# CUI

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CUI

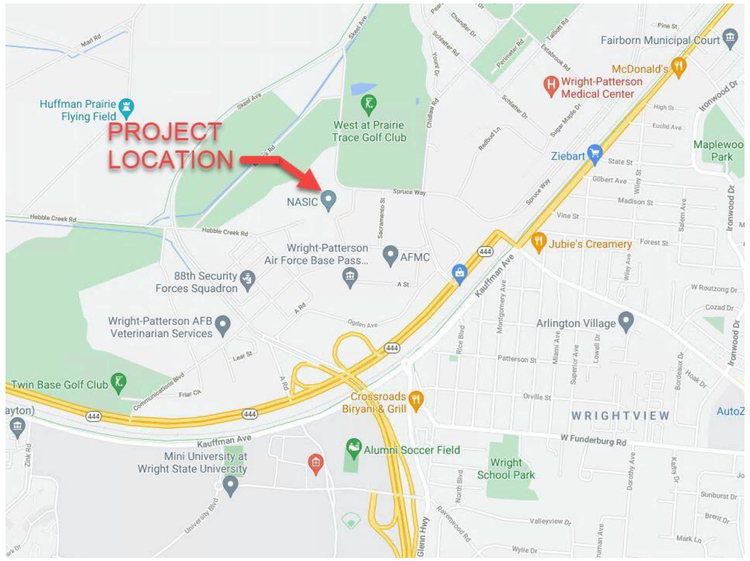
US Army Corps
of Engineers ®
LOUISVILLE DISTRICT

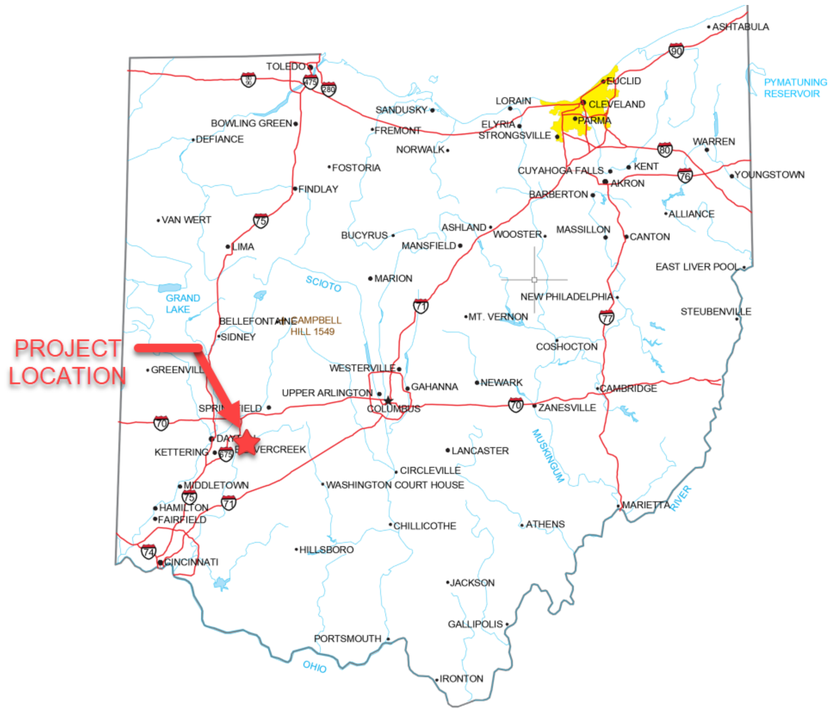
**28 February 2023**
**W912QR23R0022**

CONTROLLED BY: USACE
CONTROLLED BY: LOUISVILLE DISTRICT
CUI CATEGORY: GENERAL CRITICAL INFRASTRUCTURE INFORMATION
DISTRIBUTION/DISSEMINATION CONTROL: FEDCON
POC:

# WRIGHT PATTERSON AIR FORCE BASE, OHIO
# REPLACE AHU-5

## PN: ZHTV-160060




SOLICITATION NO.:
CONTRACT NO.:
ISSUE DATE: 16 FEBRUARY 2023
P2#: 469978

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| NO. | DATE | DESCRIPTION | MARK |
|---|---|---|---|
| 2 | | | |

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: A. TUNGSETH
DRAWN BY: A. TUNGSETH
CHECKED BY: G. JOHNSON
SUBMITTED BY: G. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

COVER SHEET

SHEET ID
**G-001_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI

| AHU-5 SHEET LIST | |
|---|---|
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| AG001_5 | LEGEND, ABBREVIATIONS AND GENERAL NOTES |
| AG002_5 | BUILDING CODE AND LIFE SAFETY CRITERIA |
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| M-703_5 | MECHANICAL CONTROLS |
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| AHU-5 SHEET LIST | |
|---|---|
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| TN502_5 | COMMUNICATIONS DETAILS |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: A. TUNGSETH
DRAWN BY: A. TUNGSETH
CHECKED BY: G. JOHNSON
SUBMITTED BY: G. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SHEET INDEX

SHEET ID
**G-002_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

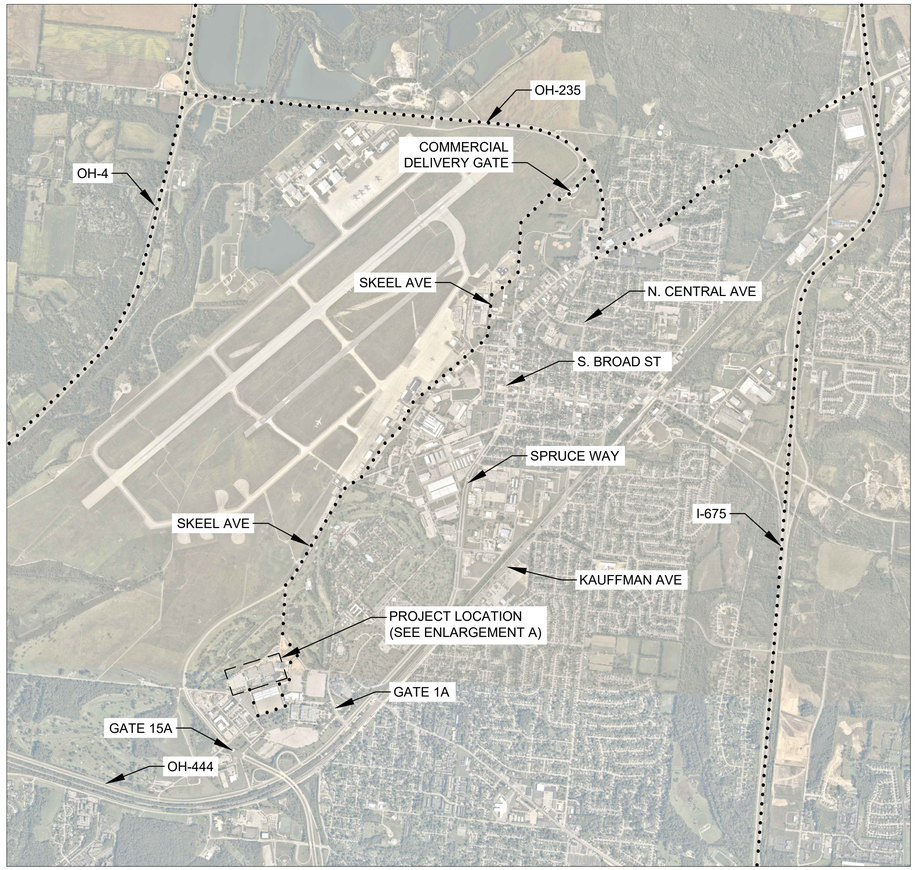
## LEGEND:

PROPOSED STAGING AND LAYDOWN

PROJECT LOCATION

## NOTE:

1. ANY EXISTING SURFACES AND LANDSCAPE AREAS DAMAGED DURING CONSTRUCTION MUST BE REPAIRED, REFINISHED, RE-SEEDED, RE-SODDED AND AERATED IF NECESSARY TO RESTORE PROJECT AREA TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR MUST ASSUME ALL RESPONSIBILITY ASSOCIATED WITH THE TEMPORARY STORAGE OF MATERIALS, TOOLS NAD EQUIPMENT ON THE SITE.
3. THE CONTRACTOR MUST ADHERE TO ALL SECURITY AND SAFETY PROCEDURES AS REQUIRED BY WPAFB CONTRACTOR ENTRY/SECURITY PROCEDURES INCLUDING, BUT NOT LIMITED TO, CONTRACTOR EMPLOYEE PARKING AND ACCESS TO THE BUILDING.
4. ALL HVAC EQUIPMENT MUST BE PROTECTED FROM WATER AND WEATHER DAMAGE. STORAGE ON SITE IS LIMITED AND JUST IN TIME DELIVERY MUST BE PART OF THE CONSTRUCTION.
5. REMEDIATION TO THE EXISTING SITE WORK AND INSIDE OR OUTSIDE THE FACILITY MUST INCLUDE REPARI/REPLACEMENT OF PAVEMENTS, SIDEWALKS, RAMPS, GUARDRAILS, SOD, WALLS, FLOORS, CEILINGS, OR PIPING DAMAGED DURING THE CONSTRUCTION PROCESS.
6. THE CONTRACTOR IS TO COORDINATE ACCESS TO THE SITE, INCLUDING THE LOCATION OF TEMPORARY STORAGE TRAILERS WITH THE GOVERNMENT. CONSTRUCTION TRAILER AND LAY DOWN AREA AREA MUST BE LOCATED AT OR NEAR THE INTERSECTIONS OF ZERO RD AND WARNER ROBIN ST ADJACENT TO BUILDING 867, AREA A WPAFB.
7. TEMPORARY SECURE STORAGE STAGING AREA MUST BE WITHIN 5 MILE RADIUS OF CONSTRUCTION SITE (BUILDING 856). COORDINATE LOCATION WITH THE GOVERNMENT PRIOR TO CONSTRUCTION.
8. CONTRACTOR TO PROVIDE ANY HEAT WHERE REQUIRED TO PROTECT THE BUILDING OR EQUIPMENT AND FOR ESCORTS IF REQUIRED FOR INSTALLATION.




A1 SITE ACCESS PLAN
SCALE: 1"=2000'

0 2000' 4000'

TRUE NORTH

B5 ENLARGEMENT A
SCALE: 1"=200'

0 200' 400'
SCALE IN FEET

TRUE NORTH

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

DESIGNED BY: B. HANSEN
DRAWN BY: J. MCMANNON
CHECKED BY: K. JENSEN
SUBMITTED BY: C. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
ATTN: CELRL-ED-TS-M
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SITE ACCESS PLAN

SHEET ID
GC101_5

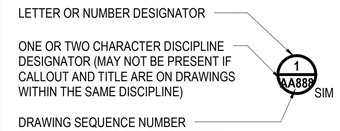
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



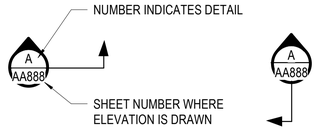
CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION

# CALLOUT IDENTIFICATION

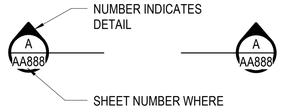
**SECTION, DETAIL, AND ELEVATION SYMBOL IDENTIFIERS:**



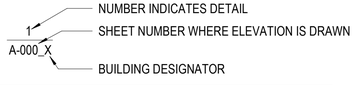

**WALL SECTION CALLOUT EXAMPLE:**



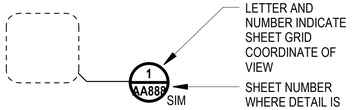

**BUILDING SECTION CALLOUT EXAMPLE:**




**VIEW REFERENCE EXAMPLE:**

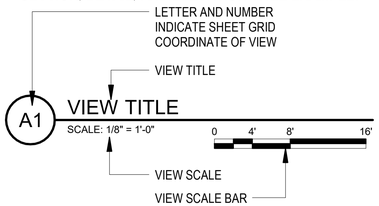



**DETAIL CALLOUT EXAMPLE:**

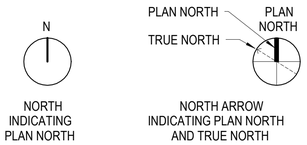



**ELEVATION CALLOUT EXAMPLE:**

**SECTION, DETAIL, AND ELEVATION TITLE EXAMPLE:**

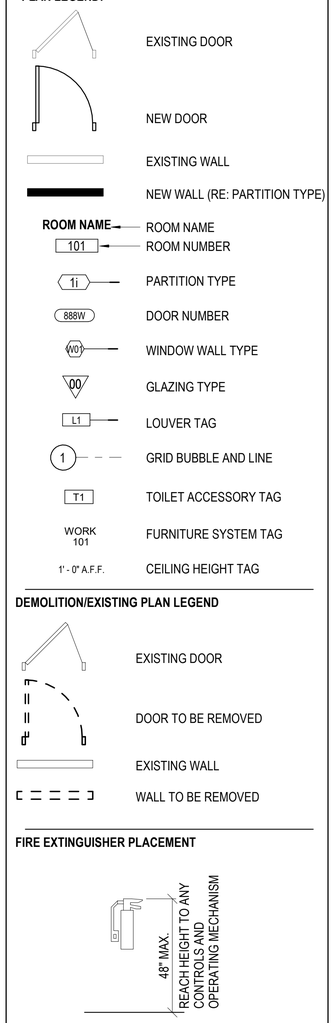



**NORTH ARROW EXAMPLE:**




# PLAN LEGEND

**PLAN LEGEND:**




**DEMOLITION/EXISTING PLAN LEGEND**



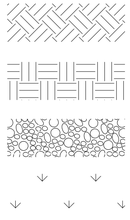

**FIRE EXTINGUISHER PLACEMENT**




BRACKET MOUNTED

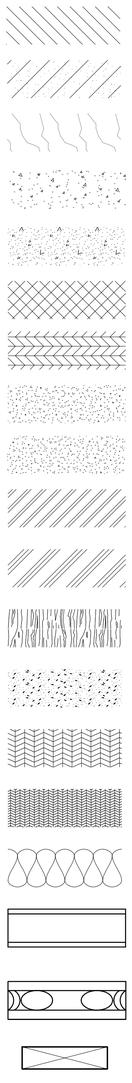
NOTE:
AT EXISTING GYPSUM BOARD WALLS TO RECEIVE FE BRACKET REMOVE GYPSUM BOARD AS REQUIRED TO INSTALL FIRE-RESISTANT TREATED WOOD BLOCKING FOR SECURE ANCHORAGE OF FE BRACKET. REPAIR / REPLACE GYPSUM BOARD AND MAKE WALL READY TO RECEIVE NEW WALL FINISH ACCORDING TO ROOM FINISH SCHEDULE.

# MATERIAL SYMBOLS



UNDISTURBED EARTH
COMPACTED FILL
GRAVEL
GRASS

# MATERIAL SYMBOLS



FACE BRICK
MASONRY
CONCRETE MASONRY UNIT
CONCRETE
TERRAZZO
RIGID INSULATION
PLYWOOD
GROUT OR GYPSUM BOARD
SAND, PLASTER, OR PORTLAND CEMENT
STEEL OR FERROUS METALS
ALUMINUM OR NON-FERROUS METALS
FINISHED WOOD
PARTICLE BOARD
GLUED-LAMINATED WOOD
PLASTIC LAMINATE
BATT INSULATION
METAL STUD WALL
BACKER ROD AND SEALANT
DIMENSION LUMBER

# ABBREVIATIONS

| | |
|---|---|
| | -A- |
| A/E | ARCHITECT/ENGINEER |
| ACOUST | ACOUSTICAL |
| ADJ | ADJACENT, ADJUSTABLE |
| AFF | ABOVE FINISH FLOOR |
| AHJ | AUTHORITY HAVING JURISDICTION |
| ALT | ALTERNATE |
| ALUM | ALUMINUM |
| APPROX | APPROXIMATE |
| ARCH | ARCHITECTURE, ARCHITECT |
| | -B- |
| BD | BOARD |
| BITUM | BITUMINOUS |
| BLDG | BUILDING |
| BLKG | BLOCKING |
| BO | BOTTOM OF, AS IN "BO STEEL" |
| BTWN | BETWEEN |
| | -C- |
| CAB | CABINET |
| CCTV | CLOSED CIRCUIT TELEVISION |
| CFCI | CONTRACTOR FURNISHED CONTRACTOR INSTALLED |
| CID | COMPREHENSIVE INTERIOR DESIGN |
| CJ | CONTROL JOINT, CONSTRUCTION JOINT |
| CL | CENTER LINE |
| CLG | CEILING |
| CLR | CLEAR |
| CMU | CONCRETE MASONRY UNIT |
| CO | CLEANOUT |
| COL | COLUMN |
| COMM | COMMUNICATION |
| CONC | CONCRETE |
| CONSTR | CONSTRUCTION |
| CONT | CONTINUOUS |
| CONTR | CONTRACT, CONTRACTOR |
| COORD | COORDINATE |
| CORR | CORRUGATED OR CORRIDOR |
| CU | CUBIC |
| °C | CELSIUS |
| | -D- |
| DBL | DOUBLE |
| DEMO | DEMOLITION |
| DESCR | DESCRIPTION |
| DET | DETAIL |
| DIA | DIAMETER |
| DIAG | DIAGONAL |
| DIM | DIMENSION |
| DN | DOWN |
| DR | DOOR |
| DS | DOWNSPOUT |
| DWG / DWGS | DRAWING / DRAWINGS |
| | -E- |
| E | EAST |
| EA | EACH |
| EEW | EMERGENCY EYEWASH |
| EEWS | EMERGENCY EYEWASH & SHOWER |
| EF | EXHAUST FAN |
| EJ | EXPANSION JOINT |
| EL | ELEVATION, AS IN HEIGHT |
| ELAST | ELASTOMERIC |
| ELEC | ELECTRIC / ELECTRICAL |
| ELEV | ELEVATOR, OR ELEVATION AS IN NORTH ELEV |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| ETC | AND SO FORTH (ETCETERA) |
| EW | EACH WAY |
| EWC | ELECTRIC WATER COOLER |
| EXH | EXHAUST |
| EXIST | EXISTING |
| EXP | EXPANSION |
| EXT | EXTERIOR |
| | -F- |
| FD | FLOOR DRAIN |
| FDN | FOUNDATION |
| FE | FIRE EXTINGUISHER WITH WALL BRACKET |
| FEC | FIRE EXTINGUISHER CABINET |
| FF | FINISH FLOOR |
| FF&E | FURNITURE, FIXTURES & EQUIPMENT |
| FHC | FIRE HOSE CABINET (WITH EXTINGUISHER & BRACKET) |
| FHR | FIRE HOSE REEL (WITH EXTINGUISHER & BRACKET) |
| FIN | FINISHED, FINISH |
| FLR | FLOOR |
| FT | FEET / FOOT |
| °F | FAHRENHEIT |
| | -G- |
| GA | GAUGE |
| GALV | GALVANIZED |
| GFCI | GOVERNMENT FURNISHED CONTRACTOR INSTALLED |
| GFGI | GOVERNMENT FURNISHED GOVERNMENT INSTALLED |
| GL | GIRT LINE |
| GRTG | GRATING |
| GYP | GYPSUM |
| GYP BD | GYPSUM BOARD |
| | -H- |
| H | HIGH |
| HD | HAND |
| HDWR | HARDWARE |
| HM | HOLLOW METAL |
| HORIZ | HORIZONTAL |
| HT | HEIGHT |
| HVAC | HEATING, VENTILATION & AIR CONDITIONING |
| | -I- |
| ID | INSIDE DIAMETER |
| IN | INCH |
| INSUL | INSULATION |
| INT | INTERIOR |
| | -J- |
| JAN | JANITOR'S CLOSET |
| | -L- |
| L | LEFT, LONG, LENGTH |
| LAB | LABORATORY |
| LAT | LATITUDE |
| LAV | LAVATORY |
| LB or # | POUND |
| LGM | LOGISTICS & MAINTENANCE |
| LH | LEFT HAND |

# ABBREVIATIONS

**SEE ADDITIONAL FINISH MATERIAL ABBREVIATIONS IN THE MATERIAL LEGEND, DRAWING A-703_5**

| | |
|---|---|
| LONG | LONGITUDE |
| LVR | LOUVER |
| | -M- |
| M | METER |
| MACH | MACHINE |
| MAINT | MAINTENANCE |
| MAS | MASONRY |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| MECH | MECHANICAL |
| MFR | MANUFACTURER |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| MM | MILLIMETER |
| MO | MASONRY OPENING |
| MTD | MOUNTED |
| MTL | METAL |
| | -N- |
| N | NORTH |
| N/A | NOT APPLICABLE |
| NIC | NOT IN CONTRACT |
| NO | NUMBER |
| NOM | NOMINAL |
| NTP | NOTICE TO PROCEED |
| NTS | NOT TO SCALE |
| | -O- |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| OFF | OFFICE |
| OPNG | OPENING |
| OPP | OPPOSITE |
| | -P- |
| PA | PUBLIC ADDRESS |
| PERIM | PERIMETER |
| PKG | PACKAGE |
| PL | PLATE |
| PLMB | PLUMBING |
| PLYWD | PLYWOOD |
| PROJ | PROJECT |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| PVC | POLYVINYL CHLORIDE |
| | -R- |
| R | RADIUS |
| R/A | RETURN AIR |
| RCP | REFLECTIVE CEILING PLAN |
| RD | ROOF DRAIN |
| RECP | RECEPTACLE |
| REFER | REFERENCE |
| REINF | REINFORCED |
| REQ'D | REQUIRED |
| REV | REVISION |
| RH | RIGHT HAND |
| RO | ROUGH OPENING |
| | -S- |
| S | SOUTH |
| S/A | SUPPLY AIR |
| SCHED | SCHEDULE |
| SECT | SECTION |
| SF | SQUARE FOOT |
| SID | STRUCTURAL INTERIOR DESIGN |
| SIM | SIMILAR |
| SPEC | SPECIFICATION |
| SQ | SQUARE, AS IN "SQ FT" |
| STC | SOUND TRANSMISSION COEFFICIENT |
| STD | STANDARD |
| STOR | STORAGE |
| STRUCT | STRUCTURAL |
| SUPP | SUPPORT |
| SUSP | SUSPENDED |
| SYS | SYSTEM |
| | -T- |
| TD | TRENCH DRAIN |
| TECH | TECHNICAL |
| THRU | THROUGH |
| TLT | TOILET |
| TO | TOP OF, AS IN "TO STEEL" |
| TYP | TYPICAL |
| | -U- |
| UL | UNDERWRITERS LABORATORY |
| UNO | UNLESS NOTED OTHERWISE |
| UTIL | UTILITY |
| | -V- |
| VENT | VENTILATE, VENTILATOR |
| VERT | VERTICAL |
| VOL | VOLUME |
| | -W- |
| W | WEST, WIDTH |
| W/ | WITH |
| W/O | WITHOUT |
| WC | WATER CLOSET |
| WD | WOOD |
| WH | WATER HEATER |
| WPAFB | WRIGHT-PATTERSON AIR FORCE BASE |
| WT | WEIGHT |

# GENERAL NOTES

1. THE CONTRACTOR MUST INCLUDE ALL WORK REQUIRED TO COMPLY WITH ALL APPLICABLE CODES BY THE AUTHORITY HAVING JURISDICTION.
2. DIMENSIONS GOVERN. DETAILS GOVERN OVER PLANS AND ELEVATIONS. LARGE SCALE DETAILS OR PLANS GOVERN OVER SMALL SCALE DETAILS OR PLANS. DO NOT SCALE DRAWINGS.
3. ALL FLOORS MUST BE INSPECTED FOR DAMAGE, WARPING OR OTHER NOTICEABLE DEVIATIONS AND PATCHED AND LEVELED PRIOR TO COVERING WITH FLOOR FINISHES, OR ERECTION AND INSTALLATION OF COLD-FORMED FRAMING.
4. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ALL MANUFACTURER'S RECOMMENDED MAINTENANCE PROCEDURES AND SCHEDULES.
5. ANY MANUFACTURER'S OR BRAND NAME PRODUCTS INDICATED OR SPECIFIED ARE DONE SO TO ESTABLISH A MINIMUM LEVEL OF QUALITY.
6. ALL CONSTRUCTION MUST MEET OR EXCEED LOCAL INDUSTRY STANDARDS. DETAILS ARE PROVIDED TO INDICATE MINIMUM QUALITY AND TO GIVE STANDARDS OF CONSTRUCTION. IF A CONDITION IS NOT SPECIFICALLY DETAILED, SUBMIT A SIMILAR DETAIL FOR GUIDANCE AND APPROVAL.
7. THE LETTERS I, O, AND Q ARE NOT USED TO INDICATE DETAILS, SECTIONS OR ELEVATIONS.
8. PROVIDE PRESERVATIVE-TREATED WOOD AT ALL LOCATIONS WHERE WOOD IS IN DIRECT CONTACT WITH CONCRETE OR MASONRY.
9. PROVIDE FIRE-RESISTANT TREATED WOOD BLOCKING FOR SECURE ANCHORAGE OF ALL SHELVES, RUNNING TRIM, RAILINGS, SUSPENDED ITEMS, DOOR-STOPS, GRAB-BARS, AND OTHER SIMILAR WOODWORK, HARDWARE, SPECIALTIES, ACCESSORIES, FIXTURES, OR EQUIPMENT.
10. ALL WORK SHOWN ON DRAWINGS MUST BE BY THE CONTRACTOR UNLESS OTHERWISE NOTED BY THE ABBREVIATION NIC (NOT IN CONTRACT) .
11. PROVIDE WATER-RESISTANT GYPSUM BOARD AT ALL WET OR UNCONDITIONED AREAS INCLUDING, BUT NOT LIMITED TO, PARTITIONS BEHIND SINKS. CONTRACTOR TO ENSURE THAT FIRE RATING IS MAINTAINED.
12. PAINT, STAIN, OR COAT ALL EXPOSED SURFACES OF CONSTRUCTION UNLESS NOTED OTHERWISE OR IF SURFACES ARE PRE-FINISHED.
13. PAINT ALL EXPOSED ELECTRICAL CONDUIT, ELECTRICAL RACEWAYS AND BOXES, MECHANICAL PIPING, DUCTS AND EQUIPMENT, AND PLUMBING PIPING WITH THE EXCEPTION OF PREFINISHED AND INSULATED ITEMS, TO MATCH THE ADJACENT SURFACE.
14. ALL CONDUITS, PLUMBING, PIPING, DUCTWORK, AND OTHER EQUIPMENT EXPOSED TO VIEW MUST BE LOCATED PARALLEL OR PERPENDICULAR TO THE STRUCTURAL FRAMING SYSTEM.
15. THE CONTRACTOR MUST COORDINATE SIZE AND LOCATION OF HVAC, PLUMBING, ELECTRICAL AND TECHNOLOGY ITEMS OR OPENINGS TO AVOID CONFLICTS BETWEEN SAID ITEMS, PRIOR TO PROCEEDING WITH RELATED WORK .
16. ARCHITECTURAL DETAILS ARE APPLICABLE WHERE INDICATED BY SECTION CUT, BY NOTE, OR BY DETAIL TITLE. INCORPORATE SIMILAR DETAILS AT SIMILAR CONDITIONS UNLESS NOTED OTHERWISE. THE CONTRACTOR MAY REQUEST A CLARIFICATION IF REQUIRED, OTHERWISE THE MORE STRINGENT REQUIREMENTS WILL CONTROL.
17. ALL OPENING DIMENSIONS ARE NOMINAL. THE CONTRACTOR MUST FIELD MEASURE ALL OPENINGS AND COORDINATE WITH THE APPROPRIATE SUPPLIER.
18. SEAL AROUND ALL DOOR AND WINDOW FRAMES, COUNTERTOPS, WALL-MOUNTED FIXTURES AND EQUIPMENT TO ADJACENT WALL SURFACES.
19. THE CONTRACTOR MUST REVIEW THE DIMENSIONS OF ALL EQUIPMENT IN THE PROJECT REGARDLESS OF THE SOURCE AND COORDINATE ACCESS TO THE SPACE AND VERIFY CLEAR FLOOR SPACE IS PROVIDED AS REQUIRED TO ENSURE EASE OF INSTALLATION.
20. ALL WORK MUST BE OF GOOD QUALITY, FREE FROM DEFECTS, AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
21. THE CONTRACTOR MUST PROVIDE ACCESS DOORS OR PANELS AS REQUIRED FOR SERVICING OF PIPING, DUCTWORK, CABLE TRAYS, FIRE DAMPERS AND SIMILAR APPLICATIONS. ALL PROPOSED ACCESS DOOR LOCATIONS TO BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.
22. BRACE PARTITIONS, SUSPENDED CEILINGS, SOFFITS, SUSPENDED ITEMS, ETC. ONLY TO STRUCTURAL ELEMENTS ABOVE. DO NOT ANCHOR TO ROOF DECK, PLUMBING / SPRINKLER PIPES, DUCTWORK, ELECTRICAL CONDUIT OR SIMILAR ELEMENTS.
23. EXTEND ALL FLOORING AND WALL-BASE COMPLETELY INTO RECESSES, UNDER OPEN COUNTERTOPS, AND BEHIND ALL EQUIPMENT.
24. ALL MATERIALS USED FOR CONSTRUCTION MUST BE NEW AND UNDAMAGED. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR ALL WORK SHOWN.
25. THE CONTRACTOR MUST BECOME FULLY ACQUAINTED WITH CONDITIONS RELATED TO THE WORK. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE ACTUAL CONDITIONS MUST BE REPORTED TO THE CONTRACTING OFFICER FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
26. EACH INSTALLER MUST EXAMINE SUBSTRATE AND/OR CONDITIONS UNDER WHICH THE WORK WILL BE INSTALLED AND REPORT TO THE CONTRACTOR IN WRITING ANY CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY EXECUTION OF THE INSTALLERS WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED. INSTALLATION WILL CONSTITUTE ACCEPTANCE OF THE SUBSTRATE AND/OR CONDITIONS.
27. "TYPICAL" (TYP) AS USED IN THESE DOCUMENTS MEANS THAT THE CONDITIONS OR DIMENSION IS THE SAME OR REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT.
28. CONTROL JOINTS (CJ) MUST BE INSTALLED AT ALL PARTITIONS. CJ AT GYPSUM PARTITIONS MUST BE MAXIMUM 30'-0" O.C., CJ AT CONCRETE MASONRY UNIT PARTITIONS MUST BE MAXIMUM 20'-0" O.C., UNLESS OTHERWISE NOTED ON DRAWINGS.
29. NON-BEARING PARTITIONS MUST BE ISOLATED FROM THE BUILDING STRUCTURE TO PREVENT TRANSFER OF BUILDING LOADS FROM THE STRUCTURE TO THE PARTITIONS.
30. THE CONTRACTOR MUST NOT CONSIDER DEMOLITION, REPAIR, AND ALTERATION NOTES TO BE ALL-INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND ASSESS EACH AREA AND TO FULFILL THE INTENT OF THE DESIGN INDICATED BY THE CONTRACT DOCUMENTS. REFER TO SPECIFICATION SECTION 011100 - SUMMARY OF WORK AND SECTION 02 40 00 - DEMOLITION. CONTRACTOR MUST COORDINATE ARCHITECTURAL DEMOLITION DRAWINGS AND NOTES WITH HVAC, ELECTRICAL, FIRE PROTECTION, AND PLUMBING DRAWINGS AND NOTES. PATCH OR REBUILD ANY AREAS TO REMAIN THAT HAVE BEEN DAMAGED OR DISTURBED BY HVAC, ELECTRICAL, FIRE PROTECTION, AND PLUMBING DEMOLITION.
31. ALL "EXISTING" INFORMATION ON THE CONTRACT DOCUMENTS HAS BEEN OBTAINED FROM A PREVIOUS SET OF DRAWINGS, OR FROM FIELD INVESTIGATION AND SUCH "EXISTING" INFORMATION MUST BE FIELD VERIFIED BY ALL CONTRACTORS.
32. THE PREMISES WILL BE OCCUPIED AT ALL TIMES DURING THE CONSTRUCTION SCHEDULE. THE CONTRACTOR MUST COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL INTERRUPTIONS OF UTILITIES, TEMPORARY EXITS, DUST PARTITIONS, DELIVERIES, AND ALL OTHER JOB REQUIREMENTS.
33. ALL ROOM NUMBERS ARE FOR CONSTRUCTION PURPOSES ONLY. USER HAS THE RIGHT TO RENAME AND/OR RENUMBER ROOMS.
34. THE CONTRACTOR IS TO COORDINATE ACCESS TO THE SITE, INCLUDING THE LOCATION OF TEMPORARY STORAGE TRAILERS WITH THE GOVERNMENT. REFER TO SHEET GC101_5 FOR ADDITIONAL INFORMATION.

GENERAL NOTES: CONSTRUCTION LIMITATIONS:

1. TEMPORARY SECURE STORAGE REQUIREMENTS: IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY SECURE STORAGE SPACE/TRAILER FOR THE FURNITURE AND EQUIPMENT. REFER TO ADDITIONAL INFORMATION AND STORAGE REQUIREMENTS BELOW.
   a. REFER TO H-SERIES SHEETS FOR ALL HAZARDOUS BUILDING MATERIAL, ASBESTOS/LEAD ABATEMENT, AND UNIVERSAL WASTE REQUIREMENTS.
   b. EXISTING FURNITURE FOR REFERENCE ONLY (TYPICAL). CONTRACTOR MUST FIELD VERIFY AND LABEL THE EXTENT OF ALL FURNITURE, EQUIPMENT, POWER POLES, COMPUTER POLES, CABLING WIRING AND DEMOUNTABLE PARTITIONS. CONTRACTOR MUST DISASSEMBLE, SORT FURNITURE FOR RE-USE, AND RE-ASSEMBLE AFTER CONSTRUCTION IS COMPLETE. LOCATION FOR STORAGE OF FURNITURE MUST BE DETERMINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
   c. CONTRACTOR IS RESPONSIBLE FOR INVENTORYING EACH ROOM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR MUST LABEL AND TAKE PHOTOS OF ALL EXISTING CONDITIONS TO ENSURE THAT THE FURNITURE, CABINETS, POWER, CCTV, CONFERENCE EQUIPMENT, ETC AND COMPUTER WIRING ARE ALL REPLACED IN THE SAME LOCATIONS. CONTRACTOR'S FAILURE TO TAKE GOOD RECORDS WILL NOT BE THE GOVERNMENT'S RESPONSIBILITY.
   d. PRIOR TO CONTRACTOR'S WORK, INDIVIDUALS' PERSONAL BELONGINGS WILL BE BOXED, MOVED AND/OR STORED BY THE GOVERNMENT.
   e. ALL FURNITURE WILL BE REMOVED FROM CONSTRUCTION AREA BY THE CONTRACTOR AND TURNED OVER TO NASIC. CONTRACTOR MUST STORE ALL FURNITURE TO BE RE-INSTALLED IN CONTRACTOR FURNISHED LOCKABLE TRAILERS ON WPAFB. CONTRACTOR MUST BEAR THE SOLE RESPONSIBILITY TO ENSURE THAT THE FURNITURE AND EQUIPMENT IS NOT DAMAGED, AND IS REINSTALLED WITH ASSOCIATED POWER POLES, COMPUTER POWER, COMPUTER FIBER, PHONES, ETC. IN THE SAME CONFIGURATION.
   f. ALL ARTWORK TO BE REMOVED BY WPAFB PRIOR TO BEGINNING OF WORK.

2. COMMON ACCESS/EGRESS CORRIDORS: STAIR W5; ROOMS W208, W253, W279 AND W280 MUST BE MAINTAINED AS COMMON ACCESS/EGRESS CORRIDORS THROUGHOUT THE CONSTRUCTION PERIOD FOR FACILITY PERSONNEL. PRIOR TO PERFORMING WORK IN CORRIDORS, CONTRACTOR MUST PERFORM AN EGRESS ANALYSIS TO VERIFY EXIT ACCESS IS MAINTAINED FOR BUILDING OCCUPANTS IN ACCORDANCE WITH NFPA 101. CONTRACTOR TO PROVIDE MINIMUM 2 WEEK NOTICE TO BUILDING OCCUPANTS OF ANY EXITS THAT WILL BE BLOCKED DURING CONSTRUCTION ACTIVITIES. THESE ROOMS WILL BE LIMITED TO CONTRACTOR WORK (IE. ABATEMENT, DEMOLITION, AND NEW WORK AS DEFINED HERE-IN) FROM THE HOURS OF 1600 TO 2400. THE CORRIDORS MUST BE CLEARED OF ALL CONSTRUCTION MATERIALS AND EQUIPMENT DURING THE HOURS OF 0500 TO 1600. CONTRACTOR MUST SCHEDULE THE CONSTRUCTION WORK ACCORDINGLY. CONTRACTOR MUST COORDINATE WITH CONTRACTING OFFICER AND SECURITY OFFICER FOR ALL CONSTRUCTION EFFORTS. THE FOLLOWING SYSTEMS MUST BE MAINTAINED AND FULLY FUNCTIONAL:
   1. SECURITY INTRUSION DETECTION
   2. SECURITY SURVEILLANCE
   3. SECURITY TURNSTILE AND ALL ASSOCIATED APPARATUS
   4. INTERCOM CALL BOX AT WEST ENTRANCE

3. CONTRACTOR MUST PROVIDE THE NECESSARY TEMPORARY SUPPORTING MEANS FOR THE FOLLOWING SYSTEMS TO MAINTAIN A FULLY FUNCTIONAL EGRESS CORRIDOR;
   1. HEATING AND VENTILATION (HVAC) SYSTEMS
   2. HVAC DIRECT DIGITAL CONTROL SYSTEM
   3. LIGHTING AND EGRESS EXIT LIGHTING SYSTEMS
   4. FIRE ALARM SYSTEMS
   5. FIRE SUPPRESSION SYSTEMS
   6. ELECTRICAL POWER TO SUPPORT ALL AFOREMENTIONED SYSTEMS.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| ISSUE DATE: | 02-16-23 |
| SOLICITATION NO.: | |
| CONTRACT NO.: | |
| DESIGNED BY: | B. KENNALEY |
| DRAWN BY: | W. NEEDLE |
| CHECKED BY: | E. VALEZQUEZ |
| SUBMITTED BY: | S. JOHNSON |
| SIZE: | 34X22 |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

LEGEND, ABBREVIATIONS AND GENERAL NOTES

SHEET ID
**AG001_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI

| 1. APPLICABLE CODES AND STANDARDS | | |
|---|---|---|
| **ABBREVIATIONS** | **TITLE** | **EDITION** |
| IBC | INTERNATIONAL BUILDING CODE | 2015 |
| IEBC | INTERNATIONAL EXISTING BUILDING CODE | 2015 |
| IMC | INTERNATIONAL MECHANICAL CODE | 2015 |
| IPC | INTERNATIONAL PLUMBING CODE | 2015 |
| NFPA 1 | NATIONAL FIRE CODE | 2018 |
| NFPA 10 | STANDARD FOR THE PORTABLE FIRE EXTINGUISHERS | 2018 |
| NFPA 13 | STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS | 2019 |
| NFPA 70 | NATIONAL ELECTRIC CODE | 2017 |
| NFPA 72 | NATIONAL FIRE ALARM AND SIGNALING CODE | 2019 |
| NFPA 80 | STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES | 2019 |
| NFPA 90A | STANDARD FOR THE INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS | 2018 |
| NFPA 101 | LIFE SAFETY CODE | 2018 |
| UFC-1-200-01 | DOD BUILDING CODE | JUN 2016, CHANGE 2 |
| UFC-3-600-01 | DESIGN: FIRE PROTECTION ENGINEERING FOR FACILITIES | AUG 2016, CHANGE 2 |
| UFC-4-010-01 | DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS | DEC 2018 |
| WPAFB IFS | WPAFB INSTALLATION FACILITY STANDARDS | APRIL 2021 |

| 2. TYPE OF CONSTRUCTION (IBC 601) | | |
|---|---|---|
| **BUILDING ELEMENT** | **TYPE OF CONSTRUCTION** | **FIRE RESISTANCE RATING** |
| PRIMARY STRUCTURAL FRAME | IIB | 0 HR |
| BEARING EXTERIOR WALL | IIB | 0 HR * |
| BEARING INTERIOR WALL | IIB | 0 HR * |
| NON-BEARING EXTERIOR WALL | IIB | 0 HR * |
| NON-BEARING INTERIOR WALL | IIB | 0 HR * |
| FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS | IIB | 0 HR |
| ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS | IIB | 0 HR |
| * EXCEPT AS REQUIRED FOR OCCUPANCY SEPARATION, INCIDENTAL USE, AND OTHER PASSIVE FIRE PROTECTION. | | |

| 3. CLASSIFICATION OF OCCUPANCY | | | |
|---|---|---|---|
| **AREAS** | **OCCUPANCY** | **IBC** | **NFPA 101** |
| OPEN OFFICE, CIRCULATION, RESTROOMS, LOBBY, BREAKROOM | BUSINESS, GROUP B | 304.1 | 6.1.11 |

| 4. INCIDENTAL USE AND OTHER PASSIVE FIRE PROTECTION | | |
|---|---|---|
| **AREA** | **REQUIRED RATING** | **CODE** |
| EXISTING SHAFT ENCLOSURE 3 STORIES OR LESS | 1 HR FIRE BARRIER | NFPA 101 8.6.5 |
| CORRIDOR | 0 HR BARRIER * | NFPA 101 38.3.6.1 |
| EXISTING ELECTRICAL ROOM | SMOKE PARTITION | NFPA 101 38.3.2.1, 8.7.1.2 |
| EXISTING MECHANICAL ROOM | 1 HR FIRE BARRIER (NORTH & WEST WALLS) | NFPA 101 38.3.2.1 |
| * NO RATING REQUIRED IF EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM. | | |

| 5. BUILDING SEPARATION (IBC TABLE 602) | | | |
|---|---|---|---|
| **OCCUPANCY** | **ELEVATION** | **RESTRICTIVE FIRE SEPARATION DISTANCE (FT) *** | **FIRE RESISTIVE RATING OF EXTERIOR WALL** |
| B | NORTH/SOUTH/WEST/EAST | > 10 | NO RATING |
| * IBC 702 - FIRE SEPARATION DISTANCE = DISTANCE FROM BUILDING'S FACE TO CLOSEST INTERIOR LOT LINE, CENTERLINE OF A STREET ALLEY OR PUBLIC WAY, OR IMAGINARY LINE BETWEEN TWO BUILDINGS. | | | |

| 6. OPENING PROTECTION FOR FIRE AND SMOKE RESISITIVE CONSTRUCTION | | | | |
|---|---|---|---|---|
| **COMPONENT** | **FIRE DOOR/SHUTTER ASSEMBLIES** | **DUCT PENETRATIONS** | **OTHER PENETRATIONS** | **CODE** |
| 1 HR FIRE BARRIER FOR MEANS OF EGRESS (INCLUDING STAIRWELLS) | 1 HR | NOT PERMITTED | 1 HR (PENETRATIONS PERMITTED WHEN SERVING THE STAIRWELL) | NFPA 101 TABLE 8.3.3.2.2, 7.1.3.2.1 |
| 1 HR FIRE BARRIER | 3/4 HR | FIRE DAMPERS NOT REQUIRED | 1 HR | NFPA 90A: 5.3.1.1 AND 5.4.1.1, NFPA 101 TABLE 8.3.3.2.2 |
| 0 HR SMOKE PARTITION | 0 HR (SELF CLOSING) | SMOKE DAMPERS ON TRANSFER DUCT ONLY | 0 HR | NFPA 101: 8.4 |

| 7. OCCUPANT LOAD CALCULATIONS (NFPA 101, UFC 3-600-01) | | | | | |
|---|---|---|---|---|---|
| **FLOOR** | **AREA** | **FUNCTION OF SPACE** | **AREA (SF)*** | **OCCUPANT LOAD FACTOR (SF/PERSON)** | **OCCUPANTS** |
| LEVEL 2 | OFFICES, BATHROOMS | BUSINESS AREAS | 23975 | 150 | 160 |
| LEVEL 2 | CONFERENCE ROOM, BREAK ROOM | ASSEMBLY WITHOUT FIXED SEATING | 1105 | 15 NET | 74 |
| LEVEL 2 | MECH ROOM, ELEC ROOM, STORAGE | MECHANICAL, ELECTRICAL, OTHER BUILDING EQUIPMENT SPACES | 2345 | 500 | 5 |
| LEVEL 2 | COLLABORATION SPACE | COLLABORATION ROOMS / SPACES <= 450 SF | 1549 | 30 | 52 |

* OCCUPANT LOAD ANALYSIS ONLY INCLUDES AREAS WITHIN THE PROJECT SCOPE OF WORK AND IS NOT INTENDED TO BE A FULL BUILDING ANALYSIS.

| 8. OCCUPANT LOAD SUMMARY AND MINUMUM EXITS FROM FLOOR | | | | |
|---|---|---|---|---|
| **FLOOR** | **GROSS AREA (SF)** | **OCCUPANTS** | **REQUIRED EXITS (NFPA 101)** | **REQUIRED EXIT SEPARATION (NFPA 101)** |
| LEVEL 2 | 28,974 | 291 | 2 (7.4.1.1) | 1/3 DIAGONAL (7.5.1.3.3) |

| 9. MINIMUM EXITS OR EXIT ACCESSES FROM A SPACE OR AREA (NFPA 101) | | | |
|---|---|---|---|
| **OCCUPANCY** | **CONDITION PERMITTING ONE EXIT** | **CONDITION REQUIRING TWO OR MORE EXITS** | **CODE SECTION** |
| BUSINESS | LESS THAN 100 FT TRAVEL DISTANCE AND LESS THAN 100 OCCUPANTS | 100 FT OR GREATER TRAVEL DISTANCE OR MORE THAN 100 OCCUPANTS | 38.2.4 |

| 10. COMMON PATH, DEAD-END, AND TRAVEL DISTANCE LIMITS (NFPA 101, TABLE A.7.6) | | | |
|---|---|---|---|
| **OCCUPANCY** | **COMMON PATH LIMIT (FT)** | **DEAD END LIMIT (FT)** | **TRAVEL DISTANCE LIMIT (FT)** |
| BUSINESS | 100 | 50 | 300 |

| 11. MINIMUM EGRESS WIDTHS | | | |
|---|---|---|---|
| **COMPONENT** | **REQUIREMENT** | **WIDTH (IN)** | **NFPA 101** |
| EXISTING STAIR IN EGRESS ACCESS | MINIMUM | 36 | SECTION 7.2.2.2.1.1 |
| DOORS IN EGRESS ACCESS | PER COMPONENT | 32 | SECTION 7.2.1.2.3.2 |
| EXISTING CORRIDOR SERVING 50 OR MORE OCCUPANTS | MINIMUM | 44 | SECTION 39.2.3.2 |
| EXISTING CORRIDOR SERVING LESS THAN 50 OCCUPANTS | MINIMUM | 28 | SECTION 7.3.4.1.2 |
| OTHER EGRESS COMPONENTS | PER PERSON | 0.2 | TABLE 7.3.3.1 |
| STAIRWAYS | PER PERSON | 0.3 | TABLE 7.3.3.1 |

| 12. MINIMUM INTERIOR FINISH RATINGS (NFPA 101, TABLE A.10.2.2) | | | |
|---|---|---|---|
| **OCCUPANCY** | **EXITS** | **EXIT ACESS CORRIDORS** | **OTHER SPACES** |
| BUSINESS | CLASS C | CLASS C | CLASS C |

| 13. FIRE SUPPRESSION REQUIREMENTS (UFC 3-600-01 9-7, 9-10, 9-17) | | |
|---|---|---|
| **SPRINKLERS** | **STANDPIPE** | **FIRE EXTINGUISHERS** |
| SPRINKLERS PROVIDED THROUGHOUT THE BUILDING | NOT REQUIRED | REQUIRED |

| 14. FIRE ALARM REQUIREMENTS (UFC 3-600-01 9-18) | | |
|---|---|---|
| **MANUAL INITIATION** | **AUTOMATIC INITIATION** | **OCCUPANT NOTIFICATION** |
| MANUAL FIRE ALARM PULL STATIONS PROVIDED AT EXITS | FLOW AND TAMPER SWITCHES, SPOT SMOKE DETECTORS AT ALARM PANELS AND DUCT SMOKE DETECTORS PROVIDED | VOICE MESSAGING, FIRE ALARM STROBES |

| 15. SMOKE MANAGEMENT SYSTEMS (UFC 3-600-01 9-20) | | |
|---|---|---|
| **SMOKE CONTROL SYSTEM** | **SMOKE AND HEAT VENTS** | **PASSIVE SMOKE MANAGEMENT** |
| NOT REQUIRED | NOT REQUIRED | SMOKE PARTITIONS WHERE NOTED |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

DATE | DESCRIPTION | MARK

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

BUILDING CODE AND LIFE SAFETY CRITERIA

SHEET ID
**AG002_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)

ARIMS: 200A Disposition: Maintain for 15 yrs after construction

NOT FOR CONSTRUCTION

CUI

**LIFE SAFETY GENERAL NOTES:**

1. EXCEPT WHERE INDICATED, ALL LIFE SAFETY FEATURES INCLUDING, BUT NOT LIMITED TO WALL RATINGS, AND OCCUPANCY CLASSIFICATIONS MUST REMAIN UNCHANGED.
2. REFER TO ARCHITECTURAL LEGEND, ON DRAWING AG001_5 FOR ADDITIONAL INFORMATION REGARDING SYMBOLS AND ABBREVIATIONS.
3. REFER TO THE ELECTRICAL LIGHTING PLANS FOR LOCATION OF EXIT SIGNS AND EMERGENCY LIGHTING.
4. REFER TO THE FIRE SUPPRESSION AND ALARM PLANS FOR LOCATION OF FIRE PROTECTION DEVICES.
5. ALL EXISTING WALL CLASSIFICATIONS SHOWN ARE BASED ON EXISTING DRAWINGS.

**OCCUPANT LOAD LEGEND**

| | | |
|---|---|---|
| | BUSINESS | 1 PERSON / 150 SF GROSS |
| | ASSEMBLY | 1 PERSON / 15 SF NET |
| | BUILDING EQUIPMENT | 1 PERSON / 500 SF GROSS |
| | BUSINESS COLLABORATION SPACE, <= 450 SF | 1 PERSON / 30 SF GROSS |

**EGRESS PATH**

CP:100' 300' — CP — EGRESS PATH

TRAVEL DISTANCE

COMMON PATH OF TRAVEL

EXIT DOOR

COMMON PATH TERMINATION POINT

**FIRE BARRIER LEGEND**

SMOKE PARTITION

1 HR FIRE BARRIER

2 HR FIRE BARRIER

**FIRE EXTINGUISHER**

FE:BR

-FE: FIRE EXTINGUISHER
-BR: BRACKET MOUNTED

A:B:C TYPE DRY CHEMICAL 4A:20B:C

PLAN NORTH

0 8' 16' 24'

**SCOPE LEGEND**

NOT IN SCOPE

KEYPLAN
NOT TO SCALE

A1 SECOND FLOOR - LIFE SAFETY PLAN
SCALE: 3/32" = 1'-0"

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARB PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR - LIFE SAFETY PLAN

SHEET ID

**AG003_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI

**GENERAL NOTES:**

1. LEAD BASED PAINT MUST BE ASSUMED TO BE PRESENT ON EXISTING PAINTED COMPONENTS AND LEAD SOLDER JOINTS MUST BE ASSUMED TO BE PRESENT WITHIN CONNECTION POINTS ON EXISTING SEWER LINES THROUGHOUT THE MODIFICATION AREAS. ALL CONTRACTORS MUST COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION 29 CODE OF FEDERAL REGULATIONS (CFR) 1926.62 LEAD IN CONSTRUCTION STANDARD PRIOR TO ANY IMPACT OR DISTURBANCE OF THESE MATERIALS. SOME OF THE REQUIREMENTS INCLUDED WITHIN THIS STANDARD INCLUDE: INITIAL EXPOSURE MONITORING, PROVIDING PERSONAL PROTECTIVE EQUIPMENT (PPE) AND HAND WASHING FACILITIES. IN ADDITION, ALL WORK MUST BE CONDUCTED IN ACCORDANCE WITH WPAFB GENERAL ENVIRONMENTAL PROTECTION REQUIREMENTS SECTION 01 35 43.

2. THE CONTRACTOR (HAZARDOUS MATERIALS ABATEMENT CONTRACTOR) IS RESPONSIBLE FOR FOLLOWING AND ADHERING TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE SET FORTH BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA), OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA), AND OHIO ENVIRONMENTAL PROTECTION AGENCY. CONTRACTOR MUST MAINTAIN A VALID AND CURRENT LICENSE IN THE STATE OF OHIO AS AN ASBESTOS ABATEMENT CONTRACTOR.

3. IF A MATERIAL THAT WAS NOT PART OF THE ASBESTOS ASSESSMENT CONDUCTED FOR THIS PROJECT IS DISCOVERED DURING THE COURSE OF RENOVATION THEN THE CONTRACTOR IS RESPONSIBLE TO HAVE THE MATERIAL ANALYZED TO DETERMINE IF IT CONTAINS ASBESTOS.

4. THE CONTRACTOR MUST DECONTAMINATE ALL BUILDING MATERIALS, WHICH BECOME CONTAMINATED OR ARE DISTURBED FROM ASBESTOS REMOVAL.

5. THE CONTRACTOR MUST COORDINATE ALL ON-SITE WORK WITH THE ARCHITECT / ENGINEER, CONSTRUCTION MANAGER, GENERAL AND SUB-CONTRACTORS, AND WPAFB TO FACILITATE THE PROMPT COMPLETION OF ALL ASPECTS OF THE MODIFICATION PROJECT.

6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING ALL NON-ACM BUILDING MATERIALS TO ACCESS ACM. ALL SELECTIVE DEMOLITION WORK PRACTICES MUST OCCUR IN A FULL-CONTAINMENT IN THE EVENT THAT ACM BECOMES DAMAGED VIA DEMOLITION WORK PRACTICES.

7. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE REMOVAL AND CLEANUP OF ALL PCB'S AND EQUIPMENT CONTAINING PCB'S IDENTIFIED IN ENVIRONMENTAL SURVEY REPORT, ALL WORK MUST BE IN ACCORDANCE WITH SPECIFICATION SECTIONS 01 35 43.

8. THE CONTRACTOR IS RESPONSIBLE TO COMPLETE ALL REMOVAL, DISPOSAL, AND/OR DECONTAMINATION OF ALL UNIVERSAL WASTE SPECIFIED IN THE SURVEY REPORT (REFER TO 01 35 43), ITEMS CAN INCLUDE BUT ARE NOT LIMITED TO HALON'S, MERCURY CONTAINING LAMPS, MERCURY CONTAINING SWITCHES, FIRE AND/OR SMOKE DETECTORS WITH RADIOACTIVE SOURCES, NICAD, LITHIUM ION, AND LEAD-ACID BATTERIES, AND EQUIPMENT CONTAINING OZONE-DEPLETING REFRIGERANTS. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING AND ADHERING TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE SET FORTH BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) AND OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA), ALL WORK MUST BE IN ACCORDANCE WITH SPECIFICATION SECTION 01 35 43.

9. SPECIAL CARE SHOULD BE TAKEN BY **ALL CONTRACTORS** WHEN WORKING NEAR EXISTING ELECTRIC, WATER, GAS, AND STEAM LINES.

10. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH WPAFB SPECIFICATION SECTION 01 35 43.

11. COORDINATE DISPOSITION OF EXCESS RADIOACTIVE COMMODITIES, E.G. IONIZATION TYPE SMOKE DETECTORS, RADIOLUMINESCENT EMERGENCY EXIT SIGNS, OR ANY OTHER RADIOACTIVE COMMODITY AND/OR RADIOACTIVE CONTAMINANT THROUGH THE INSTALLATION RADIATION SAFETY OFFICER, 88 OMR/SGXB.

12. ALL METAL AND WIRING SHALL BE RECYCLED AT THE WPAFB BASE RECYCLING CENTER. THE WPAFB RECYCLING CENTER IS AVAILABLE FOR CONTRACTOR USE TO REDUCE WASTE DISPOSAL. ALL RECYCLABLE METAL IS TO BE RECYCLED THROUGH THE BASE RECYCLING CENTER. ALL RECYCLING MUST BE ACCOMPLISHED IN ACCORDANCE WITH WPAFB SPECIFICATION SECTION 01 35 43. CONTACT WPAFB RECYCLING PROGRAM MANAGER AT 937-257-5060 TO CONFIRM WHAT MATERIALS ARE RECYCLABLE AND TO COORDINATE TURN-IN. THE CONTRACTOR SHALL SUBMIT A QUARTERLY SUMMARY REPORT TO THE GOVERNMENT CONTRACT REPRESENTATIVE IAW WPAFB SPECIFICATION SECTION 01 35 43 STATING (1) THE COST TO RECYCLE AND THE TONNAGE OF CONSTRUCTION AND DEMOLITION MATERIALS RECYCLED, (2) THE COST TO DIVERT/REUSE THE TONNAGE OF CONSTRUCTION AND DEMOLITION MATERIALS DIVERTED/REUSE, (3) THE COST TO MULCH AND THE TONNAGE AND COST OF CONSTRUCTION AND DEMOLITION MATERIALS MULCHED, (4) THE COST FOR WASTE-TO-ENERGY AND THE TONNAGE OF CONSTRUCTION AND DEMOLITION MATERIALS CONVERTED FROM WASTE-TO-ENERGY, (5) THE COST TO LANDFILL AND THE TONNAGE OF CONSTRUCTION AND DEMOLITION MATERIALS LAND-FILLED, (6) THE COST TO INCINERATE AND THE TONNAGE OF CONSTRUCTION AND DEMOLITION MATERIALS INCINERATED, AND (7) EXPLANATION OF THE DIVERSION RATE IF LESS THAN 60%. THE QUARTERLY SUMMARY REPORTS SHALL BE RECEIVED ON APRIL 7, JULY 7, OCTOBER 7, AND JANUARY 7 COVERING THE THREE MONTHS PRIOR. THE QUARTERLY SUMMARY REPORTS SHALL BE ON THE WPAFB DIVERSION FORM. FOR ADDITIONAL INFORMATION CONTACT THE RECYCLING PM, BRIAN ROBINSON, AT 937-257-5060 OR BRIAN.ROBINSON.5@US.AF.MIL.

13. TURN-IN ALL MERCURY CONTAINING DEVICES, SWITCHES AND THERMOSTATS TO 88 CEG/CEIE IN ACCORDANCE WITH WPAFB SPECIFICATION SECTION 01 35 43 FOR RECYCLING.

14. TURN-IN ALL MERCURY CONTAINING LAMPS TO 88 CEG/CEIE IN ACCORDANCE WITH WPAFB SPECIFICATION SECTION 01 35 43.

15. TURN-IN ALL PCB CONTAINING LIGHT BALLAST TO 88 CEG/CEIE IN ACCORDANCE WITH WPAFB SPECIFICATION SECTION 01 35 43.

16. REMOVE AND DISPOSE OF ANY ASBESTOS CONTAINING MATERIAL IN ACCORDANCE WITH WPAFB SPECIFICATION SECTION 01 35 43.

17. RECOVER AND RECLAIM ANY REFRIGERANT IN ACCORDANCE WITH WPAFB SPECIFICATION SECTION 01 35 43.

18. ANY USE OF RADIOACTIVE MATERIALS BY THE CONTRACTOR, INCLUDING MOISTURE DENSITY GAUGES, MUST BE APPROVED BY THE WPAFB RADIATION SAFETY OFFICER A MINIMUM OF 30 CALENDAR DAYS PRIOR TO BEING BROUGHT ONTO WPAFB. THIS REQUIREMENT IS FROM WPAFB 40-201.

19. NO ASBESTOS-CONTAINING MATERIAL MUST BE INSTALLED DURING THIS PROJECT.

20. 30 DAYS PRIOR TO START OF WORK, THE CONTRACTOR SHALL TAKE A REPRESENTATIVE SAMPLE OF THE HVAC SYSTEM WATER TO DETERMINE WHETHER IT CAN BE DRAINED DIRECTLY INTO THE SANITARY SEWER. ANALYZE THE WATER TO DETERMINE THE TOTAL LEVEL OF EACH OF THE FOLLOWING: ARSENIC, CADMIUM, CHROMIUM, COPPER, CYANIDE, LEAD, MERCURY, MOLYBDENUM, NICKEL, SELENIUM, SILVER, ZINC, SULFIDE, OIL AND GREASE, PHOSPHORUS, COD AND BOD. THE LAB PERFORMING THE ANALYSES MUST BE CERTIFIED BY OHIO EPA TO ANALYZE FOR THESE PARAMETERS. PROVIDE A COPY OF THE LAB'S REPORT TO THE CONTRACTING OFFICER, WHO WILL IN TURN FORWARD IT TO 88 CEG/CEIEA FOR A DETERMINATION ON THE WASTEWATER DISPOSAL METHOD.

21. ALL WINDOW AND DOOR FRAME CAULKING AND GLAZING WILL BE TREATED AS CONTAINING ASBESTOS UNLESS TESTING PROVES IT TO BE ASBESTOS FREE.

22. THE GENERATION OF FUGITIVE EMISSIONS MUST BE KEPT TO A MINIMUM USING APPROVED DUST SUPPRESSING METHODS SUCH AS WATER SPRAYS ON AREA OF HIGH DUST GENERATION. FOR ADDITIONAL INFORMATION PLEASE CONTACT THE 88 CEG/CEIEA AIR PM CHET POWERS AT 937-257-3349 OR BY EMAIL AT CHET.POWERS@US.AF.MIL.

23. ALL HAZARDOUS MATERIALS MUST BE PROPERLY MANAGED, LABELED AND STORED. ANY HAZARDOUS WASTE GENERATED FROM THIS CONSTRUCTION ACTIVITY MUST BE PROPERLY CHARACTERIZED, LABELED AND MANAGED BY TRAINED EMPLOYEE OF THE CONTRACTOR WITH KNOWLEDGE OF THE ACTIVITY / PROCESS WHERE THE WASTE WAS GENERATED. ALL HAZARDOUS WASTE WILL BE TURNED OVER TO THE GOV'T FOR DISPOSAL. IN ADDITION PROPER COORDINATION IS NEEDED WITH 88 CEG/CEIEC. QUESTIONS CONCERNING THE REQUIREMENTS FOR STORAGE AND DISPOSAL OF ANY HAZARDOUS MATERIALS CAN BE ADDRESSED BY THE 88 CEG/CEIEC HAZARDOUS MATERIALS PM AT KAREN.BEASON@US.AF.MIL OR 937-257-5899 OR 88 CEG/CEIEC HAZARDOUS WASTE PM, MARIA.CRUSET@US.AF.MIL OR 937-257-0023.

24. UPON COMPLETION, ALL EXPOSED SURFACES IN EACH ABATEMENT WORK AREA MUST BE MADE FREE OF ALL VISIBLE DUST AND DEBRIS VIA THE USE AND APPLICATION OF THE ENGINEERING AND WORK PRACTICE CONTROLS AND PROCEDURES SPECIFIED. THE ABSENCE OF FIBERS IN EACH WORK AREA WILL BE VERIFIED AND DOCUMENTED BY USE OF AN AGGRESSIVE AIR SAMPLING METHOD, PHASE-CONTRAST MICROSCOPY (PCM) AND TRANSMISSION ELECTRON MICROSCOPY (TEM). THE CONTRACTOR'S FAILURE TO MEET THE SPECIFIED CLEARANCE CRITERIA WILL REQUIRE HIM TO RECLEAN AND RETEST AT HIS OWN EXPENSE.

25. ALL ASBESTOS ABATEMENT WORK MAY BE DONE DURING NORMAL WORKING HOURS UNLESS THE AREA IS A COMMON ACCESS EGRESS CORRIDOR AND THEN THE WORK MUST BE DONE AFTER NORMAL WORKING HOURS (1600-2400) OR WEEKENDS.

26. THE OFFICE AREAS OUTSIDE OF CONSTRUCTION WILL REMAIN OCCUPIED BY WPAFB DURING CONSTRUCTION. CONTRACTOR MUST PROVIDE CRITICAL BARRIER TO PREVENT AIRBORNE ASBESTOS IN A WORK AREA FROM MIGRATING TO AN ADJACENT AREA. SEE H-102_5 FOR CONSTRUCTION AREA LIMITS.

27. CONTRACTOR MUST SEAL AND PROTECT ALL HVAC SYSTEM, SUPPLY AND RETURN AIR CONNECTING DUCT. ALL AIR HANDLING UNITS WILL NEED TO BE ISOLATED OR SHUT DOWN TO MEET SPECIFICATION SECTION 01 35 43. ALL VENTILATION EXHAUST AIR TO THE OUTSIDE MUST BE HEPA FILTERED DURING ABATEMENT.

28. ALL EXISTING OFFICE FURNITURE AND EQUIPMENT MUST BE REMOVED AND STORED BY CONTRACTOR PRIOR TO ABATEMENT WORK.

29. PRIOR TO BEGINNING MODIFICATION TO BLDG. 856 NOTIFICATION OF DEMOLITION AND MODIFICATION IS REQUIRED TO THE REGIONAL AIR POLLUTION AND CONTROL AGENCY (RAPCA) A MINIMUM OF 10 CALENDAR DAYS PRIOR TO BEGINNING CONSTRUCTION.

30. SOIL DISTURBANCE DURING THIS PROJECT, INCLUDING EQUIPMENT STAGING AREAS, WILL REQUIRE EROSION CONTROL MEASURES. FOR PROJECTS THAT DISTURB LESS THAN AN ACRE OF SOIL, AN EROSION CONTROL PLAN IS REQUIRED PRIOR TO SOIL DISTURBANCE. FOR PROJECTS THAT DISTURB MORE THAN AN ACRE, A NOTICE OF INTENT (NOI) MUST BE APPROVED BY THE OHIO EPA PRIOR TO ANY SOIL BEING DISTURBED AS WELL AS A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) APPROVED BY 88 CEG/CEIEA. PLEASE CONTACT THE 88 CEG/CEIEA WATER PM MIKE VAUGHN, (937-257-8028 OR MICHAEL.VAUGHN.3@US.AF.MIL) FOR ADDITIONAL INFORMATION.

31. IF ANY REFRIGERANT-CONTAINING EQUIPMENT SCHEDULED FOR NEW INSTALLATION, INCLUDING WATER COOLERS, THEY MUST UTILIZE AN HFC REFRIGERANT. CFC AND HCFC REFRIGERANTS ARE NOT AUTHORIZED FOR NEW EQUIPMENT INSTALLATION. FOR ADDITIONAL INFORMATION PLEASE CONTACT THE 88 CEG/CEIEA AIR PROGRAM MR. CHET POWERS AT 937-257-3349 OR CHET.POWERS@US.AF.MIL.

32. SUBMIT A REFRIGERANT RECORD WITHIN ONE DAY OF COMPLETION OF WORK INVOLVING REFRIGERANTS TO THE 88 CEG/CEIEA AIR PROGRAM, CHET POWERS AT 937-257-3349 OR CHET.POWERS@US.AF.MIL.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: N. LASHLEY
DRAWN BY: A. TUNGSETH
CHECKED BY: G. JOHNSON
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL.
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

HAZARDOUS BUILDING MATERIALS PLAN NOTES

SHEET ID

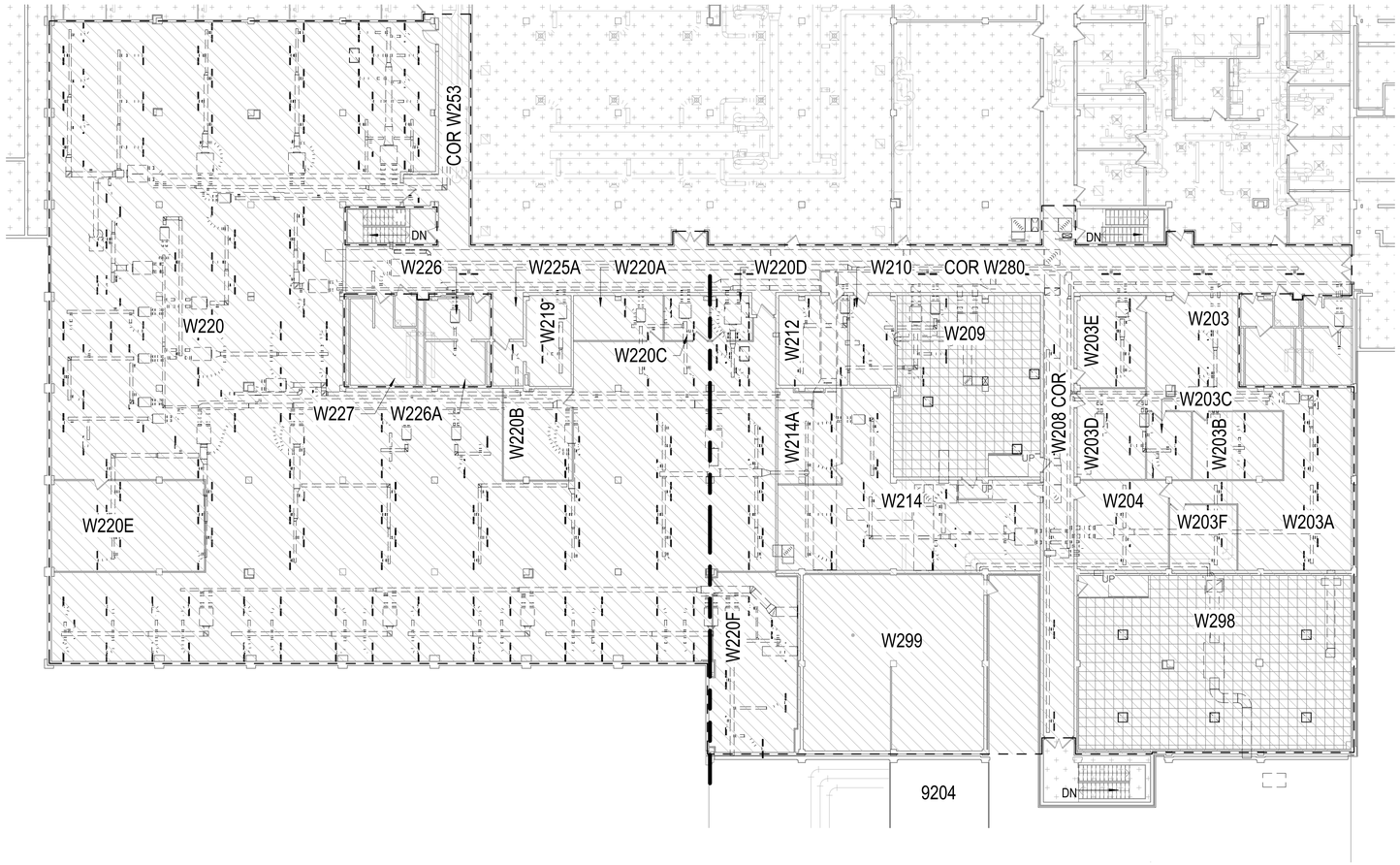
**H-101_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000





ARIMS: 200A Disposition: Maintain for 15 yrs after construction




**LEGEND:**

- CONSTRUCTION AREA LIMITS
- PROJECT AREA

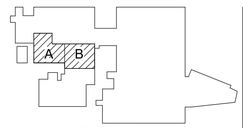
**SCOPE LEGEND**

- NOT IN SCOPE

A1 HAZARDOUS BUILDING MATERIALS - ACM
SCALE: 1/16" = 1'-0"

PLAN NORTH

0 8' 16' 32'
SCALE IN FEET




KEYPLAN
NOT TO SCALE

**GENERAL NOTES:**

1. APPROXIMATELY 1,300 SQUARE FEET OF CATEGORY II ACM DUCT INSULATION WRAP AND ADHESIVE ASSOCIATED WITH AHU-5 IS ANTICIPATED TO BE REMOVED AS PART OF THIS PROJECT.
2. DAMAGE PIPE JOINTS AND INSULATION AROUND THE PIPES WERE OBSERVED IN MECHANICAL ROOM W299 (PIPING ASSOCIATED WITH AHU-5). 5 PIPE JOINTS/FITTINGS AND 36 LINEAR FEET OF CATEGORY II ACM PIPING WERE NOTED IN THIS LOCATION AND WILL BE REMOVED AS PART OF THIS PROJECT.
3. THERE IS 10 SQUARE FEET OF ASSUMED ACM VIBRATION CLOTH AND 10 SQUARE FEET OF ASSUMED ACM GASKETS ASSOCIATED WITH THE REMOVAL OF AHU-5.
4. THERE IS ONE ELECTRICAL BOX ASSOCIATED WITH AHU-5 WHICH CONTAINS ~100 SQUARE FEET OF TRANSITE PANEL THAT WILL BE REMOVED AS PART OF THIS PROJECT.
5. CATEGORY II ACM MASTIC ASSOCIATED WITH AHU-5 WAS DETERMINED TO BE PRESENT WITHIN/ON THE UNIT. THE FOLLOWING WERE TYPES OF MASTIC IDENTIFIED:

   • YELLOW DUCT MASTIC – ~15 SQUARE FEET APPLIED ON AHU-5 DUCT TRANSITION SEAM
   • GRAY DUCT MASTIC – ~25 SQUARE FEET APPLIED ON AHU-5 SEAMS OF THE ENTIRE UNIT

   THESE MATERIALS WILL NEED TO BE REMOVED AS PART OF THIS MODIFICATION PROJECT.
6. CATEGORY II ACM WHITE ADHESIVE (~71 SQUARE FEET) AND GRAY CAULK (~10.25 SQUARE FEET) WERE DETERMINED TO BE PRESENT ON THE VAV BOXES THROUGHOUT THE MODIFICATION AREAS AND WILL NEED TO BE REMOVED AS PART OF THIS MODIFICATION PROJECT.
7. REMOVAL AND DISPOSAL IN ACCORDANCE WITH SPECIFICATION SECTION 01 35 43.
8. ASBESTOS CONTAMINATED BUILDING COMPONENTS ARE NOT REGULATED ASBESTOS CONTAINING MATERIALS (RACM). HOWEVER, ALL MODIFICATION / DEMOLITION WORK IMPACTING THESE COMPONENTS MUST BE PERFORMED IN ACCORDANCE WITH OSHA ASBESTOS STANDARD 29 CFR 1926.1101.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: N. LASHLEY
DRAWN BY: A. TUNGSETH
CHECKED BY: G. JOHNSON
SUBMITTED BY: S. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
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US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

HAZARDOUS BUILDING MATERIALS SECOND FLOOR PLAN - ACM

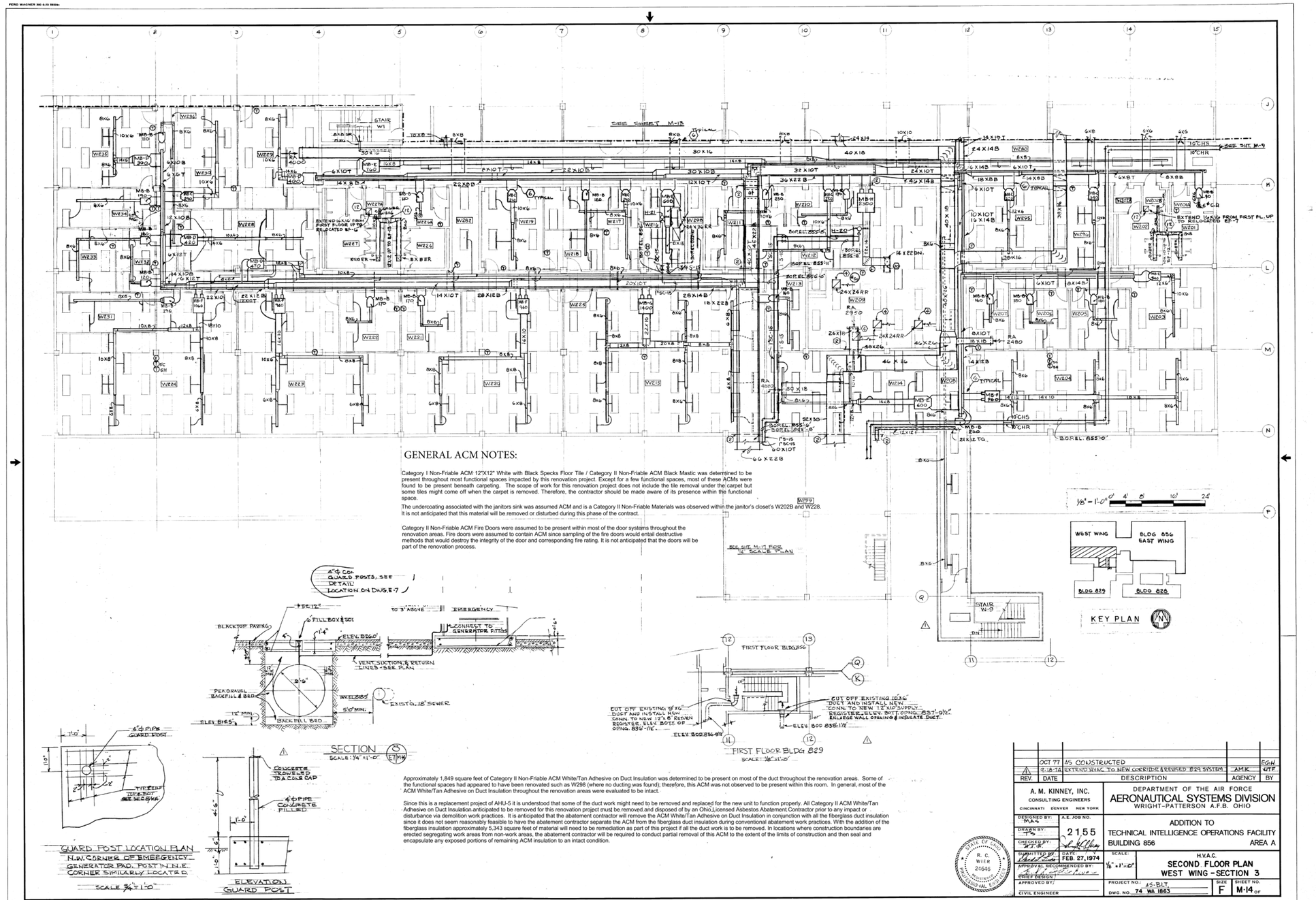
SHEET ID
**H-102_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




## GENERAL ACM NOTES:

Category I Non-Friable ACM 12"X12" White with Black Specks Floor Tile / Category II Non-Friable ACM Black Mastic was determined to be present throughout most functional spaces impacted by this renovation project. Except for a few functional spaces, most of these ACMs were found to be present beneath carpeting. The scope of work for this renovation project does not include the tile removal under the carpet but some tiles might come off when the carpet is removed. Therefore, the contractor should be made aware of its presence within the functional space.

The undercoating associated with the janitors sink was assumed ACM and is a Category II Non-Friable Materials was observed within the janitor's closet's W202B and W228. It is not anticipated that this material will be removed or disturbed during this phase of the contract.

Category II Non-Friable ACM Fire Doors were assumed to be present within most of the door systems throughout the renovation areas. Fire doors were assumed to contain ACM since sampling of the fire doors would entail destructive methods that would destroy the integrity of the door and corresponding fire rating. It is not anticipated that the doors will be part of the renovation process.

Approximately 1,849 square feet of Category II Non-Friable ACM White/Tan Adhesive on Duct Insulation was determined to be present on most of the duct throughout the renovation areas. Some of the functional spaces had appeared to have been renovated such as W298 (where no ducting was found); therefore, this ACM was not observed to be present within this room. In general, most of the ACM White/Tan Adhesive on Duct Insulation throughout the renovation areas were evaluated to be intact.

Since this is a replacement project of AHU-5 it is understood that some of the duct work might need to be removed and replaced for the new unit to function properly. All Category II ACM White/Tan Adhesive on Duct Insulation anticipated to be removed for this renovation project must be removed and disposed of by an Ohio Licensed Asbestos Abatement Contractor prior to any impact or disturbance via demolition work practices. It is anticipated that the abatement contractor will remove the ACM White/Tan Adhesive on Duct Insulation in conjunction with all the fiberglass duct insulation since it does not seem reasonably feasible to have the abatement contractor separate the ACM from the fiberglass duct insulation during conventional abatement work practices. With the addition of the fiberglass insulation approximately 5,343 square feet of material will need to be remediation as part of this project if all the duct work is to be removed. In locations where construction boundaries are erected segregating work areas from non-work areas, the abatement contractor will be required to conduct partial removal of this ACM to the extent of the limits of construction and then seal and encapsulate any exposed portions of remaining ACM insulation to an intact condition.

| REV. | DATE | DESCRIPTION | AGENCY | BY |
|---|---|---|---|---|
| | OCT 77 | AS CONSTRUCTED | | EGH |
| 1 | 9-18-74 | EXTEND HVAC TO NEW CORRIDOR & REVISED B29 SYSTEM | AMK | MTF |

A. M. KINNEY, INC. CONSULTING ENGINEERS — CINCINNATI DENVER NEW YORK

DEPARTMENT OF THE AIR FORCE
AERONAUTICAL SYSTEMS DIVISION
WRIGHT-PATTERSON A.F.B. OHIO

DESIGNED BY: MAS
DRAWN BY: TJS
CHECKED BY: W.J.W.
SUBMITTED BY: [signature] DATE: FEB. 27, 1974
APPROVAL RECOMMENDED BY: [signature] CHIEF DESIGN
APPROVED BY: CIVIL ENGINEER

A.E. JOB NO. 2155

ADDITION TO
TECHNICAL INTELLIGENCE OPERATIONS FACILITY
BUILDING 856 AREA A

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

H.V.A.C.
SECOND FLOOR PLAN
WEST WING - SECTION 3

PROJECT NO.: 45-BLT
DWG. NO. 74 WA 1863
SIZE: F
SHEET NO.: M-14 OF

R. C. WIER 21648 REGISTERED PROFESSIONAL ENGINEER STATE OF OHIO

SEQUENCE NO. 172 OF 206

102172

FOR REFERENCE ONLY

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: N. LASHLEY
DRAWN BY: A. TUNGSETH
CHECKED BY: G. JOHNSON
SUBMITTED BY: G. JOHNSON
SIZE: 34X22
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SOLICITATION NO.:
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US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

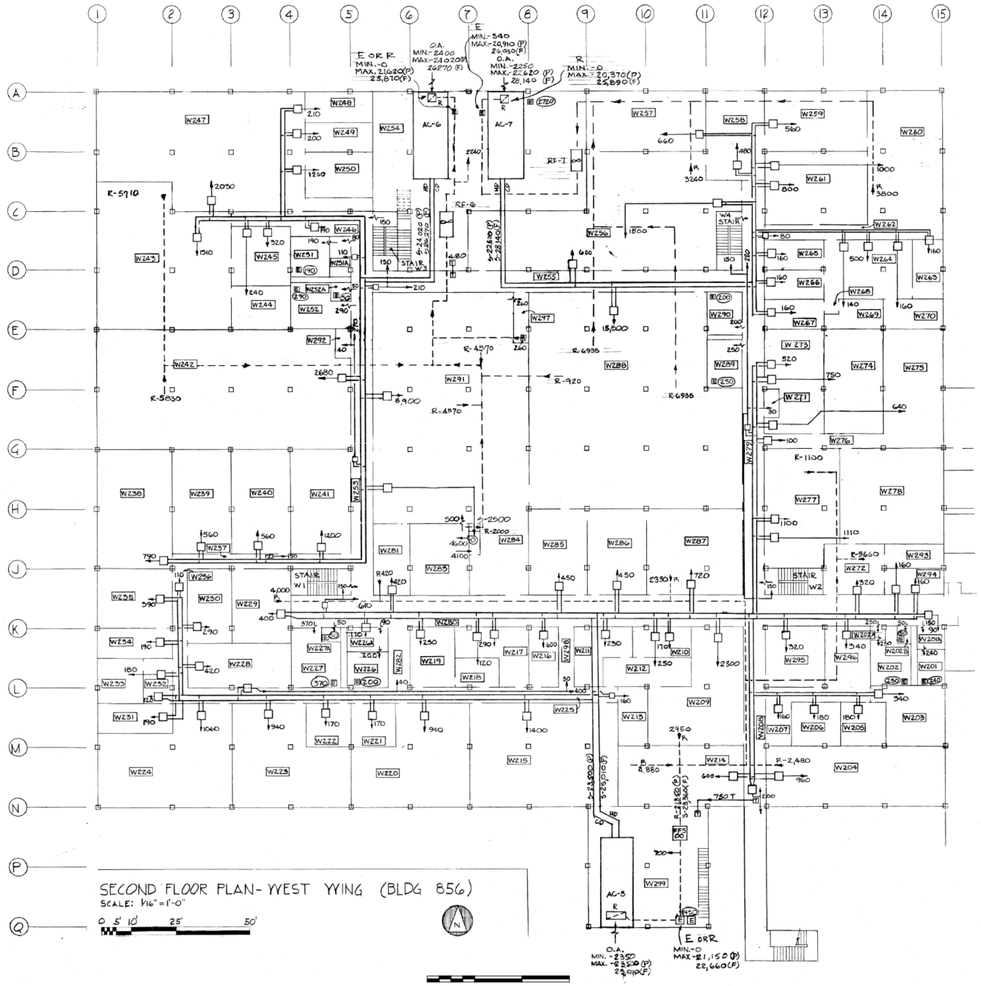
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

REFERENCE - SECOND FLOOR PLAN WEST WING

SHEET ID
H-103_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI




SECOND FLOOR PLAN- WEST WING (BLDG 856)

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

0 5' 10' 25' 50'

## GENERAL SHEET NOTES

APPROXIMATLY 1,300 SQUARE FEET OF CATEGORY II ACM DUCT INSULATION WRAP AND ADHESIVE ASSOICATED WITH AHU #5 IS ANTICIPATED TO BE REMOVED AS PART OF THIS PROJECT.

DAMAGE PIPE JOINTS AND INSULATION AROUND THE PIPES WERE OBSERVED IN MECHANICAL ROOM W299 (PIPING ASSOCIATED WITH AHU#5). 5 PIPE JOINTS/FITTINGS AND 36 LINEAR FEET OF CATEGORY II ACM PIPING WERE NOTED IN THIS LOCATION AND WILL BE REMOVED AS PART OF THIS INVESTIGATION.

THERE IS 10 SQUARE FEET OF ASSUMED ACM VIBRATION CLOTH ASSOCIATED WITH THE REMOVAL OF AHU-5.

THERE IS ONE ELECTRICAL BOX ASSOCIATED WITH AHU-5 WHICH CONTAINS ~100 SQUARE FEET OF TRANSITE PANEL THAT WILL BE REMOVED AS PART OF THIS PROJECT.

CATEGORY II ACM MASTIC ASSOCIATED WITH AHU #5 WAS DETERMINED TO BE PRESENT WITHIN/ON THE UNIT. THE FOLLOWING WERE TYPES OF MASTIC IDENTIFED:

- YELLOW DUCT MASTIC – ~15 SQUARE FEET APPLIED ON AHU #5 DUCT TRANSITION SEAM
- GRAY DUCT MASTIC – ~25 SQUARE FEET APPLIED ON AHU #5 SEAMS OF THE ENTIRE UNIT

THESE MATERILAS WILL NEED TO BE REMOVED AS PART OF THIS RENOVATION PROJECT.

CATEGORY II ACM WHITE ADHESIVE (~71 SQUARE FEET) AND GRAY CAULK (~10.25 SQUARE FEET) WERE DETERMINED TO BE PRESENT ON THE VAV BOXES THROUGHOUT THE RENOVATION AREAS AND WILL NEED TO BE REMOVED AS PART OF THIS RENOVATION PROJECT.

