

MECHANICAL GENERAL NOTES

- ALL WORK BY CONTRACTORS SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES, INCLUDING THE CURRENT INTERNATIONAL ENERGY CONSERVATION CODE.
- MATERIALS FURNISHED UNDER THE CONTRACT SHALL BE NEW & SHALL BEAR THE UL LABEL WHERE APPLICABLE, UNLESS NOTED OTHERWISE. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTIVE MATERIALS & WORKMANSHIP FOR A PERIOD OF NOT LESS THAN ONE YEAR AFTER COMPLETION & ACCEPTANCE BY THE OWNER, LONGER IF STATED OTHERWISE ELSEWHERE IN THE SPECIFICATION.
- CONTRACTOR SHALL INSTALL SYSTEMS WITHOUT INTERFERENCE & PROVIDE MANUFACTURER'S RECOMMENDED AIR & SERVICE CLEARANCES. CONTRACTOR SHALL COORDINATE WITH ALL TRADES & DISCIPLINES.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR ON LOCATION OF FIRE & SMOKE WALL PENETRATIONS. GENERAL CONTRACTOR SHALL FRAME OUT OPENING AS REQUIRED FOR LIFE SAFETY DAMPERS. PROVIDE LIFE SAFETY DAMPERS WHERE SHOWN ON DRAWINGS AND WHERE REQUIRED BY NFPA AND LOCAL BUILDING CODES.
- ALL LIFE SAFETY DAMPERS SHALL BE 2-HOUR RATED UNLESS SPECIFIED OR NOTED OTHERWISE ON DRAWINGS AND/OR SPECIFICATIONS.
- SEAL ALL MECHANICAL PENETRATION DUCT, PIPE, ETC., WITH UL LISTED DUCT CAULK IN ACCORDANCE WITH NFPA 101.
- INSTALLATION OF DUCTWORK, DUCT, PIPE, ETC., SHALL NOT LISTED DUCT CAULK IN ACCORDANCE WITH NFPA 101.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND OTHER TRADES FOR PENETRATIONS AT WALLS, FLOORS AND ROOFS, EXACT EQUIPMENT LOCATIONS, AND REQUIRED EQUIPMENT SERVICE AND AIR FLOW CLEARANCE.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR TO COORDINATE CEILING SPACE AVAILABLE, EXACT MECHANICAL ROOM LAYOUT, DUCT AND PIPE ROUTING AND EXACT EQUIPMENT LOCATIONS WITH GENERAL ELECTRICAL, STRUCTURAL AND PLUMBING CONTRACTORS. PROVIDE OFFSETS AND TRANSITIONS AT OBSTRUCTIONS WHERE REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR AND ARCHITECT PRIOR TO INSTALLATION OF THERMOSTAT/TEMPERATURE SENSORS ON WALL. COORDINATE THERMOSTAT/TEMPERATURE SENSORS WITH ALL WALL MOUNTED FURNISHINGS (ART, SCREENS, FURNITURE, ETC.)
- CONTRACTOR SHALL VISIT THE SITE FOR INSPECTION REGARDING ANY WORK REQUIRED TO COMPLETE THE SCOPE OF WORK FOR THE PROJECT PRIOR TO BID. THERE SHALL BE NO ADDITIONAL COST TO THE OWNER FOR BIDDERS AWARDED THE WORK FOR FAILURE TO EXAMINE SITE PRIOR TO BID.
- CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS AND VISIT THE SITE AND COORDINATE DUCT, PIPE AND EQUIPMENT SIZES AND ROUTING. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER WHERE DISCREPANCIES OCCUR BETWEEN CONTRACT DOCUMENTS AND EXISTING CONDITIONS.
- CONTRACTOR SHALL REVIEW CEILING SPACE AND MECHANICAL ROOM SPACE AVAILABLE FOR DUCT, PIPING AND EQUIPMENT AND MAKE REQUIRED ALLOWANCES FOR THE SIZE AND ROUTING OF DUCT, PIPING AND EQUIPMENT.
- MECHANICAL CONTRACTOR TO REVIEW CEILING SPACE AVAILABLE AND VERIFY FIELD MEASUREMENTS AND COORDINATION DRAWINGS PRIOR TO FABRICATING DUCT. BRANCH DUCT RUNS SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL ROUTE BRANCH DUCT RUNS IN MOST DIRECT MANNER.
- COORDINATE EXACT LOCATION OF ALL SLAB, FLOOR, WALL AND ROOF PENETRATIONS WITH EXISTING STRUCTURAL BEAMS, JOIST AND COMPONENTS. DO NOT CUT OR MODIFY EXISTING STRUCTURAL COMPONENTS WITHOUT APPROVAL FROM STRUCTURAL ENGINEER.
- CONTRACTOR SHALL VERIFY EXISTING SPACE TO BE APPROPRIATE TO ORDERING EQUIPMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MODIFICATIONS REQUIRED FOR EQUIPMENT THAT IS NOT APPROPRIATE TO EXISTING SPACE AS BASIS OF DESIGN.
- UNDER NO CIRCUMSTANCES SHALL EQUIPMENT AND RELATED SYSTEM COMPONENTS FIND POSITIVE FOR MOLD, MILDEW, ASBESTOS, HARMFUL BACTERIA OR ANY OTHER CONTAMINATION BE PLACED INTO SERVICE.
- INSTALL DUCT SLEEVES IN WALLS AS HIGH AS POSSIBLE. DUCT SLEEVE SHALL EXTEND PAST WALL PENETRATION ON BOTH SIDES MINIMUM 2". RETURN AIR TRAVERSE SLEEVES SHALL BE PROVIDED WITH TWO (2) DUCT ELBOWS.
- COORDINATE ALL UNDERGROUND PIPING & WORK WITH EXISTING SYSTEMS, INCLUDING EXISTING UTILITIES, SEMI-CAS, DOMESTIC WATER, CHILLED/HEATING WATER, ELECTRIC DUCT BANKS AND POWER. NOT ALL EXISTING SYSTEMS SHOWN. COORDINATE ALL EXISTING SYSTEMS PRIOR TO BEGINNING WORK. MARKED UTILITIES AND EXISTING SYSTEMS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AND REPAVED BACK TO ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONSTRUCTION CONTRACT.
- MODEL NUMBERS SCHEDULED SPECIFIED REPRESENT THE TYPE AND QUALITY OF EQUIPMENT REQUIRED TO MEET THE DESIGN REQUIREMENTS. CONTRACTOR SHALL REVIEW SUBMITTALS AND VERIFY EQUIPMENT SIZES, QUALITY AND PERFORMANCE REQUIREMENTS MEET SPECIFICATIONS PRIOR TO SUBMITTING FOR APPROVAL. EQUIPMENT THAT DIFFERS FROM BASIS OF DESIGN IS SUBJECT TO REJECTION. CONTRACTOR TO COORDINATE ALL DIFFERENCE IN EQUIPMENT WITH STRUCTURAL, ELECTRICAL AND PLUMBING CONTRACTORS.
- ALL CONDENSATE LINES SHALL BE RIGID COPPER, INSULATED WITH CELLULAR FOAM UNLESS NOTED OTHERWISE OR SUBMITTED AND APPROVED BY MECHANICAL ENGINEER. SUPPORT WITH UNISTRUT PIPE EVERY 4' AND AT TURNS. PROVIDE NEOPRENE SLEEVES BETWEEN UNISTRUT AND COPPER CONDENSATE LINE.
- DUCT SIZES SHOWN ARE SHEET METAL SIZES. ALLOWANCES HAVE BEEN INCLUDED FOR INTERNAL LINER WHERE APPLICABLE.
- COORDINATE EXACT LOCATION OF AIR UTILITIES WITH NEW AND EXISTING LIGHTS TO BE INSTALLED PRIOR TO CONSTRUCTION.
- EXPOSED DUCTWORK SHALL BE PAINT GRIPPED SHEET METAL UNLESS INDICATED OTHERWISE. ALL EXPOSED DUCT TO BE PAINTED IN FIELD BY PAINTING CONTRACTOR DURING CONSTRUCTION. COORDINATE WITH ARCHITECT & MECHANICAL ENGINEER PRIOR TO INSTALLATION OF EXPOSED DUCT AND COLOR. EXPOSED DUCTWORK SHALL BE FREE OF SIZE MARKS OR ASSEMBLY CODE NUMBERS; ALL MARKS SHALL BE ON THE INSIDE OF DUCTWORK. KEEP OUTSIDE SURFACES OF DUCT CLEAN DURING FABRICATION. BANDS SHALL JOIN ON TOP, CONCEALED FROM NORMAL VIEW OF THE DUCT AND SPIRALS SHALL BE CONTINUOUS. THREADED ROSS FROM HANGER STRAPS SHALL BE NEATLY CLIPPED AND SECURED WITHOUT EXCESS. GREATER ATTENTION TO APPEARANCE FOR EXPOSED DUCT IS EXPECTED AND DENTED/DISCARDED DUCTS SHALL NOT BE ACCEPTABLE.
- PROVIDE ELECTRICAL DISCONNECTS FOR MECHANICAL EQUIPMENT (VAV BOXES, FANS, VFDs, ETC.) FACTORY INSTALLED BY EQUIPMENT MANUFACTURER UNLESS NOTED OTHERWISE. COORDINATE WITH ELECTRICAL CONTRACTOR.
- DO NOT ROUTE PIPING CONTAINING WATER OVER ELECTRICAL EQUIPMENT.
- PROVIDE PERMANENT LABELS FOR ALL SCHEDULED EQUIPMENT. LABELS SHALL BE MINIMUM 3/8" ENGRAVED BLACK LETTERS ON WHITE BACKGROUND, CONSTRUCTED OF MINIMUM 1" WIDE LENGTH AS REQUIRED LAMINATED PLASTIC. SECURELY FASTENED TO EQUIPMENT WITH STAINLESS STEEL OR NONCORRODING HARDWARE. STICK ON LABELS NOT ACCEPTABLE.
- EXHAUST OUTLETS SHALL BE LOCATED MINIMUM 10' FROM ANY AIR INTAKE OR DUCTWORK OPENING.
- INDOR MINISPLITS, FAN COIL UNITS AND CEILING CASSETTES SHALL HAVE GRAVITY DRAINAGE WHERE POSSIBLE. PROVIDE WITH INTEGRAL CONDENSATE PUMPS WHERE NOT POSSIBLE.
- PROVIDE RETURN AIR GRILLES OPEN TO RETURN AIR PLENUM WITH SOUND ATTENUATING BOOT ON REAR OF GRILLE (RIGID DUCT WITH INSULATED LINER & TWO ELBOWS, END OPEN TO RETURN AIR PLENUM). CONTRACTOR HAS OPTION TO PROVIDE PRICE MODEL #RAC RETURN AIR CANOPY ON REAR OF RETURN AIR GRILLES OPEN TO RA PLENUM IN LIEU OF SOUND ATTENUATING BOOT.
- ELECTRONIC BALANCING DAMPERS: MANUAL DAMPER AT INACCESSIBLE LOCATIONS:

