ADDENDUM

SECTION 00 91 11.02 - ADDENDUM 002

OWNER	**INDIANA UNIVERSITY**
PROJECT	**20210388 - BL107 BIOLOGY BUILDING - REPLACE AHU 6** **A/E PROJECT 5-6669**
PURPOSE	**THIS ADDENDUM SHALL FORM PART OF THE BIDDING DOCUMENTS. CHANGES, ADDITIONS, CLARIFICATION OR DELETIONS HEREIN SUPERSEDE THE DRAWINGS AND SPECIFICATIONS. BIDDERS SHALL INCLUDE ON THE PROPOSAL FORM ACKNOWLEDGEMENT OF THE RECEIPT OF THIS ADDENDUM.**
ATTACHMENTS	**GENERAL: QUESTIONS & ANSWERS FORM** **REISSUED SPECIFICATIONS: 23 73 13 MODULAR CENTRAL-STATION AIR-HANDLING UNITS** **REISSUED SHEETS: M2.2.06, M2.3.06**
ARCHITECT-ENGINEER	**GMB** **317.641.0674** **WWW.GMB.COM**

ADDENDUM

GENERAL

1.1 QUESTIONS & ANSWERS FORM - ADDENDUM 002 (NEW)

SPECIFICATION CLARIFICATIONS / REVISIONS

2.1 SECTION 23 73 13 MODULAR CENTRAL-STATION AIR-HANDLING UNITS (REISSUED)

A. Refer to 2.3 B.3 for changes

SHEET CLARIFICATIONS / REVISIONS

3.1 SHEET M2.2.06 - SIXTH FLOOR HVAC & ELECTRICAL PLANS - ROOM A693B (REISSUED)

A. Revised electrical keynotes E01, E02 and E03.

3.2 SHEET M2.3.06 - SIXTH FLOOR PIPING PLANS - ROOM A693 (REISSUED)

A. Refer to plans for updates.

END OF SECTION

Questions & Answers

Project: 20210388 - BL107 Biology Building- Replace AHU 6

Topic/Discipline/Reference	*Question*	*Answer*
AHU/Mech/Specification	Can Dunham Bush added to the spec?	Unfortunatelly, not this time
AHU/Mech/Specification	Can 0.063 embossed aluminum exterior casing and 0.040 smooth aluminum interior casing be added as acceptable?	Yes, Specification was modified accordingly

SECTION 23 73 13 - MODULAR CENTRAL-STATION AIR-HANDLING UNITS

ADDENDUM 002

PART 1 GENERAL

1.1 SECTION INCLUDES (MAX SECTION DIMENSIONS 50"X70"X40")

A. Casing construction. **THE UNIT CONSISTS TWO AIR TUNNELS (TOP AND BOTTOM)**
B. Fan section.
C. Coil section.
D. Integral face and bypass coil section.
E. Humidifier section.
F. Filter and air cleaner section.
G. Damper section.
H. Airflow measurement.
I. Access section.
J. Electrical power connections
K. Controls.

1.2 RELATED REQUIREMENTS

A. Section 23 05 93 - Testing, Adjusting, and Balancing for HVAC.
B. Section 23 09 13 - Instrumentation and Control Devices for HVAC.
C. Section 23 33 00 - Air Duct Accessories: Flexible duct connections.
D. Section 26 05 83 - Wiring Connections: Electrical characteristics and wiring connections.
E. Section 23 09 34 - Variable-frequency motor contollers for HVAC.

1.3 REFERENCE STANDARDS

A. ABMA STD 9 - Load Ratings and Fatigue Life for Ball Bearings.
B. AHRI 410 - Forced-Circulation Air-Cooling and Air-Heating Coils.
C. AHRI 610 (I-P) - Performance Rating of Central System Humidifiers for Residential Applications.
D. AMCA (DIR) - (Directory of) Products Licensed Under AMCA International Certified Ratings Program.
E. AMCA 210 - Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating.
F. AMCA 300 - Reverberation Room Methods of Sound Testing of Fans.
G. AMCA 301 - Methods for Calculating Fan Sound Ratings from Laboratory Test Data.
H. AMCA 500-D - Laboratory Methods of Testing Dampers for Rating.
I. ASHRAE Std 52.2 - Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size.
J. ASHRAE Std 90.1 I-P - Energy Standard for Buildings Except Low-Rise Residential Buildings.
K. NFPA 70 - National Electrical Code.
L. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems.
M. NFPA 90B - Standard for the Installation of Warm Air Heating and Air-Conditioning Systems.
N. UL (DIR) - Online Certifications Directory.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the work with other trades for installation of roof mounted air handling units on roof curbs.

B. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by all affected installers.

C. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.

1.5 SUBMITTALS (DUE WITH THE BID)

A. See Section 01 30 00 - Administrative Requirements for submittal procedures.

B. Product Data:
   1. Published Literature: Indicate dimensions, weights, capacities, ratings, gauges and finishes of materials, and electrical characteristics and connection requirements.
   2. Filters: Data for filter media, filter performance data, filter assembly, and filter frames.
   3. Fans: Performance and fan curves with specified operating point clearly plotted, power, RPM.
   4. Sound Power Level Data: Fan outlet and casing radiation at rated capacity.
   5. Electrical Requirements: Power supply wiring including wiring diagrams for interlock and control wiring, clearly indicating factory-installed and field-installed wiring.