AC-6

| ROOM NO. | SUPPLY AIR DEVICES QUANTITY | TYPE | CFM EACH DESIGN/ACTUAL | RETURN AIR DEVICES NO. | TYPE | CFM EACH DESIGN/ACTUAL | EXHAUST AIR DEVICES NO. | TYPE | CFM EACH DESIGN/ACTUAL |
|---|---|---|---|---|---|---|---|---|---|
| W237 | 3 | A | 50 | | | | | | |
| W238 | 11 | A | 72 | 20 | C | 39 | | | |
| W239 | 7 | A | 80 | 14 | C | 40 | | | |
| W240 | 7 | A | 80 | 14 | C | 40 | | | |
| W241 | 14 | A | 86 | 14 | C | 40 | | | |
| | | | | 1 | F | 640 | | | |
| W242 | 35 | A | 77 | 67 | C | 40 | | | |
| W243 | 22 | A | 69 | 41 | C | 37 | | | |
| W244 | 4 | A | 60 | 6 | C | 40 | | | |
| W245 | 4 | A | 80 | 8 | C | 40 | | | |
| W246 | 3 | A | 63 | | | | | | |
| W247 | 29 | A | 70 | 51 | C | 40 | | | |
| W248 | 3 | A | 70 | 4 | C | 53 | | | |
| W249 | 3 | A | 67 | 4 | C | 50 | | | |
| W250 | 8 | B | 150 | 8 | C | 50 | | | |
| | | | | 1 | F | 800 | | | |
| W251 | | | | | | | 1 | G | 190 |
| W251A | 1 | E | 110 | | | | | | |
| W252 | | | | | | | 1 | G | 290 |
| W252A | | | | | | | 1 | G | 50 |
| W253 | 5 | A | 54 | | | | | | |
| W254 | 1 | K | 2240 | | | | 1 | G | 2720 |
| | | | | | | | 1 | H | 480 |
| W255 | 4 | A | 53 | | | | 1 | H | 480 |
| W293 | 14 | D | 328 | 20 | N | 205 | | | |
| * W291 | 46 | M | 194 | 81 | C | 50 | | | |
| | | | | 4 | F | 1270 | | | |
| W292 | 1 | K | 40 | | | | | | |
| W297 | | | | | | | 1 | F | 260 |
| STAIR W3 | 1 | K | 15 | | | | | | |

AC-7

| ROOM NO. | SUPPLY AIR DEVICES QUANTITY | TYPE | CFM EACH DESIGN/ACTUAL | RETURN AIR DEVICES NO. | TYPE | CFM EACH DESIGN/ACTUAL | EXHAUST AIR DEVICES NO. | TYPE | CFM EACH DESIGN/ACTUAL |
|---|---|---|---|---|---|---|---|---|---|
| W256 | 8 | A | 75 | 52 | C | 40 | | | |
| | 19 | A | 79 | | | | | | |
| W257 | 8 | A | 83 | 16 | C | 41 | | | |
| W258 | 6 | A | 80 | 12 | C | 40 | | | |
| W259 | 9 | A | 92 | 14 | C | 35 | | | |
| W260 | 13 | A | 77 | 25 | C | 100 | | | |
| W261 | 10 | A | 80 | 18 | C | 100 | | | |
| W262 | 1 | A | 80 | 6 | F | 160 | | | |
| W263 | 3 | A | 53 | 4 | C | 40 | | | |
| ** W264 | 8 | A | 63 | 13 | C | 38 | | | |
| W265 | 3 | A | 53 | 4 | C | 40 | | | |
| W266 | 3 | A | 53 | 4 | C | 40 | | | |
| W267 | 3 | A | 53 | 4 | C | 40 | | | |
| W269 | 3 | A | 46 | 3 | C | 46 | | | |
| W270 | 3 | A | 53 | 4 | C | 40 | | | |
| | 100 | M | 155 | 92 | C | 40 | | | |
| W288 | | | | 8 | F | 400 | | | |
| | | | | 9 | F | 958 | | | |

* INCLUDES W284
** INCLUDES W268

AC-5

| ROOM NO. | SUPPLY AIR DEVICES QUANTITY | TYPE | CFM EACH DESIGN/ACTUAL | RETURN AIR DEVICES NO. | TYPE | CFM EACH DESIGN/ACTUAL | EXHAUST AIR DEVICES NO. | TYPE | CFM EACH DESIGN/ACTUAL |
|---|---|---|---|---|---|---|---|---|---|
| W201 | | | | | | | 1 | G | 240 |
| W201A | 1 | E | 90 | | | | | | |
| W202 | | | | | | | 1 | G | 250 |
| W202A | | | | | | | | | |
| W201B | | | | | | | 1 | G | 50 |
| W203 | 1 | A | 85 | 8 | C | 43 | | | |
| W204 | 12 | A | 80 | 24 | C | 40 | | | |
| W205 | 4 | A | 45 | 5 | C | 36 | | | |
| W206 | 4 | A | 45 | 4 | C | 45 | | | |
| W207 | 2 | A | 80 | 4 | C | 40 | | | |
| ⚠ W208 | 5 | A | 90 | | | | 1 | H | 750 |
| | 15 | M | 155 | 18 | C | 40 | | | |
| W209 | | | | 4 | F | 395 | | | |
| W210 | 2 | A | 85 | 4 | C | 43 | | | |
| W211 | 4 | A | 58 | 6 | C | 38 | | | |
| W212 | 4 | A | 63 | 6 | C | 42 | | | |
| W213 | 2 | A | 80 | 4 | C | 40 | | | |
| W214 | 8 | A | 75 | 16 | C | 37 | | | |
| W215 | 18 | A | 78 | 35 | C | 40 | | | |
| | | | | 4 | C | 40 | | | |
| W216 | 4 | B | 150 | 2 | F | 220 | | | |
| W217 | 5 | A | 58 | 7 | C | 42 | | | |
| W218 | 2 | A | 60 | 3 | C | 40 | | | |
| W219 | 4 | A | 63 | 6 | C | 42 | | | |
| W220 | 10 | A | 78 | 24 | C | 39 | | | |
| | 1 | B | 160 | | | | | | |
| W221 | 2 | A | 85 | 4 | C | 43 | | | |
| W222 | 2 | A | 85 | 5 | C | 34 | | | |
| W223 | 10 | A | 78 | 23 | C | 41 | | | |
| | 1 | B | 160 | | | | | | |
| W224 | 11 | A | 82 | 27 | C | 39 | | | |
| | 1 | B | 164 | | | | | | |
| W225 | 7 | A | 57 | | | | | | |
| W226 | | | | | | | 1 | G | 200 |
| W226A | 1 | E | 110 | | | | | | |
| W227 | | | | | | | 1 | G | 370 |
| W227A | | | | | | | 1 | G | 50 |
| W228 | 6 | A | 70 | 11 | C | 38 | | | |
| W229 | 5 | A | 80 | 10 | C | 40 | | | |
| W230 | 5 | A | 58 | 7 | C | 41 | | | |
| W231 | 3 | A | 63 | 5 | C | 38 | | | |
| W232 | 2 | A | 60 | 3 | C | 40 | | | |
| W233 | 3 | A | 60 | 4 | C | 45 | | | |
| W234 | 3 | A | 63 | 5 | C | 38 | | | |
| W235 | 1 | A | 78 | 10 | C | 39 | | | |
| | 2 | B | 156 | | | | | | |
| W236 | 2 | A | 55 | | | | | | |
| W271 | 1 | K | 30 | | | | | | |
| W272 | 4 | A | 80 | 6 | C | 53 | | | |
| W273 | 7 | A | 74 | 13 | F | 160 | | | |
| W274 | 10 | A | 75 | 14 | C | 35 | | | |
| W275 | 8 | A | 80 | 2 | F | 100 | | | |
| W276 | 2 | A | 50 | 16 | C | 40 | | | |
| W277 | 5 | B | 137 | 19 | C | 40 | | | |
| | | | | 2 | F | 170 | | | |
| W278 | 14 | A | 79 | 21 | C | 40 | | | |
| W279 | 4 | A | 55 | 2 | F | 135 | | | |
| W280 | 10 | A | 61 | | | | | | |
| W281 | 2 | A | 70 | 4 | C | 40 | | | |
| | 2 | B | 140 | 1 | F | 240 | | | |
| W282 | 1 | A | 40 | | | | | | |
| W285 | 4 | A | 75 | 10 | C | 45 | | | |
| | 1 | B | 150 | | | | | | |
| W286 | 4 | A | 75 | 10 | C | 45 | | | |
| | 1 | B | 150 | | | | | | |
| W287 | 10 | A | 72 | 15 | C | 48 | | | |
| W289 | | | | | | | 1 | G | 250 |
| W290 | | | | | | | 1 | G | 200 |
| W293 | 2 | A | 80 | 4 | C | 40 | | | |
| W294 | 2 | A | 80 | 2 | F | 40 | | | |
| W295 | 4 | A | 80 | 8 | C | 40 | | | |
| W296 | 3 | B | 113 | 9 | C | 38 | | | |
| W298 | 1 | A | 30 | | | | | | |
| | 1 | K | 700 | | | | | | |
| W299 | | | | | | | 1 | G | 1450 |
| | | | | | | | 1 | H | 750 |
| STAIR W1 | 1 | B | 150 | | | | | | |
| STAIR W2 | 1 | B | 150 | | | | | | |
| STAIR W4 | 1 | B | 150 | | | | | | |

## LEGEND
(AIR FLOW DIAGRAMS ONLY)

- S SUPPLY AIR
- T TRANSFER AIR
- HD HOT DECK SUPPLY AIR
- CD COLD DECK SUPPLY AIR
- E EXHAUST (200)
- R RETURN -(RETURN THRU EACH LIGHTING TROFFER UNLESS OTHERWISE INDICATED) – – – – –
- —□— INDICATES MIXING BOXES FOR AREAS SHOWN(NOT NECESSARILY THE NUMBER OF BOXES)
- O.A. OUTSIDE AIR
- RF RETURN FAN
- AC AIR CONDITIONING UNIT
- W299 ROOM NUMBER
- 1400 NUMBERS SHOWN ARE CFM (CUBIC FEET PER MINUTE OF AIR)
- P PRESENT DESIGN
- F FUTURE DESIGN(EQUIPMENT AND MAIN DUCTS SIZED FOR 25% FUTURE INCREASE OF INTERNAL EQUIPMENT HEAT LOADS ONLY BRANCH DUCT SYSTEMS SIZED FOR PRESENT.)

| REV. | DATE | DESCRIPTION | AGENCY | BY |
|---|---|---|---|---|
| | OCT 77 | AS CONSTRUCTED | | EGH |
| ⚠ 1 | 1-15-14 | MODIFIED SUPPLY TO CORRIDOR EXTENSION & STAIR #3 | AMK | WTF |

A. M. KINNEY, INC.
CONSULTING ENGINEERS
CINCINNATI DENVER NEW YORK

DEPARTMENT OF THE AIR FORCE
AERONAUTICAL SYSTEMS DIVISION
WRIGHT-PATTERSON A.F.B. OHIO

DESIGNED BY: A.E. JOB NO. 2155
DRAWN BY:
CHECKED BY:
SUBMITTED BY: DATE: FEB 27,1974
APPROVAL RECOMMENDED BY:
CHIEF DESIGN
APPROVED BY:
CIVIL ENGINEER

ADDITION TO
TECHNICAL INTELLIGENCE OPERATIONS FACILITY
BUILDING 856 AREA A

SCALE: NONE
H.V.A.C.
AIR FLOW DIAGRAM
SECOND FLOOR-WEST WING

PROJECT NO.: AS-BLT.
SIZE: F
SHEET NO.: M-5 OF
DWG. NO. 74 WA 1863

STATE OF OHIO R. C. WEIR 24646 PROFESSIONAL ENGINEER

SEQUENCE NO. 163 OF 206

102163

FOR REFERENCE ONLY

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
CONSULTING ENGINEER: MARVILLE DEER KING JR. PE
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

DESIGNED BY: N. LASHLEY
DRAWN BY: A. TUNGSETH
CHECKED BY: G. JOHNSON
SUBMITTED BY: G. JOHNSON
SIZE: 34X22

REPLACE AHU-5
PN: ZHTV-160060 / P2: 4699078
WRIGHT-PATTERSON AFB, OHIO

REFERENCE - SECOND FLOOR PLAN WEST WING

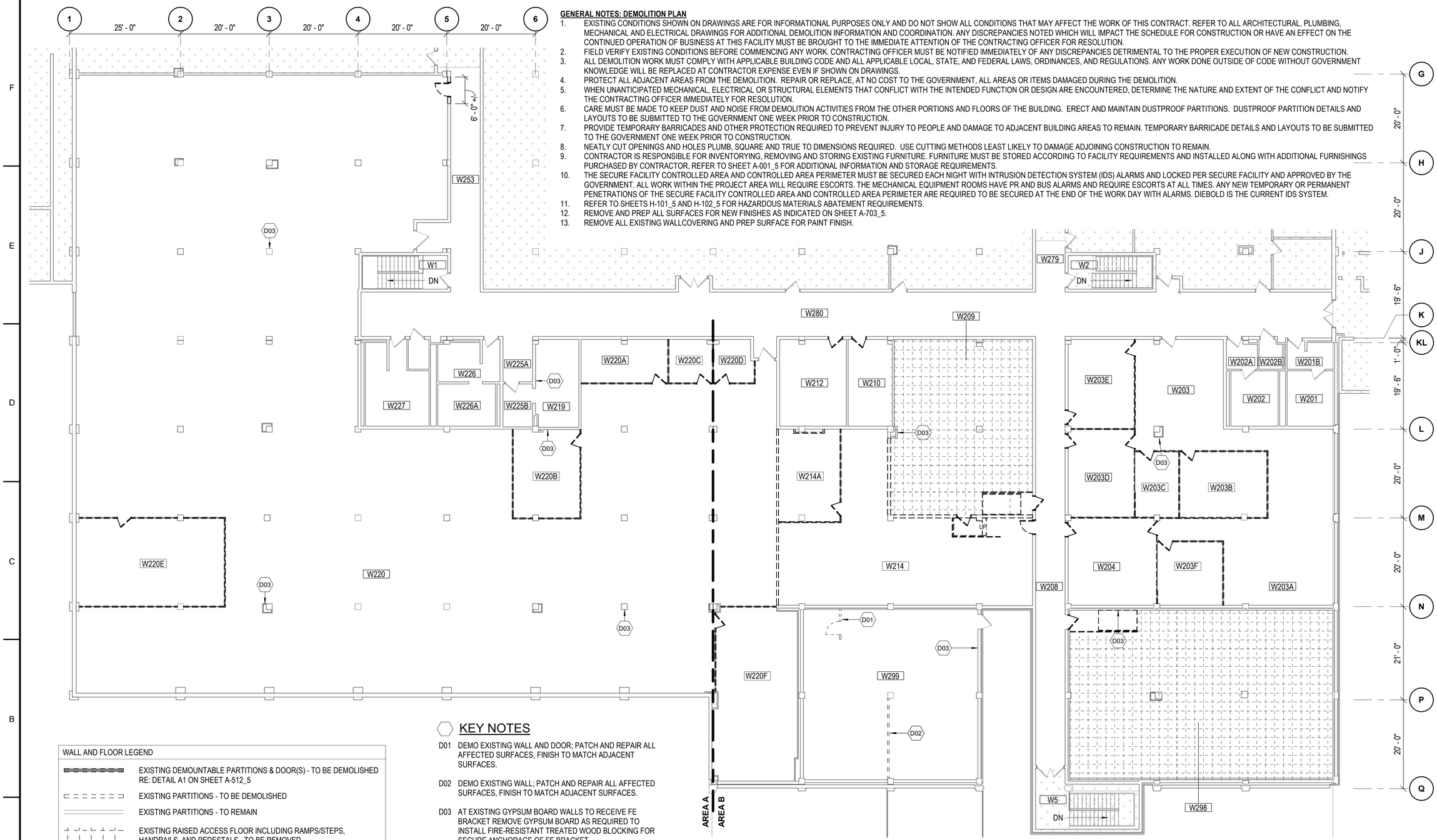
SHEET ID
H-104_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI

**GENERAL NOTES: DEMOLITION PLAN**

1. EXISTING CONDITIONS SHOWN ON DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT SHOW ALL CONDITIONS THAT MAY AFFECT THE WORK OF THIS CONTRACT. REFER TO ALL ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION AND COORDINATION. ANY DISCREPANCIES NOTED WHICH WILL IMPACT THE SCHEDULE FOR CONSTRUCTION OR HAVE AN EFFECT ON THE CONTINUED OPERATION OF BUSINESS AT THIS FACILITY MUST BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTING OFFICER FOR RESOLUTION.
2. FIELD VERIFY EXISTING CONDITIONS BEFORE COMMENCING ANY WORK. CONTRACTING OFFICER MUST BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES DETRIMENTAL TO THE PROPER EXECUTION OF NEW CONSTRUCTION.
3. ALL DEMOLITION WORK MUST COMPLY WITH APPLICABLE BUILDING CODE AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS, ORDINANCES, AND REGULATIONS. ANY WORK DONE OUTSIDE OF CODE WITHOUT GOVERNMENT KNOWLEDGE WILL BE REPLACED AT CONTRACTOR EXPENSE EVEN IF SHOWN ON DRAWINGS.
4. PROTECT ALL ADJACENT AREAS FROM THE DEMOLITION. REPAIR OR REPLACE, AT NO COST TO THE GOVERNMENT, ALL AREAS OR ITEMS DAMAGED DURING THE DEMOLITION.
5. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, DETERMINE THE NATURE AND EXTENT OF THE CONFLICT AND NOTIFY THE CONTRACTING OFFICER IMMEDIATELY FOR RESOLUTION.
6. CARE MUST BE MADE TO KEEP DUST AND NOISE FROM DEMOLITION ACTIVITIES FROM THE OTHER PORTIONS AND FLOORS OF THE BUILDING. ERECT AND MAINTAIN DUSTPROOF PARTITIONS. DUSTPROOF PARTITION DETAILS AND LAYOUTS TO BE SUBMITTED TO THE GOVERNMENT ONE WEEK PRIOR TO CONSTRUCTION.
7. PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTION REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDING AREAS TO REMAIN. TEMPORARY BARRICADE DETAILS AND LAYOUTS TO BE SUBMITTED TO THE GOVERNMENT ONE WEEK PRIOR TO CONSTRUCTION.
8. NEATLY CUT OPENINGS AND HOLES PLUMB, SQUARE AND TRUE TO DIMENSIONS REQUIRED. USE CUTTING METHODS LEAST LIKELY TO DAMAGE ADJOINING CONSTRUCTION TO REMAIN.
9. CONTRACTOR IS RESPONSIBLE FOR INVENTORYING, REMOVING AND STORING EXISTING FURNITURE. FURNITURE MUST BE STORED ACCORDING TO FACILITY REQUIREMENTS AND INSTALLED ALONG WITH ADDITIONAL FURNISHINGS PURCHASED BY CONTRACTOR, REFER TO SHEET A-001_5 FOR ADDITIONAL INFORMATION AND STORAGE REQUIREMENTS.
10. THE SECURE FACILITY CONTROLLED AREA AND CONTROLLED AREA PERIMETER MUST BE SECURED EACH NIGHT WITH INTRUSION DETECTION SYSTEM (IDS) ALARMS AND LOCKED PER SECURE FACILITY AND APPROVED BY THE GOVERNMENT. ALL WORK WITHIN THE PROJECT AREA WILL REQUIRE ESCORTS. THE MECHANICAL EQUIPMENT ROOMS HAVE PR AND BUS ALARMS AND REQUIRE ESCORTS AT ALL TIMES. ANY NEW TEMPORARY OR PERMANENT PENETRATIONS OF THE SECURE FACILITY CONTROLLED AREA AND CONTROLLED AREA PERIMETER ARE REQUIRED TO BE SECURED AT THE END OF THE WORK DAY WITH ALARMS. DIEBOLD IS THE CURRENT IDS SYSTEM.
11. REFER TO SHEETS H-101_5 AND H-102_5 FOR HAZARDOUS MATERIALS ABATEMENT REQUIREMENTS.
12. REMOVE AND PREP ALL SURFACES FOR NEW FINISHES AS INDICATED ON SHEET A-703_5.
13. REMOVE ALL EXISTING WALLCOVERING AND PREP SURFACE FOR PAINT FINISH.




## KEY NOTES

D01 DEMO EXISTING WALL AND DOOR; PATCH AND REPAIR ALL AFFECTED SURFACES, FINISH TO MATCH ADJACENT SURFACES.

D02 DEMO EXISTING WALL; PATCH AND REPAIR ALL AFFECTED SURFACES, FINISH TO MATCH ADJACENT SURFACES.

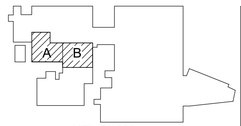
D03 AT EXISTING GYPSUM BOARD WALLS TO RECEIVE FE BRACKET REMOVE GYPSUM BOARD AS REQUIRED TO INSTALL FIRE-RESISTANT TREATED WOOD BLOCKING FOR SECURE ANCHORAGE OF FE BRACKET.

WALL AND FLOOR LEGEND

- EXISTING DEMOUNTABLE PARTITIONS & DOOR(S) - TO BE DEMOLISHED RE: DETAIL A1 ON SHEET A-512_5
- EXISTING PARTITIONS - TO BE DEMOLISHED
- EXISTING PARTITIONS - TO REMAIN
- EXISTING RAISED ACCESS FLOOR INCLUDING RAMPS/STEPS, HANDRAILS, AND PEDESTALS - TO BE REMOVED. IN ADDITION, REMOVE ALL ADHESIVES AND/OR PEDESTAL ATTACHMENTS TO THE EXISTING SLAB. PREP/REPAIR EXISTING SLAB FOR NEW FINISHES INDICATED

**SCOPE LEGEND**

NOT IN SCOPE




KEYPLAN
NOT TO SCALE

PLAN NORTH

A1 SECOND FLOOR PLAN - DEMOLITION
SCALE: 3/32" = 1'-0"

0 8' 16' 24'

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR PLAN - DEMOLITION

SHEET ID
AD101_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION

EXISTING CEILING GRID APPROXIMATE LOCATION

EXISTING ACOUSTICAL CEILING TO REMAIN

EXISTING ACOUSTICAL CEILING TO REMAIN

EXISTING CEILING GRID APPROXIMATE LOCATION

W253 W1 W279 W2 W280 W228 W226 W220A W220D W212 W210 W202B W201B W202A W201A W227 W226A W225B W219 W203E W203 W202 W201 W209 W203D W220B W214A W203C W203B W203C W204 W203F W203A W220E W220 W299 W298 W5

AREA A
AREA B

EXPOSED CEILING

EXISTING 2' x 4' ACOUSTICAL CEILING TILE

EXISTING PARTITIONS - TO BE DEMOLISHED

GYPSUM BOARD CEILING

TYPICAL EXISTING 5'-0" SQUARE ACOUSTIC LAY-IN CEILING MODULE OF (2) 1'-6" X 5'-0" LAY-IN BOARDS & (1) 2' X 4' LIGHT FIXTURE W/ 6" METAL EXTENSIONS OR (1) 2' X 5' LAY-IN BOARD. ALL TILE JOINTS ARE LAID OUT TO CL OF COLUMN GRID UNLESS OTHERWISE NOTED.

CEILING AREA - TO BE DEMOLISHED

CEILING AREA - ALREADY BEING REMOVED DUE TO HAZARDOUS MATERIAL ABATEMENT

**GENERAL NOTES:**

1. REFER TO SHEETS A-001_5 AND A-002_5 FOR SECURE AREA PERIMETER WALL LOCATIONS.
2. REFER TO ELECTRICAL AND MECHANICAL SHEETS FOR EXISTING FIXTURES AND DEVICES.

**SCOPE LEGEND**

NOT IN SCOPE

PLAN NORTH

KEYPLAN
NOT TO SCALE

A1 SECOND FLOOR REFLECTED CEILING PLAN - DEMOLITION
SCALE: 3/32" = 1'-0"

0 8' 16' 24'

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR REFLECTED CEILING PLAN - DEMOLITION

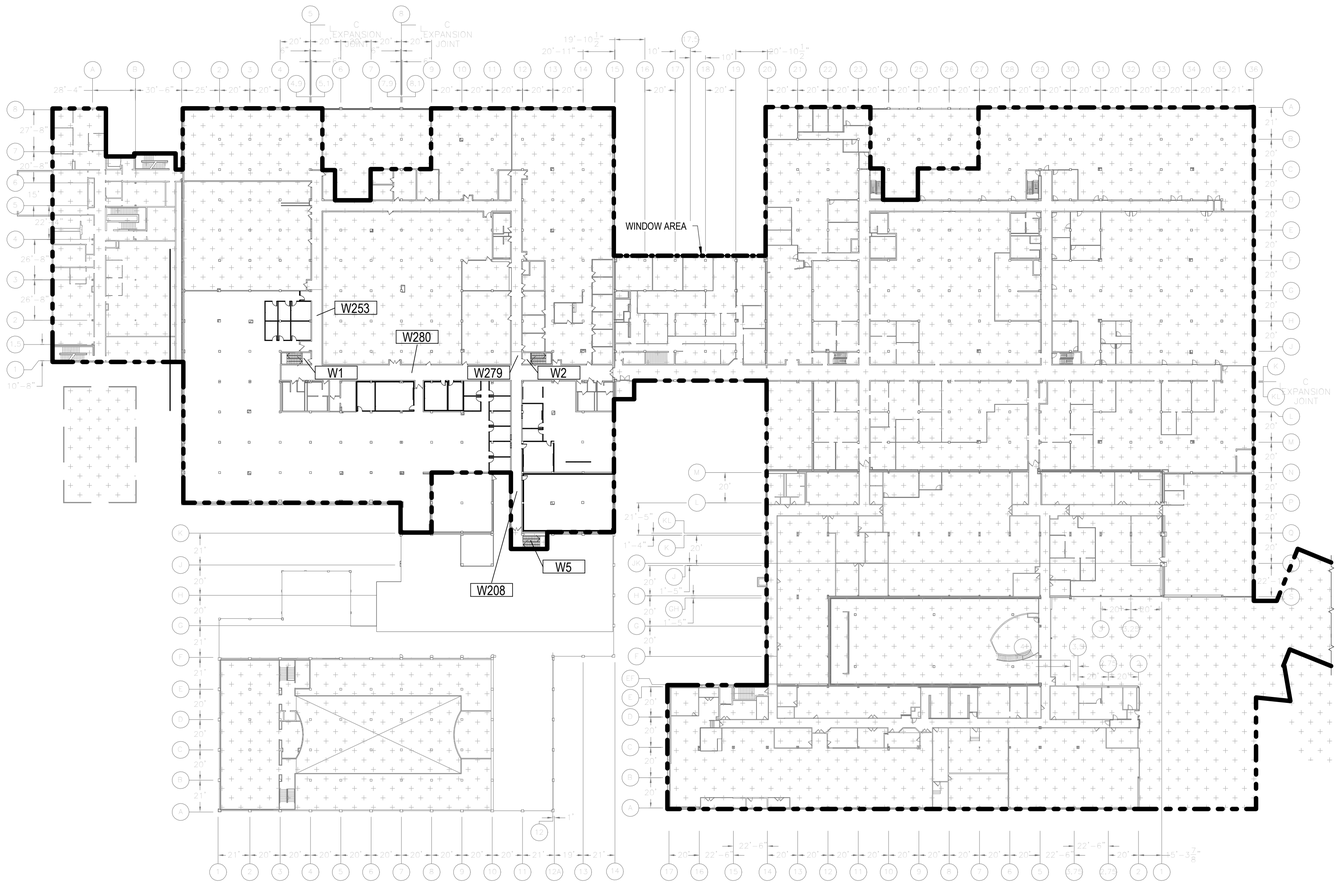
SHEET ID

**AD151_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




B1 LEVEL 2 AHU 5 - OVERALL 2ND FLOOR PLAN
SCALE: 1" = 50'-0"

PLAN NORTH

0 50' 100'

**GENERAL NOTES: SECURE WALLS**
1. REFER TO SHEETS A-001_5 AND A-002_5 FOR SECURE AREA PERIMETER WALL LOCATIONS.
2. REFER TO ELECTRICAL AND MECHANICAL SHEETS FOR EXISTING FIXTURES AND DEVICES.

**SCOPE LEGEND**

NOT IN SCOPE

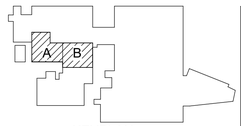
LINE TYPE LEGEND
- EXISTING WALL TO REMAIN
- NEW WALL
- SECURE AREA PERIMETER
- SECURE AREA WALL AT WINDOWS

**GENERAL NOTES: CONSTRUCTION LIMITATIONS:**

1. TEMPORARY SECURE STORAGE REQUIREMENTS: IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY SECURE STORAGE SPACE/TRAILER FOR THE FURNITURE AND EQUIPMENT. REFER TO ADDITIONAL INFORMATION AND STORAGE REQUIREMENTS BELOW.
   a. REFER TO H-SERIES SHEETS FOR ALL HAZARDOUS BUILDING MATERIAL, ASBESTOS/LEAD ABATEMENT, AND UNIVERSAL WASTE REQUIREMENTS.
   b. EXISTING FURNITURE FOR REFERENCE ONLY (TYPICAL). CONTRACTOR MUST FIELD VERIFY AND LABEL THE EXTENT OF ALL FURNITURE, EQUIPMENT, POWER POLES, COMPUTER POLES, CABLING WIRING AND DEMOUNTABLE PARTITIONS. CONTRACTOR MUST DISASSEMBLE, SORT FURNITURE FOR RE-USE, AND RE-ASSEMBLE AFTER CONSTRUCTION IS COMPLETE. LOCATION FOR STORAGE OF FURNITURE MUST BE DETERMINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
   c. CONTRACTOR IS RESPONSIBLE FOR INVENTORYING EACH ROOM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR MUST LABEL, RECORD, AND TAKE PHOTOS (CONTRACTOR MUST COORDINATE WITH GOVERNMENT TO TAKE PICTURES OF THE FACILITY) OF ALL EXISTING CONDITIONS TO ENSURE THAT THE FURNITURE, CABINETS, POWER, CCTV, CONFERENCE EQUIPMENT, ETC AND COMPUTER WIRING ARE REPLACED IN THE SAME LOCATIONS. CONTRACTOR'S FAILURE TO TAKE GOOD RECORDS WILL NOT BE THE GOVERNMENT'S RESPONSIBILITY.
   d. ALL FURNITURE WILL BE REMOVED FROM CONSTRUCTION AREA BY THE CONTRACTOR AND TURNED OVER TO NASIC. CONTRACTOR MUST STORE ALL FURNITURE TO BE RE-INSTALLED IN CONTRACTOR FURNISHED LOCKABLE TRAILERS ON WPAFB. CONTRACTOR MUST BEAR THE SOLE RESPONSIBILITY TO ENSURE THAT THE FURNITURE AND EQUIPMENT IS NOT DAMAGED, AND IS REINSTALLED WITH ASSOCIATED POWER POLES, COMPUTER POWER, COMPUTER FIBER, PHONES, ETC. IN THE SAME CONFIGURATION.

2. COMMON ACCESS/EGRESS CORRIDORS: STAIR W5; ROOMS W208, W253, W279 AND W280 MUST BE MAINTAINED AS COMMON ACCESS/EGRESS CORRIDORS THROUGHOUT THE CONSTRUCTION PERIOD FOR FACILITY PERSONNEL. THESE ROOMS WILL BE LIMITED TO CONTRACTOR WORK (IE. ABATEMENT, DEMOLITION, AND NEW WORK AS DEFINED HERE-IN) FROM THE HOURS OF 1600 TO 2400. THE CORRIDORS MUST BE CLEARED OF ALL CONSTRUCTION MATERIALS AND EQUIPMENT DURING THE HOURS OF 0500 TO 1600. CONTRACTOR MUST SCHEDULE THE CONSTRUCTION WORK ACCORDINGLY. CONTRACTOR MUST COORDINATE WITH CONTRACTING OFFICER AND SECURITY OFFICER FOR ALL CONSTRUCTION EFFORTS. THE FOLLOWING SYSTEMS MUST BE MAINTAINED AND FULLY FUNCTIONAL:
   a. SECURITY INTRUSION DETECTION
   b. SECURITY SURVEILLANCE
   c. SECURITY TURNSTILE AND ALL ASSOCIATED APPARATUS
   d. INTERCOM CALL BOX AT WEST ENTRANCE

3. CONTRACTOR MUST PROVIDE THE NECESSARY TEMPORARY SUPPORTING MEANS FOR THE FOLLOWING SYSTEMS TO MAINTAIN A FULLY FUNCTIONAL EGRESS CORRIDOR:
   a. HEATING AND VENTILATION (HVAC) SYSTEMS
   b. HVAC DIRECT DIGITAL CONTROL SYSTEM
   c. LIGHTING AND EGRESS EXIT LIGHTING SYSTEMS
   d. FIRE ALARM SYSTEMS
   e. FIRE SUPPRESSION SYSTEMS
   f. ELECTRICAL POWER TO SUPPORT ALL AFOREMENTIONED SYSTEMS.




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

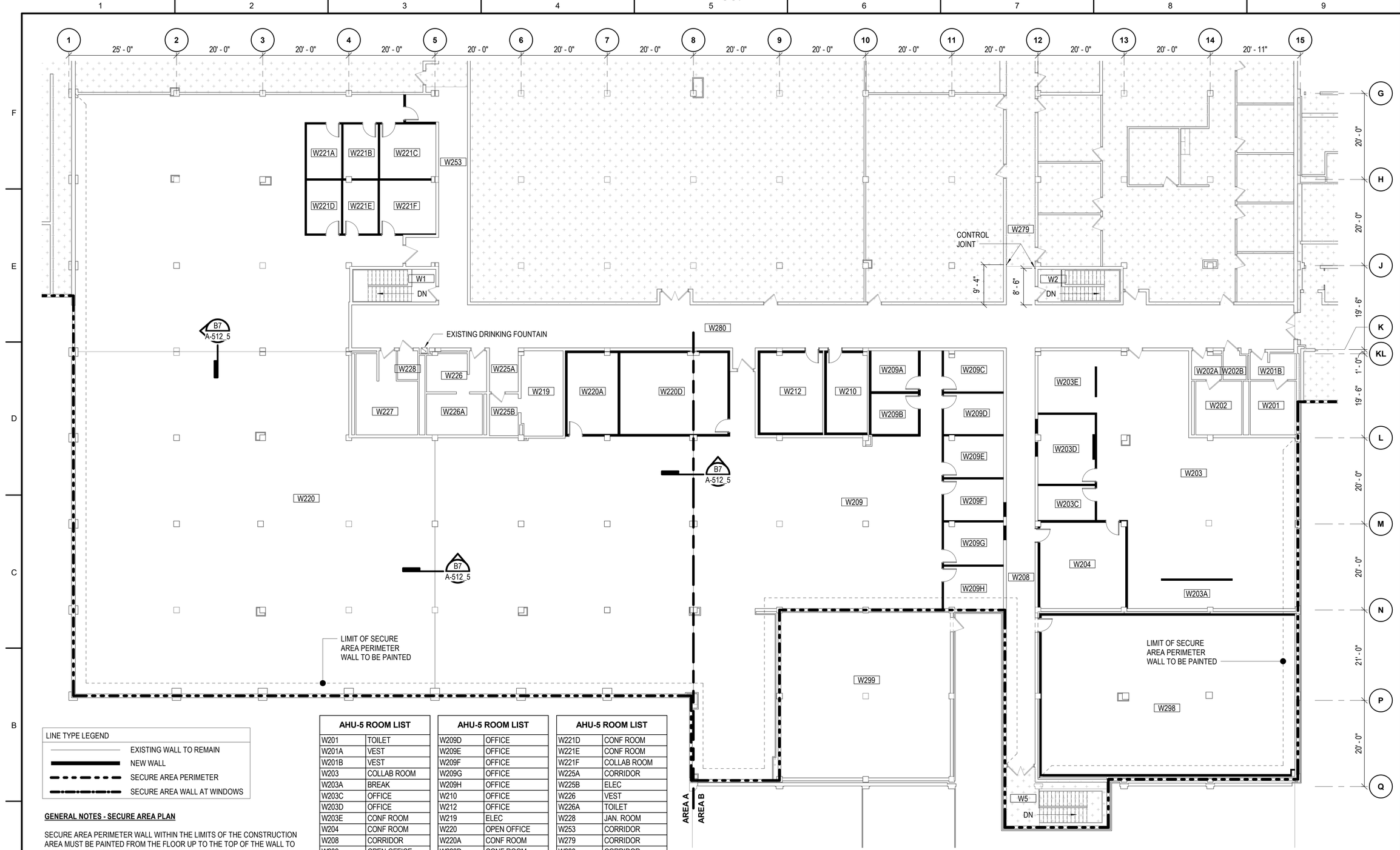
OVERALL SECOND FLOOR PLAN

SHEET ID
**A-001_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION




LINE TYPE LEGEND

- EXISTING WALL TO REMAIN
- NEW WALL
- SECURE AREA PERIMETER
- SECURE AREA WALL AT WINDOWS

**GENERAL NOTES - SECURE AREA PLAN**

SECURE AREA PERIMETER WALL WITHIN THE LIMITS OF THE CONSTRUCTION AREA MUST BE PAINTED FROM THE FLOOR UP TO THE TOP OF THE WALL TO THE FLOOR OR ROOF ABOVE INCLUDING ALL PORTIONS OF THE WALL ABOVE THE CEILING. SEE PLAN ABOVE FOR ADDITIONAL INFORMATION.

| AHU-5 ROOM LIST | |
|---|---|
| W201 | TOILET |
| W201A | VEST |
| W201B | VEST |
| W203 | COLLAB ROOM |
| W203A | BREAK |
| W203C | OFFICE |
| W203D | OFFICE |
| W203E | CONF ROOM |
| W204 | CONF ROOM |
| W208 | CORRIDOR |
| W209 | OPEN OFFICE |
| W209A | CONF ROOM |
| W209B | CONF ROOM |
| W209C | OFFICE |

| AHU-5 ROOM LIST | |
|---|---|
| W209D | OFFICE |
| W209E | OFFICE |
| W209F | OFFICE |
| W209G | OFFICE |
| W209H | OFFICE |
| W210 | OFFICE |
| W212 | OFFICE |
| W219 | ELEC |
| W220 | OPEN OFFICE |
| W220A | CONF ROOM |
| W220D | CONF ROOM |
| W221A | CONF ROOM |
| W221B | CONF ROOM |
| W221C | COLLAB ROOM |

| AHU-5 ROOM LIST | |
|---|---|
| W221D | CONF ROOM |
| W221E | CONF ROOM |
| W221F | COLLAB ROOM |
| W225A | CORRIDOR |
| W225B | ELEC |
| W226 | VEST |
| W226A | TOILET |
| W228 | JAN. ROOM |
| W253 | CORRIDOR |
| W279 | CORRIDOR |
| W280 | CORRIDOR |
| W298 | OPEN OFFICE |
| W299 | MECHANICAL |

**SCOPE LEGEND**

NOT IN SCOPE

PLAN NORTH

0 8' 16' 24'

KEYPLAN
NOT TO SCALE

B1 SECURE AREA SECOND FLOOR PLAN - NEW
SCALE: 3/32" = 1'-0"

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

US ARMY CORPS OF ENGINEERS
DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECURE AREA SECOND FLOOR PLAN - NEW

SHEET ID

**A-002_5**

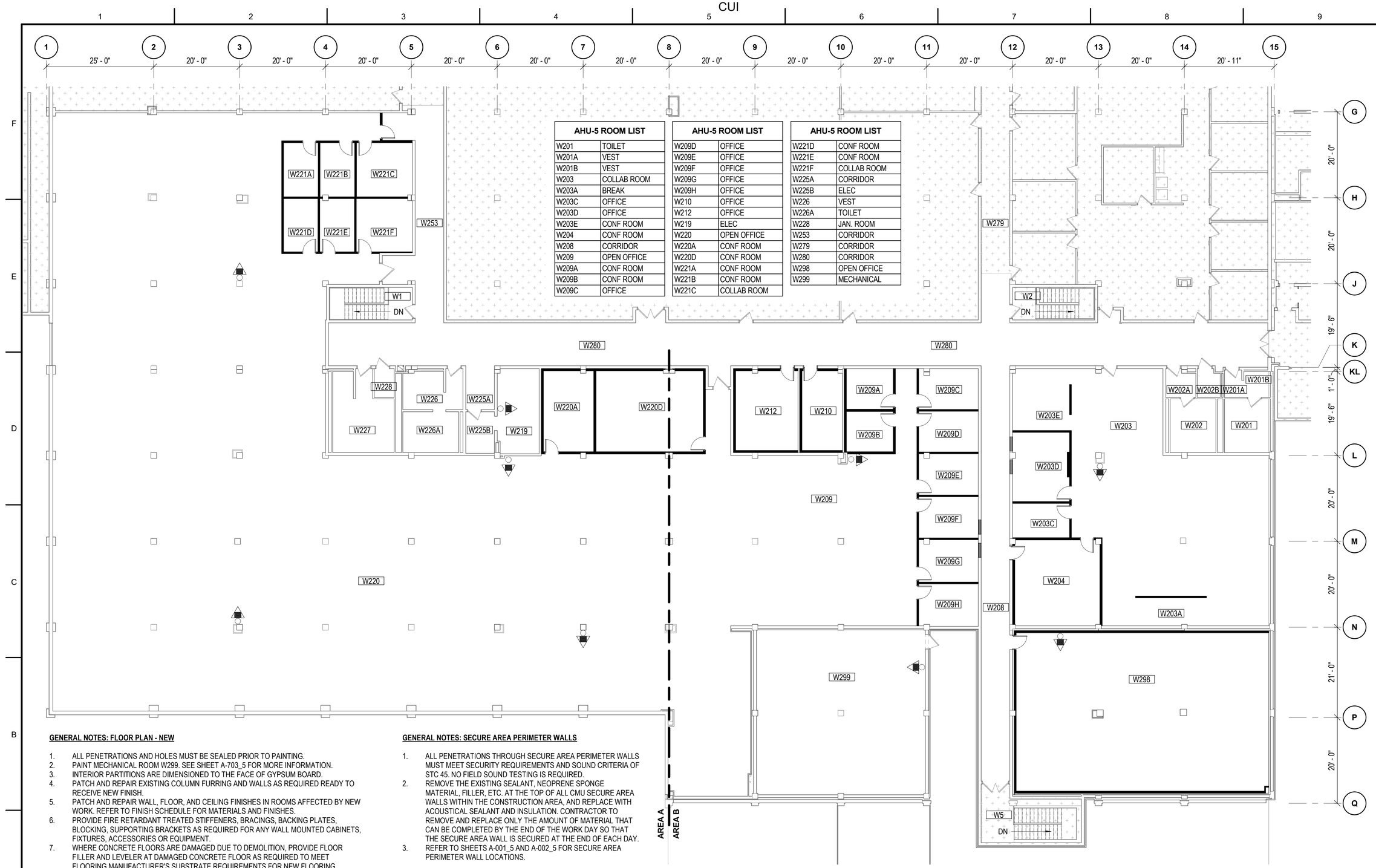
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)

ARIMS: 200A Disposition: Maintain for 15 yrs after construction

NOT FOR CONSTRUCTION




| AHU-5 ROOM LIST | |
|---|---|
| W201 | TOILET |
| W201A | VEST |
| W201B | VEST |
| W203 | COLLAB ROOM |
| W203A | BREAK |
| W203C | OFFICE |
| W203D | OFFICE |
| W203E | CONF ROOM |
| W204 | CONF ROOM |
| W208 | CORRIDOR |
| W209 | OPEN OFFICE |
| W209A | CONF ROOM |
| W209B | CONF ROOM |
| W209C | OFFICE |

| AHU-5 ROOM LIST | |
|---|---|
| W209D | OFFICE |
| W209E | OFFICE |
| W209F | OFFICE |
| W209G | OFFICE |
| W209H | OFFICE |
| W210 | OFFICE |
| W212 | OFFICE |
| W219 | ELEC |
| W220 | OPEN OFFICE |
| W220A | CONF ROOM |
| W220D | CONF ROOM |
| W221A | CONF ROOM |
| W221B | CONF ROOM |
| W221C | COLLAB ROOM |

| AHU-5 ROOM LIST | |
|---|---|
| W221D | CONF ROOM |
| W221E | CONF ROOM |
| W221F | COLLAB ROOM |
| W225A | CORRIDOR |
| W225B | ELEC |
| W226 | VEST |
| W226A | TOILET |
| W228 | JAN. ROOM |
| W253 | CORRIDOR |
| W279 | CORRIDOR |
| W280 | CORRIDOR |
| W298 | OPEN OFFICE |
| W299 | MECHANICAL |

**GENERAL NOTES: FLOOR PLAN - NEW**

1. ALL PENETRATIONS AND HOLES MUST BE SEALED PRIOR TO PAINTING.
2. PAINT MECHANICAL ROOM W299. SEE SHEET A-703_5 FOR MORE INFORMATION.
3. INTERIOR PARTITIONS ARE DIMENSIONED TO THE FACE OF GYPSUM BOARD.
4. PATCH AND REPAIR EXISTING COLUMN FURRING AND WALLS AS REQUIRED READY TO RECEIVE NEW FINISH.
5. PATCH AND REPAIR WALL, FLOOR, AND CEILING FINISHES IN ROOMS AFFECTED BY NEW WORK. REFER TO FINISH SCHEDULE FOR MATERIALS AND FINISHES.
6. PROVIDE FIRE RETARDANT TREATED STIFFENERS, BRACINGS, BACKING PLATES, BLOCKING, SUPPORTING BRACKETS AS REQUIRED FOR ANY WALL MOUNTED CABINETS, FIXTURES, ACCESSORIES OR EQUIPMENT.
7. WHERE CONCRETE FLOORS ARE DAMAGED DUE TO DEMOLITION, PROVIDE FLOOR FILLER AND LEVELER AT DAMAGED CONCRETE FLOOR AS REQUIRED TO MEET FLOORING MANUFACTURER'S SUBSTRATE REQUIREMENTS FOR NEW FLOORING.
8. REFER TO SHEET A-703_5 FOR FINISH REQUIREMENTS.
9. PATCH EXISTING PENETRATIONS AND RESTORE EXISTING CONSTRUCTION TO MATCH EXISTING ADJACENT ASSEMBLY WHERE MECHANICAL, ELECTRICAL,OR PLUMBING WORK HAS BEEN REMOVED AND PENETRATIONS ARE NOT REQUIRED.

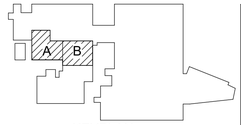
**GENERAL NOTES: SECURE AREA PERIMETER WALLS**

1. ALL PENETRATIONS THROUGH SECURE AREA PERIMETER WALLS MUST MEET SECURITY REQUIREMENTS AND SOUND CRITERIA OF STC 45. NO FIELD SOUND TESTING IS REQUIRED.
2. REMOVE THE EXISTING SEALANT, NEOPRENE SPONGE MATERIAL, FILLER, ETC. AT THE TOP OF ALL CMU SECURE AREA WALLS WITHIN THE CONSTRUCTION AREA, AND REPLACE WITH ACOUSTICAL SEALANT AND INSULATION. CONTRACTOR TO REMOVE AND REPLACE ONLY THE AMOUNT OF MATERIAL THAT CAN BE COMPLETED BY THE END OF THE WORK DAY SO THAT THE SECURE AREA WALL IS SECURED AT THE END OF EACH DAY.
3. REFER TO SHEETS A-001_5 AND A-002_5 FOR SECURE AREA PERIMETER WALL LOCATIONS.

**SCOPE LEGEND**

NOT IN SCOPE

PLAN NORTH




KEYPLAN
NOT TO SCALE

A1 OVERALL SECOND FLOOR PLAN - NEW
SCALE: 3/32" = 1'-0"

0 8' 16' 24'

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

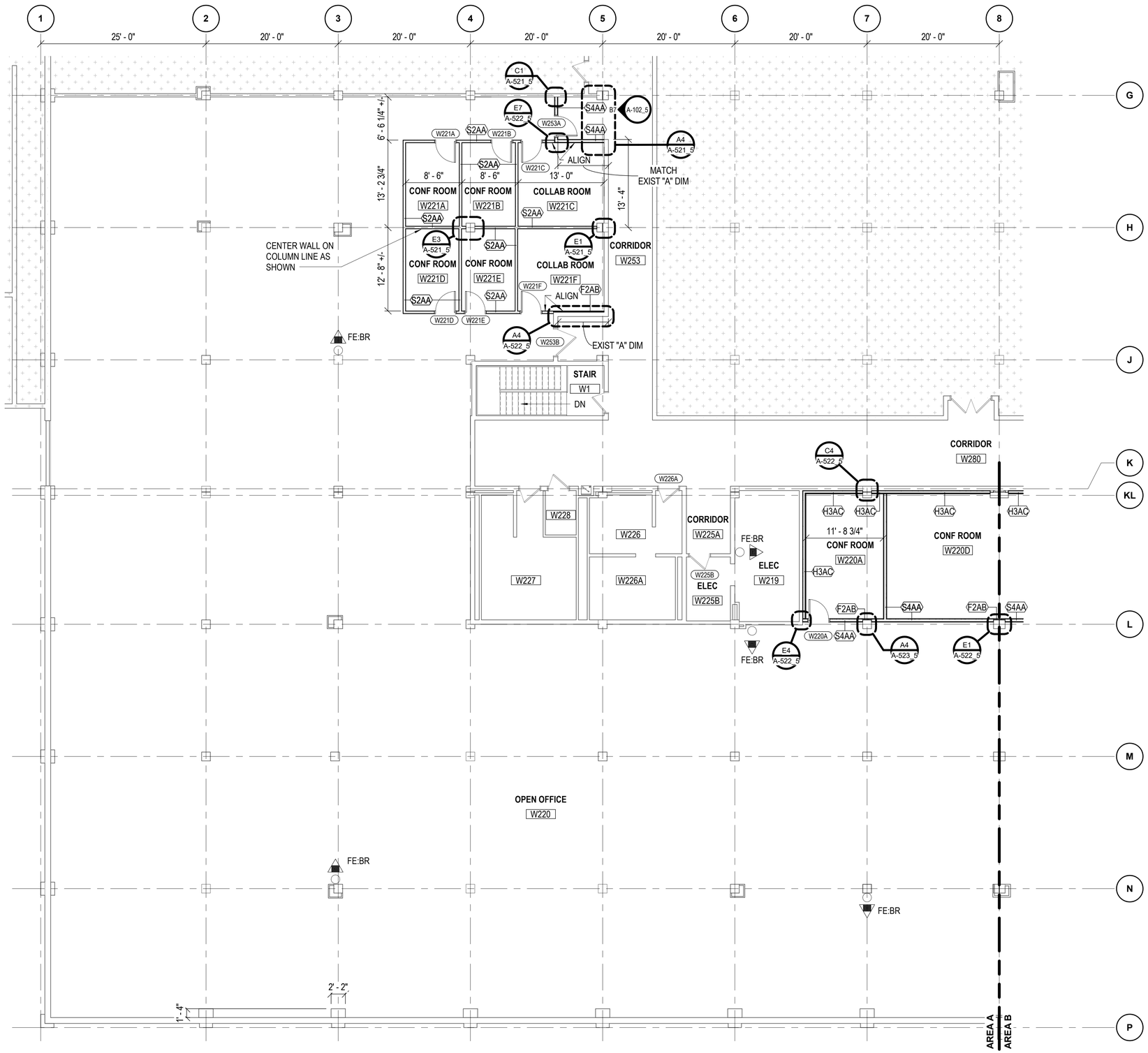
SECOND FLOOR PLAN - NEW

SHEET ID
A-101_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

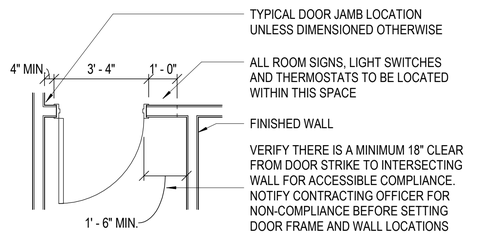


CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION




## ARCHITECTURAL GENERAL NOTES:

REFER TO GENERAL NOTES ON SHEET A-101_5.

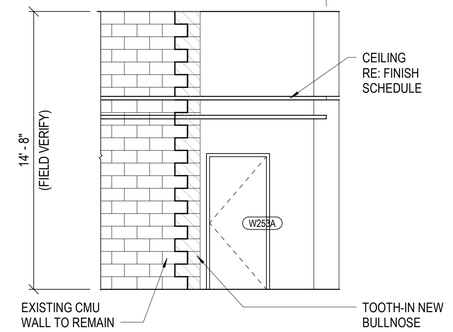



E7 DOOR CLEARANCE
SCALE: 3/8" = 1'-0"

**AHU-5 ROOM LIST - AREA A**

**SCOPE LEGEND**

NOT IN SCOPE




NOTE: PLASTER NOT SHOWN FOR CLARITY.
SEE PLAN DETAIL A4 ON A-521_5 FOR MORE
DETAIL AND WALL FINISHES

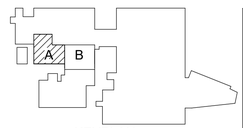
B7 CMU TOOTH-IN WALL ELEVATION
SCALE: 1/4" = 1'-0"

0 2' 4' 8'
SCALE IN FEET

PLAN NORTH

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

0 8' 16' 24'




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZ/QUEZ
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
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REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR PLAN - AREA A

SHEET ID

**A-102_5**

CUI

W912QR23R0022_CUI_Plans-0000

CORRECTED FINAL



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

CUI

## ARCHITECTURAL GENERAL NOTES:

REFER TO GENERAL NOTES ON SHEET A-101_5.

**AHU-5 ROOM LIST - AREA B**

**SCOPE LEGEND**

NOT IN SCOPE

CORRIDOR W280 · CONF ROOM W220D · OPEN OFFICE W220 · OFFICE W212 · OFFICE W210 · CONF ROOM W209A · CONF ROOM W209B · OFFICE W209C · OFFICE W209D · OPEN OFFICE W209 · OFFICE W209E · OFFICE W209F · OFFICE W209G · OFFICE W209H · MECHANICAL W299 · CORRIDOR W279 · STAIR W2 · CONF ROOM W203E · COLLAB ROOM W203 · OFFICE W203D · OFFICE W203C · CONF ROOM W204 · BREAK W203A · W202A · W202B · W201A · W201B · W201 · TOILET W201 · CORRIDOR W208 · OPEN OFFICE W298 · STAIR W5

AREA A · AREA B

A1 SECOND FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

A8 ENLARGED PLAN
SCALE: 1/4" = 1'-0"

B9 CONTROL JOINTS
SCALE: 1/4" = 1'-0"

PLASTER CONTROL JOINT - EXTEND TO TOP OF EXISTING PLASTER
CEILING RE: FINISH SCHED
REMOVE PORTION OF EXISTING PLASTER AS REQUIRED TO INSTALL NEW PLASTER CONTROL JOINT
CMU INFILL WALL OPENING - MATCH COURSING WITH ADJACENT CMU WALL
EXISTING WALL
FINISH FLOOR
RE: DETAIL E6 ON A-521_5

PLAN NORTH

KEYPLAN NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| DESIGNED BY: B. KENNALEY | ISSUE DATE: 02-16-23 |
|---|---|
| DRAWN BY: W. NEEDLE | SOLICITATION NO.: |
| CHECKED BY: E. VALEZQUEZ | CONTRACT NO.: |
| SUBMITTED BY: C. JOHNSON | |
| SIZE: 34X22 | |

US ARMY CORPS OF ENGINEERS LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

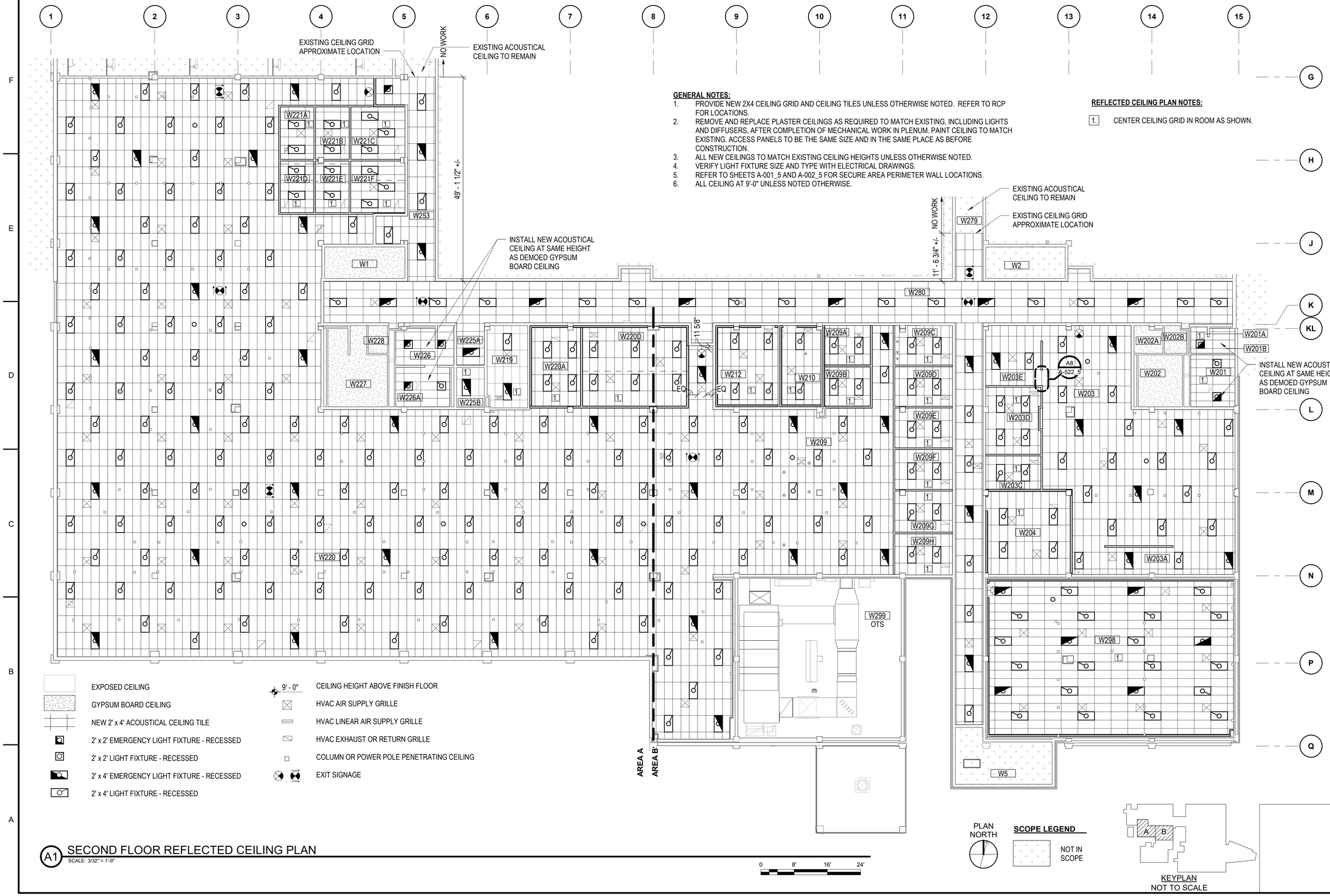
SECOND FLOOR PLAN - AREA B

SHEET ID

**A-103_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI




**GENERAL NOTES:**

1. PROVIDE NEW 2X4 CEILING GRID AND CEILING TILES UNLESS OTHERWISE NOTED. REFER TO RCP FOR LOCATIONS.
2. REMOVE AND REPLACE PLASTER CEILINGS AS REQUIRED TO MATCH EXISTING, INCLUDING LIGHTS AND DIFFUSERS, AFTER COMPLETION OF MECHANICAL WORK IN PLENUM. PAINT CEILING TO MATCH EXISTING. ACCESS PANELS TO BE THE SAME SIZE AND IN THE SAME PLACE AS BEFORE CONSTRUCTION.
3. ALL NEW CEILINGS TO MATCH EXISTING CEILING HEIGHTS UNLESS OTHERWISE NOTED.
4. VERIFY LIGHT FIXTURE SIZE AND TYPE WITH ELECTRICAL DRAWINGS.
5. REFER TO SHEETS A-001_5 AND A-002_5 FOR SECURE AREA PERIMETER WALL LOCATIONS.
6. ALL CEILING AT 9'-0" UNLESS NOTED OTHERWISE.

**REFLECTED CEILING PLAN NOTES:**

1. CENTER CEILING GRID IN ROOM AS SHOWN.

EXPOSED CEILING
GYPSUM BOARD CEILING
NEW 2' x 4' ACOUSTICAL CEILING TILE
2' x 2' EMERGENCY LIGHT FIXTURE - RECESSED
2' x 2' LIGHT FIXTURE - RECESSED
2' x 4' EMERGENCY LIGHT FIXTURE - RECESSED
2' x 4' LIGHT FIXTURE - RECESSED

9' - 0" CEILING HEIGHT ABOVE FINISH FLOOR
HVAC AIR SUPPLY GRILLE
HVAC LINEAR AIR SUPPLY GRILLE
HVAC EXHAUST OR RETURN GRILLE
COLUMN OR POWER POLE PENETRATING CEILING
EXIT SIGNAGE

## A1 SECOND FLOOR REFLECTED CEILING PLAN

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

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

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SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: G. JAMESON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS MCDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

REFLECTED CEILING SECOND FLOOR PLAN - NEW

SHEET ID

**A-151_5**

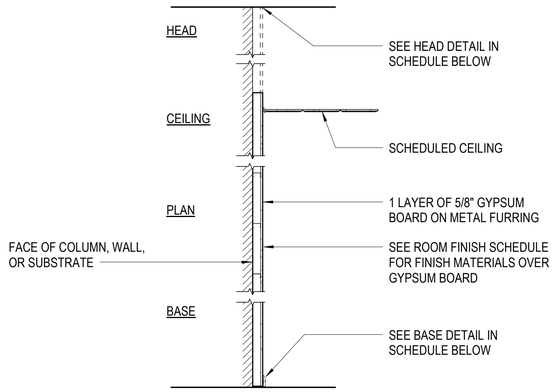
CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



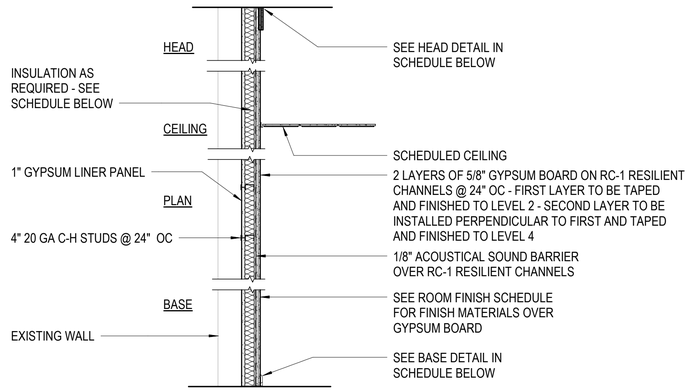
ARIMS: 200A Disposition: Maintain for 15 yrs after construction

## PARTITION TYPE F1



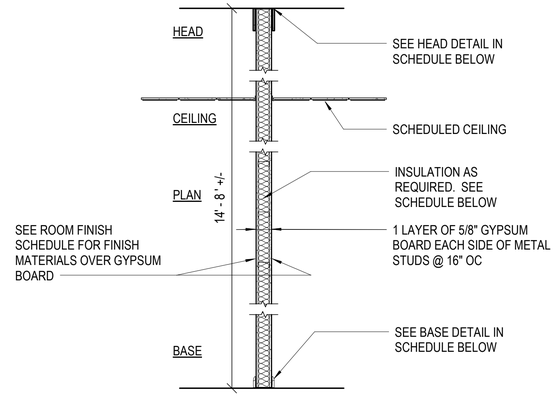

| TYPE | STC | FIRE RATING | UL DESIGN NO | HEAD DETAIL | BASE DETAIL | TYPE COMMENTS |
|---|---|---|---|---|---|---|
| F1AA | - | - | - | E7/A502_5 | C7/A502_5 | 7/8" HAT CHANNELS |
| F1AB | - | - | - | E7/A502_5 | C7/A502_5 | 7/8" FURRING STRIPS AT 24" O.C. HORIZONTALLY |
| F1CA | - | - | - | E7/A502_5 | C7/A502_5 | 2 1/2" FURRING STUDS AT 16" O.C. VERTICALLY |

## PARTITION TYPE H3




| TYPE | STC | FIRE RATING | UL DESIGN NO | HEAD DETAIL | BASE DETAIL | TYPE COMMENTS |
|---|---|---|---|---|---|---|
| H3AC | 50 | - | - | A1/A-502_5 | A7/A-502_5 | 4" C-H STUDS - 2 LAYERS 5/8" GYP BD WITH 3 1/2" SOUND ATTENUATION UNFACED BATT INSULATION |

## PARTITION TYPE S2




| TYPE | STC | FIRE RATING | UL DESIGN NO | HEAD DETAIL | BASE DETAIL | TYPE COMMENTS |
|---|---|---|---|---|---|---|
| S2AA | - | - | - | E4/A-502_5 | A4/A-502_5 | 3 5/8" METAL STUDS WITH BLANKET INSULATION. |
| S2AF | - | - | - | C4/A-502_5 | A4/A-502_5 | 3 5/8" METAL STUDS WITHOUT BLANKET INSULATION. |

## PARTITION TYPE F2




| TYPE | STC | FIRE RATING | UL DESIGN NO | HEAD DETAIL | BASE DETAIL | TYPE COMMENTS |
|---|---|---|---|---|---|---|
| F2AB | - | - | - | E7/A502_5 | C7/A502_5 | 7/8" HAT CHANNELS AT 16" OC |

## PARTITION TYPE M1




| TYPE | STC | FIRE RATING | UL DESIGN NO | HEAD DETAIL | BASE DETAIL | TYPE COMMENTS |
|---|---|---|---|---|---|---|
| M1CB | STC-50 | 60 MIN | U905 | E8 / A-521_5 | - | 8" NOMINAL MASONRY, FULLY GROUTED, SOUND TEST NOT REQUIRED, ELECTRICAL OUTLETS SHALL BE MOUNTED ON FACE OF WALLS NOT RECESSED |

## PARTITION TYPE S4

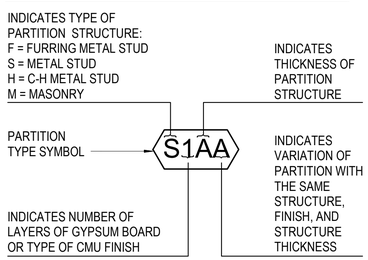



| TYPE | STC | FIRE RATING | UL DESIGN NO | HEAD DETAIL | BASE DETAIL | TYPE COMMENTS |
|---|---|---|---|---|---|---|
| S4AA | STC-50 | - | - | E1/A-502_5 | C1/A-502_5 | 3 5/8" METAL STUDS WITH 3 1/2" SOUND ATTENUATION UNFACED BATT INSULATION. |

## PARTITION TYPES GENERAL NOTES:

1. PROVIDE MINIMUM 20 GAUGE METAL BACKING AS REQUIRED FOR INSTALLATION OF FIRE EXTINGUISHER BRACKETS, MESSAGE BOARDS, WALL AND BASE CABINETS, ACCESS PANELS, ELECTRICAL AND FIRE PROTECTION SYSTEM PANELS, UNLESS NOTED OTHERWISE.
2. ALL METAL STUD AND FURRING DESIGNATIONS ARE THE STEEL STUD MANUFACTURER ASSOCIATIONS (SSMA) UNIVERSAL DESIGNATOR SYSTEM FOR LIGHT GAUGE STEEL FRAMING MEMBERS. ALL METAL STUDS AND BRACING MUST BE 20 GAUGE MIN UNLESS NOTED OTHERWISE.
3. REFERENCE DRAWINGS A-102_5 AND A-103_5 FOR PARTITION TYPE LOCATIONS.
4. PROVIDE METAL STUD DIAGONAL BRACING @ 4'-0" OC MIN (ALTERNATE DIRECTIONS) TO UNDERSIDE OF METAL DECK FOR ALL WALLS GREATER THAN 14'-0" IN HEIGHT UNLESS NOTED OTHERWISE.
5. SEE DRAWING A-512_5 FOR TYPICAL PENETRATION DETAILS THROUGH STC-RATED PARTITIONS.
6. SECURE WALLS THAT ARE NOT FURRED OUT MUST HAVE ELECTRICAL DEVICES SURFACE MOUNTED.

## PARTITION TYPE SYMBOL LEGEND:




US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

DATE | DESCRIPTION | MARK

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS LOUISVILLE DISTRICT ATTN: CELRL-ED-TS-KING 600 DR. MARTIN LUTHER KING JR. PL LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

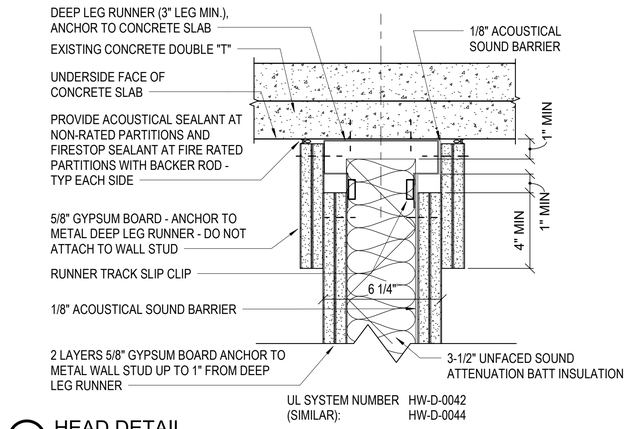
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

PARTITION TYPES

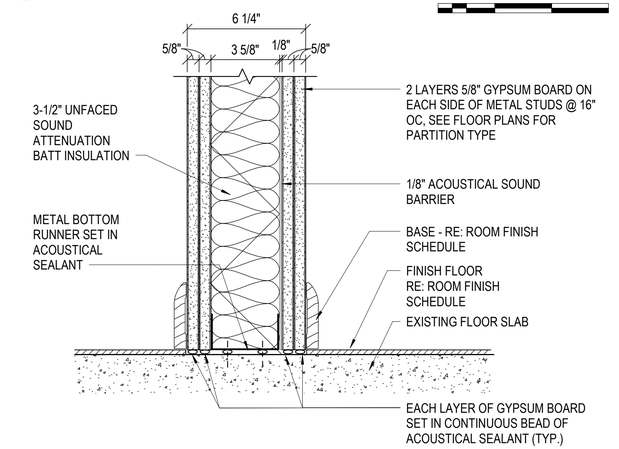
SHEET ID
A-501_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

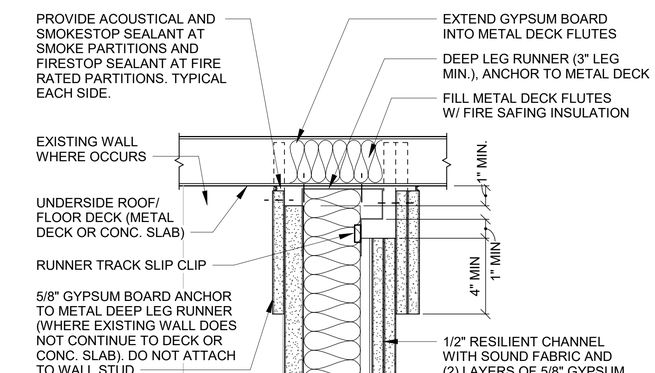
CUI



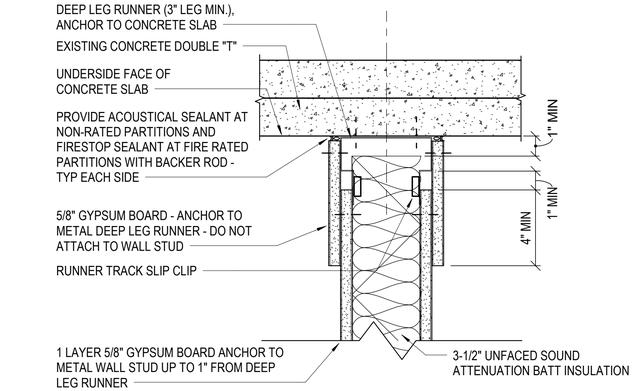

## E1 HEAD DETAIL
SCALE: 3" = 1'-0"



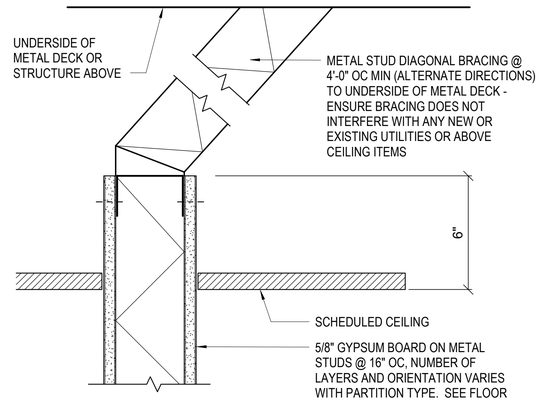

## C1 BASE DETAIL
SCALE: 3" = 1'-0"



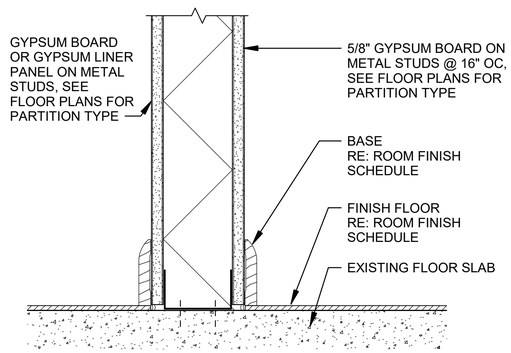

## A1 HEAD DETAIL
SCALE: 3" = 1'-0"



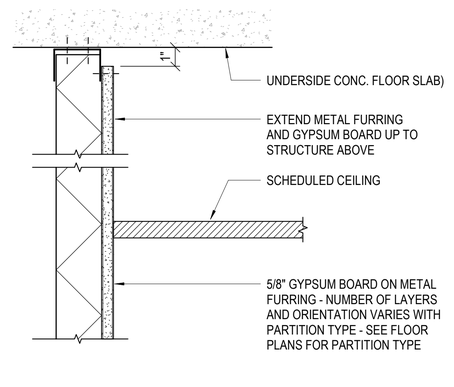

## E4 HEAD DETAIL
SCALE: 3" = 1'-0"



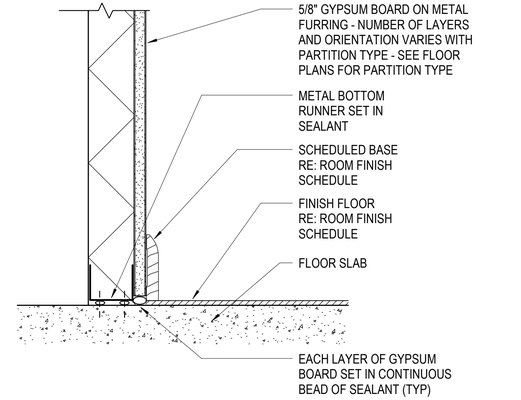

## C4 HEAD DETAIL
SCALE: 3" = 1'-0"



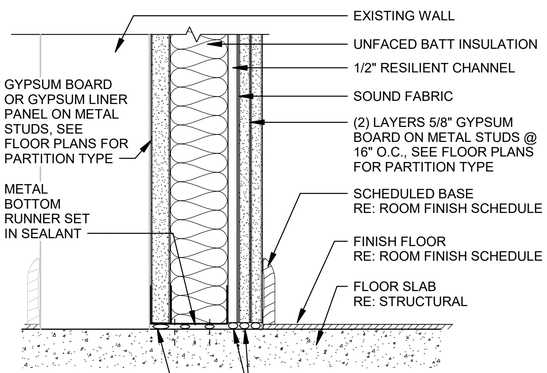

## A4 BASE DETAIL
SCALE: 3" = 1'-0"




## E7 HEAD DETAIL
SCALE: 3" = 1'-0"




## C7 BASE DETAIL
SCALE: 3" = 1'-0"




## A7 BASE DETAIL
SCALE: 3" = 1'-0"

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: C. SPRINKLE
CHECKED BY: E. VELAZQUEZ
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

PARTITION DETAILS

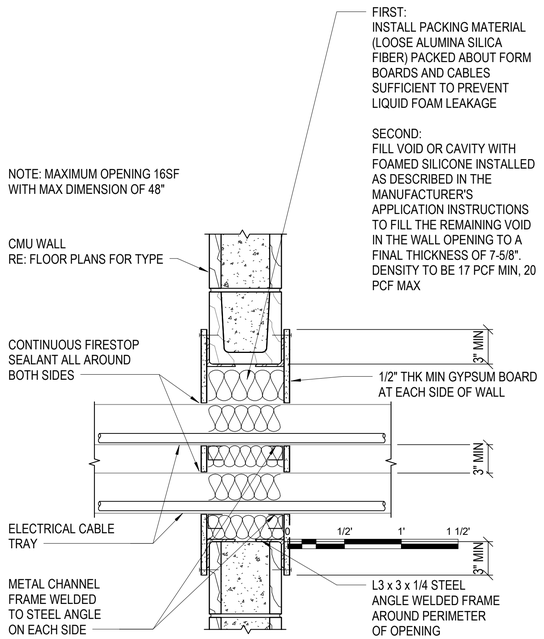
SHEET ID
**A-502_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

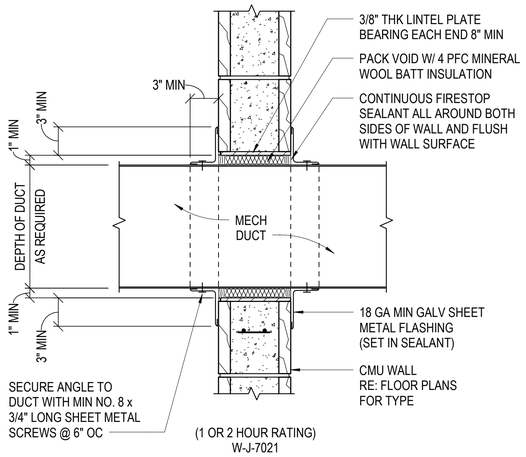


ARIMS: 200A Disposition: Maintain for 15 yrs after construction



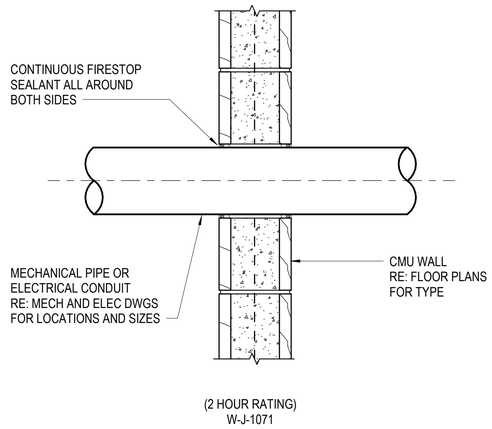

(2 HOUR RATING)
W-J-4008

## D1 CMU WALL PENETRATION
SCALE: 1 1/2" = 1'-0"



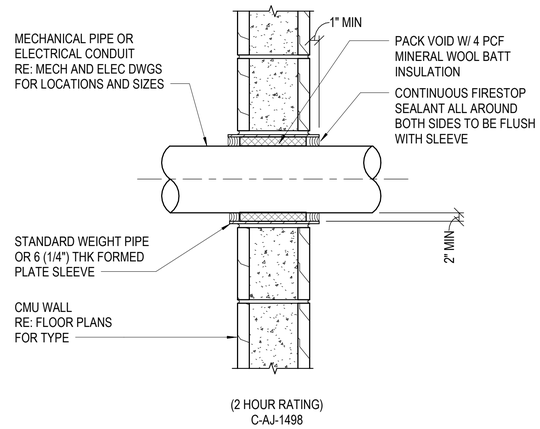

(1 OR 2 HOUR RATING)
W-J-7021

## D3 CMU WALL PENETRATION
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'



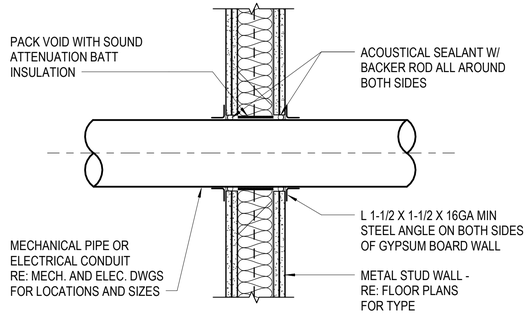

(2 HOUR RATING)
W-J-1071

## D5 CMU WALL PENETRATION
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




(2 HOUR RATING)
C-AJ-1498

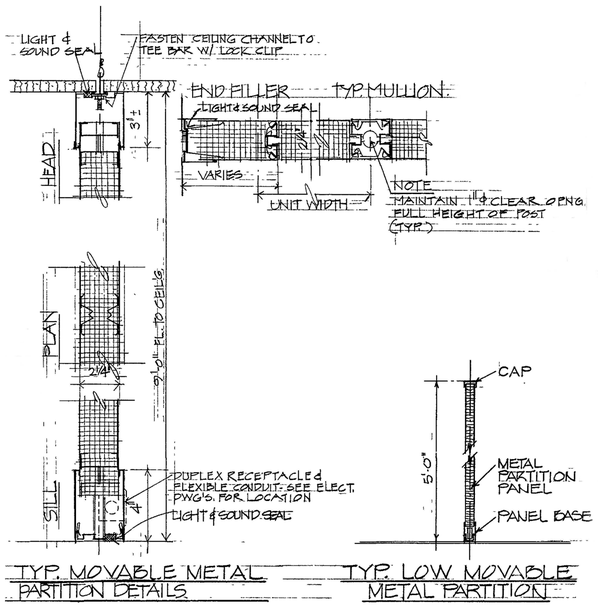
## D7 CMU WALL PENETRATION
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'



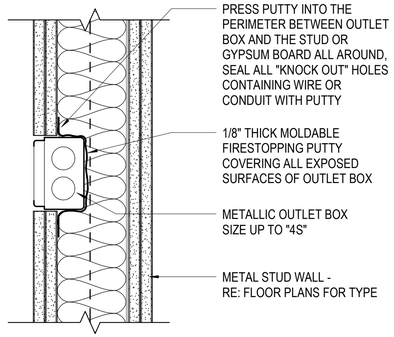

## B4 STUD WALL PENETRATION
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'

NOTE:
TYPICAL DETAIL, FIELD VERIFY ACTUAL CONDITIONS

## B7 2-HR FIRE RATED EXPANSION JOINT DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




## A1 EXISTING DEMOUNTABLE PARTITION DETAILS
SCALE:NTS




## A4 DETAIL AT OUTLET BOX
SCALE: 3" = 1'-0"
0 3" 6" 9"

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

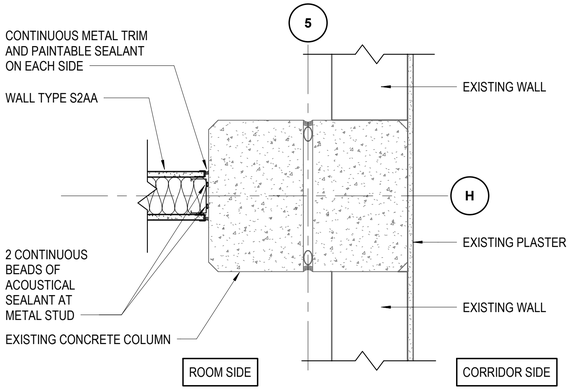
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

PENETRATION DETAILS

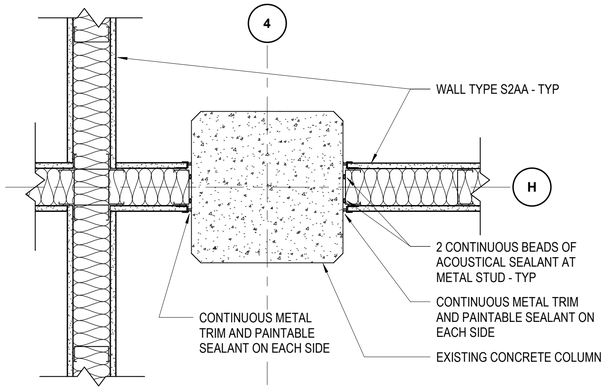
SHEET ID
A-512_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

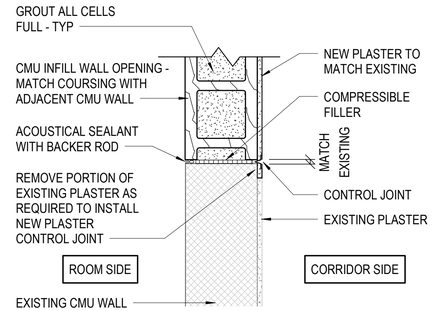
CUI



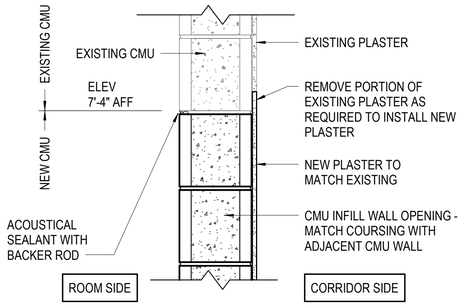

E1 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




E3 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




E6 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




E8 CMU INFILL HEAD DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'



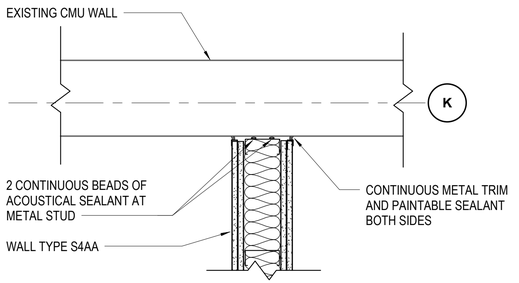

C1 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'



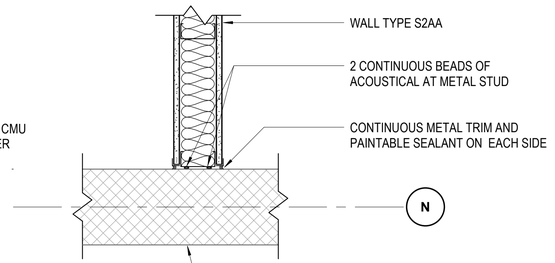

A4 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




C7 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




A1 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




A7 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VELAZQUEZ
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

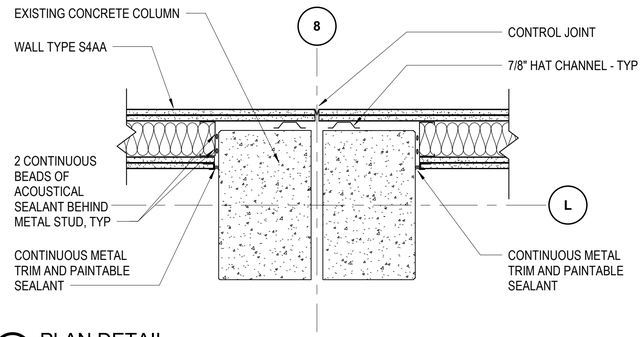
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

PLAN DETAILS

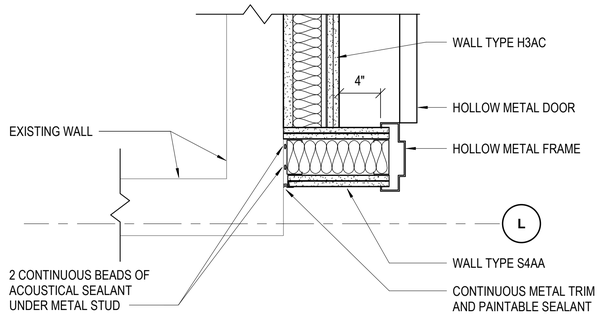
SHEET ID
A-521_5

CUI

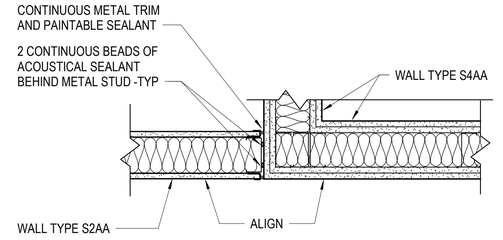
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



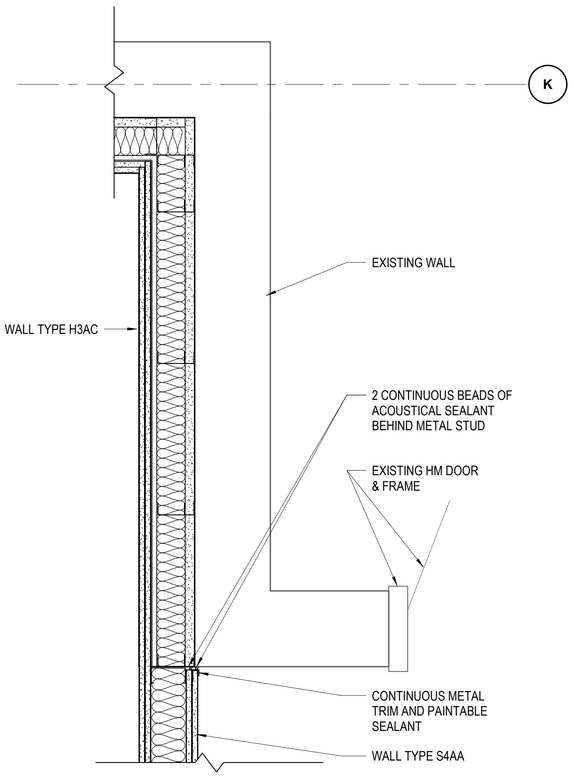

E1 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'



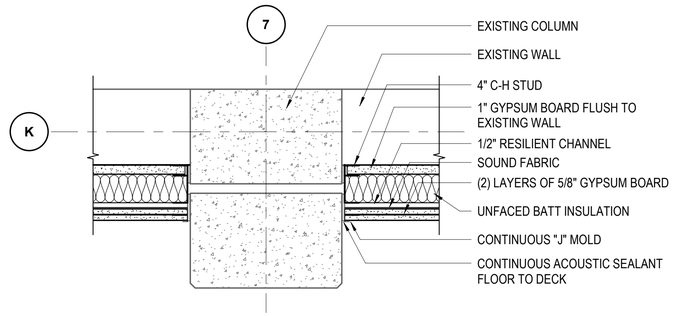

E4 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'



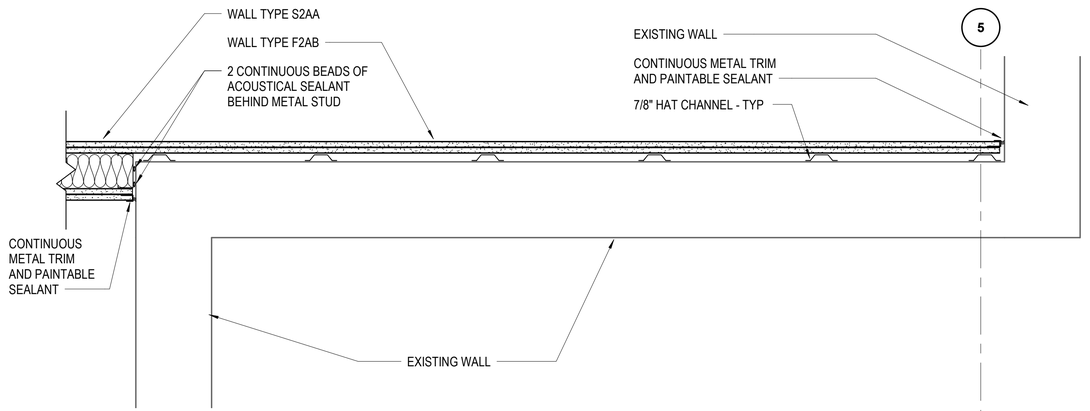

E7 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'



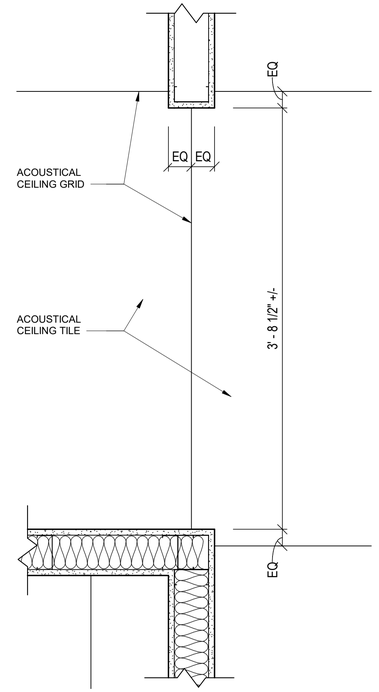

A1 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




C4 DETAIL AT COLUMN
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




A4 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




A8 CEILING DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
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CONTRACT NO.:

DESIGNED BY: B. KENNALEY
DRAWN BY: C. SPRINKLE
CHECKED BY: E. VELAZQUEZ
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

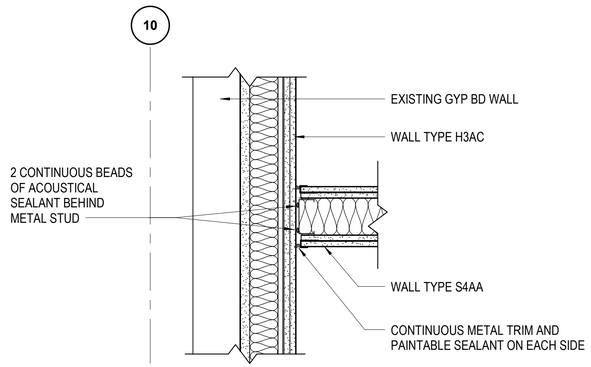
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

PLAN DETAILS

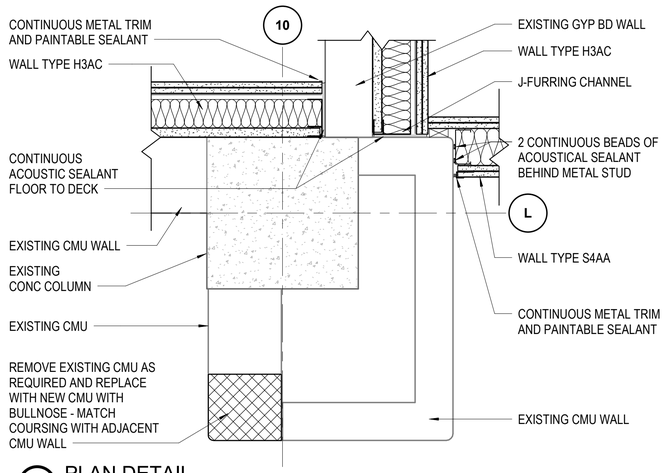
SHEET ID
A-522_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

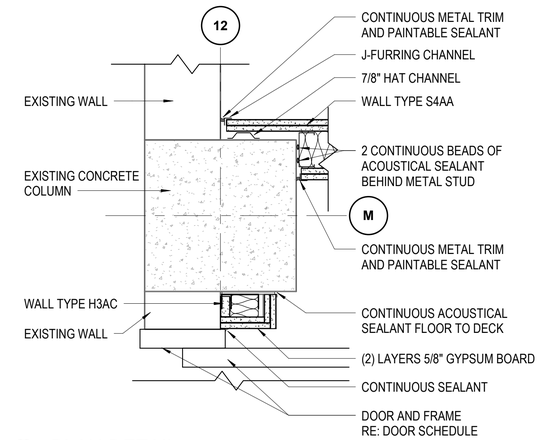
CUI




E1 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




E4 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




E7 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




C1 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




C4 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




C7 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




A1 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'




A4 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"
0 1/2' 1' 1 1/2'

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

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DRAWN BY: C. SPRINKLE
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SUBMITTED BY: S. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
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US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

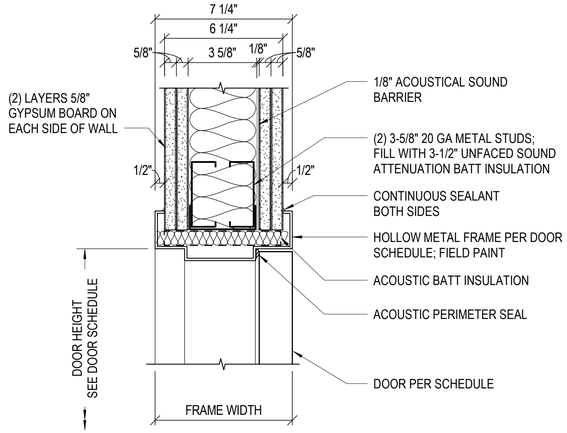
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

PLAN DETAILS

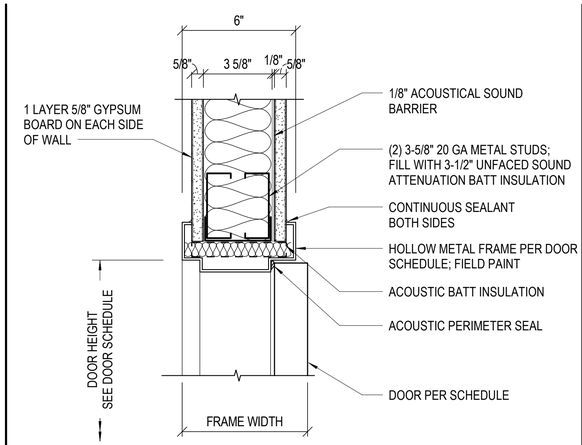
SHEET ID
A-523_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

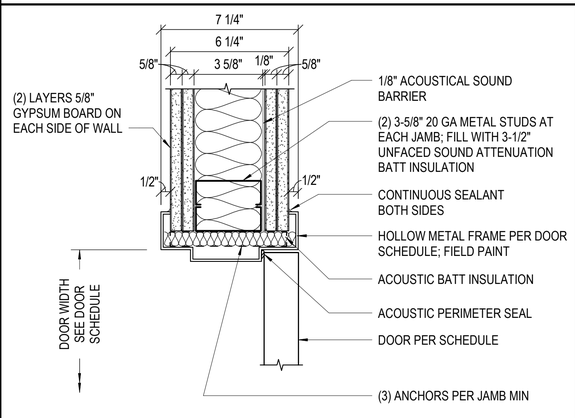
CUI



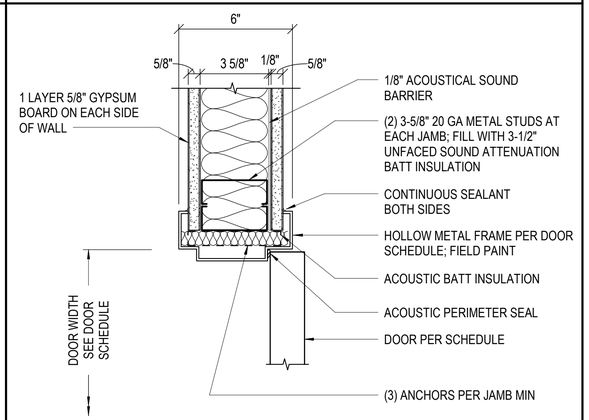

E1 DOOR HEAD
SCALE: 3" = 1'-0"



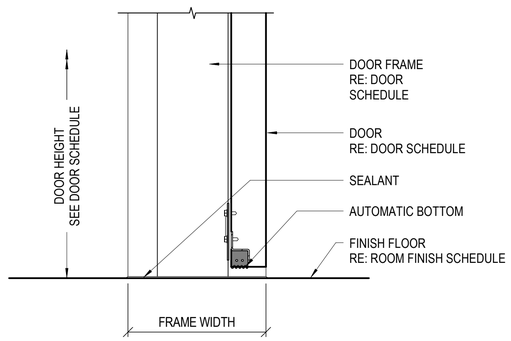

E3 DOOR HEAD
SCALE: 3" = 1'-0"




C1 DOOR JAMB
SCALE: 3" = 1'-0"




C3 DOOR JAMB
SCALE: 3" = 1'-0"




A1 DOOR SILL
SCALE: 3" = 1'-0"

**DOOR HARDWARE SETS**

1. THE DOOR HARDWARE SETS REPRESENT THE DESIGN INTENT AND DIRECTION OF THE OWNER AND ARCHITECT. THEY ARE A GUIDELINE ONLY AND SHOULD NOT BE CONSIDERED A DETAILED HARDWARE SCHEDULE. DISCREPANCIES, CONFLICTING HARDWARE AND MISSING ITEMS SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND OWNER WITH CORRECTIONS MADE PRIOR TO THE BIDDING PROCESS. OMITTED ITEMS NOT INCLUDED IN A HARDWARE SET SHOULD BE SCHEDULED WITH THE APPROPRIATE ADDITIONAL HARDWARE REQUIRED FOR PROPER APPLICATION AND FUNCTIONALITY.
2. THE SUPPLIER IS RESPONSIBLE FOR HANDING AND SIZING ALL PRODUCTS AS LISTED IN THE DOOR HARDWARE SETS. QUANTITIES LISTED ARE FOR EACH PAIR OF DOORS, OR FOR EACH SINGLE DOOR. PROVIDE FIRE-RATED HARDWARE WHERE REQUIRED.

**HARDWARE SETS**

**SET: 1.0**
DOORS: W253A
DESCRIPTION: SINGLE OPEN OFFICE (STC)

| | | | |
|---|---|---|---|
| 1 | MORTISE EXIT DEVICE | TYPE 3 GR1 F08 LEVER | US26D |
| 1 | CYLINDER | BEST - TYPE AS REQ'D FOR EXIT DEVICE | 626 |
| 1 | DOOR CLOSER PA | C02021 PT4H-BF/PT4D | AL |
| 1 | KICK PLATE | J102 10" X 2" LDW BEV CSK | US32D |
| 1 | MAGNETIC HOLDER | C00011 | 689 |

NOTES: HINGES, SOUND GASKET, DOOR BOTTOM, AND THRESHOLD (IF REQUIRED) TO BE PROVIDED BY ACOUSTIC DOOR MANUFACTURER.

OPERATION:
1. MAGNETIC HOLDER TO RELEASE UPON FIRE ALARM OR POWER FAILURE.

**DOOR SCHEDULE - AHU-5**

| DOOR NUMBER | DOOR SIZE WIDTH | DOOR SIZE HEIGHT | DOOR TYPE | DOOR MATERIAL | FRAME TYPE | FRAME MATERIAL | ASSEMBLY RATING (MIN) | STC (MIN) | DETAIL HEAD | DETAIL JAMB | DETAIL SILL | HARDWARE SET | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W201 | - | - | - | - | - | - | _ | - | - | - | - | 5 | 1 |
| W201A | - | - | - | - | - | - | _ | - | - | - | - | 5 | 1 |
| W203A | - | - | - | - | - | - | - | - | - | - | - | 5 | 1 |
| W203C | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | - | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W203D | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | - | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W204A | 3' - 0" | 7' - 0" | F-IN | HM | 1.2 | HM | - | 50 | E4/A-602_5 | C4/A-602_5 | A4/A-602_5 | 6 | |
| W204B | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | 50 | E1/A-601_5 | C1/A-601_5 | A1/A-601_5 | 4 | |
| W209A | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | 50 | E1/A-601_5 | C1/A-601_5 | A1/A-601_5 | 3 | |
| W209B | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | 50 | E1/A-601_5 | C1/A-601_5 | A1/A-601_5 | 3 | |
| W209C | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | - | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W209D | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | - | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W209E | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | - | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W209F | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | - | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W209G | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | - | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W209H | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | - | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W210A | 3' - 0" | 7' - 0" | F-IN | HM | 1.2 | HM | - | 50 | E4/A-602_5 | C4/A-602_5 | A4/A-602_5 | 6 | |
| W212A | 3' - 0" | 7' - 0" | F-IN | HM | 1.2 | HM | - | 50 | E4/A-602_5 | C4/A-602_5 | A4/A-602_5 | 6 | |
| W220A | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | 50 | E1/A-601_5 | C1/A-601_5 | A1/A-601_5 | 3 | |
| W220D | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | 50 | E1/A-601_5 | C1/A-601_5 | A1/A-601_5 | 3 | |
| W221A | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W221B | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W221C | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W221D | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W221E | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W221F | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | | E3/A-601_5 | C3/A-601_5 | - | 2 | |
| W225B | - | - | - | - | - | - | - | - | - | - | - | 5 | 1 |
| W226A | - | - | - | - | - | - | - | - | - | - | - | 5 | 1 |
| W253A | 3' - 0" | 7' - 0" | F-IN | HM | 1.1 | HM | - | 50 | E1/A-601_5 | C1/A-601_5 | A1/A-601_5 | 1 | |
| W253B | - | - | - | - | - | - | - | - | - | - | - | 5 | 1 |
| W280A | - | - | - | - | - | - | - | - | - | - | - | 5 | 1 |
| W298A | 3' - 0" | 7' - 0" | F-IN | HM | 1.2 | HM | - | 50 | E1/A-602_5 | C1/A-602_5 | A4/A-602_5 | 6 | |

**DOOR SCHEDULE REMARKS:**

1. EXISTING DOOR - NO WORK REQUIRED. AT PROJECT COMPLETION, REPAIR OR REPLACE ANY DAMAGED PART OR FINISH OF DOOR, DOOR FRAME AND/OR DOOR HARDWARE AS NEEDED.