 - 30.1. PROVIDE REMOTE BALANCING DAMPER WITH POSITION INDICATOR AT INACCESSIBLE MANUAL VOLUME DAMPERS
 - 30.2. INACCESSIBLE LOCATIONS:

 - 30.2.1. ABOVE GYPSUM BOARD/HARD CEILING
 - 30.2.2. WHERE LOCATED HIGHER THAN 4'0" ABOVE ACCESSIBLE CEILING TILE
 - 30.2.3. WHERE LOCATED ABOVE 14'-0" FROM FINISHED FLOOR

- 30.2. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR REFLECTED CEILING PLAN.
- 30.3. ELECTRIC, BATTERY POWERED, PORTABLE, REMOTE CONTROLLED, POSITIONING ACTUATOR, PULSE ACTUATOR, CAT 5 CABLE, WALL OR CEILING PLATE AND HAND HELD POWER PACK, PROVIDE WALL/CEILING ACCESS PORT ON WALL WITHIN CLOSEST MECHANICAL ROOM, OR ABOVE ACCESSIBLE CEILING MOUNTED ON WALL. ALL ACCESS PORTS TO BE PROPERLY LABELED AND NUMERICALLY IDENTIFIED. REFER TO REFLECTED CEILING DRAWINGS FOR REFLECTED CEILING PLAN.
- 30.4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR REFLECTED CEILING PLAN. PROVIDE TILE IDENTIFICATION WHERE LOCATED ABOVE CEILING. PROVIDE DRAWING IDENTIFYING PORT LOCATION & PORT SCHEDULE AS PART OF CLOSE OUT DOCUMENTS.
31. PROVIDE UL LISTED SMOKE DETECTORS IN THE MAIN SUPPLY DUCT AND RETURN ON THE DOWNSTREAM SIDE OF THE FILTERS IN ALL RECIRCULATING AIR SYSTEMS HANDLING OVER 2000 CFM. NOTE: SMOKE DETECTORS TO BE WIRED TO BUILDING FIRE ALARM SYSTEM BY FIRE ALARM CONTRACTOR. FIRE ALARM CONTRACTOR IS TO PROVIDE AND INSTALL ALL WIRING, TERMINATIONS, ETC. TO PROVIDE A COMPLETE, PROPERLY FUNCTIONING AND OPERATING SYSTEM.
32. PROVIDE SMOKE DAMPER IN THE MAIN SUPPLY & RETURN DUCT IN ALL AIR HANDLING UNITS HANDLING OVER 15,000 CFM. SMOKE DAMPERS TO BE INTERCONNECTED TO SMOKE DETECTORS.
33. PROVIDE ACCESS PANELS FOR EQUIPMENT VALVES, DAMPER, ETC. LOCATED ABOVE AN INACCESSIBLE CEILING. ACCESS PANELS SHALL BE LARGE ENOUGH FOR ALL REQUIRED MAINTENANCE, ADJUSTMENT, ETC. PROVIDE MULTIPLE ACCESS PANELS AS REQUIRED. COORDINATE COLOR AND LOCATIONS WITH ARCHITECT. PROVIDE FIRE AND/ OR SMOKE RATED ACCESS PANELS WHERE REQUIRED IN RATED CEILINGS. REFERENCE ARCHITECTURAL DRAWINGS FOR RATED CEILING LOCATIONS. WHERE ACCESS PANELS ARE SHOWN ON ARCHITECTURAL REFLECTED CEILING PLAN, COORDINATE EXACT LOCATION OF EQUIPMENT, DEVICES, ETC. WITH ACCESS PANEL LOCATIONS.
34. PROVIDE TEMPORARY CAPS/PLUGS/COVERING ON ALL OPEN ENDED PIPES & DUCT DURING CONSTRUCTION TO PREVENT DIRT/DEBRIS FROM ENTERING PIPE/DUCT SYSTEMS.
35. PROVIDE PROTECTIVE LOCKABLE THERMOSTAT COVERS FOR THERMOSTATS. COORDINATE WITH OWNER.
36. MECHANICAL CONTRACTOR SHALL COORDINATE WITH PLUMBING CONTRACTOR ON LOCATION OF ALL FLOOR DRAINS & HUB DRAINS AS NOT TO INTERFERE WITH EQUIPMENT & EQUIPMENT PADS. COORDINATE NEW FLOOR DRAIN & HUB LOCATION WHERE EQUIPMENT DOES NOT ALLOW FOR THE INSTALLATION SHOWN FOR DRAIN. COORDINATE HEIGHT OF HUB DRAINS FOR FAN COIL UNITS & CEILING CASSETTES.
37. PROVIDE TRANSITIONS FROM REAR OF ALL GRILLES TO BRANCH DUCTS AND TO ALL EQUIPMENT AS REQUIRED. REFER TO CONSTRUCTION DOCUMENTS FOR SIZES OF GRILLES AND DUCTS.
38. PRESSURE TEST AND LEAK TESTED FOR SYSTEMS. TESTS SHALL BE PERFORMED AT NORMAL SYSTEM OPERATING PRESSURE UNLESS INDICATED/SPECIFIED OTHERWISE. REPAIR AND RETEST AS REQUIRED UNTIL SYSTEMS ARE PROVEN TIGHT WITHOUT LEAKS.
39. AIR DUCTS SHALL BE COMPLETELY JACKETED AND INSULATED AS REQUIRED BY THE MANUFACTURER.
40. LOCATE ALL TEMPERATURE/PRESSURE AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP AND DOWN STREAM AS RECOMMENDED BY THE MANUFACTURER.
41. REINFORCEMENT, DETAILING, AND PLACEMENT OF CONCRETE SHALL CONFORM TO ASTM C31 AND ACI 318. CONCRETE WORK SHALL CONFORM TO ACI 318, PART ENTITLED "CONSTRUCTION REQUIREMENTS." COMPRESSIVE STRENGTH IN 28 DAYS SHALL BE 3,000 PSI. TOTAL AIR CONTENT OF EXTERIOR CONCRETE SHALL BE BETWEEN 5 AND 7 PERCENT BY VOLUME. SLUMP SHALL BE BETWEEN 3 AND 4 INCHES. CONCRETE SHALL BE CURED FOR 7 DAYS AFTER PLACEMENT.