C. Shop Drawings: Indicate assembly, unit dimensions, weight loading, required clearances, construction details, field connection details, and electrical characteristics and connection requirements.

D. Manufacturer's Instructions: Include installation instructions.

E. Maintenance Data: Include instructions for lubrication, filter replacement, motor and drive replacement, spare parts lists, and wiring diagrams.

F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 01 60 00 - Product Requirements for additional provisions.
   2. Gaskets: One set for each access door.
   3. Extra Filters: Two sets of each type and size.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum five years of documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Accept products on site in factory-fabricated protective containers, with factory-installed shipping skids and lifting lugs. Inspect for damage.

B. Store in clean dry place and protect from weather and construction traffic. Handle carefully to avoid damage to components, enclosures, and finish.

C. Do not operate units until construction is complete and ductwork is clean, filters are in place, bearings lubricated, and fan has been test run under observation.

1.8 WARRANTY

A. Refer to closeout procedure for additional warranty requirements.

B. Provide minimum two year manufacturer warranty covering repair or replacement due to defective materials or workmanship.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Carrier Global Corporation (Basis of Design)

B. Ventrol

C. Trane Technologies, PLC.

D. York, a brand of Johnson Controls International, PLC.

2.2 REGULATORY REQUIREMENTS

A. Comply with NFPA 70.

B. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified and indicated.

2.3 CASING CONSTRUCTION

A. Full Perimeter Base Rail:
   1. Construct of galvanized steel.
   2. Provide minimum base rail of 6 inches for bottom "tunnel" and 4 inches for top "tunnel".

B. Casing:
   1. Constructed of one piece, injection foam insulated, double wall panels.
   2. Provide mid-span, no through metal, internal thermal break.
   3. Construct outer panels of galvanized steel or 0.063 embossed aluminum and inner panels of galvanized steel or 0.040 smooth aluminum for all section except humidifier section which shall have stainless steel panels.
   4. Casing Air Pressure Performance Requirements:
      a. Able to withstand up to 8 in-wc positive or negative static pressure.
      b. Not to exceed 0.0042 inches per inch deflection at 1.5 times design static pressure up to a maximum of plus 8 in-wc in positive pressure sections and minus 8 in-wc in negative pressure sections.

C. Access Doors:
   1. Construction, thermal and air pressure performance same as casing.
   2. Provide surface mounted handles on stainless steel piano hinged, swing doors. Arrange doors to be opened against airflow. Provide safety latch on doors so that doors do not open uncontrollably. Doors shall be fully removable.
   3. "VENT-LOCK" model 310 door handles are installed on both sides of the door.
   4. Access doors shall have close cell EPDM bulb type gasket applied around entire perimeters of panel frames.
   5. All doors include DURODYNE IP test ports.

D. Unit Flooring: Construct with sufficient strength to support expected people and equipment loads associated with maintenance activities. Floors shall be continuously welded 0.1875" thick aluminum treadplate and 1" turned up flange.

E. Casing Leakage: Seal joints and provide airtight access doors so that air leakage does not exceed one percent of design flow at the specified casing pressure.

F. Insulation:
   1. Provide minimum thermal thickness of R13 throughout.
   2. Completely fill panel cavities in each direction to prevent voids and settling.
   3. Comply with NFPA 90A.

G. Drain Pan Construction:
   1. Provide coil sections with an insulated, double wall, stainless steel drain pan complying with ASHRAE Std 62.1 for indoor air quality and sufficiently sized to collect all condensate.
   2. Slope in two planes to promote positive drainage and eliminate stagnate water conditions.
   3. Locate outlet of sufficient diameter at lowest point of pan to prevent overflow at normal operating conditions.
   4. Provide threaded drain connections constructed of drain pan material, extended sufficient distance beyond the base to accommodate field installed, condensate drain trapping.

H. Finish:

1. Indoor Units:
    a. Provide exterior, G90 galvanized steel panels without paint.

2.4 FAN SECTION

A. Type: Air foil, single width, single inlet, centrifugal plug fan, in accordance with AMCA 99.

B. Performance Ratings: Determined in accordance with AMCA 210 and labeled with AMCA Certified Rating Seal.

C. Sound Ratings: AMCA 301; tested to AMCA 300 and label with AMCA Certified Sound Rating Seal.

D. Bearings: Self-aligning, grease lubricated, with lubrication fittings extended to exterior of casing with plastic tube and grease fitting rigidly attached to casing.

E. Mounting:
1. Locate fan and motor internally on welded steel base coated with corrosion resistant paint.
2. Factory-mount fans with manufacturer's standard restrained vibration isolation mounting devices having a minimum static deflection of 1 inch.
3. Factory mount motor on slide rails.
4. Provide access to motor, drive, and bearings through removable casing panels or hinged access doors.

F. External Motor Junction Box: Factory mount NEMA 4 external junction box and connect to extended motor leads from internally mounted motors.

G. Motor Wiring Conduit: Factory wire fan motor wiring to the unit mounted starter-disconnect, variable frequency drive, and external motor junction box.