**GENERAL DOOR NOTES:**

1. ALL DOORS AND FRAMES TO BE FACTORY PAINTED.

**SET: 2.0**
DOORS: W203C, W203D, W209C, W209D, W209E, W209F, W209G, W209H, W221A, W221B, W221C, W221D, W221E, W221F
DESCRIPTION: SINGLE OFFICE

| | | | |
|---|---|---|---|
| 3 | HINGE | A8112 4-1/2" X 4-1/2" | US26D |
| 1 | MORTISE LOCK (CLASSROOM) | 1000 GRADE 1 LEVER* | 626 |
| 1 | CYLINDER | BEST - TYPE AS REQ'D FOR LOCK | 626 |
| 1 | WALL STOP | L02251 | US32D |
| 3 | SILENCER | METAL FRAME TYPE | |

**SET: 3.0**
DOORS: W209A, W209B, W220A, W220D
DESCRIPTION: SINGLE CONFERENCE/COLLAB (STC)

| | | | |
|---|---|---|---|
| 1 | MORTISE LOCK (CLASSROOM) | 1000 GRADE 1 LEVER* | 626 |
| 1 | CYLINDER | BEST - TYPE AS REQ'D FOR LOCK | 626 |
| 1 | WALL STOP | L02251 | US32D |

NOTES: HINGES, SOUND GASKET, DOOR BOTTOM, AND THRESHOLD (IF REQUIRED) TO BE PROVIDED BY ACOUSTIC DOOR MANUFACTURER.

**SET: 4.0**
DOORS: W204B
DESCRIPTION: SINGLE CONFERENCE (STC)

| | | | |
|---|---|---|---|
| 1 | MORTISE LOCK (CLASSROOM) | 1000 GRADE 1 LEVER* | 626 |
| 1 | CYLINDER | BEST - TYPE AS REQ'D FOR LOCK | 626 |
| 1 | SURFACE OVERHEAD STOP | C02541 | 630 |

NOTES: HINGES, SOUND GASKET, DOOR BOTTOM, AND THRESHOLD (IF REQUIRED) TO BE PROVIDED BY ACOUSTIC DOOR MANUFACTURER.

**SET: 5.0**
DOORS: W201, W201A, W203A, W225B, W226A, W253B, W280A
DESCRIPTION: SINGLE EXISTING DOOR

NOTES: REUSE EXISTING HARDWARE. AT PROJECT COMPLETION, REPAIR OR REPLACE ANY DAMAGED DOOR HARDWARE AS NEEDED.

## DOOR TYPE




F

| (FLUSH PANEL) | |
|---|---|
| TYPE | DESCRIPTION |
| F-IN | FLUSH PANEL INSULATED |

## DOOR FRAME TYPE




1

| (DOOR FRAME) | | |
|---|---|---|
| TYPE | A | B |
| 1.1 | 2" | 2" |
| 1.2 | 2" | 4" |

**SET: 6.0**
DOORS: W204A, W210A, W212A, W298A
DESCRIPTION: SINGLE CONFERENCE (STC)

| | | | |
|---|---|---|---|
| 1 | MORTISE LOCK (CLASSROOM) | 1000 GRADE 1 LEVER* | 626 |
| 1 | CYLINDER | BEST - TYPE AS REQ'D FOR LOCK | 626 |
| 1 | SURFACE OVERHEAD STOP | C02541 | 630 |
| 1 | DOOR CLOSER REG ARM | C02011 PT4H-BF/PT4D | AL |
| 1 | KICK PLATE | J102 10" X 2" LDW BEV CSK | US32D |

NOTES: HINGES, SOUND GASKET, DOOR BOTTOM, AND THRESHOLD (IF REQUIRED) TO BE PROVIDED BY ACOUSTIC DOOR MANUFACTURER.

* CLASSROOM SECURITY LOCK FUNCTION IS CUSTOM AND DOES NOT HAVE AN ANSI/BHMA DESIGNATION. IT SHALL FUNCTION AS FOLLOWS:

- LATCHBOLT ALWAYS RETRACTED BY INSIDE LEVER/KNOB FOR EGRESS, OR BY OUTSIDE LEVER/KNOB WHEN NOT LOCKED BY THROWN DEADBOLT.
- DEADBOLT THROWN OR RETRACTED BY KEY FROM OUTSIDE, OR THUMBTURN INSIDE LOCKING OUTSIDE LEVER/KNOB.
- INDICATOR INSIDE DISPLAYS "LOCKED" WHEN OUTSIDE LEVER/KNOB IS LOCKED BY THUMBTURN INSIDE OR KEY OUTSIDE
- WHEN DEADBOLT IS THROWN, LEVER/KNOB ROTATION INSIDE RETRACTS DEADBOLT AND LATCHBOLT SIMULTANEOUSLY, AND UNLOCKS OUTSIDE LEVER/KNOB

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| ISSUE DATE: | 02-16-23 |
| SOLICITATION NO.: | |
| CONTRACT NO.: | |
| DESIGNED BY: | B. KENNALEY |
| DRAWN BY: | W. NEEDLE |
| CHECKED BY: | E. VALEZQUEZ |
| SUBMITTED BY: | C. JOHNSON |
| SIZE: | 34X22 |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

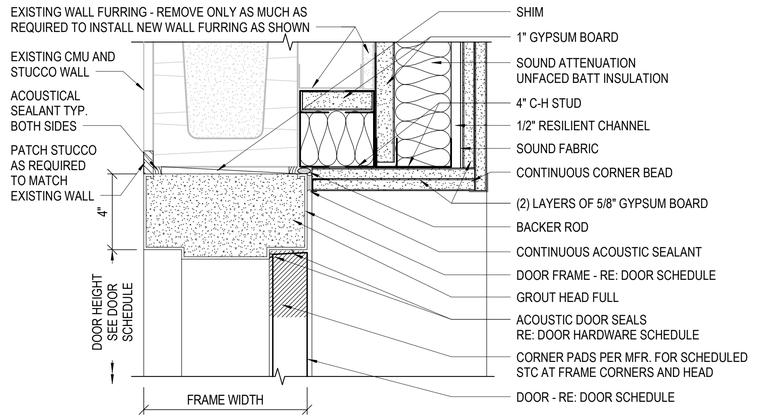
DOOR SCHEDULE, DOOR & FRAME TYPES, DOOR DETAILS

SHEET ID

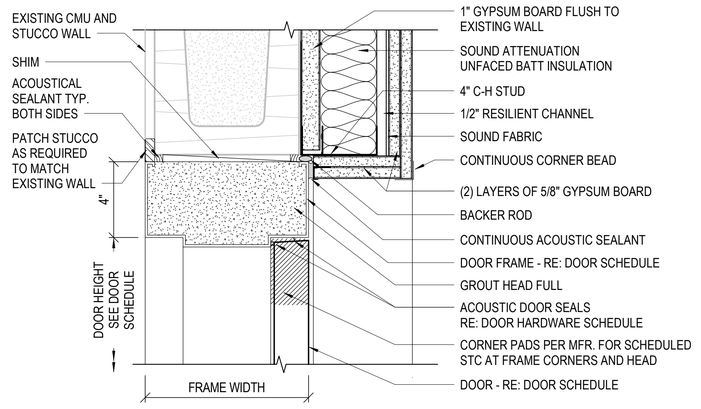
A-601_5

CUI

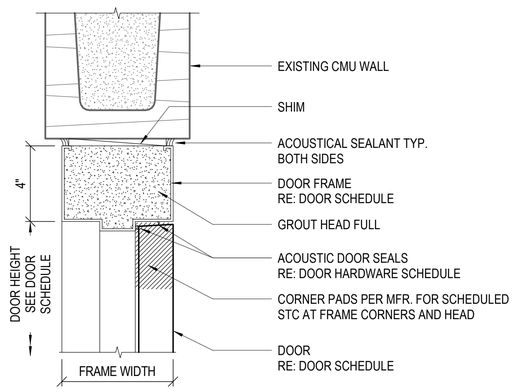
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



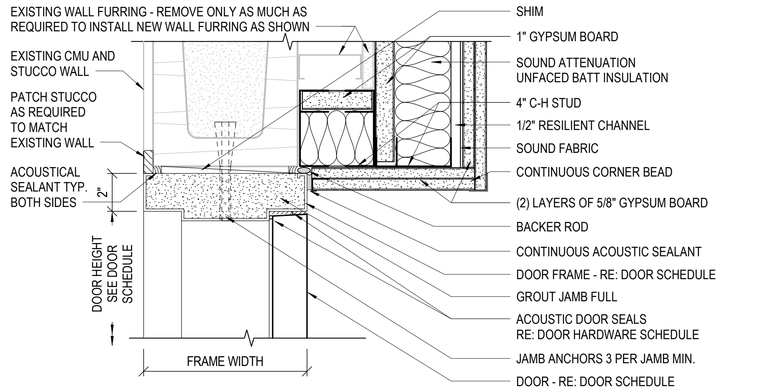

E1 DOOR HEAD - STC
SCALE: 3" = 1'-0"



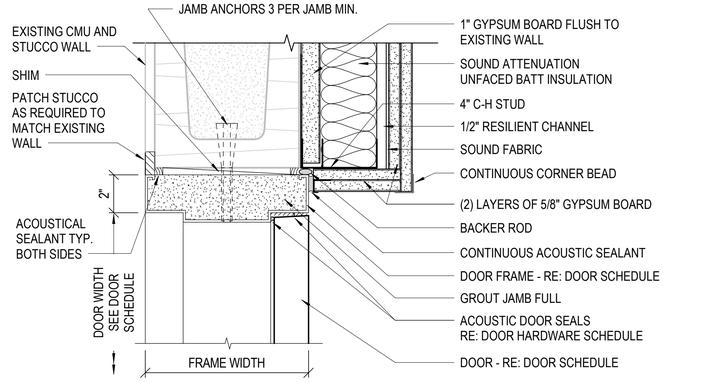

E4 DOOR HEAD - STC
SCALE: 3" = 1'-0"



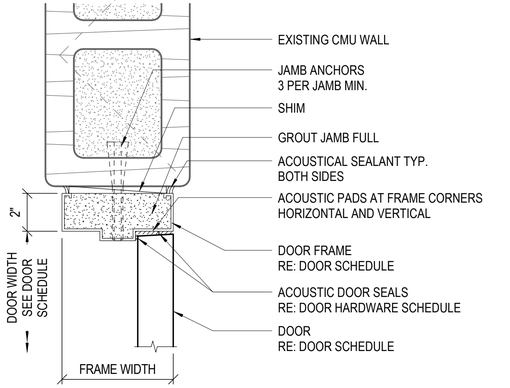

E7 DOOR HEAD - STC
SCALE: 3" = 1'-0"



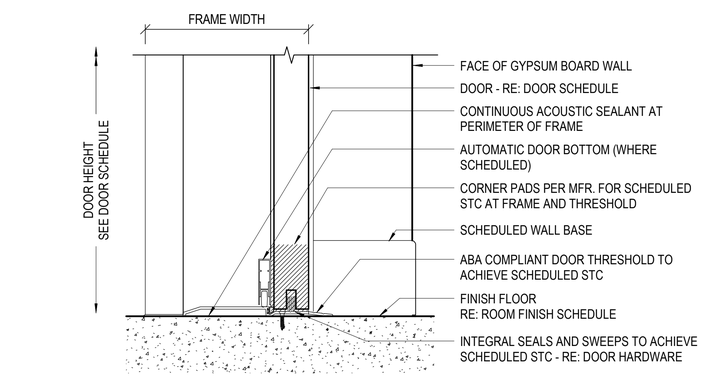

C1 DOOR JAMB - STC
SCALE: 3" = 1'-0"



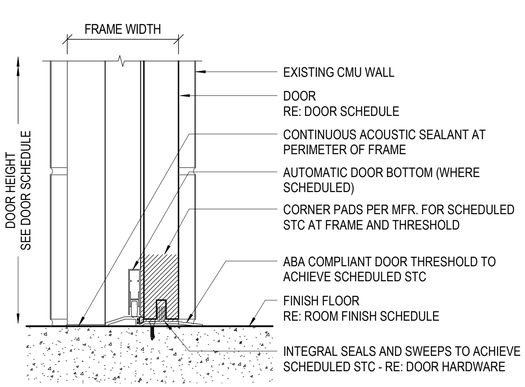

C4 DOOR JAMB - STC
SCALE: 3" = 1'-0"




C7 DOOR JAMB - STC
SCALE: 3" = 1'-0"




A4 DOOR SILL
SCALE: 3" = 1'-0"




A7 DOOR SILL - STC
SCALE: 3" = 1'-0"

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: B. KENNALEY
DRAWN BY: W. NEEDLE
CHECKED BY: E. VALEZQUEZ
SUBMITTED BY: C. DAWSON
SIZE: 34X22

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
CONSTRUCTION BRANCH
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

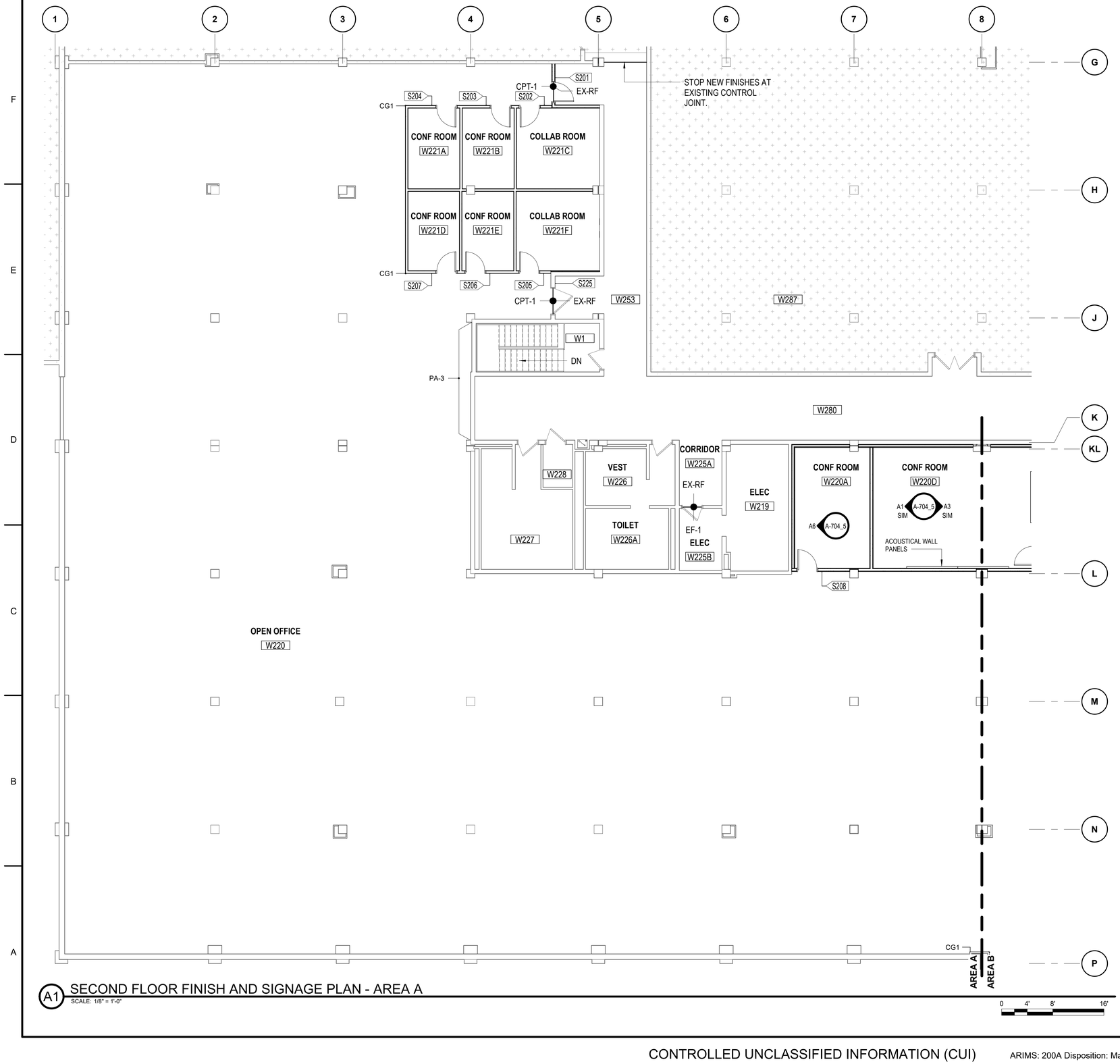
BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

DOOR DETAILS

SHEET ID
A-602_5

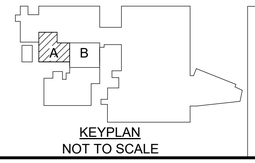
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000




A1 SECOND FLOOR FINISH AND SIGNAGE PLAN - AREA A
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH




KEYPLAN
NOT TO SCALE

## GENERAL FINISH PLAN NOTES:

1. SEE ROOM FINISH SCHEDULE FOR FLOOR AND WALL FINISHES NOT INDICATED ON FLOOR PLANS.
2. SEE SPECIFICATION FOR FLOORING MATERIAL INSTALLATION REQUIREMENTS, COORDINATION OF FLOORING ACCESSORIES AND TRANSITION STRIPS BETWEEN DIFFERENT FLOOR CONDITIONS. PROVIDE THRESHOLDS PER SPECIFICATIONS AND DRAWINGS.
3. FOR FLOORING MATERIAL TRANSITIONS WHICH OCCUR AT DOORWAYS, TERMINATE FINISH TRANSITION AND TRANSITION STRIP UNDER THE DOOR AT THE DOOR STOP OR CENTER UNDER THE CLOSED DOOR.
4. WHERE TWO OR MORE PAINTED FINISHES OCCUR ON THE SAME WALL FACE OR CEILING SURFACE, A PAINT TRANSITION REVEAL IS TO PROVIDED AS INDICATED ON THE DRAWINGS.

## GENERAL SIGNAGE PLACEMENT PLAN NOTES:

1. REFER TO SIGNAGE SCHEDULE AND DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.
2. REFER TO SIGNAGE SCHEDULE FOR SIGN LOCATION TAG, DOOR LOCATION, SIGN TYPE, SIGN TEXT NUMBER, AND PLACEHOLDER MESSAGE TEXT.
3. REFER TO SIGNAGE MOUNTING HEIGHTS ON SIGNAGE DETAIL DRAWINGS. SIGNS TO BE WALL-MOUNTED ON THE LATCH SIDE OF DOOR OR AS INDICATED. HEIGHTS, CLEARANCES, AND CONFIGURATIONS SHOWN ARE TYPICAL AND MUST APPLY IN ALL INSTANCES UNLESS NOTED OTHERWISE.
4. INTERIOR SIGNAGE MUST COMPLY WITH UFC REQUIREMENTS, GUIDANCE FOR AIR FORCE SIGNAGE AS FOUND IN UFC 3-120-01 "SIGN STANDARDS, WITH CHANGE 3" AND BASE STANDARDS.
5. CONTRACTOR MUST ENSURE SIGNAGE ROOM NUMBER COORDINATE WITH NEW ROOM NUMBERS OR SIGNAGE MUST BE REPLACED TO MATCH EXISTING. RE: A-703_5 FOR SCHEDULE OF SIGNS.

## SCOPE LEGEND

NOT IN SCOPE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR FINISH AND SIGNAGE PLAN - AREA A

SHEET ID
**A-701_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



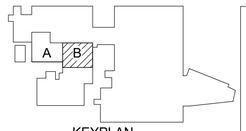
CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION

A1 SECOND FLOOR FINISH AND SIGNAGE PLAN - AREA B

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

0 4' 8' 16'

PLAN NORTH




KEYPLAN
NOT TO SCALE

## GENERAL FINISH PLAN NOTES:

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2. SEE SPECIFICATION FOR FLOORING MATERIAL INSTALLATION REQUIREMENTS, COORDINATION OF FLOORING ACCESSORIES AND TRANSITION STRIPS BETWEEN DIFFERENT FLOOR CONDITIONS. PROVIDE THRESHOLDS PER SPECIFICATIONS AND DRAWINGS.
3. FOR FLOORING MATERIAL TRANSITIONS WHICH OCCUR AT DOORWAYS, TERMINATE FINISH TRANSITION AND TRANSITION STRIP UNDER THE DOOR AT THE DOOR STOP OR CENTER UNDER THE CLOSED DOOR.
4. WHERE TWO OR MORE PAINTED FINISHES OCCUR ON THE SAME WALL FACE OR CEILING SURFACE, A PAINT TRANSITION REVEAL IS TO PROVIDED AS INDICATED ON THE DRAWINGS.

## GENERAL SIGNAGE PLACEMENT PLAN NOTES:

1. REFER TO SIGNAGE SCHEDULE AND DETAIL DRAWINGS FOR ADDITIONAL INFORMATION.
2. REFER TO SIGNAGE SCHEDULE FOR SIGN LOCATION TAG, DOOR LOCATION, SIGN TYPE, SIGN TEXT NUMBER, AND PLACEHOLDER MESSAGE TEXT.
3. REFER TO SIGNAGE MOUNTING HEIGHTS ON SIGNAGE DETAIL DRAWINGS. SIGNS TO BE WALL-MOUNTED ON THE LATCH SIDE OF DOOR OR AS INDICATED. HEIGHTS, CLEARANCES, AND CONFIGURATIONS SHOWN ARE TYPICAL AND MUST APPLY IN ALL INSTANCES UNLESS NOTED OTHERWISE.
4. INTERIOR SIGNAGE MUST COMPLY WITH UFC REQUIREMENTS, GUIDANCE FOR AIR FORCE SIGNAGE AS FOUND IN UFC 3-120-01 "SIGN STANDARDS, WITH CHANGE 3" AND BASE STANDARDS.
5. CONTRACTOR MUST ENSURE SIGNAGE ROOM NUMBER COORDINATE WITH NEW ROOM NUMBERS OR SIGNAGE MUST BE REPLACED TO MATCH EXISTING. RE: A-703_5 FOR SCHEDULE OF SIGNS.

## SCOPE LEGEND

NOT IN SCOPE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: S. JATKINSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR FINISH AND SIGNAGE PLAN - AREA B

SHEET ID

**A-702_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

NOT FOR CONSTRUCTION

**GENERAL SIGNAGE SCHEDULE NOTES:**

1. REFER TO SPECIFICATION SECTION 10 14 00.20 INTERIOR SIGNAGE FOR BASIS OF DESIGN OR EQUIVALENT, PRODUCT STYLE AND COLOR.
2. REFER TO SIGNAGE PLACEMENT DRAWINGS FOR LOCATION OF INTERIOR SIGNS.
3. REFER TO SIGNAGE DETAILS FOR SIGNAGE CONSTRUCTION AND MOUNTING ELEVATION.
4. REFER TO ARCHITECTURAL DRAWINGS FOR COORDINATION OF SIGNAGE INSTALLATION TO WALL CONSTRUCTION. SIGNAGE MUST BE ANCHORED THRU THE SURFACE APPLIED WALL FINISHES TO THE SUBSTRATE WALL.
5. ALL HARDWARE/MOUNTING ATTACHMENTS TO BE CONCEALED AND APPROPRIATE FOR THE RECEIVING BUILDING SURFACE.
6. ALL SIGNAGE MUST COMPLY WITH THE MOST CURRENT VERSION OF THE ARCHITECTURAL BARRIERS ACT (ABA).
7. INSTALL FIRE EXTINGUISHER IDENTIFICATION SIGN ABOVE ALL FIRE EXTINGUISHER CABINETS AND WALL BRACKET MOUNTED EXTINGUISHERS. SEE LIFE SAFETY PLANS FOR FIRE EXTINGUISHER LOCATIONS.
8. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH SIGNAGE MANUFACTURER(S) TO PROVIDE ANY ADDITIONAL SIGNAGE AS REQUIRED BY GOVERNING MUNICIPALITY AT THE SITE LOCATION.
9. ALL MESSAGE TEXT AS SHOWN ON THE SIGN SCHEDULE IS A PLACE HOLDER ONLY AND IS NOT THE FINAL TEXT MESSAGE. ALL MESSAGE TEXT MUST BE CONFIRMED BY GOVERNMENT END USER PRIOR TO SIGNAGE SHOP DRAWINGS.

**GENERAL ROOM FINISH SCHEDULE NOTES:**

1. REFER TO FINISH LEGEND FOR BASIS OF DESIGN INTERIOR FINISH MATERIALS. FINISHES WHICH MATCH TECHNICAL SPECIFICATIONS ARE CONSIDERED EQUAL AND MAY BE CONSIDERED FOR APPROVAL. MATCH EXISTING PATTERNS AND FINISHES IN KIND.
2. REFER TO SPECIFICATIONS FOR FINISH TECHNICAL REQUIREMENTS.
3. REFER TO ELECTRICAL DRAWINGS, MECHANICAL DRAWINGS, AND COMMUNICATION DRAWINGS FOR COORDINATION OF BUILDING FINISHES TO BUILDING SYSTEMS.
4. ALL PAINTING MUST BE COMPLETED BY CONTRACTOR DURING OFF-SHIFT HOURS.
5. CONTRACTOR TO ELECTROSTATICALLY PAINT ALL NEW AND EXISTING METAL DOORS AND HAND ROLL DOOR FRAMES WITHIN PROJECT BOUNDARY. COLOR TO MATCH FACILITY STANDARD: PA-2.
6. CONTRACTOR TO PAINT ALL WALLS IN AHU-5 AREA.
7. PAINT BOTH SIDES OF WALL IN MECHANICAL ROOM W299 ONE COAT WHITE, INCLUDING ABOVE CEILING. PAINT SECURE SPACE EXTERIOR BOUNDARY WALLS WITHIN PROJECT AREA, INCLUDING ABOVE CEILING.
8. RE-LABEL JUNCTION BOXES AND OTHER EQUIPMENT IN MECHANICAL ROOM W299 WHERE LABELS WILL BE PAINTED OVER.
9. IN MECHANICAL ROOM W299, PAINT MISC. STEEL, EXISTING LOUVER BLANK OFF PANEL TO REMAIN. TEMPORARILY REMOVE PANEL AND RE-INSTALL AFTER INSTALLATION OF AIR HANDLING UNIT.
10. IN MECHANICAL ROOM W299, EXISTING CONCRETE FLOOR TO BE PROPERLY PREPARED TO RECEIVE PAINTED FINISH AS SCHEDULED. PREPARE FLOOR SURFACE TO REMOVE ALL DIRT, OIL, GREASE, POWDERY AND PEELING PAINT, AND OTHER CONTAMINANTS. ETCHING, BEAD BLASTING OR OTHER APPROVED MEANS WILL BE REQUIRED. REPAIR ALL CRACKS AND OTHER SURFACE IMPERFECTIONS WITH HIGH QUALITY COMPOUNDS. APPLY 2 COATS LOW VOC EPOXY PAINT, PER MANUFACTURER'S RECOMMENDATION. APPLY SILICON SAND TO MIXTURE FOR SLIP RESISTANCE. COLOR MUST BE BY SHERWIN WILLIAMS APPROVED BY WPAFB. MOISTURE LEVELS MUST BE TESTED AND AT ACCEPTABLE LEVELS PRIOR TO PAINTING, PER MANUFACTURER'S RECOMMENDATION.
11. IN MECHANICAL ROOM W299, EXISTING CEILING TO REMAIN. PATCH, CLEAN, AND PAINT. PAINT WALLS SAME COLOR AS CEILING.
12. PROVIDE CORNER GUARDS (CG-1) AS INDICATED ON PLANS.
13. ALL SECURE AREA PERIMETER WALLS MUST BE PAINTED ABOVE CEILING TO UNDERSIDE OF DECK ABOVE, AND BELOW RAISED ACCESS FLOOR TO FLOOR SLAB BELOW.

SIGNAGE SCHEDULE - SECOND FLOOR

| SIGN CODE | SIGN TYPE | ROOM NUMBER | MESSAGE TEXT |
|---|---|---|---|
| S201 | A | W220 | OPEN OFFICE |
| S202 | A | W221C | COLLABORATION ROOM |
| S203 | A | W221B | CONFERENCE ROOM |
| S204 | A | W221A | CONFERENCE ROOM |
| S205 | A | W221F | COLLABORATION ROOM |
| S206 | A | W221E | CONFERENCE ROOM |
| S207 | A | W221D | CONFERENCE ROOM |
| S208 | A | W220A | CONFERENCE ROOM |
| S209 | A | W220D | CONFERENCE ROOM |
| S210 | A | W209A | CONFERENCE ROOM |
| S211 | A | W209C | OFFICE |
| S212 | A | W209B | CONFERENCE ROOM |
| S213 | A | W209D | OFFICE |
| S214 | A | W209E | OFFICE |
| S215 | A | W209F | OFFICE |
| S216 | A | W209G | OFFICE |
| S217 | A | W209H | OFFICE |
| S218 | A | W203D | OFFICE |
| S219 | A | W203C | OFFICE |
| S220 | A | W204 | CONFERENCE ROOM |
| S221 | A | W204 | CONFERENCE ROOM |
| S222 | A | W298 | OPEN OFFICE |
| S223 | A | W203 | OPEN OFFICE |
| S224 | A | W209 | OPEN OFFICE |
| S225 | A | W220 | OPEN OFFICE |

**ROOM FINISH SCHEDULE**

| ROOM NUMBER | ROOM NAME | FLOOR | BASE MATERIAL | WALLS NORTH | WALLS EAST | WALLS SOUTH | WALLS WEST | CEILING | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| LEVEL 2 | | | | | | | | | |
| W201 | TOILET | - | - | - | - | - | - | ACT-1 | ONLY EXISTING CEILING TO BE REPLACED |
| W201A | VEST | - | - | - | - | - | - | ACT-1 | ONLY EXISTING CEILING TO BE REPLACED |
| W201B | VEST | - | - | - | - | - | - | ACT-1 | ONLY EXISTING CEILING TO BE REPLACED |
| W203 | COLLAB ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 / PA-3 | PA-1 / PA-3 | ACT-1 | |
| W203A | BREAK | CPT-1 | RB-1 | PA-1 / PA-3 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W203C | OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W203D | OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W203E | CONF ROOM | CPT-1 | RB-1 | PA-1 | PA-1 / PA-3 | PA-1 | PA-1 | ACT-1 | |
| W204 | CONF ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W208 | CORRIDOR | EXISTING | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W209 | OPEN OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W209A | CONF ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W209B | CONF ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W209C | OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W209D | OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W209E | OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W209F | OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W209G | OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W209H | OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W210 | OFFICE | - | - | - | - | - | - | ACT-1 | ONLY EXISTING CEILING TO BE REPLACED |
| W212 | OFFICE | - | - | - | - | - | - | ACT-1 | ONLY EXISTING CEILING TO BE REPLACED |
| W219 | ELEC | EF-1 | - | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W220 | OPEN OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 / PA-3 | PA-1 | PA-1 / PA-3 | ACT-1 | |
| W220A | CONF ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W220D | CONF ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W221A | CONF ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W221B | CONF ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W221C | COLLAB ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W221D | CONF ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W221E | CONF ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W221F | COLLAB ROOM | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W225A | CORRIDOR | EXISTING | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W225B | ELEC | EF-1 | - | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W226 | VEST | - | - | - | - | - | - | ACT-1 | ONLY EXISTING CEILING TO BE REPLACED |
| W226A | TOILET | - | - | - | - | - | - | ACT-1 | ONLY EXISTING CEILING TO BE REPLACED |
| W253 | CORRIDOR | EXISTING | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | SEE A-701_5 AND A-702_5 FINISH PLANS FOR FINISH EXTENT |
| W279 | CORRIDOR | RF-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | MATCH EXISTING TILE AT NEW ALCOVE |
| W298 | OPEN OFFICE | CPT-1 | RB-1 | PA-1 | PA-1 | PA-1 | PA-1 | ACT-1 | |
| W299 | MECHANICAL | EF-1 | - | - | - | - | - | - | SEE GENERAL NOTES FOR MORE INFORMATION |

**FINISH LEGEND - BASIS OF DESIGN OR EQUIVALENT**

| MATERIAL | DESCRIPTION | MANUF. | MODEL | PRODUCT NUMBER | COLOR | REMARKS |
|---|---|---|---|---|---|---|
| CEILING FINISHES | | | | | | |
| ACT-1 | 24" x 48" x 3/4" | ARMSTRONG | FINE FISSURED, SCHOOL ZONE, SQUARE LAY-IN | 1714 | WHITE | |
| FLOOR FINISHES | | | | | | |
| CPT-1 | CARPET TILE - 24" X 24" | SHAW CONTRACT | DISPERSE | 59576 | MAGNETIC FIELDS | |
| EF-1 | STANDARD RESINOUS FLOORING | SHERWIN WILLIAMS | 2 COAT / SILICON SAND | - | SW4031 STRUCTURAL GRAY | |
| EX-RF | EXISTING RESILIENT FLOORING | - | - | - | - | - |
| RF-1 | VINYL COMPOSITION TILE 12"X12" | ARMSTRONG | IMPERIAL TEXTURE STANDARD EXCELON | 51839 | FORTRESS WHITE | MATCH TO EXISTING |
| WALL FINISHES | | | | | | |
| AP-1 | ACOUSTICAL PANEL FABRIC | CARNEGIE | XOREL HAVANA | 6249 | NO.5 | |
| CG-1 | 4' HIGH CORNER GUARD | CONSTRUCTION SPECIALTIES | ACROVYN | SM-20 | FOLKSTONE 927 | INSTALLED AT ALL OUTSIDE CORNERS OF GYPSUM BOARD WALLS |
| PA-1 | ACRYLIC/LATEX | SHERWIN WILLIAMS | EGGSHELL | SW7649 | SILVERPLATE | INTERIOR ROOM WALL PAINT |
| PA-2 | ACRYLIC/LATEX | BENJAMIN MOORE | SEMI-GLOSS | 2134-30 | IRON MOUNTAIN | METAL DOORS AND FRAMES |
| PA-3 | ACRYLIC/LATEX | SHERWIN WILLIAMS | EGGSHELL | SW6530 | REVEL BLUE | INTERIOR ROOM WALL PAINT |
| RB-1 | 4" TOED WALL BASE | ROPPE | RUBBER BASE | 193, COVE | 98 BLACK BROWN | |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

FINISH & SIGNAGE SCHEDULES AND NOTES

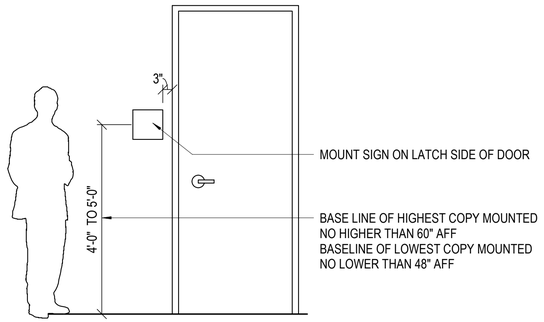
SHEET ID

**A-703_5**

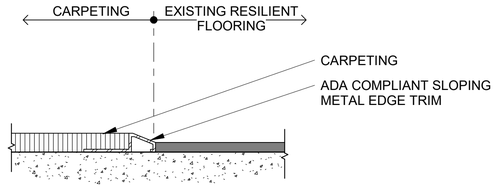
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



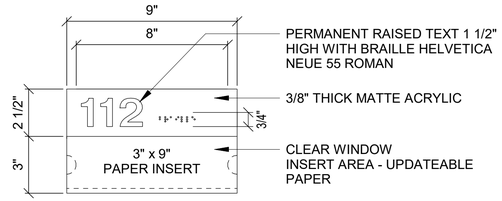
CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION



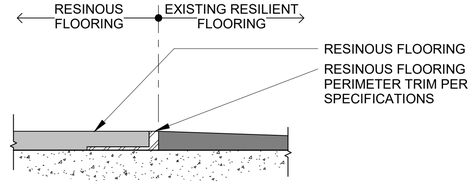

D1 TYP. SIGNAGE MOUNTING - WALL
SCALE: 1/2" = 1'-0"
0 1' 2' 4'



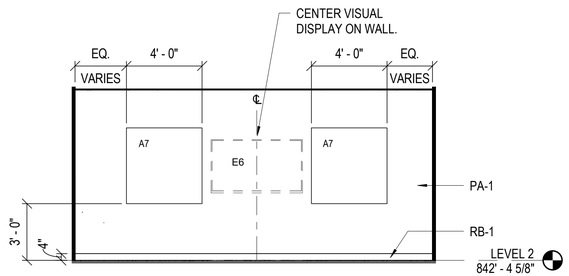

D3 FLOOR TRANSITION - RESILIENT TO CARPET
SCALE: 12" = 1'-0"
0 1" 2"



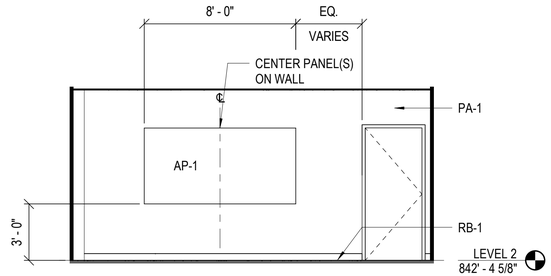

C1 SIGN TYPE A
SCALE: 3" = 1'-0"
0 3" 6" 9"



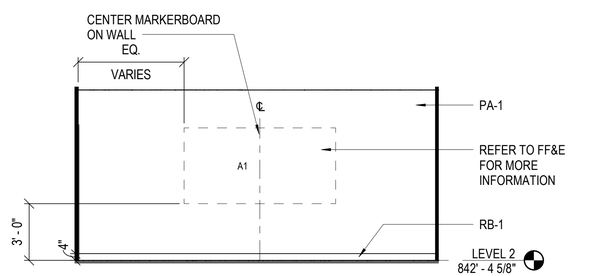

C3 FLOOR TRANSITION - RESINOUS TO RESILIENT
SCALE: 12" = 1'-0"
0 1" 2"




A1 TYPICAL CONFERENCE ROOM MEDIA ELEVATION
SCALE: 1/4" = 1'-0"
0 2' 4' 8'




A3 TYPICAL SINGLE ACOUSTICAL PANEL ELEVATION
SCALE: 1/4" = 1'-0"
0 2' 4' 8'




A6 TYPICAL MARKERBOARD ELEVATION
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: T. LEE-WELLER
DRAWN BY: W. NEEDLE
CHECKED BY: R. LASTER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

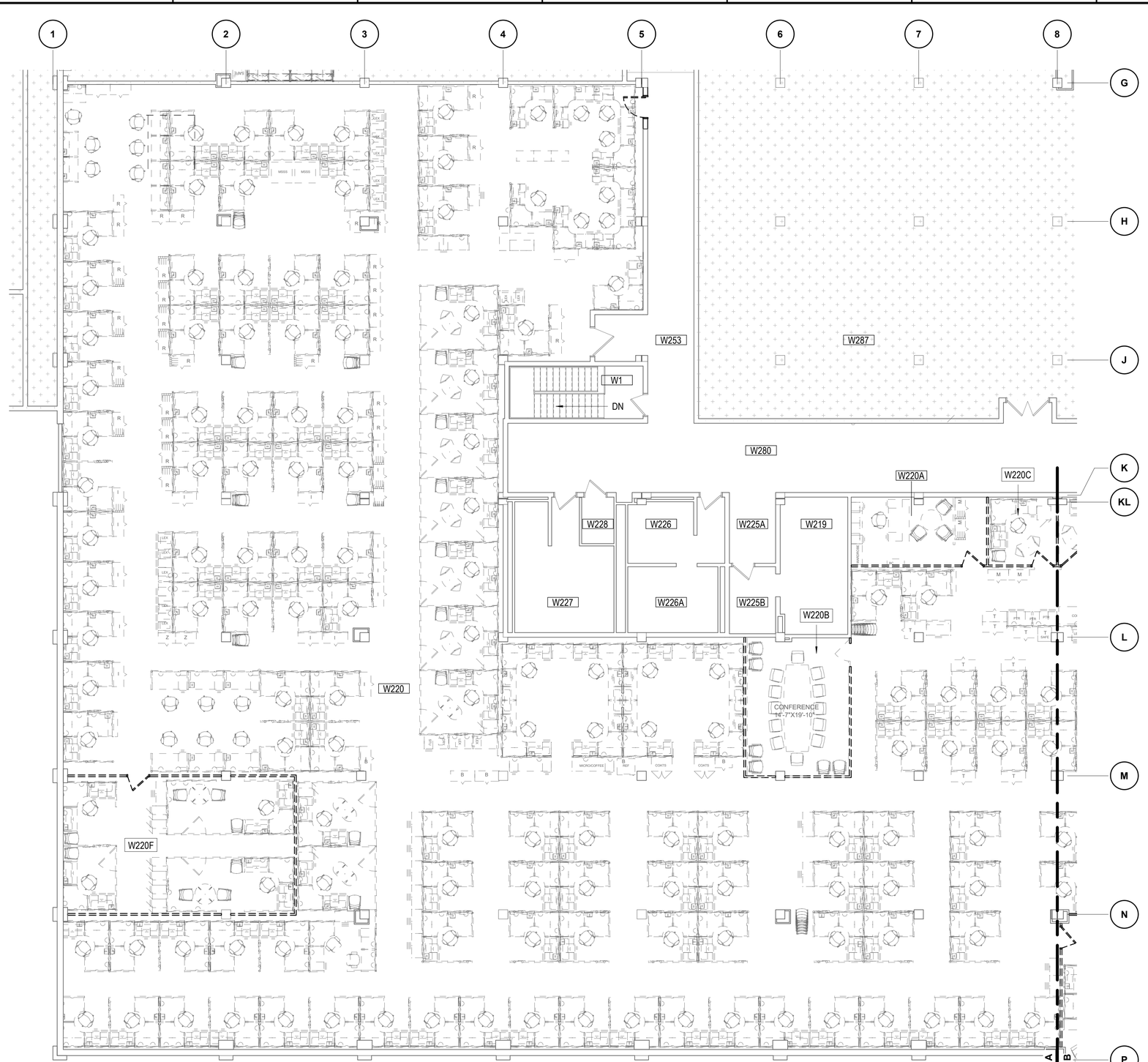
INTERIOR DETAILS AND ELEVATIONS

SHEET ID
A-704_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION




A1 SECOND FLOOR DEMOLITION FURNITURE PLAN - AREA A
SCALE: 1/8" = 1'-0"

PLAN NORTH

## GENERAL DEMOLITION PLAN NOTES: FURNITURE

1. REFER TO H-SERIES SHEETS FOR ALL HAZARDOUS BUILDING MATERIAL, ASBESTOS/LEAD ABATEMENT, AND UNIVERSAL WASTE REQUIREMENTS.
2. CONTRACTOR MUST FIELD VERIFY AND LABEL THE EXTENT OF ALL FURNITURE, EQUIPMENT, POWER POLES, COMPUTER POLES, CABLING, WIRING AND DEMOUNTABLE PARTITIONS. CONTRACTOR MUST DISASSEMBLE, SORT FURNITURE FOR RE-USE, AND RE-ASSEMBLE AFTER CONSTRUCTION IS COMPLETE. LOCATION FOR STORAGE OF FURNITURE MUST BE DETERMINED BY GOVT. PRIOR TO COMMENCMENT OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR INVENTORYING EACH ROOM PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR MUST LABEL ALL EXISTING CONDITIONS TO ENSURE THAT THE FURNITURE, CABINETS, POWER, CCTV, CONFERENCE EQUIPMENT, ETC. AND COMPUTER WIRING ARE ALL REPLACED IN THE SAME LOCATIONS. CONTRACTOR SHALL DIRECT GOVERNMENT TO TAKE PICTURES OF ALL EXISTING DAMAGE FOR RECORDS. PHOTOS ARE ONLY NEEDED FOR DAMAGED ITEMS. CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND NOTIFY THE GOVERNMENT OF DAMAGED ITEMS. CONTRACTOR'S FAILURE TO TAKE GOOD RECORDS WILL NOT BE THE GOVERNMENT'S RESPONSIBLITY.
4. PRIOR TO CONTRACTOR'S WORK, INDIVIDUALS' PERSONAL BELONGS WILL BE BOXED, MOVED AND/OR STORED BY THE GOVERNMENT.
5. ALL FURNITURE WILL BE REMOVED FROM CONSTRUCTION AREA BY THE CONTRACTOR AND TURNED OVER TO APPROPRIATE ENTITIES OR STORED FOR RE-INSTALLATION. CONTRACTOR MUST STORE ALL FURNITURE TO BE RE-INSTALLED IN CONTRACTOR FURNISHED LOCKABLE TRAILERS ON WPAFB. CONTRACTOR MUST BEAR THE SOLE RESPONSIBILITY TO ENSURE THAT THE FURNITURE AND EQUIPMENT IS NOT DAMAGED, AND IS REINSTALLED WITH ASSOCIATED POWER POLES, COMPUTER POWER, COMPUTER FIBER, PHONES, ETC. IN THE SAME CONFIGURATION.
6. ALL EXISTING DEMOUNTABLE PARTITIONS TO BE REMOVED.
7. ALL ARTWORK TO BE REMOVED BY WPAFB PRIOR TO BEGINNING OF WORK.
8. SEE SHEE A-002_5 FOR ROOM SCHEDULE.

## DEMOLITION/EXISTING PLAN LEGEND

- EXISTING DOOR
- DOOR TO BE REMOVED
- EXISTING WALL
- WALL TO BE REMOVED
- FURNITURE TO BE REMOVED

**SCOPE LEGEND**

- NOT IN SCOPE

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: G. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
ATTN: CELRL-PEB-ESS-KING, JR., PL
600 DR. MARTIN LUTHER KING, JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR DEMO FURNITURE PLAN - AREA A

SHEET ID
**ID110_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION

## GENERAL DEMOLITION PLAN NOTES: FURNITURE

1. REFER TO H-SERIES SHEETS FOR ALL HAZARDOUS BUILDING MATERIAL, ASBESTOS/LEAD ABATEMENT, AND UNIVERSAL WASTE REQUIREMENTS.
2. CONTRACTOR MUST FIELD VERIFY AND LABEL THE EXTENT OF ALL FURNITURE, EQUIPMENT, POWER POLES, COMPUTER POLES, CABLING, WIRING AND DEMOUNTABLE PARTITIONS. CONTRACTOR MUST DISASSEMBLE, SORT FURNITURE FOR RE-USE, AND RE-ASSEMBLE AFTER CONSTRUCTION IS COMPLETE. LOCATION FOR STORAGE OF FURNITURE MUST BE DETERMINED BY GOVT. PRIOR TO COMMENCMENT OF CONSTRUCTION.
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4. PRIOR TO CONTRACTOR'S WORK, INDIVIDUALS' PERSONAL BELONGS WILL BE BOXED, MOVED AND/OR STORED BY THE GOVERNMENT.
5. ALL FURNITURE WILL BE REMOVED FROM CONSTRUCTION AREA BY THE CONTRACTOR AND TURNED OVER TO APPROPRIATE ENTITIES OR STORED FOR RE-INSTALLATION. CONTRACTOR MUST STORE ALL FURNITURE TO BE RE-INSTALLED IN CONTRACTOR FURNISHED LOCKABLE TRAILERS ON WPAFB. CONTRACTOR MUST BEAR THE SOLE RESPONSIBILITY TO ENSURE THAT THE FURNITURE AND EQUIPMENT IS NOT DAMAGED, AND IS REINSTALLED WITH ASSOCIATED POWER POLES, COMPUTER POWER, COMPUTER FIBER, PHONES, ETC. IN THE SAME CONFIGURATION.
6. ALL EXISTING DEMOUNTABLE PARTITIONS TO BE REMOVED.
7. ALL ARTWORK TO BE REMOVED BY WPAFB PRIOR TO BEGINNING OF WORK.
8. SEE SHEE A-002_5 FOR ROOM SCHEDULE.

## DEMOLITION/EXISTING PLAN LEGEND

EXISTING DOOR

DOOR TO BE REMOVED

EXISTING WALL

WALL TO BE REMOVED

FURNITURE TO BE REMOVED

## SCOPE LEGEND

NOT IN SCOPE

A1 SECOND FLOOR DEMOLITION FURNITURE PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
CHRISTOPHER S. JOHNSON
MARSHALL HER KING JR. PL
600 DR. LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR DEMO FURNITURE PLAN - AREA B

SHEET ID
ID111_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION

**FURNITURE PLAN KEY LEGEND:**

B — EXISTING FURNITURE - TO BE RE-INSTALLED IN NEW LOCATION.
GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)

A — EXISTING FURNITURE - TO BE RE-INSTALLED IN SAME LOCATION.
GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)

XX — NEW FURNITURE
CONTRACTOR FURNISHED CONTRACTOR INSTALLED (CFCI)

– – – – GOVERNMENT FURNISHED GOVERNMENT INSTALLED FURNITURE (GFGI)

**FURNITURE PLAN KEY NOTES:**

1. ALL NOTED EXISTING FURNITURE TO BE DISASSEMBLED AND STORED DURING CONSTRUCTION. STEAM CLEAN PRIOR TO RE-INSTALLING AT COMPLETION OF CONSTRUCTION.

2. ANY ITEMS TO BE REINSTALLED SHALL NOT SHOW ANY DAMAGE OR SIGNS OF BIOLOGICAL GROWTH.

PLAN NORTH

**SCOPE LEGEND**

NOT IN SCOPE

0 8' 16' 24'

KEYPLAN
NOT TO SCALE

A1 SECOND FLOOR FURNITURE PLAN - OVERALL KEY
SCALE: 3/32" = 1'-0"

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: T. LEE-WELLER | ISSUE DATE: 02-16-23 |
| DRAWN BY: S. BRANNAN | SOLICITATION NO.: |
| CHECKED BY: R. LASTER | CONTRACT NO.: |
| SUBMITTED BY: G. JOHNSON | |
| SIZE: 34X22 | |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR FURNITURE PLAN - OVERALL KEY

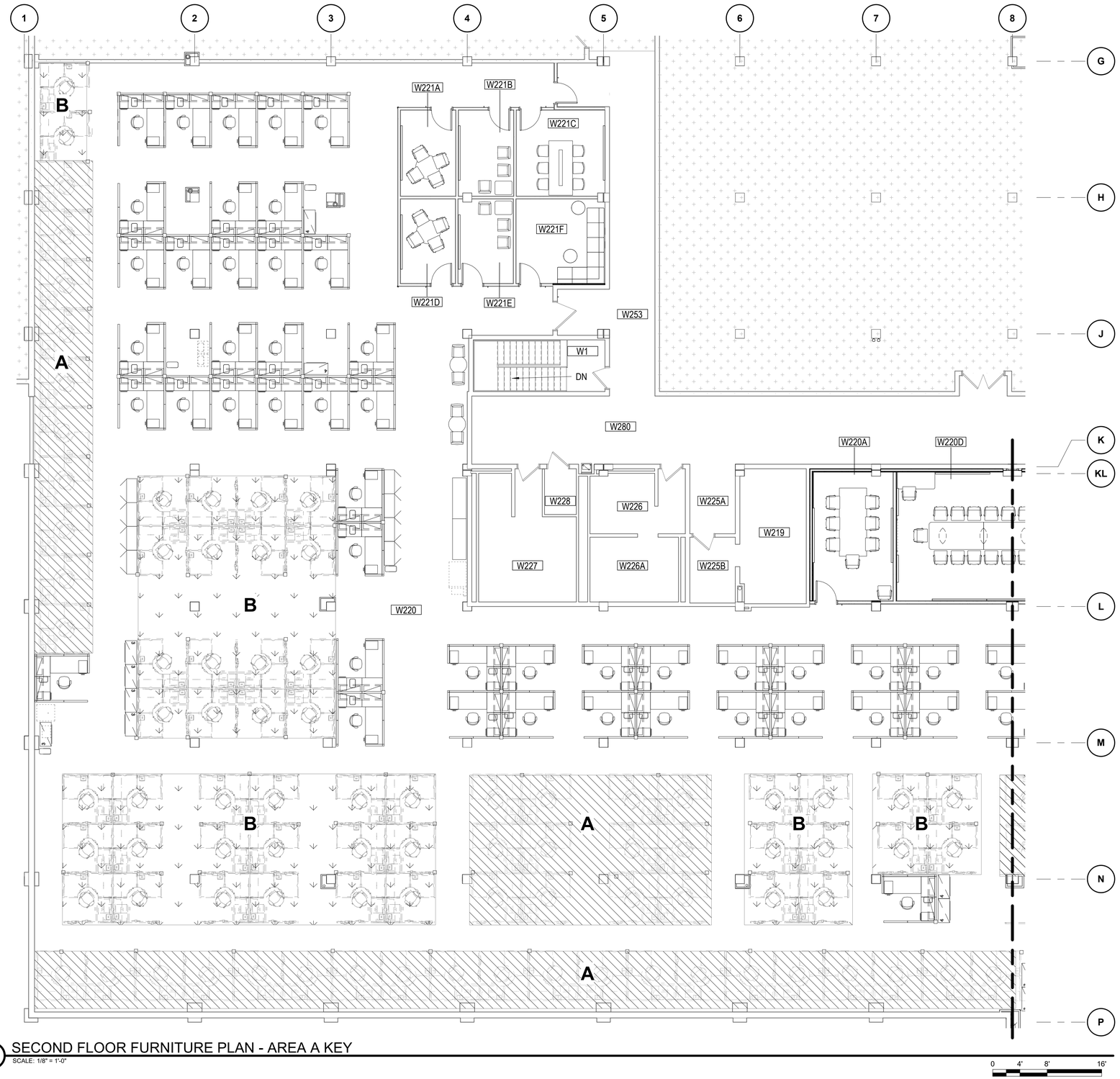
SHEET ID

I-109_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




## FURNITURE PLAN KEY LEGEND:

- EXISTING FURNITURE - TO BE RE-INSTALLED IN NEW LOCATION. GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)
- EXISTING FURNITURE - TO BE RE-INSTALLED IN SAME LOCATION. GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)
- NEW FURNITURE CONTRACTOR FURNISHED CONTRACTOR INSTALLED (CFCI)
- GOVERNMENT FURNISHED GOVERNMENT INSTALLED FURNITURE (GFGI)

## FURNITURE PLAN KEY NOTES:

1. ALL NOTED EXISTING FURNITURE TO BE DISASSEMBLED AND STORED DURING CONSTRUCTION. STEAM CLEAN PRIOR TO RE-INSTALLING AT COMPLETION OF CONSTRUCTION.

2. ANY ITEMS TO BE REINSTALLED SHALL NOT SHOW ANY DAMAGE OR SIGNS OF BIOLOGICAL GROWTH.

## SCOPE LEGEND

NOT IN SCOPE

A1 SECOND FLOOR FURNITURE PLAN - AREA A KEY
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: C. JOHNSON
SIZE: 34"X22"
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR FURNITURE PLAN - AREA A KEY

SHEET ID

I-110_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

A1 SECOND FLOOR FURNITURE PLAN - AREA B KEY

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

PLAN NORTH

0 4' 8' 16'

**FURNITURE PLAN KEY LEGEND:**

- B — EXISTING FURNITURE - TO BE RE-INSTALLED IN NEW LOCATION. GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)
- A — EXISTING FURNITURE - TO BE RE-INSTALLED IN SAME LOCATION. GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)
- XX — NEW FURNITURE CONTRACTOR FURNISHED CONTRACTOR INSTALLED (CFCI)
- GOVERNMENT FURNISHED GOVERNMENT INSTALLED FURNITURE (GFGI)

**FURNITURE PLAN KEY NOTES:**

1. ALL NOTED EXISTING FURNITURE TO BE DISASSEMBLED AND STORED DURING CONSTRUCTION. STEAM CLEAN PRIOR TO RE-INSTALLING AT COMPLETION OF CONSTRUCTION.

2. ANY ITEMS TO BE REINSTALLED SHALL NOT SHOW ANY DAMAGE OR SIGNS OF BIOLOGICAL GROWTH.

**SCOPE LEGEND**

NOT IN SCOPE

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR FURNITURE PLAN - AREA B KEY

SHEET ID

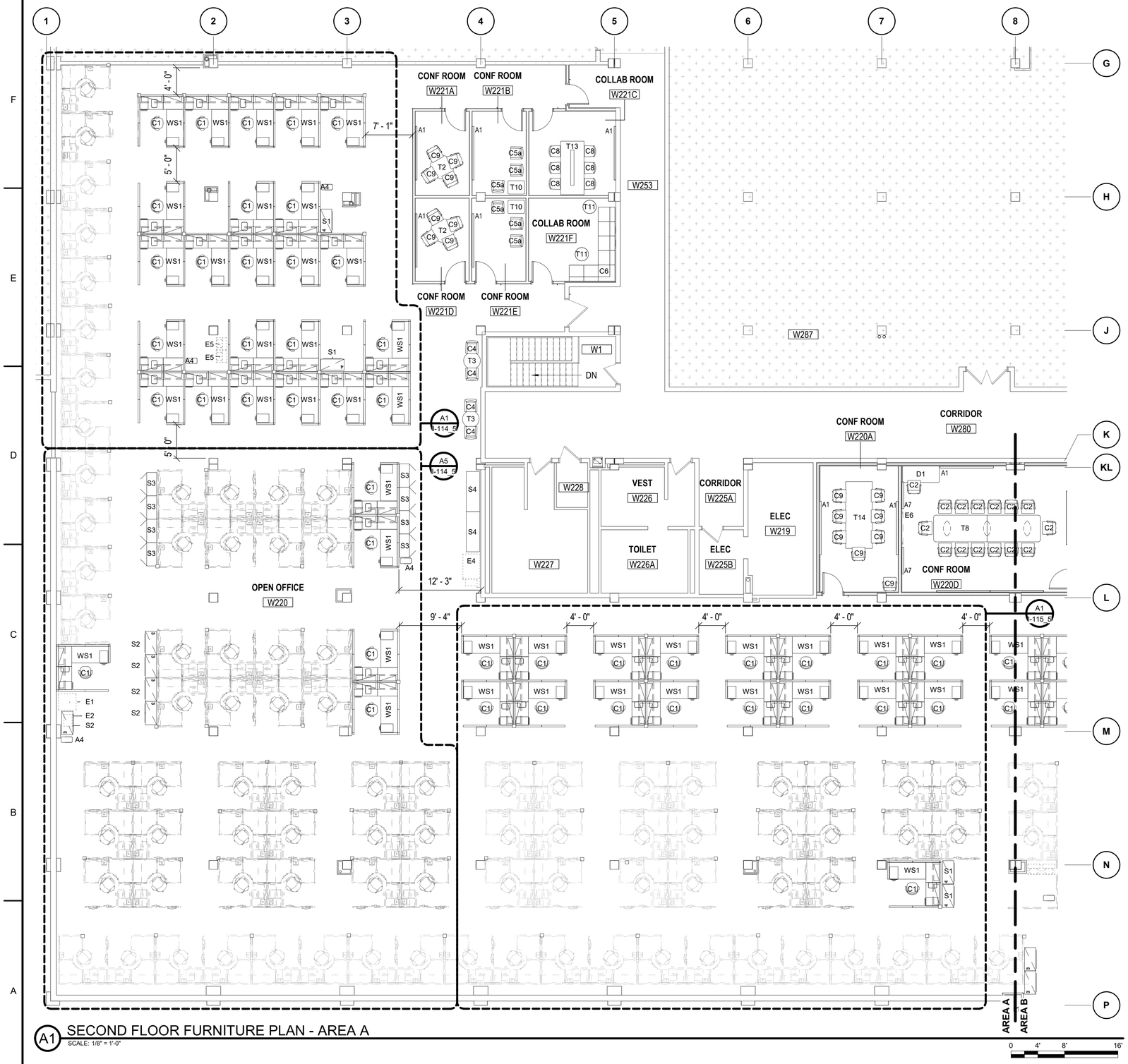
**I-111_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




A1 SECOND FLOOR FURNITURE PLAN - AREA A
SCALE: 1/8" = 1'-0"

## GENERAL FURNITURE PLAN NOTES:

1. THE OFFICE AREAS OUTSIDE OF CONSTRUCTION WILL REMAIN OCCUPIED BY WPAFB DURING CONSTRUCTION. SEE PROJECT GENERAL NOTES ON SHEET AG001_5 FOR ADDITIONAL INFORMATION.
2. THE EXISTING MODULAR FURNITURE IN THE SPACES INDICATED MUST BE DISASSEMBLED AND REASSEMBLED BY PROFESSIONAL WORKERS WHO ARE FULLY TRAINED IN THE INSTALLATION OF MODULAR FURNITURE. CONTRACTOR MUST PROVIDE PROOF OF EXPERIENCE WITH THE INSTALLATION OF THE MODULAR FURNITURE. PROVIDE INDIVIDUALS EXPERIENCED WITH THE INSTALLATION OF FURNITURE. CONTRACTOR MUST PROTECT FURNITURE FROM WATER, DUST, DEBRIS, AND DAMAGE DUE TO CONSTRUCTION ACTIVITIES. FURNITURE MUST BE STORED OUTSIDE OF THE CONSTRUCTION AREA DURING CONSTRUCTION.
3. EXISTING FURNITURE FOR REFERENCE ONLY (TYPICAL). FIELD VERIFY EXTENT OF FURNITURE AND EXACT LOCATION SO THAT FURNITURE CAN BE RE-ASSEMBLED IN THE SAME LOCATION AFTER CONSTRUCTION IS COMPLETE, AS INDICATED.
4. EXISTING FURNITURE NOT BEING REUSED MUST BE INVENTORIED AND DELIVERED TO BUILDING 10867 BY THE GENERAL CONTRACTOR UNLESS DIRECTED OTHERWISE BY THE GOVERNMENT. FURNITURE MUST BE PLACED IN A CONDITIONED SPACE, STACKED WHERE APPROPRIATE, AND STORED NEATLY. GENERAL CONTRACTOR MUST DISPOSE OF UNUSED FURNITURE AS IDENTIFIED BY GOVERNMENT. GENERAL CONTRACTOR MUST COORDINATE WITH GOVERNMENT PRIOR TO DELIVERY OR DISPOSAL OF EXISTING FURNITURE.
5. PERSONAL WASTE RECEPTACLE (A2) TO BE PLACED AT EVERY DESK AND WORKSTATION.
6. NOT ALL FF&E CODES ARE USED.

## FURNITURE PLAN LEGEND:

EXISTING FURNITURE - TO BE RE-INSTALLED IN NEW LOCATION.
GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)

EXISTING FURNITURE - TO BE RE-INSTALLED IN SAME LOCATION.
GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)

XX NEW FURNITURE
CONTRACTOR FURNISHED CONTRACTOR INSTALLED (CFCI)

GOVERNMENT FURNISHED GOVERNMENT INSTALLED FURNITURE (GFGI)

## FURNITURE PLAN KEY NOTES:

1. ALL NOTED EXISTING FURNITURE TO BE DISASSEMBLED AND STORED DURING CONSTRUCTION. STEAM CLEAN PRIOR TO RE-INSTALLING AT COMPLETION OF CONSTRUCTION.

2. ANY ITEMS TO BE REINSTALLED SHALL NOT SHOW ANY DAMAGE OR SIGNS OF BIOLOGICAL GROWTH.

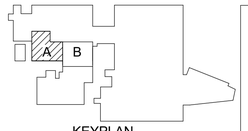
| FURNITURE SCHEDULE | |
|---|---|
| ITEM CODE | DESCRIPTION |
| ACCESSORIES | |
| A1 | MARKERBOARD (8' X 4') |
| A2 | PERSONAL WASTE RECEPTACLE |
| A4 | LARGE WASTE RECEPTACLE |
| A6 | UTILITY POLE |
| A6E | EXISTING UTILITY POLE |
| A7 | MARKERBOARD (4' X 4') |
| CHAIRS AND SEATING | |
| C1 | TASK CHAIR |
| C2 | CONFERENCE CHAIR |
| C4 | CAFE CHAIR |
| C5 | GUEST CHAIR |
| C5a | GUEST CHAIR |
| C6 | MODULAR COUCH |
| C7 | COUCH |
| C8 | CAFE STOOL |
| C9 | EXECUTIVE CONFERENCE CHAIR |
| C10 | CONFERENCE GUEST CHAIR |
| DESKS | |
| D1 | CONTROL DESK |
| D2 | U-SHAPED DESK (8' X 8') |
| D3 | L-SHAPED DESK (8' X 6') |
| EQUIPMENT | |
| E1 | REFRIGERATOR (GFGI) |
| E2 | COUNTERTOP MICROWAVE (GFGI) |
| E3 | SMALL FLOOR COPIER/PRINTER (GFGI) |
| E4 | LARGE FLOOR COPIER/PRINTER (GFGI) |
| E5 | SHREDDER (GFGI) |

| FURNITURE SCHEDULE | |
|---|---|
| ITEM CODE | DESCRIPTION |
| E6 | VISUAL DISPLAY (GFGI) |
| FURNITURE SYSTEMS | |
| WS1 | L-SHAPED WORKSTATION (7' X 8') |
| WS2 | U-SHAPED WORKSTATION (8' X 8'-6") |
| WS3 | L-SHAPED WORKSTATION W/ TRANSACTION TOP (8' X 8') |
| STORAGE AND FILES | |
| S1 | 4 DRAWER LATERAL FILE (42"W X 18"D) |
| S2 | 3 DRAWER LATERAL FILE W/ LAMINATE TOP (42"W X 18"D) |
| S3 | STORAGE CABINET (42"W X 18"D) |
| S4 | CASEWORK CABINET (48"W X 25"D) |
| TABLES | |
| T2 | ROUND TABLE (42" D) |
| T3 | CAFE TABLE (30" D) |
| T4 | TRAINING TABLE (60"L X 36"W) |
| T7 | CONFERENCE TABLE (144"L X 48"W) |
| T8 | LARGE CONFERENCE TABLE (192"L X 48"W) |
| T9 | BREAK TABLE (84"L X 36"W) |
| T10 | OCCASIONAL TABLE (30"L X 24"W) |
| T11 | OCCASIONAL TABLE ROUND (12" D) |
| T13 | CONFERENCE TABLE (96"L X 42"H) BAR HEIGHT |
| T14 | CONFERENCE TABLE (120"L X 48"W) |
| T15 | CONFERENCE TABLE (72"L X 36"W) |

PLAN NORTH

**SCOPE LEGEND**

NOT IN SCOPE




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR FURNITURE PLAN - AREA A

SHEET ID

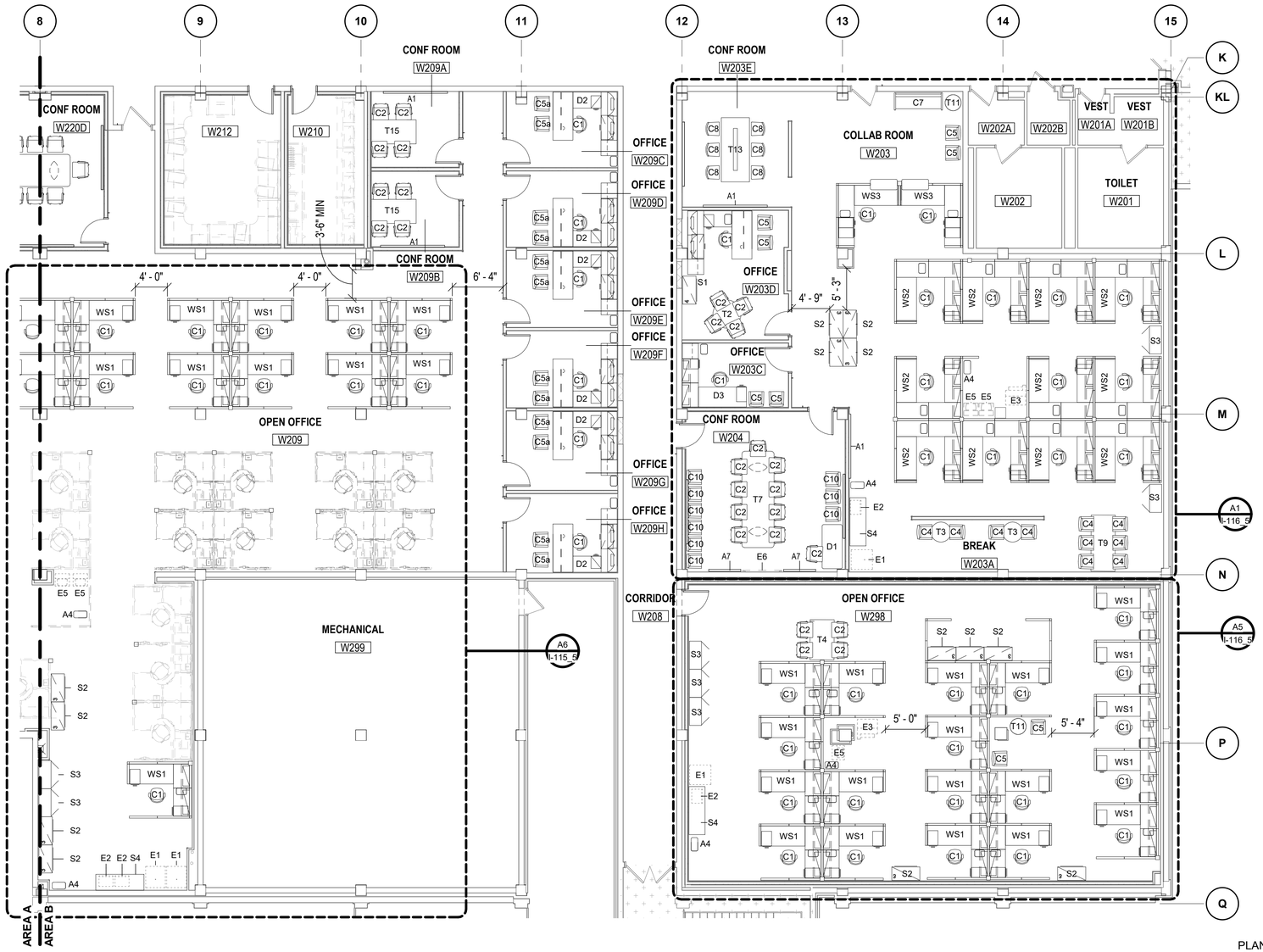
**I-112_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




A1 SECOND FLOOR FURNITURE PLAN - AREA B

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

PLAN NORTH

0 4' 8' 16'

## GENERAL FURNITURE PLAN NOTES:

1. THE OFFICE AREAS OUTSIDE OF CONSTRUCTION WILL REMAIN OCCUPIED BY WPAFB DURING CONSTRUCTION. SEE PROJECT GENERAL NOTES ON SHEET AG001_5 FOR ADDITIONAL INFORMATION.
2. THE EXISTING MODULAR FURNITURE IN THE SPACES INDICATED MUST BE DISASSEMBLED AND REASSEMBLED BY PROFESSIONAL WORKERS WHO ARE FULLY TRAINED IN THE INSTALLATION OF MODULAR FURNITURE. CONTRACTOR MUST PROVIDE PROOF OF EXPERIENCE WITH THE INSTALLATION OF THE MODULAR FURNITURE. PROVIDE INDIVIDUALS EXPERIENCED WITH THE INSTALLATION OF FURNITURE. CONTRACTOR MUST PROTECT FURNITURE FROM WATER, DUST, DEBRIS, AND DAMAGE DUE TO CONSTRUCTION ACTIVITIES. FURNITURE MUST BE STORED OUTSIDE OF THE CONSTRUCTION AREA DURING CONSTRUCTION.
3. EXISTING FURNITURE FOR REFERENCE ONLY (TYPICAL). FIELD VERIFY EXTENT OF FURNITURE AND EXACT LOCATION SO THAT FURNITURE CAN BE RE-ASSEMBLED IN THE SAME LOCATION AFTER CONSTRUCTION IS COMPLETE, AS INDICATED.
4. EXISTING FURNITURE NOT BEING REUSED MUST BE INVENTORIED AND DELIVERED TO BUILDING 10867 BY THE GENERAL CONTRACTOR UNLESS DIRECTED OTHERWISE BY THE GOVERNMENT. FURNITURE MUST BE PLACED IN A CONDITIONED SPACE, STACKED WHERE APPROPRIATE, AND STORED NEATLY. GENERAL CONTRACTOR MUST DISPOSE OF UNUSED FURNITURE AS IDENTIFIED BY GOVERNMENT. GENERAL CONTRACTOR MUST COORDINATE WITH GOVERNMENT PRIOR TO DELIVERY OR DISPOSAL OF EXISTING FURNITURE.
5. PERSONAL WASTE RECEPTACLE (A2) TO BE PLACED AT EVERY DESK AND WORKSTATION.
6. NOT ALL FF&E CODES ARE USED.

## FURNITURE PLAN LEGEND:

EXISTING FURNITURE - TO BE RE-INSTALLED IN NEW LOCATION.
GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)

EXISTING FURNITURE - TO BE RE-INSTALLED IN SAME LOCATION.
GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)

XX NEW FURNITURE
CONTRACTOR FURNISHED CONTRACTOR INSTALLED (CFCI)

GOVERNMENT FURNISHED GOVERNMENT INSTALLED FURNITURE (GFGI)

## FURNITURE PLAN KEY NOTES:

1. ALL NOTED EXISTING FURNITURE TO BE DISASSEMBLED AND STORED DURING CONSTRUCTION. STEAM CLEAN PRIOR TO RE-INSTALLING AT COMPLETION OF CONSTRUCTION.

2. ANY ITEMS TO BE REINSTALLED SHALL NOT SHOW ANY DAMAGE OR SIGNS OF BIOLOGICAL GROWTH.

| FURNITURE SCHEDULE | |
|---|---|
| ITEM CODE | DESCRIPTION |
| ACCESSORIES | |
| A1 | MARKERBOARD (8' X 4') |
| A2 | PERSONAL WASTE RECEPTACLE |
| A4 | LARGE WASTE RECEPTACLE |
| A6 | UTILITY POLE |
| A6E | EXISTING UTILITY POLE |
| A7 | MARKERBOARD (4' X 4') |
| CHAIRS AND SEATING | |
| C1 | TASK CHAIR |
| C2 | CONFERENCE CHAIR |
| C4 | CAFE CHAIR |
| C5 | GUEST CHAIR |
| C5a | GUEST CHAIR |
| C6 | MODULAR COUCH |
| C7 | COUCH |
| C8 | CAFE STOOL |
| C9 | EXECUTIVE CONFERENCE CHAIR |
| C10 | CONFERENCE GUEST CHAIR |
| DESKS | |
| D1 | CONTROL DESK |
| D2 | U-SHAPED DESK (8' X 8') |
| D3 | L-SHAPED DESK (8' X 6') |
| EQUIPMENT | |
| E1 | REFRIGERATOR (GFGI) |
| E2 | COUNTERTOP MICROWAVE (GFGI) |
| E3 | SMALL FLOOR COPIER/PRINTER (GFGI) |
| E4 | LARGE FLOOR COPIER/PRINTER (GFGI) |
| E5 | SHREDDER (GFGI) |

| FURNITURE SCHEDULE | |
|---|---|
| ITEM CODE | DESCRIPTION |
| E6 | VISUAL DISPLAY (GFGI) |
| FURNITURE SYSTEMS | |
| WS1 | L-SHAPED WORKSTATION (7' X 8') |
| WS2 | U-SHAPED WORKSTATION (8' X 8'-6") |
| WS3 | L-SHAPED WORKSTATION W/ TRANSACTION TOP (8' X 8') |
| STORAGE AND FILES | |
| S1 | 4 DRAWER LATERAL FILE (42"W X 18"D) |
| S2 | 3 DRAWER LATERAL FILE W/ LAMINATE TOP (42"W X 18"D) |
| S3 | STORAGE CABINET (42"W X 18"D) |
| S4 | CASEWORK CABINET (48"W X 25"D) |
| TABLES | |
| T2 | ROUND TABLE (42" D) |
| T3 | CAFE TABLE (30" D) |
| T4 | TRAINING TABLE (60"L X 36"W) |
| T7 | CONFERENCE TABLE (144"L X 48"W) |
| T8 | LARGE CONFERENCE TABLE (192"L X 48"W) |
| T9 | BREAK TABLE (84"L X 36"W) |
| T10 | OCCASIONAL TABLE (30"L X 24"W) |
| T11 | OCCASIONAL TABLE ROUND (12" D) |
| T13 | CONFERENCE TABLE (96"L X 42"H) BAR HEIGHT |
| T14 | CONFERENCE TABLE (120"L X 48"W) |
| T15 | CONFERENCE TABLE (72"L X 36"W) |

**SCOPE LEGEND**

NOT IN SCOPE

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
ATTN: CELRL-ED-TH-HER KING JR. PL
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL.
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR FURNITURE PLAN - AREA B

SHEET ID

I-113_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

## FURNITURE PLAN LEGEND:

EXISTING FURNITURE - TO BE RE-INSTALLED IN NEW LOCATION.
GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)

EXISTING FURNITURE - TO BE RE-INSTALLED IN SAME LOCATION.
GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)

NEW FURNITURE
CONTRACTOR FURNISHED CONTRACTOR INSTALLED (CFCI)

GOVERNMENT FURNISHED GOVERNMENT INSTALLED FURNITURE (GFGI)

## SCOPE LEGEND

NOT IN SCOPE

## WORKSTATION PANEL CODE:

#/A
PANEL TYPE
PANEL SIZE WIDTH / HEIGHT

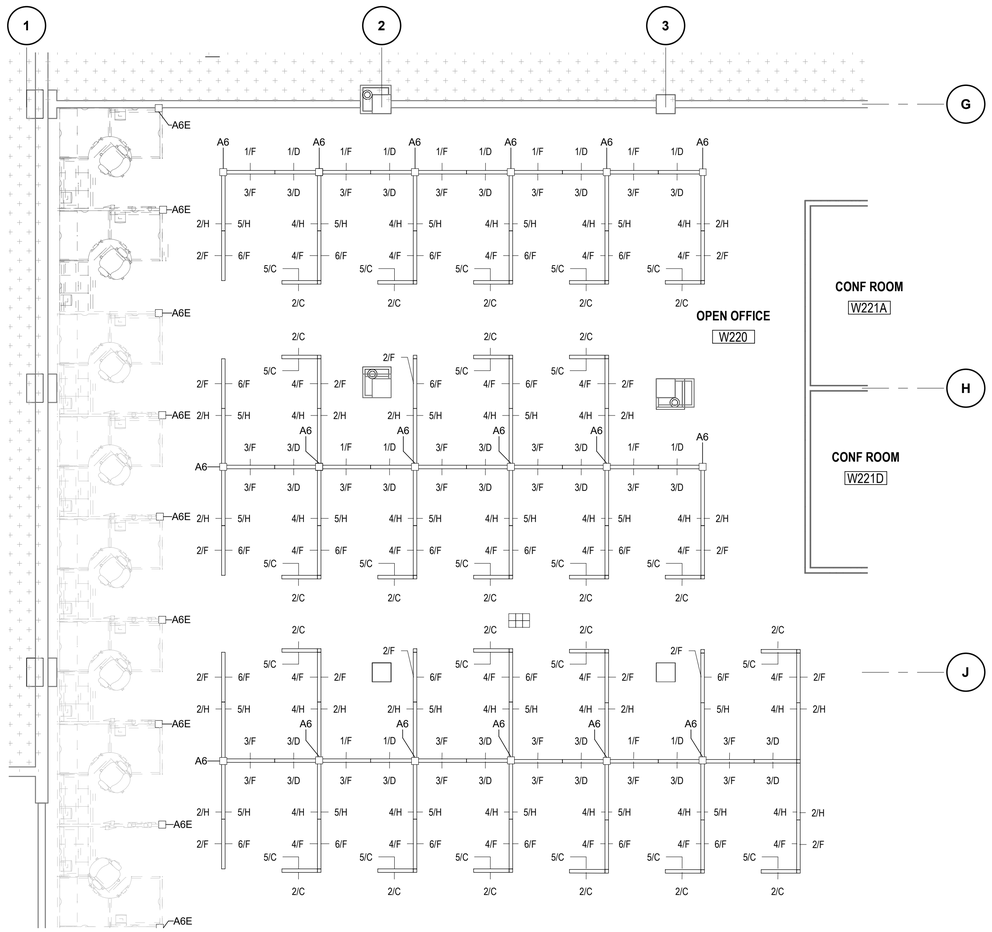
- **A -** 24/66
- **B -** 30/42
- **C -** 30/66
- **D -** 36/66
- **E -** 42/42
- **F -** 42/66
- **G -** 48/42
- **H -** 48/66

1. SEE SHEET I-117_5 FOR PANEL ELEVATIONS
2. SEE SHEET I-110_5 FOR FF&E SCHEDULE

## FURNITURE PLAN KEY NOTES:

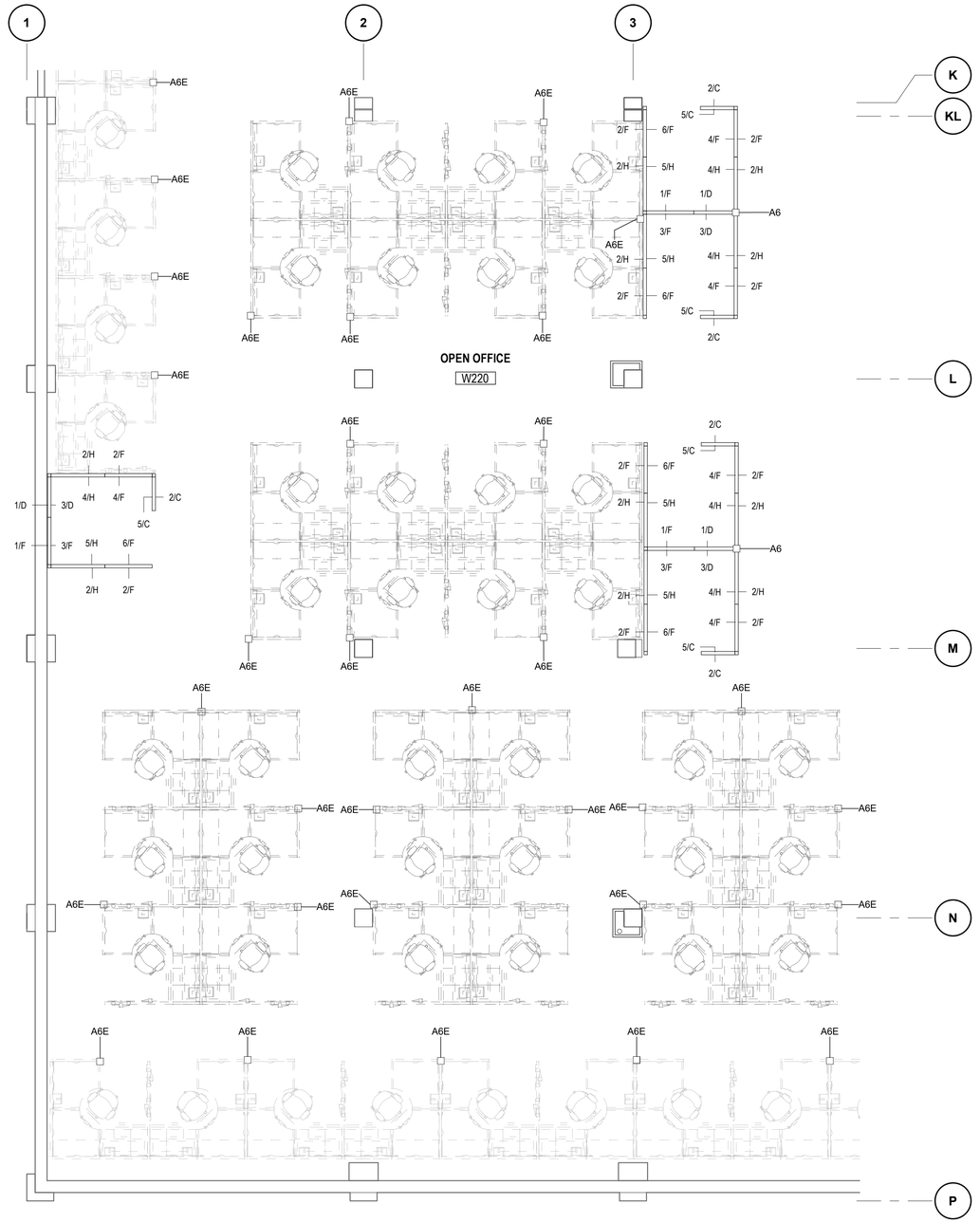
1. ALL NOTED EXISTING FURNITURE TO BE DISASSEMBLED AND STORED DURING CONSTRUCTION. STEAM CLEAN PRIOR TO RE-INSTALLING AT COMPLETION OF CONSTRUCTION.

2. ANY ITEMS TO BE REINSTALLED SHALL NOT SHOW ANY DAMAGE OR SIGNS OF BIOLOGICAL GROWTH.



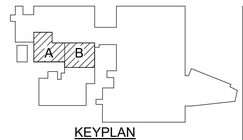

A1 SECOND FLOOR FURNITURE PLAN - OPEN OFFICE W220
SCALE: 3/16" = 1'-0"

0 4' 8' 12'




A5 SECOND FLOOR FURNITURE PLAN - OPEN OFFICE W220
SCALE: 3/16" = 1'-0"

0 4' 8' 12'




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR ENLARGED PANEL PLANS

SHEET ID

**I-114_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

**FURNITURE PLAN LEGEND:**

EXISTING FURNITURE - TO BE RE-INSTALLED IN NEW LOCATION.
GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)

EXISTING FURNITURE - TO BE RE-INSTALLED IN SAME LOCATION.
GOVERNMENT FURNISHED CONTRACTOR INSTALLED (GFCI)

NEW FURNITURE
CONTRACTOR FURNISHED CONTRACTOR INSTALLED (CFCI)

GOVERNMENT FURNISHED GOVERNMENT INSTALLED FURNITURE (GFGI)

**FURNITURE PLAN KEY NOTES:**

1. ALL NOTED EXISTING FURNITURE TO BE DISASSEMBLED AND STORED DURING CONSTRUCTION. STEAM CLEAN PRIOR TO RE-INSTALLING AT COMPLETION OF CONSTRUCTION.