42. COORDINATE ALL EQUIPMENT CONNECTION WITH MANUFACTURERS CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSION BEFORE FABRICATION.
43. MINIMUM CONCRETE PAD THICKNESS SHALL BE 4 INCHES. PAD SHALL EXTEND BEYOND THE EQUIPMENT A MINIMUM OF 6 INCHES ON EACH SIDE UNLESS OTHERWISE DIRECTED IN THESE DOCUMENTS 15 LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED. REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION.
44. INSTALL TRANSITION DUCT FROM INLET AND OUTLET OF EQUIPMENT TO DUCT SIZE SHOWN ON PLANS. CONSULT EQUIPMENT MANUFACTURER FOR INLET AND OUTLET SIZE.
45. ALL DUCT ELBOWS, BENDS, AND TEES SHALL BE PROVIDED WITH DOUBLE THICKNESS TURNING VENES OR RADIUS ELBOWS UNLESS SHOWN OR NOTED OTHERWISE. ELBOWS IN DISHWASHER, KITCHEN, AND LAUNDRY EXHAUST SHALL BE UNVANCED SMOOTH RADIUS CONSTRUCTION WITH A RADIUS OF 1.5 TIMES THE WIDTH OF THE DUCT.
46. PROVIDE ESCUTCHEONS AT ALL EXPOSED LOCATIONS WHERE PIPE NUTS SHALL NOT DECREASE IN SIZE FROM THE DRAIN PAN CONNECTION TO THE FLOOR DRAIN; ELEVATE UNIT TO ACCOMMODATE P-TRAP.
47. THE CONDENSATE DRAIN LINE SHALL NOT DECREASE IN SIZE FROM THE DRAIN PAN CONNECTION TO THE FLOOR DRAIN; ELEVATE UNIT TO ACCOMMODATE P-TRAP.
48. ALL EQUIPMENT AND DEVICES TO BE FURNISHED AND INSTALLED PER THE REQUIREMENTS OF CONTRACT DRAWINGS, SPECIFICATIONS, MANUFACTURERS RECOMMENDATIONS, AND ACCORDING TO CODE.
49. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS (IN, RETURN, AND EXHAUST) CONNECTED TO AIR HANDLING UNITS, FANS, AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION TO THE EQUIPMENT AND NOT DIRECTIONAL DUE TO VIBRATION ISOLATION.
50. UNLESS OTHERWISE NOTED, ALL DUCTWORK IS OVERHEAD, TIGHT TO UNDERSIDE OF THE STRUCTURE, WITH SPACE FOR INSULATION.
51. ALL ROOF CURBS SHALL BE INSTALLED TO THE ROOFING STRUCTURE AND FINISH A MINIMUM 12" ABOVE THE FINISHED ROOF FOR Counter FLASH ENDURED BY ROOF MANUFACTURER. ROOF CURBS SHALL BE PITCHED WHERE REQUIRED TO ENSURE EQUIPMENT IS INSTALLED LEVEL. ALL MISCELLANEOUS ROOFTOP EQUIPMENT SUPPORTS SHALL BE ENDURED BY THE RESPECTIVE EQUIPMENT MANUFACTURER AND ROOF SYSTEM MANUFACTURER.
52. ALL WALL APPLIED ITEMS SHALL BE INSTALLED PLUMB, LEVEL, AND IN LOCATIONS DESIGNATED IN CONTRACT DOCUMENTS. ALL DEVICE COVERS AND TRIM SHALL FIT TIGHT TO WALL SURFACE ON ALL SIDES. WHERE SPECIFIC LOCATIONS FOR ITEMS NOT SHOWN OR CLEAR, CONTRACTOR SHALL OBTAIN CLARIFICATION AND DIRECTION FROM ARCHITECT AND MECHANICAL ENGINEER PRIOR TO INSTALLATION.
53. ALL FLEX DUCT SERVING DIFFUSERS SHALL BE LIMITED TO RUNS OF 6'. FLEX DUCT SHALL BE FLEXMASTER 1-MR OR APPROVED EQUAL AND USE STAINLESS STEEL (OR NYLON IF APPROVED BY MECHANICAL ENGINEER) TO CONNECT FLEX TO DUCT AND GRILLES.
54. FLEXIBLE DUCT NOT ACCEPTABLE FOR EXHAUST, RETURN AND FRESH AIR SYSTEMS UNLESS SPECIFIED OR NOTED OTHERWISE. FLEX DUCT SHALL NOT PENETRATE ANY WALLS UNLESS SUBMITTED AND APPROVED ON TO BOTH THE ARCHITECT AND MECHANICAL ENGINEER.
55. PROVIDE ADDITIONAL SUSPENDED SUPPORTS AS REQUIRED TO PREVENT FLEXIBLE DUCT FROM CONTACTING THE CEILING MATERIAL AND/OR CEILING FRAME/GIRD ASSEMBLY.
56. ALL ROUND TAP OFF RECTANGULAR DUCTWORK TO DIFFUSERS SHALL BE MADE WITH HIGH EFFICIENCY STANDOFF BRACKETS AND LOCKING QUADRANT. FLEXMASTER MODEL STOD-B03 OR APPROVED EQUAL.
57. ALL GRILLES LOCATED IN LAY-IN CEILINGS SHALL HAVE 24x24 FRAMES, STYLES TO FIT THE GRID TYPE, EITHER 16/16" OR 9/16" GRID. VERIFY GRID WITH ARCHITECTURAL DRAWINGS. PROVIDE PLASTER FRAMES FOR SURFACE MOUNT APPLICATIONS. PRICE MODEL AMF OR APPROVED EQUAL.
58. ALL MANUAL VOLUME DAMPERS IN ALL BRANCH DUCT CONNECTIONS TO LOW PRESSURE MAIN DUCTS.
59. PROVIDE MANUFACTURER SUPPLIED TO THE PROJECT SHALL BE PER SPECIFICATIONS. OBTAINING APPROVED SUBMITTALS DOES NOT RELIEVE THE CONTRACTOR/SUPPLIER OF PROVIDING ALL FEATURES, OPTIONS AND ACCESSORIES INCLUDED WITHIN THE CONSTRUCTION DOCUMENTS.