H. Flexible Duct Connections:
1. For all unit ductwork connections.
2. See Section 23 33 00.

I. Drives:
1. Bearings: Heavy duty pillow block type, ball bearings, with ABMA STD 9 L-10 life at 50,000 hours.
2. Direct Drive: Factory mounted direct drive.

J. Motors:
1. Comply with modular air handling unit requirements and ratings along with requirements of Section 23 05 13.
2. Motor electrical requirements and wiring to comply with requirements of Section 26.

2.5 COIL SECTION

A. Casing: Provide access to both sides of coils. Enclose coils with headers and return bends fully contained within casing. Slide coils into casing through removable end panel with blank off sheets and sealing collars at connection penetrations.

B. Drain Pans: long as required to catch all carry over condensate downstream of coil and down spouts for cooling coil banks more than one coil high.

C. Eliminators: Three break of galvanized steel, mounted over drain pan.

D. Air Coils:
1. Certify capacities, pressure drops, and selection procedures in accordance with AHRI 410.

E. Fabrication:
1. Tubes: 5/8 inch OD seamless copper expanded into fins, brazed joints.
2. Fins: Aluminum.
3. Casing: Die formed channel frame of galvanized steel.

F. Water Cooling Coils:
1. Headers: Cast iron, seamless copper tube, or prime coated steel pipe with brazed joints.

2. Configuration: Drainable, with threaded plugs for drain and vent; threaded plugs in return bends and in headers opposite each tube.
3. Piping Connections: Same end, threaded or flanged.
4. Ratings: 200 psi, 325 degrees F.
5. Casing: Stainless Steel

2.6 INTEGRAL FACE AND BYPASS COIL SECTION

A. Provide horizontal tube, integral face and bypass, steam coil certified in accordance with AHRI 410.

B. Coil shall be capable of maintainng a constant air volume, within 5%, shall be capable of maintaining a constant leaving air temperature as entering air conditions vary, and shall be capable of producing leaving air temperature within 3 ft downstream with a maximum variance in air temperature of 5degF, regardless of damper position. When no heating is required, dampers shall divert air to by-pass around heating surface with minimal temperature override.Coil casing, dampers and baffles shall be fabricated from galvanized steel with an option for stainless steel. Coils shall be tested at 300 psig. Integral face and by-pass coils shall be provided with a connection point for field-mounted electrical actuator(s). Actuator connection point shall be mechanically attached to dampers via linkage machanisms. Dampers shall be interconnected for operation simultaneously across each face of coil.

C. Enclose headers and return bends within unit casing.

D. Assembly to consist of finned heating elements and bypasses with interlocked dampers.

E. Damper actuator by IU Control group.

2.7 HUMIDIFIER SECTION

A. General: Capacities and selection in accordance with AHRI 610 (I-P).

B. Steam Grid Humidifier:
1. Stainless steel distribution tube with evenly spaced orifices extended full width of unit, factory mounted in plenum with drain pan for draw-through units.

2.8 FILTER AND AIR CLEANER SECTION

A. General: Provide filter sections with filter racks, minimum of one access door for filter removal, and filter block-offs to prevent air bypass.

B. Pleated Media Filters:
1. Media: 2 inch, 100 percent synthetic fibers, continuously laminated to a grid with water repellent adhesive, and capable of operating up to a maximum of 625 fpm without loss of efficiency and holding capacity.
2. Frame: Steel wire grid.
3. Minimum Efficiency Reporting Value: 8 MERV when tested in accordance with ASHRAE Std 52.2.

C. Hi-Efficiency Filters:
1. Media: 2 inch prefilter and 4 inch closely spaced, pleated, fine fiber, hi-efficiency filter, sealed into a rigid frame, and capable of operating up to a maximum of 625 fpm without loss of efficiency and holding capacity.
2. Filter Rack: Side-access designed to hold rigid frames.
3. Minimum Efficiency Reporting Value: 13 MERV when tested in accordance with ASHRAE Std 52.2.

2.9 DAMPER SECTION

A. Damper Actuators to comply with requirements of Section 23 09 13.

B. Internal Face and Bypass Section: Provide dampers to divert airflow around the heating coils.

C. Internal Face Damper Section: Provide as indicated within the air handling unit.

D. Damper Blades:

1. Dampers to comply with requirements of Section 23 33 00.
2. Double-skin airfoil design with metal, compressible jamb seals and extruded-vinyl blade-edge seals on each blade.
3. Self-lubricating stainless steel or synthetic sleeve bearings.
4. Comply with ASHRAE Std 90.1 I-P for rated maximum leakage rate.
5. Provide leakage testing and pressure ratings in compliance with AMCA 500-D test methods.
6. Arrange in parallel or opposed-blade configuration.