2. ANY ITEMS TO BE REINSTALLED SHALL NOT SHOW ANY DAMAGE OR SIGNS OF BIOLOGICAL GROWTH.

**WORKSTATION PANEL CODE:**

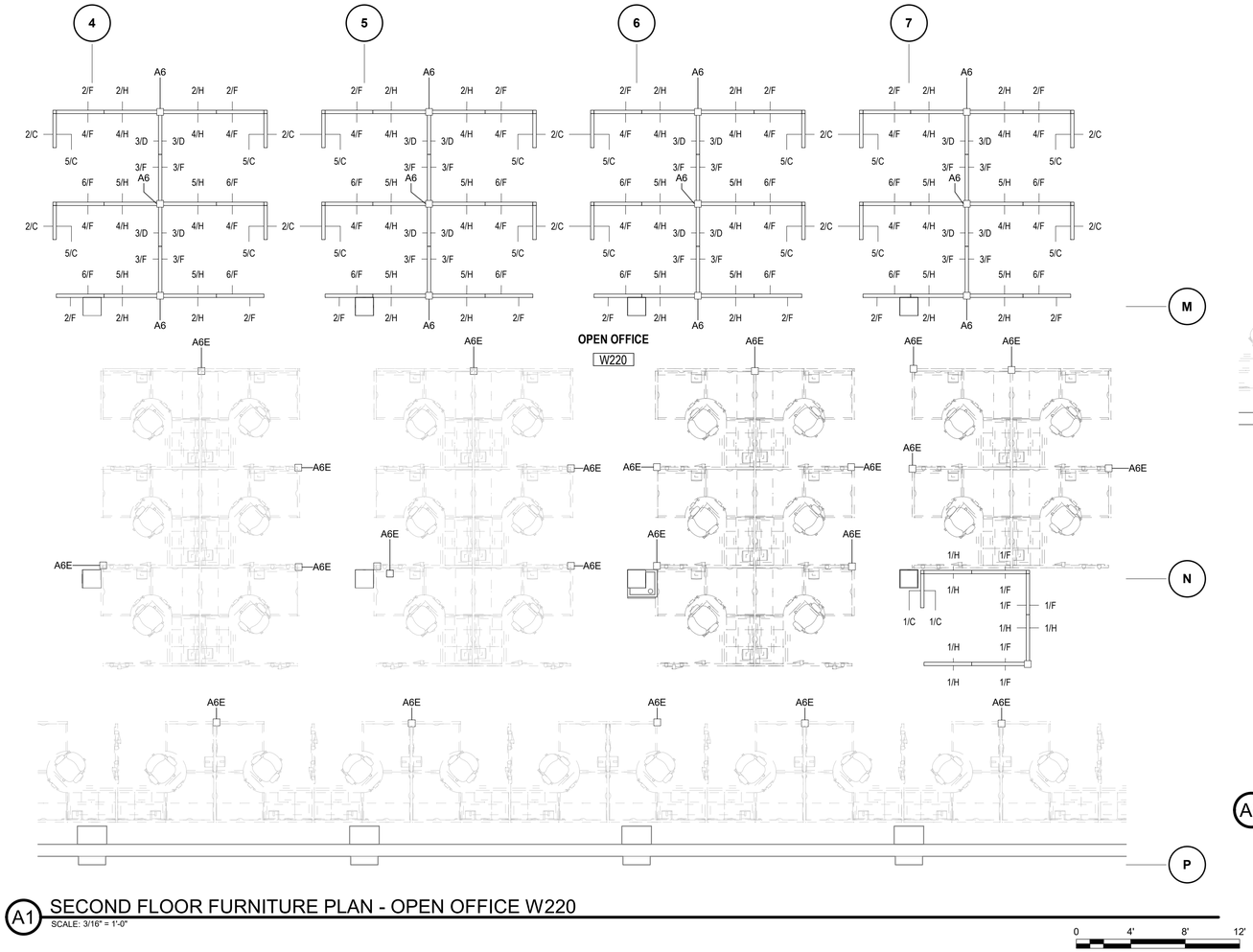
#/A
PANEL TYPE
PANEL SIZE WIDTH / HEIGHT

- **A -** 24/66
- **B -** 30/42
- **C -** 30/66
- **D -** 36/66
- **E -** 42/42
- **F -** 42/66
- **G -** 48/42
- **H -** 48/66

1. SEE SHEET I-117_5 FOR PANEL ELEVATIONS
2. SEE SHEET I-110_5 FOR FF&E SCHEDULE

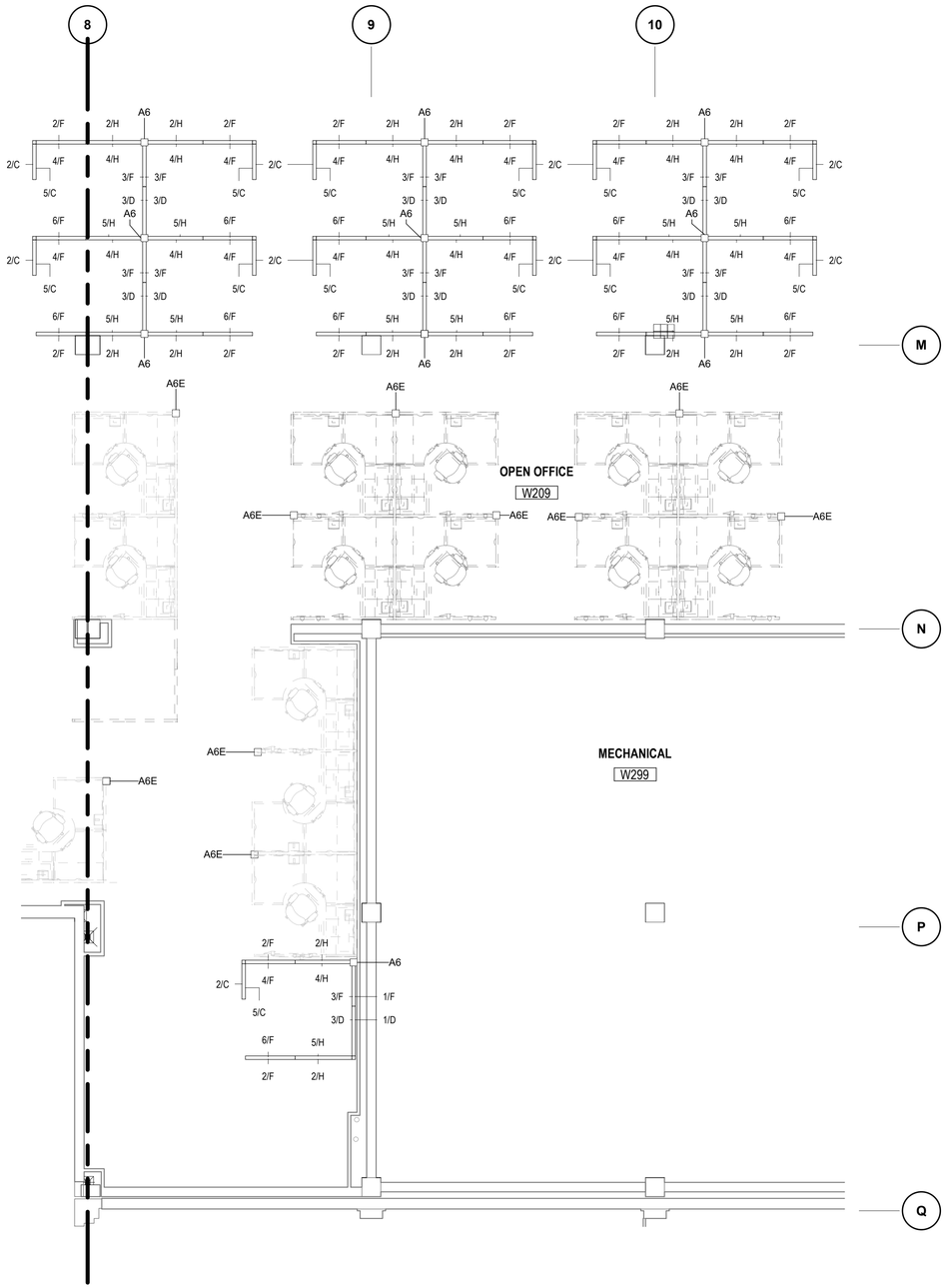
**SCOPE LEGEND**

NOT IN SCOPE



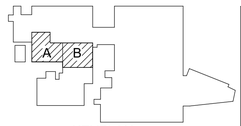

A1 SECOND FLOOR FURNITURE PLAN - OPEN OFFICE W220
SCALE: 3/16" = 1'-0"

0 4' 8' 12'




A6 SECOND FLOOR FURNITURE PLAN - OPEN OFFICE W209
SCALE: 3/16" = 1'-0"

0 4' 8' 12'




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: C. DAWSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR ENLARGED PANEL PLANS

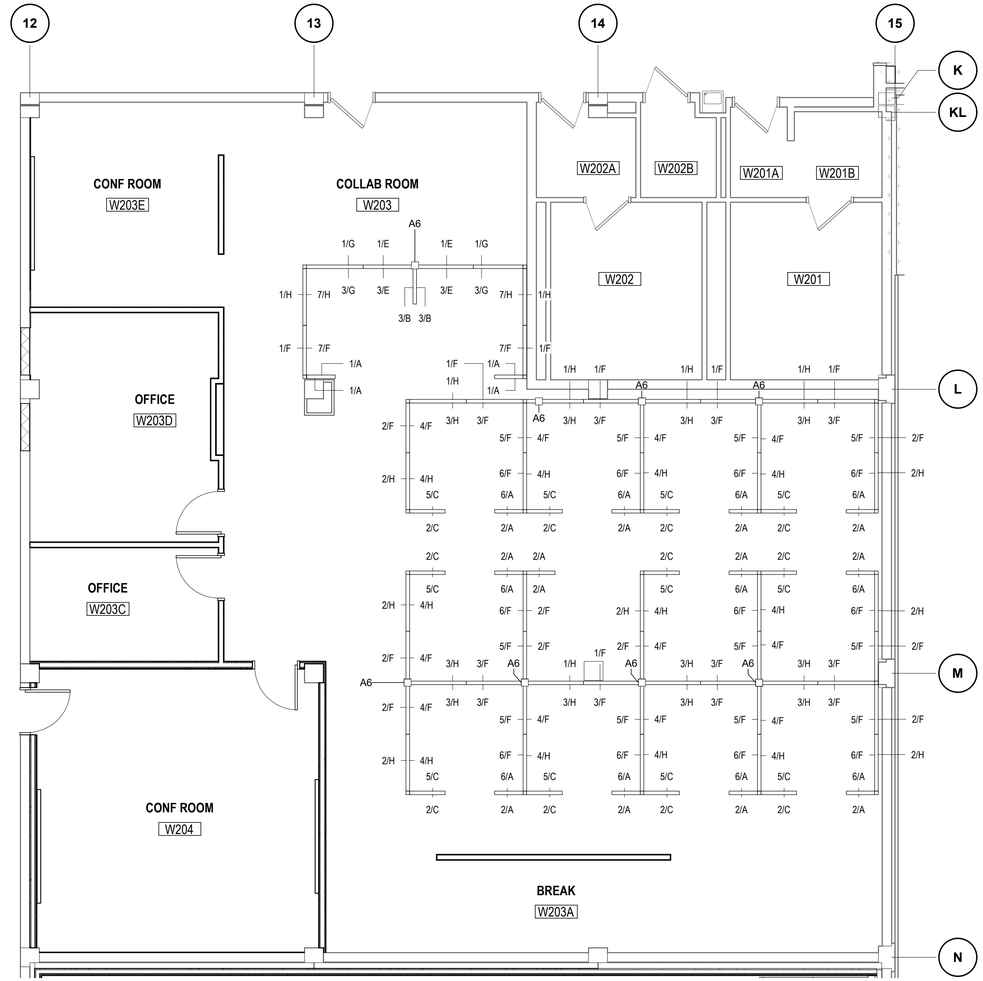
SHEET ID

**I-115_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

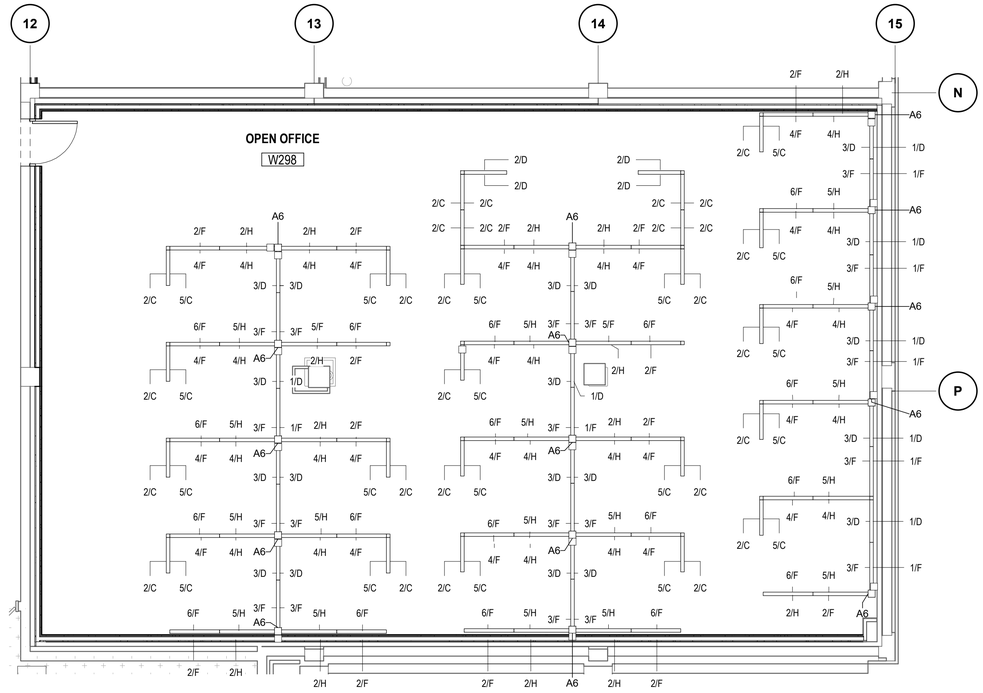


CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION




A1 SECOND FLOOR FURNITURE PLAN - SUITE 203
SCALE: 3/16" = 1'-0"

0 4' 8' 12'




A5 SECOND FLOOR FURNITURE PLAN - OPEN OFFICE W298
SCALE: 3/16" = 1'-0"

0 4' 8' 12'

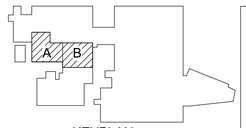
**SCOPE LEGEND**

NOT IN SCOPE

**WORKSTATION PANEL CODE:**

#/A
PANEL TYPE
PANEL SIZE WIDTH / HEIGHT
**A** - 24/66
**B** - 30/42
**C** - 30/66
**D** - 36/66
**E** - 42/42
**F** - 42/66
**G** - 48/42
**H** - 48/66

1. SEE SHEET I-117_5 FOR PANEL ELEVATIONS
2. SEE SHEET I-110_5 FOR FF&E SCHEDULE




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: T. LEE-WELLER
DRAWN BY: S. BRANNAN
CHECKED BY: R. LASTER
SUBMITTED BY: C. JOHNSON
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
CONSTELLATION HER KING JR. PL
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

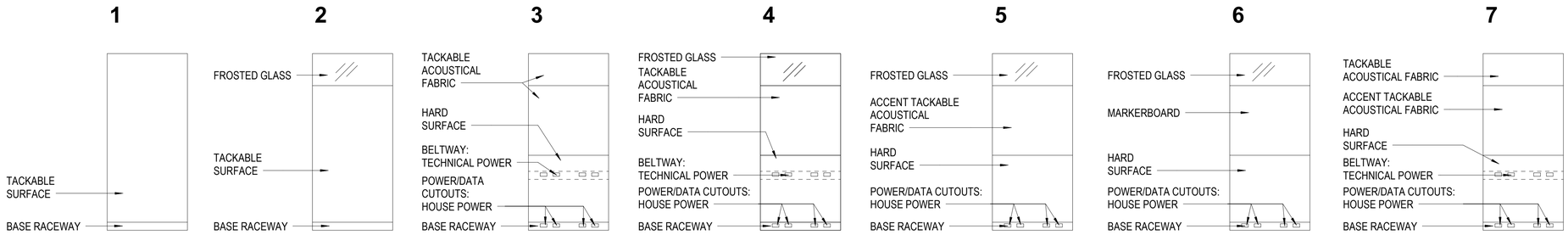
SECOND FLOOR ENLARGED PANEL PLANS

SHEET ID
**I-116_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI

## PANEL TYPES



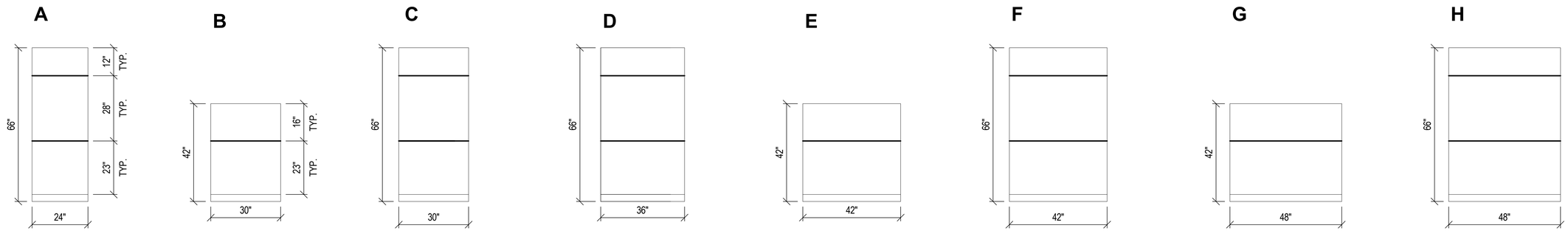

**WORKSTATION PANEL CODE:**

#/A

- PANEL TYPE
- PANEL SIZE WIDTH / HEIGHT
  - **A** - 24/66
  - **B** - 30/42
  - **C** - 30/66
  - **D** - 36/66
  - **E** - 42/42
  - **F** - 42/66
  - **G** - 48/42
  - **H** - 48/66

1. SEE SHEET I-117_5 FOR PANEL ELEVATIONS
2. SEE SHEET I-110_5 FOR FF&E SCHEDULE

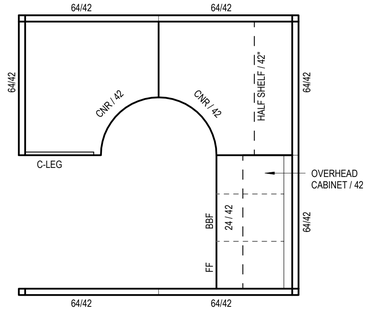
## PANEL SIZES




## C1 PANEL ELEVATIONS

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

0 1' 2' 4'




MFR: STEELCASE
SERIES: ANSWER

ADJUSTABLE WORKSURFACE
OVERHEAD CABINET W/ UNDERCABINET LIGHT
BELOW COUNTER FILE/FILE CABINET
BELOW COUNTER BOX/BOX/FILE CABINET
QTY. 2 MONITOR ARMS
TASK CHAIR

PANEL TRIM: 4706 SMOKE
PANEL FABRIC: 5683 AMIRANTE QUINCE
COMPONENTS: 4706 SMOKE
WORKSURFACE: 2824 SMOKE SPECKLE

2 CIRCUITS PER STATION, MIN.
2 DUPLEXES PER STATION, MIN.
2 DATA CUTOUTS PER STATION, MIN.

## A1 TYPICAL EXISTING WORKSTATION

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

0 1' 2' 4'

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
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REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SECOND FLOOR WORKSTATION PANEL ELEVATIONS

SHEET ID

**I-117_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

## PIPE LINE ABBREVIATIONS

| | |
|---|---|
| CD | COOLING COIL CONDENSATE DRAIN |
| CHWR | CHILLED WATER RETURN |
| CHWS | CHILLED WATER SUPPLY |
| HHWR | HEATING HOT WATER RETURN |
| HHWS | HEATING HOT WATER SUPPLY |
| FPW | FIRE PROTECTION WATER |

## HVAC LEGEND

- CONTROL DAMPER, MOTOR OPERATED
- MANUAL BALANCE DAMPER
- FLEXIBLE DUCT CONNECTION
- RECT. ELBOW W/TURNING VANES
- TEE W/TURNING VANES
- RECTANGULAR RADIUS ELBOW
- RISE IN RESPECT TO AIR-FLOW
- DROP IN RESPECT TO AIR-FLOW
- SQUARE OR RECTANGULAR TO ROUND TRANSITION
- SUPPLY OR OUTSIDE AIR DUCT SECTION
- RETURN OR EXHAUST AIR DUCT SECTION
- ROUND FLEXIBLE DUCT (5'-0" MAX LENGTH)
- SQUARE OR RECT. SUPPLY DIFFUSER
- RETURN AIR GRILLE
- EXHAUST AIR GRILLE
- THERMOSTAT
- DIFFERENTIAL PRESSURE TRANSMITTER
- AIR FLOW MEASUREMENT ARRAY
- CARBON DIOXIDE SENSOR
- LINEAR SLOT SUPPLY DIFFUSER
- MOTOR
- EMERGENCY SHUTOFF SWITCH
- MANUAL VOLUME DAMPER (SINGLE LINE)
- SECURITY MANBARS
- FIRE DAMPER (FD)-

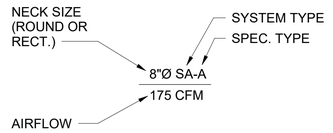
## MECHANICAL ABBREVIATIONS

| | |
|---|---|
| 24"x12" | RECTANGULAR DUCT DIMENSION (INCHES) |
| 12"Ø | ROUND DUCT DIMENSION |
| AFF | ABOVE FINISHED FLOOR |
| AFMA | AIR FLOW MEASUREMENT ARRAY |
| AHU | AIR HANDLING UNIT |
| ARF | ABOVE RAISED FLOOR |
| AS | AIR SEPARATOR |
| BOD | BOTTOM OF DUCT |
| BOP | BOTTOM OF PIPE |
| CD | COLD DUCT |
| CRAC | COMPUTER ROOM AIR CONDITIONING UNIT |
| CRU | COMPUTER ROOM UNIT |
| CV | CONTROL VALVE |
| DN | DOWN |
| DP | DIFFERENTIAL PRESSURE TRANSMITTER |
| DRG | DIFFUSER, REGISTER, GRILLE |
| EA | EXHAUST AIR |
| EDH | ELECTRIC DUCT HEATER |
| EF | EXHAUST FAN |
| EG | EXHAUST GRILLE |
| EL | ELEVATION |
| ELL | ELBOW |
| ER | EXHAUST REGISTER |
| ET | EXPANSION TANK |
| EXST | EXISTING |
| FF | FLAT FACED |
| FOB | FLAT ON BOTTOM |
| FOT | FLAT ON TOP |
| HD | HOT DUCT |
| INV. EL. | INVERT ELEVATION |
| MA | MIXED AIR |
| MVD | MANUAL VOLUME DAMPER |
| MD | MOTORIZED DAMPER |
| MMP | MANUAL MOTOR PROTECTORS |
| NC | NORMALLY CLOSED (FAIL POSITION) |
| NG | NATURAL GAS |
| NIC | NOT IN CONTRACT |
| NO | NORMALLY OPEN (FAIL POSITION) |
| OA | OUTSIDE AIR |
| OB | OPPOSED BLADE |
| PB | PARALLEL BLADE |
| PSIA | POUNDS PER SQUARE INCH ABSOLUTE |
| PSIG | POUNDS PER SQUARE INCH GAUGE |
| RED | REDUCER-REDUCING |
| RA | RETURN AIR |
| RF | RETURN FAN |
| SCH | SCHEDULE |
| SA | SUPPLY AIR |
| STC | SOUND TRANSMISSION CLASS |
| SP | STATIC PRESSURE SENSOR |
| SR | SUPPLY REGISTER |
| ST | SOUND TRAP |
| TA | TRANSFER AIR |
| TOC | TOP OF CONCRETE |
| TOD | TOP OF DUCT |
| TOS | TOP OF STEEL |
| UH | UNIT HEATER |
| UV | ULTRAVIOLET |
| V | VENT |
| VFD | VARIABLE FREQUENCY DRIVE |

## GENERAL NOTES:

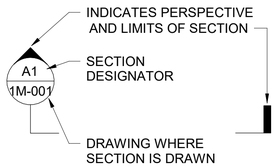
1. LEGEND IS GENERAL IN NATURE AND MAY INDICATE MORE INFORMATION THAN IS APPLICABLE TO PROJECT. SEE PLANS FOR SPECIFIC SYMBOLS AND ABBREVIATIONS.
2. PROVIDE ALL MATERIALS, VALVES, HANGERS, ETC. AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED 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 ARCHITECTURAL, 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 DUCTS, 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, EQUIPMENT PIPE, OR PIPE INSULATION UNLESS NOTED OTHERWISE. GRILLE & REGISTER ELEVATIONS ARE CENTERLINE.
9. DUCT DIMENSIONS INDICATED REFER TO SHEET METAL DIMENSIONS. AIR OPENING SIZE AND SHEET METAL SIZE SHALL BE THE SAME.
10. LOCATE TRANSFER AIR DUCTS AND OPENINGS 12" ABOVE HIGHEST CEILING ELEVATION UNLESS OTHERWISE NOTED. CONTRACTOR TO COORDINATE OPENING WITH UTILITIES ABOVE CEILING.
11. COORDINATE ALL WALL AND ROOF PENETRATIONS WITH ARCHITECTURAL PLANS.
12. INSTALL TEMPERATURE CONTROLS AT 54" ABOVE FINISHED FLOOR AND COORDINATE WITH OTHER DEVICES LOCATED ON WALLS. COORDINATE WITH ARCHITECTURAL WALL FINISHES. ADD 10' OF T-STAT WIRE COILED ABOVE CEILING.
13. 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.
14. ALL MECHANICAL OPENINGS IN MASONRY WALLS, LESS THAN 48", SHALL BE COORDINATED WITH STANDARD STRUCTURAL DRAWING DETAILS. ALL MECHANICAL OPENINGS LARGER THAN 48" SHALL BE LOCATED AS SHOWN ON STRUCTURAL ELEVATIONS AND COORDINATED WITH STRUCTURAL DETAILS.
15. REFER TO ARCHITECTURAL DRAWINGS FOR LOUVER INFORMATION AND SECURE WALL LOCATIONS.
16. ALL EXISTING DUCTWORK AND PIPING SHOWN ON DRAWINGS IS SCHEMATIC AND IS BASED ON EXISTING RECORD DRAWINGS PROVIDED BY THE OWNER AND DO NOT REFLECT EXACT EXISTING CONDITIONS. CONTRACTOR SHALL FIELD VERIFY ALL ACTUAL CONDITIONS ON JOB SITE. CONTRACTOR SHALL REROUTE NEW WORK TO ACCOMMODATE EXACT LOCATIONS OF EXISTING UTILITIES, STUBOUTS, AND/OR CONNECTIONS AS PART OF THE SCOPE OF WORK OF THIS PROJECT.
17. CONTRACTOR SHALL AIR BALANCE ALL EQUIPMENT, GRILLES, AND DIFFUSERS TO CFMS SHOWN ON PLANS.

## AIR DISTRIBUTION DEVICE IDENTIFICATION

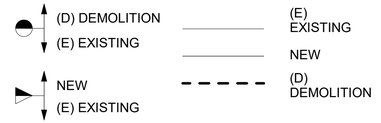



## DETAIL/SECTION TITLE

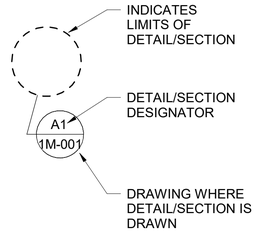
## SECTION CUT SYMBOL




## CONSTRUCTION INTERFACE




## DETAIL/SECTION CALLOUT SYMBOL




## PIPE LINE ACCESSORIES

- GATE VALVE
- OS&Y — OUTSIDE SCREW & YOKE
- BUTTERFLY VALVE
- CHECK VALVE
- 3 - WAY VALVE
- BALL VALVE
- GLOBE VALVE
- PDV — PUMP DISCHARGE VALVE
- BALANCING VALVE
- RELIEF, SAFETY OR THERMAL RELIEF VALVE
- CONTROL VALVE
- M — MOTORIZED CONTROL VALVE
- SUCTION DIFFUSER
- AV — AUTOMATIC AIR VENT ASSEMBLY
- MV — MANUAL AIR VENT - SEE SPECIFICATIONS FOR APPROPRIATE VALVE TYPE.
- FLEX CONNECTION
- PUMP
- THERMOMETER
- BP — BACKFLOW PREVENTION ASSEMBLY
- SELF CONTAINED PRESSURE REDUCING (REGULATING) VALVE
- PRESSURE GAUGE
- Y-TYPE STRAINER
- REMOVABLE CAP
- REDUCER (CONCENTRIC)
- REDUCER (ECCENTRIC)
- UNION
- BLIND FLANGE
- TEST CONNECTION
- * — COMPONENTS TO BE FURNISHED WITH EQUIPMENT
- M — METER

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPIETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
ATTN: CELRL-ED-TS-SPEC
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

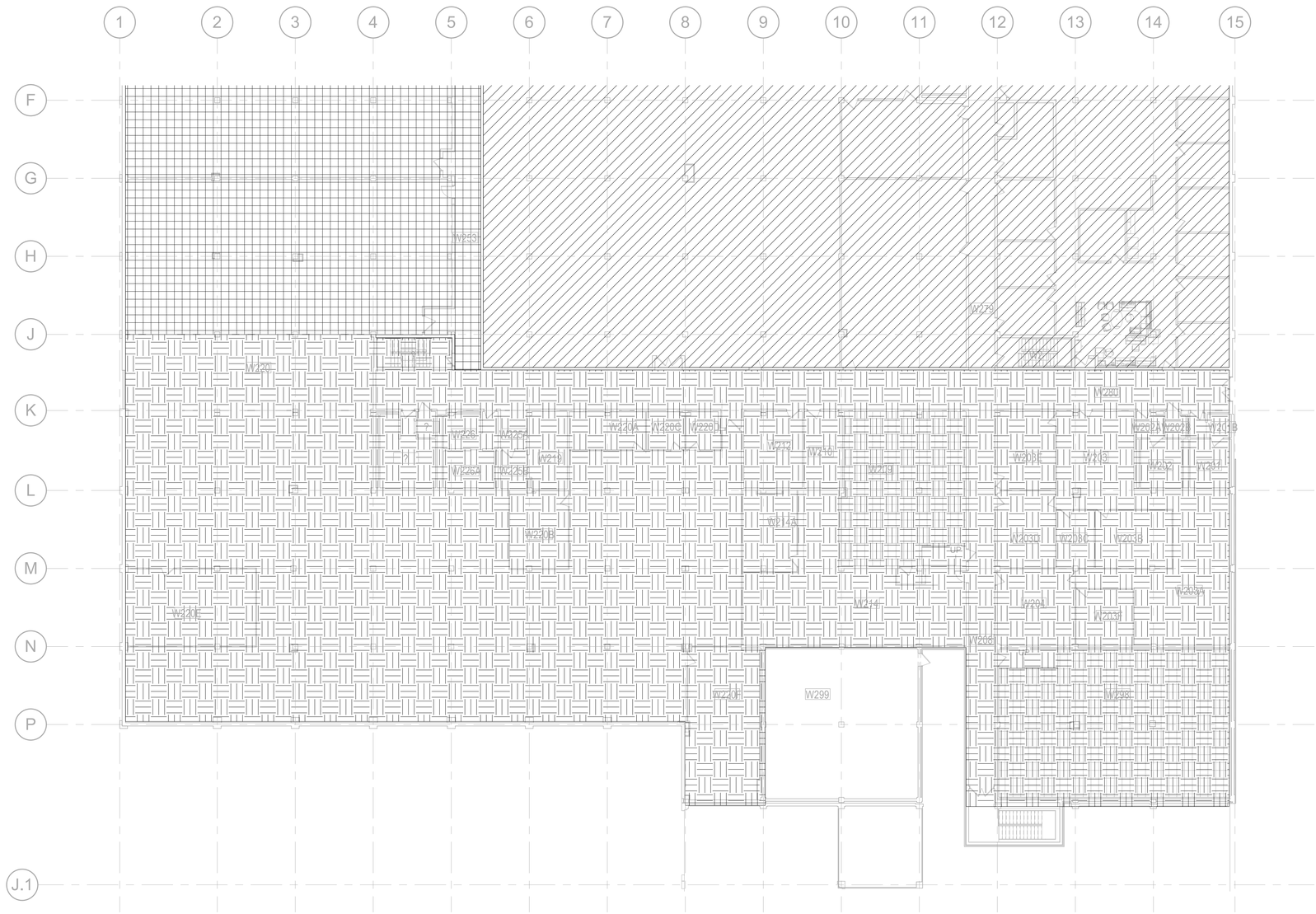
MECHANICAL GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

SHEET ID
**M-001_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION




A1 AHU EXISTING ZONING SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"

PLAN NORTH

0 8' 16' 32'

**LEGEND**

AHU-7 ZONE

AHU-5 ZONE

AHU-6 ZONE

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

AHU ZONING EXISTING SECOND FLOOR PLAN

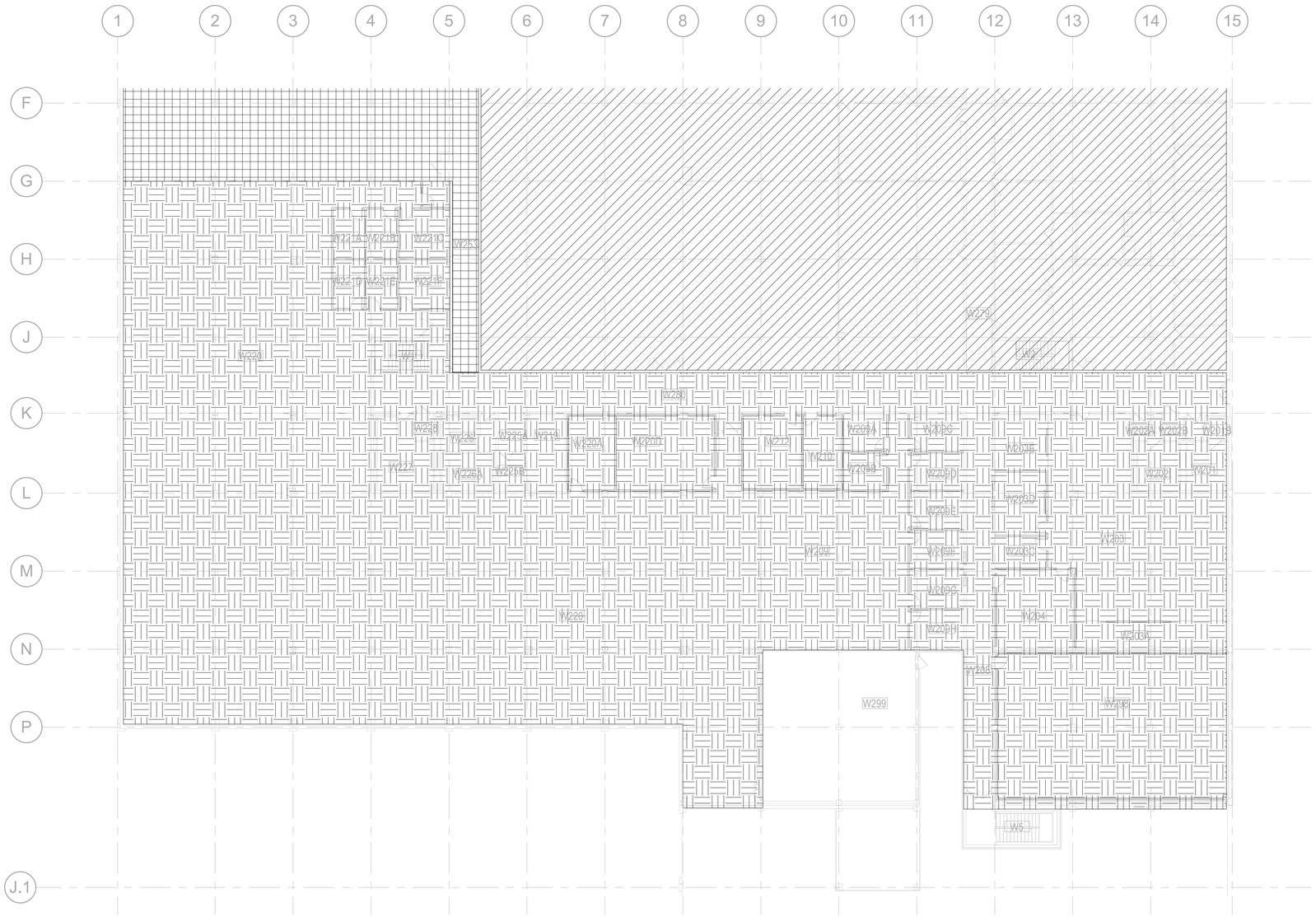
SHEET ID

**M-002_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION




A1 AHU NEW ZONING SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"

PLAN NORTH

0 8' 16' 32'

**LEGEND**

AHU-7 ZONE

AHU-5 ZONE

AHU-6 ZONE

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
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SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

AHU ZONING SECOND FLOOR PLAN

SHEET ID

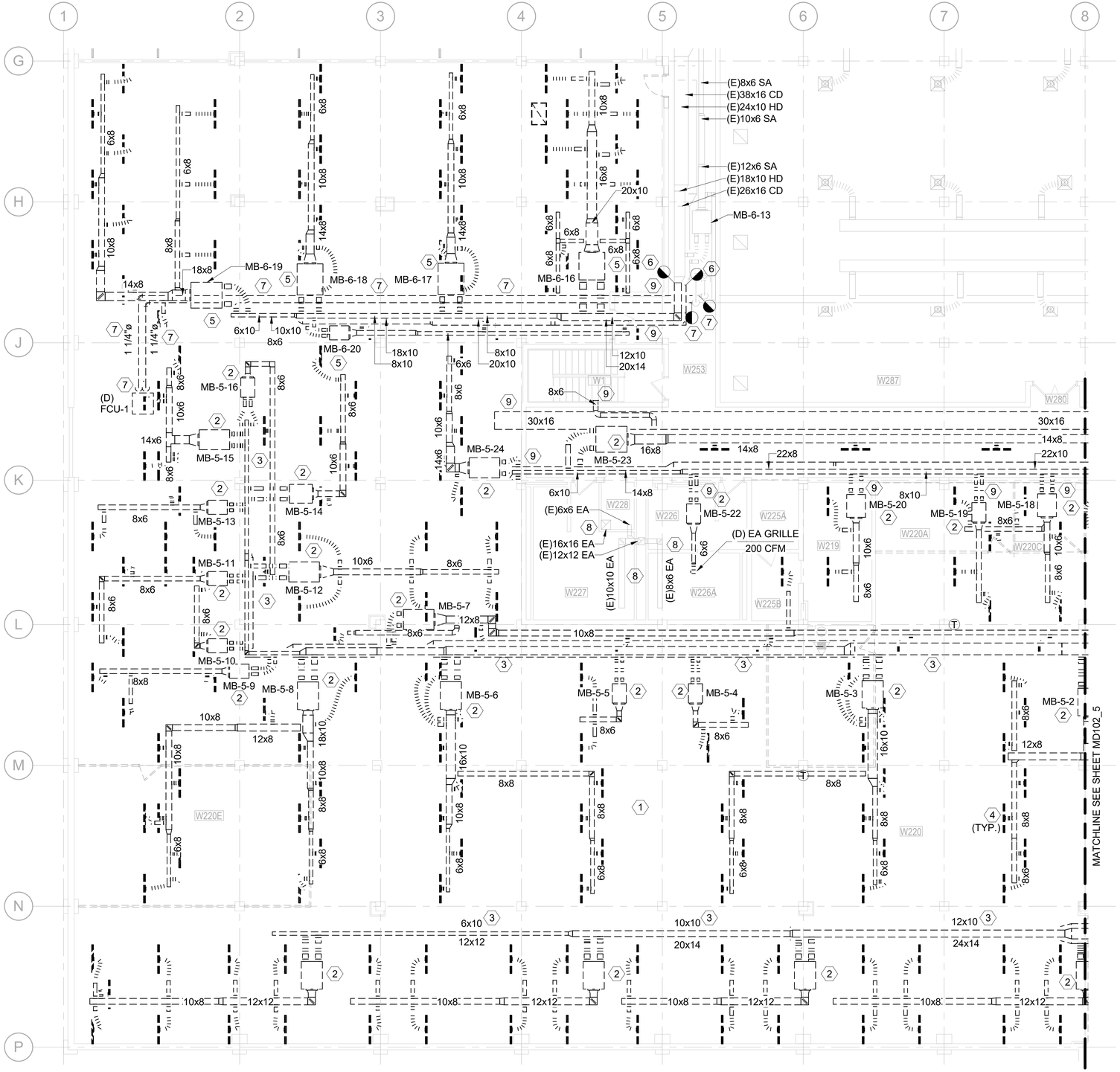
**M-003_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




A1 DEMO - HVAC SECOND FLOOR - AREA A
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. REMOVE EXISTING COLD AND HOT DECK DUCTS, DUAL DUCT MIXING BOXES, SUPPORTS, APPURTENANCES AND ASSOCIATED THERMOSTATS.

C. REMOVE THERMOSTATS AND COMPRESSED AIR PIPING ASSOCIATED WITH AHU-5 BACK TO MAIN. CONTRACTOR TO COORDINATE WITH FACILITIES MANAGER PRIOR TO DEMO TO VERIFY WHICH SECTIONS OF PNEUMATIC PIPING ARE EXISTING TO REMAIN FOR ADJACENT HVAC SYSTEMS. GROUND MAIN AT SECURE WALLS PER DETAIL C5/M-504_5.

D. ALL ASBESTOS WORK MAY BE DONE DURING NORMAL WORKING HOURS UNLESS THE AREA IS A COMMON ACCESS AREA AND THEN THE WORK MUST BE DONE AFTER NORMAL WORKING HOURS (1600 HOURS TO 0030 HOURS) OR DURING THE WEEKEND.

E. CLOSE VOLUME DAMPERS UPSTREAM OF ALL MIXING BOXES PRIOR TO ASBESTOS ABATEMENT AND THROUGHOUT CONSTRUCTION OF THE PHASE IN WHICH THE MIXING BOX SERVES.

F. REFER TO H-SERIES SHEETS FOR ALL HAZARDOUS BUILDING MATERIAL, ASBESTOS/LEAD ABATEMENT AND UNIVERSAL WASTE REQUIREMENTS.

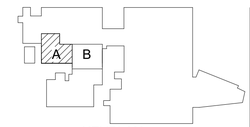
G. ALL DUCTWORK, PIPING AND EQUIPMENT REMOVED AND DISCARDED SHALL COMPLY WITH DEMOLITION SPECIFICATION 02 41 00 AND SHALL BE DISPOSED OF APPROPRIATELY.

H. ALL AREAS AFFECTED BY DEMOLITION, INCLUDING UNFORESEEN EXISTING OPENINGS, SHALL BE SEALED, PATCHED, AND REPAIRED WITH LIKE MATERIALS TO MATCH ADJACENT WALL/ROOF/FLOOR/ETC. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR MORE INFORMATION.

I. GENERAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR TO REMOVE WIRING AND CONDUIT FROM EQUIPMENT AND DEVICES BACK TO DISTRIBUTION PANELS.

**KEYED NOTES:**

1. DEMOLISH ALL HVAC EQUIPMENT AND ASSOCIATED PIPING, DUCT, LOUVERS, DUCT ACCESSORIES, PIPING APPURTENANCES, CONTROLS, WIRING, THERMOSTATS, CONTROL PANELS, HANGERS AND SUPPORTS. RECOVER ANY REFRIGERANT AND TURN OVER TO THE GOVERNMENT (SEE SPECIFICATION 01 35 43). (TYPICAL UNLESS NOTED OTHERWISE)
2. DEMOLISH AHU-5 MIXING BOX AND ASSOCIATED SUPPORTS, DUCTWORK, INSULATION AND CONTROLS.
3. DEMOLISH HOT AND COLD DUCT MAINS AND ASSOCIATED SUPPORTS, INSULATION AND DUCT ACCESSORIES.
4. DEMOLISH DUCT CONNECTION TO LIGHT TROFFER DIFFUSERS AND ASSOCIATED SUPPORTS, INSULATION AND LIGHT TROFFER FIXTURE.
5. DEMOLISH AHU-6 MIXING BOX AND ASSOCIATED SUPPORTS, DUCTWORK, INSULATION AND CONTROLS. COORDINATE WITH AHU-6 MODIFICATIONS SHOWN ON MD103_5.
6. DEMOLISH AHU-6 HOT AND COLD DUCT MAINS BACK TO POINT INDICATED AND CAP. PROVIDE NEW INSULATION FOR CAP TO MATCH EXISTING INSULATION. SEE MD103_5 FOR AHU-6 LOCATION.
7. DEMOLISH FAN COIL UNIT AND ASSOCIATED SUPPORTS, DUCTWORK, INSULATION AND CONTROLS. DEMOLISH CHILLED WATER PIPING BACK TO POINT INDICATED AND CAP. PROVIDE NEW INSULATION FOR CAP TO MATCH EXISTING INSULATION.
8. EXHAUST FANS SERVING RESTROOMS AND ASSOCIATED DUCTWORK, SUPPORTS AND GRILLES TO REMAIN UNLESS NOTED OTHERWISE. AIRFLOW RATES OF EXISTING EXHAUST FANS SHALL BE VERIFIED BY CONTRACTOR PRIOR TO SUBMITTING / PURCHASING THE VAV PROVIDING MAKEUP AIR FROM THE CORRIDOR INTO THE SPACE.
9. PATCH HOLES IN WALL TO DECK FROM DEMOLISHED DUCTWORK, SEE ARCHITECTURAL FOR REQUIREMENTS.




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

HVAC DUCTWORK DEMOLITION SECOND FLOOR PLAN - AREA A

SHEET ID

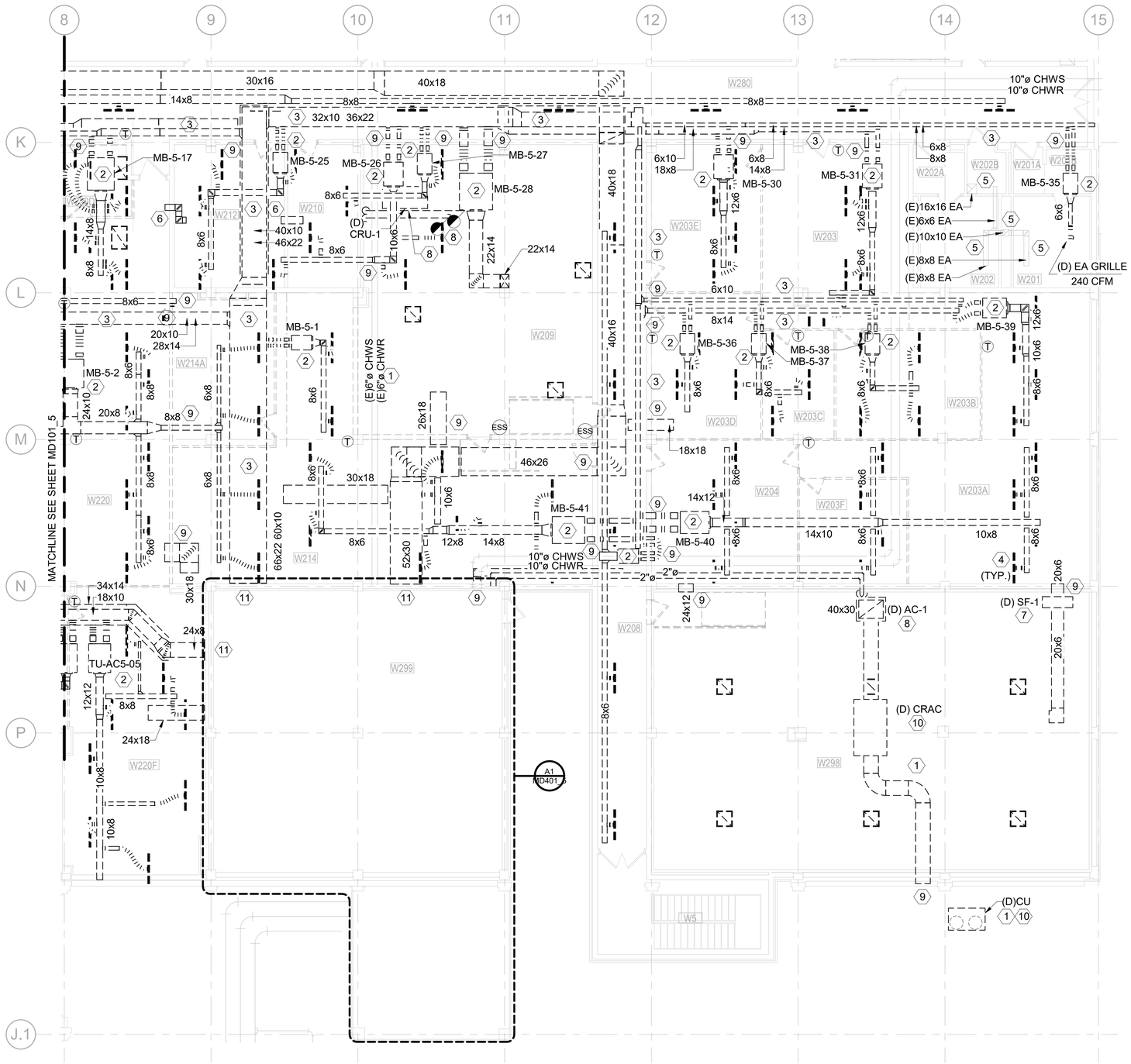
**MD101_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




A1 DEMO - HVAC SECOND FLOOR - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. REMOVE EXISTING COLD AND HOT DECK DUCTS, DUAL DUCT MIXING BOXES, SUPPORTS, APPURTENANCES AND ASSOCIATED THERMOSTATS.

C. REMOVE THERMOSTATS AND COMPRESSED AIR PIPING ASSOCIATED WITH AHU-5 BACK TO MAIN. CONTRACTOR TO COORDINATE WITH FACILITIES MANAGER PRIOR TO DEMO TO VERIFY WHICH SECTIONS OF PNEUMATIC PIPING ARE EXISTING TO REMAIN FOR ADJACENT HVAC SYSTEMS. GROUND MAIN AT SECURE WALLS PER DETAIL C5/M-504_5.

D. ALL ASBESTOS WORK MAY BE DONE DURING NORMAL WORKING HOURS UNLESS THE AREA IS A COMMON ACCESS AREA AND THEN THE WORK MUST BE DONE AFTER NORMAL WORKING HOURS (1600 HOURS TO 0030 HOURS) OR DURING THE WEEKEND.

E. CLOSE VOLUME DAMPERS UPSTREAM OF ALL MIXING BOXES PRIOR TO ASBESTOS ABATEMENT AND THROUGHOUT CONSTRUCTION OF THE PHASE IN WHICH THE MIXING BOX SERVES.

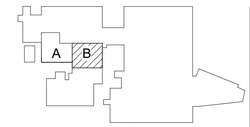
F. REFER TO H-SERIES SHEETS FOR ALL HAZARDOUS BUILDING MATERIAL, ASBESTOS/LEAD ABATEMENT AND UNIVERSAL WASTE REQUIREMENTS.

G. ALL AREAS AFFECTED BY DEMOLITION, INCLUDING UNFORESEEN EXISTING OPENINGS, SHALL BE SEALED, PATCHED, AND REPAIRED WITH LIKE MATERIALS TO MATCH ADJACENT WALL/ROOF/FLOOR/ETC. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR MORE INFORMATION.

H. GENERAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR TO REMOVE WIRING AND CONDUIT FROM EQUIPMENT AND DEVICES BACK TO DISTRIBUTION PANELS.

**KEYED NOTES:**

1. DEMOLISH ALL HVAC EQUIPMENT AND ASSOCIATED PIPING, DUCT, LOUVERS, DUCT ACCESSORIES, PIPING APPURTENANCES, CONTROLS, WIRING, THERMOSTATS, CONTROL PANELS, HANGERS AND SUPPORTS. RECOVER ANY REFRIGERANT AND TURN OVER TO THE GOVERNMENT (SEE SPECIFICATION 01 35 43). (TYPICAL UNLESS NOTED OTHERWISE)
2. DEMOLISH AHU-5 MIXING BOX AND ASSOCIATED SUPPORTS, DUCTWORK, GRILLES, INSULATION AND CONTROLS.
3. DEMOLISH HOT AND COLD DUCT MAINS AND ASSOCIATED SUPPORTS, INSULATION AND DUCT ACCESSORIES.
4. DEMOLISH DUCT CONNECTION TO LIGHT TROFFER DIFFUSERS AND ASSOCIATED SUPPORTS, INSULATION AND LIGHT TROFFER FIXTURE.
5. EXHAUST FANS SERVING RESTROOMS AND ASSOCIATED DUCTWORK, SUPPORTS AND GRILLES TO REMAIN UNLESS NOTED OTHERWISE. AIRFLOW RATES OF EXISTING EXHAUST FANS SHALL BE VERIFIED BY CONTRACTOR PRIOR TO SUBMITTING / PURCHASING THE VAV PROVIDING MAKEUP AIR FORM THE CORRIDOR INTO THE SPACE.
6. DEMOLISH EXISTING Z-DUCTS AND PATCH HOLES IN WALL FROM DEMOLISHED DUCTWORK. SEE ARCHITECTURAL FOR REQUIREMENTS.
7. DEMOLISH TRANSFER FAN AND ASSOCIATED SUPPORTS, DUCTWORK, INSULATION AND CONTROLS.
8. DEMOLISH EXISTING AIR CONDITIONING UNIT AND ASSOCIATED SUPPORTS, DUCTWORK, INSULATION AND CONTROLS. DEMOLISH CHILLED WATER PIPING BACK TO POINT INDICATED IN W299 AND CAP. PROVIDE NEW INSULATION FOR CAP TO MATCH EXISTING INSULATION.
9. PATCH HOLES IN WALL FROM DEMOLISHED DUCTWORK, PIPING AND DEVICES. SEE ARCHITECTURAL FOR REQUIREMENTS.
10. DEMOLISH EXISTING OUTSIDE AIR VENTILATOR, CONDENSING UNIT ON ADJACENT ROOF, AND ALL ASSOCIATED SUPPORTS, DUCTWORK, REFRIGERANT LINES, INSULATION AND CONTROLS.
11. REUSE EXISTING OPENING FOR NEW DUCTWORK.




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPIETRO
SUBMITTED BY: J.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

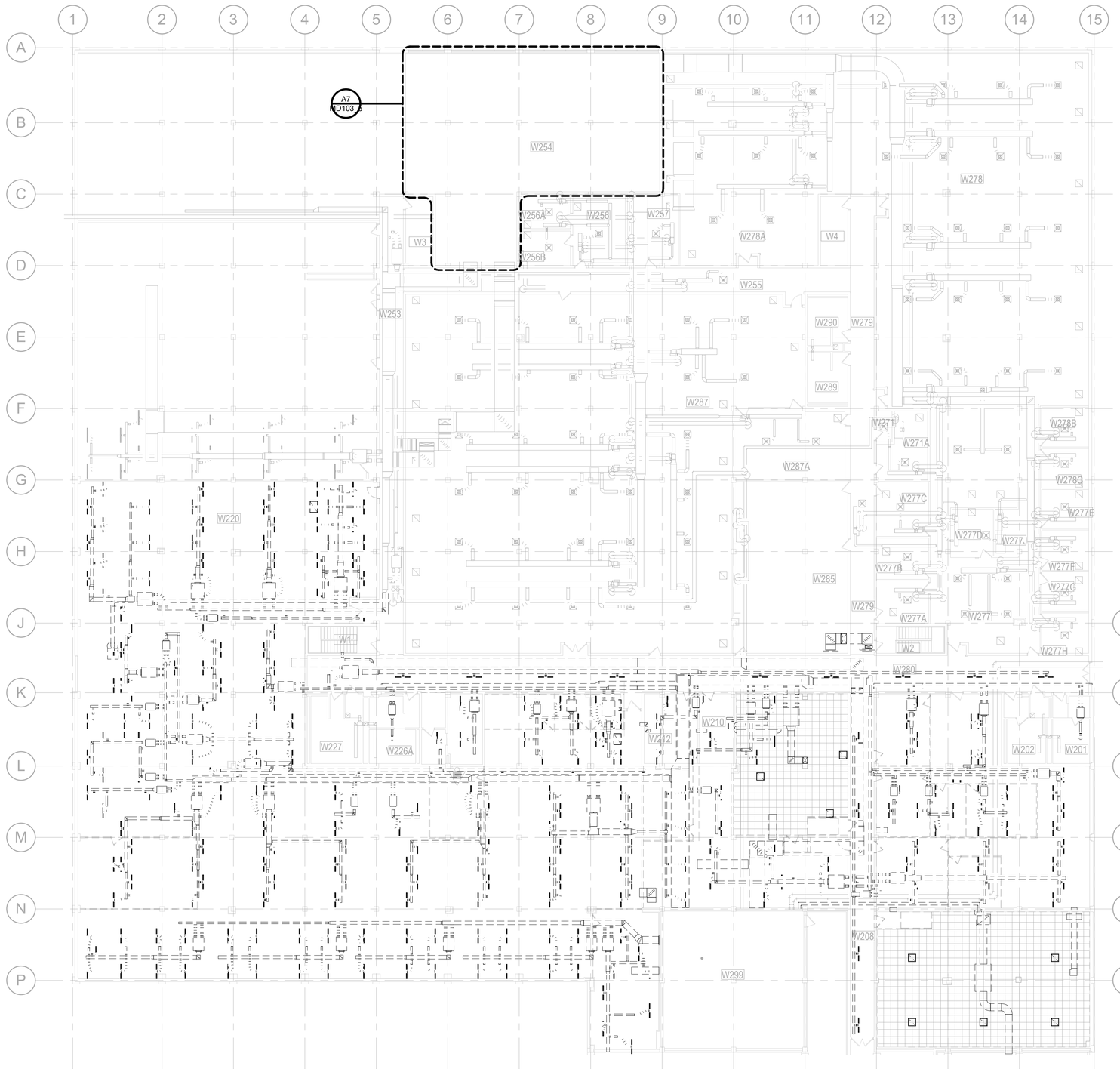
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

HVAC DUCTWORK DEMOLITION SECOND FLOOR PLAN - AREA B

SHEET ID

**MD102_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000




A1 DEMO - HVAC SECOND FLOOR - AHU-6 MODIFICATIONS
SCALE: 1/16" = 1'-0"

0 8' 16' 32'

PLAN NORTH

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. CLOSE VOLUME DAMPERS UPSTREAM OF ALL MIXING BOXES PRIOR TO ASBESTOS ABATEMENT AND THROUGHOUT CONSTRUCTION OF THE PHASE IN WHICH THE MIXING BOX SERVES.

C. REFER TO H-SERIES SHEETS FOR ALL HAZARDOUS BUILDING MATERIAL, ASBESTOS/LEAD ABATEMENT AND UNIVERSAL WASTE REQUIREMENTS.

D. MODIFICATIONS TO AHU-6 SHOWN ON THIS SHEET, ALONG WITH DEMOLITION OF AHU-6 MIXING BOXES ON MD101_5 MUST BE COORDINATED WITH BASE PERSONNEL FOR SCHEDULING AND DURATION OF AHU-6 SHUTDOWN. WORK MAY ONLY BE DONE AFTER NORMAL WORKING HOURS (1600 HOURS TO 0030 HOURS) OR DURING THE WEEKEND.

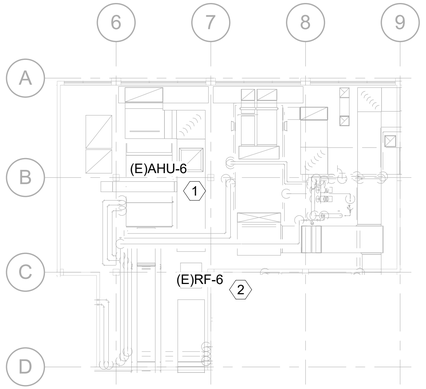
E. ALL AREAS AFFECTED BY DEMOLITION, INCLUDING UNFORESEEN EXISTING OPENINGS, SHALL BE SEALED, PATCHED, AND REPAIRED WITH LIKE MATERIALS TO MATCH ADJACENT WALL/ROOF/FLOOR/ETC. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR MORE INFORMATION.

F. GENERAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR TO REMOVE WIRING AND CONDUIT FROM EQUIPMENT AND DEVICES BACK TO DISTRIBUTION PANELS.

**KEYED NOTES:**

(1) RE-SHEAVE AHU-6 SUPPLY FAN TO ACCOMMODATE REDUCTION IN AIRFLOW FROM DEMOLISHED MIXING BOXES. BALANCE TOTAL SUPPLY AIRFLOW TO 20,740 CFM VIA BULK AIRFLOW BALANCING DOWNSTREAM OF FAN.

(2) RE-SHEAVE RETURN FAN RF-6 TO ACCOMMODATE REDUCTION IN AIRFLOW FROM DEMOLISHED MIXING BOXES. MATCH AHU-6 SUPPLY FAN VIA BULK AIRFLOW BALANCING DOWNSTREAM OF FAN.




A7 DEMO - ENLARGED MECHANICAL ROOM W254
SCALE: 1/16" = 1'-0"

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

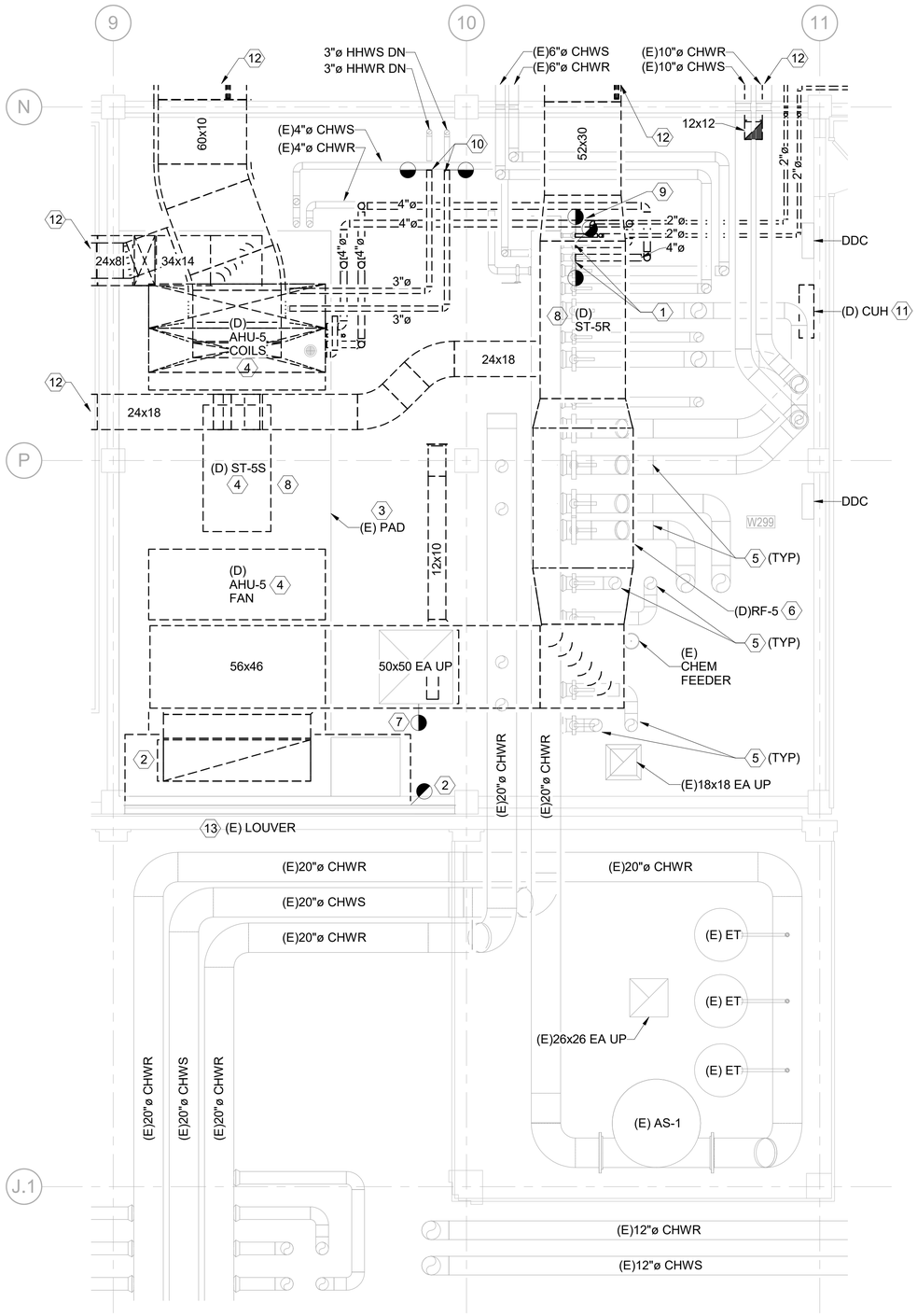
HVAC DEMOLITION SECOND FLOOR PLAN - AHU-6 MODIFICATIONS

SHEET ID

**MD103_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI




A1 DEMO - ENLARGED MECHANICAL ROOM W299
SCALE: 1/4" = 1'-0"

PLAN NORTH

0 2' 4' 8'
SCALE:1/4"=1'

**KEYED NOTES:**

1. DEMOLISH CHILLED WATER PIPING TO AHU-5 BACK TO POINT SHOWN. PROVIDE TEMPORARY INSULATED CAP TO PROTECT SPACE UNTIL NEW PIPING IS INSTALLED.
2. DEMOLISH MIXED AIR PLENUM BACK TO EXISTING LOUVER. EXISTING LOUVER AND SECURITY MANBARS TO REMAIN. PROVIDE INSULATED SHEET METAL PANEL TO PROTECT SPACE UNTIL NEW DUCTWORK IS INSTALLED.
3. EXISTING EQUIPMENT PAD TO REMAIN AND BE REUSED FOR NEW AHU PLACEMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR INCREASING PAD SIZE TO MATCH NEW AHU DIMENSIONS, IF THAT IS REQUIRED.
4. DEMOLISH EXISTING BUILT-UP AIR HANDLER AHU-5, DUCTWORK, PIPING, UNIT CONTROLS, AND POWER CONNECTIONS UNLESS NOTED OTHERWISE ON PLAN.
5. EXISTING PIPING BELOW RETURN FAN TO REMAIN. PROTECT PIPING DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE, SCHEDULE AND OBTAIN APPROVAL FOR ANY REQUIRED CHILLED WATER SHUT-DOWN WITH CONTRACTING OFFICER PRIOR TO DEMOLITION OR INSTALLATION OF RF-5 EQUIPMENT.
6. DEMOLISH RETURN FAN RF-5, FAN MOTOR, AND EXISTING DUCTWORK AND FLEXIBLE DUCT FITTINGS. COORDINATE WITH ELECTRICAL CONTRACTOR.
7. DEMOLISH RELIEF AIR DUCT UP TO GRAVITY HOOD ON ROOF AT UNDERSIDE OF ROOF DECK. EXISTING GRAVITY HOOD TO REMAIN. EXISTING SECURITY MANBARS TO REMAIN INTACT AT ALL TIMES. PROVIDE TEMPORARY INSULATED CAP TO PROTECT SPACE UNTIL NEW DUCTWORK IS INSTALLED.
8. DEMOLISH SOUND TRAP AND ASSOCIATED SUPPORTS, DUCTWORK AND INSULATION.
9. DEMOLISH EXISTING AIR CONDITIONING UNIT SERVING W298 AND ASSOCIATED SUPPORTS, DUCTWORK, INSULATION AND CONTROLS. DEMOLISH CHILLED WATER PIPING BACK TO POINT INDICATED AND CAP. PROVIDE NEW INSULATION FOR CAP TO MATCH EXISTING INSULATION.
10. DEMOLISH HEATING WATER PIPING TO AHU-5 BACK TO POINT SHOWN. PROVIDE TEMPORARY INSULATED CAP TO PROTECT SPACE UNTIL NEW PIPING IS INSTALLED.
11. DEMOLISH FLOOR MOUNTED CABINET UNIT HEATER AND ASSOCIATED HOT WATER HEATING PIPING. CAP PIPING BACK AT CONNECTION TO MAINS WITH INSULATED CAP.
12. DEMOLISH DUCTWORK AND PROTECT EXISTING OPENING FOR ROUTING NEW DUCTWORK. SEAL OPENING TO MATCH EXISTING WALL CONDITIONS WHERE NOT USED FOR NEW WORK.
13. TEMPORARY ACCESS TO THE MECHANICAL ROOM FOR REMOVAL AND INSTALLATION OF EQUIPMENT SHALL BE THROUGH THE EXISTING INTAKE LOUVER OPENING. THE SECURITY MANBARS AT THE LOUVER OPENING ARE REQUIRED TO REMAIN INTACT DURING ALL TIMES CONSTRUCTION IS NOT ACTIVELY TAKING PLACE. MANBARS ARE REQUIRED TO BE REINSTALLED (BY WELDING OR OTHER APPROVED METHOD) AT THE CLOSE OF EACH CONSTRUCTION DAY. DURING CONSTRUCTION, LOUVER OPENING SHALL NOT BE LEFT UNSECURED AND UNATTENDED. CONTRACTOR IS REQUIRED TO PROVIDE A SECURITY PLAN REPORT TO THE CONTRACTING OFFICER FOR REVIEW AND APPROVAL PRIOR TO DEMOLITION OR NEW WORK.

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. ALL ASBESTOS WORK MAY BE DONE DURING NORMAL WORKING HOURS UNLESS THE AREA IS A COMMON ACCESS AREA AND THEN THE WORK MUST BE DONE AFTER NORMAL WORKING HOURS (1600 HOURS TO 0030 HOURS) OR DURING THE WEEKEND.

C. REFER TO H-SERIES SHEETS FOR ALL HAZARDOUS BUILDING MATERIAL, ASBESTOS/LEAD ABATEMENT, AND UNIVERSAL WASTE REQUIREMENTS.

D. CONTRACTOR IS RESPONSIBLE FOR COORDINATING DEMOLITION WORK WITH EXISTING MECHANICAL ROOM EQUIPMENT AND BUILDING OPENINGS.

E. ALL AREAS AFFECTED BY DEMOLITION, INCLUDING UNFORESEEN EXISTING OPENINGS, SHALL BE SEALED, PATCHED, AND REPAIRED WITH LIKE MATERIALS TO MATCH ADJACENT WALL/ROOF/FLOOR/ETC. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR MORE INFORMATION.

F. GENERAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR TO REMOVE WIRING AND CONDUIT FROM EQUIPMENT AND DEVICES BACK TO DISTRIBUTION PANELS.

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
CELRL-ED-MEC-EAST
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

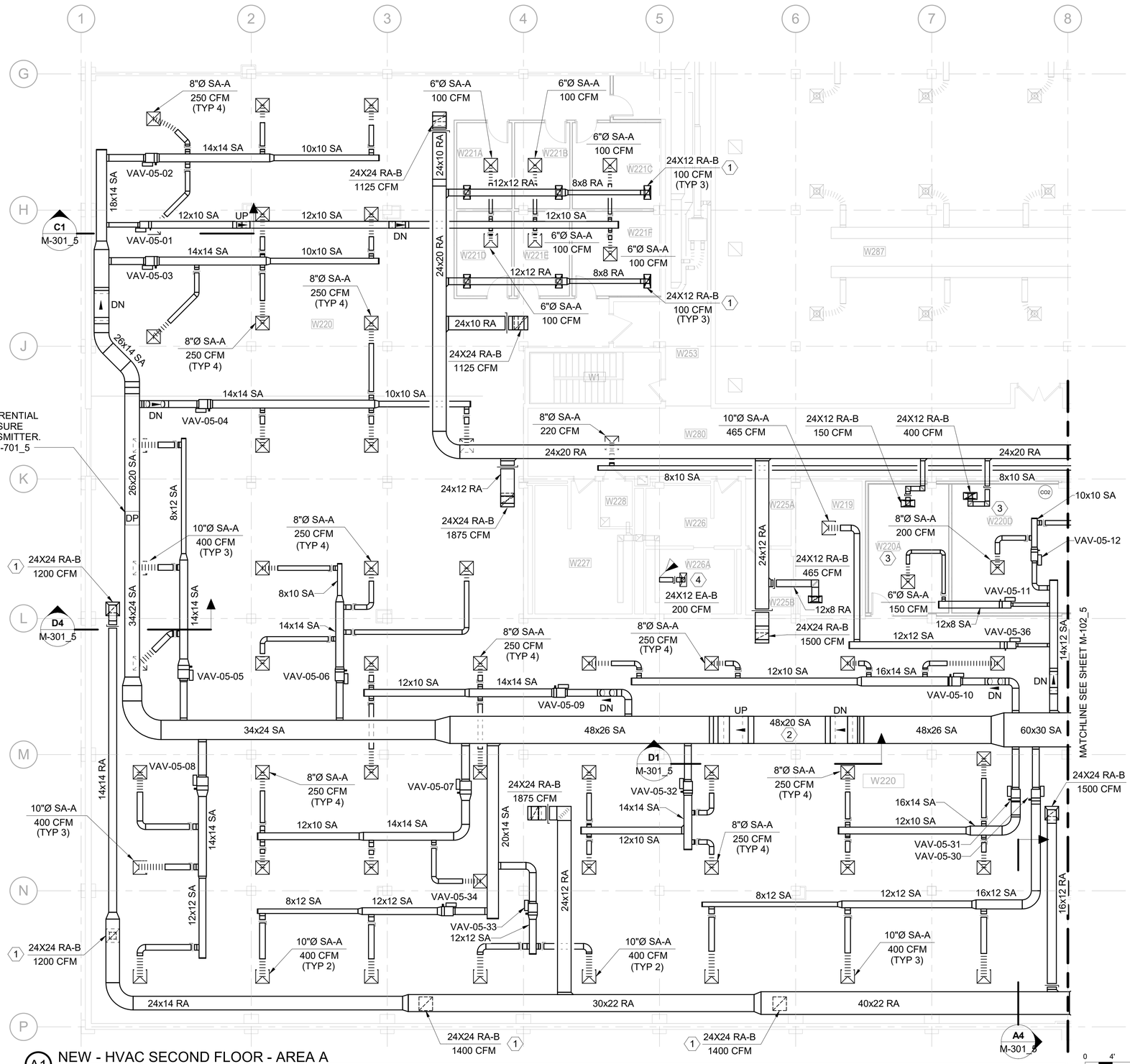
ENLARGED MECH ROOM W299 DEMOLITION PLAN

SHEET ID
**MD401_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION




**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. FOR ROOM NAMING, SEE ARCHITECTURAL FINISH AND SIGNAGE PLANS OR SCHEDULES.

C. INSTALL THERMOSTATS AT 54" AFF, UNLESS NOTED OTHERWISE. PROVIDE EXTRA 10' OF THERMOSTAT WIRING COILED ABOVE CEILING TO ALLOW FOR FUTURE MOVEMENT OF THERMOSTAT.

D. CONTRACTOR RESPONSIBLE FOR REWORKING SUPPORT WIRES, FLEXIBLE CABLES, ETC. TO FACILITATE INSTALLATION OF DUCTWORK.

E. PROVIDE PERMANENT LABELS INCLUDING FLOW ARROW AND DETAILS FOR EVERY PIPE, VAV, DUCT, CRAC, VALVES, ETC. SHOWN ON PLANS. INCLUDE ROTATION ARROW FOR ALL ROTATING COMPONENTS.

F. VAV INLET DUCT SIZE SHALL BE AS INDICATED ON EQUIPMENT SCHEDULE.

**KEYED NOTES:**

1. MANUAL BALANCING DAMPER IS LOCATED IN VERTICAL DUCT.
2. FLATTEN AND OFFSET SUPPLY AIR DUCT TO ALLOW FOR ROUTING BELOW EXISTING CABLE TRAY AND CONDUITS ABOVE CEILING. COORDINATE EXACT REQUIREMENTS IN FIELD.
3. ROOM SHALL MAINTAIN STC 50 SOUND RATING. CONTRACTOR SHALL ENSURE NEW WORK MEETS OR EXCEEDS THE STC 50 RATING REQUIREMENTS. DUCTWORK CHANGES MADE IN FIELD SHALL REQUIRE PRIOR GOVERNMENT APPROVAL.
4. EXISTING RESTROOM EXHAUST SYSTEM TO REMAIN. INSTALL NEW EXHAUST GRILLE AND DUCTWORK WHERE INDICATED DUE TO CEILING REPLACEMENT. AIRFLOW RATES OF EXISTING EXHAUST FANS AND GRILLES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO SUBMITTING / PURCHASING THE VAV PROVIDING MAKEUP AIR FROM THE CORRIDOR INTO THE SPACE. BALANCE NEW GRILLE TO MATCH EXISTING CFM.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANFETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

HVAC DUCTWORK SECOND FLOOR PLAN - AREA A

SHEET ID

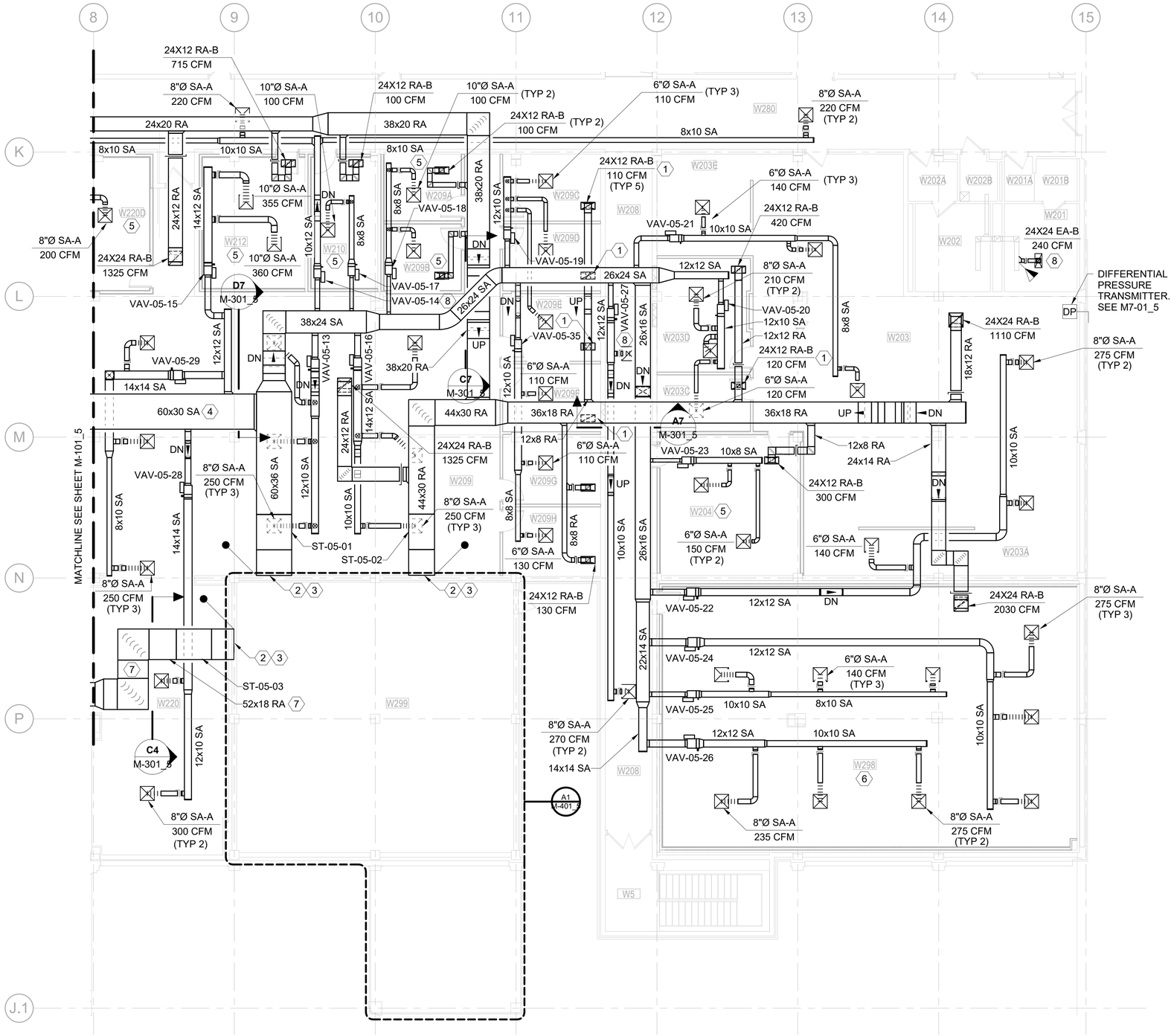
**M-101_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




## GENERAL NOTES:

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. FOR ROOM NAMING, SEE ARCHITECTURAL FINISH AND SIGNAGE PLANS OR SCHEDULES.

C. INSTALL THERMOSTATS AT 54" AFF, UNLESS NOTED OTHERWISE. PROVIDE EXTRA 10' OF THERMOSTAT WIRING COILED ABOVE CEILING TO ALLOW FOR FUTURE MOVEMENT OF THERMOSTAT.

D. CONTRACTOR RESPONSIBLE FOR REWORKING SUPPORT WIRES, FLEXIBLE CABLES, ETC. TO FACILITATE INSTALLATION OF DUCTWORK.

E. PROVIDE PERMANENT LABELS INCLUDING FLOW ARROW AND DETAILS FOR EVERY PIPE, VAV, DUCT, CRAC, VALVES, ETC. SHOWN ON PLANS. INCLUDE ROTATION ARROW FOR ALL ROTATING COMPONENTS.

F. VAV INLET DUCT SIZE SHALL BE AS INDICATED ON EQUIPMENT SCHEDULE.

## KEYED NOTES:

1. MANUAL BALANCING DAMPER IS LOCATED IN VERTICAL DUCT.
2. CONTRACTOR TO PROVIDE MANBARS INSTALLED IN DUCT PENETRATIONS AT SECURE WALL. INCLUDE INSPECTION PORTS ON THE SECURE SIDE AT EACH LOCATION. SEE DETAILS D1 & A5/M-504_5.
3. ROUTE NEW DUCT THROUGH EXISTING OPENING IN MECHANICAL ROOM WALL. CONTRACTOR SHALL ENLARGE OPENING AS REQUIRED FOR NEW WORK. SEAL UNUSED EXISTING OPENINGS TO MATCH EXISTING WALL CONSTRUCTION.
4. CONTRACTOR SHALL FIELD VERIFY FINAL SUPPLY DUCT LOCATION WITH EXISTING FIRE SPRINKLER PIPE MAIN.
5. ROOM SHALL MAINTAIN STC 50 SOUND RATING. CONTRACTOR SHALL ENSURE NEW WORK MEETS OR EXCEEDS THE STC 50 RATING REQUIREMENTS. DUCTWORK CHANGES MADE IN FIELD SHALL REQUIRE PRIOR GOVERNMENT APPROVAL.
6. ROOM SHALL MAINTAIN STC 45 SOUND RATING. CONTRACTOR SHALL ENSURE NEW WORK MEETS OR EXCEEDS THE STC 45 RATING REQUIREMENTS. DUCTWORK CHANGES MADE IN FIELD SHALL REQUIRE PRIOR GOVERNMENT APPROVAL.
7. CONTRACTOR SHALL FIELD ROUTE RETURN DUCTWORK TO COORDINATE WITH CABLE TRAY, CONDUITS/PIPING IN THIS AREA. DESIGN INTENT IS TO ALIGN THE NEW RETURN AIR DUCT WITH THE EXISTING MECHANICAL ROOM OPENING. DUCT INSTALLATION MUST REMAIN IN COMPLIANCE WITH SECURITY DETAILS ON M-504.
8. EXISTING RESTROOM EXHAUST SYSTEM TO REMAIN. INSTALL NEW EXHAUST GRILLE AND DUCTWORK WHERE INDICATED DUE TO CEILING REPLACEMENT. AIRFLOW RATES OF EXISTING EXHAUST FANS AND GRILLES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO SUBMITTING / PURCHASING THE VAV PROVIDING MAKEUP AIR FROM THE CORRIDOR INTO THE SPACE. BALANCE NEW GRILLE TO MATCH EXISTING CFM.

A1 NEW - HVAC SECOND FLOOR - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
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DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANFEITRO
SUBMITTED BY: G.JOHNSON
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US ARMY CORPS OF ENGINEERS
DISTRICT LOUISVILLE
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

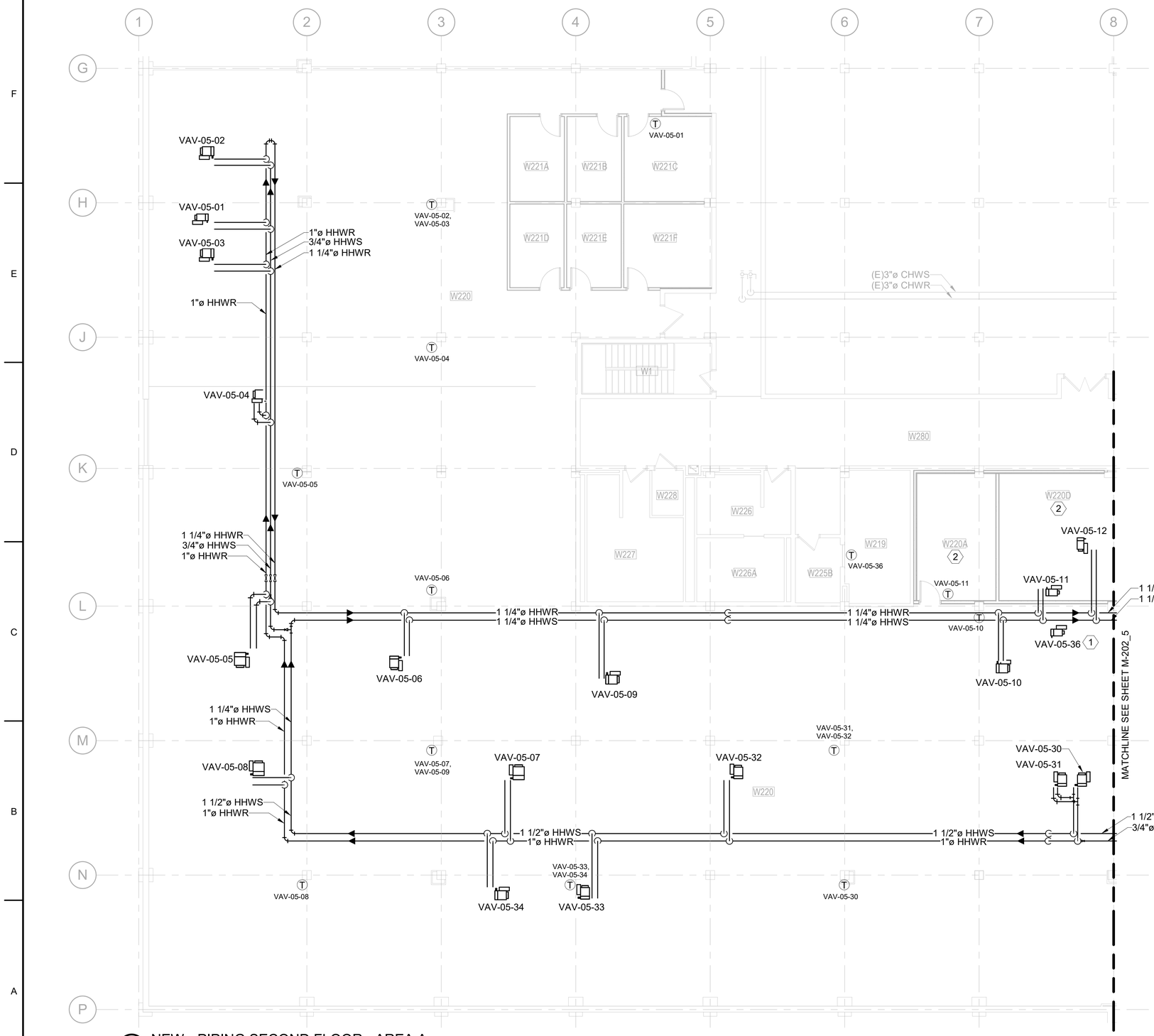
BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

HVAC DUCTWORK SECOND FLOOR PLAN - AREA B

SHEET ID
M-102_5

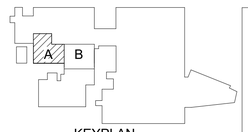
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000




A1 NEW - PIPING SECOND FLOOR - AREA A
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'




KEYPLAN
NOT TO SCALE

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. FOR ROOM NAMING, SEE ARCHITECTURAL FINISH AND SIGNAGE PLANS OR SCHEDULES.

C. PROVIDE 2-WAY CONTROL VALVES AT ALL TERMINAL BOXES UNLESS NOTED OTHERWISE.

D. ALL PIPING TO BE 3/4"ø UNLESS NOTED OTHERWISE.

E. PROVIDE PERMANENT LABELS INCLUDING FLOW ARROW AND DETAILS FOR EVERY PIPE, VAV, DUCT, VALVE, ETC. SHOWN ON PLANS. INCLUDE ROTATION ARROW FOR ALL ROTATING COMPONENTS.

F. FOR ADDITIONAL INFORMATION ON VALVING AND OTHER PIPE ACCESSORIES, SEE HEATING HOT WATER SCHEMATIC ON SHEET M-803_5.

G. COORDINATE FINAL VAV THERMOSTAT LOCATION WITH FURNITURE PLAN. IF REQUIRED, RELOCATE THERMOSTAT WITHIN ZONE TO AVOID CONFLICT WITH FURNITURE.

**KEYED NOTES:**

1 COOLING ONLY VAV BOX. NO REHEAT COIL.

2 ROOM SHALL MAINTAIN STC 50 SOUND RATING. CONTRACTOR SHALL ENSURE NEW WORK MEETS OR EXCEEDS THE STC 50 RATING REQUIREMENTS.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

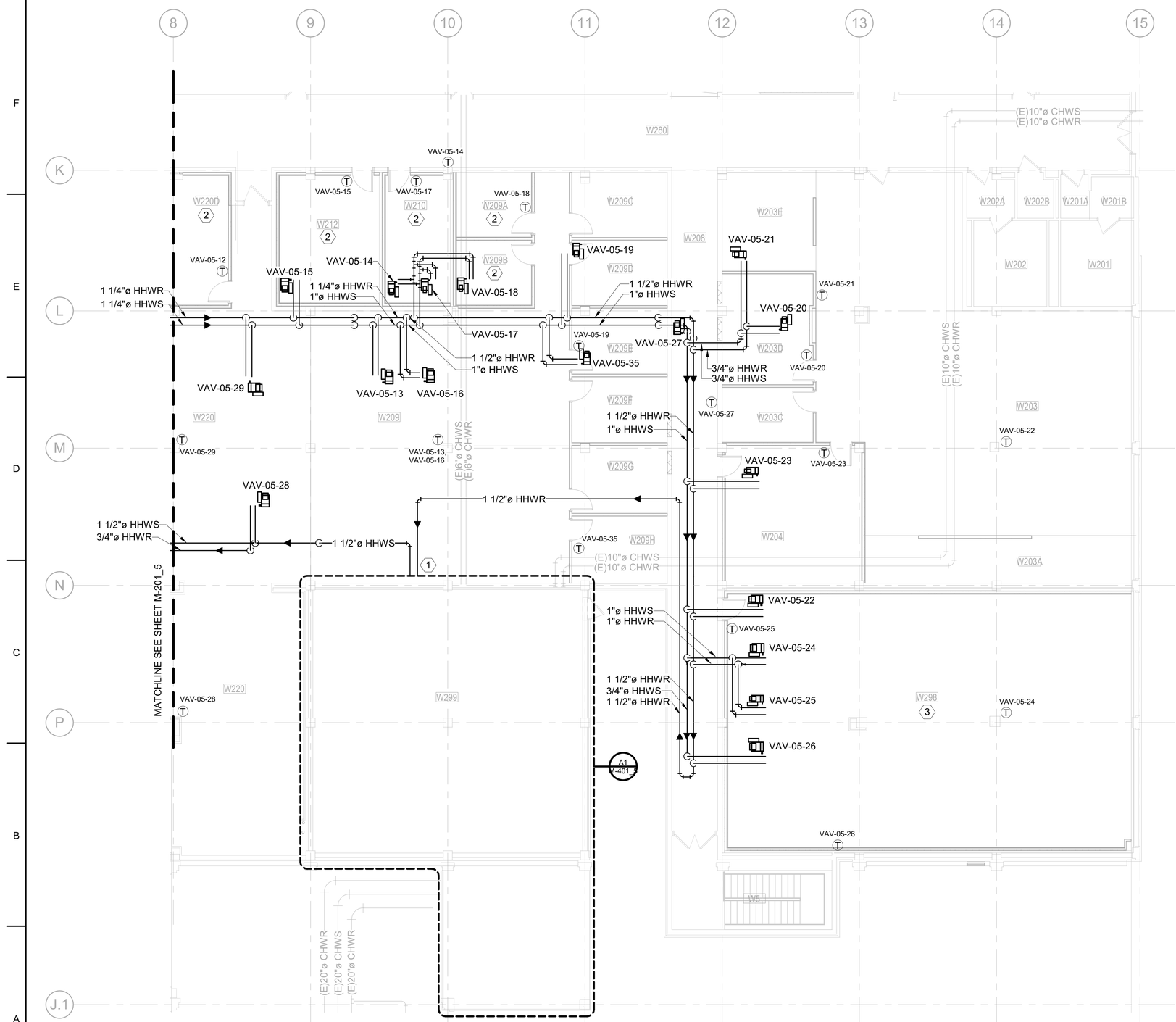
HVAC PIPING SECOND FLOOR PLAN - AREA A

SHEET ID

**M-201_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000




A1 NEW - PIPING SECOND FLOOR - AREA B

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

0 4' 8' 16'

PLAN NORTH

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. FOR ROOM NAMING, SEE ARCHITECTURAL FINISH AND SIGNAGE PLANS OR SCHEDULES.

C. PROVIDE 2-WAY CONTROL VALVES AT ALL TERMINAL BOXES UNLESS NOTED OTHERWISE.

D. ALL PIPING TO BE 3/4"Ø UNLESS NOTED OTHERWISE.

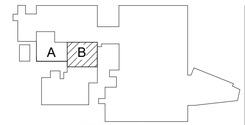
E. PROVIDE PERMANENT LABELS INCLUDING FLOW ARROW AND DETAILS FOR EVERY PIPE, VAV, DUCT, CRAC, VALVES, ETC. SHOWN ON PLANS. INCLUDE ROTATION ARROW FOR ALL ROTATING COMPONENTS.

F. FOR ADDITIONAL INFORMATION ON VALVING AND OTHER PIPE ACCESSORIES, SEE HEATING HOT WATER SCHEMATIC ON SHEET M-803_5.

G. COORDINATE FINAL VAV THERMOSTAT LOCATION WITH FURNITURE PLAN. IF REQUIRED, RELOCATE THERMOSTAT WITHIN ZONE TO AVOID CONFLICT WITH FURNITURE.

**KEYED NOTES:**

1. REFER TO SHEET M-401_5 - ENLARGED MECHANICAL ROOM W299 PLAN FOR CONTINUATION.
2. ROOM SHALL MAINTAIN STC 50 SOUND RATING. CONTRACTOR SHALL ENSURE NEW WORK MEETS OR EXCEEDS THE STC 50 RATING REQUIREMENTS.
3. ROOM SHALL MAINTAIN STC 45 SOUND RATING. CONTRACTOR SHALL ENSURE NEW WORK MEETS OR EXCEEDS THE STC 45 RATING REQUIREMENTS.




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS LOUISVILLE DISTRICT 600 DR. MARTIN LUTHER KING JR. PL LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

HVAC PIPING SECOND FLOOR PLAN - AREA B

SHEET ID

**M-202_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

**KEYED NOTES:**

1. COORDINATE SUPPLY AND RETURN DUCT ROUTING TO AVOID EXISTING TO REMAIN CONDUIT, CABLE TRAY, AND FIRE PROTECTION PIPING BY OFFSETTING AND OR FLATTENING SECTIONS OF DUCT AS NEEDED.
2. OFFSET NEW HYDRONIC PIPING AS NEEDED TO AVOID EXISTING CHILLED WATER PIPING, CONDUIT, CABLE TRAY, AND FIRE PROTECTION PIPING.

**GENERAL NOTES:**

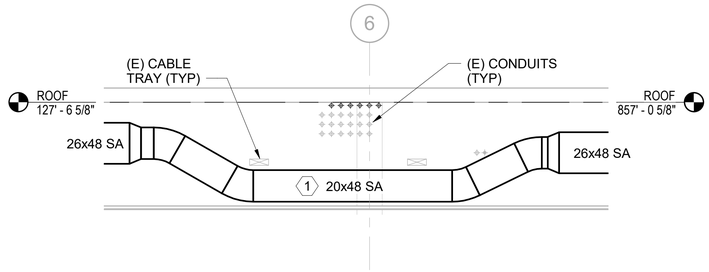
A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. PROVIDE 2-WAY CONTROL VALVES AT ALL TERMINAL BOXES UNLESS NOTED OTHERWISE.

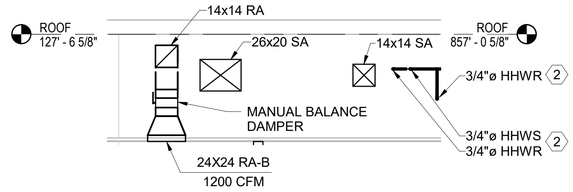
C. ALL PIPING TO BE 3/4"ø UNLESS NOTED OTHERWISE.

D. PROVIDE PERMANENT LABELS INCLUDING FLOW ARROW AND DETAILS FOR EVERY PIPE, VAV, DUCT, CRAC, VALVES, ETC. SHOWN ON PLANS. INCLUDE ROTATION ARROW FOR ALL ROTATING COMPONENTS.

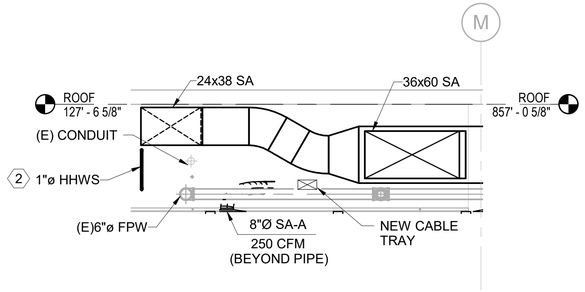
E. FOR ADDITIONAL INFORMATION ON VALVING AND OTHER PIPE ACCESSORIES, SEE HEATING HOT WATER SCHEMATIC ON SHEET M-803_5.



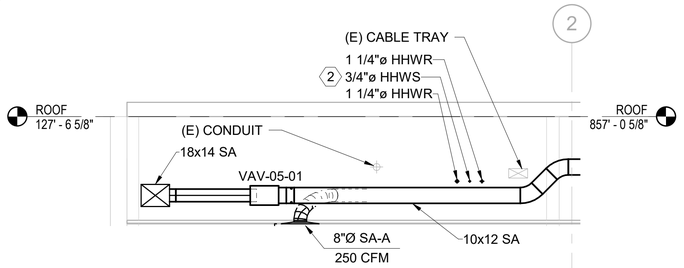

D1 SECTION NEAR GRIDS M6
SCALE 1/4" = 1'-0"



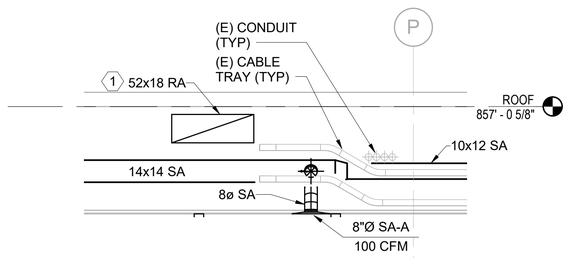

D4 SECTION NEAR GRIDS L1
SCALE 1/4" = 1'-0"



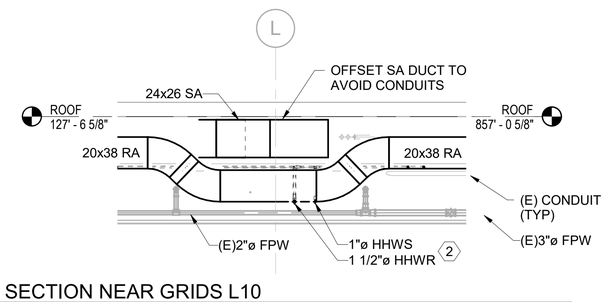

D7 SECTION NEAR GRIDS L9
SCALE 1/4" = 1'-0"



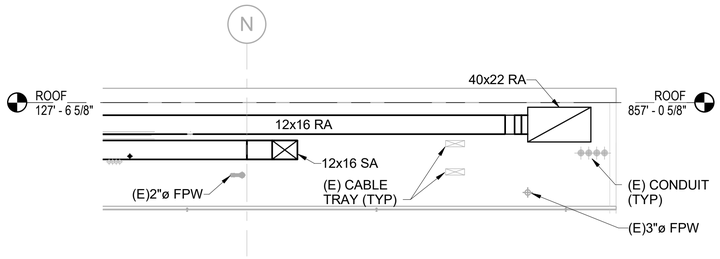

C1 SECTION NEAR GRIDS H1
SCALE 1/4" = 1'-0"



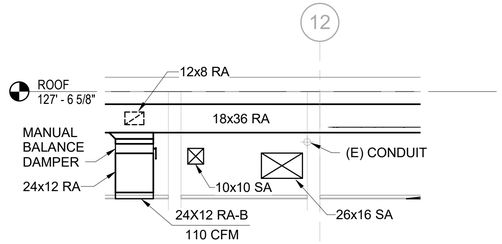

C4 SECTION NEAR GRIDS P9
SCALE 1/4" = 1'-0"




C7 SECTION NEAR GRIDS L10
SCALE 1/4" = 1'-0"




A4 SECTION NEAR GRIDS P8
SCALE 1/4" = 1'-0"




A7 SECTION NEAR GRIDS N11
SCALE 1/4" = 1'-0"

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL SECTIONS

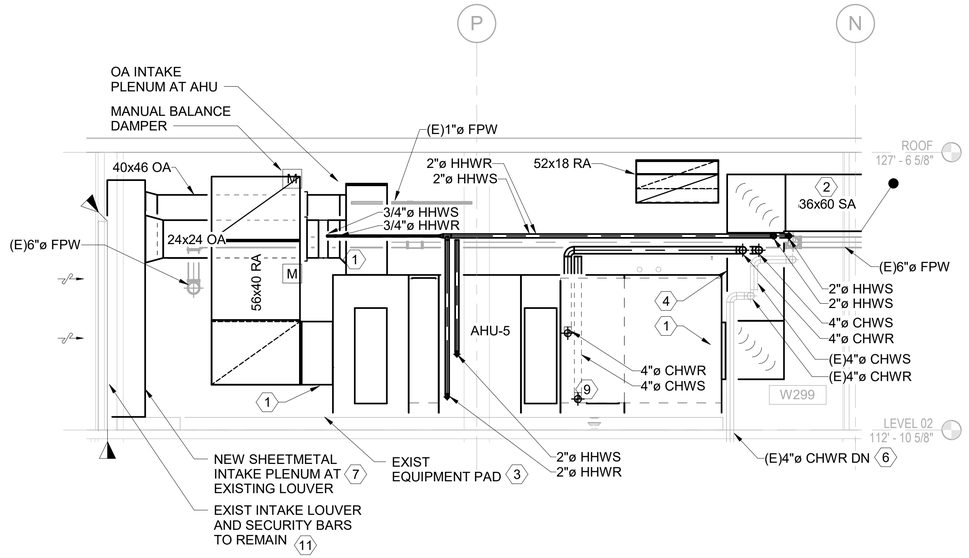
SHEET ID
**M-301_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI

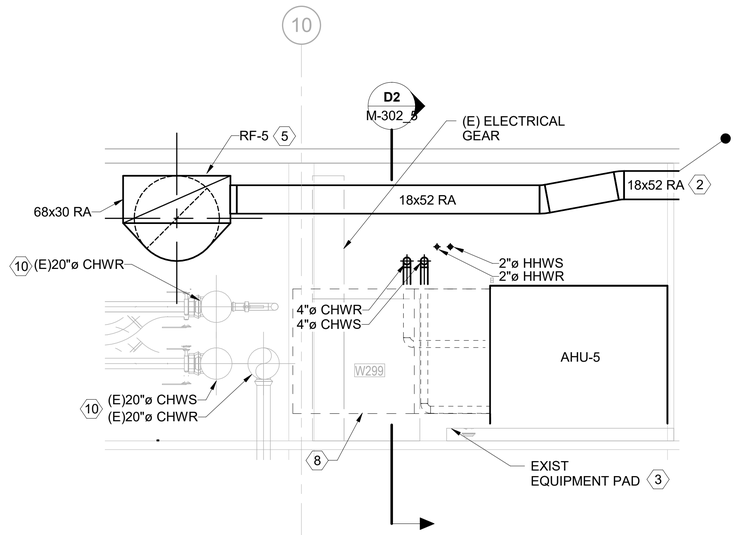


ARIMS: 200A Disposition: Maintain for 15 yrs after construction




D2 SECTION - MECHANICAL ROOM W299 - LOOKING WEST

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




A2 SECTION - MECHANICAL ROOM W299 - LOOKING SOUTH

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

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. PROVIDE PERMANENT LABELS INCLUDING FLOW ARROW AND DETAILS FOR EVERY PIPE, VAV, DUCT, CRAC, VALVES, ETC. SHOWN ON PLANS. INCLUDE ROTATION ARROW FOR ALL ROTATING COMPONENTS.