COORDINATION DRAWINGS

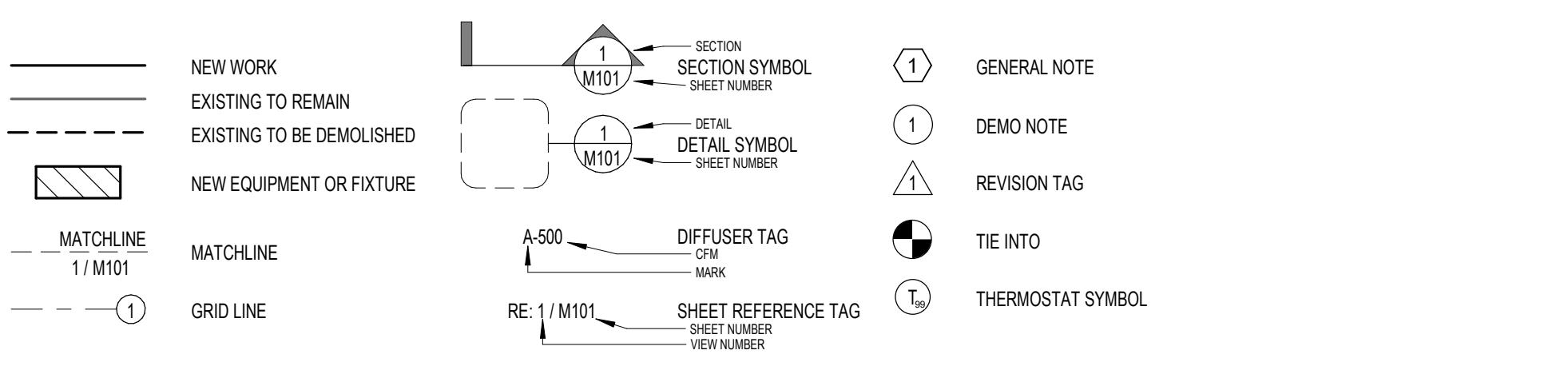
- MECHANICAL CONTRACTORS SHALL SUBMIT TO THE DESIGNER, AS SOON AS FEASIBLE AFTER AWARD OF THE CONTRACT, EQUIPMENT ROOM LAYOUTS AT A SCALE NOT LESS THAN 1/4"=1' SHOWING THE LAYOUT OF THE ACTUAL EQUIPMENT TO BE USED. THE DESIGNER SHALL ENSURE THAT ALL SPECIFIED MODELS FIT IN THE EQUIPMENT ROOM(S).
- CONTRACTOR SHALL SUBMIT SINGLE SET OF DRAWINGS OF ENTIRE SYSTEM LAYOUT SHOWING ACTUAL EQUIPMENT TO BE SUPPLIED TO THE PROJECT & REQUIRED CLEARANCES, DUCTWORK & DUCTWORK HEIGHTS, HYDRONIC PIPING, STORM WATER PIPING, SPRINKLER PIPING, STRUCTURAL STEEL, MAJOR ELECTRICAL CONDUITS, LIGHT FIXTURE DEPTHS, FINISHED CEILING HEIGHTS, ETC. DRAWINGS SHALL BE COMPREHENSIVE WITH ALL TRADES AS TO ELIMINATE CONFLICTS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ACCESS FOR MAINTENANCE AS REQUIRED BY EQUIPMENT MANUFACTURERS. COORDINATION DRAWINGS SHALL BE REVIEWED BY THE ARCHITECT & MECHANICAL ENGINEER PRIOR TO INSTALLATION OF MECHANICAL EQUIPMENT. SUBMIT COORDINATION DRAWINGS WITHIN 30 DAYS AFTER WORK HAS COMMENCED ON SITE.

EXISTING SUBSURFACE STRUCTURE & UTILITIES

- THE PROJECT SITE INCLUDES EXISTING SUBSURFACE STRUCTURAL CONCRETE SHAFTS FROM PREVIOUSLY DEMOLISHED BUILDING THAT ARE LOCATED BELOW GRADE. CONTRACTOR TO COORDINATE EXACT LOCATION OF EXISTING SHAFTS WITH ALL NEW UNDERGROUND PIPING & WORK.
- CONTRACTOR TO DEMOLISH EXISTING SHAFTS FROM PREVIOUS BUILDING AS REQUIRED FOR NEW WORK & INSTALLATION OF MECHANICAL, PLUMBING & SPRINKLER SUBSURFACE PIPING SYSTEMS.
- CONTRACTOR TO COORDINATE INSTALLATION OF MECHANICAL SUBSURFACE PIPING WITH PLUMBING, SPRINKLER, STORM DRAINAGE PIPING, CATCH BASINS & EXISTING TREES TO REMAIN. REFER TO PLUMBING, SPRINKLER, CIVIL, LANDSCAPE, & ARCHITECTURAL DRAWINGS FOR PIPING SYSTEMS & EXISTING TREES TO REMAIN.

MECHANICAL SYMBOL LEGEND

(REFER TO DRAWINGS AND SPECIFICATIONS FOR FURTHER REQUIREMENTS)

GENERAL**ABBREVIATION LEGEND**

AC AIR CONDITIONING
ACCU AIR COOLED CONDENSING UNIT
AFF ABOVE FINISHED FLOOR
AFS AIR FLOW STATION
AHU AIR HANDLING UNIT
AMB AMBIENT
AS AIR SEPARATOR
AV AIR VENT

BAS BUILDING AUTOMATION SYSTEM
BDD BACKDRAFT DAMPER
BFP BACKFLOW PREVENTER
BOD BOTTOM OF DUCT

BTUH BRITISH THERMAL UNIT PER HOUR
CC COLD COILING COIL
CFH CUBIC FEET PER HOUR
CFPM CUBIC FEET PER MINUTE
CH CHILLED

CHWC CHILLED WATER CHEMICAL FEED
CWP CHILLED WATER PUMP

CHR CHILLED WATER RETURN

CHS CHILLED WATER SUPPLY

COMP COMPRESSOR

CP CIRCULATING PUMP

CU CONDENSING UNIT

CT COOLING TOWER

CW COLD WATER

CWC CONDENSER WATER CHEMICAL FEED

CWR CONDENSER WATER RETURN

CWP CONDENSER WATER PUMP

CWS CONDENSER WATER SUPPLY

DB DRY BULB TEMP (DEG F)

DDC DIRECT DIGITAL CONTROL

DN DOWNFALL

DP DIFFERENTIAL PRESSURE

DPS DIFFERENTIAL PRESSURE SWITCH

DWG DRAWING

DX DIRECT EXPANSION

EA EXHAUST AIR

EDH ELECTRIC DUCT HEATER

EER ENERGY EFFICIENCY RATIO

EF EXHAUST FAIR

EL ELEVATION

ELEC ELECTRICAL

ENT ENTERTAINMENT

EQU EQUIPMENT

ERU ELECTRIC REFRIGERANT UNIT

ESP EXTERNAL STATIC PRESSURE

ET EXPANSION TANK

EUH ELECTRIC UNIT HEATER

EVAP EVAPORATOR

EX EXHAUST

EXT EXTERNAL

FA FRESH AIR

FCFCU FAN COIL UNIT

FD FIRE DAMPER

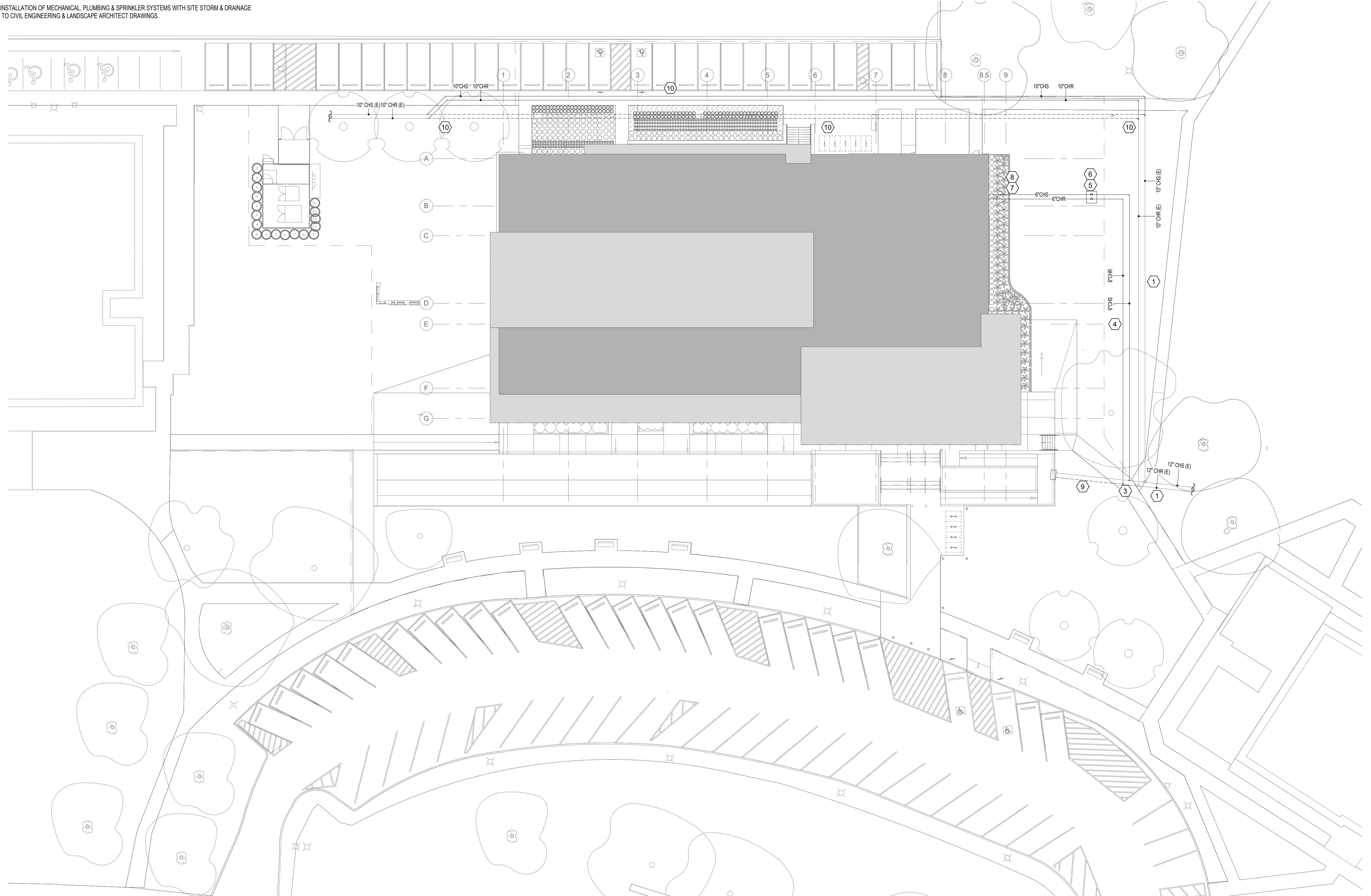
GENERAL SITE PLAN NOTES:

- A. EXISTING SUBSURFACE STRUCTURE: THE PROJECT SITE INCLUDES EXISTING SUBSURFACE STRUCTURAL CONCRETE SHAFTS FROM PREVIOUSLY DEMOLISHED BUILDING THAT ARE LOCATED BELOW GRADE. CONTRACTOR TO COORDINATE EXACT LOCATION OF EXISTING SHAFTS WITH ALL NEW UNDERGROUND PIPING & WORK. CONTRACTOR TO DEMOLISH EXISTING SHAFTS FROM PREVIOUS BUILDING AS REQUIRED FOR NEW WORK & INSTALLATION OF MECHANICAL, PLUMBING & SPRINKLER SUBSURFACE PIPING SYSTEMS.
- B. EXISTING SUBSURFACE UTILITIES: NON-DESTRUCTIVE VERIFICATION
1. CONTRACTOR TO FIGURE BID PERFORMANCE ASCO 38-0 STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITIES DATA UTILITY QUALITY LEVEL A & B TO VERIFY EXACT LOCATION & SIZE OF ALL EXISTING SUBSURFACE UTILITIES.
 2. HAND DIG ALL LOCATIONS AS TO DETERMINE EXACT SIZE, DEPTH, LOCATION & TYPE OF EXISTING SUBSURFACE UTILITIES UPON VERIFICATION. PROVIDE DRAWINGS OF UTILITIES INDICATING SIZE, TYPE, ROUTING, LOCATION TO OWNER, ARCHITECT & ENGINEER FOR REVIEW & COMMENT.
 3. VERIFY EXISTING SANITARY SEWER TIE IN LOCATION(S) & INVERT TO ENSURE NEW PLUMBING SYSTEM INSTALLATION CAN BE INSTALLED WITH PROPER SLOPE & SIZE. SUBMIT DRAWING OF TIE IN INDICATING DEPTH & SIZE OF EXISTING SANITARY SEWER TO OWNER, ARCHITECT & ENGINEER FOR REVIEW.
 4. ANY EXISTING UTILITIES DAMAGED DURING SUBSURFACE UTILITY VERIFICATION AND/OR INSTALLATION OF NEW MECHANICAL, PLUMBING, & SPRINKLER SYSTEMS SHALL BE REPAIRED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
- C. PROVIDE COPPER TRACER WIRE & WARNING TAPE FOR ALL NON-CONDUCTIVE SUBSURFACE PIPING. WARNING TAPE SHALL HAVE BRIGHTLY COLORED, METALLIC CORE, NON-DETERIORATING, MINIMUM 2" WIDE. ID RIBBON TAPE SET WHICHEVER IS SHALLOWER: 12" ABOVE TOP OF PIPE OR 24" BELOW FINISHED GRADE.
- D. CONTRACTOR TO REFER TO LANDSCAPE, CIVIL ENGINEERING & ARCHITECTURAL DRAWINGS FOR TREES TO REMAIN, STORM DRAIN PIPING & LANDSCAPE ELEMENT. COORDINATE INSTALLATION OF NEW WORK AS NOT TO INTERFERE WITH ROOT SYSTEM OF EXISTING TREES TO REMAIN.
- E. CONTRACTOR TO COORDINATE INSTALLATION OF MECHANICAL, PLUMBING & SPRINKLER SYSTEMS WITH SITE STORM & DRAINAGE PIPING & CATCH BASINS. REFER TO CIVIL ENGINEERING & LANDSCAPE ARCHITECT DRAWINGS.

MECHANICAL KEY NOTES

- ① APPROXIMATE LOCATION OF EXISTING CAMPUS CHILLED WATER SUPPLY & RETURN PIPING (INVERT ANTICIPATED BETWEEN -2'-0" & 5'-0" BELOW GRADE). FIELD VERIFY EXACT LOCATION & PIPE SERVICE (SUPPLY & RETURN) PRIOR TO COMMENCEMENT OF WORK.
- ② APPROXIMATE LOCATION OF EXISTING VALVE BOX AND CHILLED WATER LINES. REMOVE EXISTING VALVE BOX & PIPING UPON CONNECTION OF NEW PIPING. FIELD VERIFY EXACT LOCATION & NOTIFY MECHANICAL ENGINEER ON FINDINGS PRIOR TO COMMENCEMENT OF NEW SITE CHILLED WATER PIPING WORK.
- ③ SHUTDOWN OF THE CHILLED WATER SYSTEM NOT ALLOWED. UTILIZE PIPE FREEZING METHOD OR ALTERNATIVE AS REQUIRED TO CONNECT NEW CHS/CHR PIPING TO THIS LOCATION WITHOUT SHUTDOWN. COORDINATE WITH UNIVERSITY & GENERAL CONTRACTOR & FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
- ④ PROVIDE NEW CHILLED & HEATING WATER PIPING AS SHOWN WITH MINIMUM 2'-0" OF COVER. COORDINATE EXACT INSTALLATION ELEVATION WITH CIVIL ENGINEERING & LANDSCAPE ARCHITECT DRAWINGS. NEW UNDERGROUND CHILLED WATER PIPING SHALL BE PRE-INSULATED PIPE SYSTEM (PIPE OUTER JACKET - ALUMINUM DIFFUSION BARRIER, POLYURETHANE INSULATION, & STEEL CARRIER PIPE WITH ANTI-CORROSION COATING, PRE-FABRICATED FITTINGS TO MATCH, WELDED JOINTS WITH HEAT SHRINK SLEEVES). INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (TRENCHING, BACKFILLING, SUPPORTS, ETC.) & PROVIDE CONCRETE THRUST BLOCKS AND/OR ANCHORS AS REQUIRED.