2.10 AIRFLOW MEASUREMENT

A. Fan Inlet Airflow Measurement (AFMS) devise:
   1. Provide airflow piezometer measurement probes to directly measure fan airflow or measure differential pressure that can be used to calculate airflow without interfering with submitted airflow performance and noise levels.
   2. Each piezometer airflow probes shall contain multiple, averaged velocity pressure taps located symmetrically around the throat of the fan inlet and a single static pressure tap located on the fan housing. The entire airflow monitoring probe must be located outside the inlet throat as to not obstruct the airflow. Provide interconnecting tuing and single connection point for transducer. Interconnecting tubing shall be mounted outside the inlet throat.
   3. The piezometer probe shall be capable of producing steady, non-pulsating sugnal of the velocity pressure, independent of the upstream static pressure without adversely affecting the performance of the fan.
   4. Accuracy: Plus/minus 5 percent when operating within the stable operating region of the fan curve.
   5. Provide differential pressure versus airflow calculation curves and equations.

2.11 ACCESS SECTION

A. Provide where indicated on drawings to allow for inspection, cleaning, and maintenance of field-installed components.

B. Construct access doors same as previously specified within this Section.

2.12 TURNING AND DISCHARGE PLENUM SECTION

A. Provide plenum to efficiently turn and discharge air.
   1. Scale plenum vertical height to accommodate discharge duct height.
   2. Scale plenum horizontal length to accommodate required dimensional constraints.

B. Acoustical Liner for fan an:
   1. Fabricate from corrosion-proof, perforated stainless steel with completely encapsulated fiberglass insulation.

2.13 ELECTRICAL POWER CONNECTIONS

A. Air Handling Unit shall have a single connection of power to unit with unit-mounted disconnect switch accessible from outside unit and control-circuit transformer with built-in overcurrent protection.

2.14 CONTROLS

A. Controls shall be field installed by IU Control group.

B. Combination VFD - Disconnects:
   1. Provide factory ship loose, field mounted, combination VFD - disconnect for each fan motor.
      a. Provide in accordance with Section 23 09 34.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Bolt sections together with gaskets.

C. Make connections to coils with unions or flanges.

D. Hydronic Coils:
   1. Hydronic Coils: Connect water supply to leaving air side of coil (counterflow arrangement).
   2. Provide shut-off valve on supply line and lockshield balancing valve with memory stop and shut-off valve on return line.
   3. Locate water supply at bottom of supply header and return water connection at top.
   4. Provide manual air vents at high points complete with stop valve.
   5. Ensure water coils are drainable and provide drain connection at low points.

E. Cooling Coils:
   1. Pipe drain and overflow to nearest floor drain.

F. Coordinate BAS, BMS, or Integrated Automation linking between unit controller(s) and front end interface.

3.2 FIELD QUALITY CONTROL

A. Coordination Tests and Inspections:
   1. Owner or Construction Manager will employ independent Testing, Adjusting, and Balancing agency and Commissioning agency to test and/or inspect modular central-station air handling-unit.
   2. Provide access and coordination time as required to accommodate timely performance.
   3. See Section 23 05 93 and 23 08 00.

3.3 SYSTEM STARTUP

A. Provide manufacturer's field representative to perform systems startup.

B. Prepare and start equipment and systems in accordance with manufacturers' instructions and recommendations.

C. Adjust all air handling unit and each component for proper operation within manufacturer's published tolerances.

3.4 CLEANING

A. After completing system installation, testing procedures and startup service, clean air handling units internally of all dirt and debris.

B. Comb all damaged coil fins to original manufactured orientation.

C. Install new filters.

3.5 FIELD QUALITY CONTROL

A. Provide manufacturer's field representative to perform startup service; test, inspect, instruct, and observe field-assembled components and equipment installation, including connections and to assist in field testing. Report results in writing.
   1. Leak Test:
      a. After installation, fill water and steam coils with water and test for leaks.
      b. Charge refrigerant coils with nitrogen and test for leaks.
      c. Repair leaks and retest until no leaks exist.
   2. Operational Test:
      a. After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
      b. Test and adjust controls and safeties.
      c. Replace damaged and malfunctioning controls and other equipment.
      d. Remove and replace malfunctioning air handling unit components and retest as specified above.