**KEYED NOTES:**

1. TRANSITION DUCTWORK TO AHU CONNECTION SIZE.
2. CONTRACTOR TO PROVIDE MANBARS INSTALLED IN DUCT PENETRATIONS AT SECURE WALL. INCLUDE INSPECTION PORTS ON THE SECURE SIDE AT EACH LOCATION. SEE DETAILS D1 & A5/M-504_5.
3. EXISTING EQUIPMENT PAD TO REMAIN AND BE REUSED FOR NEW AHU PLACEMENT. CONTRACTOR TO EXPAND EXISTING EQUIPMENT PAD AS REQUIRED TO ACCOMMODATE NEW AHU-5.
4. INSTALL EXTERNAL ACOUSTICAL DUCT LAGGING ON FIRST 10' OF SUPPLY AIR DUCT.
5. SUPPORT NEW RETURN FAN, RF-5 FROM STRUCTURE IN SAME LOCATION AS PREVIOUS FAN. CONNECT TO DUCTWORK WITH FLEXIBLE DUCT CONNECTIONS. MOUNT FAN MOTOR WHERE ACCESSIBLE.
6. EXISTING CHILLED WATER PIPING THROUGH FLOOR TO REMAIN. CONTRACTOR SHALL RELOCATE IF REQUIRED TO ACCOMMODATE NEW AHU PLACEMENT.
7. PROVIDE NEW 12'-6" x 15'-10" x 2'-0" INSULATED SWEETMEAT PLENUM AT EXISTING INTAKE LOUVER. EXISTING SECURITY BARS TO REMAIN INSTALLED THROUGHOUT THE ENTIRE LOUVER. CAP UNUSED LOUVER PORTIONS WITH INSULATED COVER.
8. MAINTAIN REQUIRED MECHANICAL CLEARANCES PER AHU MANUFACTURER AND COORDINATE WITH EXISTING TO REMAIN EQUIPMENT.
9. ROUTE COOLING COIL CONDENSATE DRAIN TO EXISTING FLOOR SINK NEXT TO EQUIPMENT PAD. REPLACE EXISTING FLOOR SINK GRATE WITH NEW.
10. CONTRACTOR SHALL COORDINATE, SCHEDULE AND OBTAIN APPROVAL FOR ANY REQUIRED CHILLED WATER SHUT-DOWN WITH CONTRACTING OFFICER PRIOR TO DEMOLITION OR INSTALLATION OF RF-5 EQUIPMENT.
11. TEMPORARY ACCESS TO THE MECHANICAL ROOM FOR REMOVAL AND INSTALLATION OF EQUIPMENT SHALL BE THROUGH THE EXISTING INTAKE LOUVER OPENING. THE SECURITY MANBARS AT THE LOUVER OPENING ARE REQUIRED TO REMAIN INTACT DURING ALL TIMES CONSTRUCTION IS NOT ACTIVELY TAKING PLACE. MANBARS ARE REQUIRED TO BE REINSTALLED (BY WELDING OR OTHER APPROVED METHOD) AT THE CLOSE OF EACH CONSTRUCTION DAY. DURING CONSTRUCTION, LOUVER OPENING SHALL NOT BE LEFT UNSECURED AND UNATTENDED. CONTRACTOR IS REQUIRED TO PROVIDE A SECURITY PLAN REPORT TO THE CONTRACTING OFFICER FOR REVIEW AND APPROVAL PRIOR TO DEMOLITION OR NEW WORK.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: G JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

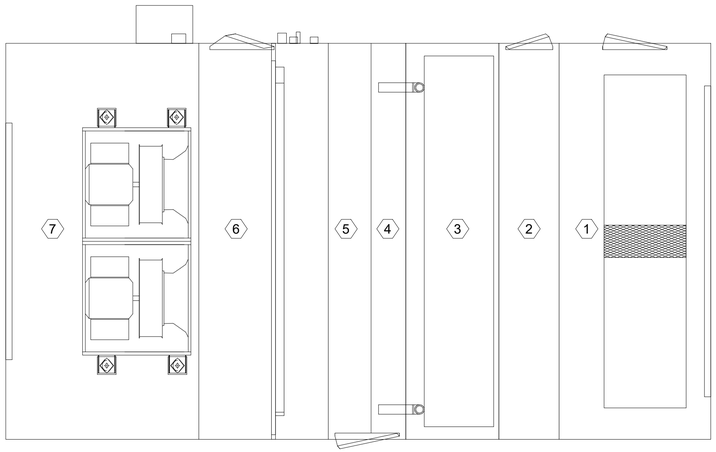
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL SECTIONS

SHEET ID

**M-302_5**

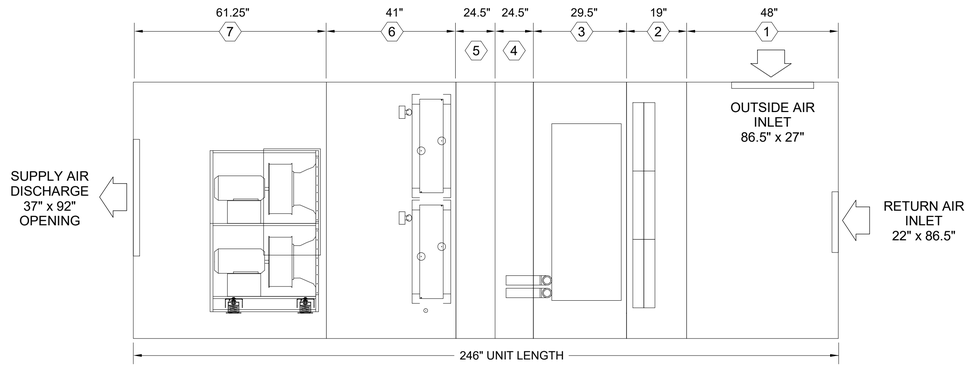
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



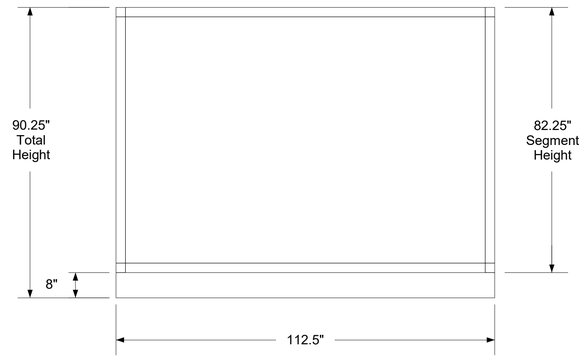

**AHU-5 DETAIL - PLAN VIEW**

**KEYED NOTES:**

1. AIR MIXING SECTION WITH AIR BLENDER
2. HIGH EFFICIENCY FILTER
3. INTEGRAL FACE & BYPASS HOT WATER HEATING COIL
4. ACCESS SECTION
5. ACCESS SECTION
6. CHILLED WATER COOLING COIL WITH ULTRAVIOLET GERMICIDAL IRRADIATION (UVGI)
7. SUPPLY FAN SECTION




**AHU-5 DETAIL - ELEVATION VIEW**




**AHU-5 DETAIL - FRONT (INLET) END VIEW**

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: G JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G JOHNSON
SIZE: 34X22

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
CUSTOMER SERVICE
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

AIR HANDLING UNIT DETAILS

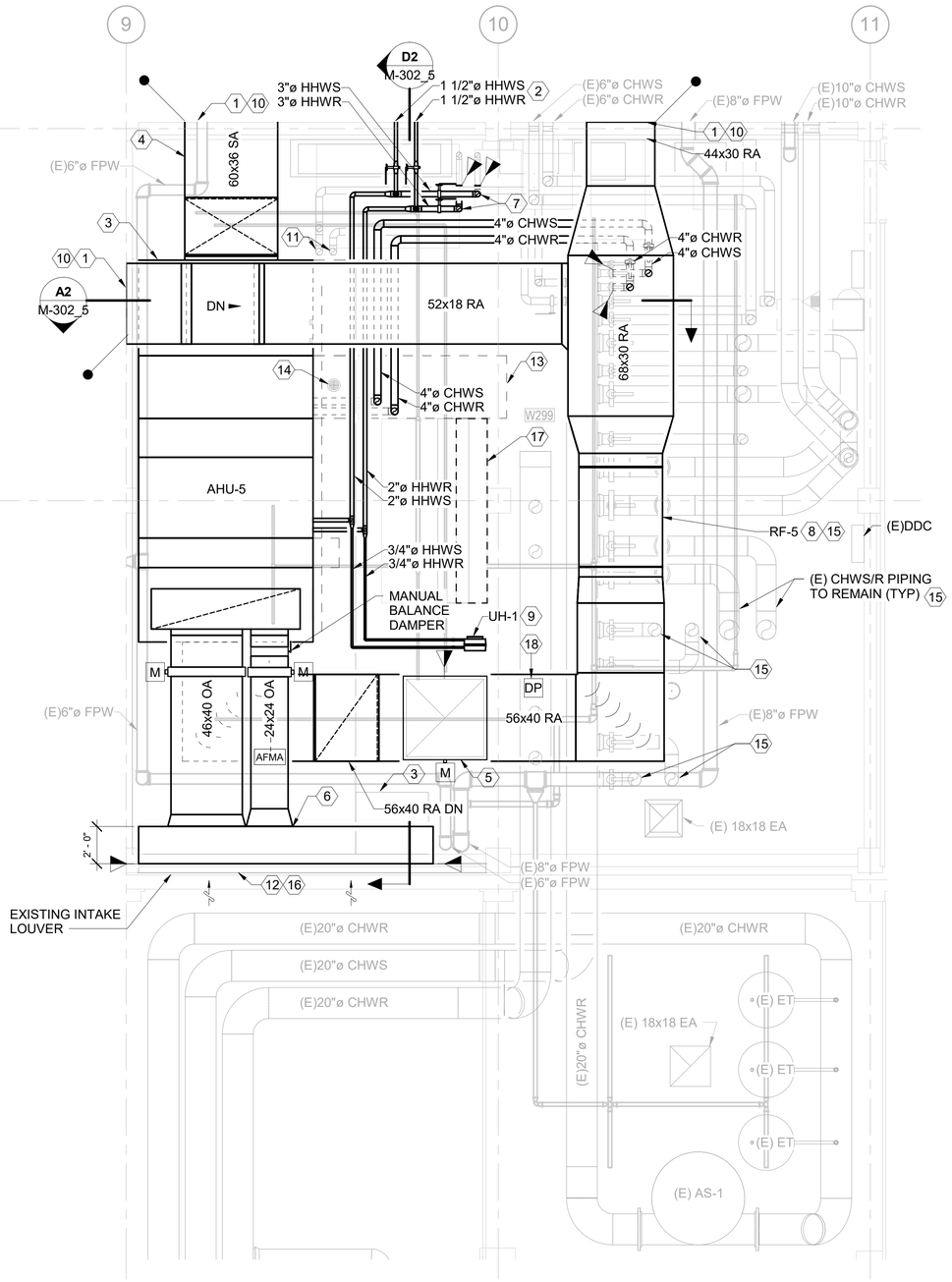
SHEET ID

**M-303_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION




A1 ENLARGED MECHANICAL ROOM W299
SCALE: 1/4" = 1'-0"

PLAN NORTH

0 2' 4' 8'
SCALE:1/4"=1'

**KEYED NOTES CONTINUED:**

13. MAINTAIN REQUIRED MECHANICAL CLEARANCES PER AHU MANUFACTURER AND COORDINATE WITH EXISTING TO REMAIN EQUIPMENT.
14. ROUTE COOLING COIL CONDENSATE DRAIN TO EXISTING FLOOR SINK NEXT TO EQUIPMENT PAD. REPLACE EXISTING FLOOR SINK GRATE WITH NEW.
15. CONTRACTOR SHALL COORDINATE, SCHEDULE AND OBTAIN APPROVAL FOR ANY REQUIRED CHILLED WATER SHUT-DOWN WITH CONTRACTING OFFICER PRIOR TO DEMOLITION OR INSTALLATION OF RF-5 EQUIPMENT.
16. TEMPORARY ACCESS TO THE MECHANICAL ROOM FOR REMOVAL AND INSTALLATION OF EQUIPMENT SHALL BE THROUGH THE EXISTING INTAKE LOUVER OPENING. THE SECURITY MANBARS AT THE LOUVER OPENING ARE REQUIRED TO REMAIN INTACT DURING ALL TIMES CONSTRUCTION IS NOT ACTIVELY TAKING PLACE. MANBARS ARE REQUIRED TO BE REINSTALLED (BY WELDING OR OTHER APPROVED METHOD) AT THE CLOSE OF EACH CONSTRUCTION DAY. DURING CONSTRUCTION, LOUVER OPENING SHALL NOT BE LEFT UNSECURED AND UNATTENDED. CONTRACTOR IS REQUIRED TO PROVIDE A SECURITY PLAN REPORT TO THE CONTRACTING OFFICER FOR REVIEW AND APPROVAL PRIOR TO DEMOLITION OR NEW WORK.
17. EXISTING ELECTRICAL SWITCHGEAR, MCC4A, TO REMAIN. ALL AHU SERVICE CLEARANCES AND COIL PULL REQUIREMENTS MUST BE COORDINATED WITH THE EXISTING TO REMAIN EQUIPMENT AND PIPING.
18. RETURN AIR DUCT DIFFERENTIAL PRESSURE TRANSMITTER. SEE M-701_5.

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF NEW EQUIPMENT WITH EXISTING BUILDING AND MECHANICAL ROOM OPENINGS. PROVIDE EQUIPMENT IN SPLIT SECTIONS, AS REQUIRED, AND COORDINATE WITH EXISTING SYSTEMS IN PLACE.

C. SEE C3 & C7/M-505_5 FOR HEATING AND COOLING COIL PIPING CONNECTION DETAILS.

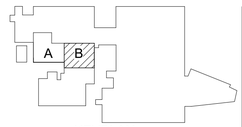
D. PROVIDE PERMANENT LABELS INCLUDING FLOW ARROW AND DETAILS FOR EVERY PIPE, VAV, DUCT, CRAC, VALVES, ETC. SHOWN ON PLANS. INCLUDE ROTATION ARROW FOR ALL ROTATING COMPONENTS.

E. CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEALING ANY PENETRATION ASSOCIATED WITH THIS SCOPE.

F. PROTECT EXISTING PIPING IN MECHANICAL ROOM DURING CONSTRUCTION.

**KEYED NOTES:**

1. CONTRACTOR TO PROVIDE MANBARS INSTALLED IN DUCT PENETRATIONS AT SECURE WALL. INCLUDE INSPECTION PORTS ON THE SECURE SIDE AT EACH LOCATION. SEE DETAILS D1 & A5/M-504_5.
2. SEE C5/M-504_5 FOR PIPE PENETRATION AT SECURE WALL.
3. EXISTING EQUIPMENT PAD TO REMAIN AND BE REUSED FOR NEW AHU PLACEMENT. CONTRACTOR TO EXPAND EXISTING EQUIPMENT PAD AS REQUIRED TO ACCOMMODATE NEW AHU-5.
4. INSTALL EXTERNAL ACOUSTICAL DUCT LAGGING ON FIRST 10' OF SUPPLY AIR DUCT DOWNSTREAM OF AHU.
5. NEW 50x50 RELIEF AIR UP FROM TOP OF DUCT TO EXISTING 50x50 RELIEF OPENING AT ROOF. INSTALL NEW MOTORIZED DAMPER IN INTERIOR DUCTWORK WHERE ACCESSIBLE. DISCHARGE THROUGH EXISTING ROOF MOUNTED RELIEF HOOD.
6. PROVIDE SEPARATE MINIMUM OUTSIDE AIR DUCT CONNECTION TO INTAKE AIR PLENUM. PROVIDE AFMS AND MANUAL BALANCE DAMPER WHERE ACCESSIBLE.
7. CONNECT NEW 3" HOT WATER SUPPLY AND RETURN PIPING TO EXISTING SYSTEM 3" HOT WATER PIPING.
8. SUPPORT NEW RETURN FAN, RF-5 FROM STRUCTURE IN SAME LOCATION AS PREVIOUS FAN. CONNECT TO DUCTWORK WITH FLEXIBLE DUCT CONNECTIONS. MOUNT FAN MOTOR WHERE ACCESSIBLE.
9. MOUNT HOT WATER UNIT HEATER MINIMUM 8'-0" AFF. DO NOT ROUTE ANY WATER PIPING OVER ELECTRICAL EQUIPMENT.
10. ROUTE NEW DUCT THROUGH EXISTING OPENING IN MECHANICAL ROOM WALL. CONTRACTOR SHALL EXPAND OPENING AS REQUIRED FOR NEW WORK. SEAL UNUSED EXISTING OPENINGS TO MATCH EXISTING WALL CONSTRUCTION.
11. EXISTING CHILLED WATER PIPING THROUGH FLOOR TO REMAIN. CONTRACTOR SHALL RELOCATE IF REQUIRED TO ACCOMMODATE NEW AHU PLACEMENT.
12. PROVIDE NEW 12'-6" x 15'-10" x 2'-0" INSULATED SWEETMEAT PLENUM AT EXISTING INTAKE LOUVER. EXISTING SECURITY BARS TO REMAIN INSTALLED THROUGHOUT THE ENTIRE LOUVER. CAP UNUSED LOUVER PORTIONS WITH INSULATED COVER.




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

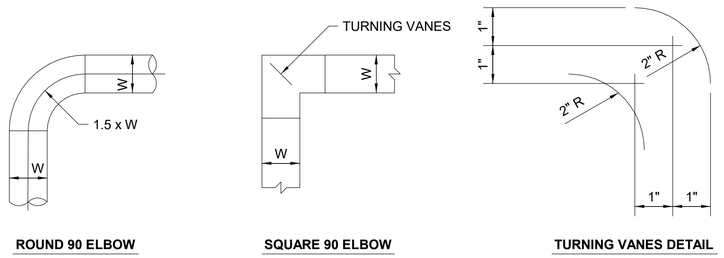
ENLARGED MECHANICAL ROOM W299 PLAN

SHEET ID
**M-401_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION



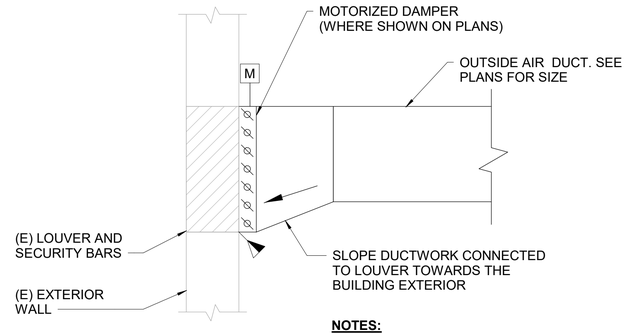

**ROUND 90 ELBOW** | **SQUARE 90 ELBOW** | **TURNING VANES DETAIL**

**NOTE:**

1. USE THIS DESIGN WHERE SQUARE 90°ELBOWS ARE SHOWN ON DRAWINGS OR IF SPACE DOES NOT PERMIT ROUND 90° ELBOWS.

**RECTANGULAR TRANSITION** | **RECTANGULAR TO ROUND TRANSITION**

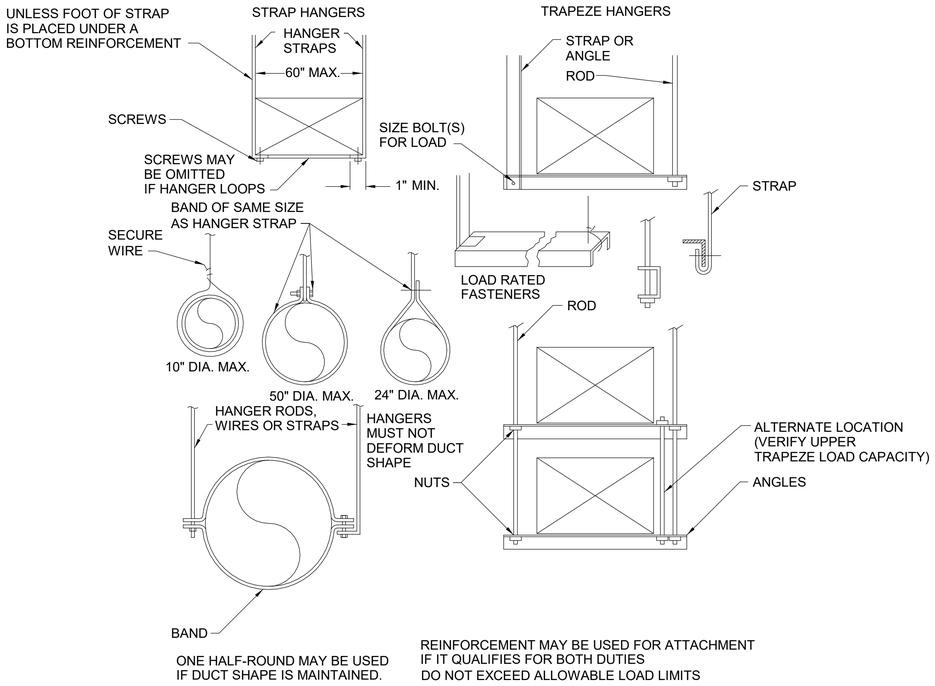
## D1 LOW VELOCITY DUCT LAYOUT
SCALE:NTS



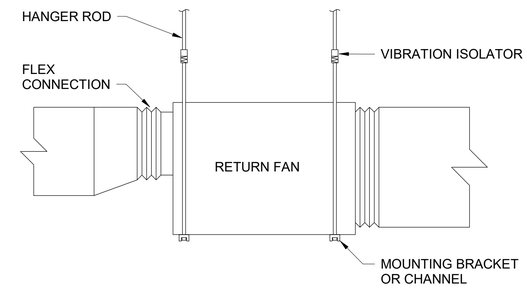

**NOTES:**

1. PROVIDE INSULATED CONTROL DAMPER RATED FOR -40 DEG F.

## D4 DUCTWORK CONNECTED TO EXTERIOR LOUVER
SCALE:NTS




## A1 LOWER DUCT HANGER ATTACHMENTS
SCALE:NTS




## A6 INLINE FAN INSTALLATION
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

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CONTRACT NO.:

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DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPIETRO
SUBMITTED BY: G. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL DETAILS

SHEET ID
**M-501_5**

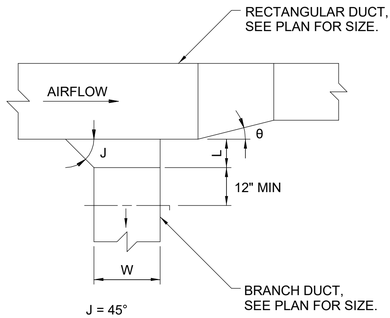
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction



CUI

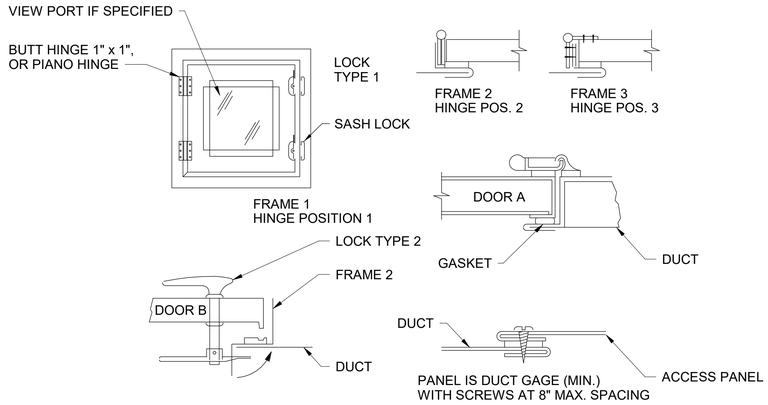



J = 45°
L = 1/4 W, 4" MIN.
θ = 20° MAX.

**NOTES:**

1. TAKEOFF ON BOTH SIDES OR SINGLE SIDE AS REQUIRED BY PLANS.
2. SEE SMACNA MANUAL FOR TAP-IN DETAILS.
3. CLINCH LOCK CONNECTION TO DUCT SHALL HAVE CORNER SEALS. (SEE SMACNA MANUAL)
4. 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.

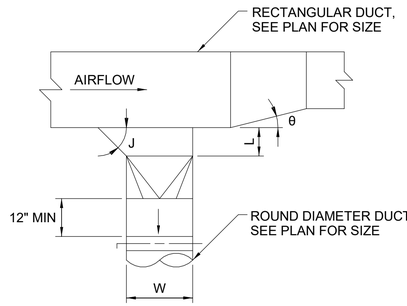
## D1 RECTANGULAR BRANCH DUCT TAKE-OFF
SCALE:NTS




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

B - BOTTOM
S - SIDE
T - TOP

## D4 ACCESS DOOR IN RECTANGULAR DUCT
SCALE:NTS




J = 45°
L = 1/4 W, 4" MIN.
θ = 20° MAX.

**NOTES:**

1. TAKEOFF ON BOTH SIDES OR SINGLE SIDE AS REQUIRED BY PLANS.
2. SEE SMACNA MANUAL FOR TAP-IN DETAILS.
3. CLINCH LOCK CONNECTION TO DUCT SHALL HAVE CORNER SEALS. (SEE SMACNA MANUAL)
4. 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.

## D7 ROUND BRANCH DUCT TAKE-OFF
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL.
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

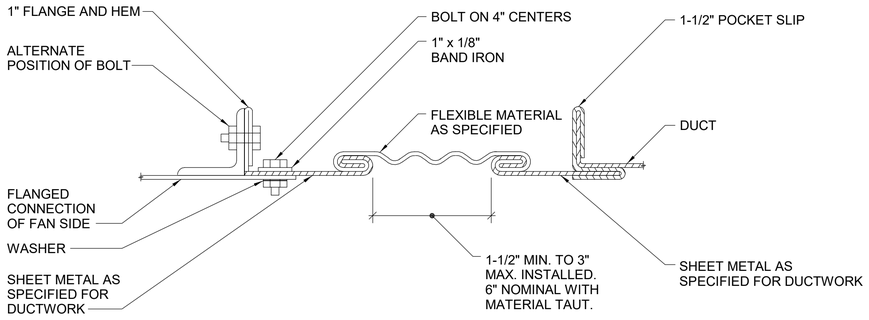
MECHANICAL DETAILS

SHEET ID
**M-502_5**

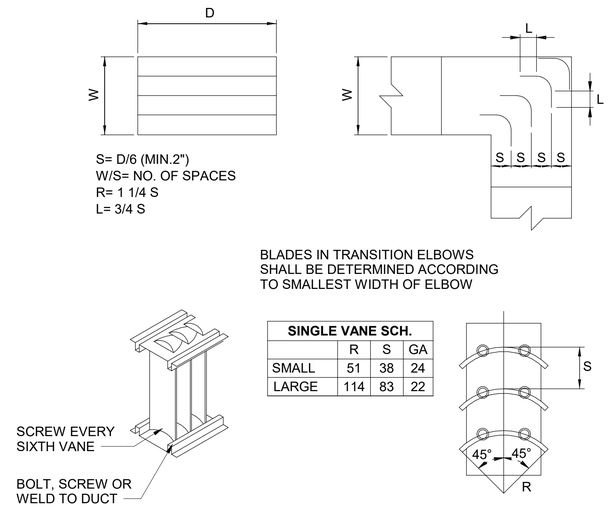
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION

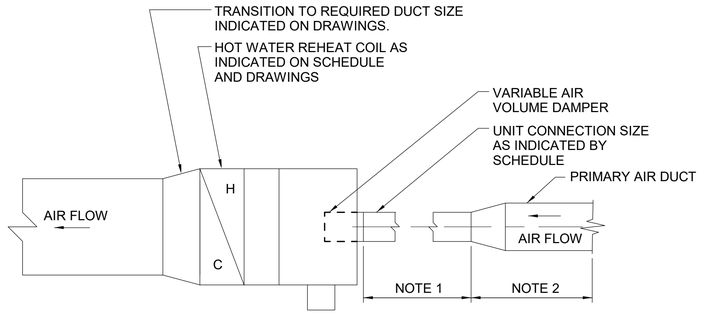



D4 RECTANGULAR FLEXIBLE CONNECTION
SCALE:NTS



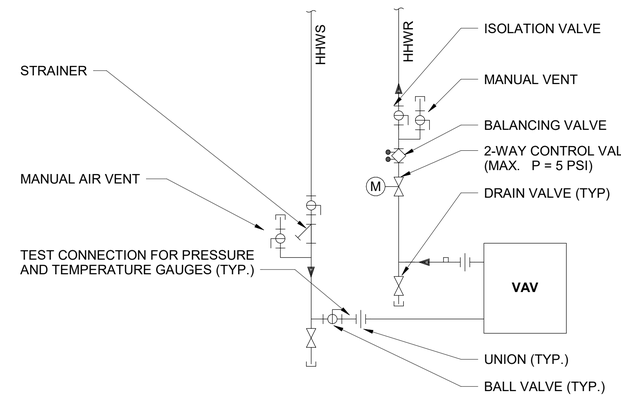

| SINGLE VANE SCH. | | | |
|---|---|---|---|
| | R | S | GA |
| SMALL | 51 | 38 | 24 |
| LARGE | 114 | 83 | 22 |

D7 RECTANGULAR DUCT ELBOW TURNING VANES
SCALE:NTS




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

A4 STANDARD SHUT-OFF VARIABLE AIR VOLUME TERMINAL UNIT DETAIL
SCALE:NTS




A7 VARIABLE AIR VOLUME BOX PIPING
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

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DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
CLOSE E. PETERSON
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

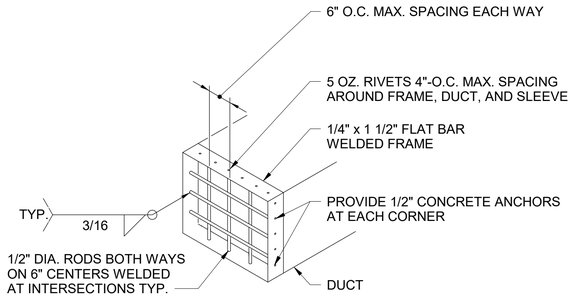
MECHANICAL DETAILS

SHEET ID
**M-503_5**

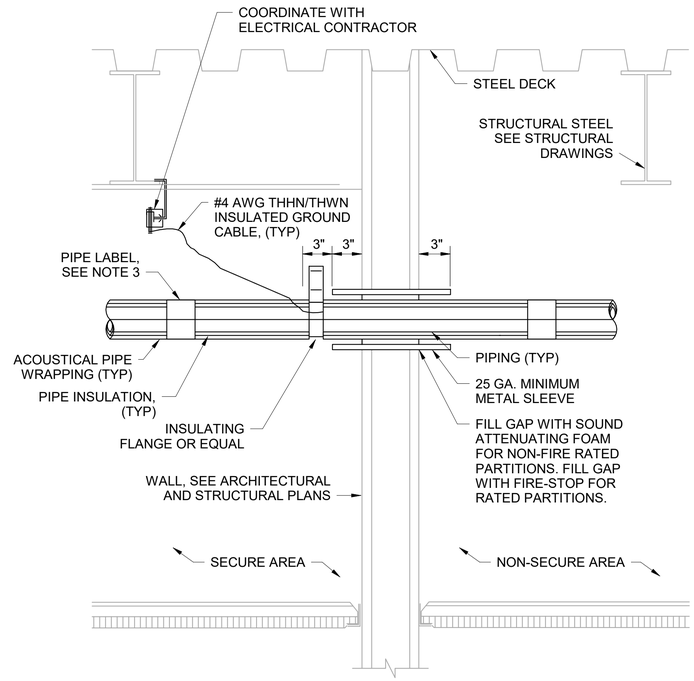
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION



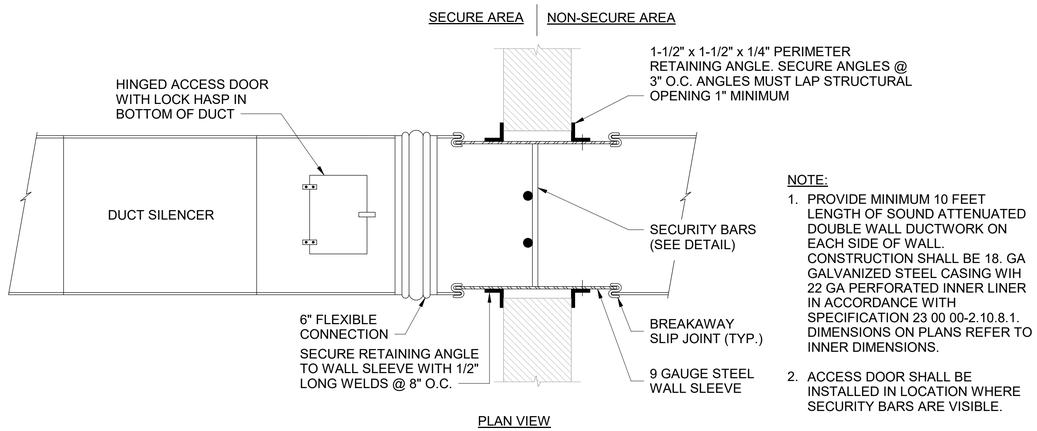

D1 DUCTWORK SECURITY MANBARS
SCALE:NTS




**NOTES:**

1. SECURED AREA REQUIRES THAT PENETRATIONS SUCH AS THE DETAIL SHOWN BE ACCESSIBLE FOR INSPECTION BY PROGRAM SECURITY. COORDINATE WITH CONTRACTING OFFICER DURING INSTALLATION OF PIPES CROSSING BETWEEN SECURED AREAS. GROUNDING CONNECTIONS MUST BE VISIBLE FROM BELOW FOR PHYSICAL SECURITY INSPECTIONS.
2. CONTRACTOR SHALL KEEP A LOG OF ALL PIPE PENETRATIONS INDICATING LOCATION, PURPOSE, AND INDICATION THAT THE INSTALLATION HAS BEEN COORDINATED WITH CONTRACTING OFFICER AND PROGRAM SECURITY.
3. LABEL SHALL BE PERMANENTLY AFFIXED WITHIN 2 FEET OF WALL. LABEL PIPE FUNCTION.
4. DO NOT MECHANICALLY TIE PIPE TO WALL CONSTRUCTION IN ANY WAY.
5. SPACE BETWEEN PIPE AND SLEEVE TO BE FREE OF FOREIGN MATERIAL.
6. PIPE SHALL NOT CONTACT SLEEVE AT ANY TIME. WEDGES SHALL NOT BE USED TO MAINTAIN PIPE POSITION.
7. PIPE MUST BE CENTERED IN WALL OPENING. PROVIDE ADDITIONAL CLEARANCE FOR POSITIONAL CHANGE OF PIPE DUE TO LOADING OF PIPE OR SYSTEM OPERATION.
8. INSULATION SHOULD BE CUT UP TO THE EDGE OF PIPE CLAMP TO ENSURE THAT GROUNDING IS PROPERLY CONNECTED.

C5 PIPE PENETRATION AT SECURE WALL
SCALE:NTS




NOTE:

1. PROVIDE MINIMUM 10 FEET LENGTH OF SOUND ATTENUATED DOUBLE WALL DUCTWORK ON EACH SIDE OF WALL. CONSTRUCTION SHALL BE 18. GA GALVANIZED STEEL CASING WIH 22 GA PERFORATED INNER LINER IN ACCORDANCE WITH SPECIFICATION 23 00 00-2.10.8.1. DIMENSIONS ON PLANS REFER TO INNER DIMENSIONS.
2. ACCESS DOOR SHALL BE INSTALLED IN LOCATION WHERE SECURITY BARS ARE VISIBLE.

A5 DUCT PENETRATION AT SECURE WALL WITH DUCT SILENCER
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

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DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G JOHNSON
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LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

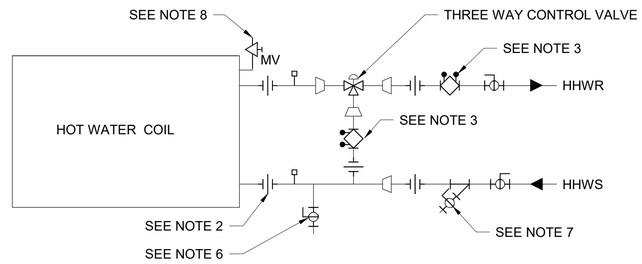
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL DETAILS

SHEET ID
**M-504_5**

CUI

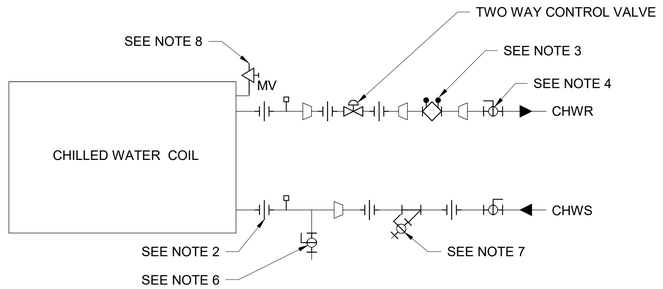
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000




NOTES:

1. INDIVIDUAL PIPE SIZES SHALL BE THE SAME SIZE AS THE COIL TAPS.
2. LOCATE FLANGES AND UNIONS TO ALLOW FOR REMOVAL OF ALL COILS AND CONTROL VALVES.
3. CONTROL VALVES AND BALANCING VALVES SHALL 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 SHALL BE PIPED FOR COUNTERFLOW ARRANGEMENT; I.E. HOTTEST WATER ENTERS COIL NEAREST COIL FACE WHERE HOTTEST AIR LEAVES.
6. PROVIDE 3/4" BALL OR GATE VALVE WITH 3/4" HOSE CONNECTION FOR DRAINING AND FLUSHING. ALL COIL DRAIN CONNECTIONS SHALL 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 OR GATE VALVE WITH 3/4" HOSE CONNECTION FOR FLUSHING. TYPICAL ALL STRAINERS.
8. VENTS SHALL BE INSTALLED THROUGH HVAC UNIT CASING TO PERMIT COMPLETE VENTING OF COILS FROM UNIT EXTERIOR. TYPICAL ALL VENT CONNECTIONS.

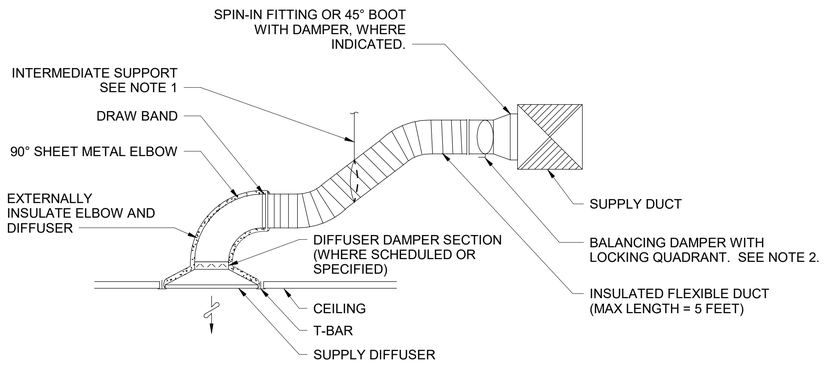
C3 HOT WATER, SINGLE COIL, 3-WAY CONTROL VALVE
SCALE:NTS




**NOTES:**

1. INDIVIDUAL PIPE SIZES SHALL BE THE SAME SIZE AS THE COIL TAPS.
2. LOCATE FLANGES AND UNIONS TO ALLOW FOR REMOVAL OF ALL COILS AND CONTROL VALVES.
3. CONTROL VALVES AND BALANCING VALVES SHALL 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 SHALL BE PIPED FOR COUNTERFLOW ARRANGEMENT; I.E. CHILLED WATER ENTERS COIL NEAREST COIL FACE WHERE COLDEST AIR LEAVES.
6. PROVIDE 3/4" BALL VALVE WITH 3/4" HOSE CONNECTION FOR DRAINING AND FLUSHING. ALL COIL DRAIN CONNECTIONS SHALL 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 SHALL BE INSTALLED THROUGH HVAC UNIT CASING TO PERMIT COMPLETE VENTING OF COILS FROM UNIT EXTERIOR. TYPICAL ALL VENT CONNECTIONS.

C7 CHILLED WATER, SINGLE COIL, 2-WAY CONTROL VALVE
SCALE:NTS




NOTES:

1. PROVIDE INTERMEDIATE SUPPORT, WHERE REQUIRED, TO PREVENT SAGGING AND KINKS AND TO KEEP FLEXIBLE DUCTWORK OFF SURROUNDING OBJECTS.
2. PROVIDE 2" DUCT EXTENSION TO ALLOW OPERATION OF DAMPER WITHOUT DAMAGE TO INSULATION.

A1 DUCT CONNECTION TO DIFFUSER
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
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MECHANICAL DETAILS

SHEET ID
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CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

**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 SUCH 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.

D1 PIPE SUPPORT SPACING
SCALE:NTS

**DUCTWORK CONSTRUCTION AND LEAKAGE TESTING TABLE**

| SYSTEM | DUCT PRESSURE CLASS INCHES OF WATER COLUMN: SUPPLY DUCT | RETURN DUCT | EXHAUST DUCT | OUTSIDE AIR DUCT | SUPPLY ROUND/OVAL: DUCT SEAL CLASS | DUCT LEAK CLASS | SUPPLY RECTANGULAR: DUCT SEAL CLASS | DUCT LEAK CLASS | EXHAUST/ RETURN/OUTSIDE AIR: DUCT SEAL CLASS | DUCT LEAK CLASS | DUCT TEST PRESSURE: INCHES OF WATER COLUMN | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AHU-5/RF-5 | 2 | - | - | - | A | 6 | A | 12 | - | - | 2.0 | 1 |
| | - | - | -1 | -1 | - | - | - | - | A | 24 | -1.0 | 1 |

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.

D4 DUCTWORK CONSTRUCTION AND LEAKAGE TESTING
SCALE:NTS

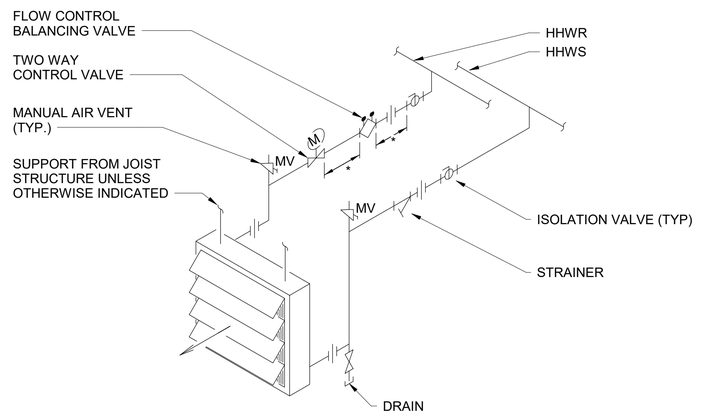
**MIN. ROD DIAMETER FOR SINGLE ROD HANGERS**

| 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:**

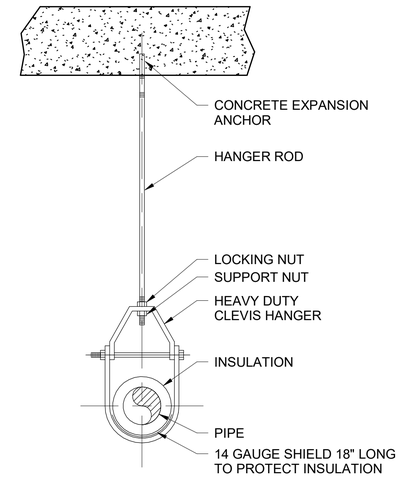
1. COLUMN A FOR USE WITH STD. WT. STEEL PIPE, CAST IRON PRESS. PIPE, CAST IRON SOIL PIPE AND GLASS PIPE.
2. COLUMN B FOR USE WITH COPPER TUBE, PLASTIC PIPE AND FIBERGLASS REINFORCED PIPE.
3. EXTRACTED FROM MSS SP-69, 1983, WITH PERMISSION OF THE PUBLISHER, THE MANUFACTURERS STANDARDIZATION SOCIETY.
4. 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




*THE FLOW CONTROL BALANCING VALVES SHALL BE INSTALLED BY THE CONTRACTOR IN CONFORMANCE WITH VALVE MFR'S RECOMMENDED SPACING UP/DOWNSTREAM FROM PIPE CHANGES IN DIRECTION AND/OR OTHER VALVES/COMPONENTS IN THE PIPING.

A4 UNIT HEATER - HOT WATER
SCALE:NTS




A8 CLEVIS HANGER
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPIETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
CORPS OF ENGINEERS BUILDING
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL DETAILS

SHEET ID
**M-506_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

## AIR HANDLING UNIT SCHEDULE (AHU)

| TAG | LOCATION | MINIMUM OUTDOOR AIRFLOW (CFM) | SF TOTAL AIRFLOW (CFM) | SUPPLY FANS (TYP 4) | | | | COOLING COIL | | | | | | | | | | | | | | HEATING COIL | | | | | | | | | | ELECTRICAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | CAPACITY | | AIR | | | | | | WATER | | | | | | | | AIR | | | WATER | | | | | | | | | |
| | | | | ESP (IN W.C.) | TSP (IN W.C.) | SPEED (RPM) | MOTOR (HP) | TOT (MBH) | SENS (MBH) | EAT DB (°F) | EAT WB (°F) | LAT DB (°F) | LAT WB (°F) | FACE VEL (FPM) | APD (IN W.C.) | FLUID TYPE | FLOW (GPM) | EWT (°F) | LWT (°F) | WPD (FT W.C.) | FOULING FACTOR | AIRFLOW (CFM) | CAPACITY (MBH) | EAT DB (°F) | LAT DB (°F) | FACE VEL (FPM) | FLUID TYPE | FLOW (GPM) | EWT (°F) | LWT (°F) | WPD (FT W.C.) | FOULING FACTOR | V / PH / HZ | DISCONN. BY | WEIGHT (LBS) | NOTES |
| AHU-5 | W299 | 6050 | 23500 | 2 | 4.62 | 2586 | 7.5 | 934 | 668 | 80.8 | 67.2 | 55 | 54.4 | 480 | 0.59 | WATER | 186 | 44 | 54 | 5.1 | 0.00010 | 12945 | 333 | 38.7 | 55 | 437 | WATER | 25 | 180 | 160 | 0.5 | 0.00025 | 460 / 3 / 60 | DIVISION 23 | 7575 | 1, 2, 3, 4, 5, 6, 7, 8 |

NOTES:
1. MOUNT UNIT ON EXISTING EQUIPMENT PAD. CONTRACTOR SHALL EXTEND EXISTING PAD WITH NEW WHERE REQUIRED TO ACCOMMODATE NEW AHU.
2. PROVIDE WITH 2" PLEATED MERV 8 PRE-FILTERS (30% EFF.) AND 4" MINI-PLEAT MERV 13 FINAL FILTERS (80-85% EFF.)
3. AIR HANDLING UNIT SHALL BE SHIPPED IN SECTIONS SIZED AS REQUIRED TO PASS THROUGH EXISTING MECHANICAL ROOM OPENINGS.
4. PROVIDE WITH MAINTENANCE LIGHTS AND 120V RECEPTACLES.
5. PROVIDE WITH FAN MOTOR VFDs PER DIVISION 26 SPECIFICATIONS.
6. PROVIDE WITH FACTORY MOUNTED AIR BLENDER SECTION AND COOLING COIL ULTRAVIOLET LIGHT SYSTEM.
7. HEATING WATER COIL SHALL BE PROVIDED WITH A VERTICAL INTEGRAL FACE AND BYPASS DAMPER WITH HEADER CONNECTIONS ON ACCESS SIDE OF AHU.
8. AHU DIMENSIONS SHALL NOT EXCEED 246"L x 112"W x 96"H. VERIFY EXISTING CONDITIONS PRIOR TO AHU PROCUREMENT.

## UNIT HEATER SCHEDULE (UH)

| TAG | LOCATION | ALTITUDE (FT) | ORIENTATION | MOUNTING HEIGHT (FT - IN) | AIRFLOW (CFM) | HEATING COIL | | | | | | | MOTOR SIZE (W) | ELECTRICAL | | | WEIGHT (LBS) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | WATERSIDE | | | | | | | | | | |
| | | | | | | CAPACITY (MBH) | TYPE | FLUID TYPE | FLOW (GPM) | EWT (DEG. F) | LWT (DEG. F) | PRESSURE DROP (FT W.C.) | | STARTER / DISCONNECT | VOLTS | PHASE | | |
| UH-1 | W299 | 823 | HORIZONTAL | 8'-6" | 580 | 23.3 | HOT WATER | WATER | 2.5 | 180 | 160 | 2.2 | 25 | DIVISION 23 | 115 | 1 | 25 | 1, 2, 3 |

NOTES:
1. CAPACITY HAS BEEN CORRECTED FOR WATER TEMPERATURES INDICATED.
2. PROVIDE WITH OSHA FAN GUARD.
3. PROVIDE WITH MANUFACTURERS WALL THERMOSTAT.

## DIFFUSER, REGISTER, & GRILLE SCHEDULE (DRG)

| TAG | DESCRIPTION | MOUNTING | THROW PATTERN | BLADE DEFLECTION | BLADE SPACING | NOTES |
|---|---|---|---|---|---|---|
| A | 24X24 SQUARE PLAQUE FACE SUPPLY AIR DIFFUSER | LAY-IN | 4-WAY | | | |
| B | ALUMINUM RECTANGULAR EGGCRATE RETURN/EXHAUST/TRANSFER AIR GRILLE | LAY-IN | - | - | 1/2" X 1/2" | |
| C | ALUMINUM RECTANGULAR EGGCRATE RETURN/EXHAUST/TRANSFER AIR GRILLE | SURFACE | - | - | 1/2" X 1/2" | |

## CONTROL VALVE SCHEDULE (CV)

| VALVE TAG | FLUID TYPE | SERVICE | FAIL POSITION | FLOW GPM | CALCULATED VALVE Cv | PIPE SIZE INCHES | DIFFERENTIAL PRESSURE PSI | REMARKS |
|---|---|---|---|---|---|---|---|---|
| CV-01 | HHW | VAV-05-01 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-02 | HHW | VAV-05-02 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-03 | HHW | VAV-05-03 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-04 | HHW | VAV-05-04 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-05 | HHW | VAV-05-05 | OPEN | 0.9 | 0.52 | 0.75 | 3.0 | 1 |
| CV-06 | HHW | VAV-05-06 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-07 | HHW | VAV-05-07 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-08 | HHW | VAV-05-08 | OPEN | 0.9 | 0.52 | 0.75 | 3.0 | 1 |
| CV-09 | HHW | VAV-05-09 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-10 | HHW | VAV-05-10 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-11 | HHW | VAV-05-11 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-12 | HHW | VAV-05-12 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-13 | HHW | VAV-05-13 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-14 | HHW | VAV-05-14 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-15 | HHW | VAV-05-15 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-16 | HHW | VAV-05-16 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-17 | HHW | VAV-05-17 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-18 | HHW | VAV-05-18 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-19 | HHW | VAV-05-19 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-20 | HHW | VAV-05-20 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-21 | HHW | VAV-05-21 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-22 | HHW | VAV-05-22 | OPEN | 0.9 | 0.52 | 0.75 | 3.0 | 1 |
| CV-23 | HHW | VAV-05-23 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-24 | HHW | VAV-05-24 | OPEN | 1.6 | 0.92 | 0.75 | 3.0 | 1 |
| CV-25 | HHW | VAV-05-25 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-26 | HHW | VAV-05-26 | OPEN | 1.1 | 0.64 | 0.75 | 3.0 | 1 |
| CV-27 | HHW | VAV-05-27 | OPEN | 0.4 | 0.23 | 0.75 | 3.0 | 1 |
| CV-28 | HHW | VAV-05-28 | OPEN | 1.0 | 0.58 | 0.75 | 3.0 | 1 |
| CV-29 | HHW | VAV-05-29 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-30 | HHW | VAV-05-30 | OPEN | 0.9 | 0.52 | 0.75 | 3.0 | 1 |
| CV-31 | HHW | VAV-05-31 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-32 | HHW | VAV-05-32 | OPEN | 0.6 | 0.35 | 0.75 | 3.0 | 1 |
| CV-33 | HHW | VAV-05-33 | OPEN | 1.6 | 0.92 | 0.75 | 3.0 | 1 |
| CV-34 | HHW | VAV-05-34 | OPEN | 1.6 | 0.92 | 0.75 | 3.0 | 1 |
| CV-35 | HHW | VAV-05-35 | OPEN | 0.3 | 0.17 | 0.75 | 3.0 | 1 |
| CV-36 | HHW | AHU-5 PREHEAT | OPEN | 25.0 | 14.43 | 2.0 | 3.0 | 1, 2 |
| CV-37 | CHW | AHU-5 COOLING | OPEN | 186.0 | 83.18 | 4 | 5.0 | 1 |

NOTES:
1. CONTROL VALVES SHALL BE ELECTRIC ACTUATED AND BE SIZED AND PROVIDED BY THE CONTROLS CONTRACTOR.
2. 3-WAY CONTROL VALVE.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

DATE | DESCRIPTION | MARK

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.A.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL SCHEDULES

SHEET ID
**M-601_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

## AHU-5 VENTILATION SCHEDULE

| ROOM NUMBER | ROOM TYPE | AREA (SF) | OCCUPANCY (PEOPLE) | REQUIRED OUTSIDE AIRFLOW (CFM) | NOTES |
|---|---|---|---|---|---|
| W201 | TOILET | 133 | 0 | 0 | NIC |
| W201A | VEST | 27 | 0 | 0 | NIC |
| W201B | VEST | 38 | 0 | 0 | NIC |
| W203 | COLLAB ROOM | 1841 | 13 | 220 | |
| W203A | BREAK | 264 | 4 | 65 | |
| W203C | OFFICE | 106 | 1 | 14 | |
| W203D | OFFICE | 210 | 1 | 22 | |
| W203E | CONF ROOM | 193 | 6 | 52 | |
| W204 | CONF ROOM | 397 | 20 | 155 | |
| W208 | CORRIDOR | 642 | 0 | 48 | |
| W209A | CONF ROOM | 108 | 4 | 34 | |
| W209B | CONF ROOM | 107 | 4 | 34 | |
| W209C | OFFICE | 130 | 1 | 16 | |
| W209D | OFFICE | 132 | 1 | 16 | |
| W209E | OFFICE | 132 | 1 | 16 | |
| W209F | OFFICE | 133 | 1 | 16 | |
| W209G | OFFICE | 135 | 1 | 16 | |
| W209H | OFFICE | 136 | 1 | 16 | |
| W210 | OFFICE | 179 | 2 | 26 | |
| W212 | OFFICE | 292 | 7 | 66 | |
| W219 | ELEC | 192 | 0 | 0 | NIC |
| W220 | OPEN OFFICE | 15045 | 151 | 2137 | |
| W220A | CONF ROOM | 221 | 9 | 74 | |
| W220D | CONF ROOM | 483 | 15 | 132 | |
| W221A | CONF ROOM | 102 | 4 | 33 | |
| W221B | CONF ROOM | 102 | 3 | 26 | |
| W221C | COLLAB ROOM | 164 | 6 | 50 | |
| W221D | CONF ROOM | 100 | 4 | 33 | |
| W221E | CONF ROOM | 100 | 3 | 26 | |
| W221F | COLLAB ROOM | 161 | 6 | 50 | |
| W225A | CORRIDOR | 66 | 0 | 0 | NIC |
| W225B | ELEC | 66 | 0 | 0 | NIC |
| W226 | VEST | 124 | 0 | 0 | NIC |
| W226A | TOILET | 124 | 0 | 0 | NIC |
| W253 | CORRIDOR | 976 | 0 | 73 | |
| W279 | CORRIDOR | 83 | 0 | 0 | NIC |
| W280 | CORRIDOR | 2269 | 0 | 173 | |
| W298 | OPEN OFFICE | 2192 | 17 | 275 | |
| W299 | MECHANICAL | 1508 | 0 | 0 | NIC |

*NIC INDICATES THE ROOM WAS NOT INCLUDED IN THE UPDATED VENTILATION CALCULATIONS

## VARIABLE AIR VOLUME BOX SCHEDULE (VAV)

| TAG | TERMINAL SPEC. TYPE | INLET SIZE (IN) | MAX DESIGN AIRFLOW (CFM) | MIN DESIGN AIRFLOW (CFM) | HOT WATER REHEAT COIL | | | | | | | AIR OPERATING PRESSURE DROP (IN) | MAX. WATER PRESSURE DROP (FT) | MIN. ROWS / MAX. FPI | MIN. BOX INLET PRESSURE (IN) | RADIATED SOUND (NC) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | HEATING AIRFLOW (CFM) | CAPACITY (MBH) | MINIMUM INLET AIR TEMP. (°F) | DISCHARGE AIR TEMP. (°F) | EWT (°F) | LWT (°F) | FLOW (GPM) | | | | | | |
| VAV-05-01 | SINGLE DUCT REHEAT | 8 | 600 | 400 | 400 | 7.3 | 55 | 72 | 180 | 135 | 0.30 | 0.12 | 0.10 | 1 / 10 | 0.75 | 20 | 3 |
| VAV-05-02 | SINGLE DUCT REHEAT | 12 | 1000 | 335 | 450 | 12.4 | 55 | 81 | 180 | 142 | 0.60 | 0.09 | 0.08 | 1 / 10 | 0.75 | 18 | 3 |
| VAV-05-03 | SINGLE DUCT REHEAT | 12 | 1000 | 335 | 450 | 12.4 | 55 | 81 | 180 | 142 | 0.60 | 0.09 | 0.08 | 1 / 10 | 0.75 | 18 | 3 |
| VAV-05-04 | SINGLE DUCT REHEAT | 12 | 1000 | 335 | 450 | 12.4 | 55 | 81 | 180 | 142 | 0.60 | 0.09 | 0.08 | 1 / 10 | 0.75 | 18 | 3 |
| VAV-05-05 | SINGLE DUCT REHEAT | 14 | 1200 | 400 | 600 | 17.7 | 55 | 83 | 180 | 159 | 0.90 | 0.06 | 0.07 | 1 / 10 | 0.75 | 16 | 3 |
| VAV-05-06 | SINGLE DUCT REHEAT | 12 | 1000 | 335 | 450 | 12.4 | 55 | 81 | 180 | 151 | 0.60 | 0.09 | 0.08 | 1 / 10 | 0.75 | 18 | 3 |
| VAV-05-07 | SINGLE DUCT REHEAT | 12 | 1000 | 335 | 450 | 12.4 | 55 | 81 | 180 | 148 | 0.60 | 0.09 | 0.08 | 1 / 10 | 0.75 | 18 | 3 |
| VAV-05-08 | SINGLE DUCT REHEAT | 14 | 1200 | 400 | 600 | 17.7 | 55 | 83 | 180 | 151 | 0.90 | 0.06 | 0.07 | 1 / 10 | 0.75 | 16 | 3 |
| VAV-05-09 | SINGLE DUCT REHEAT | 12 | 1000 | 335 | 450 | 12.4 | 55 | 81 | 180 | 148 | 0.60 | 0.09 | 0.08 | 1 / 10 | 0.15 | 18 | 3 |
| VAV-05-10 | SINGLE DUCT REHEAT | 12 | 1000 | 335 | 450 | 12.4 | 55 | 81 | 180 | 148 | 0.60 | 0.09 | 0.08 | 1 / 10 | 0.2 | 18 | 3 |
| VAV-05-11 | SINGLE DUCT REHEAT | 06 | 150 | 75 | 100 | 4 | 55 | 92 | 180 | 152 | 0.30 | 0.02 | 0.08 | 1 / 10 | 0.75 | - | 3 |
| VAV-05-12 | SINGLE DUCT REHEAT | 06 | 400 | 120 | 200 | 6 | 55 | 83 | 180 | 145 | 0.30 | 0.06 | 0.10 | 1 / 10 | 0.75 | 15 | 3 |
| VAV-05-13 | SINGLE DUCT REHEAT | 10 | 750 | 230 | 375 | 10 | 55 | 80 | 180 | 150 | 0.60 | 0.09 | 0.07 | 1 / 10 | 0.75 | 19 | 3 |
| VAV-05-14 | SINGLE DUCT REHEAT | 10 | 620 | 620 | 620 | 11.6 | 55 | 73 | 180 | 141 | 0.60 | 0.07 | 0.07 | 1 / 10 | 0.75 | 19 | 1, 3 |
| VAV-05-15 | SINGLE DUCT REHEAT | 10 | 715 | 220 | 350 | 9.8 | 55 | 81 | 180 | 150 | 0.60 | 0.09 | 0.07 | 1 / 10 | 0.75 | 19 | 3 |
| VAV-05-16 | SINGLE DUCT REHEAT | 10 | 750 | 230 | 375 | 10 | 55 | 80 | 180 | 150 | 0.60 | 0.09 | 0.07 | 1 / 10 | 0.75 | 19 | 3 |
| VAV-05-17 | SINGLE DUCT REHEAT | 04 | 100 | 50 | 75 | 3.6 | 55 | 99 | 180 | 141 | 0.30 | 0.01 | 0.08 | 1 / 10 | 0.75 | 11 | 3 |
| VAV-05-18 | SINGLE DUCT REHEAT | 06 | 200 | 75 | 100 | 4 | 55 | 92 | 180 | 151 | 0.30 | 0.03 | 0.08 | 1 / 10 | 0.75 | 11 | 3 |
| VAV-05-19 | SINGLE DUCT REHEAT | 06 | 330 | 165 | 165 | 4.9 | 55 | 83 | 180 | 139 | 0.30 | 0.07 | 0.08 | 1 / 10 | 0.75 | 18 | 3 |
| VAV-05-20 | SINGLE DUCT REHEAT | 08 | 540 | 165 | 270 | 6.6 | 55 | 78 | 180 | 152 | 0.30 | 0.10 | 0.10 | 1 / 10 | 0.75 | 19 | 3 |
| VAV-05-21 | SINGLE DUCT REHEAT | 08 | 420 | 150 | 200 | 6 | 55 | 83 | 180 | 145 | 0.30 | 0.07 | 0.10 | 1 / 10 | 0.75 | 17 | 3 |
| VAV-05-22 | SINGLE DUCT REHEAT | 12 | 690 | 210 | 400 | 14.1 | 55 | 88 | 180 | 135 | 0.90 | 0.05 | 0.15 | 1 / 10 | 0.75 | 15 | 3 |
| VAV-05-23 | SINGLE DUCT REHEAT | 06 | 300 | 140 | 240 | 5.5 | 55 | 76 | 180 | 137 | 0.30 | 0.06 | 0.08 | 1 / 10 | 0.75 | 16 | 3 |
| VAV-05-24 | SINGLE DUCT REHEAT | 10 | 825 | 275 | 425 | 14 | 55 | 86 | 180 | 167 | 1.50 | 0.11 | 0.25 | 1 / 10 | 0.75 | 20 | 3 |
| VAV-05-25 | SINGLE DUCT REHEAT | 08 | 420 | 130 | 210 | 6.1 | 55 | 82 | 180 | 153 | 0.30 | 0.07 | 0.10 | 1 / 10 | 0.75 | 17 | 3 |
| VAV-05-26 | SINGLE DUCT REHEAT | 08 | 785 | 240 | 400 | 11.2 | 55 | 81 | 180 | 144 | 1.10 | 0.18 | 0.62 | 1 / 10 | 0.75 | 23 | 3 |
| VAV-05-27 | SINGLE DUCT REHEAT | 08 | 540 | 540 | 540 | 9.4 | 55 | 71 | 180 | 132 | 0.40 | 0.10 | 0.17 | 1 / 10 | 0.75 | 19 | 1, 3 |
| VAV-05-28 | SINGLE DUCT REHEAT | 08 | 400 | 120 | 300 | 9.8 | 55 | 85 | 180 | 147 | 1.00 | 0.06 | 0.52 | 1 / 10 | 0.75 | 15 | 3 |
| VAV-05-29 | SINGLE DUCT REHEAT | 10 | 750 | 225 | 375 | 10 | 55 | 80 | 180 | 146 | 0.60 | 0.09 | 0.07 | 1 / 10 | 0.75 | 19 | 3 |
| VAV-05-30 | SINGLE DUCT REHEAT | 14 | 1200 | 400 | 600 | 17.7 | 55 | 83 | 180 | 143 | 0.90 | 0.06 | 0.07 | 1 / 10 | 0.75 | 16 | 3 |
| VAV-05-31 | SINGLE DUCT REHEAT | 12 | 1000 | 335 | 450 | 12.4 | 55 | 81 | 180 | 142 | 0.60 | 0.09 | 0.08 | 1 / 10 | 0.75 | 18 | 3 |
| VAV-05-32 | SINGLE DUCT REHEAT | 12 | 1000 | 335 | 450 | 12.4 | 55 | 81 | 180 | 142 | 0.60 | 0.09 | 0.08 | 1 / 10 | 0.75 | 18 | 3 |
| VAV-05-33 | SINGLE DUCT REHEAT | 12 | 800 | 240 | 400 | 15.9 | 55 | 92 | 180 | 138 | 1.60 | 0.06 | 0.33 | 1 / 10 | 0.75 | 17 | 3 |
| VAV-05-34 | SINGLE DUCT REHEAT | 12 | 800 | 240 | 400 | 15.9 | 55 | 92 | 180 | 138 | 1.60 | 0.06 | 0.33 | 1 / 10 | 0.75 | 17 | 3 |
| VAV-05-35 | SINGLE DUCT REHEAT | 06 | 350 | 175 | 175 | 5 | 55 | 82 | 180 | 139 | 0.30 | 0.08 | 0.08 | 1 / 10 | 0.75 | 20 | 3 |
| VAV-05-36 | SINGLE DUCT REHEAT | 06 | 465 | 0 | 0 | 0 | 55 | 55 | 180 | 160 | 0.00 | 0.00 | 0.00 | 0 | 0.75 | 25 | 2, 3 |

NOTES:
1. CONSTANT VOLUME BOXES SERVING CORRIDORS FOR EXHAUST AIR MAKEUP AND BUILDING PRESSURIZATION.
2. COOLING ONLY. NO REHEAT COIL.
3. PROVIDE 24V CONTROL TRANSFORMER AND FACTORY DISCONNECT SWITCH.

## FAN SCHEDULE (F)

| TAG | LOCATION | SERVING | TYPE | AIRFLOW (CFM) | ESP (IN W.C.) | DRIVE TYPE | FAN SPEED (RPM) | TIP SPEED (FPM) | MOTOR | | | ELECTRICAL | | | | WEIGHT (LBS) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | HP | SPEED (RPM) | ENCLOSURE | VOLTS | PHASE | HERTZ | DISCONNECT BY | | |
| RF-5 | W299 | AHU-05 RETURN | TUBULAR INLINE CENTRIFUGAL | 23500 | 2 | BELT | 992 | 9479 | 15 | 1800 | TEFC | 460 | 3 | 60 | DIVISION 26 | 1653 | 1, 2, 3 |

NOTES:
1. SUPPORT FAN WITH VIBRATION ISOLATION SPRING HANGERS.
2. ARRANGE MOTOR ON FAN WHERE ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE WITH VFD COMPATIBLE MOTOR. REFER TO DIVISION 26 FOR VFD SPECIFICATIONS.

## SOUND TRAP SCHEDULE (ST)

| | SERVING | LOCATION | TYPE | AIRFLOW (CFM) | VELOCITY (FPM) | SIZE (W" X H" X L") | APD (IN) | INSERTION LOSS (dB) | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz | 8000 Hz | |
| ST-05-01 | AHU-05 SUPPLY | W209 | RECTANGULAR DISSIPATIVE | 23500 | 1567 | 60 X 36 X 60 | 0.13 | 4 | 8 | 17 | 19 | 18 | 10 | 10 | 8 | |
| ST-05-02 | AHU-05 RETURN | W209 | RECTANGULAR DISSIPATIVE | 13765 | 1502 | 44 X 30 X 60 | 0.12 | 3 | 7 | 15 | 28 | 24 | 12 | 9 | 6 | |
| ST-05-03 | AHU-05 RETURN | W220 | RECTANGULAR DISSIPATIVE | 8575 | 1319 | 52 X 18 X 60 | 0.09 | 4 | 8 | 17 | 26 | 20 | 11 | 9 | 7 | 1 |

NOTES:
1. ELBOW-STYLE SOUND TRAP IS AN ACCEPTABLE ALTERNATIVE CONFIGURATION IF IT COMPLIES WITH SECURITY PENETRATION INSTALLATION REQUIREMENTS.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPIETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL SCHEDULES

SHEET ID

**M-602_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction



CUI

# 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
DIR
REV
DDC
##

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 L P

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

HC — COIL, HEAT/COOL (DUAL TEMPERATURE)

H — COIL, HEATING

PC — COIL, PRECOOL

PH — COIL, PREHEAT

U V — ULTRAVIOLET GERMICIDAL IRRADIATION (UVGI)

FAN

FILTER

HUMIDIFIER

DAMPER, BALANCING

DAMPER, PARALLEL BLADE
NORMALLY OPEN OR CLOSED AS SHOWN

DAMPER, OPPOSED BLADE
NORMALLY OPEN OR CLOSED AS SHOWN

RADIATOR

BOILER

CHILLER

SHELL AND TUBE
HEAT EXCHANGER

PLATE AND FRAME
HEAT EXCHANGER

PUMP

ACTUATOR, ELECTRIC

THERMOWELL IN PIPE

VALVE, BALANCING

V-##
NC/NO

VALVE, WITH SPRING FAILSAFE
NO = NORMALLY OPEN
NC = NORMALLY CLOSED
## = VALVE NUMBER AS SHOWN
IN VALVE SCHEDULE

V-##
FL

VALVE
FL = FAIL IN LAST POSITION
## = VALVE NUMBER AS SHOWN
IN VALVE SCHEDULE

V-##
COM
NO
NC

VALVE, 3-WAY DIVERTING
WITH SPRING FAILSAFE
NO = NORMALLY OPEN
NC = NORMALLY CLOSED
COM = COMMON PORT
## = VALVE NUMBER AS SHOWN
IN VALVE SCHEDULE

V-##
NO
COM
NC

VALVE, 3-WAY DIVERTING
WITH SPRING RETURN FAILSAFE
NO = NORMALLY OPEN
NC = NORMALLY CLOSED
COM = COMMON PORT
## = VALVE NUMBER AS SHOWN
IN VALVE SCHEDULE

PP

POSITIVE POSITIONER
SEE "ACTUATOR, PNEUMATIC"

P

PRESSURE GAGE

T

TEMPERATURE GAGE

MAIN AIR

MAIN AIR

M#

MOTOR

MS-#

MOTOR STARTER

CT

CURRENT TRANSFORMER/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) |
| ADJ | ADJUSTABLE/ADJUSTMENT |
| AFMA | AIRFLOW MEASUREMENT ARRAY |
| AI | ANALOG INPUT |
| ALM | ALARM |
| AO | ANALOG OUTPUT |
| BA | BREATHING AIR |
| BI | BINARY INPUT |
| BLDG | BUILDING |
| BLR | BOILER |
| BO | BINARY OUTPUT |
| BUT | BUTTON |
| BYP | BYPASS |
| C | COMMAND (MODULATING CONTROL SIGNAL) |
| CA | COMPRESSED AIR |
| CD | COLD DECK |
| CF | CONDENSER FAN |
| CH | CHILLER |
| CHW | CHILLED WATER |
| CHS | CHILLED WATER SUPPLY |
| CHR | CHILLED WATER RETURN |
| CLG | COOLING |
| CO | CARBON MONOXIDE |
| CO2 | CARBON DIOXIDE |
| COM | COMMON |
| COMP | COMPRESSOR |
| CP | CONFIGURATION PROPERTY |
| CR | CONDENSATE WATER RETURN |
| CS | CONDENSATE WATER SUPPLY |
| CSR | CURRENT SENSING RELAY |
| CT | COOLING TOWER |
| CT | CURRENT TRANSFORMER/SWITCH |
| CTF | COOLING TOWER FAN |
| CWR | CONDENSER WATER RETURN |
| CWS | CONDENSER WATER SUPPLY |
| CW | CONDENSER WATER |
| D | DAMPER |
| DA | DISCHARGE AIR |
| DB | DEADBAND |
| DDC | DIRECT DIGITAL CONTROL(LER) |
| DIFF | DIFFERENCE |
| DIR | DIRECT (CONTROL ACTION) |
| DIS | DISABLE |
| DISP | DISPLAY |
| DP | DEW POINT |
| DPT | DIFFERENTIAL PRESSURE TRANSMITTER |
| DT | DUAL TEMP |
| DTWR | DUAL TEMP WATER RETURN |
| DTWS | DUAL TEMP WATER SUPPLY |
| DX | DIRECT EXPANSION (UNIT) |
| EA | EXHAUST AIR |
| ECM | ELECTRICALLY COMMUTATED MOTOR |
| ECO | ECONOMIZER |
| EF | EXHAUST FAN |
| ENA | ENABLE |
| EP | ELECTRIC TO PNEUMATIC TRANSDUCER |
| EPS | ELECTRIC TO PNEUMATIC SWITCH |
| ESS | EMERGENCY SHUT-DOWN SWITCH |
| F | FLOW |
| FACP | FIRE ALARM CONTROL PANEL |
| FL | FAIL IN LAST POSITION |
| FLT | FILTER |
| H2 | HYDROGEN |
| HD | HOT DECK |
| HL | HIGH LIMIT |
| HTG | HEATING |
| HTHW | HIGH TEMPERATURE HOT WATER |
| HUM | HUMIDIFIER |
| HW | HOT WATER |
| HWR | HOT WATER RETURN |
| HWS | HOT WATER SUPPLY |
| HX | HEAT EXCHANGER |
| I/O | INPUT/OUTPUT |
| IR | INFRARED |
| IW | INDUSTRIAL WASTE |
| L | LEVEL |
| LDP | LOCAL DISPLAY PANEL |
| LL | LOW LIMIT |
| LVG | LEAVING |
| M | MOTOR or MAIN |
| M&C | MONITORING & CONTROL (SOFTWARE) |
| MA | MIXED AIR |
| MINOA | MINIMUM OUTSIDE AIR |
| MS | MOTOR STARTER |
| MUW | MAKE-UP WATER |
| MUW | MAKE-UP WATER |
| N/A | NOT APPLICABLE |
| NC | NORMALLY CLOSED |
| nci | NETWORK CONFIGURATION INPUT |
| NO | NORMALLY OPEN |
| NVI | NETWORK VARIABLE INPUT |
| NVO | NETWORK VARIABLE OUTPUT |
| OA | OUTSIDE AIR |
| OAF | OUTSIDE AIR FAN |
| OCC | OCCUPIED |
| ODT | ON DELAY TIMER |
| OL | OVERLOAD |
| OVRD | OVERRIDE |
| OWS | OPERATOR WORKSTATION |
| P | PRESSURE |
| PC | PRE-COOLING |
| PCW | PRIMARY CHILLER WATER |
| PCWR | PRIMARY CHILLER WATER RETURN |
| PCWS | PRIMARY CHILLER WATER SUPPLY |
| PH | PREHEAT |
| PHW | PROCESS HOT WATER |
| PHWR | PROCESS HOT WATER RETURN |
| PHWS | PROCESS HOT WATER SUPPLY |
| PID | PROPORTIONAL INTEGRAL DERIVATIVE (CONTROL) |
| PMP | PUMP |
| PP | POSITIVE POSITIONER |
| PWR | POWER |
| R | RELAY |
| RA | RETURN AIR |
| RE | RELIEF AIR |
| REV | REVERSE (CONTROL ACTION) |
| REF | RELIEF FAN |
| RF | RETURN FAN |
| RH | RELATIVE HUMIDITY |
| RH | REHEAT |
| RHT | RELATIVE HUMIDITY TRANSMITTER |
| RLA | RELIEF AIR |
| RM | ROOM |
| RQST | REQUEST |
| RST | RESET |
| RT | RATE |
| S | STATUS |
| SA | SUPPLY AIR |
| SEC | SECONDARY |
| SF | SUPPLY FAN |
| SMK | SMOKE |
| SNVT | STANDARD NETWORK VARIABLE TYPE |
| SO | SHUT-OFF |
| SP | SETPOINT |
| SS | START/STOP COMMAND |
| STAT | THERMOSTAT |
| STM | STEAM |
| SYS | SYSTEM |
| SCHD | SCHEDULER |
| T | TEMPERATURE |
| TT | TEMPERATURE TRANSMITTER |
| TAP | TAP, PRESSURE |
| TRB | TROUBLE |
| TSTAT | THERMOSTAT |
| UNOCC | UNOCCUPIED |
| V | VALVE |
| VAV | VARIABLE AIR VOLUME |
| VFD | VARIABLE FREQUENCY DRIVE |
| VIB | VIBRATION |
| VOC | VOLATILE ORGANIC COMPOUND |
| WB | WET BULB (TEMPERATURE) |
| XFMR | TRANSFORMER |
| ZN | ZONE |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

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|---|---|---|
| | | |

ISSUE DATE: 02-16-23
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CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

CONTROLS SYMBOLS & ABBREVIATIONS

SHEET ID

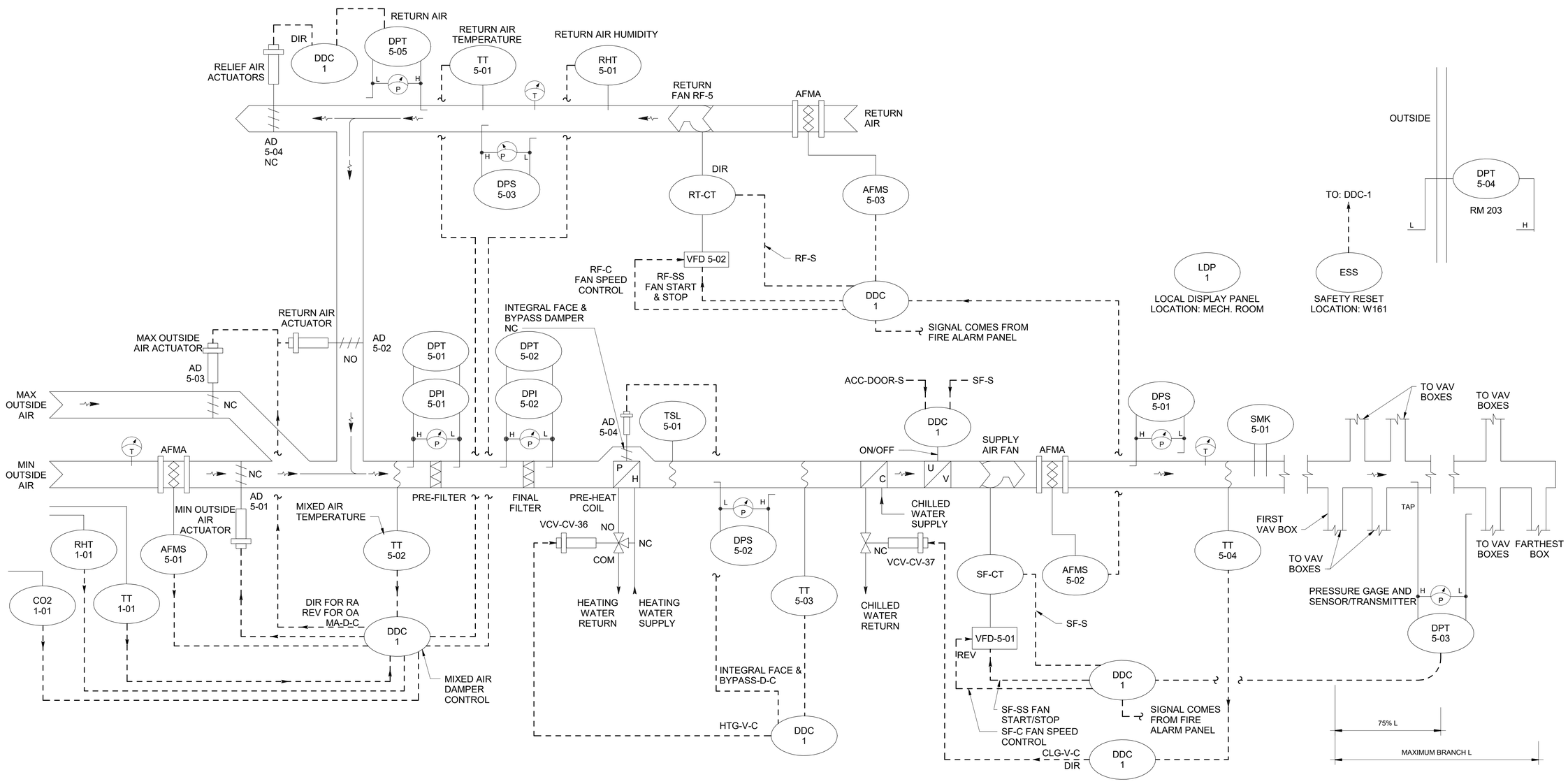
**M-700_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




A1 AIR HANDLING UNIT AND RETURN FAN CONTROLS SCHEMATIC
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

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US ARMY CORPS OF ENGINEERS
CECW-CE-L LUTHER KING JR. PL
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL CONTROLS

SHEET ID
M-701_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

**SEQUENCE OF OPERATION**
**VARIABLE AIR VOLUME (VAV) AHU WITH RETURN FAN AND AIR-SIDE ECONOMIZER**

GENERAL: THE HVAC SYSTEM SHALL HAVE THE FOLLOWING MODES OF OPERATION: OFF, UNOCCUPIED, UNOCCUPIED/OFF COIL PROTECTION, COOL-DOWN, WARM-UP, AIR-SIDE ECONOMIZER, AND OCCUPIED. COOL-DOWN AND WARM-UP MODE ARE INITIATED AT LEAST 1-HOUR BEFORE SCHEDULED OCCUPIED MODE. THE SYSTEM SHALL OBTAIN ITS OCCUPANCY MODE INPUT FROM THE SYTEM SCHEDULER AS SPECIFIED AND SHOWN. THE SCHEDULE SHALL BE IDENTIFIED BY OWNER DURING COMMISSIONING.

CONTRACTOR SHALL INSTALL DDC HARDWARE TO PERFORM THIS SEQUENCE OF OPERATION AND TO PROVIDE INPUTS, OUTPUTS AND ALARMS AS SPECIFIED AND SHOWN ON THE POINTS SCHEDULE. UNLESS OTHERWISE SPECIFIED, ALL MODULATING CONTROL SHALL BE PROPORTIONAL-INTEGRAL (PI) CONTROL.

**SYSTEM ENABLE AND LOOP ENABLE:**

OCCUPIED MODE: THE SUPPLY FAN SHALL BE ENABLED (SYS-ENA) AND COMMANDED TO RUN (SF-SS). ALL CONTROL LOOPS SHALL BE ENABLED.

UNOCCUPIED MODE: WHEN ALL SPACE TEMPERATURES ARE WITHIN THE UNOCCUPIED TEMPERATURE SETPOINT RANGES, ALL CONTROL LOOPS SHALL BE DISABLED AND THE SUPPLY FAN SHALL NOT RUN. WHEN ANY SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED TEMPERATURE SETPOINT (MINUS 3 DEG F (ADJ)) OR WHEN ANY SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED TEMPERATURE SETPOINT (PLUS 3 DEG F (ADJ)), THE SUPPLY FAN SHALL BE ENABLED (SYS-ENA) AND COMMANDED TO RUN (SF-SS), THE SUPPLY DUCT STATIC PRESSURE CONTROL, RETURN FAN VOLUME CONTROL, PREHEAT CONTROL, COOLING COIL CONTROL, MINIMUM OUTSIDE AIR CONTROL AND AIR-SIDE ECONOMIZER CONTROL LOOPS SHALL BE ENABLED.

WARM UP/COOL DOWN: THE SUPPLY FAN SHALL BE ENABLED (SYS-ENA) AND COMMANDED TO RUN (SF-SS). THE MINIMUM OUTSIDE AIR FLOW CONTROL LOOP SHALL BE DISABLED AND ALL OTHER CONTROL LOOPS SHALL BE ENABLED. THE ZONE TEMPERATURE CONTROL LOOPS FOR VAV BOXES SERVICED BY THE AHU SHALL ALSO BE ENABLED.

HAND-OFF-AUTO SWITCHES: SUPPLY FANS VARIABLE FREQUENCY DRIVE (VFD) UNIT SHALL ACCEPT A FIRE ALARM PANEL (FAP) SIGNAL THAT TAKES PRECEDENCE OVER ALL OTHER VFD INPUTS AND SWITCHES AND SHALL CAUSE THE VFD TO STOP. THE VFD SHALL ACCEPT AN OCCUPANT ACCESSIBLE EMERGENCY SHUTOFF SWITCH AS SHOWN. THE SUPPLY FAN VARIABLE FREQUENCY DRIVE (VFD) UNIT SHALL HAVE AN INTEGRAL H-O-A SWITCH:

HAND: WITH THE H-O-A SWITCH IN HAND POSITION, THE SUPPLY FAN SHALL START AND RUN CONTINUOUSLY, UNLESS ANY SAFETIES ARE TRIPPED. FAN SPEED SHALL BE UNDER MANUAL-OPERATOR CONTROL. MIN OA DAMPER SHALL BE OPEN, MAX OA DAMPER SHALL BE CLOSED, AND RA DAMPER SHALL BE OPEN.

OFF: WITH THE H-O-A SWITCH IN OFF POSITION, THE SUPPLY FAN SHALL STOP. MIN OA DAMPER AND MAX OA DAMPER SHALL BE CLOSED, AND RA DAMPER SHALL BE OPEN.

AUTO: WITH THE H-O-A SWITCH IN AUTO POSITION, THE SUPPLY FAN SHALL RUN SUBJECT TO THE SUPPLY FAN START/STOP SIGNAL (SF-SS) AND SAFETIES. FAN SPEED, MIN OA DAMPER, MAX OA DAMPER, AND RA DAMPER SHALL BE UNDER CONTROL OF THE DDC HARDWARE.

RETURN FANS VARIABLE FREQUENCY DRIVE (VFD) UNIT SHALL ACCEPT A FIRE ALARM PANEL (FAP) SIGNAL THAT TAKES PRECEDENCE OVER ALL OTHER VFD INPUTS AND SWITCHES AND SHALL CAUSE THE VFD TO STOP. THE RETURN FAN VARIABLE FREQUENCY DRIVE (VFD) UNIT SHALL HAVE AN INTEGRAL H-O-A SWITCH:

HAND: WITH THE H-O-A SWITCH IN HAND POSITION, THE RETURN FAN SHALL RUN UNLESS ANY SAFETIES ARE TRIPPED. FAN SPEED SHALL BE UNDER MANUAL-OPERATOR CONTROL.

OFF: WITH THE H-O-A SWITCH IN OFF POSITION, THE RETURN FAN SHALL BE OFF.

AUTO: WITH THE H-O-A SWITCH IN AUTO POSITION, THE RETURN FAN SHALL RUN SUBJECT TO THE SUPPLY FAN RUNNING. FAN SPEED SHALL BE UNDER CONTROL OF THE DDC HARDWARE.

**OFF MODE:**
OFF MODE SHALL BE INITIATED MANUALLY IN THE BAS OR BY ALARM. AHU SHALL REMAIN IN OFF MODE UNTIL MANUALLY SWITCHED OUT OF OFF MODE IN THE BAS.

THE AHU SA FANS AND THE RA FANS SHALL BE OFF. MIN OA DAMPER SHALL BE CLOSED. MAX OA DAMPER SHALL BE CLOSED. RA DAMPER SHALL BE OPEN. CHILLED WATER VALVE SHALL BE CLOSED. HEATING HOT WATER VALVE SHALL BE CLOSED. FACE AND BYPASS DAMPERS SHALL BE OPEN TO THE HEATING COIL. RELIEF AIR DAMPERS SHALL BE CLOSED.

SPACE VAV BOXES PRIMARY AIR DAMPER SHALL BE AT MINIMUM POSITION AND RE-HEAT HOT WATER VALVE SHALL BE CLOSED.

**UNOCCUPIED MODE:**
UNOCCUPIED MODE SHALL BE INITIATED BY THE BAS SYSTEM BASED ON PROGRAMMED OCCUPANCY SCHEDULE.

THE AHU SA FANS AND THE RA FANS SHALL BE OFF. MIN OA DAMPER SHALL BE CLOSED. MAX OA DAMPER SHALL BE CLOSED. RA DAMPER SHALL BE OPEN. CHILLED WATER VALVE SHALL BE CLOSED. HEATING HOT WATER VALVE SHALL BE CLOSED. FACE AND BYPASS DAMPERS SHALL BE OPEN TO THE HEATING COIL. RELIEF DAMPERS SHALL BE CLOSED.

SPACE VAV BOXES PRIMARY AIR DAMPER SHALL BE AT MINIMUM POSITION AND RE-HEAT HOT WATER VALVE SHALL BE CLOSED.

IF ANY THREE SPACE TEMPERATURES FALL BELOW THE UNOCCUPIED TEMPERATURE SETPOINT MINUS 3 DEG F (ADJ), THE AHU SA FANS AND RETURN FANS SHALL ENERGIZE AND THE FAN SPEED SHALL BE CONTROLLED AS DESCRIBED IN THE "OCCUPIED" MODE. THE MIN OA DAMPER AND THE MAX OA DAMPER SHALL REMAIN CLOSED AND THE RA DAMPER SHALL REMAIN OPEN. THE AIR-SIDE ECONOMIZER MODE SHALL BE DISABLED. THE HEATING HOT WATER VALVE SHALL OPEN AND THE FACE AND BYPASS DAMPERS SHALL MODULATE TO MAINTAIN AHU LEAVING AIR TEMPERATURE SETPOINT OF 65 DEG F (ADJ). THE CHILLED WATER VALVE SHALL BE CLOSED. THE VAV BOXES DAMPER AND HEATING HOT WATER VALVE SHALL MODULATE TO MAINTAIN UNOCCUPIED SPACE TEMPERATURE SETPOINT. ONCE SPACE TEMPERATURE IS SATISFIED, AHU AND VAV BOXES SHALL RETURN TO UNOCCUPIED MODE.

IF ANY THREE SPACE TEMPERATURES RISE ABOVE UNOCCUPIED TEMPERATURE PLUS 3 DEG F (ADJ), THE AHU SA FANS AND RA FANS SHALL ENERGIZE AND FAN SPEED SHALL BE CONTROLLED AS DESCRIBED IN THE "OCCUPIED" MODE. THE MIN OA DAMPER SHALL BE CLOSED AND THE RA DAMPER SHALL REMAIN OPEN. THE AIR-SIDE ECONOMIZER MODE SHALL BE CONTROLLED AS INDICATED BELOW WITH MIN OA SETPOINT BEING 0 CFM (ADJ). THE RELIEF AIR DAMPER SHALL OPEN ONLY IF THE ECONOMIZER MODE ACTIVATES. THE HEATING HOT WATER VALVE SHALL BE CLOSED AND INTEGRAL FACE AND BYPASS DAMPERS SHALL BE BYPASSING HEATING COIL. THE CHILLED WATER VALVE SHALL MODULATE TO MAINTAIN AHU LEAVING AIR TEMPERATURE OF 55 DEG F (ADJ). THE VAV BOXES DAMPER SHALL MODULATE TO MAINTAIN UNOCCUPIED SPACE TEMPERATURE SETPOINT. ONCE SPACE TEMPERATURE IS SATISFIED, AHU AND VAV BOXES SHALL RETURN TO UNOCCUPIED MODE.

**UNOCCUPIED/OFF COIL PROTECTION MODE:**
WHEN THE SUPPLY FAN IS DE-ENERGIZED AND THE OUTSIDE AIR IS BELOW THE OUTSIDE AIR LOW TEMPERATURE PROTECTION SETPOINT OF 35 DEG F (ADJ), THEN THE FACE AND BYPASS DAMPERS SHALL BE OPEN TO THE HEATING COIL, THE HEATING HOT WATER VALVE SHALL CYCLE TO MAINTAIN MIXED AIR TEMPERATURE OF 55 DEG F (ADJ) AND THE CHILLED WATER VALVE SHALL BE CLOSED AND AN ALARM WILL BE SENT. MIN OA DAMPER AND MAX OA DAMPER SHALL BE CLOSED. THE RA DAMPER SHALL BE OPEN. RELIEF AIR DAMPER SHALL BE CLOSED.

WHEN THE OUTSIDE AIR DROPS BELOW 10 DEG F (ADJ), THEN THE FACE AND BYPASS DAMPERS SHALL BE OPEN TO THE HEATING COIL, THE HEATING HOT WATER VALVE SHALL BE FULLY OPEN AND THE FACE AND BYPASS DAMPERS SHALL MODULATE TO MAINTAIN MIXED AIR TEMPERATURE OF 55 DEG F (ADJ).

WHEN THE OUTSIDE AIR TEMPERATURE IS MORE THAN 5 DEG F (ADJ) ABOVE THE OUTSIDE AIR LOW TEMPERATURE PROTECTION SETPOINT, OR THE MIXED AIR TEMPERATURE IS GREATER THAN 5 DEG F (ADJ) ABOVE THE MIXED AIR LOW TEMPERATURE PROTECTION SETPOINT FOR AT LEAST 30 MINUTES (ADJ), THEN THE HEATING HOT WATER VALVE AND THE CHILLED WATER VALVE SHALL BE CLOSED. THE MIN OA DAMPER AND MAX OA DAMPER SHALL BE CLOSED. THE RA DAMPER SHALL BE OPEN. THE RELIEF AIR DAMPER SHALL BE CLOSED.

**FREEZESTAT SECTION:**
IF THE MIXED AIR TEMPERATURE DROPS BELOW THE FREEZESTAT SET POINT, THE UNIT SHALL GO INTO OFF MODE AND AN ALARM SHALL BE SENT TO THE DDC SYSTEM.

**COOL-DOWN MODE:**
OPTIMUM START PROGRAM SHALL START THE UNIT AT THE LATEST POSSIBLE TIME (MINIMUM 1 HOUR (ADJ)) PRIOR TO OCCUPANCY TO REACH THE OCCUPIED SPACE TEMPERATURE. IF THE AVERAGE SPACE TEMPERATURE IS ABOVE THE OCCUPIED SPACE TEMPERATURE COOLING SETPOINT, COOL-DOWN MODE WILL INITIATE.

AHU SUPPLY AND RETURN FANS SHALL ENERGIZE, AND THE FAN SPEEDS SHALL BE CONTROLLED AS DESCRIBED IN THE "OCCUPIED" MODE. RETURN AIR DAMPER SHALL BE OPEN. THE HEATING HOT WATER VALVE SHALL BE CLOSED AND INTEGRAL FACE AND BYPASS DAMPERS SHALL BE BYPASSING THE HEATING COIL. THE CHILLED WATER VALVE SHALL MODULATE TO MAINTAIN AHU LEAVING AIR TEMPERATURE OF 55 DEG F (ADJ).