- ⑤ PROVIDE NEW VALVE BOX CONSTRUCTED OF 4000 PSI CONCRETE REINFORCED WITH REBAR PRE-CAST SLAB & WATERPROOFING JOINTS/CONNECTIONS. CONTINUOUS WATER STOP. PROVIDE EXTENSION FOR WATER TIGHT, PRE-FABRICATED MANHOLE/COVER MARKED 'CHW VALVES'. VALVE BOX & COVER SHALL BE MINIMUM 60"x60". CLEAR DEPTH AS REQUIRED FOR NEW PIPE INSTALLATION (FIGURE IN BID 6'-0" DEPTH - BOTTOM OF PIT TO 12' BELOW BOTTOM OF CHILLED WATER PIPING). CORE DRILL VALVE BOX WALL & PROVIDE SLEEVE. SEAL & GROUT/CAULK AFTER SETTING FOR WATERTIGHT INSTALLATION. PROVIDE PIPE SUPPORTS BELOW PIPING. PROVIDE SHOP DRAWING OF VALVE BOX CONSTRUCTION TO MECHANICAL ENGINEER FOR REVIEW & APPROVAL PRIOR TO COMMENCEMENT OF SITE WORK. COORDINATE WITH GENERAL CONTRACTOR & ARCHITECT ON EXACT LOCATION PRIOR TO INSTALLATION.
- ⑥ PROVIDE TWO 6" STAINLESS STEEL GEAR OPERATED HIGH PERFORMANCE BUTTERFLY VALVES ON CHILLED WATER SUPPLY & RETURN PIPING WITHIN VALVE BOX. VALVES SHALL BE CLASS 150 WITH LUG ENDS SUITABLE FOR BIREDIRECTIONAL BUBBLE TIGHT SHUTOFF UP TO 265 PSI.
- ⑦ ROUTE PIPING BELOW EXTERIOR GRADE BEAM WHERE POSSIBLE & PROVIDE SLEEVE AT PIPE PENETRATION THRU CONCRETE SLAB (OR FOUNDATION WALL) AS REQUIRED. COORDINATE WITH MECHANICAL & STRUCTURAL ENGINEER ON EXACT PIPE PENETRATION LOCATION PRIOR TO COMMENCEMENT OF FOUNDATION WORK. SEAL SLEEVE WATER TIGHT, REFER TO SPECS.
- ⑧ STORM DRAIN PIPING THIS AREA. COORDINATE CHILLED WATER PIPE ROUTING & INVERT WITH CIVIL ARCHITECT & LANDSCAPE CONSTRUCTION DOCUMENTS THIS AREA PRIOR TO COMMENCEMENT OF WORK.
- ⑨ REMOVE ABANDONED CHILLED WATER PIPING UPON NEW CHILLED WATER PIPING CONNECTION.
- ⑩ CONTRACTOR SHALL DISCONNECT AND REMOVING EXISTING 10" CHILLED WATER SUPPLY & RETURN PIPING AS SHOWN, EXTENDING THE EXISTING PIPING PLAN NORTH TO AVOID THE NEW BUILDING FOUNDATION AND RECONNECT TO EXISTING PIPING PAST THE NEW BUILDING FOOTPRINT. SHUTDOWN OF CHILLED WATER SYSTEM NOT ALLOWED. CONTRACTOR SHALL BID ALL WORK ASSOCIATED WITH RELOCATING THE EXISTING CHILLED WATER LINES AS A SEPARATE LINE ITEM. PRIOR TO RELOCATION AND ORDERING ANY MATERIAL, FIELD VERIFY EXACT LOCATION OF EXISTING CHILLED WATER LINES AND NOTIFY THE MECHANICAL ENGINEER.



1 SITE - MECHANICAL

1" = 20'-0"

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ARCHITECTSWilliams & Williams
Architecture
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NEW ORLEANS, LA 70130

SITE CODE: L-36-007

STATE ID: NEW

STATE PROJECT NO. 19-617-23-02, E1902503

SITE CODE: L-36-007

Southern University at New Orleans
NURSING & ALLIED HEALTH
BUILDING
6400 Press Dr. New Orleans, LA 70126

REVIEW & COMMENT

REVIEW & APPROVAL

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NO. DESCRIPTION DATE

PROJECT NO. 23042

PHASE BD

DATE 02.07.25

PROJECT MANAGER DD/GM

QUALITY CONTROL GM

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M100
 MECHANICAL SITE PLAN
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parisheng.com #23-139

REVIEW & COMMENT

REVIEW & APPROVAL

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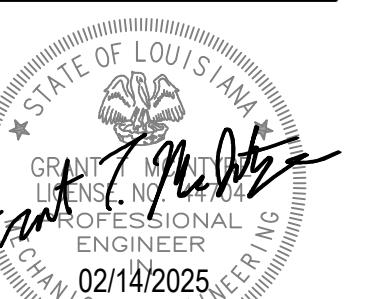
SITE CODE: L36-007

STATE ID: NEW

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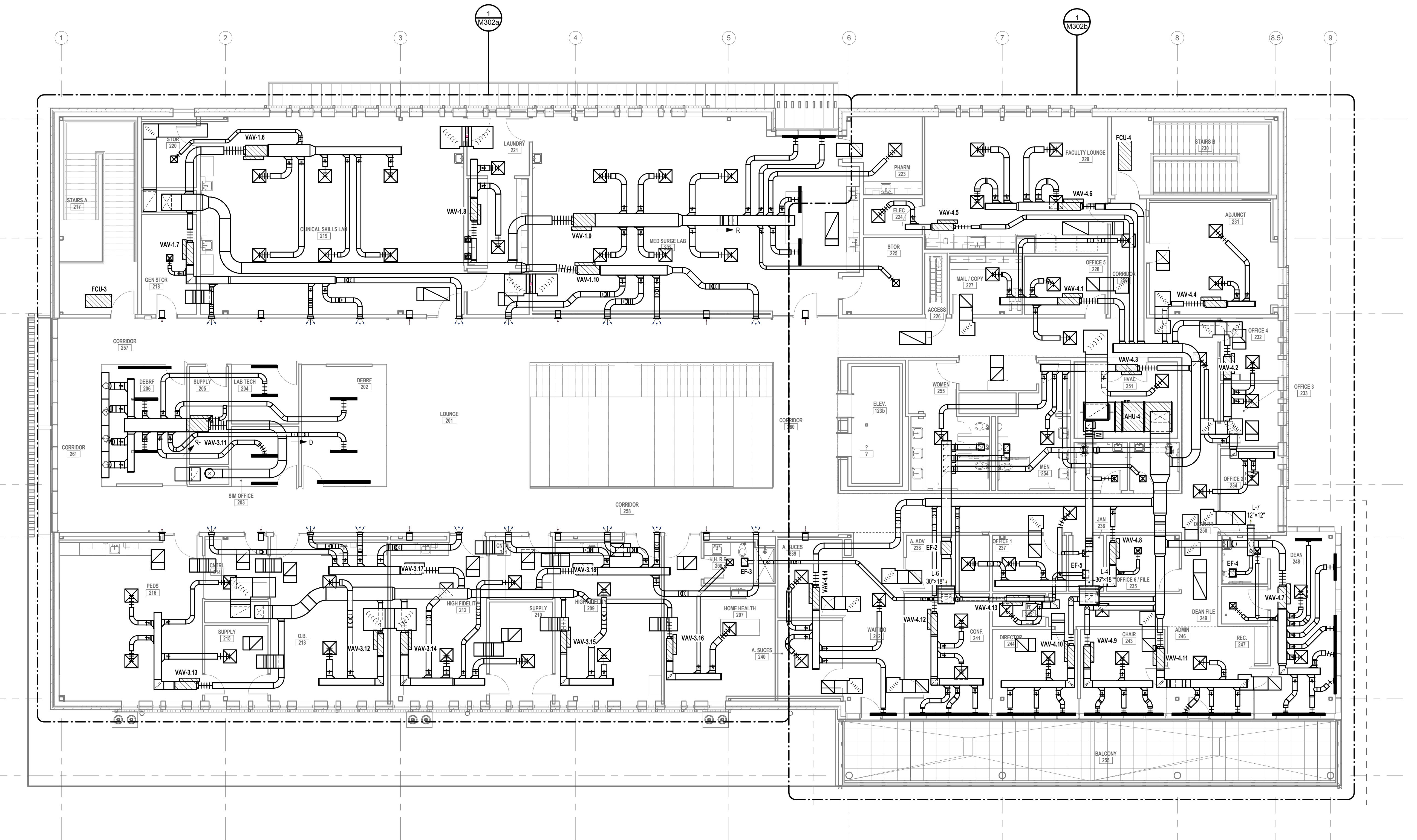
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M102