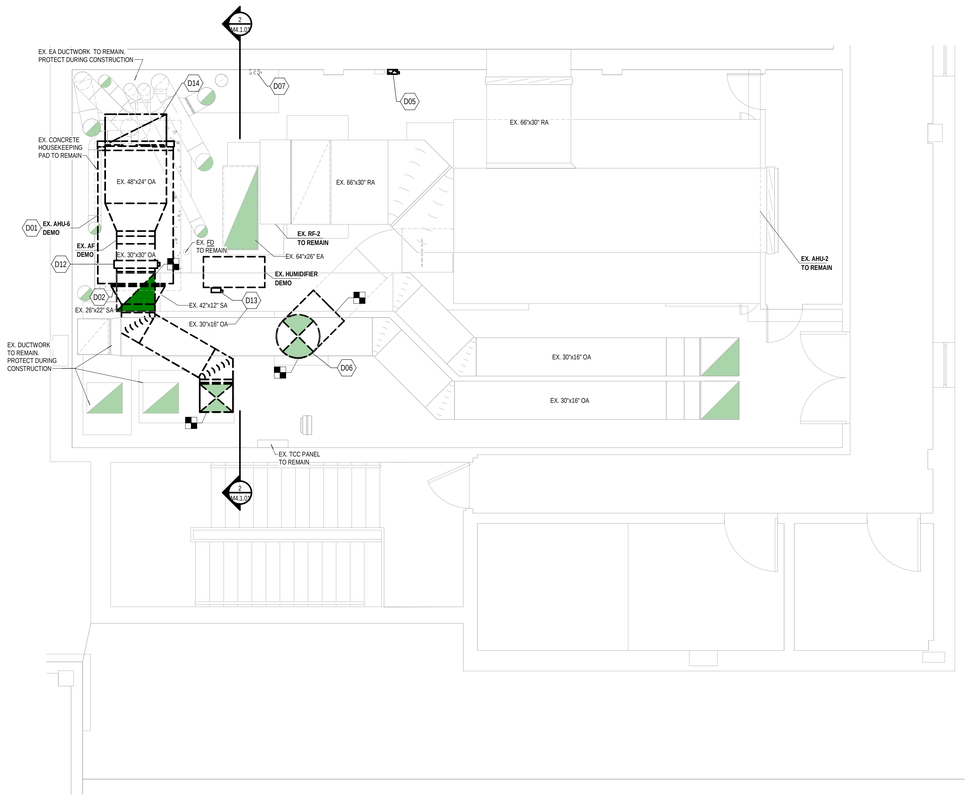
3.6 CLOSEOUT ACTIVITIES

A. Demonstrate proper operation of equipment to Owner's designated representative.

B. Demonstration: Demonstrate operation of system to Owner's personnel.
   1. Use operation and maintenance data as reference during demonstration.
   2. Conduct walking tour of project.
   3. Briefly describe function, operation, and maintenance of each component.

C. Training: Train Owner's personnel on operation and maintenance of system.
   1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required. All training shall be video recorded for Owner's usage.
   2. Provide minimum of four hours of training.
   3. Instructor: Manufacturer's training personnel.
   4. Location: At project site.

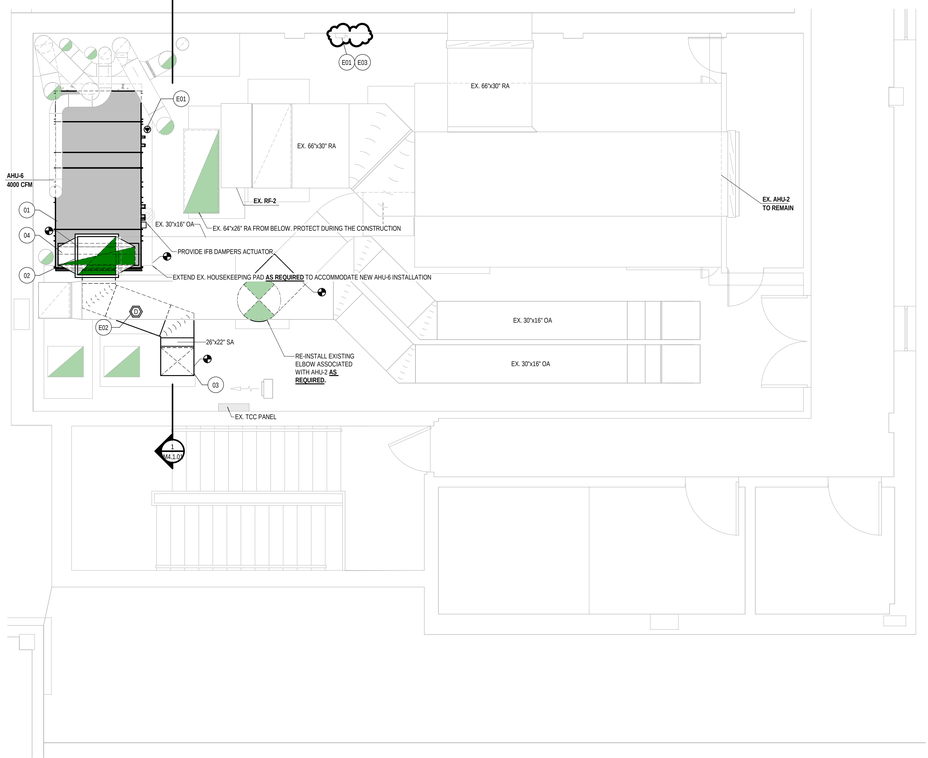
END OF SECTION



2 M2.2.06 SIXTH FLOOR HVAC & ELECTRICAL DEMOLITION PLAN - ROOM A693B

1/4" = 1'-0"

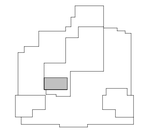
	MECHANICAL DEMO KEYNOTE...
D01	DISCONNECT ALL UTILITIES, DUCTWORK INCLUDING FILTERS, ETC. AND REMOVE EX. AHU-6 COMPLETELY.
D02	DISCONNECT AND REMOVE EX. SUPPLY AIR & OUTSIDE AIR DUCTWORK FROM EX. AHU-6 AS SHOWN.
D05	DISCONNECT AND REMOVE ELECTRICAL CONNECTIONS TO EXISTING AHU-6. PREPARE EX. DISCONNECT SWITCH TO BE RE-USED FOR NEW AHU-6.
D06	TEMPORARILY DISCONNECT, REMOVE AND SALVAGE 90 DEGREE SUPPLY AIR ELBOW (EX. AHU-2) ONLY IF NEEDED TO ALLOW NEW AHU-6 DELIVERY. AHU-2 SHUT DOWN TIME MUST BE AS SHORT AS POSSIBLE (2 HOURS MAX) AND COORDINATED WITH IU.
D07	DISCONNECT AND REMOVE EX. ELECTRICAL CONNECTION AND DISCONNECT SWITCH FOR DUCT MOUNTED FILTER SYSTEM MOTOR.
D12	DISCONNECT AND REMOVE EXISTING OA CONTROL DAMPER, DISINTEGRATE FROM EX. BMS. REMOVE PNEUMATIC TUBING BACK TO MAIN AND CAP AIR-TIGHT.
D13	REMOVE EX. SWITCH AND ALL ASSOCIATED HARDWARE BACK TO ITS SOURCE FOR EX. HUMIDIFIER.
D14	REMOVE EX. DUCT SMOKE DETECTOR.