OA CONTROL:
THE MIN OA DAMPER SHALL BE CLOSED. THE "AIR-SIDE ECONOMIZER" MODE SHALL BE CONTROLLED AS INDICATED BELOW WITH MINIMUM OA SETPOINT BEING 0 CFM (ADJ). RELIEF AIR DAMPER AND MAX OA DAMPER SHALL ONLY OPEN IF THE AIR-SIDE ECONOMIZER SEQUENCE ACTIVATES.

VAV BOXES DAMPER SHALL MODULATE FROM MINIMUM TO MAXIMUM AIRFLOW SETPOINTS TO MAINTAIN SPACE TEMPERATURE.

COOL-DOWN MODE SHALL CONTINUE UNTIL ALL SPACES HAVE REACHED COOLING SETPOINT OR OCCUPIED SCHEDULE HAS BEGUN.

**WARM-UP MODE:**
OPTIMUM START PROGRAM SHALL START THE UNIT AT THE LATEST POSSIBLE TIME (MINIMUM 1 HOUR (ADJ)) PRIOR TO OCCUPANCY TO REACH THE OCCUPIED SPACE TEMPERATURE. IF THE AVERAGE SPACE TEMPERATURE IS BELOW THE OCCUPIED SPACE TEMPERATURE HEATING SETPOINT, WARM-UP MODE WILL INITIATE.

AHU SUPPLY AND RETURN FANS SHALL BE ENERGIZED, AND THE FAN SPEEDS SHALL BE CONTROLLED AS DESCRIBED IN "OCCUPIED" MODE. THE RA DAMPER SHALL REMAIN OPEN. HEATING CYCLE SHALL BE CONTROLLED AS DESCRIBED IN "OCCUPIED" MODE.

OA CONTROL:
THE MIN OA DAMPER SHALL BE CLOSED. AFTER WARM-UP MODE HAS BEEN ACTIVE FOR 15 MINUTES (ADJ.), THE MINIMUM OUTSIDE AIR DAMPER SHALL MODULATE FROM 0% OPEN TO MINIMUM SETPOINT. AFTER MINIMUM OUTSIDE AIR DAMPER HAS BEEN AT MINIMUM SETPOINT FOR 15 MINUTES (ADJ.), THE "AIR-SIDE ECONOMIZER" MODE SHALL BE CONTROLLED AS INDICATED BELOW WITH MINIMUM OA SETPOINT BEING 0 CFM (ADJ). RELIEF AIR DAMPER AND MAX OA DAMPER SHALL ONLY OPEN IF THE AIR-SIDE ECONOMIZER SEQUENCE ACTIVATES.

VAV BOXES DAMPER AND RE-HEAT HOT WATER VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT.

WARM-UP MODE SHALL CONTINUE UNTIL ALL SPACES HAVE REACHED OCCUPIED HEATING SETPOINT OR OCCUPIED SCHEDULE HAS BEGUN.

**OCCUPIED MODE:**
OCCUPIED MODE SHALL BE INITIATED BY BAS SYSTEM BASED ON PROGRAMMED OCCUPANCY SCHEDULE OR FORCED INTO TEMPORARY OCCUPIED MODE AT A THERMOSTAT OVERRIDE SWITCH.

FAN CONTROL: THE SUPPLY AND RETURN FANS SHALL BE ON. SUPPLY FAN VFDS SHALL MODULATE TO MAINTAIN DUCT STATIC PRESSURE SETPOINT OF 1.0 IN W.C. (ADJ). DUCT STATIC PRESSURE SETPOINT SHALL BE CONFIRMED/ADJUSTED DURING TEST AND BALANCING. FAN SPEEDS SHALL NOT DROP BELOW 30% (ADJ). RETURN FAN VFD SHALL MODULATE BASED ON MAINTAINING A DIFFERENTAIL AIRFLOW OF [SUPPLY AIRFLOW] MINUS [GENERAL EXHAUST + 1000 CFM PRESSURIZATION (ADJ)]. AIRFLOWS SHALL BE CONFIRMED DURING TEST AND BALANCE.

ONCE DUCT STATIC PRESSURE SETPOINT IS SATISFIED AND MAINTAINED FOR 15 MINUTES, VAV BOXES SHALL BE POLLED FOR DAMPER POSITION EVERY MINUTE (ADJ). IF VAV DAMPER POSITION IS 90% (ADJ) OR GREATER OPEN, A PRESSURE REQUEST SHALL BE GENERATED. AFTER THE VAV BOXES HAVE BEEN POLLED, IF THERE ARE NO PRESSURE REQUESTS, THE DUCT STATIC PRESSURE SETPOINT SHALL BE DECREASED BY 0.04 IN W.C. (ADJ). IF THERE ARE MORE THAN TWO (ADJ) PRESSURE REQUESTS, THE SETPOINT SHALL BE INCREASED BY 0.04 IN W.C. (ADJ). THE CONTROL LOGIC SHALL BE SLOW-ACTING TO AVOID HUNTING. DUCT STATIC PRESSURE SETPOINT SHALL NEVER EXCEED 150% OF THE DESIGN SETPOINT, AS DETERMINED BY THE TAB CONTRACTOR DURING BALANCING. IF COMMUNICATION IS LOST WITH ANY VAV BOX, THEN DUCT STATIC PRESSURE SETPOINT SHALL BE DESIGN SETPOINT AND AN ALARM SHALL BE SENT.

DAMPER CONTROL: RA DAMPER SHALL BE OPEN. RELIEF AIR DAMPER SHALL BE CONTROLLED AS DESCRIBED BELOW. MIN OA DAMPER SHALL BE OPEN AND CONTROLLED AS DESCRIBED BELOW. "AIR-SIDE ECONOMIZER" MODE SHALL BE ENABLED AND CONTROLLED AS DESCRIBED BELOW.

MINIMUM OA CAPACITY:
MAX OA DAMPER SHALL BE CLOSED.

MINIMUM OA AIRFLOW SHALL BE MEASURED BY AN AIRFLOW MONITORING STATION. MIN OA DAMPER SHALL MODULATE TO MAINTAIN MINIMUM OA AIRFLOW SETPOINT.

RETURN DAMPER SHALL MODULATE OPPOSITE THE MIN OA DAMPER.

RELIEF AIR DAMPERS SHALL MODULATE AS NECESSARY TO RELIEVE EXCESS OUTSIDE AIR AND MAINTAIN SPACE PRESSURIZATION SETPOINT.

SUPPLY AIR TEMPERATURE CONTROL:
CONTROLS SHALL MODULATE HEATING AND COOLING CYCLES TO MAINTAIN SCHEDULED SUPPLY AIR TEMPERATURE (SAT) SETPOINT. INITIAL SUPPLY AIR TEMPERATURE SETPOINT SHALL BE 55 DEG F (ADJ). SET POINT SHALL BE RESET BASED ON POLLING OF VAV BOXES COOLING DEMAND. VAV BOX COOLING DEMAND SHALL BE CALCULATED BY TAKING THE CURRENT VAV BOX AIRFLOW AND DIVIDING IT BY VAV BOX MAXIMUM COOLING AIR FLOW. THE VAV BOXES SHALL BE POLLED FOR COOLING DEMAND SIGNAL EVERY TWO MINUTES (ADJ). IF A VAV BOX COOLING DEMAND IS 95% (ADJ) OR GREATER, A COOLING REQUEST SHALL BE GENERATED. AFTER THE VAV BOXES HAVE BEEN POLLED, IF THERE ARE NO COOLING REQUESTS, THE SAT SETPOINT SHALL BE INCREASED BY 0.2 DEG F (ADJ). IF THERE ARE MORE THAN TWO (ADJ) COOLING REQUESTS, THE SAT SETPOINT SHALL BE DECREASED BY 0.3 DEG F (ADJ). THE CONTROL LOGIC SHALL BE SLOW ACTING TO AVOID HUNTING. THE MINIMUM OR INITIAL SAT SHALL BE AS INDICATED ABOVE AND THE MAXIMUM SAT SETPOINT SHALL BE 60 DEG F(ADJ). ONCE COOLING DEMAND IS ABOVE 95%, SAT SHALL BE RESET DOWN AGAIN. IF COMMUNICATION IS LOST WITH ANY VAV BOX, THEN SAT SETPOINT SHALL BE MINIMUM OR INITIAL SAT SETPOINT.

COOLING CYCLE:
IF SA TEMPERATURE IS ABOVE SA TEMPERATURE SETPOINT, CHILLED WATER VALVE SHALL MODULATE TO SATISFY SA TEMPERATURE SETPOINT.

COOLING CYCLE SHALL NOT BE ENABLED UNTIL THE HEATING CYCLE HAS BEEN OFF FOR 5 MIN (ADJ).

HEATING HOT WATER VALVE SHALL BE CLOSED AND FACE AND BYPASS DAMPERS SHALL BE BYPASSING HEATING COIL.

DEHUMIDIFICATION CYCLE:
IF RA RELATIVE HUMIDITY RISES ABOVE THE 60% RH SETPOINT (ADJ), DEHUMIDIFICATION MODE SHALL BE ENABLED. THE COOLING COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN 2 DEGREES (ADJ.) LESS THAN SUPPLY AIR TEMPERATURE SETPOINT. THE HEATING CONTROL VALVE SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT. ONCE RA RELATIVE HUMIDITY FALLS TO 55% RH (ADJ) OR LESS, DEHUMIDIFICATION MODE SHALL BE OFF.

HEATING CYCLE:
HEATING HOT WATER VALVE SHALL OPEN AND FACE AND BYPASS DAMPERS SHALL MODULATE TO SATISFY SUPPLY AIR TEMPERATURE SETPOINT SETPOINT.

CHILLED WATER VALVE SHALL BE CLOSED.

HEATING CYCLE SHALL HAVE A DEADBAND OF 4 DEG AND SHALL NOT BE ENABLED UNTIL THE COOLING CYCLE HAS BEEN OFF FOR 5 MIN (ADJ).

**AIR-SIDE ECONOMIZER MODE:**
THE AIR-SIDE ECONOMIZER SHALL BE ON WHEN THE OUTSIDE ENTHALPY IS 2 BTU/LB (ADJ) LESS THAN THE RETURN AIR ENTHALPY FOR MORE THAN 10 (ADJ) CONSECUTIVE MINUTES. THE AIR-SIDE ECONOMIZER WILL OTHERWISE BE OFF. ENTHALPY SHALL BE CALCULATED BASED ON FACILITY OUTDOOR AIR TEMPERATURE AND RELATIVE HUMIDITY READINGS.

THE MAX OUTSIDE AIR DAMPER AND RETURN AIR DAMPER SHALL BE MODULATED TO MAINTAIN A MIXED AIR TEMPERATURE OF 2 DEGREES LESS THAN THE SUPPLY AIR TEMPERATURE SETPOINT (INDICATED ABOVE). THE MIN OUTSIDE AIR DAMPER SHALL BE FULLY OPEN, BUT ALARM SHALL BE DEACTIVIATED.

IF THE AIR-SIDE ECONOMIZER CANNOT MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT (INDICATED ABOVE), THEN THE CHILLED WATER VALVE WILL MODULATE TO MAINTAIN AHU LEAVING AIR TEMPERATURE AT SETPOINT.

IF SUPPLY AIR TEMPERATURE FALLS BELOW SETPOINT (INDICATED ABOVE) FOR MORE THAN FIVE MINUTES, MAX OA DAMPER SHALL BE CLOSED. MIN OA DAMPER SHALL CONTINUE TO MODULATE TO MAINTAIN MINIMUM OA AIRFLOW SETPOINT (INDICATED ABOVE), AND ALARM SHALL BE ACTIVATED. OCCUPIED HEATING CYCLE (INDICATED ABOVE) WILL ACTIVATE. THIS WILL CONTINUE UNTIL SUPPLY AIR TEMPERATURE RISES ABOVE CC LAT SETPOINT FOR FIVE MINUTES. THEN MAX OA DAMPER SHALL BEGIN TO MODULATE TO MAINTAIN MIXED AIR TEMPERATURE AT AHU LAT SETPOINT AND MINIMUM OA AIRFLOW SETPOINT ALARM WILL BE DEACTIVATED.

RELIEF AIR DAMPERS SHALL MODULATE AS NECESSARY TO RELIEVE EXCESS OUTSIDE AIR AND MAINTAIN SPACE PRESSURIZATION.

THE AIR-SIDE ECONOMIZER SHALL BE ON UNTIL THE OUTSIDE AIR DRY BULB TEMPERATURE IS GREATER THAN 2 DEG F (ADJ) LESS THAN THE RETURN AIR TEMPERATURE, THE OUTSIDE AIR DRY BULB IS LESS THAN 0 DEG F (ADJ), OR THE OUTSIDE AIR ENTHALPY IS GREATER THAN 28 BTU/LB (ADJ) FOR MORE THAN 30 (ADJ) CONSECUTIVE MINUTES.

**PROOFS AND SAFETIES:**
THE SUPPLY FAN, RETURN FAN, AND ALL DDC HARDWARE CONTROL LOOPS SHALL BE SUBJECT TO PROOFS AND SAFETIES. SAFETIES SHALL BE DIRECT-HARDWIRE INTERLOCKED TO THE VFD AS SHOWN. DDC HARDWARE SHALL MONITOR ALL PROOFS AND SAFETIES AND FAILURE OF ANY PROOF OR ACTIVATION OF ANY SAFETY SHALL RESULT IN ALL CONTROL LOOPS BEING DISABLED AND THE AHU FAN BEING COMMANDED OFF UNTIL RESET, AND AN ALARM SHALL BE SENT TO THE BAS.

PROOFS:
- SUPPLY FAN STATUS (SF-S)
- RETURN FAN STATUS (RF-S)

SAFETIES:
- SUPPLY AIR DUCT PRESSURE HIGH LIMIT (DPS-5-01)
- SUPPLY AIR DUCT PRESSURE LOW LIMIT (DPS-5-02)
- SUPPLY AIR SMOKE (SMK-5-01)
- RETURN AIR DUCT PRESSURE HIGH LIMIT (DPS-5-03)

DDC HARDWARE RESET OF ALL PROOFS AND SAFETIES SHALL BE VIA A LOCAL BINARY PUSH-BUTTON (RST-BUT) AND A REMOTE COMMAND TO THE DDC HARDWARE. (THE OPERATOR CAN USE EITHER ONE TO PERFORM THE RESET), AS SHOWN ON THE POINTS SCHEDULE DRAWING.

**ALARMS:**
SMOKE DETECTOR: IF THE SUPPLY AIR SMOKE DETECTOR SENSES SMOKE IN THE DUCTWORK, AN ALARM SHALL BE SENT TO THE DDC SYSTEM FROM THE FIRE ALARM CONTROL PANEL AND THE 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, AND SEND A HIGH-STATIC PRESSURE ALARM TO THE DDC SYSTEM.

SUPPLY AIR LOW STATIC PRESSURE: WHEN THE SUPPLY AIR STATIC PRESSURE IS BELOW SETPOINT, THE LOW-LIMIT STATIC-PRESSURE SWITCH IN THE FAN DISCHARGE SHALL STOP THE SUPPLY FAN, AND SEND A LOW-STATIC PRESSURE ALARM TO THE DDC SYSTEM.

RETURN AIR HIGH STATIC PRESSURE: WHEN THE RETURN AIR STATIC PRESSURE EXCEEDS SETPOINT, THE HIGH-LIMIT STATIC-PRESSURE SWITCH IN THE FAN DISCHARGE SHALL STOP THE RETURN FAN, AND SEND A HIGH-STATIC PRESSURE ALARM TO THE DDC SYSTEM.

DIRTY FILTER SENSOR: IF FILTER DIFFERENTIAL PRESSURE SENSOR IS ABOVE SETPOINT, AN ALARM SHALL BE SENT TO THE DDC SYSTEM.

OUTSIDE AIRFLOW LOW: IF AIR FLOW MONITORING STATION READING OF OUTSIDE AIRFLOW DROPS BELOW 90% OF OUTSIDE AIRFLOW SETPOINT FOR MORE THAN 5 MIN. OR LONGER, THEN AN ALARM SHALL BE SENT TO THE BAS. THE FUNCTION OF THE AHU SHALL NOT BE CHANGED DUE TO THE ALARM.

HIGH SPACE C02: IF A SPACE CO2 SENSOR IS READING HIGHER THAN 900 PPM ABOVE OUTDOOR CO2 LEVELS FOR 5 MIN. OR LONGER, THEN AN ALARM SHALL BE SENT TO THE BAS. THE FUNCTION OF THE AHU SHALL NOT BE CHANGED DUE TO THE ALARM.

FREEZE STAT: IF THE FREEZE STAT SENSOR READS BELOW SETPOINT, THE AHU SHALL GO TO THE OFF MODE AND THE UNOCCUPIED/OFF COIL PROTECTION MODE SHALL BE INITIATED. AHU SHALL REMAIN OFF UNTIL RESET BY BAS.

HVAC SYSTEM EMERGENCY SHUTDOWN: CONNECT TO EXISTING FORCE PROTECTION SYSTEM. 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 BAS. UNIT SHALL REMAIN OFF UNTIL EMERGENCY SHUTDOWN HAS BEEN RESET.

RETURN AIRFLOW CONTROL ALARM: IF THE RETURN AIRFLOW IS NOT +/- 15% (ADJ) OF SETPOINT, AN ALARM SHALL BE SENT TO THE DDC SYSTEM.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: G JOHNSON
DRAWN BY: R PEARSON
CHECKED BY: A GIANPETRO
SUBMITTED BY: G JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL CONTROLS

SHEET ID
**M-702_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION

## EQUIPMENT SCHEDULE - AHU-5

| IDENTIFIER | FUNCTION | POINT TYPE | RANGE | REMARKS |
|---|---|---|---|---|
| TT-5-01 | RETURN AIR TEMPERATURE TRANSMITTER | ANALOG INPUT | 40 F TO 140 F | |
| TT-5-02 | MIXED AIR TEMPERATURE TRANSMITTER | ANALOG INPUT | -30 F TO 140 F | EQUAL TO CC LAT SETPOINT |
| TT-5-03 | HEATING COIL LEAVING AIR TEMPERATURE TRANSMITTER | ANALOG INPUT | 40 F TO 140 F | RESET BASED ON AIRFLOW AND VFD BOX POSITION |
| TT-5-04 | SUPPLY AIR TEMPERATURE TRANSMITTER | ANALOG INPUT | 40 F TO 140 F | RESET BASED ON VFD AND VAV BOX POSITION |
| RHT-5-01 | RETURN AIR RELATIVE HUMIDITY TRANSMITTER | ANALOG INPUT | 5% RH @ -130 F TO 95% RH @ 130 F | |
| DPT-5-01 | PRE-FILTER DIFFERENTIAL PRESSURE TRANSMITTER | ANALOG INPUT | 0 TO 5.0 IN WATER COLUMN | |
| DPI-5-01 | PRE-FILTER DIFFERENTIAL PRESSURE INDICATION | - | 0 TO 5.0 IN WATER COLUMN | |
| DPT-5-02 | FINAL-FILTER DIFFERENTIAL PRESSURE TRANSMITTER | ANALOG INPUT | 0 TO 5.0 IN WATER COLUMN | |
| DPI-5-02 | FINAL-FILTER DIFFERENTIAL PRESSURE INDICATION | - | 0 TO 5.0 IN WATER COLUMN | |
| DPT-5-03 | SUPPLY AIR DUCT DIFFERENTIAL PRESSURE TRANSMITTER | ANALOG INPUT | 0 TO 2.0 IN WATER COLUMN | LOCATE AS INDICATED ON PLANS. RESET BASED ON VFD AND VAV BOX POSITION. STARTING SETPOINT SET BY TAB CONTRACTOR. |
| DPT-5-04 | SPACE DIFFERENTIAL PRESSURE TRANSMITTER | ANALOG INPUT | 0 TO 0.5 IN WATER COLUMN | LOCATE AS INDICATED ON PLANS. |
| DPT-5-05 | RETURN AIR DUCT DIFFERENTIAL PRESSURE TRANSMITTER | ANALOG INPUT | 0 TO 2.0 IN WATER COLUMN | LOCATE AS INDICATED ON PLANS. |
| DPS-5-01 | HIGH STATIC PRESSURE TRANSMITTER | DIGITAL INPUT | 0 TO 5.0 IN WATER COLUMN | |
| DPS-5-02 | LOW STATIC PRESSURE TRANSMITTER | DIGITAL INPUT | -5.0 TO 0 IN WATER COLUMN | |
| DPS-5-03 | HIGH STATIC PRESSURE TRANSMITTER | DIGITAL INPUT | 0 TO 5.0 IN WATER COLUMN | |
| AFMS-5-01 | MINIMUM OUTSIDE AIR FLOW MONITORING STATION | ANALOG INPUT | 10,000 CFM | SEE MECHANICAL SCHEDULES FOR DETAILS |
| AFMS-5-02 | SUPPLY AIR FLOW MONITORING STATION | ANALOG INPUT | 23500 CFM | SEE MECHANICAL SCHEDULES FOR DETAILS |
| AFMS-5-03 | RETURN AIR FLOW MONITORING STATION | ANALOG INPUT | 23500 CFM | SEE MECHANICAL SCHEDULES FOR DETAILS |
| AD-5-01 | MINIMUM OUTSIDE AIR DAMPER | ANALOG OUTPUT | MODULATING | PROVIDE AS PART OF OUTSIDE AIRFLOW MONITORING STATION. MODULATE BASED ON MINIMUM OA SETPOINT |
| AD-5-02 | RETURN AIR DAMPER | ANALOG OUTPUT | MODULATING | |
| AD-5-03 | MAXIMUM OUTSIDE AIR DAMPER | ANALOG OUTPUT | MODULATING | NORMALLY CLOSED. MODULATE WITH ECONOMIZER CONTROL BASED ON MIXED AIR TEMPERATURE SETPOINT. |
| AD-5-04 | GRAVITY HOOD RELIEF AIR DAMPER | DIGITAL OUTPUT | TWO POSITION | NORMALLY CLOSED. OPEN WITH ECONOMIZER CONTROL. |
| TSL-5-01 | FREEZE STAT | DIGITAL INPUT | - | |
| SMK-5-01 | SUPPLY AIR SMOKE DETECTOR | DIGITAL INPUT | - | MOUNT IN AHU SUPPLY AIR DISCHARGE SECTION |
| VLV-CV-01 | CHILLED WATER VALVE | ANALOG OUTPUT | - | |
| VLV-CV-02 | HEATING HOT WATER VALVE | ANALOG OUTPUT | - | |
| VFD-5-01 | SUPPLY FAN VFD - START/STOP | DIGITAL OUTPUT | - | |
| | SUPPLY FAN VFD - MODULATION | ANALOG OUTPUT | - | |
| | SUPPLY FAN VFD - STATUS | DIGITAL INPUT | - | |
| | SUPPLY FAN VFD - CURRENT | ANALOG INPUT | - | |
| VFD-5-02 | RETURN FAN VFD - START/STOP | DIGITAL OUTPUT | - | |
| | RETURN FAN VFD - MODULATION | ANALOG OUTPUT | - | |
| | RETURN FAN VFD - STATUS | DIGITAL INPUT | - | |
| | RETURN FAN VFD - CURRENT | ANALOG INPUT | - | |
| ESS | BUILDING HVAC EMERGENCY SHUT-DOWN SWITCH | DIGITAL INPUT | - | HARDWIRED RELAY TO EXISTING ESS ONLY |
| AD-5-04 | INTEGRAL FACE AND BYPASS DAMPER | ANALOG OUTPUT | MODULATING | PROVIDE AS PART OF INTEGRAL FACE AND BYPASS DAMPER PREHEAT COIL |
| TT-1-01 | FACILITY OUTSIDE AIR TEMPERATURE TRANSMITTER | ANALOG INPUT | -30 F TO 130 F | FACILITY SENSOR; EXISTING |
| RHT-1-01 | FACILITY OUTSIDE AIR RELATIVE HUMIDITY TRANSMITTER | ANALOG INPUT | 5% RH @ -130 F TO 95% RH @ 130 F | FACILITY SENSOR; EXISTING |
| C02-1-01 | FACILITY OUTDOOR AIR CARBON DIOXIDE SENSOR | ANOLOG INPUT | 0 TO 2000 PPM | FACILITY SENSOR; EXISTING |

## INPUT/OUTPUT SCHEDULE - AHU-5

| POINT DESCRIPTION | INPUT: DIGITAL: ON/OFF STATUS | OPEN/CLOSE STATUS | PRESS./DIFF. PRESS. INPUT | TEMPERATURE SENSOR | SAFETY ALARM(S) | FLOW CONTACT / MOISTURE | LEVEL | AUXILIARY CONTACT | INPUT: ANALOG: TEMPERATURE | PRESSURE (PSIG, PSIA, PSID) | FLOW (CFM, GPM) | % RH | POSITION | CURRENT/AMPERAGE | CARBON DIOXIDE LEVEL | RUN TIME | OUTPUT: DIGITAL: ON/OFF/AUTO | ON/OFF | OPEN/CLOSE | ENABLE/DISABLE | CONTROL RELAY | OUTPUT: ANALOG: POSITION ADJ | SET POINT ADJ | MODULATION | OPEN/CLOSED | SPEED ADJUST | ALARMS: DIGITAL: HIGH | LOW | MOISTURE | ALARMS: ANALOG: HIGH | LOW | RUN TIME | FUNCTIONS: SCHEDULED START/STOP | HUMID. / DEHUMIDIFICATION | HEATING / COOLING CYCLE | OCCUPIED / UNOCCUPIED | OPTIMUM START/STOP | FIRE-SMOKE CONTROL | ENTHALPY CALCULATION | ECONOMIZER CONTROL | SET POINT RESET / OVERRIDE | CFM CALCULATION | TREND | SYSTEM GRAPHIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AHU-5** | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | X | | | | | | | | | | | X |
| SUPPLY FAN VFD | X | | | | | | | | | | | | | X | | | X | | | | | | | X | | | | | | | | | | | | | | | X | | X | | |
| RETURN FAN VFD | X | | | | | | | | | | | | | X | | | X | | | | | | | X | | | | | | | | | | | | | | | X | | X | | |
| OUTSIDE AIR | | | | | | | | | X | | X | X | | | X | | | | | | | | | | | | | | X | | | | | | | | | | X | X | | X | | |
| MINIMUM OUTSIDE AIR DAMPER | | | | | | | | | | | | | X | | | | | | | | | | | X | X | | | | | | | | | | | | | | | | | X | | |
| MAXIMUM OUTSIDE AIR DAMPER | | | | | | | | | | | | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| RETURN AIR | | | X | | | | | | X | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | X | | |
| RETURN AIR DAMPER | | | | | | | | | | | | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIXED AIR | | | | | | | | | X | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| PRE-HEAT COIL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRE-HEAT COIL VALVE | | | | | | | | | | | | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| PRE-HEAT COIL - FACE AND BYPASS DAMPER | | | | | | | | | | | | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| PRE-HEAT COIL SUPPLY AIR TEMPERATURE | | | | | | | | | X | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| COOLING COIL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| COOLING COIL VALVE | | | | | | | | | | | | | X | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| COOLING COIL SUPPLY AIR TEMPERATURE | | | | | | | | | X | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | X | | X | | |
| SUPPLY AIR | | | X | | X | | | | X | X | | | | | | | | | | | | | | | | | | X | | | X | X | | | | | | | | X | | X | | |
| SUPPLY AIR SMOKE DETECTOR | | | | | X | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUPPLY DUCT | | | | | | | | | | X | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | X | | X | | |
| PRE FILTER | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | X | | |
| FINAL FILTER | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | X | | |
| SPACE | | | | | | | | | + | X | | | | + | | | | | | | | | | | | | | | | | + | | | | | | | | | | | X | | |
| RELIEF AIR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RELIEF AIR DAMPER | | | | | | | | | | | | | + | | | | | | | | | | | | | + | | | | | | | | | | | | | | | X | | |

NOTES:
1. SYSTEM GRAPHIC SHALL PROVIDE DISPLAY OF ALL POINTS.

+ NUMBER AS INDICATED ON PLANS

## OPERATING PARAMETERS - AHU-5

| FUNCTION | SETPOINT | REMARKS |
|---|---|---|
| OUTSIDE AIR LOW TEMPERATURE PROTECTION | 35 DEG F | COIL FREEZE PROTECTION |
| OUTSIDE AIR LOW TEMPERATURE PROTECTION | 10 DEG F | COIL FREEZE PROTECTION, VALVE FULLY OPEN |
| MIXED AIR LOW TEMPERATURE PROTECTION | 55 DEG F | COIL FREEZE PROTECTION |
| ECONOMIZER CONTROL - TEMPERATURE | HIGH - RETURN AIR MINUS 2 DEG F<br>LOW - 0 DEG F | MUST MEET TEMPERATURE AND ENTHALPY REQUIREMENTS FOR AT LEAST 30 MIN |
| ECONOMIZER CONTROL - ENTHALPY | HIGH - 28 BTU/LB | MUST MEET TEMPERATURE AND ENTHALPY REQUIREMENTS FOR AT LEAST 30 MIN |
| DUCT STATIC PRESSURE | 1.0 IN WC | 0.5 TO 1.5 IN WC RANGE. SETPOINT SET BY TAB CONTRACTOR. RESET BASED ON VFD AND VAV BOX DAMPER POSITION. LOCATE IN DUCTWORK, AS INDICATED ON PLANS |
| MINIMUM OA AIRFLOW | 6100 CFM | ALARM -10% OF SETPOINT FOR 5 MIN. |
| SUPPLY AIR TEMPERATURE | 55 DEG F TO 60 DEG F | RESET BASED ON VFD AND VAV DAMPER POSITION |
| COILING COIL FREEZE STAT ALARM | 35 DEG F | |
| HEATING COIL LEAVING AIR TEMPERATURE | 53 DEG F TO 58 DEG F | TRACKS SUPPLY AIR TEMPERATURE MINUS 2 DEG F |
| SPACE PRESSURIZATION | 0.05 IN WC | SPACE VS. OUTSIDE DIFFERENTIAL PRESSURE; CONTROLS RELIEF AIR |
| RETURN AIR RELATIVE HUMIDITY | 60% | |
| OCCUPIED MODE | | MONDAY - SATURDAY: 0600 HRS - 1800 HRS |
| FILTER ALARM | 1.0 IN WC | PRESSURE DROP ACROSS EACH BANK |
| RETURN AIR HIGH STATIC ALARM | 2.0 IN WC | |
| SUPPLY AIR HIGH STATIC ALARM | 3.5 IN WC | |
| SUPPLY AIR LOW STATIC ALARM | 0.5 IN WC | |

**GENERAL NOTES:**

A. FIBER NETWORK CONNECTIONS (TO THE BAS) WILL BE PROVIDED BY CUSTOMER. REFER TO SPECIFICATION SECTION 01 11 00 FOR REQUIRED NOTICE DURATION TO ALLOW CUSTOMER TO PREPARE FOR NEW CONNECTIONS.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
CIVIL WORKS DIRECT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

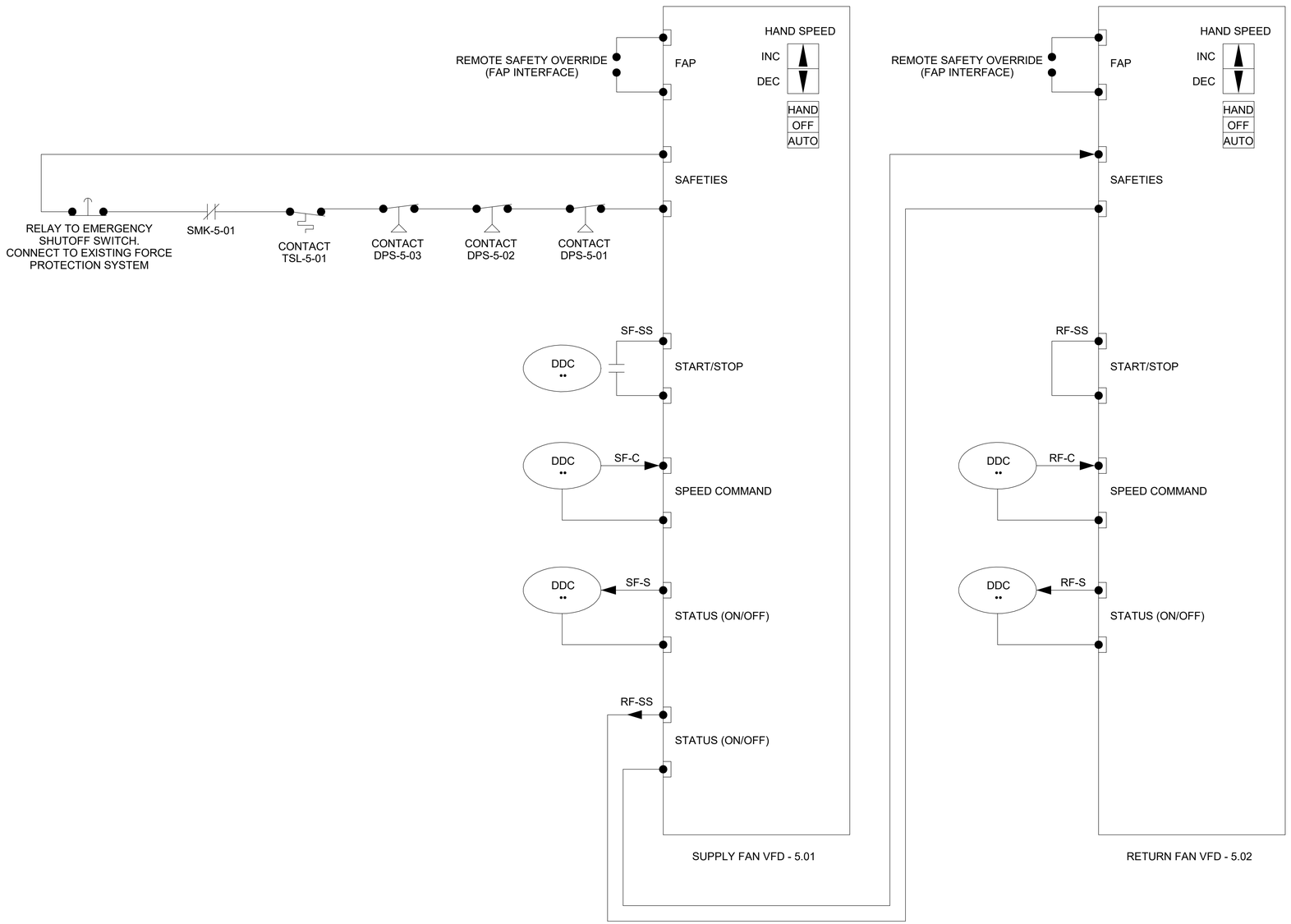
BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL CONTROLS

SHEET ID
**M-703_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000




A1 AHU-5 LADDER DIAGRAM
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
CIVIL E. DIVISION
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

MECHANICAL CONTROLS

SHEET ID
M-704_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI


ARIMS: 200A Disposition: Maintain for 15 yrs after construction

| EQUIPMENT SCHEDULE - VAV | | | | |
|---|---|---|---|---|
| IDENTIFIER | FUNCTION | POINT TYPE | RANGE | REMARKS |
| VAV-D-C | VAV BOX CONTROL DAMPERS | ANALOG OUTPUT | - | SEE SCHEDULE FOR DETAILS. SEE PLAN FOR LOCATIONS. |
| VAV-SA-F | VAV BOX FLOW TRANSMITTER | ANALOG INPUT | - | NUMBER AND LOCATION AS INDICATED ON PLANS. |
| HTG-V-C | VAV BOX RE-HEAT HOT WATER VALVE | ANALOG OUTPUT | | NUMBER AS INDICATED ON PLANS. |
| VAV-DA-T | VAV BOX SUPPLY AIR TEMPERATURE TRANSMITTER | ANALOG INPUT | 40 F TO 140 F | SETPOINT AND NUMBER AS INDICATED ON PLANS. |
| ZN-T | SPACE TEMPERATURE | ANALOG INPUT | 40F TO 100F | NUMBER AND LOCATION AS INDICATED ON PLANS. |
| ZN-CO2 | SPACE CARBON DIOXIDE SENSOR | ANALOG INPUT | 0 TO 2000 PPM | NUMBER AND LOCATION AS INDICATED ON PLANS. |

| OPERATING PARAMETERS - VAV | | |
|---|---|---|
| FUNCTION | SETPOINT | REMARKS |
| SPACE TEMPERATURE - OCCUPIED | 68 DEG F HTG<br>78 DEG F CLNG | |
| SPACE TEMPERATURE - UNOCCUPIED | 55 DEG F HTG<br>85 DEG F CLNG | |
| SPACE CO2 LEVEL | 0 - 800 PPM | ABOVE OA CO2 LEVEL<br>ALARM OVER 900 ABOVE OA CO2 |

**INPUT/OUTPUT SCHEDULE - VAV**

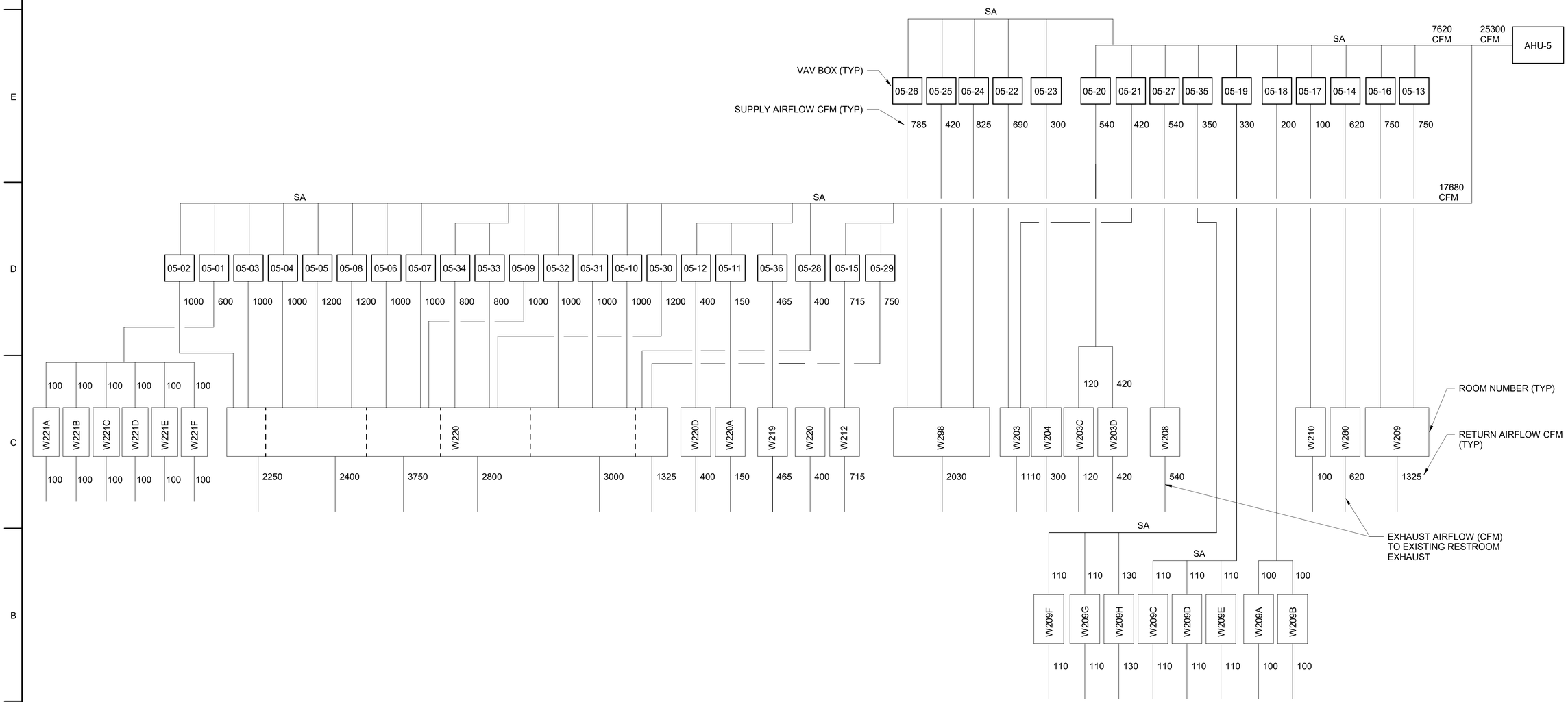
| | INPUT | | | | | | | | | | | | | | | | OUTPUT | | | | | | | | | | | | ALARMS | | | | | | FUNCTIONS | | | | | | | | | | | | | | | |

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. AIR BALANCING FOR THE LARGE OPEN SPACE COMPRISED OF ROOMS W220 AND W209 SHALL BE NEUTRAL OVERALL FOR TOTAL SUPPLY AND RETURN.

C. AIRFLOW SUMS REPRESENTS VAV BOX PEAK FLOWS. THIS AIRFLOW MAY BE DIFFERENT FROM THE TOTAL AHU AIRFLOW WHICH IS SIZED ON SYSTEM BLOCK AIRFLOWS.




A1 AHU-5 AIRFLOW SCHEMATIC
SCALE: NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| ISSUE DATE: | 02-16-23 |
| SOLICITATION NO.: | |
| CONTRACT NO.: | |
| DESIGNED BY: | G.JOHNSON |
| DRAWN BY: | R.PEARSON |
| CHECKED BY: | A.GIANPIETRO |
| SUBMITTED BY: | G.JOHNSON |
| SIZE: | 34X22 |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

AIRFLOW SCHEMATIC

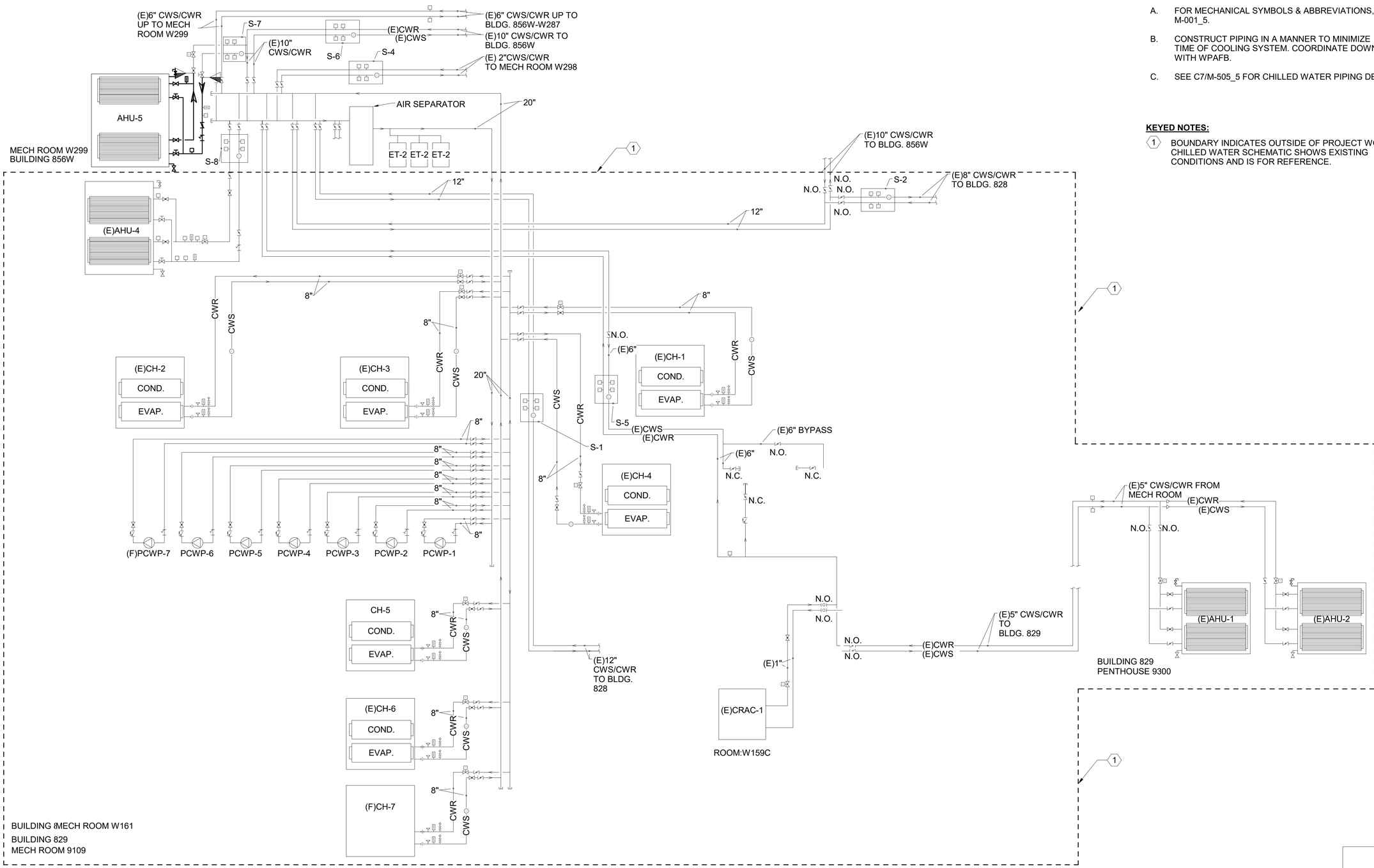
SHEET ID

**M-801_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION




A1 AHU-5 CHILLED WATER SCHEMATIC - CONNECTION TO EXISTING SYSTEM
SCALE:NTS

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. CONSTRUCT PIPING IN A MANNER TO MINIMIZE DOWN TIME OF COOLING SYSTEM. COORDINATE DOWN TIME WITH WPAFB.

C. SEE C7/M-505_5 FOR CHILLED WATER PIPING DETAIL.

**KEYED NOTES:**

1 BOUNDARY INDICATES OUTSIDE OF PROJECT WORK AREA. CHILLED WATER SCHEMATIC SHOWS EXISTING CONDITIONS AND IS FOR REFERENCE.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPIETRO
SUBMITTED BY: G.JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
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US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
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REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

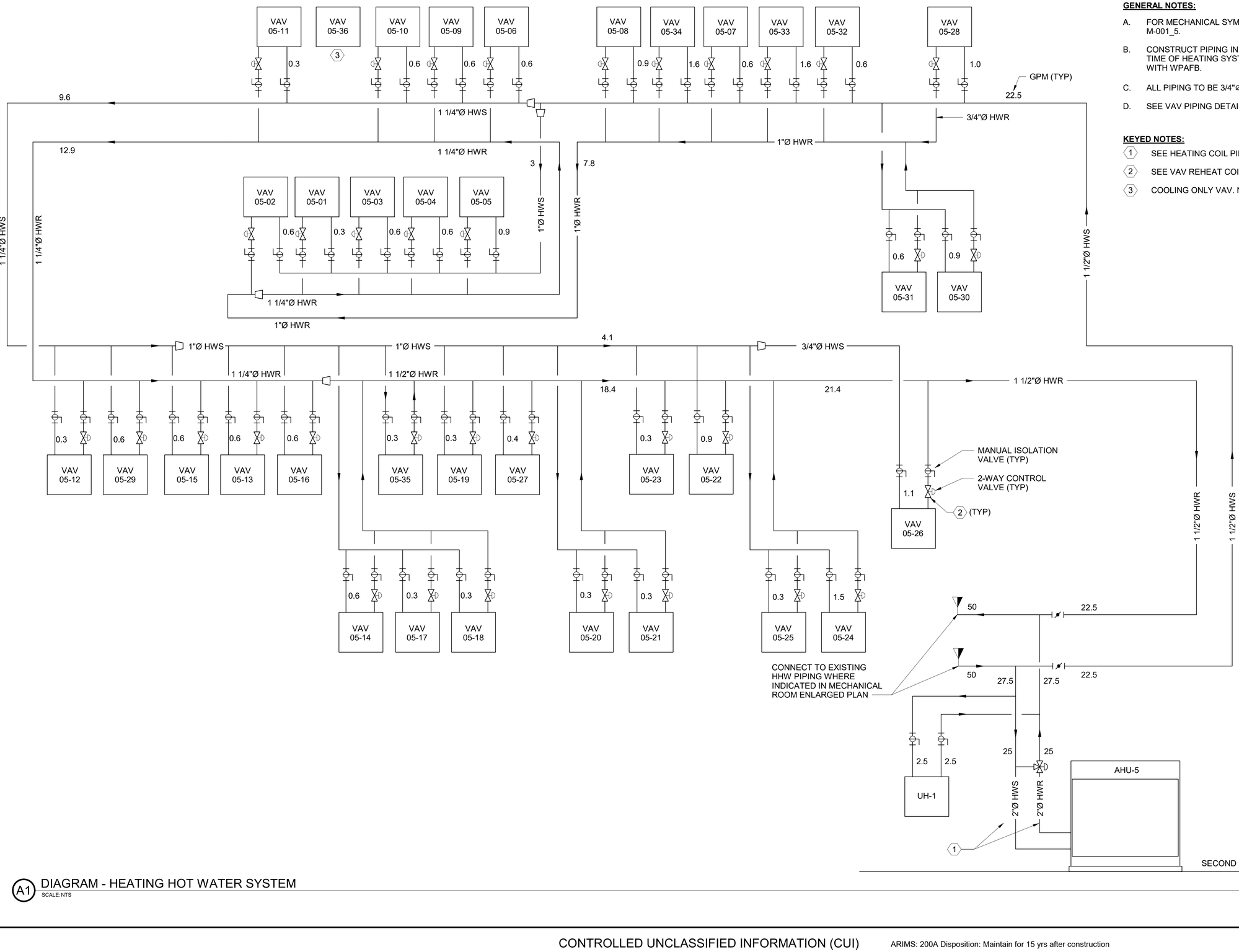
CHILLED WATER SCHEMATIC

SHEET ID
**M-802_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION




A1 DIAGRAM - HEATING HOT WATER SYSTEM
SCALE:NTS

**GENERAL NOTES:**

A. FOR MECHANICAL SYMBOLS & ABBREVIATIONS, SEE M-001_5.

B. CONSTRUCT PIPING IN A MANNER TO MINIMIZE DOWN TIME OF HEATING SYSTEM. COORDINATE DOWN TIME WITH WPAFB.

C. ALL PIPING TO BE 3/4"Ø UNLESS NOTED OTHERWISE.

D. SEE VAV PIPING DETAIL A7/M-503_5.

**KEYED NOTES:**

1. SEE HEATING COIL PIPING DETAIL C3/M-505_5.
2. SEE VAV REHEAT COIL PIPING DETAIL A7/M-503-5.
3. COOLING ONLY VAV. NO REHEAT COIL.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

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|---|---|---|

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CONTRACT NO.:

DESIGNED BY: G.JOHNSON
DRAWN BY: R.PEARSON
CHECKED BY: A.GIANPETRO
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SIZE: 34X22

US ARMY CORPS OF ENGINEERS LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

HEATING HOT WATER SCHEMATIC

SHEET ID
**M-803_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION

## FIRE ALARM/MASS NOTIFICATION SYSTEM LEGEND

| | |
|---|---|
| BATT | SECONDARY POWER SUPPLY (BATTERY) |
| FACU/ACU | COMBINATION FIRE ALARM CONTROL UNIT AND AUTONOMOUS CONTROL UNIT |
| NAC | NOTIFICATION APPLIANCE CIRCUIT BOOSTER POWER SUPPLY |
| SPD | SURGE PROTECTION DEVICE |
| AMP | AMPLIFIER |
| | SPEAKER / STROBE COMBINATION |
| S | SPEAKER |
| | WALL MOUNT STROBE |
| S | IN-DUCT PHOTOELECTRIC SMOKE DETECTOR S = SUPPLY |
| P | CEILING MOUNTED SMOKE DETECTOR P = PHOTOELECTRIC |
| AOM | ADDRESSABLE OUTPUT MODULE |
| AIM | ADDRESSABLE INPUT MODULE |
| | GROUND |
| | REMOTE ALARM INDICATOR |

## SYMBOL IDENTIFICATION LEGEND

EXISTING EQUIPMENT

NEW EQUIPMENT

## ABBREVIATIONS:

| | |
|---|---|
| AFF | ABOVE FINISHED FLOOR |
| AWG | AMERICAN WIRE GAGE |
| dBA | DECIBEL A-WEIGHTED |
| FA | FIRE ALARM |
| FACU | FIRE ALARM CONTROL UNIT |
| IDC | INITIATING DEVICE CIRCUIT |
| MNS | MASS NOTIFICATION SYSTEM |
| NAC | NOTIFICATION APPLIANCE CIRCUIT |
| NEC | NATIONAL ELECTRICAL CODE |
| SLC | SIGNALING LINE CIRCUIT |
| SPD | SURGE PROTECTION DEVICE |
| STC | SOUND TRANSMISSION CLASS |
| TYP | TYPICAL |
| UL | UNDERWRITERS LABORATORIES |

## DETAIL/SECTION TITLE

SECTION, DETAIL OR ELEVATION IDENTIFICATION MARK

**SECTION, DETAIL OR ELEVATION TITLE**

PLATE NUMBER WHERE SECTION, DETAIL OR ELEVATION IS TAKEN

## DETAIL CALLOUT SYMBOL

DETAIL NUMBER

PLATE NUMBER WHERE DETAIL IS DRAWN

## DESIGN CRITERIA:

1. AUDIBLE NOTIFICATION SHALL BE PROVIDED FOR ALL AREAS AND ROOMS THROUGHOUT THE AREA OF WORK. THE FOLLOWING DESIGN CRITERIA SHALL BE ACCOMPLISHED WITH ALL DOORS CLOSED. WHERE THIS DESIGN CRITERIA IS NOT ACCOMPLISHED DURING COMMISSIONING, THE CONTRACTOR SHALL PROVIDE ADDITIONAL DEVICES TO MEET THE MINIMUM DESIGN CRITERIA REQUIREMENTS AT NO ADDITIONAL COST. AS-BUILT DRAWINGS SHALL DEMONSTRATE THE ADDITIONAL DEVICES AND OR MODIFICATIONS TO THE INSTALLED DEVICES DO NOT EXCEED THE LIMITATIONS OF THE FACU/ACU, NAC BOOSTER PANEL, OR AMPLIFIER (INCLUSIVE OF SAFETY FACTORS).
2. IN AREAS WHERE ADDITIONAL NOTIFICATION IS PROVIDED, THE PERFORMANCE MUST ADHERE TO THE SOUND POWER CRITERIA WITHIN THE SPECIFICATIONS, CONTRACT DRAWINGS, AND NFPA 72.
3. IN AREAS WHERE ADDITIONAL AUDIBLE NOTIFICATION IS PROVIDED, THE SOUND POWER OF THE AUDIBLE NOTIFICATION SHALL BE A MINIMUM OF 70 DBA AND 15 DBA OVER THE AMBIENT CONDITIONS AT THE MOST REMOTE LOCATION WITHIN THE ROOM OR AREA. THE FOLLOWING CRITERIA SHALL BE UTILIZED FOR REVIEW AND APPROVAL OF SHOP DRAWINGS.
   A. THE SOUND POWER SHALL BE REDUCED BY 6 DBA EACH TIME THE DISTANCE BETWEEN THE APPLIANCE AND THE LISTENER IS DOUBLED. STARTING DISTANCE IS PER MANUFACTURER'S DATASHEET, TYPICALLY 10 FT.
   B. THE SOUND POWER SHALL BE REDUCED IN ACCORDANCE WITH THE MANUFACTURER'S DATASHEET FOR SOUND POWER DISTRIBUTION NOT PERPENDICULAR TO THE SPEAKER FACE. REFER TO MANUFACTURER'S TYPICAL SOUND OUTPUT DISTRIBUTION DIAGRAM.
   C. A MINIMUM 15 DBA LOSS SHALL BE ASSUMED THROUGH A STANDARD CLOSED DOOR.
   D. ALL STC RATED DOORS AND BARRIERS ARE ASSUMED TO BE SOUND PROOF ALLOWING NO TRANSMISSION OF SOUND.
4. 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 AREAS 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 TO A LOCATION IN THAT ROOM THAT ACHIEVES THE MINIMUM CIS. THIS AREA MUST BE READILY ACCESSIBLE, WITHOUT REQUIRING THE OCCUPANT TO WALK THROUGH A SECURED DOOR/AREA OR EXIT THE BUILDING.
   C. A LESSER CIS IS PERMITTED IN NORMALLY UNOCCUPIED ROOM OF THE BUILDING, WHERE THE OCCUPANT CAN WALK NO MORE THAN 50 FT TO A LOCATION IN THAT ROOM THAT ACHIEVES THE MINIMUM CIS. THIS AREA MUST BE READILY ACCESSIBLE, WITHOUT REQUIRING THE OCCUPANT TO WALK THROUGH A SECURED DOOR/AREA OR EXIT THE BUILDING. NORMALLY UNOCCUPIED ROOMS ARE CONSIDERED TO BE STORAGE ROOMS < 100 SF, MECHANICAL / ELECTRICAL ROOMS, COMMUNICATION CLOSETS, AND FIRE PROTECTION ROOMS.
5. STROBE SPACING FOR THE FIRE ALARM/MASS NOTIFICATION SYSTEM SHALL BE IN ACCORDANCE WITH NFPA 72.

## GENERAL FIRE ALARM NOTES:

1. PROVIDE MODIFICATIONS TO THE EXISTING FIRE ALARM/MASS NOTIFICATION SYSTEM AS INDICATED IN THESE DRAWINGS. THE EXISTING FA/MNS DEVICES ARE FED BY A TRANSPONDER PANEL LOCATED IN ROOM W271. THE SYSTEM FACU/ACU IS A SIMPLEX 4100ES LOCATED IN ROOM W147C.
2. COORDINATE ALL REQUIRED SYSTEMS TO THE SATISFACTION OF THE ENGINEER AND AUTHORITY HAVING JURISDICTION. CORRECT ANY DEFICIENCIES, INCONSISTENCIES, OR POORLY COORDINATED INSTALLATIONS AT NO ADDITIONAL COST.
3. THE FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE AND SHOW A MINIMAL QUANTITY OF DEVICES. CONTRACTOR SHALL 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. ADDITIONAL DEVICES SHALL BE PROVIDED FOR A FULLY FUNCTIONING FIRE ALARM SYSTEM AS REQUIRED BY NFPA 72 AND UFC 3-600-01.
4. ALL NEW CONDUITS SHALL BE CONCEALED IN WALLS, FLOOR SLABS OR CEILINGS UNLESS OTHERWISE INDICATED. CONDUIT SHALL NOT BE MOUNTED INSIDE SECURE WALLS UNLESS IT SERVES THE SECURE AREA. EXCEPTION: CONDUIT SHALL BE ALLOWED TO BE SURFACE MOUNTED ON WALLS AND CEILINGS IN UNFINISHED AREAS (E.G. MECHANICAL ROOM) AND WHEN NECESSARY TO PREVENT COMPROMISING SECURE WALLS. WHERE CONDUIT FEEDS DEVICES NOT MOUNTED DIRECTLY ON THE WALL OR CEILING, THE CONDUIT SHALL BE ROUTED AS A SINGLE PENDENT TYPE DROP TO EACH DEVICE.
5. ALL NEW EXPOSED FIRE ALARM CONDUITS AND JUNCTION BOXES IN UNFINISHED AREAS SHALL BE PRE-FINISHED RED FROM THE FACTORY. CONDUIT AND JUNCTION BOXES EXPOSED IN FINISHED AREAS SHALL BE FINISHED TO MATCH ADJACENT FINISHES.
6. CONDUIT SHALL BE SUPPORTED IN STRICT ACCORDANCE WITH THE NEC (E.G.10 FT INTERVALS AND 3 FT FROM TERMINATION). TENSION ONLY HANGERS ARE NOT PERMITTED (E.G. BATWINGS). TYPE OF CONDUIT UTILIZED SHALL BE IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS UNLESS OTHERWISE NOTED. FLEXIBLE CONDUIT IS ONLY PERMITTED FOR TERMINATION AT DEVICES MOUNTED ON PIPING OR SUBJECTED TO REMOVAL (E.G. FLOW SWITCHES, TAMPER SWITCHES, SPEAKERS AND STROBES MOUNTED IN REMOVABLE CEILINGS).
7. NAC AND IDC CONDUCTOR SIZE SHALL NOT BE LESS THAN 16 AWG, SLC CONDUCTOR SIZING SHALL NOT BE LESS THAN 18 AWG. ALL CONDUCTORS SHALL BE CONSISTENTLY COLOR COORDINATED THROUGH THE SYSTEM TO MATCH EXISTING IN RELATION TO DEVICES THEY FEED (E.G. SLC - BLACK/RED, STROBE - YELLOW/BLUE). ADDRESSABLE SLC CIRCUITS SHALL BE PROVIDED WITH SHIELDED CONDUCTORS. SHIELDING SHALL BE GROUNDED AT ONE END OF THE CIRCUIT. ALL CIRCUITS SHALL BE PROVIDED WITH LABELING AT POINT OF TERMINATION.
8. CONDUCTORS SHALL BE RUN FROM DEVICE TO DEVICE WITHOUT SPLICES. WIRE NUTS SHALL BE PROHIBITED. TERMINAL STRIPS SHALL BE UTILIZED WHERE CONDUCTORS CANNOT BE DIRECTLY TERMINATED AT THE DEVICE.
9. FIRE ALARM EQUIPMENT PANELS SHALL NOT BE USED AS RACEWAY FOR ROUTING POWER WIRING OR LOW VOLTAGE WIRING. ONLY WIRING TERMINATING WITHIN THE PANEL SHALL BE ROUTED INTO THE PANEL. POWER WIRING AND POWER LIMITED WIRING SHALL BE SEPARATED BY A MINIMUM OF TWO INCHES WITHIN THE EQUIPMENT PANELS.
10. MOUNTING DEVICES IN THE FACU/ACU, AMP, AND NAC BOOSTER PANELS WHICH ARE NOT UL LISTED AS PART OF THE PANEL IS PROHIBITED.
11. ALL POWER SUPPLIES TO FACU/ACU, AMP, AND NAC BOOSTER PANELS SHALL BE PROVIDED WITH SPD. SPD SHALL BE MOUNTED IN A SEPARATE ENCLOSURE.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KNOFF
DRAWN BY: M. MAFFEI
CHECKED BY: K. KNEPPER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL.
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

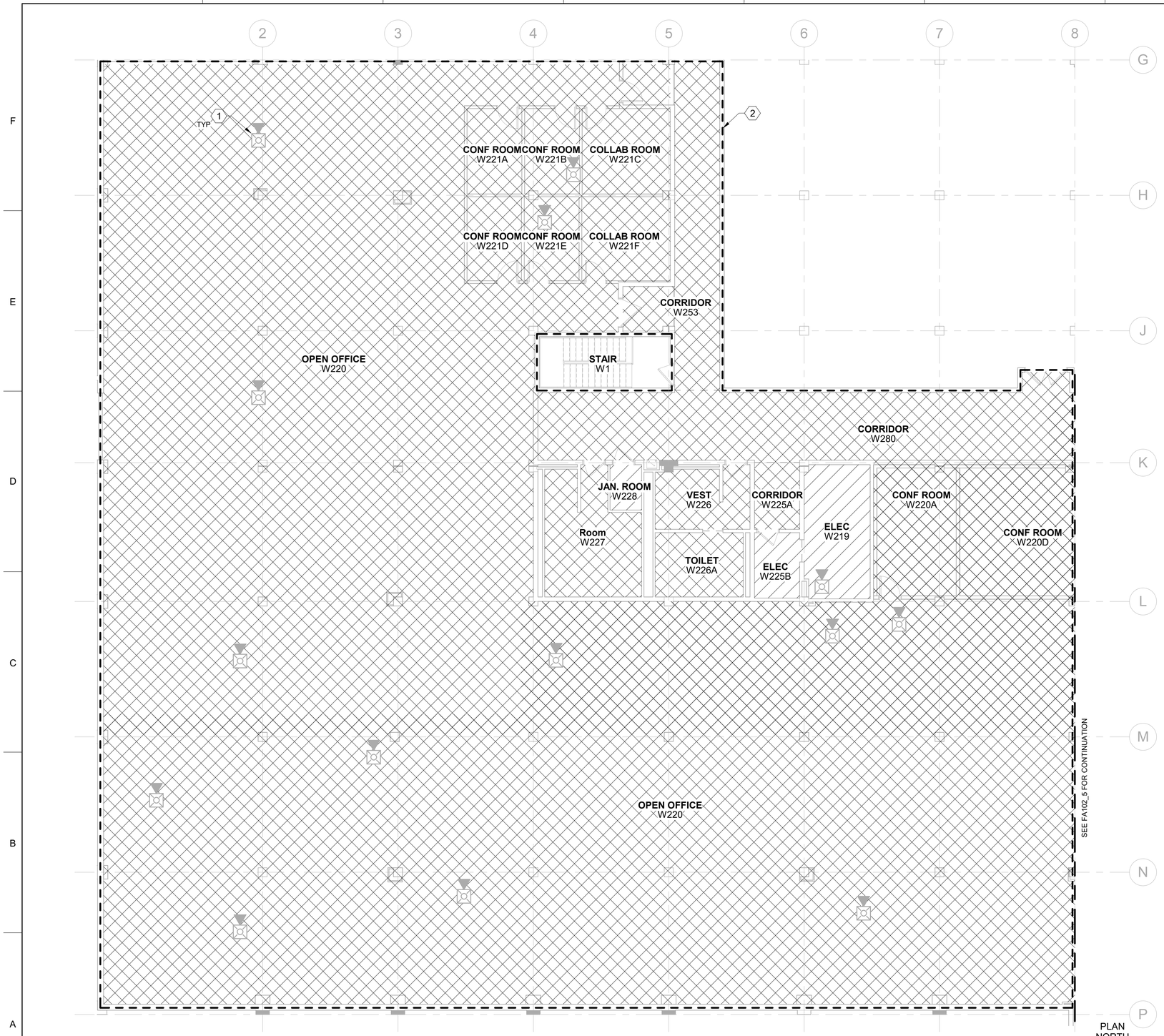
FIRE ALARM GENERAL NOTES, LEGEND, AND ABBREVIATIONS

SHEET ID

**FA001_5**



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION




A1 FIRE ALARM/MASS NOTIFICATION SECOND FLOOR PLAN - AREA A

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

**NOTES:**

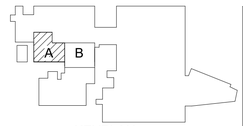
1. REFER TO FA001_5 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.
2. ALL NEW PENETRATIONS IN SECURE AREA WALLS SHALL BE AS INDICATED IN DETAIL C1 ON SHEET E-501_5. SEE ARCHITECTURAL PLANS FOR LOCATIONS OF SECURE AREA PERIMETER WALLS.
3. EXISTING NOTIFICATION DEVICE LOCATIONS ARE SHOWN ONLY IN THE SCOPE OF WORK AREAS. ALL LOCATIONS AND DEVICE TYPES SHOWN ARE APPROXIMATE AND HAVE NOT BEEN VERIFIED FOR ACCURACY. CONTRACTOR ASSUMES RESPONSIBILITY AND SHALL FIELD VERIFY THE TYPES OF DEVICES AND EXACT LOCATIONS.

**KEYED NOTES:**

1. DEMOLISH ALL EXISTING WALL AND CEILING MOUNTED NOTIFICATION APPLIANCES THOUGHOUT SCOPE OF WORK AREA.
2. DURING CONSTRUCTION AND UPON REMOVAL OF ACOUSTIC CEILING TILES, INSTALL TEMPORARY SPOT-TYPE HEAT DETECTION IN ALL SCOPE OF WORK AREAS, SPACED IN ACCORDANCE WITH NFPA 72. HEAT DETECTION SHALL BE INSTALLED BY A NICET LEVEL III TECHNICIAN AND BE CONNECTED TO THE EXISTING FACU/ACU SERVING THIS AREA. CIRCUITING TO HEAT DETECTORS IS NOT REQUIRED TO BE IN CONDUIT. REMOVE ALL TEMPORARY HEAT DETECTORS AT COMPLETION OF CONSTRUCTION AND PRIOR TO RECONSTRUCTION OF ACOUSTIC CEILING TILES.

**FIRE ALARM HATCH LEGEND:**

| | |
|---|---|
| | NO WORK REQUIRED. |
| | PROVIDE AUDIBLE NOTIFICATION THROUGHOUT THE AREA TO ACHIEVE THE DESIGN CRITERIA. |
| | PROVIDE AUDIBLE AND VISUAL NOTIFICATION THROUGHOUT THE AREA TO ACHIEVE THE DESIGN CRITERIA. |




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

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SUBMITTED BY: S. JOHNSON
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LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
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REPLACE AHU-5
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FIRE ALARM SECOND FLOOR PLAN - AREA A

SHEET ID

**FA101_5**

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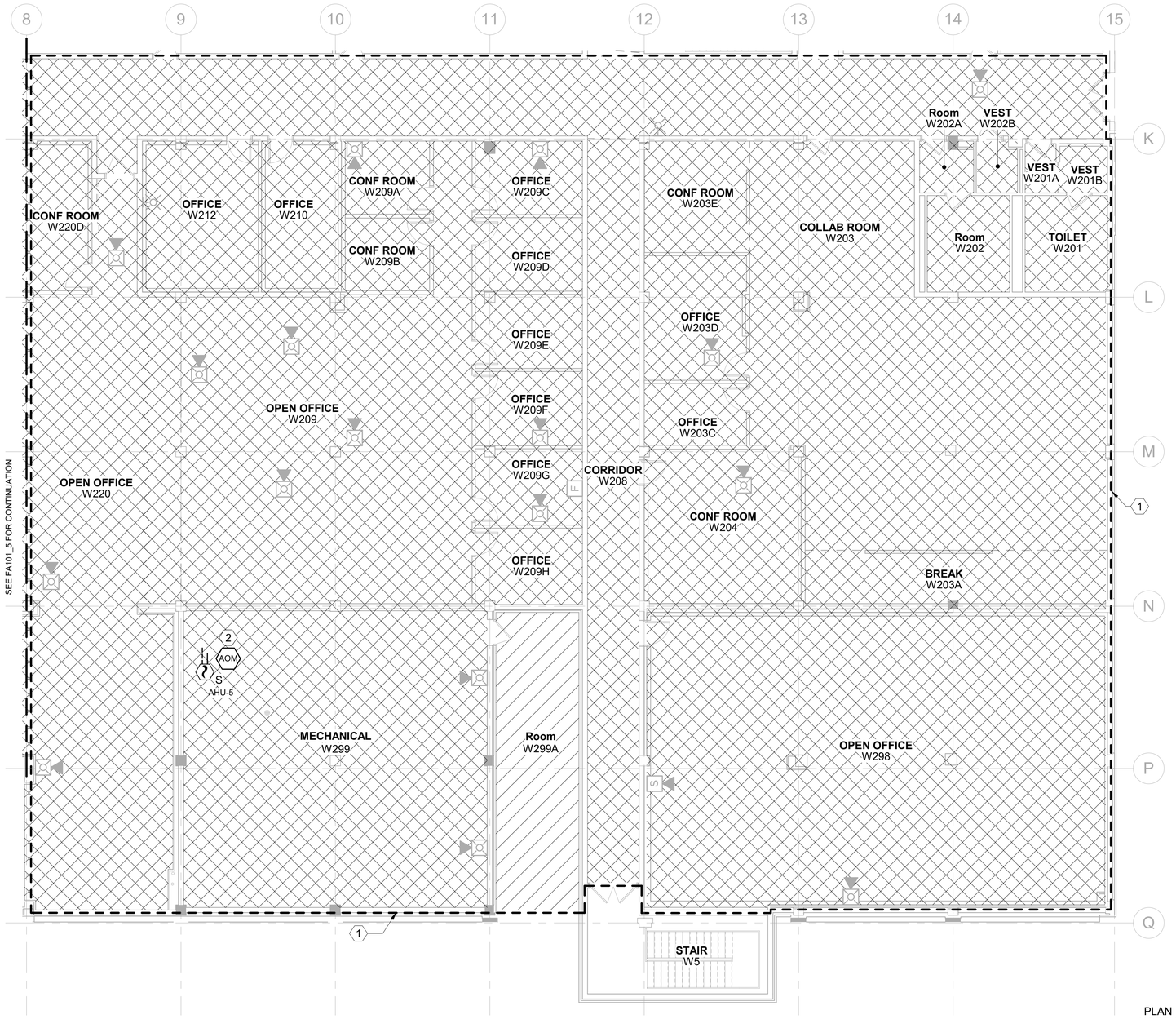
CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




A2 FIRE ALARM/MASS NOTIFICATION SECOND FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'
SCALE IN FEET

**NOTES:**

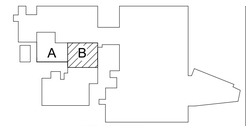
1. REFER TO FA001_5 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.
2. ALL NEW PENETRATIONS IN SECURE AREA WALLS SHALL BE AS INDICATED IN DETAIL C1 ON SHEET E-501_5. SEE ARCHITECTURAL PLANS FOR LOCATIONS OF SECURE AREA PERIMETER WALLS.
3. EXISTING NOTIFICATION DEVICE LOCATIONS ARE SHOWN ONLY IN THE SCOPE OF WORK AREAS. ALL LOCATIONS AND DEVICE TYPES SHOWN ARE APPROXIMATE AND HAVE NOT BEEN VERIFIED FOR ACCURACY. CONTRACTOR ASSUMES RESPONSIBILITY AND SHALL FIELD VERIFY THE TYPES OF DEVICES AND EXACT LOCATIONS.

**KEYED NOTES:**

1. DURING CONSTRUCTION AND UPON REMOVAL OF ACOUSTIC CEILING TILES, INSTALL TEMPORARY SPOT-TYPE HEAT DETECTION IN ALL SCOPE OF WORK AREAS, SPACED IN ACCORDANCE WITH NFPA 72. HEAT DETECTION SHALL BE INSTALLED BY A NICET LEVEL III TECHNICIAN AND BE CONNECTED TO THE EXISTING FACU/ACU SERVING THIS AREA. CIRCUITING TO HEAT DETECTORS IS NOT REQUIRED TO BE IN CONDUIT. REMOVE ALL TEMPORARY HEAT DETECTORS AT COMPLETION OF CONSTRUCTION AND PRIOR TO RECONSTRUCTION OF ACOUSTIC CEILING TILES.
2. PROVIDE AN ADDRESSABLE OUTPUT MODULE FOR DIRECT SHUTDOWN OF AHU-5. COORDINATE EXACT LOCATIONS AND CONNECTION TO AHU-5 WITH MECHANICAL CONTRACTOR.
3. DEMOLISH ALL EXISTING WALL AND CEILING MOUNTED NOTIFICATION APPLIANCES THOUGHOUT SCOPE OF WORK AREA.

**FIRE ALARM HATCH LEGEND:**

| | |
|---|---|
| | NO WORK REQUIRED. |
| | PROVIDE AUDIBLE NOTIFICATION THROUGHOUT THE AREA TO ACHIEVE THE DESIGN CRITERIA. |
| | PROVIDE AUDIBLE AND VISUAL NOTIFICATION THROUGHOUT THE AREA TO ACHIEVE THE DESIGN CRITERIA. |




KEYPLAN
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US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

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SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

FIRE ALARM SECOND FLOOR PLAN - AREA B

SHEET ID

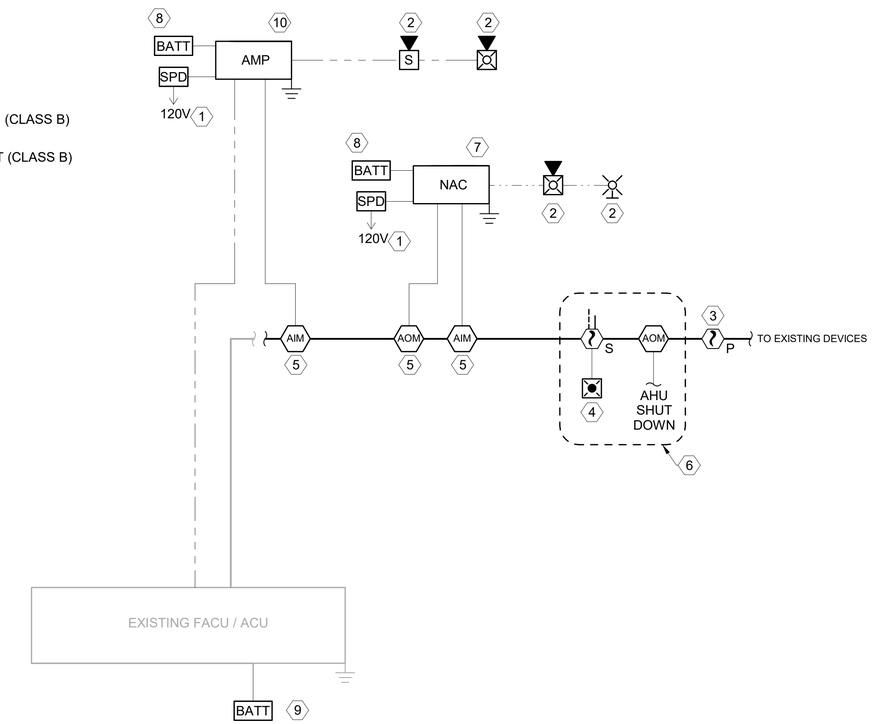
**FA102_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI

**CIRCUIT LEGEND**

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




**FIRE ALARM CONTROL UNIT / AUTONOMOUS CONTROL UNIT (FACU / ACU) FUNCTIONAL MATRIX**

| | ANNUNCIATION AT LOCAL PANEL | | | NOTIFICATION | | | | | AUXILIARY FUNCTION |
|---|---|---|---|---|---|---|---|---|---|
| **ALARM CONDITIONS** | AUDIO-VISUAL FIRE ALARM INDICATION BY DEVICE | AUDIO-VISUAL TROUBLE INDICATION BY DEVICE | AUDIO-VISUAL SUPERVISORY INDICATION BY DEVICE | SMOKE DETECTION FIRE ALARM SIGNAL TO FIRE DEPARTMENT | HEAT DETECTION FIRE ALARM SIGNAL TO FIRE DEPARTMENT | COMMON TROUBLE SIGNAL TO FIRE DEPARTMENT | COMMON SUPERVISORY SIGNAL TO FIRE DEPARTMENT | FIRE ALARM AUDIO / VISUAL ANNOUNCEMENT | SHUT-DOWN ASSOCIATED AIR HANDLING EQUIPMENT |
| SMOKE DETECTOR OVER FACU/ACU, AMPS AND NAC PANELS | X | | | X | | | | X | |
| TEMPORARY HEAT DETECTOR | X | | | | X | | | | |
| **TROUBLE CONDITIONS** | | | | | | | | | |
| AC POWER FAILURE | | X | | | | X | | | |
| LOW BATTERY | | X | | | | X | | | |
| OPEN CIRCUIT FAULT | | X | | | | X | | | |
| GROUND FAULT | | X | | | | X | | | |
| NOTIFICATION APPLIANCE CIRCUIT SHORT | | X | | | | X | | | |
| **SUPERVISORY CONDITIONS** | | | | | | | | | |
| IN-DUCT SMOKE DETECTORS | | | X | | | | X | | X |

**FIRE ALARM MATRIX GENERAL NOTES:**

1. THE FUNCTIONALITY OF THE MATRIX ON THIS SHEET SHALL MODIFY THE EXISTING FACU/ACU PROGRAMMING. ANY EXISTING PROGRAMING NOT MODIFIED BY THIS MATRIX SHALL REMAIN.

**ALARM RISER GENERAL NOTES:**

1. REFER TO SHEET FA001_5 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, AND CONTRACT DOCUMENTS.
3. THE CIRCUITRY CLASSIFICATIONS INDICATED ON THIS DRAWING HAVE NOT BEEN VERIFIED. ASSUME ALL RESPONSIBILITY AND VERIFY THE EXISTING CIRCUITRY CLASSIFICATION. WHERE AN EXISTING CIRCUIT IS EXPANDED, THE EXISTING CIRCUITRY CLASSIFICATION SHALL REMAIN.
4. WHERE AN ADDRESSABLE INPUT MODULE IS UTILIZED, PROVIDE AN END-OF-LINE RESISTOR TO MONITOR THE INTEGRITY OF THE CLASS B CIRCUIT TO THE CONVENTIONAL DEVICE.

**KEYED NOTES:**

1. CIRCUIT BREAKER SHALL BE COLORED RED, LOCKABLE, AND LABELED FIRE ALARM.
2. QUANTITY AND LOCATION BY CONTRACTOR'S DESIGN TO MEET DESIGN CRITERIA.
3. PROVIDE SMOKE DETECTION ABOVE NEW AMP AND NAC PANELS (IF PROVIDED).
4. PROVIDE INDICATING LIGHT AND SIGN NEAR HVAC UNIT MODULE ON SMOKE DETECTION WHERE INDICATING LIGHT ON THE SMOKE DETECTOR IS NOT VISIBLE FROM FLOOR.
5. PROVIDE ADDRESSABLE INPUT AND OUTPUT MODULE(S) AS REQUIRED TO ACHIEVE THE FUNCTIONALITY INDICATED IN THE FIRE ALARM MATRIX.
6. PROVIDE SUPPLY DUCT SMOKE DETECTORS AND DIRECT SHUT DOWN FOR THE FOLLOWING UNITS: AHU-5. REFERENCE MECHANICAL DRAWINGS FOR EXACT LOCATION.
7. PROVIDE ADDITIONAL BOOSTER PANELS AS REQUIRED. LOCATE NEW PANEL IN THE SAME LOCATION AS THE EXISTING.
8. WHERE EXISTING NAC OR SPEAKER CIRCUIT IS EXPANDED, PROVIDE NEW BATTERIES TO PROVIDE INCREASED CAPACITY FOR THE REVISED NOTIFICATION CIRCUITRY.
9. PROVIDE NEW BATTERIES TO PROVIDE INCREASED BATTERY CAPACITY FOR THE REVISED FIRE ALARM SYSTEM.
10. WHERE THE EXISTING AMP PANEL HAS CAPABILITIES FOR EXPANSION, IT MAY BE USED AS LONG AS EXPANDING THE EXISTING PANEL DOES NOT EXCEED THE DESIGN CRITERIA. IF THE EXISTING AMP PANEL CANNOT BE EXPANDED, PROVIDE A NEW PANEL FOR THE SYSTEM MODIFICATIONS.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KNOFF
DRAWN BY: M. MAFFEI
CHECKED BY: K. KNEPPER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

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LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL.
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PN: ZHTV-160060 / P2: 4699978
WRIGHT-PATTERSON AFB, OHIO

FIRE ALARM RISER DIAGRAM AND MATRIX

SHEET ID

**FA601_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

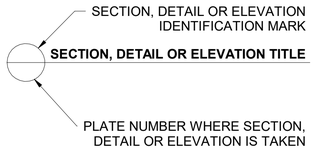


CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION

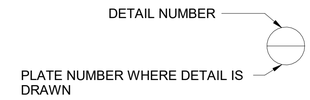
## FIRE SUPPRESSION ABBREVIATIONS

| | |
|---|---|
| AFF | ABOVE FINISHED FLOOR |
| AHJ | AUTHORITY HAVING JURISDICTION |
| BMCD | BURNS AND MCDONNELL |
| FP | FIRE PROTECTION |
| NC | NORMALLY CLOSED |
| (S) | ELECTRICALLY SUPERVISED |
| SQ FT | SQUARE FOOT |

## DETAIL/SECTION TITLE




## DETAIL CALLOUT SYMBOL




## FIRE PROTECTION SPRINKLER SYSTEM DESIGN CRITERIA

| MARK | HAZARD CLASSIFICATION | SYSTEM TYPE | DENSITY GPM/SF | REMOTE AREA SQ FT | MAXIMUM AREA PER HEAD SQ FT | HOSE DEMAND GPM | SPRINKLER CHARACTERISTICS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | TEMP RATING | TYPE | K-FACTOR | FINISH |
| NO HATCH | NOT IN SCOPE | - | - | - | - | - | - | - | - | - |
| | LIGHT HAZARD | WET | 0.10 | 1500 | 225 | 250 | MATCH EXISTING | MATCH EXISTING | 5.6 | MATCH EXISTING |
| | ORDINARY HAZARD | WET | 0.20 | 2500 | 130 | 250 | MATCH EXISTING | MATCH EXISTING | 8.0 | MATCH EXISTING |

## FIRE SUPPRESSION GENERAL NOTES

1. PROVIDE ALL NECESSARY COMPONENTS FOR REVISIONS TO THE EXISTING WET-PIPE SPRINKLER SYSTEMS AS INDICATED IN THESE DRAWINGS.
2. ALL SYSTEMS WHICH REQUIRE COORDINATION BETWEEN TRADES SHALL BE TO THE SATISFACTION OF THE BMCD ENGINEER AND AUTHORITY HAVING JURISDICTION. CORRECT ANY DEFICIENCIES, INCONSISTENCIES, OR POORLY COORDINATED INSTALLATIONS AT NO ADDITIONAL COST.
3. DETERMINE FINAL DESIGN REQUIREMENTS (DEVICE QUANTITY, SIZE, AND LOCATIONS). DRAWINGS INDICATE MINIMUM REQUIREMENTS; VERIFY AND COORDINATE FINAL DESIGN REQUIREMENTS WITH THESE CONSTRUCTION DOCUMENTS, SPECIFICATIONS, REFERENCE DOCUMENTS, APPLICABLE CODES, AND FACILITY USER REQUIREMENTS.
4. PERFORM A HYDRANT FLOW TEST IN ACCORDANCE WITH NFPA 291 AND BASE ALL HYDRAULIC CALCULATIONS ON THIS FLOW TEST. CONTACT AND COORDINATE WITH BASE FIRE MARSHALL PRIOR TO PROCEEDING WITH FLOW TEST.
5. PAINT ALL EXPOSED FIRE SUPPRESSION PIPING RED IN UNFINISHED AREAS. PIPING EXPOSED IN FINISHED SPACES SHALL BE PAINTED TO MATCH THE SURROUNDINGS.
6. REFER TO SHEET FX100_5 FOR EXISTING PIPE ROUTING. THE INFORMATION ON SHEET FX100_5 HAS NOT BEEN VERIFIED FOR ACCURACY. VERIFY ALL EXISTING CONDITIONS AND ASSUME ALL RESPONSIBILITY FOR ANY ASSUMPTIONS MADE BY OR FROM THESE SHEETS.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

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CHECKED BY: K. KNEPPER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
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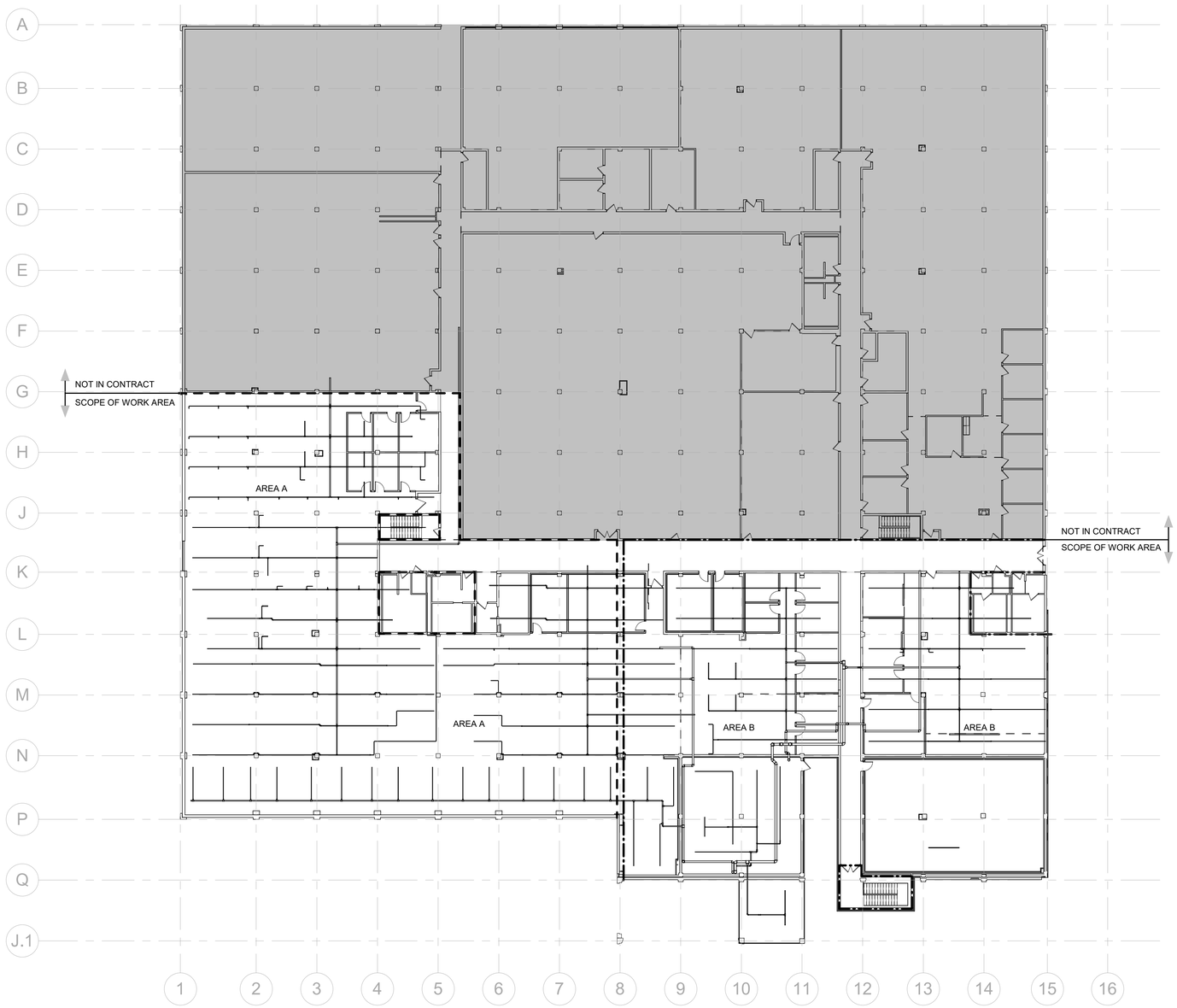
FIRE SUPPRESSION NOTES, LEGEND, AND ABBREVIATIONS

SHEET ID
**FX001_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION




A1 FIRE SUPPRESSION OVERALL SECOND FLOOR PLAN
SCALE: 3/64" = 1'-0"

**NOTES:**

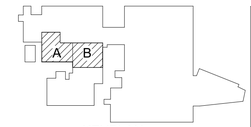
1. REFER TO FX001_5 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

**AREA SCHEDULE**

NOT IN SCOPE

AREA A

AREA B




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

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FIRE SUPPRESSION OVERALL FLOOR PLAN

SHEET ID

**FX100_5**

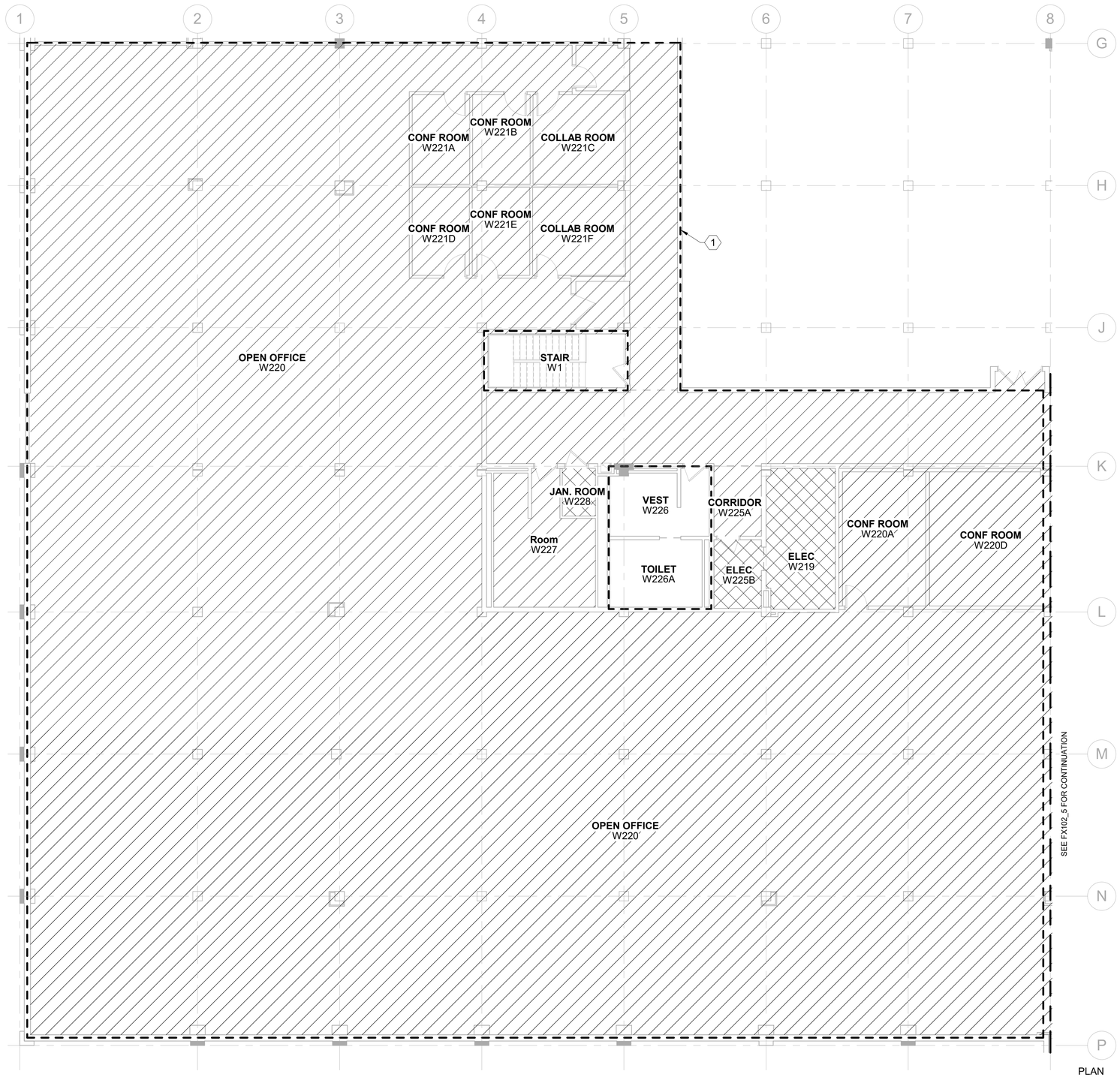
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)

ARIMS: 200A Disposition: Maintain for 15 yrs after construction

NOT FOR CONSTRUCTION




A1 FIRE SUPPRESSION SECOND FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

**NOTES:**

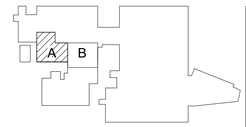
1. REFER TO FX001_5 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.
2. NO NEW PIPING PENETRATIONS SHALL BE PROVIDED IN SECURE AREA WALLS.
3. COORDINATE SPRINKLER PIPE ROUTING WITH NEW AND EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT.

**KEYED NOTES:**

(1) MODIFY EXISTING SPRINKLER SYSTEM AND PROVIDE NEW SPRINKLERS AS NECESSARY TO ACCOMMODATE NEW CEILING AND WALL LAYOUTS IN ACCORDANCE WITH NFPA 13 REQUIREMENTS. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR CHANGES IN CEILING LAYOUT.