2ND FLOOR - MECHANICAL - AIRSIDE



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M201

1ST FLOOR - MECHANICAL - WATERSIDE

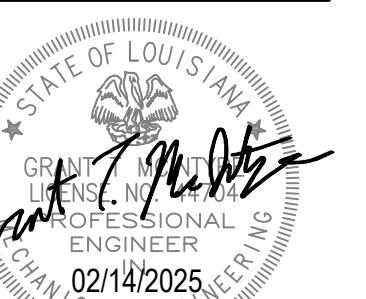
- MECHANICAL KEY NOTES**
- ① REFER TO SHEET M100 FOR CONTINUATION.
 - ② ROUTE PIPING BELOW EXTERIOR GRADE BEAM WHERE POSSIBLE & PROVIDE SLEEVE AT PIPE PENETRATION THRU CONCRETE SLAB (OR FOUNDATION WALL) AS REQUIRED. COORDINATE WITH MECHANICAL & STRUCTURAL ENGINEER ON EXACT PIPE PENETRATION LOCATION PRIOR TO COMMENCEMENT OF FOUNDATION WORK. SEAL SLEEVE WATER TIGHT. REFER TO SPECS.
 - ③ STORM DRAIN PIPING THIS AREA. COORDINATE CHILLED WATER PIPE ROUTING & INVERT WITH PLUMBING CONTRACTOR & CIVIL, ARCHITECT & LANDSCAPE CONSTRUCTION DOCUMENTS THIS AREA PRIOR TO COMMENCEMENT OF WORK.
 - ④ COORDINATE WITH GENERAL & PLUMBING CONTRACTOR & PROVIDE MULTIPLE PIPE SUPPORT HANGER FOR CHILLED WATER & PLUMBING UTILITY PIPING. COORDINATE EXACT INSTALLATION HEIGHT & ROUTING PRIOR TO ROUGH IN OF MECHANICAL & PLUMBING PIPING. REFER TO SHEET P201 FOR PLUMBING PIPING.
 - ⑤ CHILLED WATER PIPING UP TO FLOOR ABOVE. COORDINATE WITH STRUCTURE & INSTALL PIPE PENETRATION THRU FLOOR TO SLEEVE & CAULKING/SEALANT AS REQUIRED TO MAINTAIN RATING, TYPICAL.
 - ⑥ PROVIDE DIFFERENTIAL PRESSURE SENSOR ON SUPPLY & RETURN PIPING APPROXIMATELY THIS LOCATION. REFER TO SPECIFICATIONS & TEMPERATURE CONTROLS SPECIFICATION. COORDINATE EXACT LOCATION WITH CONTROLS CONTRACTOR PRIOR TO INSTALLATION.
 - ⑦ PROVIDE DIGITAL THERMOSTAT MOUNTED ON WALL. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION & CONTROL WIRING ROUGH IN. PROVIDE CLEAR LOCK BOX COVERS FOR ALL THERMOSTATS/HUMIDISTATS & SENSORS LOCATED IN CLASSROOMS & COMMON AREAS. THERMOSTATS WITHIN CLASSROOMS SHALL HAVE OCCUPANCY SENSOR. COORDINATE WITH CONTROLS CONTRACTOR. TYPICAL ALL THERMOSTATS, HUMIDISTATS & SENSORS, TYPICAL.

- ⑧ PROVIDE THERMOSTAT SENSOR IN RETURN AIR DUCT AT VESTIBULE AREAS. TEMPERATURE SETPOINT BY BAS - TIME SCHEDULE. COORDINATE WITH CONTROLS CONTRACTOR.
- ⑨ PROVIDE 2-1/2" BYPASS PIPING WITH ISOLATION & CONTROL VALVE. CONTROL VALVE PROVIDED FOR OPERATION OF CHILLED WATER PUMP MINIMUM FLOW RATE. BALANCE AS REQUIRED FOR CHILLED WATER PUMP MINIMUM FLOW RATES (WHERE COIL 2-WAY VALVES ARE AT MINIMUM OR CLOSED POSITIONS). COORDINATE WITH CONTROLS & T&B CONTRACTOR.

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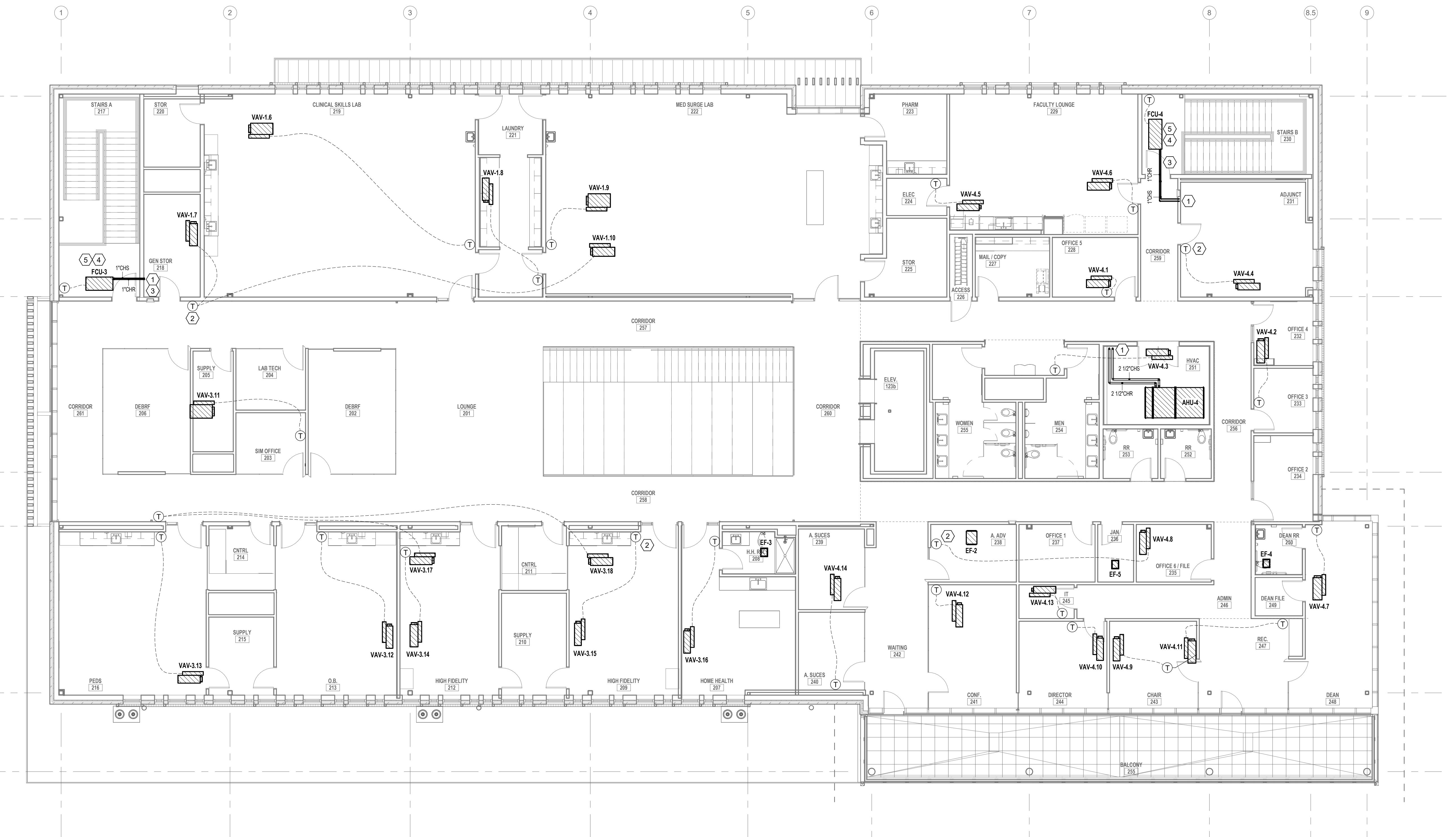
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- MECHANICAL KEY NOTES**
- ① CHILLED WATER PIPING DOWN TO FLOOR BELOW. COORDINATE WITH STRUCTURE & INSTALL PIPE PENETRATION THRU FLOOR WITH SLEEVE & CAULKING/SEALANT AS REQUIRED TO MAINTAIN RATING, TYPICAL.
 - ② PROVIDE DIGITAL THERMOSTAT MOUNTED ON WALL. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION & CONTROL WIRING ROUGH IN. PROVIDE CLEAR LOCK BOX COVERS FOR ALL THERMOSTATS/HUMIDISTATS & SENSORS LOCATED IN CLASSROOMS & COMMON AREAS. THERMOSTATS WITHIN CLASSROOMS SHALL HAVE OCCUPANCY SENSOR. COORDINATE WITH CONTROLS CONTRACTOR. TYPICAL ALL THERMOSTATS, HUMIDISTATS & SENSORS, TYPICAL.
 - ③ PROVIDE METAL JACKET/SLEEVE ON PIPE PENETRATION THRU WALL EXTEND 6' ON BOTH SIDE OF WALL. PROVIDE INSULATION COUPLE AS REQUIRED FOR PIPE INSULATION WITHIN SLEEVE TO MATCH PERFORMANCE OF FIRESTOPPING MATERIAL. PROVIDE FIRE CAULK AROUND SLEEVE. TYPICAL ALL PIPE PENETRATIONS THRU RATED WALLS.
 - ④ PROVIDE PRESSURE GAUGE & THERMOMETER ON INLET & OUTLET PIPING TO EQUIPMENT.
 - ⑤ PROVIDE AUTOMATIC AIR VENT AT PIPING ON HIGH POINTS OF SYSTEM.