	MECHANICAL KEYNOTE LEGEND
01	INSTALL NEW AHU-6 ON EXISTING CONCRETE PAD. CONNECT NEW DUCTWORK WITH FLEX CONNECTIONS TO THE UNIT. CONNECT NEW LPS, STEAM CONDENSATE RETURN AND CWS/R PIPING, POWER, CONTROLS, ETC. EXTEND BRANCH CIRCUITS AS NECESSARY. INTEGRATE INTO EX. BMS. MAXIMUM SHIPPING SPLIT DIMENSION: 52"x72". REFER TO NOTES, DETAILS, DIAGRAMS FOR FURTHER INFORMATION.
02	PROVIDE NEW OA MOTORIZED CONTROL DAMPER. INTEGRATE INTO EXISTING BMS.
03	PROVIDE NEW SA DUCTWORK FROM NEW AHU-6 AS SHOWN. CONNECT TO EXISTING SA DUCTWORK SERVING FLOORS BELOW. PROVIDE DUCTWORK SUPPORT FROM A FLOOR.
04	PROVIDE NEW OA DUCTWORK AND CONNECT TO NEW AHU-6 AS SHOWN. PROVIDE SUPPORTS AS NECESSARY.
E01	REUSE EX. DISCONNECT SWITCH FED FROM MCC-4 ON 5TH FLOOR. PROVIDE (4) #12 AWG + (1) #12 AWG GRD IN 3/4" TO FOR NEW VFD AT AHU-6 UNIT.
E02	INSTALL NEW DUCT SMOKE DETECTORS IN SUPPLY AIR DUCTWORK AS INDICATED. AND INTEGRATE IN EXISTING BMS.
E03	CONTRACTOR TO FIELD-VERIFY EXISTING FUSE SIZE IN MCC-4 AND INSTALL A NEW 20AMP FUSE, IF REQUIRED.

1 M2.2.06 SIXTH FLOOR HVAC & ELECTRICAL PLAN - ROOM A693B

1/4" = 1'-0"



KEYPLAN

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20210388 BL107 BIOLOGY BUILDING - REPLACE AHU 6