**HAZARD SCHEDULE**

| MARK | HAZARD CLASSIFICATION |
|---|---|
| NO HATCH | NO WORK REQUIRED |
| | LIGHT HAZARD |
| | ORDINARY HAZARD |




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

DATE | DESCRIPTION | MARK

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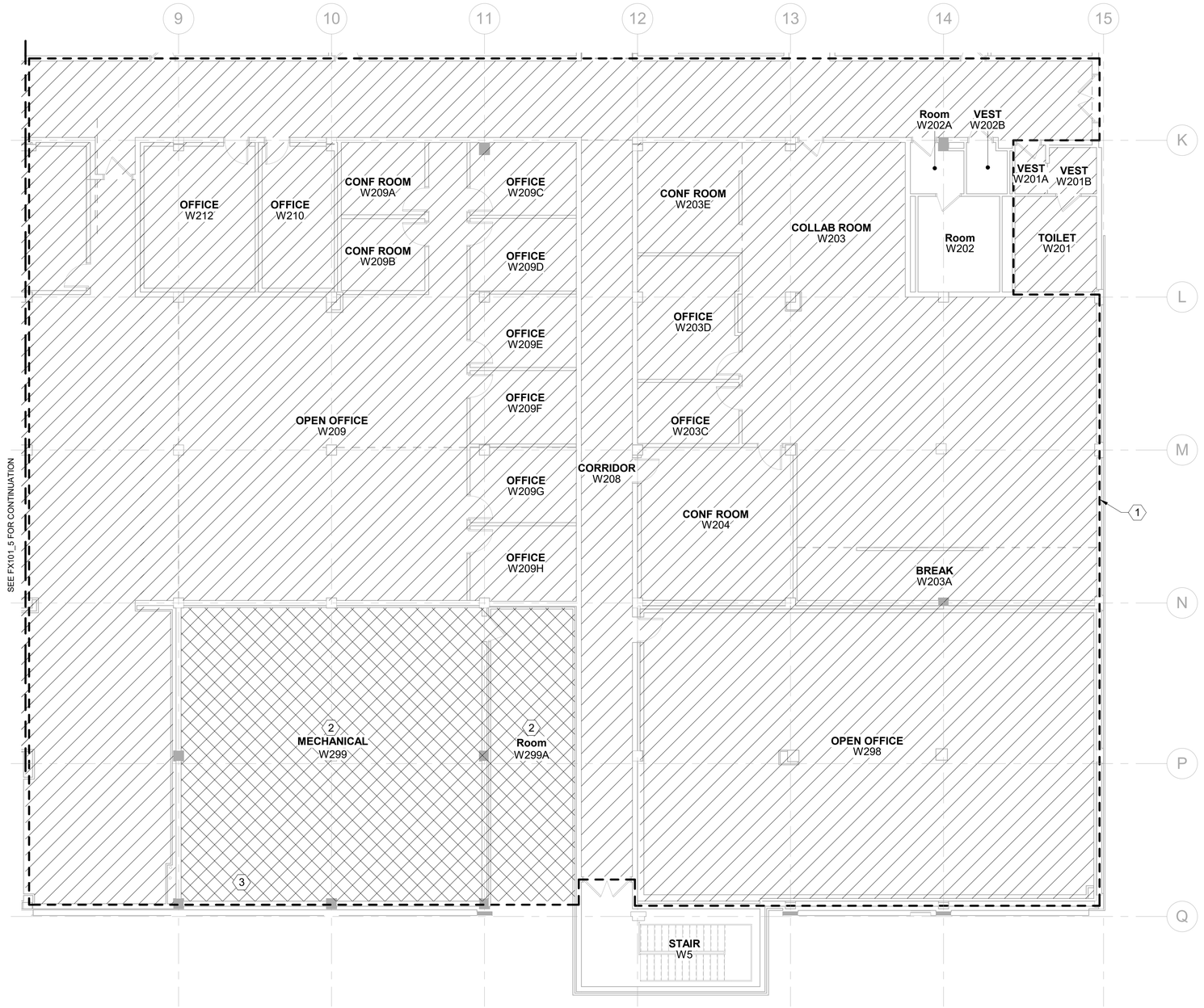
FIRE SUPPRESSION SECOND FLOOR PLAN - AREA A

SHEET ID
**FX101_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



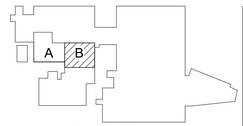
CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION




A2 FIRE SUPPRESSION SECOND FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'
SCALE IN FEET




KEYPLAN
NOT TO SCALE

**NOTES:**

1. REFER TO FX001_5 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.
2. NO NEW PIPING PENETRATIONS SHALL BE PROVIDED IN SECURE AREA WALLS.
3. COORDINATE SPRINKLER PIPE ROUTING WITH NEW AND EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT.

**KEYED NOTES:**

1. MODIFY EXISTING SPRINKLER SYSTEM AND PROVIDE NEW SPRINKLERS AS NECESSARY TO ACCOMMODATE NEW CEILING AND WALL LAYOUTS IN ACCORDANCE WITH NFPA 13 REQUIREMENTS. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR CHANGES IN CEILING LAYOUT.
2. IN ROOMS WITH EXPOSED CEILINGS, MODIFY SPRINKLER COVERAGE AND PIPING AS REQUIRED TO ACCOUNT FOR NEW MECHANICAL AND ELECTRICAL EQUIPMENT. PROVIDE SPRINKLERS UNDER LARGE OBSTRUCTIONS AS REQUIRED BY NFPA 13.
3. ELEVATE THE EXISTING 6 INCH SPRINKLER PIPING SPANNING IN FRONT OF THE INTAKE LOUVER TO A HEIGHT ABOVE THE LOUVER TO AVOID BLOCKING THE LOUVER OPENING.

**HAZARD SCHEDULE**

| MARK | HAZARD CLASSIFICATION |
|---|---|
| NO HATCH | NO WORK REQUIRED |
| | LIGHT HAZARD |
| | ORDINARY HAZARD |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

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FIRE SUPPRESSION SECOND FLOOR PLAN - AREA B

SHEET ID
**FX102_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI


ARIMS: 200A Disposition: Maintain for 15 yrs after construction

## 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 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.

## SYMBOLS - GROUNDING/LIGHTNING PROTECTION

- GROUND ROD
- GROUND TEST WELL
- LIGHTNING PROTECTION AIR TERMINAL
- STATIC GROUND
- GROUND BAR
  - MGB = MAIN GROUND BUSBAR
  - PBB, SBB = TELECOMM BONDING BUSBARS
  - MPG = LAB MULTIPOINT GROUND (AND STATIC)
- BOLTED GROUND CONNECTION
- EXOTHERMIC WELDED CONNECTION

## 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
- CONDUIT ROUTED VERTICALLY

### RECEPTACLES

- 120V, NEMA 5-20R, MOUNT AT 18" UON

| | |
|---|---|
| RECESSED SIMPLEX | SURFACE SIMPLEX |
| RECESSED DUPLEX | SURFACE DUPLEX |
| RECESSED QUAD | SURFACE QUAD |
| CEILING RECESSED DUPLEX | FLOORBOX RECESSED DUPLEX |
| FLOORBOX RECESSED | SPECIAL RECEPTACLE (REFER TO DRAWINGS FOR NEMA CONFIGURATION) |
| CORD REEL | |
| POWER POLE (NEW) PP | POWER POLE (EXISTING) PP(E)TO BE REUSED WHERE NOTED |

### 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)
- SURFACE POWER/COMM, REFER TO EP501 FOR INSTALLATION REQUIREMENTS
- RECESSED POWER/COMM, REFER TO EP501 FOR INSTALLATION REQUIREMENTS
- 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 — EQUIPMENT IDENTIFICATION; PANELBOARD - CIRCUIT; SYMBOL MODIFIER(S); MECHANICAL EQUIPMENT CONNECTION
- REMOTE DISCONNECT SWITCH

### 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
- (E) ELECTRICAL CONNECTION

### 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.

### SWITCHES

- DISCONNECT SWITCH
  - "SP" MODIFIER = SINGLE POINT / DISCONNECT PART OF EQUIPMENT
- COMBINATION STARTER/DISCONNECT SWITCH
- M — MOTOR-RATED SWITCH

## SYMBOLS - COMMUNICATIONS

- WICS — EXISTING WICS BOX MOUNTED ABOVE THE CEILING. FIBER TYPE AVAILABLE; Y - YELLOW FIBER; R - RED FIBER; G - GREEN FIBER
- CF: COMMUNICATIONS POLE (NEW)
- CP-E: COMBINATION POWER/COMMUNICATIONS POLE (EXISTING) TO BE RE-USED WHERE NOTED.
- CF-E: COMMUNICATIONS POLE (EXISTING) TO BE RE-USED WHERE NOTED.

## SYMBOLS - LIGHTING

### LIGHTING FIXTURES

- REFER TO FIXTURE SCHEDULE FOR FIXTURE TYPE INFORMATION
- LINEAR FIXTURE
- EMERGENCY FIXTURE WITH LIFE SAFETY BRANCH CIRCUITING, UON (NOTE: ALL FIXTURES NOTED ON PLAN WITH HALF-SHADE INDICATE EMERGENCY)
- DOWNLIGHT OR SPOTLIGHT, UON
- EXIT SIGNS, CEILING: ARROW INDICATES EGRESS DIRECTION
- EXIT SIGNS, WALL: ARROW INDICATES EGRESS DIRECTION

### 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
- (PS) DAYLIGHT SENSOR

LINE VOLTAGE TOGGLE SWITCH — x

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 — x

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
- AUTOMATIC 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

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

ELECTRICAL SYMBOLS LEGEND - 1 OF 2

SHEET ID

**E-001_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

## 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 |
| RTU | ROOFTOP UNIT |
| 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 |
| WICS | WALLMOUNT INTERCONNECT CENTER (CORNING) |
| WP | WEATHERPROOF |
| WPIU | WEATHERPROOF WHILE IN USE |
| XFMR | TRANSFORMER |
| Z | IMPEDANCE |

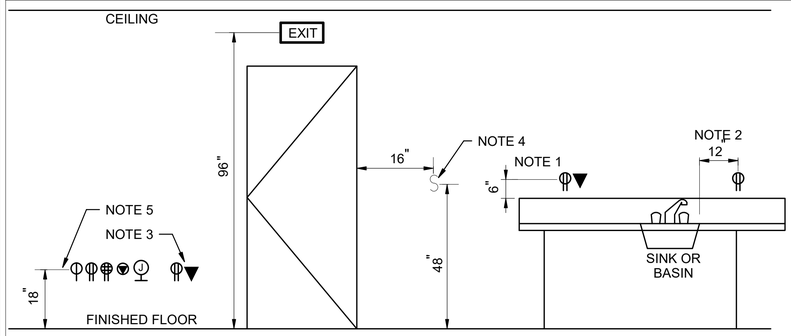
## GENERAL NOTES

1. SYMBOL ORIENTATION DOES NOT IMPLY DEVICE OR EQUIPMENT ORIENTATION. UNLESS NOTED AS SUCH.
2. SYMBOL SIZE DOES NOT IMPLY EQUIPMENT SIZE, UON.
3. MOUNTING HEIGHT INDICATED IN LEGEND AND ON THE DRAWINGS MUST BE THE DISTANCE MEASURED FROM THE CENTER OF THE DEVICE TO THE FINISHED FLOOR.
4. NOT ALL SYMBOLS ARE USED.
5. ALL RECEPATACLES INDICATED WITH A "WP" SUBSCRIPT MUST BE GFI AND INSTALLED WITH A CAST, GASKETED, AND "WHILE IN USE COVER."
6. NEW SWITCHBOARDS AND PANEL BOARDS MUST BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH THE REQUIREMENTS OF NEC ARTICLE 110.16.
7. COORDINATE WITH MECHANICAL CONTRACTOR REGARDING ELECTRICAL REQUIREMENTS OF ACTUAL MECHANICAL EQUIPMENT PROVIDED.
8. ALL SYSTEMS THAT REQUIRE COORDINATION BETWEEN TRADES MUST BE TO THE SATISFACTION OF THE CONTRACTING OFFICER. ANY DEFICIENCIES, INCONSISTENCIES, OR POORLY COORDINATED INSTALLATIONS MUST BE CORRECTED BY THE CONTRACTOR.
9. ALL ELECTRICAL WORK MUST COMPLY WITH NEC (NFPA 70), NFPA 72, NFPA 101, AND DEPARTMENT OF DEFENSE UNIFIED FACILITIES CRITERIA (UFC) OR TECHNICAL LETTERS, IN ADDITION TO LOCAL CODES AND ORDINANCES.
10. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL ELECTRICAL, BRANCH AND FEEDER CIRCUITS.
11. EVERY MAJOR COMPONENT OF THE RACEWAY SYSTEMS EXCLUDING CONDUITS AND FITTINGS MUST BE MARKED WITH VOLTAGE, PANEL AND CIRCUIT NUMBER.
12. ALL NEW OUTLETS IN THE AREA UNDER CONTRACT MUST RECEIVE NEW AND VERIFIED LABELS.
13. REMOVE ALL EMPTY AND ABANDONED CONDUIT AND JUNCTION BOXES. PROPERLY SEAL OPENINGS LEFT IN WALLS DUE TO DEMOLITION WORK.
14. REFER TO H-SERIES SHEETS FOR ALL HAZARDOUS BUILDING MATERIAL, ASBESTOS/LEAD ABATEMENT, AND UNIVERSAL WASTE REQUIREMENTS.
15. ITEMS IN BOLD AND/OR DASHED ARE TO BE DEMOLISHED. ITEMS GRAYSCALE ARE EXISTING TO REMAIN.
16. UNLESS INDICATED AS EXISTING, ALL MATERIALS AND LABOR MUST BE CONSIDERED NEW.

## EXISTING CONDITIONS NOTES

1. THE ELECTRICAL DEMOLITION SHEETS SHOW EXISTING CONDITIONS THAT HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS AND ORIGINAL DRAWINGS. ADDITIONAL COMPONENTS AND CONDITIONS THAT ARE NOT SHOWN ON THE DRAWINGS MAY EXIST AND MAY REQUIRE ADJUSTMENTS THAT ARE NOT NOTED ON THE DRAWINGS.
2. NOT ALL EXISTING UTILITES AND OR ELECTRICAL SYSTEMS ARE SHOWN ON PLANS. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
3. OBTAIN WRITTEN PERMISSION FROM THE CONTRACTING OFFICER PRIOR TO SHUTTING OFF SERVICES OR SYSTEMS WHICH MAY AFFECT OTHER AREAS BEYOND THE LIMITS OF THE DEMOLITION AREA. PROVIDE TEMPORART POWER AS REQUIRED.
4. ALL ELECTRICAL EQUIPMENT AND DEVICES TO BE DEMOLISHED: COMPLETELY REMOVE ALL CONDUCTORS AND CONDUIT BACK TO SOURCE. WHERE CONDUIT REMOVAL IS NOT POSSIBLE, CAP CONDUIT AND MAKE SAFE.
5. REMOVE, STORE, CLEAN, RE-INSTALL, RECONNECT AND MAKE OPERATIONAL COMPONENTS INDICATED FOR RELOCATION OR RE-USE.
6. RESTORE ALL INTERIOR/EXTERIOR WALLS, CEILINGS, FLOORS, AND CONCRETE WORK REQUIRING PATCHING, PLASTERING, PAINTING AND ANY OTHER REPAIRS DUE TO ELECTRICAL WORK TO RESTORE THE ORIGINAL FINISH AND APPEARANCE.
7. PROTECT EXISTING ELECTRICAL EQUIPMENT INDICATED TO REMAIN. IF DAMAGED OR DISTURBED IN THE COURSE OF THE WORK, REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL CAPACITY, QUALITY AND FUNCTIONALITY.
8. PROVIDE TEMPORARY POWER AS REQUIRED FOR ALL EXISTING TO REMAIN ELECTRICAL, MECHANICAL, AND CONTROLS EQUIPMENT AFFECTED BY SCHEDULED POWER OUTAGES. COORDINATE REQUIREMENTS WITH COR.
9. DEMOLISH ALL ABANDONED NETWORK CABLING. CONTRACTOR TO ASSUME A MINUMIM OF 300 NETWORK CABLES AT 150LF EACH. DEMOLISH AS INDICATED ON THE DRAWINGS.

## 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.

## 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 28 01.00 10 POSTED IN THE ELECTRICAL ROOM.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

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600 DR. MARTIN LUTHER KING JR. PL
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REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

ELECTRICAL SYMBOLS LEGEND - 2 OF 2

SHEET ID
**E-002_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION

A1 OVERALL SECOND FLOOR DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

0 8' 16' 32'

PLAN NORTH

**DEMOLITION NOTES:**

1. FOR ELECTRICAL LEGEND, NOTES AND ABBREVIATIONS, SEE SHEETS E-001_5 AND E-002_5.
2. COORDINATE WITH THE CONTRACTING OFFICER AND FACILITY SECURITY OFFICER, A MINIMUM OF 10 WORKING DAYS PRIOR TO DEMOLITION , TO IDENTIFY ACTIVE FIBERS IN DEMOLITION AREAS. PROVIDE AN ACCEPTABLE MEANS FOR FACILITY SECURITY OFFICER TO VISUALLY INSPECT THE FIBER DURING THE DEMOLITION PROCESS.
3. EXISTING POWER POLES ARE FED USING WIREMOLD WALKERFLEX MODULAR WIRING SYSTEM. SEE DETAIL A4/EP-501_5 FOR ADDITIONAL INFORMATION.
4. IN ACCORDANCE WITH NEC ARTICLES 645.5, 725.25, AND 800.25, DEMOLISH ALL ABANDONED CONDUCTORS, ELECTRICAL RACEWAYS, ELECTRICAL CONNECTIONS, AND ASSOCIATED EQUIPMENT ABOVE CEILING. PROVIDE THE GOVERNMENT 10 BUSINESS DAYS TO IDENTIFY ALL ABANDONED ELECTRICAL WIRING, CONDUIT AND COMMUNICATIONS CABLING UPON COMPLETION OF THE CEILING REMOVAL. REMOVE ALL IDENTIFIED WIRING, CONDUIT, CABLING INCLUDING REMOVAL OF CABLING BACK TO IT'S SOURCE AND ABANDONED CONDUIT IN THE PROJECT BOUNDARY AREA. PROPERLY SEAL OPENINGS LEFT IN WALLS FROM DEMOLITION WORK. IN ADDITION TO DEVICE CABLING SHOWN ON DEMOLITION DRAWINGS THE FOLLOWING ADDITIONAL CABLING HAS BEEN IDENTIFIED FOR DEMOLITION:
   a. EXISTING RED PHONE CABLING: 35,000 FEET OF UTP CABLING, REMOVE FROM DEVICE TO TELECOM ROOM SOURCE.
   b. (1) 25 PAIR BACKBONE CABLE AND ASSOCIATED TERMINAL BOARDS. ESTIMATED LENGTH 300LF.
5. THE EXISTING BUILDING MUST REMAIN OPERATIONAL DURING CONSTRUCTION. PROVIDE TEMPORARY POWER AS NEEDED.
6. ALL WICS PANELS ARE EXISTING TO REMAIN, UON.
7. EXISTING COMMUNICATIONS DEVICES ARE NOT SHOWN ON DEMOLITION PLANS, CONTRACTOR IS REQUIRED TO:
   a. DEMOLISH ALL EXISTING FIBER OPTIC CABLING FROM WORK STATION DEVICE BOX TO SERVING WICS PANEL, TYPICAL 4 PER EXISTING DESK AND/OR MODULAR WORK STATION; UON.
   b. DEMOLISH ALL EXISTING CAT. 5 UTP PHONE CABLING FROM WORKSTATION TO TELECOMMUNICATION ROOM (W271A), TYPICAL 1 PHONE DEVICE PER EXISTING DESK AND/OR MODULAR WORK STATION, UON.
8. REFER TO H-SERIES SHEETS FOR ALL HAZARDOUS BUILDING MATERIAL, ASBESTOS/LEAD ABATEMENT, AND UNIVERSAL WASTE REQUIREMENTS.
9. REFER TO A-101_5 FOR PATCH AND REPAIR REQUIREMENTS.
10. EXISTING ABOVE CEILING RECEPTACLES, DEMO EXISTING ABOVE CEILING RECEPTACLES AND REPLACE WITH J-BOX, TYPICAL OF 20 LOCATIONS IN PROJECT AREA.
11. EXISTING ABOVE CEILING AMPLIFIERS, RELOCATE BELOW CEILING ON NEAREST AVAILABLE WALL. PROVIDE SURFACE MOUNT DUPLEX RECEPTACLE ON WALL NEAR AMPLIFIER, TIE INTO NEAREST AVAILABLE 120V BRANCH CIRCUIT. SPLICE AND EXTEND RG6 COAX CABLE DOWN TO AMPLIFIER. TYPICAL OF 5 LOCATIONS IN PROJECT AREA.
12. EXISTING CONDUITS PENETRATING SECURE PERIMETER WALL, VERIFY CONDUIT BONDING CONNECTION, CONNECT TO NEAREST BUILDING STEEL AS REQUIRED. REFER TO C1/EP501_5. TYPICAL OF 25 EXISTING CONDUIT LOCATIONS IN PROJECT AREA.
13. EXISTING ABOVE CEILING CONDUIT AND CABLE TRAY IS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO NOTIFY COR IF THERE ARE ANY CONFLICTS WITH NEW WORK.
14. CONTRACTOR TO VERIFY EXISTING BRANCH CIRCUITS PRIOR TO DEMOLITION. ALL CIRCUITS NOTED ON PLAN ARE BASED ON FIELD SURVEYS AND EXISTING AS-BUILT DRAWINGS. POWER POLES SHOWN WITHOUT BRANCH CIRCUITS WERE NOT ABLE TO BE IDENTIFIED IN THE FIELD. THE CONTRACTOR MUST DETERMINE EXISTING CIRCUITS. SEE EP100 SERIES DRAWINGS FOR REUSED BRANCH CIRCUITS.
15. THE SECURE FACILITY CONTROLLED AREA AND CONTROLLED AREA PERIMETER MUST BE SECURED EACH NIGHT WITH INTRUSION DETECTION SYSTEM (IDS) ALARMS AND LOCKED PER SECURE FACILITY REQUIREMENTS AND APPROVED BY THE GOVERNMENT. ALL WORK WITHIN THE PROJECT AREA WILL REQUIRE ESCORTS. THE MECHANICAL EQUIPMENT ROOMS HAVE PIR AND BUS ALARMS AND REQUIRE ESCORTS AT ALL TIMES. ANY NEW TEMPORARY OR PERMANENT PENETRATIONS OF THE SECURE FACILITY CONTROLLED AREA AND CONTROLLED AREA PERIMETER ARE REQUIRED TO BE SECURED AT THE END OF THE WORK DAY WITH ALARMS. DIEBOLD IS THE CURRENT IDS SYSTEM.
16. ITEMS IN BOLD AND/OR DASHED ARE TO BE DEMOLISHED. ITEMS GRAYSCALE ARE EXISTING TO REMAIN.

**LEGEND:**

AREA/ROOMS NOT IN SCOPE

CONSTRUCTION BOUNDARY

FURNITURE IN THIS AREA TO BE REMOVED AND REPLACED WITH NEW FURNITURE. DISCONNECT POWER TO THE POWER POLE AND REMOVE THE BRANCH CIRCUIT BACK TO SOURCE UNLESS THE CIRCUIT IS NOTED TO BE RE-USED. IF CIRCUIT IS TO BE RE-USED, DISCONNECT POWER TO THE POWER POLE, REMOVE THE BRANCH CIRCUIT BACK TO THE NEAREST JUNCTION BOX AND EXTEND TO NEW POWER POLE LOCATION AS INDICATED. REMOVE, CLEAN, AND STORE EXISTING POWER POLES TO BE RE-INSTALLED IN NEW OFFICE CONFIGURATION.

FURNITURE IN THIS AREA TO BE REMOVED AND REINSTALLED IN A NEW CONFIGURATION. DISCONNECT POWER TO THE POWER POLE AND REMOVE THE BRANCH CIRCUIT BACK TO THE NEAREST JUNCTION BOX. SEE A4/EP501_5 FOR MORE INFORMATION. DOCUMENT THE EXISTING CIRCUIT INFORMATION AND EXTEND BRANCH CIRCUIT AS REQUIRED FOR RE-INSTALLATION. POWER POLES WILL BE REINSTALLED IN NEW LOCATION AS INDICATED. REMOVE, CLEAN, AND STORE EXISTING POWER POLES TO BE RE-INSTALLED IN NEW OFFICE CONFIGURATION.

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: J. DONOVAN
SIZE: 34X22

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL.
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

OVERALL SECOND FLOOR DEMOLITION PLAN

SHEET ID

**ED100_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION

**DEMOLITION NOTES:**

1. FOR GENERAL DEMOLITION REQUIREMENTS REFER TO ED100_5.

**KEYED NOTES:** (#)

1. THIS ROOM TO BE DEMOLISHED, DEMOLISH ALL DEVICES, EQUIPMENT, AND ASSOCIATED BRANCH CIRCUITING BACK TO SOURCE, UON. RECEPTACLES ON EXISTING WALLS MUST REMAIN.
2. DEMOLISH EXISTING EMERGENCY LIGHTING BRANCH CIRCUITS BACK TO THIS LOCATION.
3. DEMOLISH EXISTING CABLE TRAY SERVING COPPER PHONE SYSTEM, REMOVE ALL CABLING BACK TO SOURCE.
4. DEMOLISH EXISTING WALKERFLEX DISTRIBUTION UNIT SERVING OFFICE MODULAR FURNITURE IN THE AREA. SEE DETAIL A4/EP-501_5 FOR REQUIREMENT, TYPICAL FOR ALL OFFICE MODULAR FURNITURE.
5. THIS CONDUIT AND JUNCTION BOX AND ASSOCIATED CABLING TO REMAIN. PROTECT AND KEEP SAFE DURING CONSTRUCTION.
6. DEMOLISH EXISTING ELECTRICAL CONNECTION FOR MECHANICAL EQUIPMENT BACK TO SOURCE.

**LEGEND:**

AREA/ROOMS NOT IN SCOPE

MATCHLINE SEE SHEET ED102_5

PLAN NORTH

0 4' 8' 16'

KEYPLAN NOT TO SCALE

A1 SYSTEMS DEMOLITION SECOND FLOOR PLAN - AREA A

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

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

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DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: G. JOHNSON
SIZE: 34X22

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

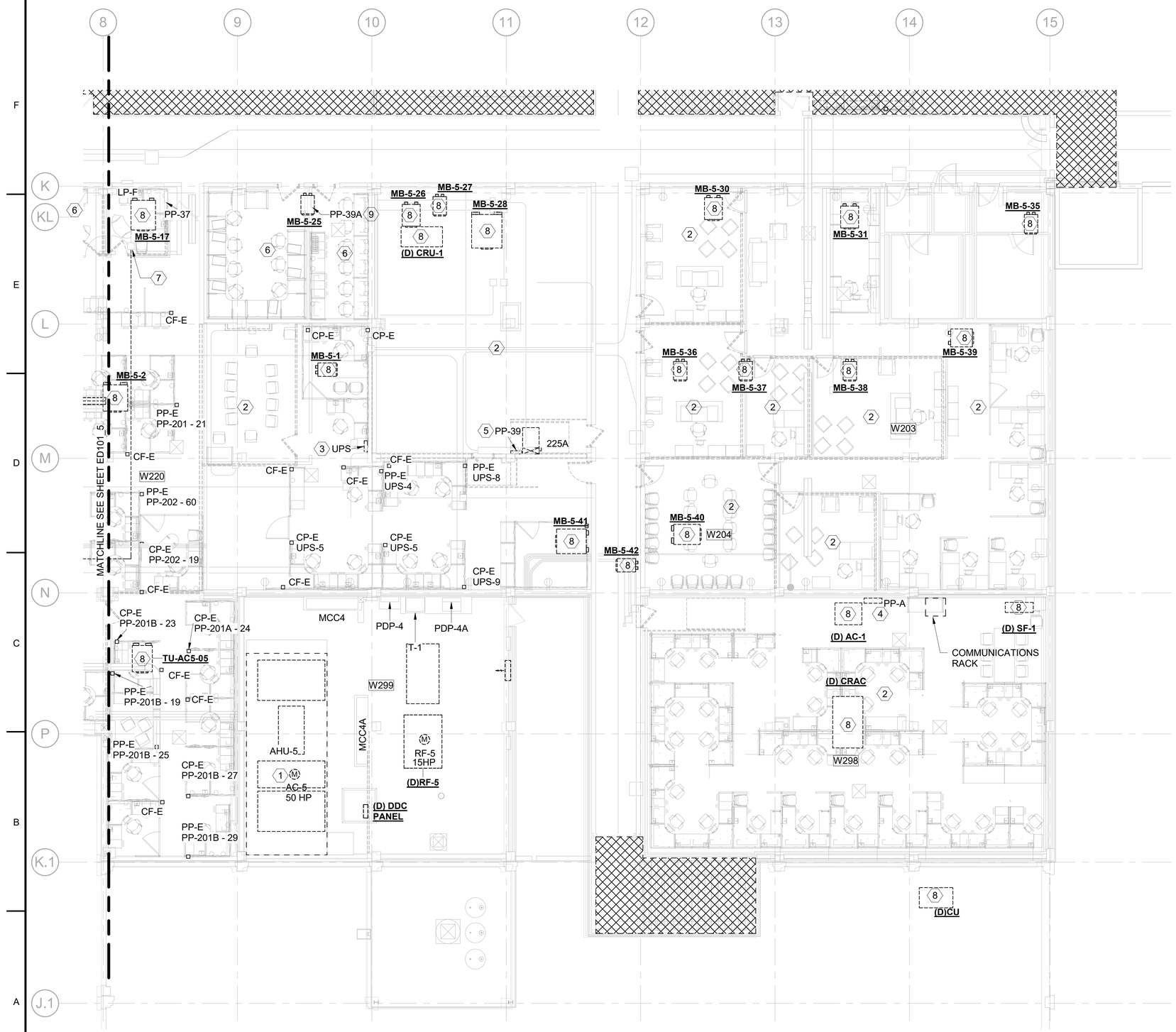
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

SYSTEMS DEMOLITION SECOND FLOOR PLAN - AREA A

SHEET ID

**ED101_5**

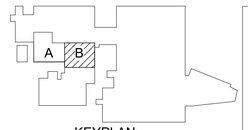
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000




A1 SYSTEMS DEMOLITION SECOND FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'




KEYPLAN
NOT TO SCALE

**DEMOLITION NOTES:**

1. FOR GENERAL DEMOLITION REQUIREMENTS REFER TO ED100_5.

**KEYED NOTES:** (#)

1. DISCONNECT AND REMOVE ALL ASSOCIATED ELECTRICAL CONNECTIONS AND CONTROLS FOR AHU-5 BACK TO SOURCE (MCC-4). SEE SHEET ED601_5 FOR DETAILS AND ADDITIONAL REQUIREMENTS.
2. THIS ROOM TO BE DEMOLISHED, DEMOLISH ALL COMMUNICATIONS EQUIPMENT, COMMUNICATIONS DEVICES, ELECTRICAL DEVICES, EQUIPMENT, AND ASSOCIATED BRANCH CIRCUITING BACK TO SOURCE, UON. RECEPTACLES ON EXISTING WALLS MUST REMAIN.
3. DEMOLISH EXISTING PANEL 'UPS' AND ITS ASSOCIATED FEEDERS AND BRANCH CIRCUITS. VERIFY ALL BRANCH CIRCUITS SERVED BY THE PANEL PRIOR TO DEMOLITION. IF A BRANCH CIRCUIT OR CIRCUITS EXTEND OUTSIDE OF PROJECT SCOPE BOUNDARY, NOTIFY COR IN ORDER TO COORDINATE WORK EFFORTS. THE IDENTIFIED BRANCH CIRCUITS THAT EXTEND OUTSIDE OF THE PROJECT SCOPE BOUNDARY WILL BE REQUIRED TO BE RE-CIRCUITED TO NEW PANEL PP-60A LOCATED IN W219, UTILIZING SPARE CIRCUITS IN PANEL. ASSUME 10% OF CIRCUITS IN PANEL TO BE RE-CIRCUITED.
4. DEMOLISH EXISTING PANEL 'PP-A' AND ITS ASSOCIATED FEEDERS AND BRANCH CIRCUITS. VERIFY ALL BRANCH CIRCUITS SERVED BY THE PANEL PRIOR TO DEMOLITION. IF A BRANCH CIRCUIT OR CIRCUITS EXTEND OUTSIDE OF PROJECT SCOPE BOUNDARY, NOTIFY COR IN ORDER TO COORDINATE WORK EFFORTS. THE IDENTIFIED BRANCH CIRCUITS THAT EXTEND OUTSIDE OF THE PROJECT SCOPE BOUNDARY WILL BE REQUIRED TO BE RE-CIRCUITED TO PANEL PP-60A PP-60A LOCATED IN W219, UTILIZING SPARE CIRCUITS IN PANEL. ASSUME 10% OF CIRCUITS IN PANEL TO BE RE-CIRCUITED.
5. DEMOLISH EXISTING PANEL 'PP-39' AND ITS ASSOCIATED FEEDERS AND BRANCH CIRCUITS. VERIFY ALL BRANCH CIRCUITS SERVED BY THE PANEL PRIOR TO DEMOLITION. IF A BRANCH CIRCUIT OR CIRCUITS EXTEND OUTSIDE OF PROJECT SCOPE BOUNDARY, NOTIFY COR IN ORDER TO COORDINATE WORK EFFORTS. THE IDENTIFIED BRANCH CIRCUITS THAT EXTEND OUTSIDE OF THE PROJECT SCOPE BOUNDARY WILL BE REQUIRED TO BE RE-CIRCUITED TO PANEL PP-39A LOCATED IN W210, UTILIZING SPARE CIRCUITS IN PANEL. ASSUME 10% OF CIRCUITS IN PANEL TO BE RE-CIRCUITED.
6. DISCONNECT AND REMOVE ALL EXISTING TELECOMMUNICATIONS AND POWER DEVICES/RECEPTACLES OFF OF EXISTING WALLS IN THIS SPACE. PROVIDE TEMPORARY SUPPORTING MEANS THROUGHOUT THE COMPLETION OF CONSTRUCTION. COORDINATE ALL WORK WITH GENERAL CONTRACTOR PRIOR TO WORK. REFER TO EP102 FOR MORE INFORMATION.
7. DEMOLISH EXISTING EMERGENCY LIGHTING BRANCH CIRCUITS BACK TO THIS LOCATION SHOWN.
8. DEMOLISH EXISTING ELECTRICAL CONNECTION FOR MECHANICAL EQUIPMENT BACK TO SOURCE.
9. DISCONNECT AND REMOVE PANEL PP-39A FROM EXISTING WALL. PROVIDE TEMPORARY SUPPORTING MEANS FOR PANEL AND ASSOCIATED CONDUIT THROUGHOUT THE COMPLETION OF CONSTRUCTION. COORDINATE ALL WORK WITH GENERAL CONTRACTOR PRIOR TO WORK. VERIFY EXISTING BRANCH CIRCUITS TO REMAIN ARE ALSO SUPPORTED.

**LEGEND:**

AREA/ROOMS NOT IN SCOPE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
CONSTRUCTION DIVISION
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO
B

SYSTEMS DEMOLITION SECOND FLOOR PLAN - AREA B

SHEET ID

**ED102_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

**DEMOLITION NOTES:**

1. FOR ELECTRICAL LEGEND, NOTES AND ABBREVIATIONS, SEE SHEETS E-001_5 AND E-002_5.
2. DEMOLISH ALL EXISTING LIGHTING FIXTURES AND ASSOCIATED LIGHTING CONTROLS UON. PROVIDE TEMPORARY WORK LIGHTING AS REQUIRED.
3. DEMOLISH ALL EXISTING EXIT LIGHT FIXTURES UON.
4. DEMOLISH ALL EXISTING EMERGENCY LIGHT FIXTURES UON.
5. DEMOLISH ALL EXISTING BLUE WARNING LIGHTS AND ASSOCIATED CONTROLS, UON.
6. REFER TO ARCHITECTURE DRAWINGS FOR PATCH AND REPAIR REQUIREMENTS.

**KEYED NOTES:** (#)

1. EMERGENCY FIXTURES LOCATED IN THIS AREA ARE CIRCUITED TO EXISTING PANEL LP-N. NORMAL LIGHT FIXTURES LOCATED IN THIS AREA ARE CIRCUITED TO EXISTING PANEL LP-D, LOCATED IN CORRIDOR W253 AND EXISTING PANEL LP-F, LOCATED IN CORRIDOR W280. ALL PANELS SHOWN ON SHEET ED100_5.

W220 W253 W280 W219 W220A W226 W225A W226A W225B W220

BLUE LIGHT

MATCHLINE SEE SHEET ED112_5

**LEGEND:**

AREA/ROOMS NOT IN SCOPE

PLAN NORTH

0 4' 8' 16'

KEYPLAN NOT TO SCALE

A1 LIGHTING DEMOLITION SECOND FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

ISSUE DATE: 02-16-23
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US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

LIGHTING DEMOLITION SECOND FLOOR PLAN - AREA A

SHEET ID

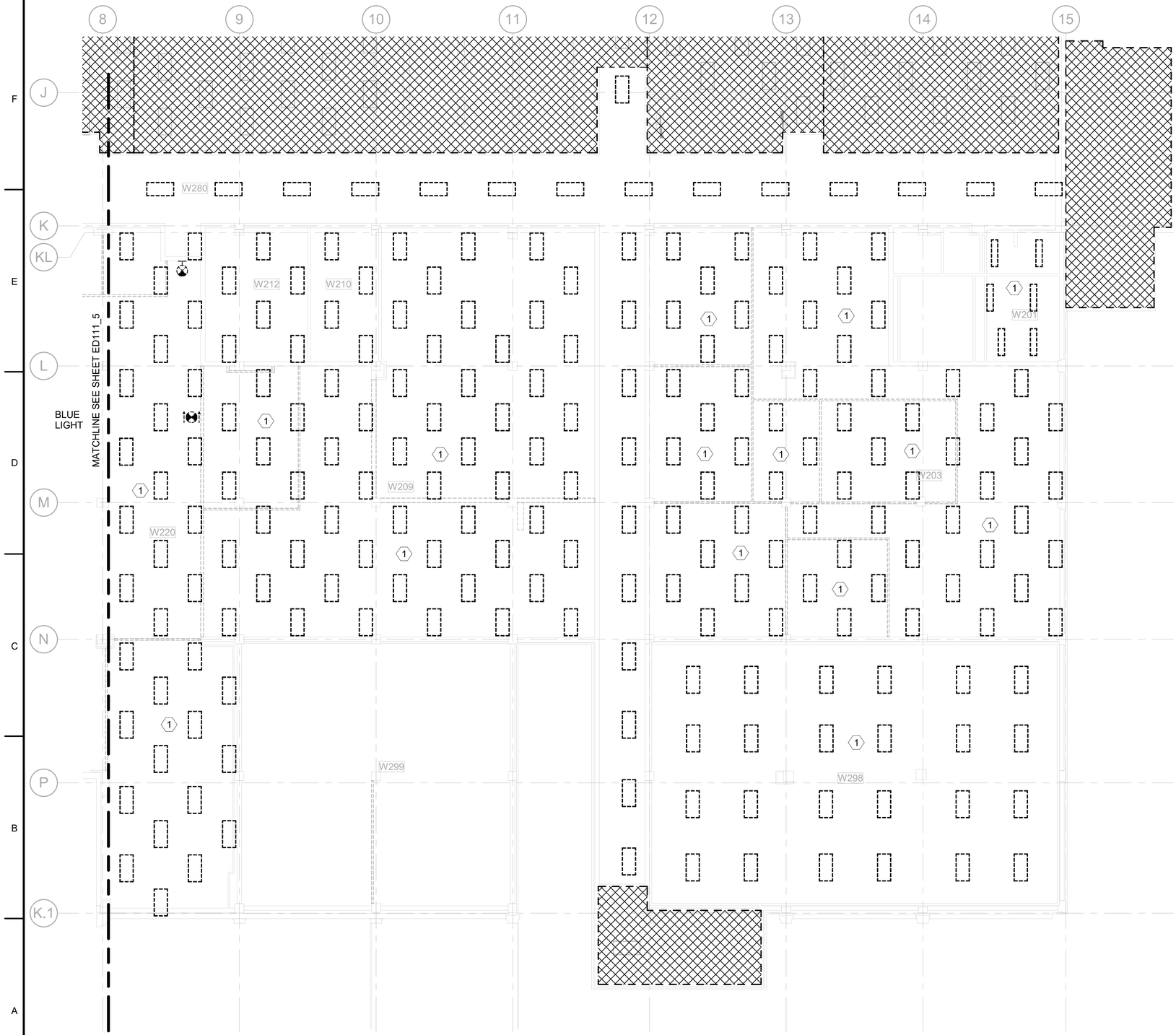
**ED111_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction




**DEMOLITION NOTES:**

1. FOR ELECTRICAL LEGEND, NOTES AND ABBREVIATIONS, SEE SHEETS E-001_5 AND E-002_5.
2. DEMOLISH ALL EXISTING LIGHTING FIXTURES AND ASSOCIATED LIGHTING CONTROLS UON. PROVIDE TEMPORARY WORK LIGHTING AS REQUIRED.
3. DEMOLISH ALL EXISTING EXIT LIGHT FIXTURES UON.
4. DEMOLISH ALL EXISTING EMERGENCY LIGHT FIXTURES UON.
5. DEMOLISH ALL EXISTING BLUE WARNING LIGHTS AND ASSOCIATED CONTROLS, UON.
6. REFER TO ARCHITECTURE DRAWINGS FOR PATCH AND REPAIR REQUIREMENTS.

**KEYED NOTES:** (#)

1. EMERGENCY FIXTURES LOCATED IN THIS AREA ARE CIRCUITED TO EXISTING PANEL LP-N. NORMAL LIGHT FIXTURES LOCATED IN THIS AREA ARE CIRCUITED TO EXISTING PANEL LP-D, LOCATED IN CORRIDOR W253 AND EXISTING PANEL LP-F, LOCATED IN CORRIDOR W280. ALL PANELS SHOWN ON SHEET ED100_5.

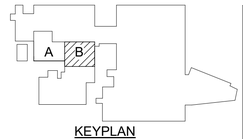
**LEGEND:**

AREA/ROOMS NOT IN SCOPE

A1 LIGHTING DEMOLITION SECOND FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
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ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
GREAT LAKES & OHIO RIVER DIVISION
MARSHALL HERT KING JR. PL
600 DR. LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

LIGHTING DEMOLITION SECOND FLOOR PLAN - AREA B

SHEET ID

**ED112_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI

4-WAY AIR SWITCH FTD-OS-2
SUBSTATION 'B'
(WPAFT-E372A-DPLOS2-SUBBUS)

9KV LA

TO SUBSTATION "A"
4-WAY AIR SWITCH
FTD-OS-1
SEE SHEET E-641 FOR CONTINUATION

(E) 1/C 250 KCM
XLP-15KV CABLE
4"C

TO TRANSFORMER T-6
BLDG 829 ROOM 9109
SEE SHEET E-631 FOR CONTINUATION

125E

T-7
(10856-E372A-DPLOS2-XFR007)
1500KVA
12,470Δ
480/277V
3PH,4W

4 SETS OF
(4) 750 KCM
4"C

SWITCHGEAR "B"
(10856-W175-SWG00B-SWGBUS)
277/480V, 3PH, 4W
OUTSIDE ROOM W175

A AS VS V

(4) #12
(1) #12G
3/4"C

30
30

TVSS-M
480VΔ

2000A BUS

B5 1600 800 GFR
B1 1600 1200 GFR
A5 1600 400 GFR
A9 1600 1200 GFR
A1 1600 500 GFR

2 SETS OF
(4)750 KCM
(1) #2/0G
4" C

3 SETS OF
(4)600 KCM
(1) #3/0G
4" C

200 FSS-859 OUTSIDE RM W175 200

2 SETS OF
(3)500 KCM
(1) #1/0G
4"C

(3) 500 KCM
(1) #2G
4"C

T-1
500KVA
480Δ
240V
1PH, 3W
RM 9109

(2) #3/0
(1) #2G
1 1/2"C

T-859
100KVA
480Δ
240V
1PH, 3W
OUTSIDE RM W175

2 SETS OF
(4)350 KCM
(1) #1/0G
4"C

CHILLER CH-1
419 KW
ROOM W161

3 SETS OF
(4)750 KCM
(1) #1/0G
4" C

PDP-2

(3) 500
KCM
(1) #2/0G
3"C

LOAD

PDP-1

PDP-4 (10856-W299-CBLA01A-PDP004)
277/480V, 3PH, 4W ROOM W299

600A BUS
1 400 300
2 100 100
3 100 100

(3) 500 KCM
(1) #2G
3"C

(3) #2
(1) #4G
1-1/2"C

T-1
225 KVA
480Δ-
208Y/120V
3PH,4W
W299

100 NFSS201
100A
ROOM W219

100 NFSS202
100A
ROOM W219

2 SETS OF
(4) 500KCM
(1) #4/0G
4"C

T-201
75 KVA
480Δ -
208/120V
3PH,52
ROOM W219

T-202
75 KVA
480Δ -
208/120V
3PH,52
ROOM W219

100 FSS201A
200A
ROOM W219

(3) #3/0
(1) #500N
(1) #4G
3"C

PP-201B COR W225 MLO
PP-201 COR W225 MLO
PP-201A COR W225 MLO
PP-202 COR W225 225A MCB
PP-202A COR W225 MLO

(4) #1/0
(1) #4G
2"C

(4) #3/0
(1) #4G
2"C

(4) #30
(1) #4G
2"C

PDP-6A 120/208V, 3PH, 4W

TO 300 KVA TRANSFORMER

800A BUS
3 400 300
1 200 200
6 200 200
2 100 100

FILTER
FILTER

(4) #4/0
(1) #6G
3"C

200A DISC.

(4) #4/0
(1) #6G
3"C

(4) #2

RP-D
PP-46
PP-39
2
EXIST CIR. BKR PNL
PP-54
PP-39A

W209 UPS PANEL

W214 UPS SUB PANEL

2 SETS OF
(4) 350 KCM,
(1) #1/0G,
4"C.

MCC-4, (10856-W254-MBK003-MCC004)
277/480V, 3PH, 4W 600A BUS, 42KAIC ROOM W299

E5 600 AA BE BC CA BG CG BI CC BA CI

TO SWITCHGEAR 'B'
(10856-W175-SWG00B-SWGBUS)
277/480V, 3PH, 4W
OUTSIDE ROOM W175

30
20
M

200A/3 50A/3 50A/3 100A/3 30A/3 40A/3 80A/3
SPARE SPARE SPARE

TVSS-S
208VΔ

(3) #4,
(1) #6G,
3"C.

(3) #2,
(1) #8G,
1-1/4"C.

(3) #10,
(1) #
10G,
3/4"C.

(3) #6,
(1) #10G,
1-1/4"C.

(3) #6,
(1) #10G,
1-1/4"C.

SS SS

60A
NFS
RM
W298

80

T-PDS
50KVA
480 -
208Y/120V
3PH, 4W

AC-5
50 HP
RM. 299
1

RF-5
15 HP
RM. 299
1

LP-F
225A
MCB

RDS PNL1
225A
MCB

RDS PNL2
225A
MCB

PDP-4A (10856-W299-MBK04A-PDP04A)
120/208V, 3PH, 4W ROOM W299

GFR
800A BUS
800 700
3 100 100
1 200 200
6 100 100
2 200 200
4 100 5
5

30
30
TVSS-M
480VΔ

100 FILTER

(4) #1/0
(1) #8G
2"C

(4) #4/0
(1) #6G
3"C

(4) #2

(4) #4/0
(1) #6G
3"C

(3) #12
(1) #12G
1/2"C

(3) #2
(1) #6G
1-1/2"C

PP-36 ROOM W220 100A MCB
PP-24 COR W253 225A MCB
PP-A ROOM W298 100A MCB
PP-35 COR W280 225A MCB
PP-40 W299 100A MCB
PP-35A COR W280 MLO

M
WATER PUMP W299
0.75 HP

**GENERAL NOTES:**

1. FOR ELECTRICAL LEGEND, NOTES AND ABBREVIATIONS, SEE SHEETS E-001_5 AND E-002_5.
2. ITEMS IN BOLD AND/OR DASHED ARE TO BE DEMOLISHED. ITEMS GRAYSCALE ARE EXISTING TO REMAIN.
3. UPDATE PANELBOARD SCHEDULES AS NEEDED FOR ALL DEMOLITION AND NEW WORK. DISCONNECT AND REMOVE ALL ASSOCIATED ELECTRICAL CONNECTIONS AND CONTROL FOR MECHANICAL EQUIPMENT TO BE DEMOLISHED. REFER TO MECHANICAL DEMOLITION DRAWINGS FOR ADDITIONAL INFORMATION.
4. VERIFY ALL ASSOCIATED ELECTRICAL EQUIPMENT SERVING EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED PRIOR TO COMMENCEMENT OF WORK.

**KEYED NOTES:**

1. DISCONNECT AND REMOVE ALL ASSOCIATED ELECTRICAL CONNECTIONS AND CONTROLS FOR MECHANICAL EQUIPMENT TO BE DEMOLISHED. REFER TO MECHANICAL DEMOLITION DRAWINGS AND GENERAL NOTES ABOVE FOR ADDITIONAL INFORMATION.
2. DEMOLISH EXISTING PANEL 'PP-39' AND ITS ASSOCIATED UPSTREAM FEEDER TO FILTER AND BRANCH CIRCUITS. REFEED PP-39A FROM FILTER. REFER TO EP601_5 FOR MORE INFORMATION.
3. ASSUMED CONDUIT AND CABLING SIZE: 3#4, 1#10GND, 1 1/4" C.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
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SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

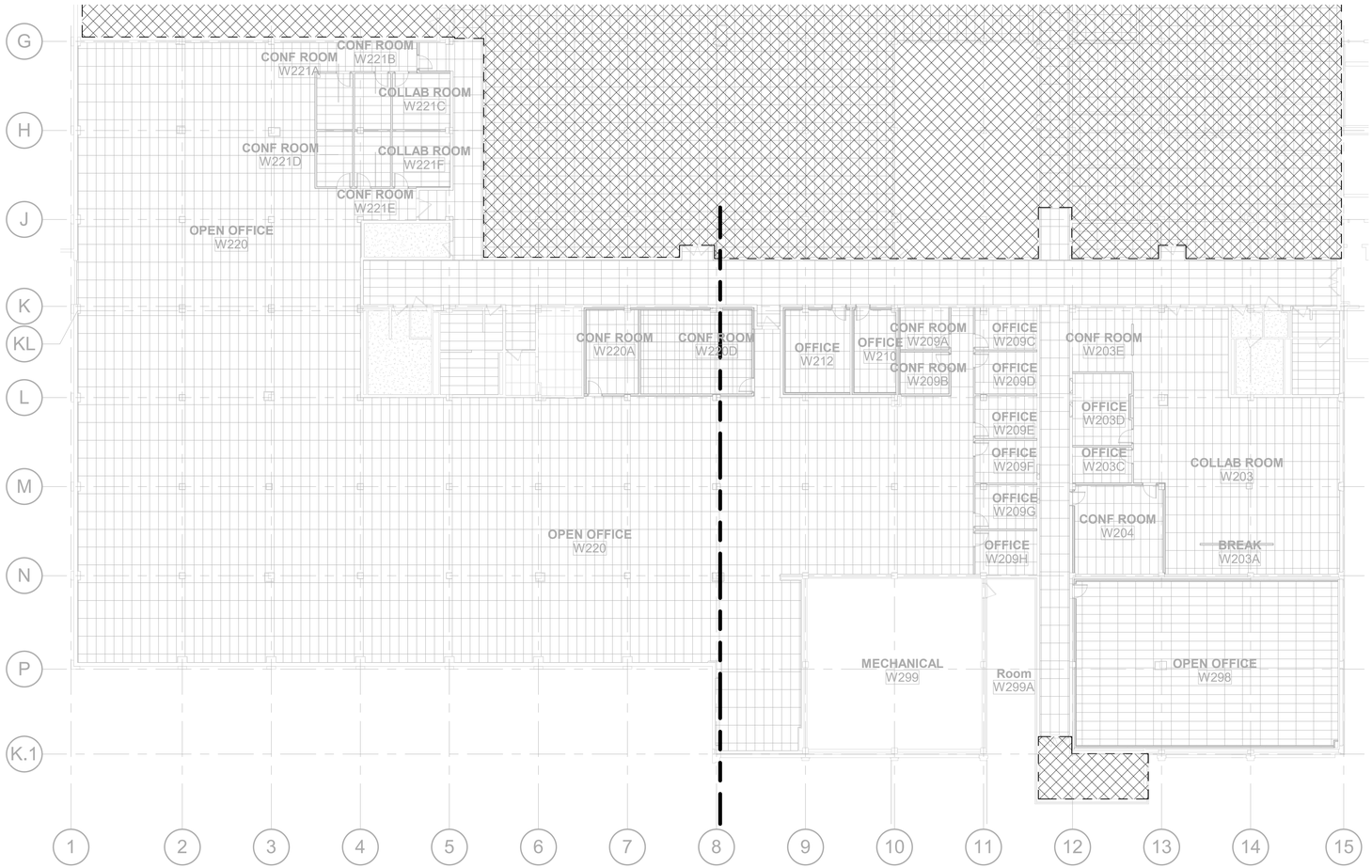
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

ELECTRICAL DEMOLITION ONE-LINE DIAGRAM

SHEET ID
**ED601_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI




A1 OVERALL SECOND FLOOR LIGHTING PLAN
SCALE: 1/16" = 1'-0"

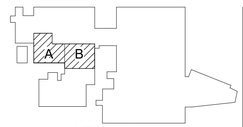
**GENERAL NOTES:**

1. REFER TO E-001_5 AND E-002_5 FOR LEGEND, SYMBOLS, EXISTING CONDITIONS NOTES AND GENERAL NOTES.
2. WHERE A CONDUIT, METAL DUCT, PIPING, OR OTHER METAL CONDUCTORS PENETRATE A WALL FROM A NON-SECURED TO SECURED AREA, REFER TO DETAIL C1 ON SHEET EP501_5 FOR GROUNDING AND SEALING REQUIREMENTS. SEE SHEET A-002_5 FOR SECURE AREA PERIMETER WALL LOCATIONS.
3. LIGHTING FIXTURES WITH LABEL 'N/L' NEXT TO THEM INDICATES NIGHT LIGHT AND EMERGENCY EGRESS. CIRCUIT NIGHT LIGHTS TO UNSWITCHED HOT OF EMERGENCY LIFE SAFETY PANEL SUCH THAT LIGHT REMAINS "ON" AT ALL TIMES.
4. EMERGENCY EGRESS LIGHTING AND EXIT LIGHTING MUST BE CIRCUITED TO EMERGENCY LIFE SAFETY PANEL 'LPN' LOCATED IN ROOM W141. PROVIDE 3/4"C, 2# 10, 1#10 GROUND FOR ALL BRANCH CIRCUITS INDICATED.
5. SEE SHEET EL610_5 FOR LIGHTING FIXTURE SCHEDULE.
6. CIRCUIT IDENTIFICATION, LABEL EACH JUNCTION BOX NEAREST EACH LIGHT FIXTURE WITH PANEL NAME AND CIRCUIT NUMBER.
7. SWITCH IDENTIFICATION, LABEL EACH SWITCH PLATE WITH PANEL NAME AND CIRCUIT NUMBER.
8. PROVIDE DEDICATED NEUTRAL CONDUCTORS FOR ALL LIGHTING AND POWER BRANCH CIRCUITS REQUIRING A NEUTRAL CONDUCTOR, SHARED NEUTRALS ARE NOT ALLOWED.
9. EMERGENCY LIGHT FIXTURE IDENTIFICATION, LABEL FIXTURE AS "EMERGENCY EGRESS LIGHT".

**LEGEND:**

AREA/ROOMS NOT IN SCOPE

NEW 2' X 4' ACOUSTICAL CEILING TILE




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
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ISSUE DATE: 02-16-23
SOLICITATION NO.:
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DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
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SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

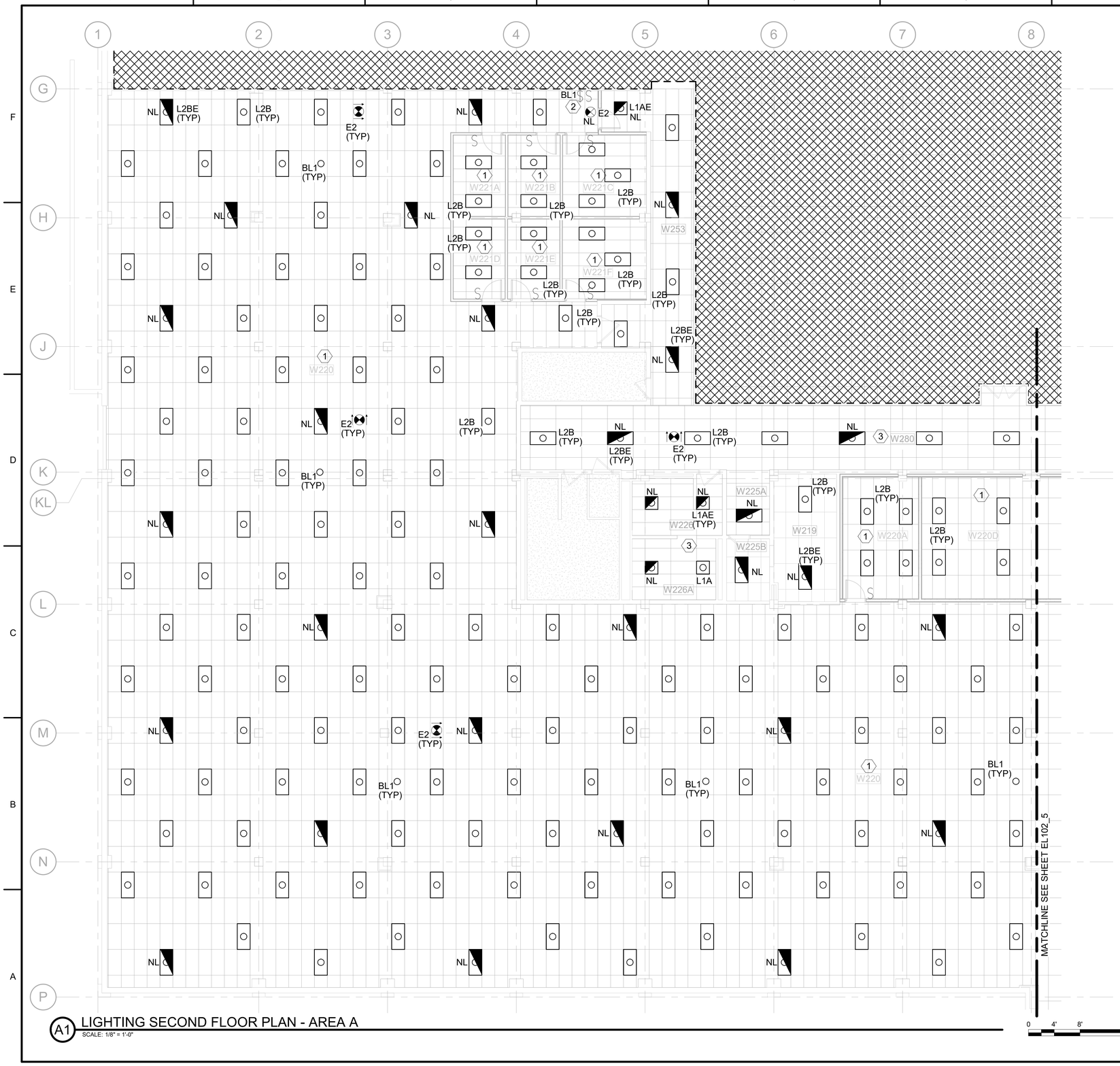
OVERALL SECOND FLOOR LIGHTING PLAN

SHEET ID

**EL100_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI




A1 LIGHTING SECOND FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

**GENERAL NOTES:**

1. REFER TO E-001_5 AND E-002_5 FOR LEGEND, SYMBOLS, EXISTING CONDITIONS NOTES AND GENERAL NOTES.
2. WHERE A CONDUIT, METAL DUCT, PIPING, OR OTHER METAL CONDUCTORS PENETRATE A WALL FROM A NON-SECURED TO SECURED AREA, REFER TO DETAIL C1 ON SHEET EP501_5 FOR GROUNDING AND SEALING REQUIREMENTS. SEE SHEET A-002_5 FOR SECURE AREA PERIMETER WALL LOCATIONS.
3. LIGHTING FIXTURES WITH LABEL 'N/L' NEXT TO THEM INDICATES NIGHT LIGHT AND EMERGENCY EGRESS. CIRCUIT NIGHT LIGHTS TO UNSWITCHED HOT OF EMERGENCY LIFE SAFETY PANEL SUCH THAT LIGHT REMAINS "ON" AT ALL TIMES.
4. EMERGENCY EGRESS LIGHTING AND EXIT LIGHTING MUST BE CIRCUITED TO EMERGENCY LIFE SAFETY PANEL 'LPN' LOCATED IN ROOM W141. PROVIDE 3/4"C, 2# 10, 1#10 GROUND FOR ALL BRANCH CIRCUITS INDICATED.
5. SEE SHEET EL610_5 FOR LIGHTING FIXTURE SCHEDULE.
6. CIRCUIT IDENTIFICATION, LABEL EACH JUNCTION BOX NEAREST EACH LIGHT FIXTURE WITH PANEL NAME AND CIRCUIT NUMBER.
7. SWITCH IDENTIFICATION, LABEL EACH SWITCH PLATE WITH PANEL NAME AND CIRCUIT NUMBER.
8. PROVIDE DEDICATED NEUTRAL CONDUCTORS FOR ALL LIGHTING AND POWER BRANCH CIRCUITS REQUIRING A NEUTRAL CONDUCTOR, SHARED NEUTRALS ARE NOT ALLOWED.
9. EMERGENCY LIGHT FIXTURE IDENTIFICATION, LABEL FIXTURE AS "EMERGENCY EGRESS LIGHT".

**KEYED NOTES:** (#)

1. CIRCUIT NEW LIGHT FIXTURES TO THE SAME BRANCH CIRCUITS THAT SERVED THE AREA. UTILIZE EXISTING BRANCH CIRCUIT HOME RUNS AND EXTEND CIRCUITING AS REQUIRED FOR NEW LIGHTING LAYOUTS AS SHOWN.
2. BLUE LED INDICATING LIGHT CONTROL, PROVIDE BLUE-HANDLED TOGGLE SWITCH WITH BLUE COVER PLATE. MOUNT CENTER-LINE OF SWITCH AT 60" AFF.
3. RECONNECT NEW LIGHT FIXTURES TO EXISTING LIGHTING CONTROLS OF SPACE.

**LEGEND:**

AREA/ROOMS NOT IN SCOPE

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

LIGHTING SECOND FLOOR PLAN - AREA A

SHEET ID

**EL101_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

CUI

**GENERAL NOTES:**

1. REFER TO E-001_5 AND E-002_5 FOR LEGEND, SYMBOLS, EXISTING CONDITIONS NOTES AND GENERAL NOTES.
2. WHERE A CONDUIT, METAL DUCT, PIPING, OR OTHER METAL CONDUCTORS PENETRATE A WALL FROM A NON-SECURED TO SECURED AREA, REFER TO DETAIL C1 ON SHEET EP501_5 FOR GROUNDING AND SEALING REQUIREMENTS. SEE SHEET A-002_5 FOR SECURE AREA PERIMETER WALL LOCATIONS.
3. LIGHTING FIXTURES WITH LABEL 'N/L' NEXT TO THEM INDICATES NIGHT LIGHT AND EMERGENCY EGRESS. CIRCUIT NIGHT LIGHTS TO UNSWITCHED HOT OF EMERGENCY LIFE SAFETY PANEL SUCH THAT LIGHT REMAINS "ON" AT ALL TIMES.
4. EMERGENCY EGRESS LIGHTING AND EXIT LIGHTING MUST BE CIRCUITED TO EMERGENCY LIFE SAFETY PANEL 'LPN' LOCATED IN ROOM W141. PROVIDE 3/4"C, 2# 10, 1#10 GROUND FOR ALL BRANCH CIRCUITS INDICATED.
5. SEE SHEET EL610_5 FOR LIGHTING FIXTURE SCHEDULE.
6. CIRCUIT IDENTIFICATION, LABEL EACH JUNCTION BOX NEAREST EACH LIGHT FIXTURE WITH PANEL NAME AND CIRCUIT NUMBER.
7. SWITCH IDENTIFICATION, LABEL EACH SWITCH PLATE WITH PANEL NAME AND CIRCUIT NUMBER.
8. PROVIDE DEDICATED NEUTRAL CONDUCTORS FOR ALL LIGHTING AND POWER BRANCH CIRCUITS REQUIRING A NEUTRAL CONDUCTOR, SHARED NEUTRALS ARE NOT ALLOWED.
9. EMERGENCY LIGHT FIXTURE IDENTIFICATION, LABEL FIXTURE AS "EMERGENCY EGRESS LIGHT".

**KEYED NOTES:** (#)

1. CIRCUIT NEW LIGHT FIXTURES TO THE SAME BRANCH CIRCUITS THAT SERVED THE AREA. UTILIZE EXISTING BRANCH CIRCUIT HOME RUNS AND EXTEND CIRCUITING AS REQUIRED FOR NEW LIGHTING LAYOUTS AS SHOWN.
2. BLUE LED INDICATING LIGHT CONTROL, PROVIDE BLUE-HANDLED TOGGLE SWITCH WITH BLUE COVER PLATE. MOUNT CENTER-LINE OF SWITCH AT 60" AFF.
3. RECONNECT NEW LIGHT FIXTURES TO EXISTING LIGHTING CONTROLS OF SPACE.

**LEGEND:**

AREA/ROOMS NOT IN SCOPE

MATCHLINE SEE SHEET EL101_5

A1 LIGHTING SECOND FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

KEYPLAN NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
MARSHALL HERT KING JR. PL
600 DR. LOUISVILLE, KY 40202

BURNS McDONNELL.
9400 WARD PARKWAY, KANSAS CITY, MO 64114

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

LIGHTING SECOND FLOOR PLAN - AREA B

SHEET ID

**EL102_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI

CONTROLLED UNCLASSIFIED INFORMATION (CUI)

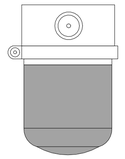
ARIMS: 200A Disposition: Maintain for 15 yrs after construction

NOT FOR CONSTRUCTION

TYPE: BL1

FEATURES

MOUNTING: CEILING



GENERAL DESCRIPTION

FLASHING BLUE BEACON LIGHT FIXTURE, REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.

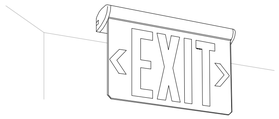
## E1 TYPICAL BLUE INDICATING LIGHT DETAIL

SCALE:NTS

TYPE: E1, E2

FEATURES

MOUNTING: CEILING MOUNT, WALL MOUNT




GENERAL DESCRIPTION

RED EXIT LIGHT FIXTURE, REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.

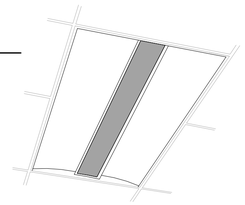
## C1 TYPICAL EXIT SIGN DETAIL

SCALE:NTS

TYPE: L2B, L2BE

FEATURES

MOUNTING: CEILING RECESSED



GENERAL DESCRIPTION

2'X4' LIGHT FIXTURE, REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.

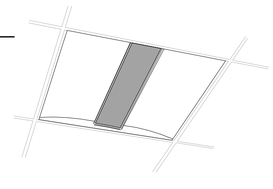
## A1 TYPICAL RECESSED 2'X4' LIGHTING DETAIL

SCALE:NTS

TYPE: L1A, L1AE

FEATURES

MOUNTING: CEILING RECESSED

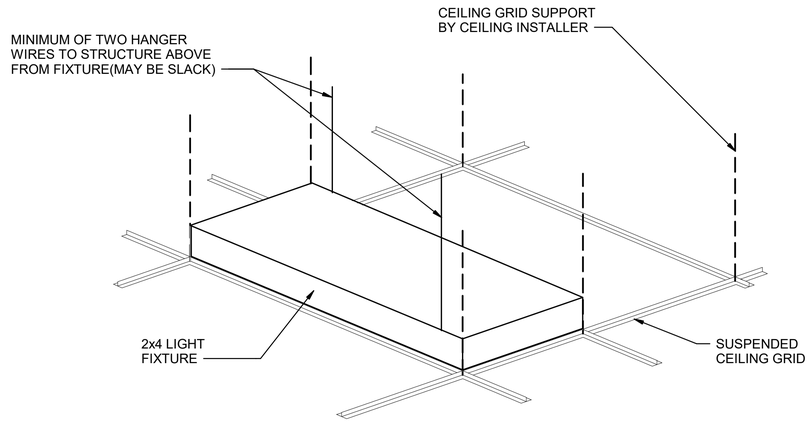


GENERAL DESCRIPTION

2'X2' LIGHT FIXTURE, REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.

## C5 LIGHTING PLATE RECESSED 2X2

SCALE:NTS




## A5 TYPICAL RECESSED FIXTURE SUPPORT DETAIL

SCALE:NTS

US ARMY CORPS
OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

LIGHTING DETAILS

SHEET ID

**EL501_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)

ARIMS: 200A Disposition: Maintain for 15 yrs after construction

NOT FOR CONSTRUCTION

## LIGHTING CONTROL SCHEDULE

| SPACE NUMBER | SPACE NAME | ASHRAE LIGHTING CONTROLS |
|---|---|---|
| W201 | TOILET | EXISTING |
| W201B | VEST | EXISTING |
| W203 | COLLAB ROOM | OS2 |
| W203A | BREAK | OS2 |
| W203C | OFFICE | VS1 |
| W203D | OFFICE | VS1 |
| W203E | CONF ROOM | OS2 |
| W204 | CONF ROOM | VS1 |
| W208 | CORRIDOR | EXISTING |
| W209 | OPEN OFFICE | OS2 |
| W209A | CONF ROOM | VS1 |
| W209B | CONF ROOM | VS1 |
| W209C | OFFICE | VS1 |
| W209D | OFFICE | VS1 |
| W209E | OFFICE | VS1 |
| W209F | OFFICE | VS1 |
| W209G | OFFICE | VS1 |
| W209H | OFFICE | VS1 |
| W210 | OFFICE | VS1 |
| W212 | OFFICE | VS1 |
| W219 | ELEC | EXISTING |
| W220 | OPEN OFFICE | OS2 |
| W220A | CONF ROOM | VS1 |
| W220D | CONF ROOM | VS1 |
| W221A | CONF ROOM | VS1 |
| W221B | CONF ROOM | VS1 |
| W221C | COLLAB ROOM | VS1 |
| W221D | CONF ROOM | VS1 |
| W221E | CONF ROOM | VS1 |
| W221F | COLLAB ROOM | VS1 |
| W225A | CORRIDOR | EXISTING |
| W225B | ELEC | EXISTING |
| W226 | VEST | EXISTING |
| W226A | TOILET | EXISTING |
| W253 | CORRIDOR | EXISTING |
| W280 | CORRIDOR | EXISTING |
| W298 | OPEN OFFICE | OS2 |

## 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 DESIGNATED FIXTURES WHEN DAYLIGHT CONTRIBUTION IS PRESENT |
|---|---|---|---|---|---|---|---|---|
| OS2 | X | X | X | | | X | | |
| VS1 | X | X | | | | X | | |

## GENERAL NOTES

1. OCCUPANCY SENSOR LAYOUT MUST BE DETERMINED BY MANUFACTURER PRIOR TO COMMENCING WORK.
2. CONTRACTOR MUST ENGAGE OCCUPANCY SENSOR MANUFACTURER'S REPRESENTATIVE TO PERFORM INITIAL ADJUSTMENT AND TUNE-UP OF ALL OCCUPANCY SENSORS.
3. ALL OCCUPANCY SENSORS OUTSIDE OF SECURED AREAS MUST BE DUAL TECHNOLOGY. ALL OCCUPANCY SENSORS INSTALLED WITHIN SECURED AREAS MUST BE PIR ONLY. REFER TO ARCHITECTURAL SHEETS FOR SECURED BOUNDARY PLANS.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
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CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

LIGHTING CONTROL SCHEDULE

SHEET ID

**EL601_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION

# LIGHT FIXTURE SCHEDULE

| FIXTURE TYPE NAME | MODIFIER | LAMP TYPE | COLOR TEMP | NOMINAL FIXTURE LUMENS | VOLTAGE | WATTAGE | DESCRIPTION | MOUNTING |
|---|---|---|---|---|---|---|---|---|
| BL1 | | LED | 0 K | 0 lm | 120 V | 12 W | BLUE, LED INDICATING LIGHT WITH 360 DEGREE ROTATION. 4" DIAMETER AND 4.25" HEIGHT. | SURFACE |
| E1 | | LED | 3200 K | 5 lm | 277 V | 5 W | LED EMERGENCY EXIT LIGHT. FIXTURE FED FROM LIFE SAFETY BRANCH CIRCUIT. | UNIVERSAL |
| E2 | | LED | 3200 K | 5 lm | 277 V | 5 W | DOUBLE SIDED LED EMERGENCY EXIT LIGHT. FIXTURE FED FROM LIFE SAFETY BRANCH CIRCUIT. | UNIVERSAL |
| L1A | | LED | 4000 K | 3300 lm | 277 V | 26 W | HIGH EFFICACY, 2' X 2' RECESSED VOLUMETRIC LED TROFFER, ACRYLIC LINEAR PRISMATIC DIFFUSER | CEILING, RECESSED |
| L1A | E | LED | 4000 K | 3300 lm | 277 V | 26 W | SAME AS L1A BUT WITH MINIMUM 90 MINUTE, 10 WATT BATTERY PACK | CEILING, RECESSED |
| L2B | | LED | 4000 K | 4281 lm | 277 V | 31 W | HIGH EFFICACY 2' X 4' RECESSED VOLUMETRIC LED TROFFER, ACRYLIC LINEAR PRISMATIC DIFFUSER | CEILING, RECESSED |
| L2B | E | LED | 4000 K | 4281 lm | 277 V | 31 W | HIGH EFFICACY 2' X 4' RECESSED VOLUMETRIC LED TROFFER, ACRYLIC LINEAR PRISMATIC DIFFUSER | CEILING, RECESSED |

**GENERAL NOTES:**

1. LIGHT FIXTURES MUST BE MINIMUM 80 CRI, UON.
2. PROVIDE ALL LIGHT FIXTURES WITH DIMMING DRIVERS CAPABLE OF DIMMING DOWN TO 10% WITHOUT FLICKERING, NOISE, OR OTHER DEFECTS IN LIGHTING FUNCTIONALITY, UON.
3. VERIFY FUNCTIONALITY OF ALL DRIVERS WITH LIGHTING CONTROL SYSTEM.
4. ALL EXIT SIGNS MUST BE UNSWITCHED.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

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SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

LIGHTING FIXTURE SCHEDULE

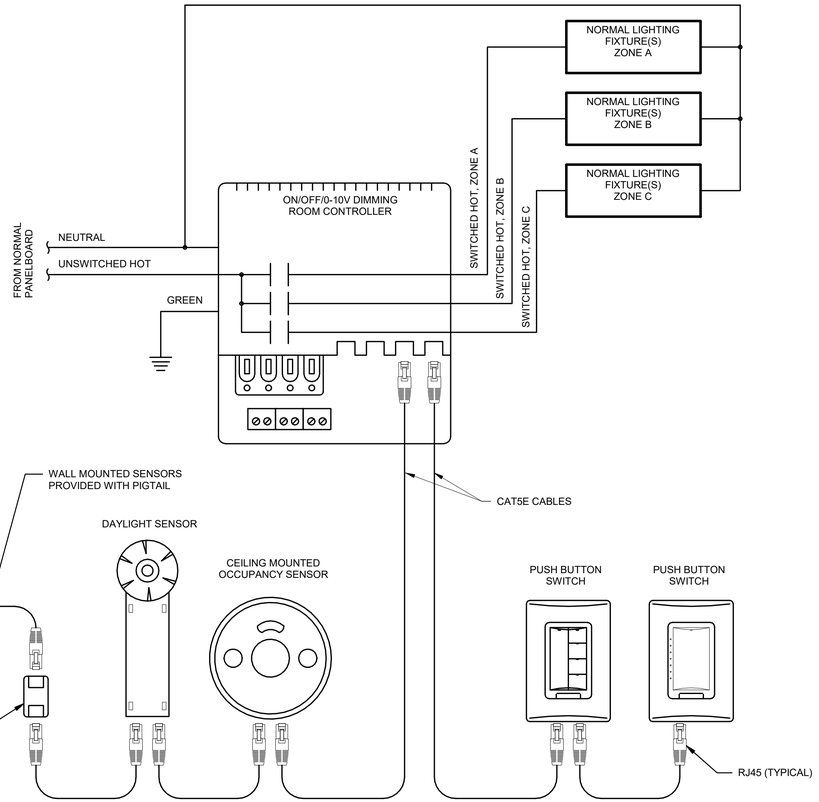
SHEET ID

**EL610_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION

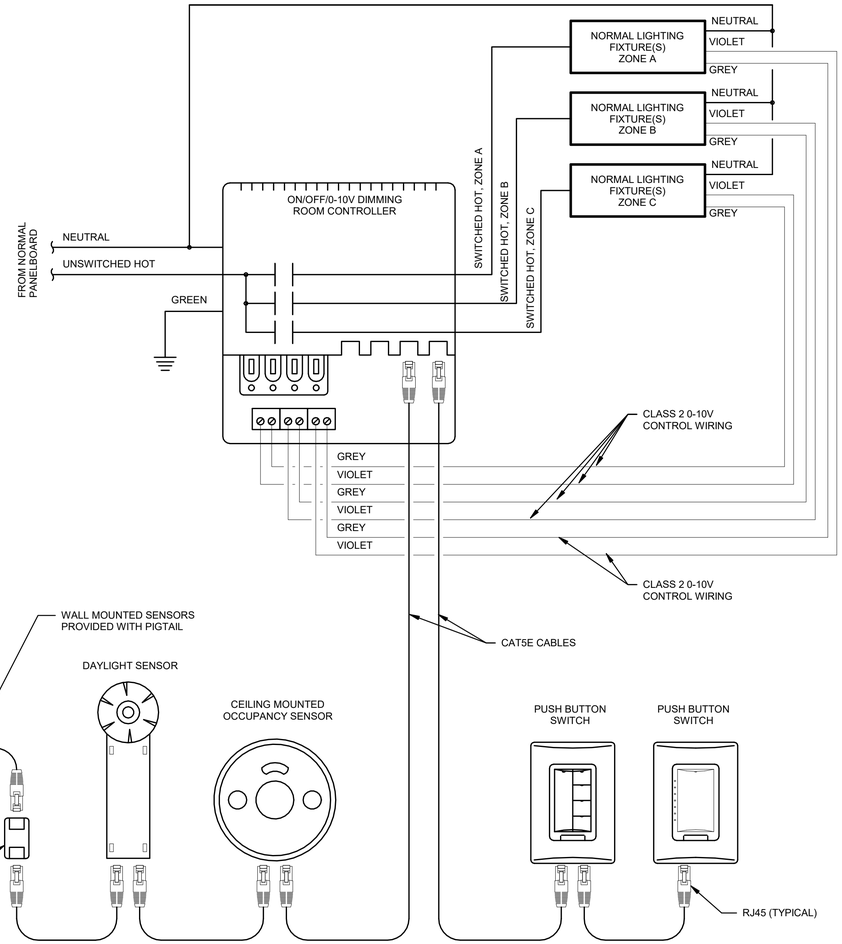



NOTES:

1. LIGHTING CONTROL CABLING MUST BE PLENUM RATED.
2. LIGHTING CONTROL CABLING MUST 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 MUST BE SUSPENDED A MINIMUM OF 8 INCHES ABOVE CEILINGS BY CABLE SUPPORTS NO GREATER THAN 60 INCHES APART. CABLE MUST NOT BE RUN THROUGH STRUCTURAL MEMBERS OR IN CONTACT WITH PIPES, DUCTS, OR OTHER POTENTIALLY DAMAGING ITEMS. PLACEMENT OF CABLE PARALLEL TO POWER CONDUCTORS MUST 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.

## A1 TYPICAL ROOM CONTROLLER WIRING DIAGRAM - ON/OFF ONLY

SCALE: NTS




NOTES:

1. LIGHTING CONTROL CABLING MUST BE PLENUM RATED.
2. LIGHTING CONTROL CABLING MUST 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 MUST BE SUSPENDED A MINIMUM OF 8 INCHES ABOVE CEILINGS BY CABLE SUPPORTS NO GREATER THAN 60 INCHES APART. CABLE MUST NOT BE RUN THROUGH STRUCTURAL MEMBERS OR IN CONTACT WITH PIPES, DUCTS, OR OTHER POTENTIALLY DAMAGING ITEMS. PLACEMENT OF CABLE PARALLEL TO POWER CONDUCTORS MUST 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.

## A5 TYPICAL ROOM CONTROLLER WIRING DIAGRAM - ON/OFF/DIMMING

SCALE: NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

LIGHTING CONTROL WIRING DIAGRAMS

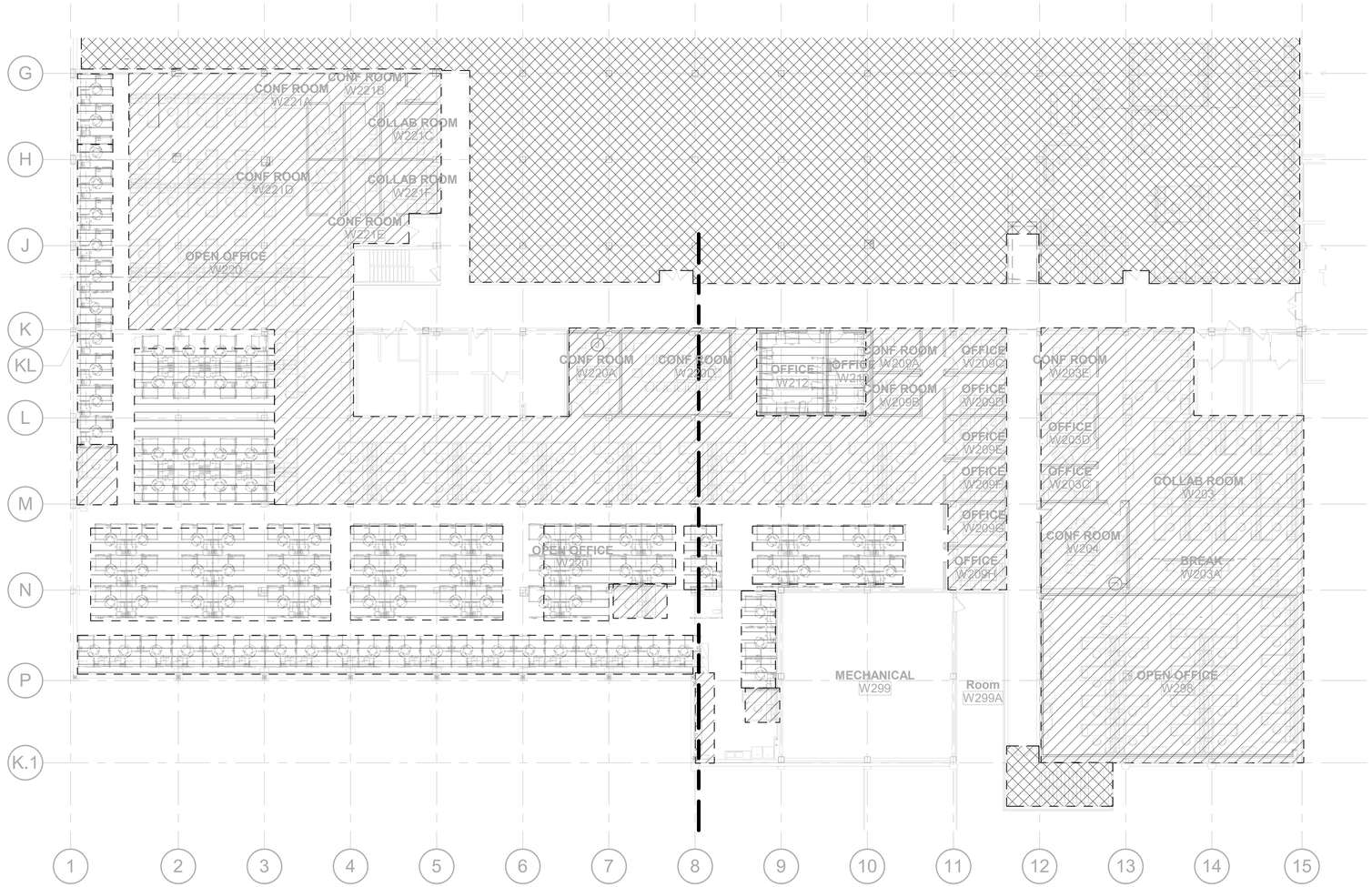
SHEET ID

**EL701_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION




A1 OVERALL SECOND FLOOR POWER PLAN
SCALE: 1/16" = 1'-0"

PLAN NORTH

0 8' 16' 32'

**GENERAL NOTES:**

1. REFER TO SHEET E-001_5 AND E-002_5 FOR SYMBOLS AND ABBREVIATIONS.
2. ANY NEW DEVICE TO BE MOUNTED ON EXISTING SECURE PERIMETER WALL MUST BE SURFACE MOUNT.
3. BUILDING WILL BE OCCUPIED DURING CONSTRUCTION. MINIMIZE IMPACT TO OTHER PARTS OF THE BUILDING TO THE GREATEST EXTENT POSSIBLE. SCHEDULE OUTAGES DURING OFF HOURS AND COORDINATE ALL OUTAGES WITH THE COR PRIOR TO COMMENCEMENT OF WORK.
4. LABEL POWER POLES AND RECEPTACLES WITH VOLTAGE, SOURCE PANEL AND CIRCUIT. HOUSE POWER OUTLETS (OUTLETS CIRCUITED TO PP-60 AND PP-60A) TO BE IVORY AND BE LABELED AS HOUSE POWER, TECHNICAL POWER OUTLETS (OUTLETS CIRCUITED TO PP-204 AND PP-204A) TO BE GREY AND BE LABELED AS TECHNICAL POWER.

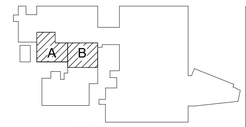
**LEGEND:**

AREA/ROOMS NOT IN SCOPE

CONSTRUCTION BOUNDARY

FURNITURE IN THIS AREA TO BE REMOVED AND REPLACED WITH NEW FURNITURE. DISCONNECT POWER TO THE POWER POLE AND REMOVE THE BRANCH CIRCUIT BACK TO SOURCE UNLESS THE CIRCUIT IS NOTED TO BE RE-USED. IF CIRCUIT IS TO BE RE-USED, DISCONNECT POWER TO THE POWER POLE, REMOVE THE BRANCH CIRCUIT BACK TO THE NEAREST JUNCTION BOX AND EXTEND TO NEW POWER POLE LOCATION AS INDICATED. REMOVE, CLEAN, AND STORE EXISTING POWER POLES TO BE RE-INSTALLED IN NEW OFFICE CONFIGURATION.

FURNITURE IN THIS AREA TO BE REMOVED AND REINSTALLED IN A NEW CONFIGURATION. DISCONNECT POWER TO THE POWER POLE AND REMOVE THE BRANCH CIRCUIT BACK TO THE NEAREST JUNCTION BOX. SEE A4/EP501_5 FOR MORE INFORMATION. DOCUMENT THE EXISTING CIRCUIT INFORMATION AND EXTEND BRANCH CIRCUIT AS REQUIRED FOR RE-INSTALLATION. POWER POLES WILL BE REINSTALLED IN NEW LOCATION AS INDICATED. REMOVE, CLEAN, AND STORE EXISTING POWER POLES TO BE RE-INSTALLED IN NEW OFFICE CONFIGURATION.




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
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US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL.
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9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

OVERALL SECOND FLOOR POWER PLAN

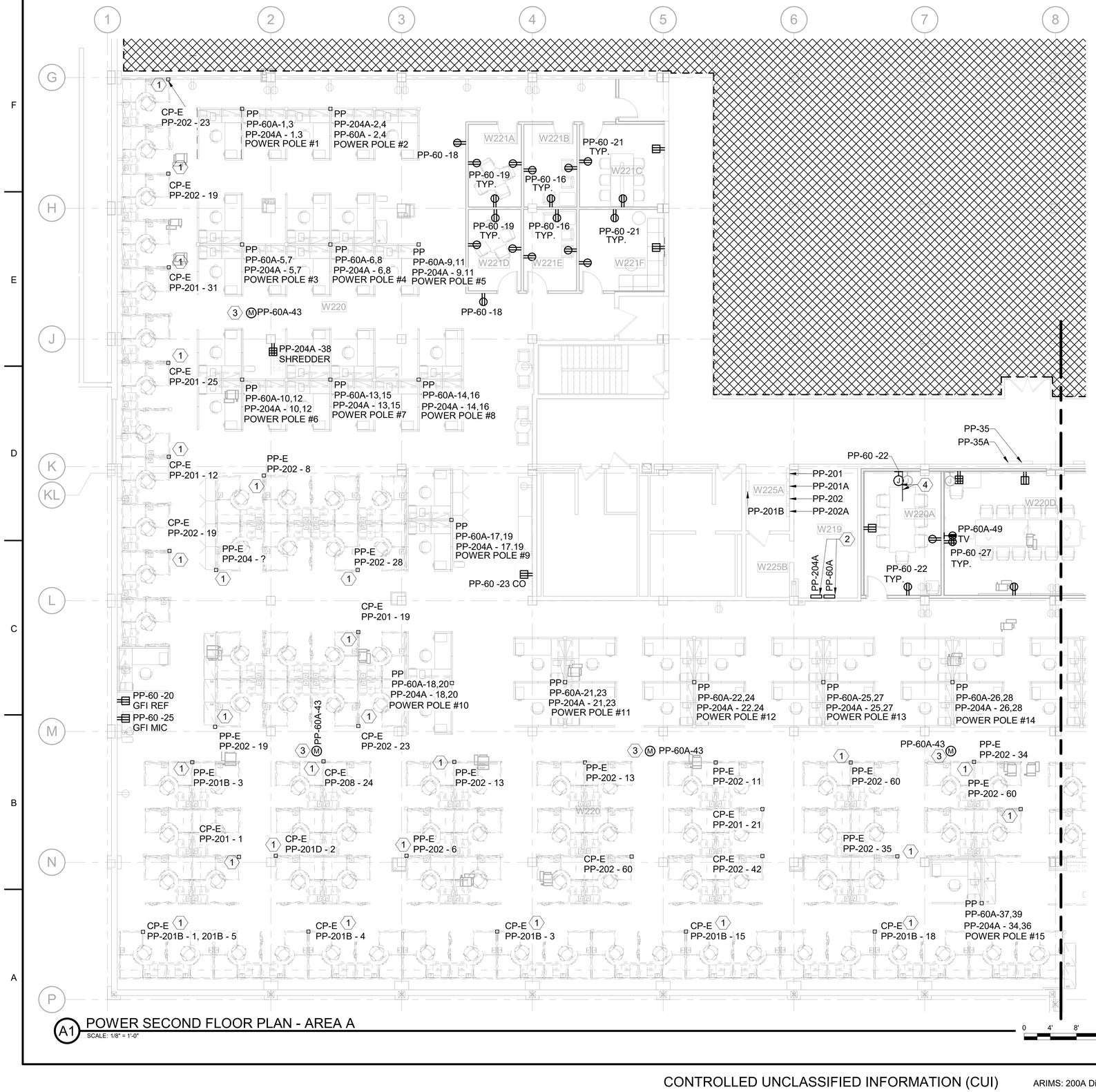
SHEET ID

**EP100_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI) ARIMS: 200A Disposition: Maintain for 15 yrs after construction NOT FOR CONSTRUCTION




A1 POWER SECOND FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

**GENERAL NOTES:**

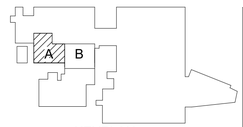
1. REFER TO SHEET E-001_5 AND E-002_5 FOR SYMBOLS AND ABBREVIATIONS.
2. ANY NEW DEVICE TO BE MOUNTED ON EXISTING SECURE PERIMETER WALL MUST BE SURFACE MOUNT.
3. BUILDING WILL BE OCCUPIED DURING CONSTRUCTION. MINIMIZE IMPACT TO OTHER PARTS OF THE BUILDING TO THE GREATEST EXTENT POSSIBLE. SCHEDULE OUTAGES DURING OFF HOURS AND COORDINATE ALL OUTAGES WITH THE COR PRIOR TO COMMENCEMENT OF WORK.
4. LABEL POWER POLES AND RECEPTACLES WITH VOLTAGE, SOURCE PANEL AND CIRCUIT. HOUSE POWER OUTLETS (OUTLETS CIRCUITED TO PP-60 AND PP-60A) TO BE IVORY AND BE LABELED AS HOUSE POWER, TECHNICAL POWER OUTLETS (OUTLETS CIRCUITED TO PP-204 AND PP-204A) TO BE GREY AND BE LABELED AS TECHNICAL POWER.

**KEYED NOTES:** ⟨#⟩

1. EXTEND BRANCH CIRCUIT FROM NEAREST JUNCTION BOX. REUSE EXISTING POWER POLE REMOVED DURING DEMOLITION.
2. REFER TO ONE LINE DIAGRAM ON EP601_5 FOR MORE INFORMATION ON NEW TRANSFORMERS AND PANELS.
3. PROVIDE 120V POWER CONNECTION FOR 24VDC POWER SUPPLY FOR VAV. POWER SUPPLY PROVIDED BY DIV. 23. COORDINATE LOCATION OF POWER SUPPLY WITH MECHANICAL DRAWINGS. PROVIDE (1) POWER CONNECTION PER (6) VAV BOXES.
4. PROVIDE LOW-PROFILE OVERFLOOR BLACK ALUMINUM 4-CHANNEL RACEWAY FOR POWERING OF CONFERENCE ROOM TABLE. PROVIDE POWER CABLING FROM WALL-MOUNTED JUNCTION BOX THROUGH (1) CHANNEL OF RACEWAY TO POWER MODULE LOCATED IN DESK. COORDINATE INSTALLATION WITH FURNITURE MANUFACTURER AND INSTALLERS. RACEWAY SYSTEM MUST BE UL LISTED FOR THIS APPLICATION. PROVIDE ALL REQUIRED ACCESSORIES AND FITTINGS.