INDIANA UNIVERSITY

BLOOMINGTON, INDIANA

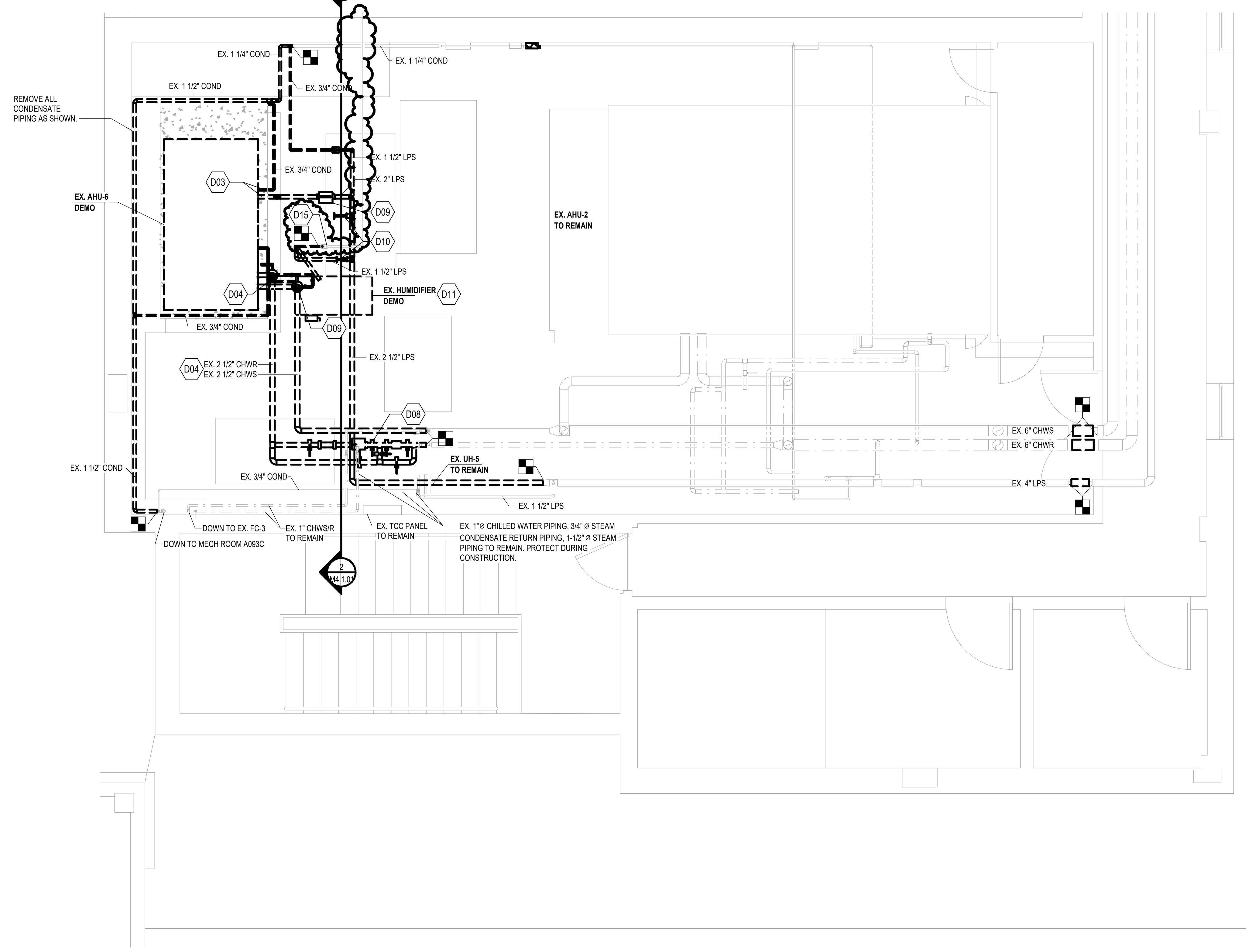
ISSUANCES

10.27.2025	BIDS & CONSTRUCTION
11.06.2025	ADDEDNUM 001
11.20.2025	ADDENDUM 002

DRAWN	GSH
REVIEWED	OSO
PROJECT NO.	5-6669

SIXTH FLOOR HVAC & ELECTRICAL PLANS - ROOM A693B

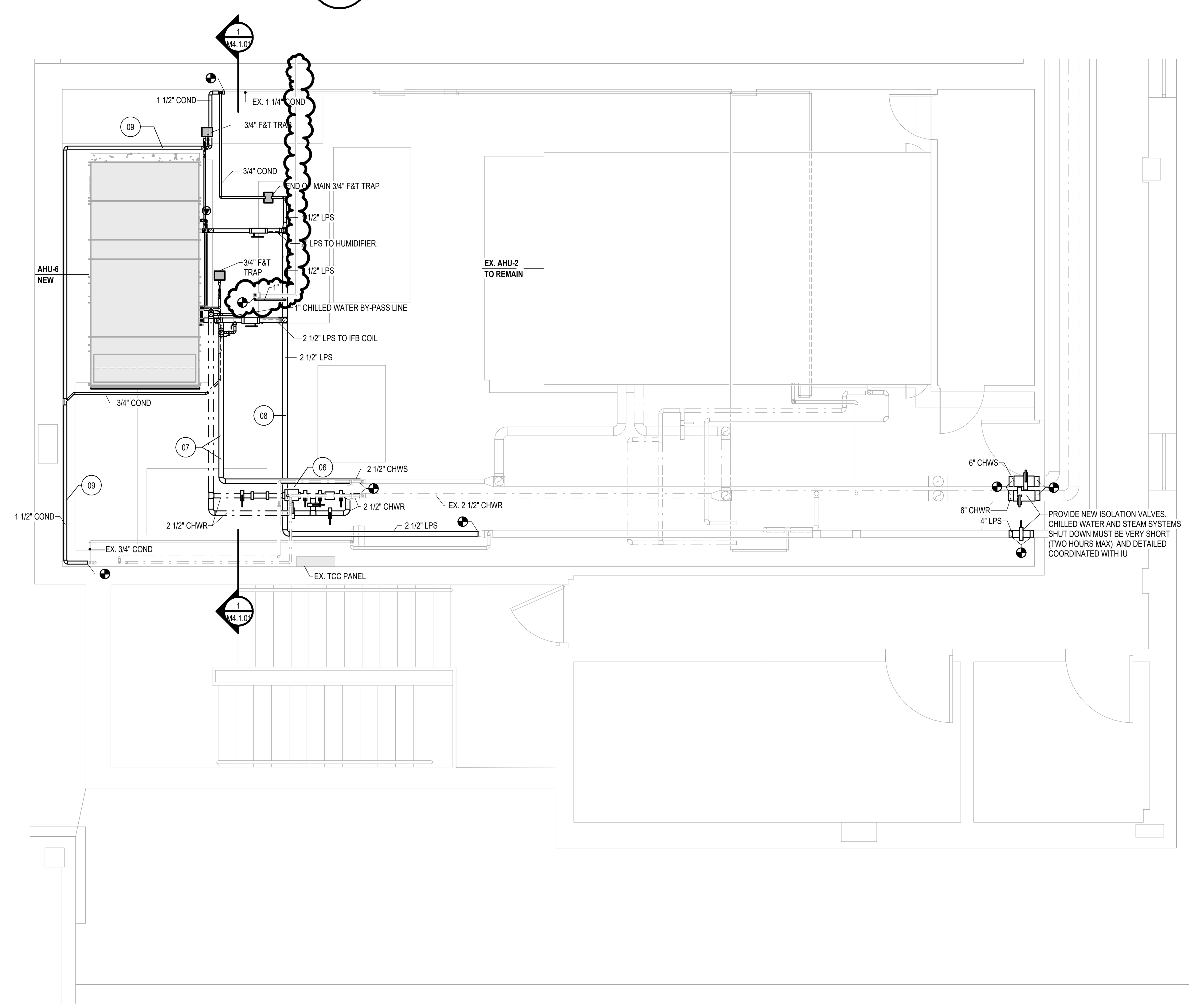
M2.2.06



2 | M2.3.06 SIXTH FLOOR PIPING DEMOLITION PLAN - ROOM A693B

1/4" = 1'-0"

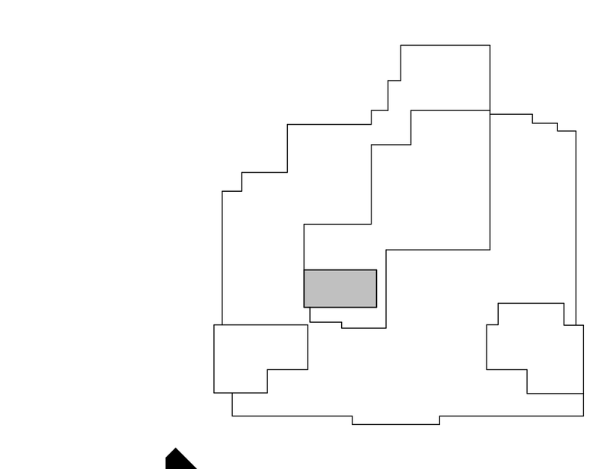
	MECHANICAL DEMO KEYNOTE...
D03	DISCONNECT AND REMOVE EX. STEAM AND STEAM CONDENSATE PIPING, CONDENSATE TRAPS, VALVES, ACCESSORIES AND PNEUMATIC CONTROLS FROM EX. AHU-6. SALVAGE/PROTECT PIPING SUPPORT IF POSSIBLE TO BE RE-USED.
D04	DISCONNECT AND REMOVE EX. CHWS AND CHWR PIPING, VALVES, ACCESSORIES AND PNEUMATIC CONTROLS FROM EX. AHU-6.
D08	REMOVE EXISTING PNEUMATIC 2-WAY CONTROL VALVE, FLOW CONTROL VALVE, ISOLATION VALVES, AND CHILLED WATER PIPING AS SHOWN. REMOVE PNEUMATIC TUBING BACK TO MAIN AND CAP AIR-TIGHT.
D09	REMOVE EX. STEAM COIL CONTROL VALVE AND ALL ASSOCIATED PNEUMATIC TUBING BACK TO MAIN AND CAP AIR-TIGHT.
D10	REMOVE EXISTING STEAM ISOLATION VALVES.
D11	REMOVE EXISTING STEAM HUMIDIFIER AND ASSOCIATED PIPING, ACCESSORIES, SUPPORTS, AND CONTROLS COMPLETE. OFFER TO RETURN HUMIDIFIER TO OWNER.
D15	EXISTING PRESSURE RELIEF VALVE AND DISCHARGE SIDE PIPING TO REMAIN. PROTECT DURING CONSTUCTION.



1 | M2.3.06 SIXTH FLOOR PIPING PLAN - ROOM A693B

1/4" = 1'-0"

	MECHANICAL KEYNOTE LEGEND
06	PROVIDE NEW 2-WAY DDC CONTROL VALVE, FLOW CONTROL VALVE, AND ISOLATION VALVES AS SHOWN (CHW). IU CONTROL GROUP TO FURNISH ALL ACTUATED VALVES, MECHANICAL CONTRACTOR TO INSTALL.
07	CONNECT NEW 2-1/2" CHWS&R TO EXISTING SERVICES. ROUTE TO NEW AHU-6 AS SHOWN AND CONNECT TO COOLING COIL SECTION. REFER TO SHEET M6.1.01 FOR REQUIRED ACCESSORIES AT COIL CONNECTION.
08	CONNECT NEW 2-1/2" LOW PRESSURE STEAM TO EXISTING SERVICES AS SHOWN. ROUTE TO NEW AHU-6 AND CONNECT TO HEATING COIL AND HUMIDIFIER SECTIONS. REFER TO SHEET M6.1.01 FOR REQUIRED ACCESSORIES AT COIL/HUMIDIFIER CONNECTION.
09	PROVIDE STEAM CONDENSATE RETURN PIPING, AND ALL RELATED TRAPS AND ACCESSORIES.



KEYPLAN

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20210388 BL107 BIOLOGY BUILDING - REPLACE AHU 6

INDIANA UNIVERSITY

BLOOMINGTON, INDIANA

ISSUANCES

10.27.2025	BIDS & CONSTRUCTION
11.20.2025	ADDENDUM 002

DRAWN	GSH
REVIEWED	OSO
PROJECT NO.	5-6669

SIXTH FLOOR PIPING PLANS - ROOM A693B

M2.3.06