**LEGEND:**

AREA/ROOM NOT IN SCOPE




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: C. GUNNOSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
DISTRICT, LOUISVILLE
600 DR. MARTIN LUTHER KING, JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

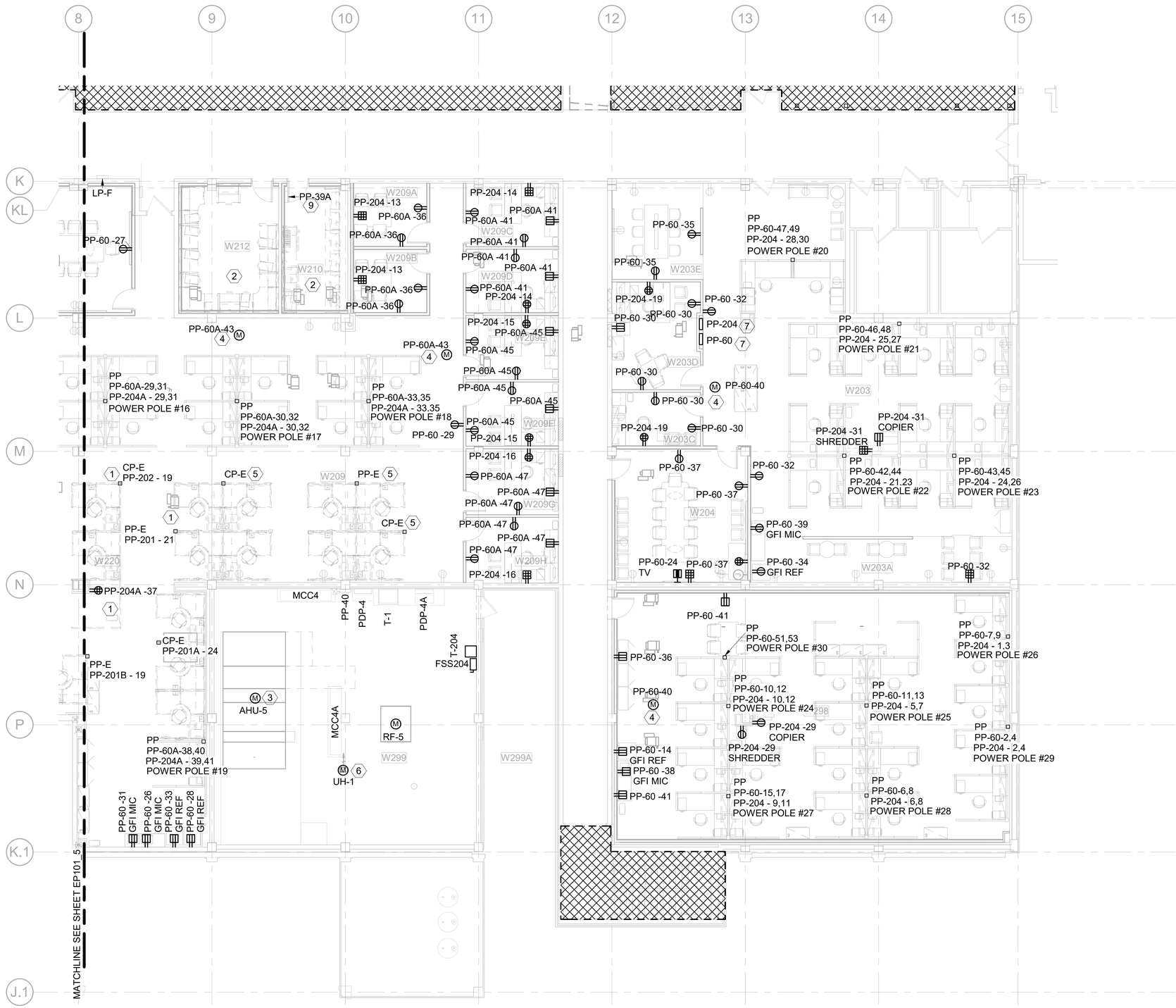
POWER SECOND FLOOR PLAN - AREA A

SHEET ID

**EP101_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000




A1 POWER SECOND FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

KEYPLAN
NOT TO SCALE

**GENERAL NOTES:**

1. REFER TO SHEET E-001_5 AND E-002_5 FOR SYMBOLS AND ABBREVIATIONS.
2. ANY NEW DEVICE TO BE MOUNTED ON EXISTING SECURE PERIMETER WALL MUST BE SURFACE MOUNT.
3. BUILDING WILL BE OCCUPIED DURING CONSTRUCTION. MINIMIZE IMPACT TO OTHER PARTS OF THE BUILDING TO THE GREATEST EXTENT POSSIBLE. SCHEDULE OUTAGES DURING OFF HOURS AND COORDINATE ALL OUTAGES WITH THE COR PRIOR TO COMMENCEMENT OF WORK.
4. LABEL POWER POLES AND RECEPTACLES WITH VOLTAGE, SOURCE PANEL AND CIRCUIT. HOUSE POWER OUTLETS TO BE IVORY AND BE LABELED AS HOUSE POWER, TECHNICAL POWER OUTLETS TO BE GREY AND BE LABELED AS TECHNICAL POWER.

**KEYED NOTES:** (#)

1. EXTEND BRANCH CIRCUIT FROM NEAREST JUNCTION BOX. REUSE EXISTING POWER POLE REMOVED DURING DEMOLITION.
2. SURFACE MOUNT EXISTING RECEPTACLES AND OTHER DEVICES TO NEW WALL IN SAME LOCATION. EXTEND CONDUIT AND CABLING AS REQUIRED FROM EXISTING JUNCTION BOX SERVING RECEPTACLES. ASSUME 5 RECEPTACLES PER SPACE.
3. PROVIDE 480V POWER TO MECHANICAL AHU-5. DISCONNECT/VFD PROVIDED BY DIV. 23. SEE EP601_5 FOR DETAILS. PROVIDE (3) SEPARATE 120V POWER CIRCUIT FOR UV LIGHTS, LIGHTS/SWITCH, AND RECEPTACLE. UTILIZE EXISTING SPARES 15, 17, AND 19 IN PANEL PP-40. PROVIDE 2#12AWG, #12GND, 3/4" C FOR EACH CIRCUIT.
4. PROVIDE 120V POWER CONNECTION FOR 24VDC POWER SUPPLY FOR VAV. POWER SUPPLY PROVIDED BY DIV. 23. COORDINATE LOCATION OF POWER SUPPLY WITH MECHANICAL CONTRACTOR. PROVIDE (1) POWER CONNECTION PER (6) VAV BOXES.
5. VERIFY HOUSE POWER AND TECHNICAL POWER CIRCUIT FOR RE-INSTALLED POWER POLE. EXISTING CIRCUITS IN THIS AREA WERE UNABLE TO BE VERIFIED.
6. PROVIDE 120V POWER CONNECTION FOR UH-1. PROVIDE 2# 12AWG, #12GND, 3/4" C FROM EXISTING SPARE IN PP-40 CIRCUIT #21.
7. REFER TO ONE LINE DIAGRAM ON EP601_5 FOR MORE INFORMATION ON NEW TRANSFORMERS AND PANELS.
8. PROVIDE 480V POWER TO MECHANICAL RF-5. DISCONNECT/VFD PROVIDED BY DIV. 26. SEE EP601_5 FOR DETAILS.
9. SURFACE MOUNT EXISTING PANEL PP-39A AND ASSOCIATED CONDUITS TO NEW WALL. EXTEND EXISTING CONDUIT AND CONDUCTORS AS REQUIRED.

**LEGEND:**

AREA/ROOM NOT IN SCOPE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

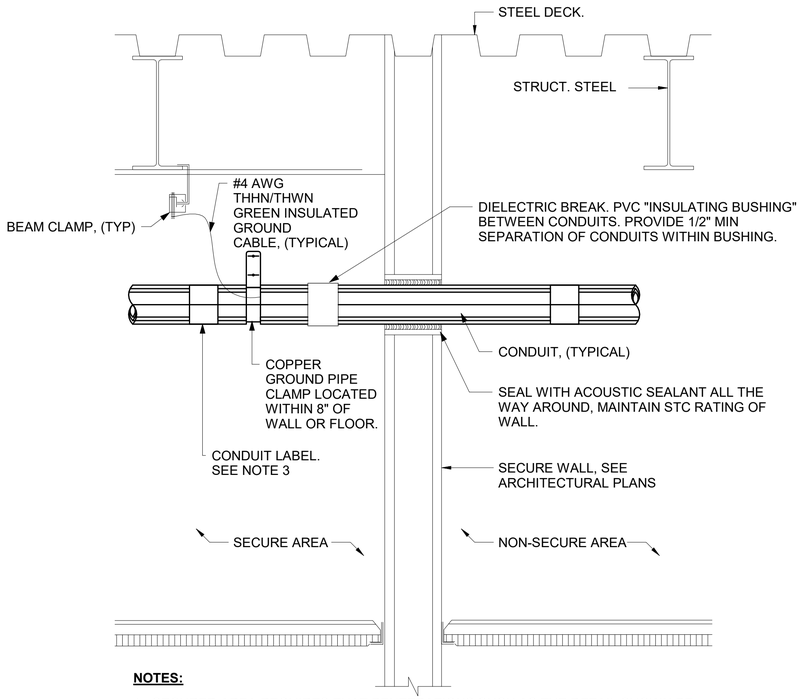
POWER SECOND FLOOR PLAN - AREA B

SHEET ID

**EP102_5**

CUI

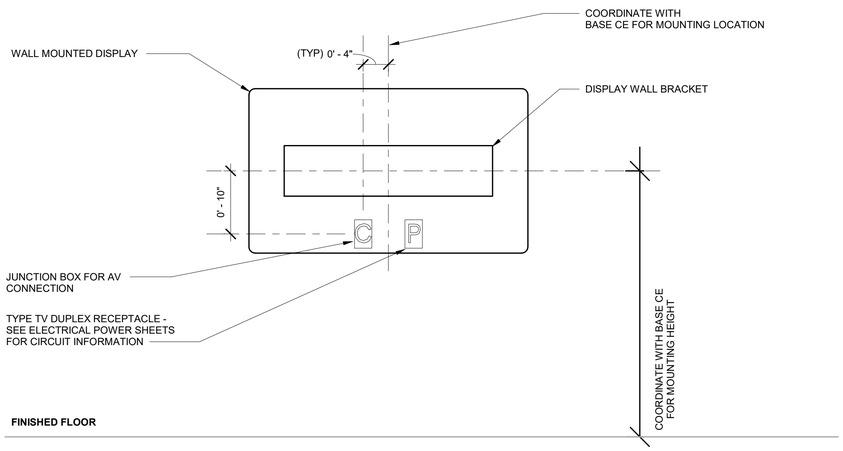
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000




**NOTES:**

1. SECURED AREA REQUIRES THAT PENETRATIONS SUCH AS THE DETAIL SHOWN BE ACCESSIBLE FOR INSPECTION BY PROGRAM SECURITY. COORDINATE WITH CONTRACTING OFFICER DURING INSTALLATION.
2. KEEP A LOG OF ALL CONDUIT PENETRATIONS INDICATING LOCATION, PURPOSE AND INDICATION THAT THE INSTALLATION HAS BEEN COORDINATED WITH CONTRACTING OFFICER AND PROGRAM SECURITY.
3. LABEL MUST BE PERMANENTLY AFFIXED. LABEL CONDUIT FUNCTION.
4. INSTALLATION MUST MAINTAIN STC RATING OF WALL, STC 50 MINIMUM.

## C1 CONDUIT PENETRATION AT SECURE WALL
SCALE:NTS



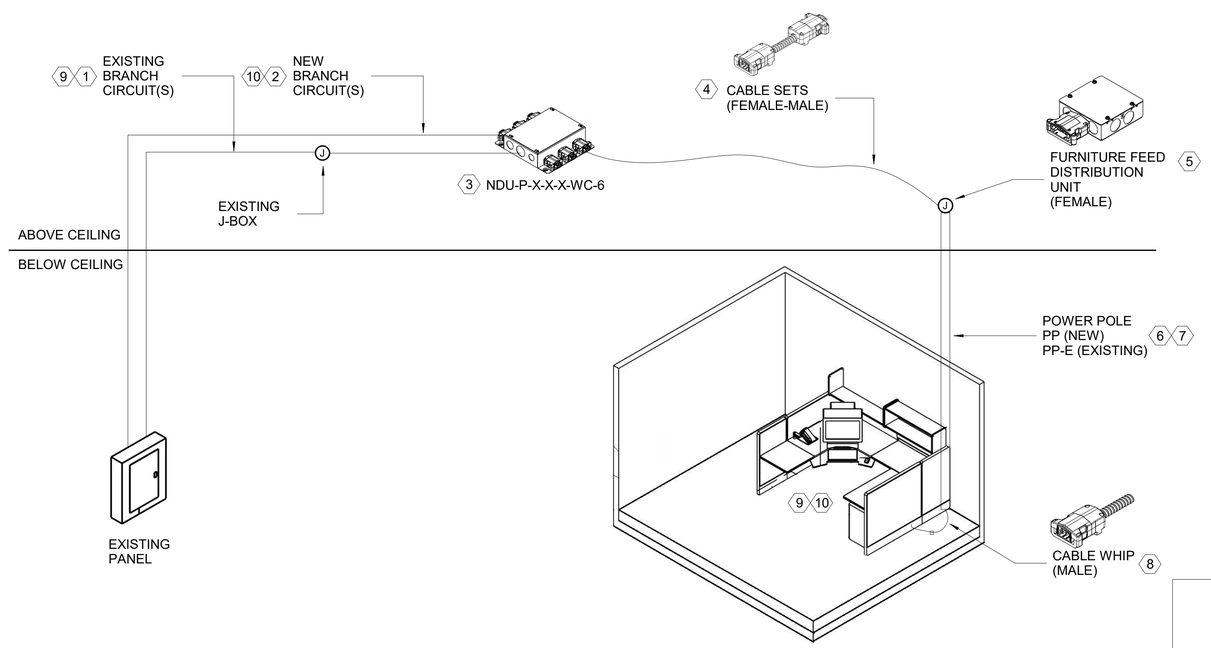

## A1 TYPICAL FLAT PANEL DISPLAY OUTLET INSTALLATION ELEVATION
SCALE:NTS

**GENERAL NOTES:**

1. FOR NEW FURNITURE, PROVIDE CIRCUITS AS SHOWN. EACH HOUSE POWER CIRCUIT CAN FEED UP TO (4) WORKSTATIONS. EACH TECHNICAL POWER CIRCUIT CAN FEED UP TO (2) WORKSTATIONS. SPECIFIC FURNITURE COMPONENTS REQUIRED TO MAINTAIN THESE ELECTRICAL CONDITIONS MUST BE COORDINATED WITH FURNITURE LAYOUT.
2. FOR EXISTING FURNITURE, EXTEND EXISTING BRANCH CIRCUIT AS SHOWN. SEE A4/EP501_5 FOR DETAILS.
3. DEMO EXISTING WALKERFLEX SYSTEM ELECTRICAL COMPONENTS IN ITS ENTIRETY.

**KEYED NOTES:** (#)

1. DEMOLISH EXISTING BRANCH CIRCUIT WIRING BACK TO SERVING ELECTRICAL PANEL. EXISTING CONDUIT AND JUNCTION BOXES TO WALKERFLEX DISTRIBUTION UNITS (NDU) MUST REMAIN.
2. PROVIDE NEW BRANCH CIRCUIT(S) AS INDICATED.
3. DEMO EXISTING WALKERFLEX DISTRIBUTION UNIT(NDU). PROVIDE NEW NEMA 1 JUNCTION BOX, SIZE AS REQUIRED PER NEC.
4. DEMO EXISTING WALKERFLEX CABLE SET(S). PROVIDE NEW BRANCH CIRCUIT CONNECTION TO POWER POLE.
5. DEMO EXISTING WALKERFLEX FURNITURE FEED DISTRIBUTION UNIT. PROVIDE NEW NEMA 1 JUNCTION BOX, SIZE PER NEC.
6. DEMO EXISTING POWER POLE(S) NOT RE-USED. WHERE NOTED FOR RE-USE, DISCONNECT, REMOVE, AND STORE FOR RE-USE. AFTER FURNITURE RE-INSTALL; INSTALL EXISTING POWER POLE AND NEW BRANCH CIRCUIT CONNECTION.
7. WHERE NOTED AS NEW POWER POLE (PP), PROVIDE A NEW POWER POLE AND INSTALL NEW BRANCH CIRCUIT CONNECTION.
8. DEMO EXISTING WALKERFLEX CABLE WHIP. PROVIDE NEW BRANCH CIRCUIT IN POWER POLE. PROVIDE NEW FURNITURE WHIP CONNECTION.
9. FOR POWER POLES INDICATED AS RELOCATED, EXTEND BRANCH CIRCUIT FROM NEAREST JUNCTION BOX TO NEW POWER POLE LOCATION. UTILIZE EXISTING BRANCH CIRCUIT NUMBERS SERVING EXISTING FURNITURE.
10. FOR POWER POLES INDICATED AS NEW, PROVIDE NEW BRANCH CIRCUIT WIRING FROM NEW ELECTRICAL PANEL. PROVIDE NEW BRANCH CIRCUITS AS INDICATED.




## A4 TYPICAL WALKERFLEX SYSTEM LAYOUT
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

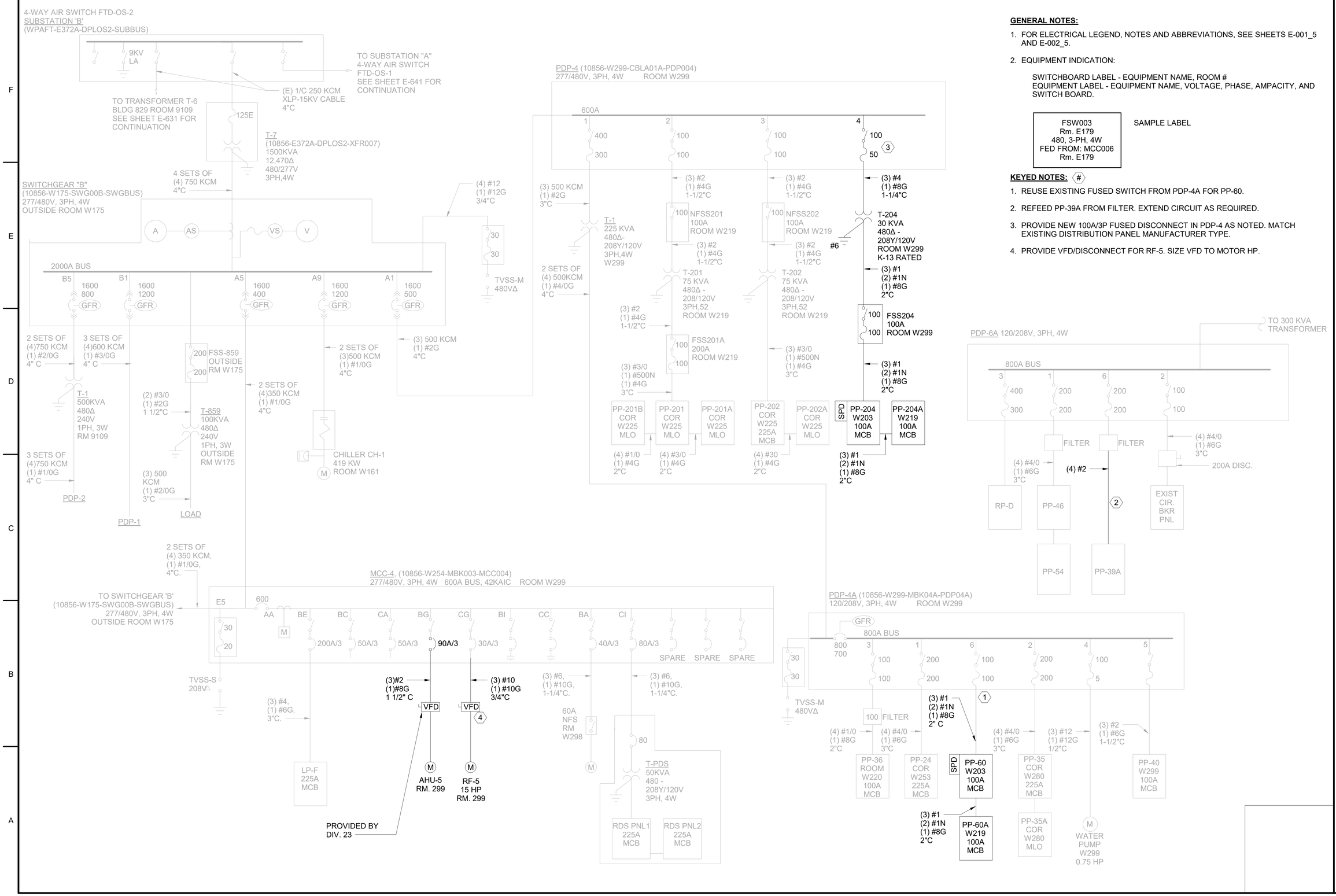
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

ELECTRICAL DETAILS

SHEET ID

**EP501_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000




**GENERAL NOTES:**

1. FOR ELECTRICAL LEGEND, NOTES AND ABBREVIATIONS, SEE SHEETS E-001_5 AND E-002_5.
2. EQUIPMENT INDICATION:

   SWITCHBOARD LABEL - EQUIPMENT NAME, ROOM #
   EQUIPMENT LABEL - EQUIPMENT NAME, VOLTAGE, PHASE, AMPACITY, AND SWITCH BOARD.

| FSW003<br>Rm. E179<br>480, 3-PH, 4W<br>FED FROM: MCC006<br>Rm. E179 |
|---|

SAMPLE LABEL

**KEYED NOTES:** ⟨#⟩

1. REUSE EXISTING FUSED SWITCH FROM PDP-4A FOR PP-60.
2. REFEED PP-39A FROM FILTER. EXTEND CIRCUIT AS REQUIRED.
3. PROVIDE NEW 100A/3P FUSED DISCONNECT IN PDP-4 AS NOTED. MATCH EXISTING DISTRIBUTION PANEL MANUFACTURER TYPE.
4. PROVIDE VFD/DISCONNECT FOR RF-5. SIZE VFD TO MOTOR HP.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 4699978
WRIGHT-PATTERSON AFB, OHIO

ELECTRICAL ONE-LINE DIAGRAM

SHEET ID

**EP601_5**

CUI

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

## PANELBOARD: PP-204A (TECHNICAL POWER)

**LOCATION:** ELEC W219
**SUPPLY FROM:** PP-204
**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1

**VOLTAGE:** 120/208 Wye
**PHASE:** 3
**WIRES:** 4

**A.I.C. RATING:** MIN 10 KAIC
**MAINS TYPE:** MCB
**MAINS RATING:** 100 A
**MCB RATING:** 100 A

**NOTES:**
SUITABLE FOR NON-LINEAR LOADS.

| # | BKR | P | LOAD SERVED | WIRE / GROUND / CONDUIT | A | B | C | WIRE / GROUND / CONDUIT | LOAD SERVED | P | BKR | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | 2 | POWER POLE #1 W220 | 4#12, 1#12G, 3/4" C | 488 | | | 4#12, 1#12G, 3/4" C | POWER POLE #2 W220 | 2 | 20 | 2 |
| 3 | -- | -- | -- | -- | | 488 | | -- | -- | -- | -- | 4 |
| 5 | 20 | 2 | POWER POLE #3 W220 | 4#12, 1#12G, 3/4" C | | | 488 | 4#12, 1#12G, 3/4" C | POWER POLE #4 W220 | 2 | 20 | 6 |
| 7 | -- | -- | -- | -- | 488 | | | -- | -- | -- | -- | 8 |
| 9 | 20 | 2 | POWER POLE #5 W220 | 4#12, 1#12G, 3/4" C | | 163 | | 4#12, 1#12G, 3/4" C | POWER POLE #6 W220 | 2 | 20 | 10 |
| 11 | -- | -- | -- | -- | | | 163 | -- | -- | -- | -- | 12 |
| 13 | 20 | 2 | POWER POLE #7 W220 | 4#12, 1#12G, 3/4" C | 650 | | | 4#12, 1#12G, 3/4" C | POWER POLE #8 W220 | 2 | 20 | 14 |
| 15 | -- | -- | -- | -- | | 650 | | -- | -- | -- | -- | 16 |
| 17 | 20 | 2 | COMM/POWER POLE #9 W220 | 4#12, 1#12G, 3/4" C | | | 325 | 4#12, 1#12G, 3/4" C | COMM/POWER POLE #10 W220 | 2 | 20 | 18 |
| 19 | -- | -- | -- | -- | 325 | | | -- | -- | -- | -- | 20 |
| 21 | 20 | 2 | POWER POLE #11 W220 | 4#12, 1#12G, 3/4" C | | 650 | | 4#12, 1#12G, 3/4" C | POWER POLE #12 W220 | 2 | 20 | 22 |
| 23 | -- | -- | -- | -- | | | 650 | -- | -- | -- | -- | 24 |
| 25 | 20 | 2 | POWER POLE #13 W220 | 4#12, 1#12G, 3/4" C | 650 | 650 | | 4#12, 1#12G, 3/4" C | POWER POLE #14 W220 | 2 | 20 | 26 |
| 27 | -- | -- | -- | -- | | 650 | | -- | -- | -- | -- | 28 |
| 29 | 20 | 2 | POWER POLE #16 W220 | 4#12, 1#12G, 3/4" C | | | 650 | 4#12, 1#12G, 3/4" C | POWER POLE #17 W220 | 2 | 20 | 30 |
| 31 | -- | -- | -- | -- | 650 | 650 | | -- | -- | -- | -- | 32 |
| 33 | 20 | 2 | POWER POLE #18 W209 | 4#12, 1#12G, 3/4" C | | 650 | | 2#12, 1#12G, 3/4" C | POWER POLE #15 W220 | 2 | 20 | 34 |
| 35 | -- | -- | -- | -- | | | 650 | -- | -- | -- | -- | 36 |
| 37 | 20 | 1 | Receptacle OPEN OFFICE W220 | 2#12, 1#12G, 3/4" C | 720 | 720 | | 2#12, 1#12G, 3/4" C | W220 SHREDDERS | 1 | 20 | 38 |
| 39 | 20 | 2 | W220 POWER POLE #19 | 4#12, 1#12G, 3/4" C | | 163 | | | | | | 40 |
| 41 | -- | -- | -- | -- | | | 163 | 0 | SPARE | 1 | 20 | 42 |
| 43 | | | | | 0 | | | | SPARE | 1 | 20 | 44 |
| 45 | 20 | 1 | SPARE | | | 0 | 0 | | SPARE | 1 | 20 | 46 |
| 47 | 20 | 1 | SPARE | | | | 0 | 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:** | 7453 VA | 6500 VA | 6663 VA | | | | | |
| | | | | **TOTAL AMPS:** | 62 A | 54 A | 56 A | | | | | |

| PANEL TOTALS | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 20615 VA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 15308 VA |
| **TOTAL CONNECTED CURRENT:** | 57 A |
| **TOTAL ESTIMATED DEMAND...** | 42 A |
| **DEMAND WITH EXPANSION:** | 51 A |

## PANELBOARD: PP-60A (HOUSE POWER)

**LOCATION:** ELEC W219
**SUPPLY FROM:** PP-60
**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1

**VOLTAGE:** 120/208 Wye
**PHASE:** 3
**WIRES:** 4

**A.I.C. RATING:** MIN 10 KAIC
**MAINS TYPE:** MCB
**MAINS RATING:** 100 A
**MCB RATING:** 100 A

**NOTES:**
SUITABLE FOR NON-LINEAR LOADS.

| # | BKR | P | LOAD SERVED | WIRE / GROUND / CONDUIT | A | B | C | WIRE / GROUND / CONDUIT | LOAD SERVED | P | BKR | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | 2 | POWER POLE #1 W220 | 4#12, 1#12G, 3/4" C | 488 | | | 4#12, 1#12G, 3/4" C | POWER POLE #2 W220 | 2 | 20 | 2 |
| 3 | -- | -- | -- | -- | | 488 | | -- | -- | -- | -- | 4 |
| 5 | 20 | 2 | POWER POLE #3 W220 | 4#12, 1#12G, 3/4" C | | | 488 | 4#12, 1#12G, 3/4" C | POWER POLE #4 W220 | 2 | 20 | 6 |
| 7 | -- | -- | -- | -- | 488 | | | -- | -- | -- | -- | 8 |
| 9 | 20 | 2 | POWER POLE #5 W220 | 4#12, 1#12G, 3/4" C | | 163 | | 4#12, 1#12G, 3/4" C | POWER POLE #6 W220 | 2 | 20 | 10 |
| 11 | -- | -- | -- | -- | | | 163 | -- | -- | -- | -- | 12 |
| 13 | 20 | 2 | POWER POLE #7 W220 | 4#12, 1#12G, 3/4" C | 650 | 163 | | 4#12, 1#12G, 3/4" C | POWER POLE #8 W220 | 2 | 20 | 14 |
| 15 | -- | -- | -- | -- | | 650 | | -- | -- | -- | -- | 16 |
| 17 | 20 | 2 | COMM/POWER POLE #9 W220 | 4#12, 1#12G, 3/4" C | | | 325 | 4#12, 1#12G, 3/4" C | COMM/POWER POLE #10 W220 | 2 | 20 | 18 |
| 19 | -- | -- | -- | -- | 325 | 325 | | -- | -- | -- | -- | 20 |
| 21 | 20 | 2 | POWER POLE #11 W220 | 4#12, 1#12G, 3/4" C | | 650 | | 4#12, 1#12G, 3/4" C | POWER POLE #12 W220 | 2 | 20 | 22 |
| 23 | -- | -- | -- | -- | | | 650 | -- | -- | -- | -- | 24 |
| 25 | 20 | 2 | POWER POLE #13 W220 | 4#12, 1#12G, 3/4" C | 650 | 650 | | 4#12, 1#12G, 3/4" C | POWER POLE #14 W220 | 2 | 20 | 26 |
| 27 | -- | -- | -- | -- | | 650 | | -- | -- | -- | -- | 28 |
| 29 | 20 | 2 | POWER POLE #16 W220 | 4#12, 1#12G, 3/4" C | | | 650 | 4#12, 1#12G, 3/4" C | POWER POLE #17 W209 | 2 | 20 | 30 |
| 31 | -- | -- | -- | -- | 650 | 650 | | -- | -- | -- | -- | 32 |
| 33 | 20 | 2 | POWER POLE #18 W209 | 4#12, 1#12G, 3/4" C | | 650 | 65 | 2#12, 1#12G, 3/4" C | Lighting OPEN OFFICE W220 | 1 | 20 | 34 |
| 35 | -- | -- | -- | -- | | | 650 | 720 2#12, 1#12G, 3/4" C | W209B, W209A RECEPTS | 1 | 20 | 36 |
| 37 | 20 | 2 | POWER POLE #15 W220 | 2#12, 1#12G, 3/4" C | 650 | 163 | | 4#12, 1#12G, 3/4" C | W220 POWER POLE #19 | 2 | 20 | 38 |
| 39 | -- | -- | -- | -- | | 650 | 163 | -- | -- | -- | -- | 40 |
| 41 | 20 | 1 | W209C, W209D RECEPTS | 2#12, 1#12G, 3/4" C | | | 1080 | 0 | SPARE | 1 | 20 | 42 |
| 43 | 20 | 1 | VAV W220 | 2#12, 1#12G, 3/4" C | 180 | 0 | | | SPARE | 1 | 20 | 44 |
| 45 | 20 | 1 | W209E, W209F RECEPTS | 2#12, 1#12G, 3/4" C | | 1080 | 0 | | SPARE | 1 | 20 | 46 |
| 47 | 20 | 1 | W209G, W209H RECEPTS | 2#12, 1#12G, 3/4" C | | | 1080 | 0 | SPARE | 1 | 20 | 48 |
| 49 | 20 | 1 | TV CONF ROOM W220D | 2#12, 1#12G, 3/4" C | 500 | 0 | | | (SPD LEADS) | SPD | 3 | 30 | 50 |
| 51 | 20 | 1 | Lighting OPEN OFFICE W220 | 2#12, 1#12G, 3/4" C | | 52 | 0 | | -- | -- | -- | 52 |
| 53 | 20 | 1 | SPARE | | | | 0 | 0 | -- | -- | -- | 54 |
| | | | | **TOTAL LOAD:** | 7505 VA | 7697 VA | 8730 VA | | | | | |
| | | | | **TOTAL AMPS:** | 63 A | 64 A | 73 A | | | | | |

| PANEL TOTALS | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 23932 VA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 17329 VA |
| **TOTAL CONNECTED CURRENT:** | 66 A |
| **TOTAL ESTIMATED DEMAND...** | 48 A |
| **DEMAND WITH EXPANSION:** | 58 A |

## PANELBOARD: PP-204 (TECHNICAL POWER)

**LOCATION:** COLLAB ROOM W203
**SUPPLY FROM:** T-204
**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1

**VOLTAGE:** 120/208 Wye
**PHASE:** 3
**WIRES:** 4

**A.I.C. RATING:** MIN 10 KAIC
**MAINS TYPE:** MCB
**MAINS RATING:** 100 A
**MCB RATING:** 100 A

**NOTES:**
SUITABLE FOR NON-LINEAR LOADS.

| # | BKR | P | LOAD SERVED | WIRE / GROUND / CONDUIT | A | B | C | WIRE / GROUND / CONDUIT | LOAD SERVED | P | BKR | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | 2 | POWER POLE #26 W298 | 4#12, 1#12G, 3/4" C | 488 | | | 4#12, 1#12G, 3/4" C | POWER POLE #29 W298 | 2 | 20 | 2 |
| 3 | -- | -- | -- | -- | | 488 | | -- | -- | -- | -- | 4 |
| 5 | 20 | 2 | POWER POLE #25 W298 | 4#12, 1#12G, 3/4" C | | | 650 | 4#12, 1#12G, 3/4" C | POWER POLE #28 W298 | 2 | 20 | 6 |
| 7 | -- | -- | -- | -- | 650 | 650 | | -- | -- | -- | -- | 8 |
| 9 | 20 | 2 | POWER POLE #27 W298 | 4#12, 1#12G, 3/4" C | | 325 | 650 | 4#12, 1#12G, 3/4" C | POWER POLE #24 W298 | 2 | 20 | 10 |
| 11 | -- | -- | -- | -- | | | 325 | 650 -- | -- | -- | -- | 12 |
| 13 | 20 | 1 | W209A, W209B RECEPTS | 2#12, 1#12G, 3/4" C | 720 | 720 | | 2#12, 1#12G, 3/4" C | W209C, W209D RECEPTS | 1 | 20 | 14 |
| 15 | 20 | 1 | W209F, W209E RECEPTS | 2#12, 1#12G, 3/4" C | | 720 | 720 | 2#12, 1#12G, 3/4" C | W209H, W209G RECEPTS | 1 | 20 | 16 |
| 17 | | | | | | | 7453 | 4#1, 1#8G, 3/4" C | PP-204A | 3 | 100 | 18 |
| 19 | 20 | 1 | W203D, W203C RECEPTS | 2#12, 1#12G, 3/4" C | 720 | 6500 | | -- | -- | -- | -- | 20 |
| 21 | 20 | 2 | POWER POLE #22 W203 | 4#12, 1#12G, 3/4" C | | 488 | 6663 | -- | -- | -- | -- | 22 |
| 23 | -- | -- | -- | -- | | | 488 | 650 4#12, 1#12G, 3/4" C | POWER POLE #23 W203 | 2 | 20 | 24 |
| 25 | 20 | 2 | POWER POLE #21 W203 | 4#12, 1#12G, 3/4" C | 650 | 650 | | -- | -- | -- | -- | 26 |
| 27 | -- | -- | -- | -- | | 650 | 325 | 4#12, 1#12G, 3/4" C | COMM/POWER POLE #20 W203 | 2 | 20 | 28 |
| 29 | 20 | 1 | W298 PRINTER/SHREDDER | 2#12, 1#12G, 3/4" C | | | 1380 | 325 -- | -- | -- | -- | 30 |
| 31 | 20 | 1 | W203 PRINTER/SHREDDER | 2#12, 1#12G, 3/4" C | 1720 | | | | | | | 32 |
| 33 | | | | | | | | | | | | 34 |
| 35 | | | | | | | | | | | | 36 |
| 37 | | | | | | | | | | | | 38 |
| 39 | | | | | | | | | | | | 40 |
| 41 | 20 | 1 | SPARE | | | | 0 | | | | | 42 |
| 43 | 20 | 1 | SPARE | | 0 | | | | | | | 44 |
| 45 | 20 | 1 | SPARE | | | 0 | | | | | | 46 |
| 47 | 20 | 1 | SPARE | | | | 0 | | | | | 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:** | 13793 VA | 11353 VA | 12570 VA | | | | | |
| | | | | **TOTAL AMPS:** | 116 A | 95 A | 106 A | | | | | |

| PANEL TOTALS | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 37715 VA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 24368 VA |
| **TOTAL CONNECTED CURRENT:** | 105 A |
| **TOTAL ESTIMATED DEMAND...** | 68 A |
| **DEMAND WITH EXPANSION:** | 81 A |

## PANELBOARD: PP-60 (HOUSE POWER)

**LOCATION:** COLLAB ROOM W203
**SUPPLY FROM:** PDP-4A
**MOUNTING:** SURFACE
**ENCLOSURE:** NEMA 1

**VOLTAGE:** 120/208 Wye
**PHASE:** 3
**WIRES:** 4

**A.I.C. RATING:** MIN 10 KAIC
**MAINS TYPE:** MCB
**MAINS RATING:** 100 A
**MCB RATING:** 100 A

**NOTES:**
SUITABLE FOR NON-LINEAR LOADS. PROVIDE 100% RATED 100A MAIN CIRCUIT BREAKER.

| # | BKR | P | LOAD SERVED | WIRE / GROUND / CONDUIT | A | B | C | WIRE / GROUND / CONDUIT | LOAD SERVED | P | BKR | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 100 | 3 | PP-60A | 4#1, 1#8G, 3/4" C | 7505 | 325 | | 4#12, 1#12G, 3/4" C | POWER POLE #29 W298 | 2 | 20 | 2 |
| 3 | -- | -- | -- | -- | | 7697 | 325 | -- | -- | -- | -- | 4 |
| 5 | -- | -- | -- | -- | | | 8730 | 650 4#12, 1#12G, 3/4" C | POWER POLE #28 W298 | 2 | 20 | 6 |
| 7 | 20 | 2 | POWER POLE #26 W298 | 4#12, 1#12G, 3/4" C | 488 | 650 | | -- | -- | -- | -- | 8 |
| 9 | -- | -- | -- | -- | | 488 | 650 | 4#12, 1#12G, 3/4" C | POWER POLE #24 W298 | 2 | 20 | 10 |
| 11 | 20 | 2 | POWER POLE #25 W298 | 4#12, 1#12G, 3/4" C | | | 650 | 650 -- | -- | -- | -- | 12 |
| 13 | -- | -- | -- | -- | 650 | 180 | | 2#12, 1#12G, 3/4" C | W298 FRIDGE | 1 | 20 | 14 |
| 15 | 20 | 2 | POWER POLE #27 W298 | 4#12, 1#12G, 3/4" C | | 325 | 1080 | 2#10, 1#10G, 3/4" C | W221B, W221E RECEPTS | 1 | 20 | 16 |
| 17 | -- | -- | -- | -- | | | 325 | 360 2#12, 1#12G, 3/4" C | W220 RECEPTS | 1 | 20 | 18 |
| 19 | 20 | 1 | W221A, W221D RECEPTS | 2#10, 1#10G, 3/4" C | 1080 | 180 | | 2#12, 1#12G, 3/4" C | W220 FRIDGE | 1 | 20 | 20 |
| 21 | 20 | 1 | W221C, W221F RECEPTS | 2#10, 1#10G, 3/4" C | | 1080 | 720 | 2#12, 1#12G, 3/4" C | W220A RECEPTS | 1 | 20 | 22 |
| 23 | 20 | 1 | W220 COPIER | 2#12, 1#12G, 3/4" C | | | 1000 | 500 2#12, 1#12G, 3/4" C | TV CONF ROOM W204 | 1 | 20 | 24 |
| 25 | 20 | 1 | W220 MICROWAVE | 2#12, 1#12G, 3/4" C | 180 | 180 | | 2#12, 1#12G, 3/4" C | W220 MICROWAVE | 1 | 20 | 26 |
| 27 | 20 | 1 | W220D RECEPTS | 2#12, 1#12G, 3/4" C | | 1260 | 180 | 2#12, 1#12G, 3/4" C | W220 FRIDGE | 1 | 20 | 28 |
| 29 | 20 | 1 | W220 CONV RECEPTS | 2#12, 1#12G, 3/4" C | | | 180 | 900 2#12, 1#12G, 3/4" C | W203D, W203C RECEPTS | 1 | 20 | 30 |
| 31 | 20 | 1 | W220 MICROWAVE | 2#12, 1#12G, 3/4" C | 180 | 720 | | 2#12, 1#12G, 3/4" C | W203-1 RECEPTS | 1 | 20 | 32 |
| 33 | 20 | 1 | W220 FRIDGE | 2#12, 1#12G, 3/4" C | | 180 | 180 | 2#12, 1#12G, 3/4" C | Receptacle BREAK W203A | 1 | 20 | 34 |
| 35 | 20 | 1 | W203E RECEPTS | 2#12, 1#12G, 3/4" C | | | 360 | 180 2#12, 1#12G, 3/4" C | W298 COPIER | 1 | 20 | 36 |
| 37 | 20 | 1 | W204 RECEPTS | 2#12, 1#12G, 3/4" C | 1080 | 180 | | 2#12, 1#12G, 3/4" C | W298 MICROWAVE | 1 | 20 | 38 |
| 39 | 20 | 1 | Receptacle COLLAB ROOM W203 | 2#12, 1#12G, 3/4" C | | 180 | 60 | 2#12, 1#12G, 3/4" C | W203, W298 VAV POWER SUPPLY | 1 | 20 | 40 |
| 41 | 20 | 1 | W298 RECEPTS | 2#12, 1#12G, 3/4" C | | | 540 | 488 4#12, 1#12G, 3/4" C | POWER POLE #22 W203 | 2 | 20 | 42 |
| 43 | 20 | 2 | POWER POLE #23 W203 | 4#12, 1#12G, 3/4" C | 650 | 488 | | -- | -- | -- | -- | 44 |
| 45 | -- | -- | -- | -- | | 650 | 650 | 4#12, 1#12G, 3/4" C | POWER POLE #21 W203 | 2 | 20 | 46 |
| 47 | 20 | 2 | POWER POLE #20 W203 | 4#12, 1#12G, 3/4" C | | | 325 | 650 -- | -- | -- | -- | 48 |
| 49 | -- | -- | -- | -- | 325 | 0 | | (SPD LEADS) | SPD | 3 | 30 | 50 |
| 51 | 20 | 2 | W298 POWER POLE #30 | 2#12, 1#12G, 3/4" C | | 90 | 0 | -- | -- | -- | -- | 52 |
| 53 | -- | -- | -- | -- | | | 90 | 0 -- | -- | -- | -- | 54 |
| | | | | **TOTAL LOAD:** | 15040 VA | 15795 VA | 16578 VA | | | | | |
| | | | | **TOTAL AMPS:** | 125 A | 133 A | 139 A | | | | | |

| PANEL TOTALS | |
|---|---|
| **TOTAL CONNECTED LOAD:** | 47412 VA |
| **TOTAL ESTIMATED DEMAND LOAD:** | 29177 VA |
| **TOTAL CONNECTED CURRENT:** | 132 A |
| **TOTAL ESTIMATED DEMAND...** | 81 A |
| **DEMAND WITH EXPANSION:** | 97 A |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

DATE | DESCRIPTION | MARK

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL.
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

ELECTRICAL PANEL SCHEDULES

SHEET ID
**EP602_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

## 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.

## INSIDE PLANT GENERAL NOTES

1. HORIZONTAL CABLING THROUGHOUT THE FACILITY MUST NOT EXCEED 295 FEET IN CABLE LENGTH PER TIA GUIDELINES. CONTRACTOR MUST ROUTE PATHWAYS AND CABLES TO ENSURE THIS DISTANCE IS NOT EXCEEDED. CONTRACTOR MUST NOTIFY COR PRIOR TO PATHWAY AND CABLE INSTALLATION IF THERE ARE AREAS WHERE THE EXPECTED CABLE LENGTH MAY BE IN EXCESS OF 295 FEET.
2. HORIZONTAL CABLING SERVING WALL MOUNTED COMMUNICATIONS OUTLETS IN STANDARD WALLS MUST BE ROUTED FROM COMMUNICATIONS OUTLET IN MINIMUM 1" CONDUIT FROM EACH COMMUNICATIONS OUTLET TO AREA CABLE TRAY, AND IN AREA CABLE TRAY TO DESIGNATED COMMUNICATION ROOM.
3. ALL CONDUITS MUST BE CONCEALED UNLESS OTHERWISE NOTED ON PLAN. CONDUITS INSTALLED IN SPACES WITH CONCRETE OR CMU WALLS MUST BE SURFACE MOUNTED AND PAINTED TO MATCH WALL FINISH. SEE ARCHITECTURAL PLANS FOR WALL FINISHES.
4. ALL CABLING MUST BE LABELED IN ACCORDANCE WITH TIA-606-C, LABELING STANDARD FOR NETWORKS.
5. USE WIDE BEND RADIUS CONDUITS FOR ALL CONDUITS CONTAINING COMMUNICATIONS CABLING TO FACILITATE CABLE PULLING.
6. ALL COMMUNICATION EQUIPMENT AND OUTLET INSTALLATION LOCATIONS MUST BE COORDINATED WITH FURNITURE INSTALLATION.
7. COORDINATE PENETRATIONS IN FIRE-RATED WALLS WITH DETAILS SHOWN ON ARCHITECTURAL SHEETS.
8. ALL PENETRATIONS IN WALLS, INCLUDING FIRE-RATED WALLS, MUST CONFORM TO THE ARCHITECTURAL PENETRATION DETAILS ON ARCHITECTURAL SHEETS.
9. CONTRACTOR MUST 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.
10. 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.
11. ALL BACKBONE CABLE RUNS MUST HAVE 10' MAINTENANCE LOOPS AT BOTH ENDS. ALL HORIZONTAL CABLE RUNS MUST HAVE 10' MAINTENANCE LOOPS AT THE TR END.
12. INSTALL TELECOMMUNICATIONS PULL BOXES IN STRAIGHT SECTIONS OF CONDUIT. DO NOT USE BOXES IN LIEU OF SWEEPING BENDS. PROVIDE BOXES WHEN:
    A. RACEWAY SECTIONS INCLUDES (2) TWO OR MORE 90 DEGREE SWEEPING BENDS OR EQUIVALENT.
    B. LENGTH OF RACEWAY SECTION IS GREATER THAN 100 FEET.

## 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 |
| TR | TELECOMMUNICATIONS ROOM |
| 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 |
| WIC | WALL-MOUNTABLE INTERCONNECT CENTER |
| 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 FURNITURE MOUNTED COMMUNICATION OUTLET 18" AFF UON.
- ▽1 WALL MOUNTED COMMUNICATION OUTLET 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
- BOX AND CONDUIT PROVIDED AS PART OF ELECTRICAL SCOPE OF WORK

- RECESSED FLAT PANEL BOX.
- TV SURFACE FLAT PANEL BOX.

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
- (J) 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 |

## SYMBOLS - COMMUNICATIONS

- # ▼ WORKSTATION FURNITURE COUPLER TERMINATED FIBER (#);
  Y - YELLOW FIBER, QUANTITY OF FIBER AS INDICATED
  R - RED FIBER, QUANTITY OF FIBER (1), UON
  G - GREEN FIBER, QUANTITY OF FIBER (1), UON
  6 PORT SURFACE MOUNT OUTLET BOX WITH LC CONNECTORS.
- # ▽ WALL PLATE TERMINATED FIBER (#);
  Y - YELLOW FIBER, QUANTITY OF FIBER AS INDICATED
  R - RED FIBER, QUANTITY OF FIBER (1), UON
  G - GREEN FIBER, QUANTITY OF FIBER (1), UON
  P - CAT 6 STP, PHONE DEVICE
  6 PORT FLUSH MOUNT SINGLE GANG OR EQUAL WITH LC CONNECTORS.
- P ▼ WORKSTATION DEVICE
  P - CAT 6 STP, PHONE DEVICE
- P ▽ WALL PLATE
  P - CAT 6 STP, PHONE DEVICE
- WICS EXISTING WICS BOX MOUNTED ABOVE THE CEILING. FIBER TYPE AVAILABLE;
  Y - YELLOW FIBER
  R - RED FIBER
  G - GREEN FIBER
- CF: COMMUNICATIONS POLE (NEW)
- CP-E: COMBINATION POWER/COMMUNICATIONS POLE (EXISTING) TO BE RE-USED WHERE NOTED.
- CF-E: COMMUNICATIONS POLE (EXISTING) TO BE RE-USED WHERE NOTED.

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| DATE | DESCRIPTION | MARK |
|---|---|---|

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL.
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

COMMUNICATIONS LEGEND

SHEET ID
T-001_5

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

A1 OVERALL CABLE TRAY PLAN
SCALE: 1/16" = 1'-0"

PLAN NORTH

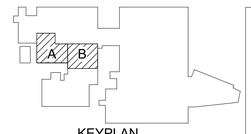
0 8' 16' 32'

**GENERAL NOTES:**

1. REFER TO T-001_5 FOR TELECOMMUNICATIONS GENERAL NOTES, SYMBOLS LEGEND, AND ABBREVIATIONS.
2. REFER TO T-001_5 FOR EQUIPMENT LABELING INFORMATION.
3. INTERCEPT EXISTING CABLE TRAY, PROVIDE NEW CABLE TRAY AS NOTED. PROTECT AND KEEP SAFE REMAINING EXISTING CABLING.
4. PROVIDE APPROPRIATE PENETRATIONS THROUGH WALLS AS REQUIRED PER PENETRATION DETAILS ON TC501_5. REFER TO ARCHITECTURAL DRAWINGS FOR SECURE BOUNDARY REQUIREMENTS. PROVIDE CABLE TRAY THROUGH WALL PENETRATION FOR ALL NON-RATED WALLS.
5. REFER TO TC501_5 FOR TYPICAL CABLE TRAY AND CONDUIT INSTALLATION DETAILS FOR NON-RATED WALLS.
6. REFER TO PENETRATION DETAILS ON ARCHITECTURE SHEETS FOR CONDUIT PENETRATION REQUIREMENTS.
7. PROVIDE CABLE TRAY BONDING PER MANUFACTURE RECOMMENTDATION IN COMPLICANCE WITH NEC 250.96(A). PROVIDE CABLE TRAY UL CLASSIFIED SPLICES AND BOND TO BUILDING STEEL VIA CABLE TRAY SUPPORT STRUCTURE.
8. PROVIDE CABLE WATERFALL SUPPORTS FOR ALL CABLING TO/FROM FIRE-RATED WALL PENETRATIONS TO CABLE TRAY OR CABLE RUNWAY THAT DIFFER IN ELEVATIONS BY MORE THAN 6-INCHES.

**LEGEND:**

AREA/ROOM NOT IN SCOPE




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker
SUBMITTED BY: G. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

OVERALL CABLE TRAY PLAN

SHEET ID

**TC100_5**

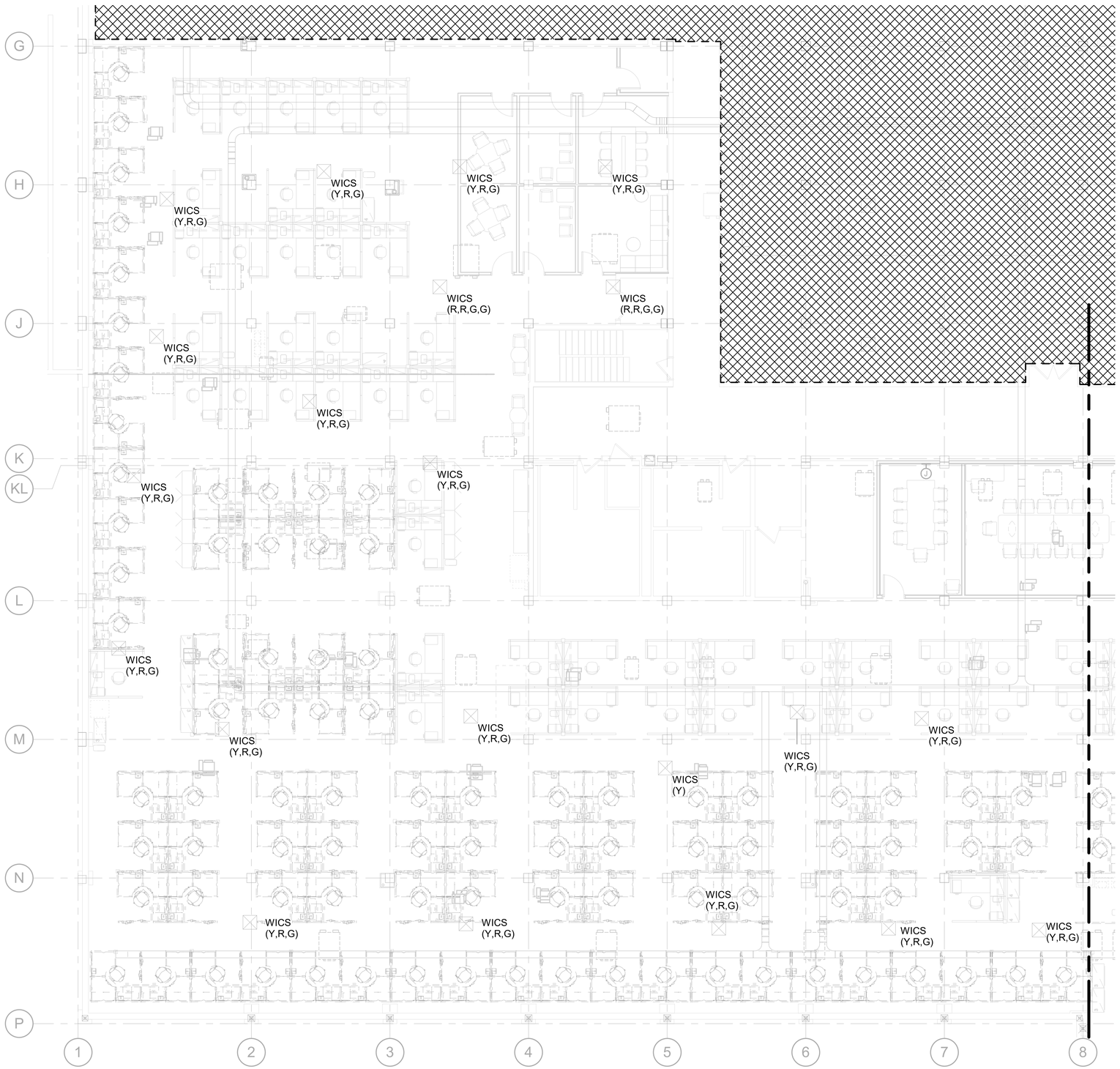
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

CUI



ARIMS: 200A Disposition: Maintain for 15 yrs after construction

NOT FOR CONSTRUCTION




**GENERAL NOTES:**

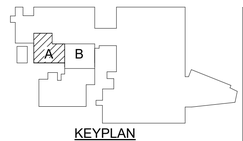
1. REFER TO T-001_5 FOR TELECOMMUNICATIONS GENERAL NOTES, SYMBOLS LEGEND, AND ABBREVIATIONS.
2. REFER TO T-001_5 FOR EQUIPMENT LABELING INFORMATION.
3. INTERCEPT EXISTING CABLE TRAY, PROVIDE NEW CABLE TRAY AS NOTED. PROTECT AND KEEP SAFE REMAINING EXISTING CABLING.
4. PROVIDE APPROPRIATE PENETRATIONS THROUGH WALLS AS REQUIRED PER PENETRATION DETAILS ON TC501_5. REFER TO ARCHITECTURAL DRAWINGS FOR SECURE BOUNDARY REQUIREMENTS. PROVIDE CABLE TRAY THROUGH WALL PENETRATION FOR ALL NON-RATED WALLS.
5. REFER TO TC501_5 FOR TYPICAL CABLE TRAY AND CONDUIT INSTALLATION DETAILS FOR NON-RATED WALLS.
6. REFER TO PENETRATION DETAILS ON ARCHITECTURE SHEETS FOR CONDUIT PENETRATION REQUIREMENTS.
7. PROVIDE CABLE TRAY BONDING PER MANUFACTURE RECOMMENDATION IN COMPLIANCE WITH NEC 250.96(A). PROVIDE CABLE TRAY UL CLASSIFIED SPLICES AND BOND TO BUILDING STEEL VIA CABLE TRAY SUPPORT STRUCTURE.
8. PROVIDE CABLE WATERFALL SUPPORTS FOR ALL CABLING TO/FROM FIRE-RATED WALL PENETRATIONS TO CABLE TRAY OR CABLE RUNWAY THAT DIFFER IN ELEVATIONS BY MORE THAN 6-INCHES.

**LEGEND:**

AREA/ROOM NOT IN SCOPE

PLAN NORTH

0 4' 8' 16'




KEYPLAN
NOT TO SCALE

A1 CABLE TRAY PLAN - AREA A
SCALE: 1/8" = 1'-0"

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| ISSUE DATE: | 02-16-23 |
| SOLICITATION NO.: | |
| CONTRACT NO.: | |

| | |
|---|---|
| DESIGNED BY: | Designer |
| DRAWN BY: | Author |
| CHECKED BY: | Checker |
| SUBMITTED BY: | S. JOHNSON |
| SIZE: | 34X22 |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

CABLE TRAY PLAN - AREA A

SHEET ID

**TC101_5**

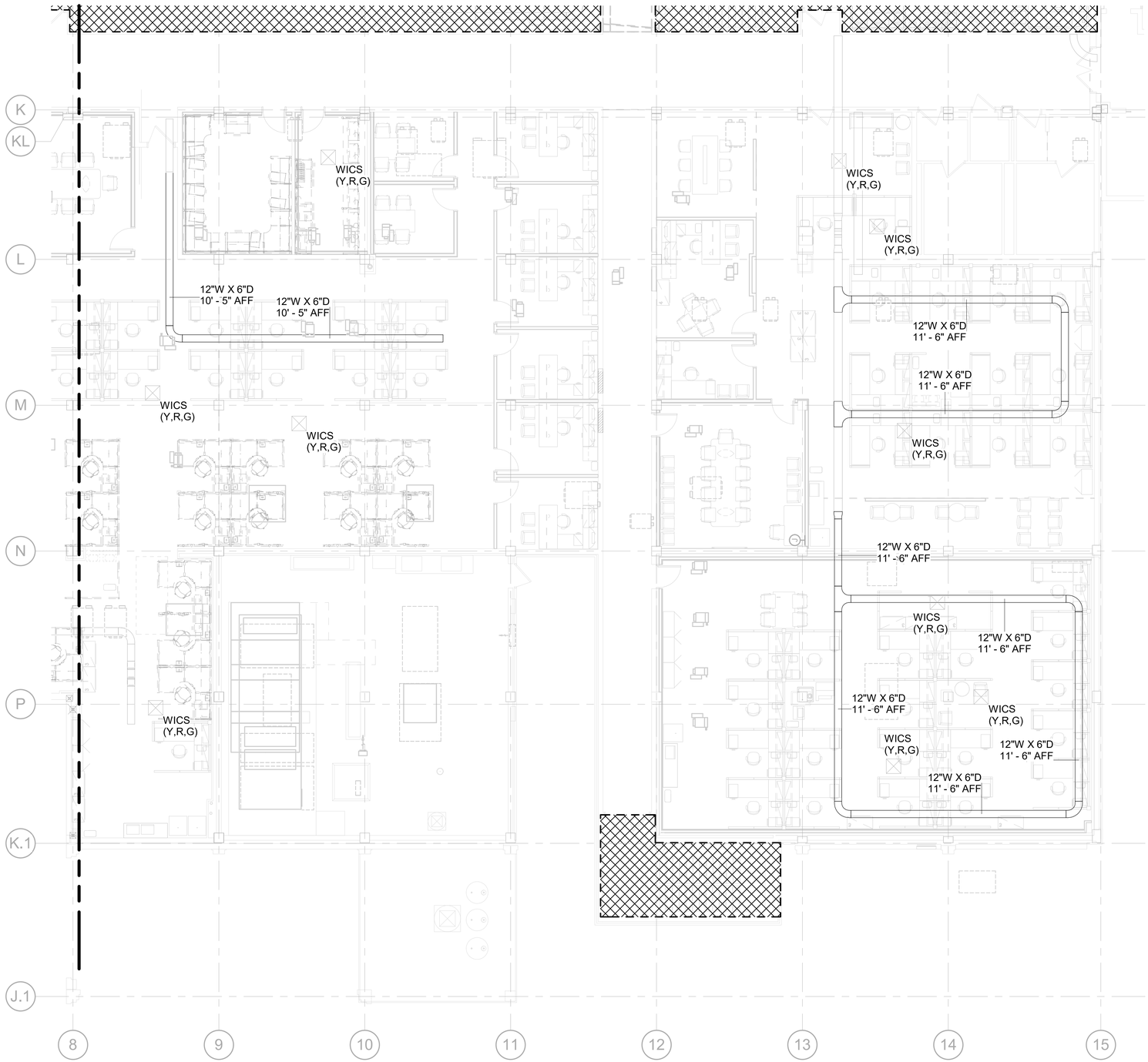
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)

ARIMS: 200A Disposition: Maintain for 15 yrs after construction

NOT FOR CONSTRUCTION




A1 CABLE TRAY PLAN - AREA B
SCALE: 1/8" = 1'-0"

**GENERAL NOTES:**

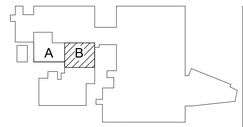
1. REFER TO T-001_5 FOR TELECOMMUNICATIONS GENERAL NOTES, SYMBOLS LEGEND, AND ABBREVIATIONS.
2. REFER TO T-001_5 FOR EQUIPMENT LABELING INFORMATION.
3. INTERCEPT EXISTING CABLE TRAY, PROVIDE NEW CABLE TRAY AS NOTED. PROTECT AND KEEP SAFE REMAINING EXISTING CABLING.
4. PROVIDE APPROPRIATE PENETRATIONS THROUGH WALLS AS REQUIRED PER PENETRATION DETAILS ON TC501_5. REFER TO ARCHITECTURAL DRAWINGS FOR SECURE BOUNDARY REQUIREMENTS. PROVIDE CABLE TRAY THROUGH WALL PENETRATION FOR ALL NON-RATED WALLS.
5. REFER TO TC501_5 FOR TYPICAL CABLE TRAY AND CONDUIT INSTALLATION DETAILS FOR NON-RATED WALLS.
6. REFER TO PENETRATION DETAILS ON ARCHITECTURE SHEETS FOR CONDUIT PENETRATION REQUIREMENTS.
7. PROVIDE CABLE TRAY BONDING PER MANUFACTURE RECOMMENDATION IN COMPLIANCE WITH NEC 250.96(A). PROVIDE CABLE TRAY UL CLASSIFIED SPLICES AND BOND TO BUILDING STEEL VIA CABLE TRAY SUPPORT STRUCTURE.
8. PROVIDE CABLE WATERFALL SUPPORTS FOR ALL CABLING TO/FROM FIRE-RATED WALL PENETRATIONS TO CABLE TRAY OR CABLE RUNWAY THAT DIFFER IN ELEVATIONS BY MORE THAN 6-INCHES.

**LEGEND:**

AREA/ROOM
NOT IN SCOPE

PLAN
NORTH

0 4' 8' 16'




KEYPLAN
NOT TO SCALE

US ARMY CORPS
OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker
SUBMITTED BY: G. ADKINSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

CABLE TRAY PLAN - AREA B

SHEET ID

**TC102_5**

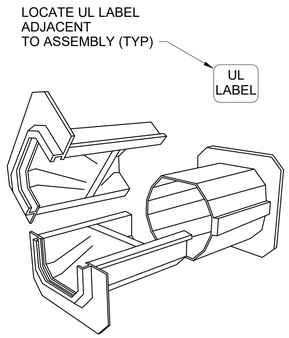
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)

ARIMS: 200A Disposition: Maintain for 15 yrs after construction

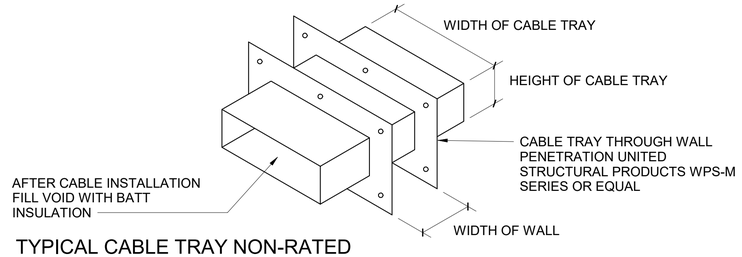
NOT FOR CONSTRUCTION



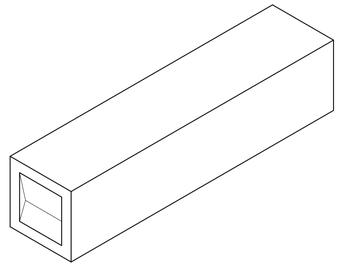

**NOTES**

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.

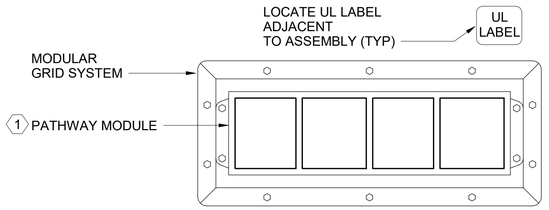
D1 TYPICAL SMOKE AND STC PENETRATION DETAIL
SCALE:NTS




D4 TYPICAL CABLE TRAY NON-RATED WALL PENETRATION DETAIL
SCALE:NTS



**SINGLE MODULE**




**SAMPLE 4-GANG**

**NOTES**

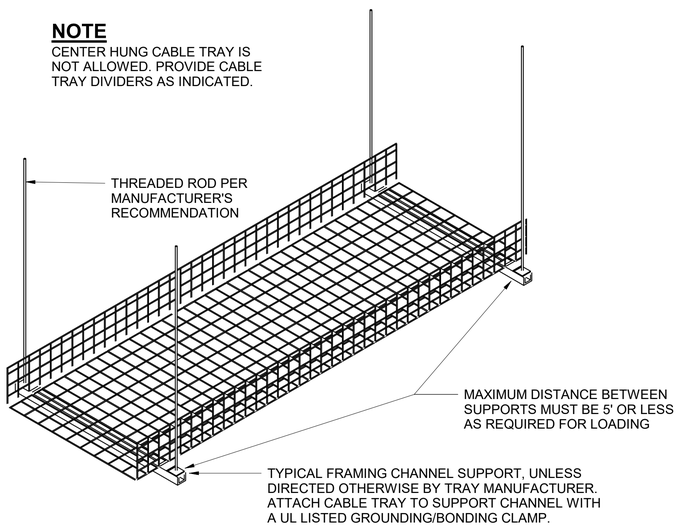
1. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. PART NUMBERS LISTED FOR REFERENCE AND MAY NOT REPRESENT ALL REQUIRED COMPONENTS FOR A COMPLETE INSTALLATION. SEE SPECIFICATIONS.
3. MUST BE UL LISTED AS A 2 HOUR FIRE RATED ASSEMBLY.
4. MINIMUM STC RATING OF 50. STC TESTING FOR 0-100% FILL.

**KEYED NOTES:**

1 ROUTE NETWORK CABLING THROUGH MODULES.

A4 TYPICAL 2-HOUR FIRE-RATED AND STC PENETRATION DETAIL
SCALE:NTS

**NOTE**
CENTER HUNG CABLE TRAY IS NOT ALLOWED. PROVIDE CABLE TRAY DIVIDERS AS INDICATED.




A1 TYPICAL BASKET CABLE TRAY DETAIL
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker
SUBMITTED BY: C. JOHNSON
SIZE: 34X22

REPLACE AHU-5
PN: ZHTV-160060 / P2: 4699978
WRIGHT-PATTERSON AFB, OHIO

CABLE TRAY DETAILS

SHEET ID
**TC501_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

**GENERAL NOTES: COMMUNICATIONS**

1. REFER TO T-001_5 FOR TELECOMMUNICATION GENERAL NOTES, SYMBOLS LEGEND, AND ABBREVIATIONS.
2. REFER TO T-001_5 FOR EQUIPMENT LABELING INFORMATION.
3. REFER TO TYPICAL TELECOMMUNICATIONS DETAILS, SHEETS TN501_5 AND TN502_5.
4. INSTALL FIBER OPTIC CABLING FROM THE NEAREST WICS BOX LOCATED ABOVE CEILING TO DEVICE LOCATIONS INDICATED. FIBER PATCHING AT WICS BOX WILL BE GFGI.
5. FURNISH AND INSTALL WORK STATION FURNITURE COUPLER AND/OR WALL PLATE AS INDICATED.
6. GOVERNMENT TO RELOCATE WICS BOXES IF REQUIRED. COORDINATE WICS BOX LOCATIONS WITH GOVERNMENT. ENSURE 4' CLEARANCE BE MAINTAINED AROUND WICS BOX.
7. TYPE 'P' DEVICE CABLING MUST BE ROUTED BACK TO MUCS ROOM. TERMINATE IN COMMUNICATION RACK AS DIRECTED BY NASIC. PROVIDE COPPER PATCH PANELS AS REQUIRED FOR NEW WORK TO BE PERFORMED.

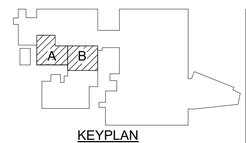
A1 OVERALL SECOND FLOOR COMMUNICATIONS PLAN
SCALE: 1/16" = 1'-0"

PLAN NORTH

0 8" 16" 32"

**LEGEND:**

AREA/ROOM NOT IN SCOPE




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

OVERALL SECOND FLOOR COMM PLAN

SHEET ID

**TN100_5**

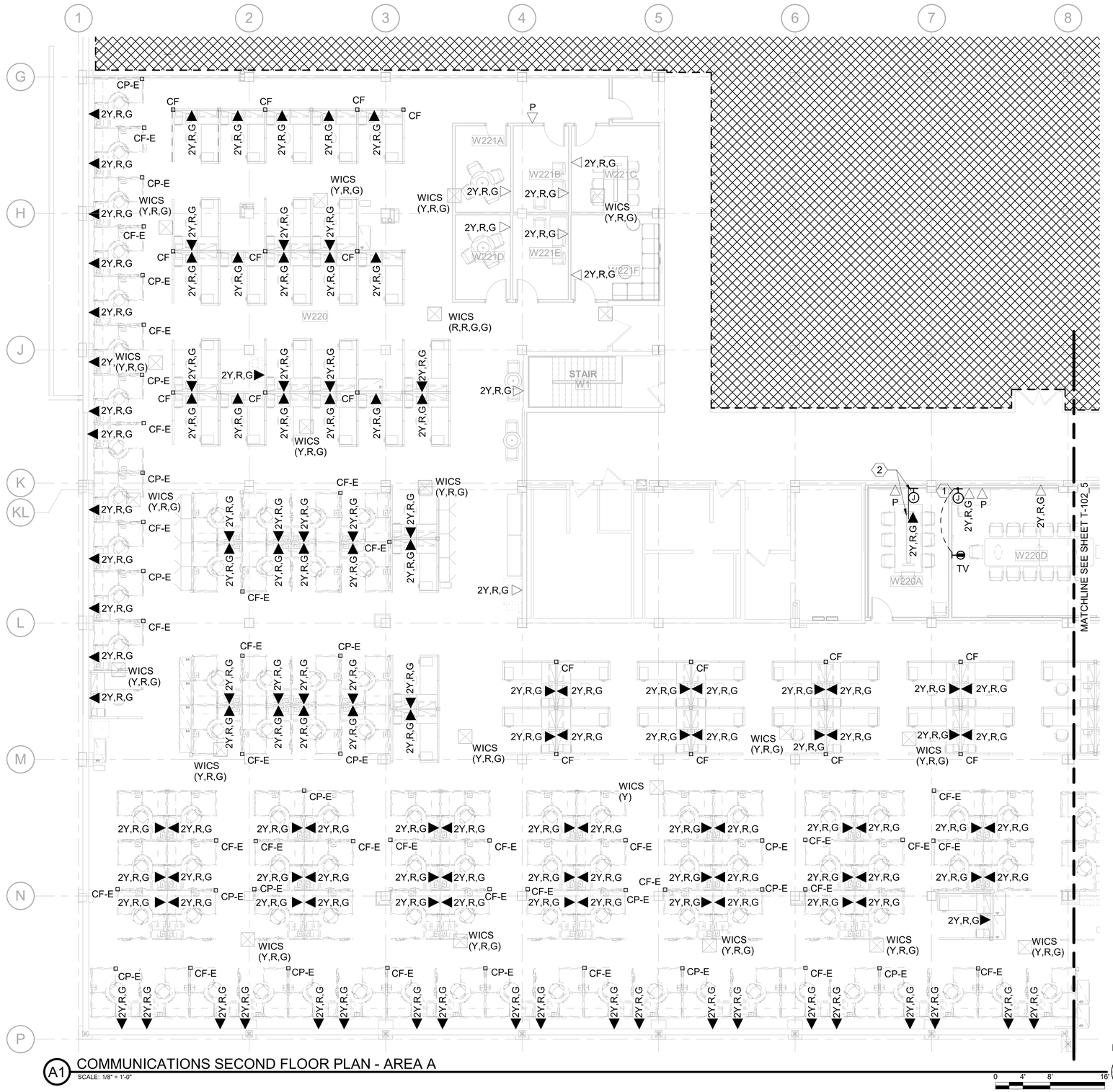
CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)

ARIMS: 200A Disposition: Maintain for 15 yrs after construction

NOT FOR CONSTRUCTION




A1 COMMUNICATIONS SECOND FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

**GENERAL NOTES: COMMUNICATIONS**

1. REFER TO T-001_5 FOR TELECOMMUNICATION GENERAL NOTES, SYMBOLS LEGEND, AND ABBREVIATIONS.
2. REFER TO T-001_5 FOR EQUIPMENT LABELING INFORMATION.
3. REFER TO TYPICAL TELECOMMUNICATIONS DETAILS, SHEETS TN501_5 AND TN502_5.
4. INSTALL FIBER OPTIC CABLING FROM THE NEAREST WICS BOX LOCATED ABOVE CEILING TO DEVICE LOCATIONS INDICATED. FIBER PATCHING AT WICS BOX WILL BE GFGI.
5. FURNISH AND INSTALL WORK STATION FURNITURE COUPLER AND/OR WALL PLATE AS INDICATED.
6. GOVERNMENT TO RELOCATE WICS BOXES IF REQUIRED. COORDINATE WICS BOX LOCATIONS WITH GOVERNMENT. ENSURE 4' CLEARANCE BE MAINTAINED AROUND WICS BOX.
7. TYPE 'P' DEVICE CABLING MUST BE ROUTED BACK TO MUCS ROOM. TERMINATE IN COMMUNICATION RACK AS DIRECTED BY NASIC. PROVIDE COPPER PATCH PANELS AS REQUIRED FOR NEW WORK TO BE PERFORMED.

**KEYED NOTES:** (#)

1. PROVIDE JUNCTION BOX AND 1-1/4" CONDUIT FOR AV CONNECTION TO TV. CABLING TO BE GFGI.
2. PROVIDE JUNCTION BOX FOR FIBER CONNECTION TO CONFERENCE ROOM TABLE. PROVIDE 2Y,R,G THROUGH (3) CHANNELs of RACEWAY (SHOWN ON EP101_5) TO BREAKOUT MODULE MOUNTED ON INTERIOR OF LEG OF TABLE. GOVERNMENT TO PROVIDE FIBER PATCH CORDS FROM BREAKOUT MODULE THROUGH FURNITURE TO POWER/DATA MODULE AND LEAVE COILED FOR USE. COORDINATE INSTALLATION WITH FURNITURE MANUFACTURER AND INSTALLERS.

**LEGEND:**

AREA/ROOM NOT IN SCOPE

KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| ISSUE DATE: 02-16-23 | |
| SOLICITATION NO.: | |
| CONTRACT NO.: | |
| DESIGNED BY: C. KLOS | |
| DRAWN BY: D. BRADLEY | |
| CHECKED BY: W. SCHWEITZER | |
| SUBMITTED BY: G. JOHNSON | |
| SIZE: 34X22 | |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

COMMUNICATIONS SECOND FLOOR PLAN - AREA A

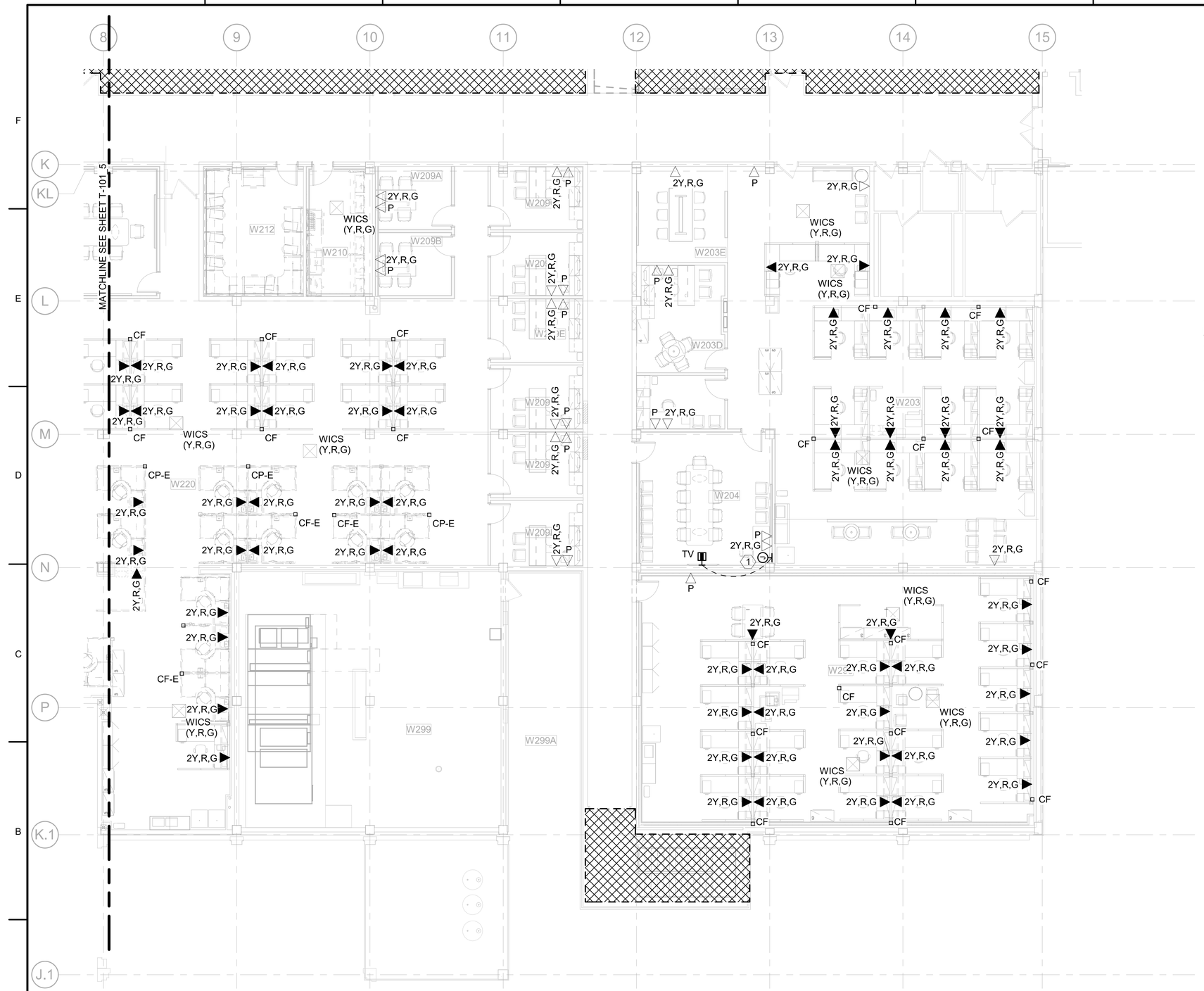
SHEET ID

**TN101_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000



CONTROLLED UNCLASSIFIED INFORMATION (CUI)
ARIMS: 200A Disposition: Maintain for 15 yrs after construction
NOT FOR CONSTRUCTION




**GENERAL NOTES: COMMUNICATIONS**

1. REFER TO T-001_5 FOR TELECOMMUNICATION GENERAL NOTES, SYMBOLS LEGEND, AND ABBREVIATIONS.
2. REFER TO T-001_5 FOR EQUIPMENT LABELING INFORMATION.
3. REFER TO TYPICAL TELECOMMUNICATIONS DETAILS, SHEETS TN501_5 AND TN502_5.
4. INSTALL FIBER OPTIC CABLING FROM THE NEAREST WICS BOX LOCATED ABOVE CEILING TO DEVICE LOCATIONS INDICATED. FIBER PATCHING AT WICS BOX WILL BE GFGI.
5. FURNISH AND INSTALL WORK STATION FURNITURE COUPLER AND/OR WALL PLATE AS INDICATED.
6. GOVERNMENT TO RELOCATE WICS BOXES IF REQUIRED. COORDINATE WICS BOX LOCATIONS WITH GOVERNMENT. ENSURE 4' CLEARANCE BE MAINTAINED AROUND WICS BOX.
7. TYPE 'P' DEVICE CABLING MUST BE ROUTED BACK TO MUCS ROOM. TERMINATE IN COMMUNICATION RACK AS DIRECTED BY NASIC. PROVIDE COPPER PATCH PANELS AS REQUIRED FOR NEW WORK TO BE PERFORMED.

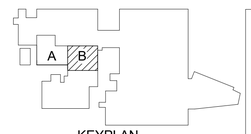
**KEYED NOTES:** (#)

1. PROVIDE JUNCTION BOX AND CONDUIT FOR AV CONNECTION TO TV. CABLING TO BE GFGI.
2. SURFACE MOUNT EXISTING DATA OUTLETS AND DEVICES TO NEW WALL IN SIMILAR LOCATION. ASSUME 5 DATA OUTLETS PER SPACE.

A1 COMMUNICATIONS SECOND FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'




KEYPLAN
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: S. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

COMMUNICATIONS SECOND FLOOR PLAN - AREA B

SHEET ID

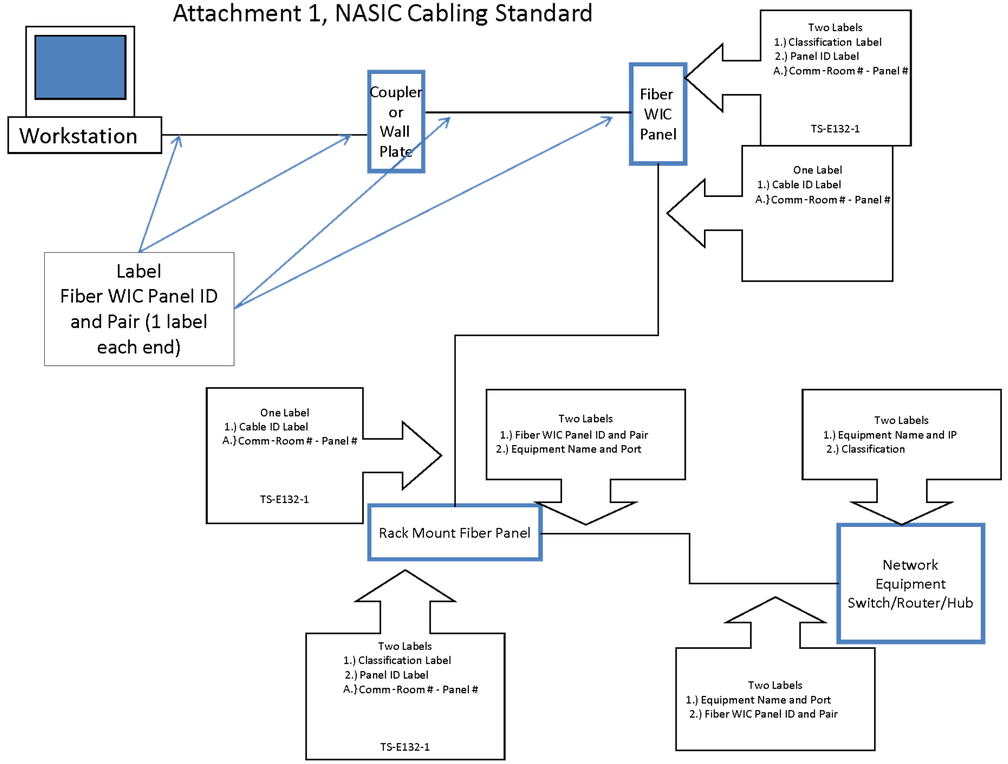
**TN102_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

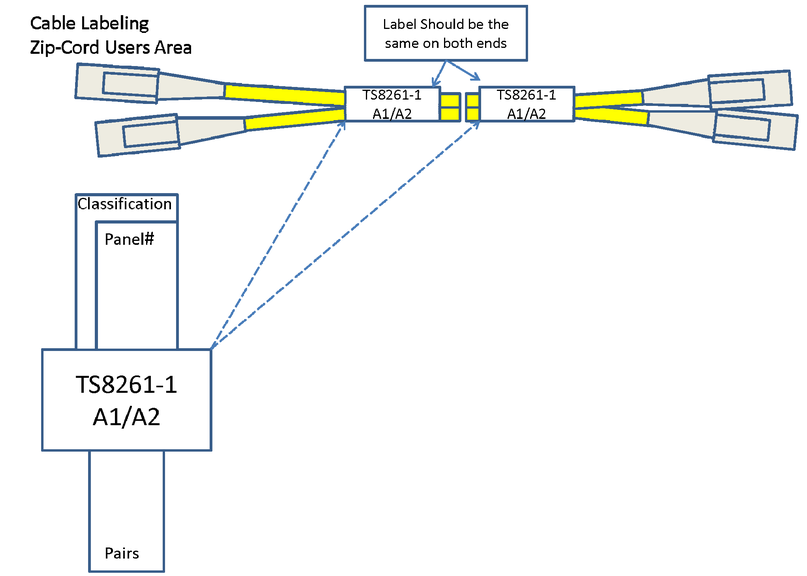


ARIMS: 200A Disposition: Maintain for 15 yrs after construction

# Attachment 1, NASIC Cabling Standard



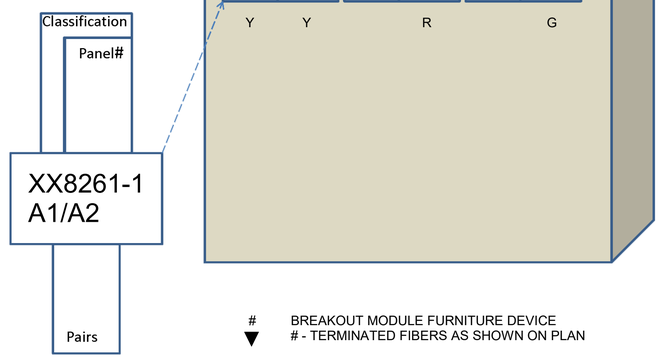

C1 TYPICAL SECURE FACILITY LABELING STANDARD
SCALE:NTS



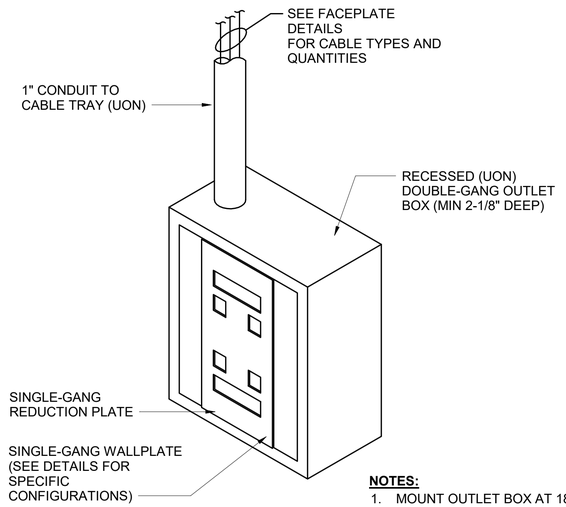

D6 MTP TO MTP JUMPER LABELLING
SCALE:NTS

## MODULAR JACK AND CABLING FACEPLATE INFORMATION SCHEDULE

| APPEARANCE | DESIGNATOR | MODULAR JACK | | CABLE | |
|---|---|---|---|---|---|
| | | DESCRIPTION | COLOR | DESCRIPTION | COLOR |
| | B | CAT6 RJ-45 NON-KEYED (DATA, VOIP) | BLUE | 4-PAIR CATEGORY 6 STP | BLUE |

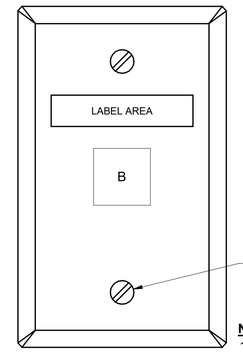



A1 TYPICAL BREAKOUT MODULE FURNITURE LABELING
AHU_5
SCALE:NTS




**NOTES:**
1. MOUNT OUTLET BOX AT 18" AFF (UON).

A4 TYPICAL COMMUNICATIONS BACKBOX
SCALE:NTS




**NOTES:**
1. COORDINATE ALL TYPE P MOUNTING LOCATIONS WITH NASIC SC/XP.

A7 COMM OUTLET TYPE P
SCALE:NTS

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: C. JOHNSON
SIZE: 34X22
ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DATE | DESCRIPTION | MARK

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING, JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

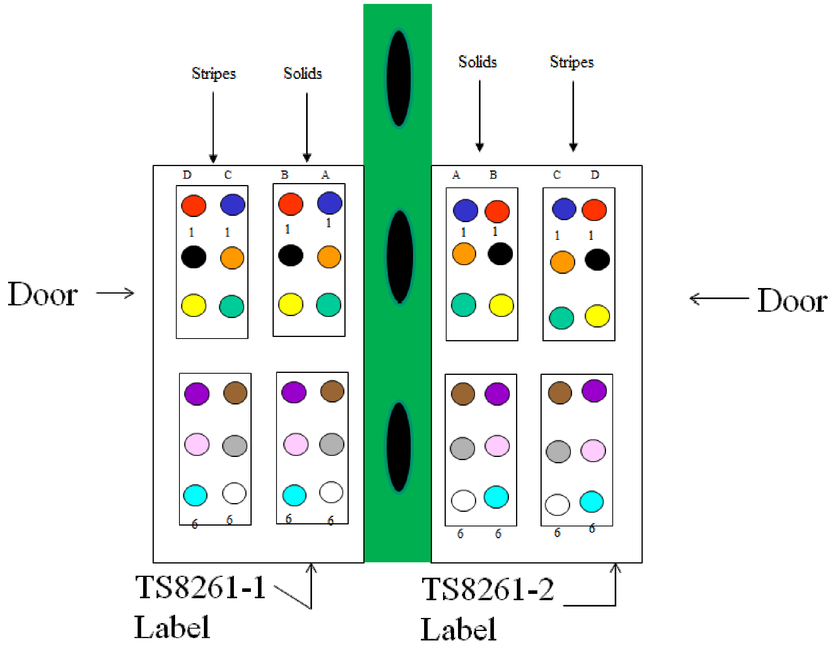
REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

COMMUNICATIONS DETAILS

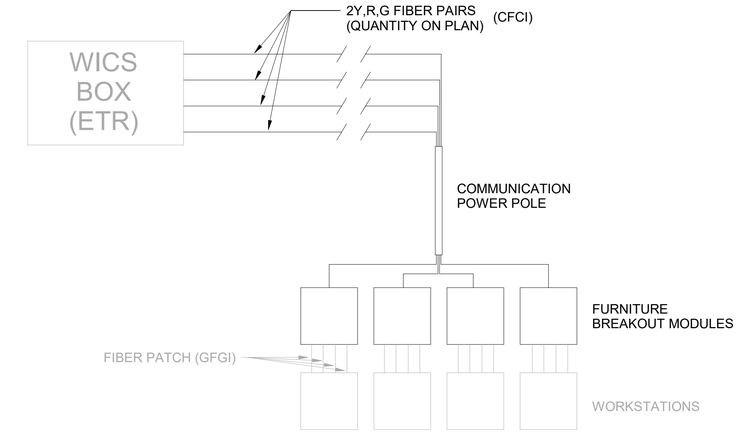
SHEET ID
**TN501_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000

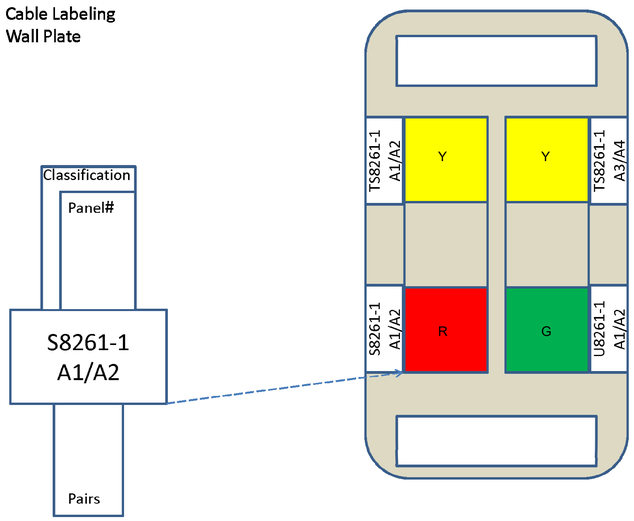
## Ceiling Mounted WICS (Corning WICS Panel WIC-024)




C1 TYPICAL CEILING MOUNTED WICS
SCALE:NTS




C5 TYPICAL WICS TO WORKSTATION CONNECTION
SCALE:NTS




A1 TYPICAL CABLE FACEPLATE
SCALE:NTS

**AHU5 TYPE 2Y,R,G COMMUNICATIONS DROPS BY ROOM NUMBER**

| ROOM | | OUTLET | |
|---|---|---|---|
| NO. | NAME | TYPE | QUANTITY |
| W203 | COLLAB ROOM | 2Y,R,G | 15 |
| W203A | BREAK | 2Y,R,G | 1 |
| W203C | OFFICE | 2Y,R,G | 1 |
| W203D | OFFICE | 2Y,R,G | 1 |
| W203E | CONF ROOM | 2Y,R,G | 1 |
| W204 | CONF ROOM | 2Y,R,G | 1 |
| W209 | OPEN OFFICE | 2Y,R,G | 16 |
| W209A | CONF ROOM | 2Y,R,G | 1 |
| W209B | CONF ROOM | 2Y,R,G | 1 |
| W209C | OFFICE | 2Y,R,G | 1 |
| W209D | OFFICE | 2Y,R,G | 1 |
| W209E | OFFICE | 2Y,R,G | 1 |
| W209F | OFFICE | 2Y,R,G | 1 |
| W209G | OFFICE | 2Y,R,G | 1 |
| W209H | OFFICE | 2Y,R,G | 1 |
| W220 | OPEN OFFICE | 2Y,R,G | 144 |
| W220A | CONF ROOM | 2Y,R,G | 1 |
| W220D | CONF ROOM | 2Y,R,G | 2 |
| W221A | CONF ROOM | 2Y,R,G | 1 |
| W221B | CONF ROOM | 2Y,R,G | 1 |
| W221C | COLLAB ROOM | 2Y,R,G | 1 |
| W221D | CONF ROOM | 2Y,R,G | 1 |
| W221E | CONF ROOM | 2Y,R,G | 1 |
| W221F | COLLAB ROOM | 2Y,R,G | 1 |
| W298 | OPEN OFFICE | 2Y,R,G | 22 |
| Grand total: 219 | | | 219 |

**AHU5 TYPE P COMMUNICATIONS DROPS BY ROOM NUMBER**

| ROOM | | OUTLET | |
|---|---|---|---|
| NO. | NAME | TYPE | QUANTITY |
| W203 | COLLAB ROOM | P | 1 |
| W203C | OFFICE | P | 1 |
| W203D | OFFICE | P | 1 |
| W204 | CONF ROOM | P | 1 |
| W209A | CONF ROOM | P | 1 |
| W209B | CONF ROOM | P | 1 |
| W209C | OFFICE | P | 1 |
| W209D | OFFICE | P | 1 |
| W209E | OFFICE | P | 1 |
| W209F | OFFICE | P | 1 |
| W209G | OFFICE | P | 1 |
| W209H | OFFICE | P | 1 |
| W220 | OPEN OFFICE | P | 1 |
| W220A | CONF ROOM | P | 1 |
| W220D | CONF ROOM | P | 1 |
| W298 | OPEN OFFICE | P | 1 |
| Grand total: 16 | | | 16 |

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT

DATE | DESCRIPTION | MARK

ISSUE DATE: 02-16-23
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: C. KLOS
DRAWN BY: D. BRADLEY
CHECKED BY: W. SCHWEITZER
SUBMITTED BY: G. JOHNSON
SIZE: 34X22

US ARMY CORPS OF ENGINEERS
LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING JR. PL
LOUISVILLE, KY 40202

BURNS McDONNELL
9400 WARD PARKWAY, KANSAS CITY, MO 64114

REPLACE AHU-5
PN: ZHTV-160060 / P2: 469978
WRIGHT-PATTERSON AFB, OHIO

COMMUNICATIONS DETAILS

SHEET ID
**TN502_5**

CORRECTED FINAL W912QR23R0022_CUI_Plans-0000