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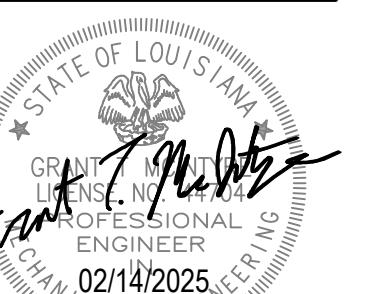
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SITE CODE: L-36-007

SITE ID: NEW

STATE PROJECT NO. 19-617-23-02, E1902503

STATE PROJECT NO. 19-617-23-02, E1902503



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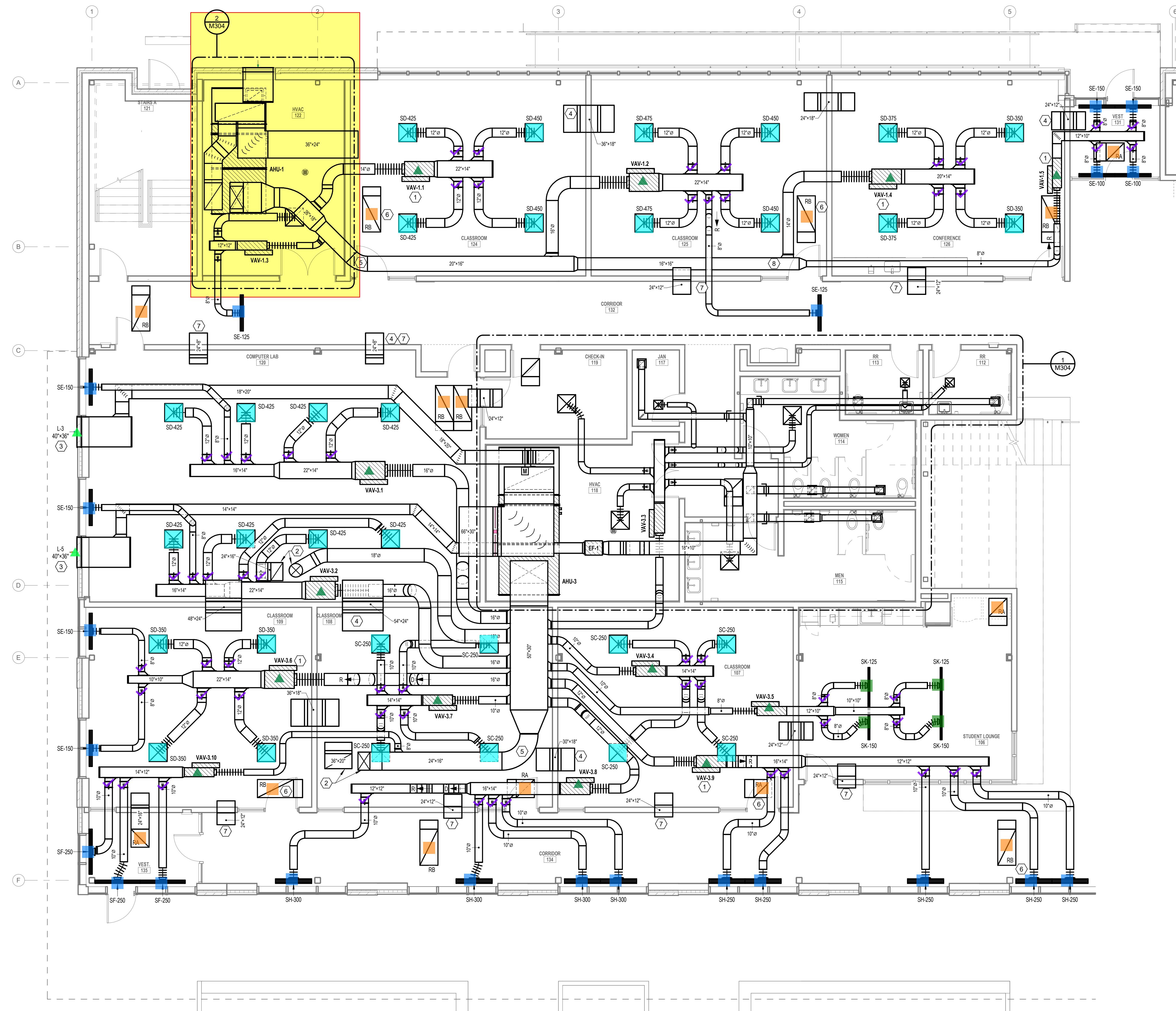
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TYPICAL

1



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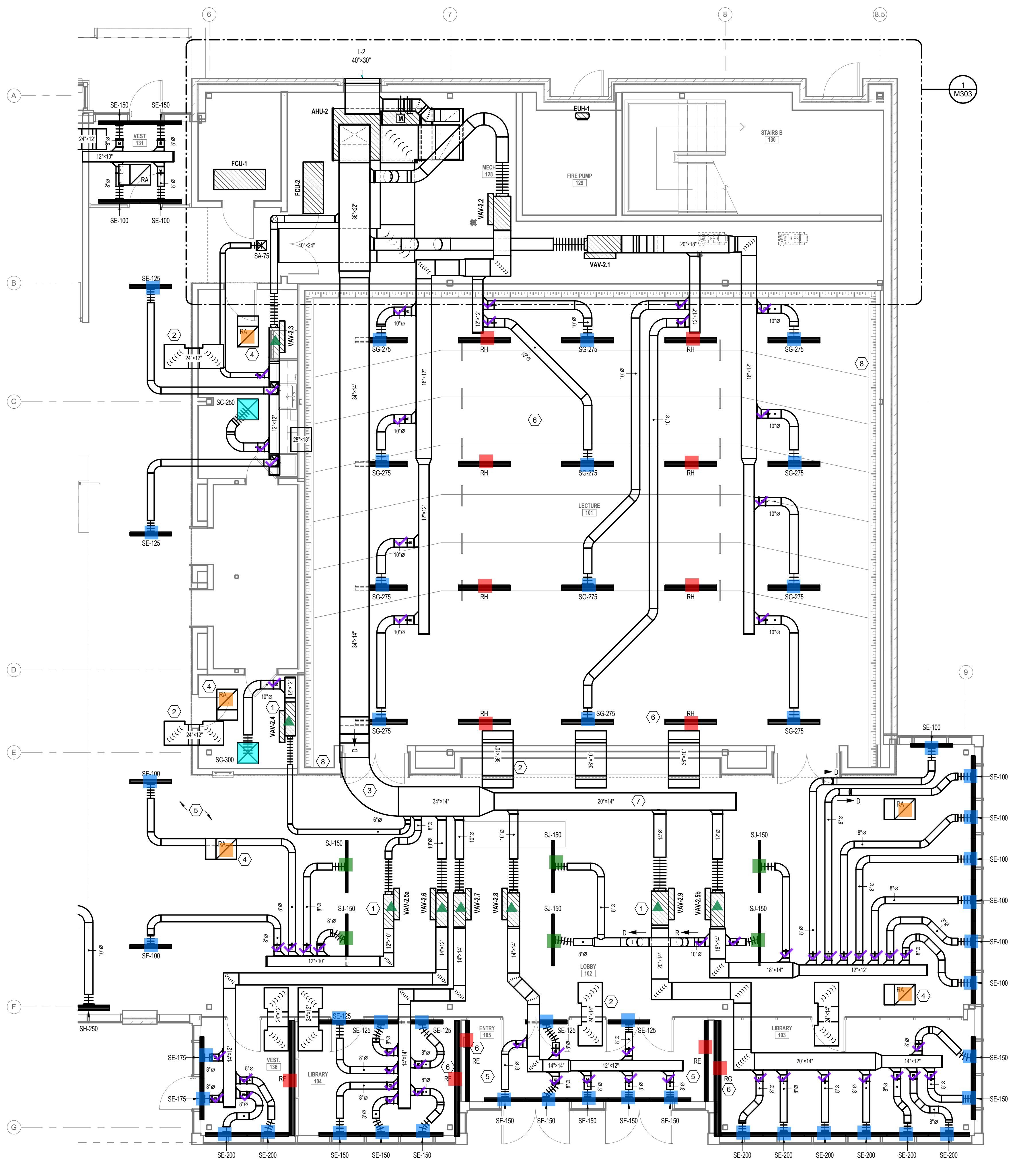
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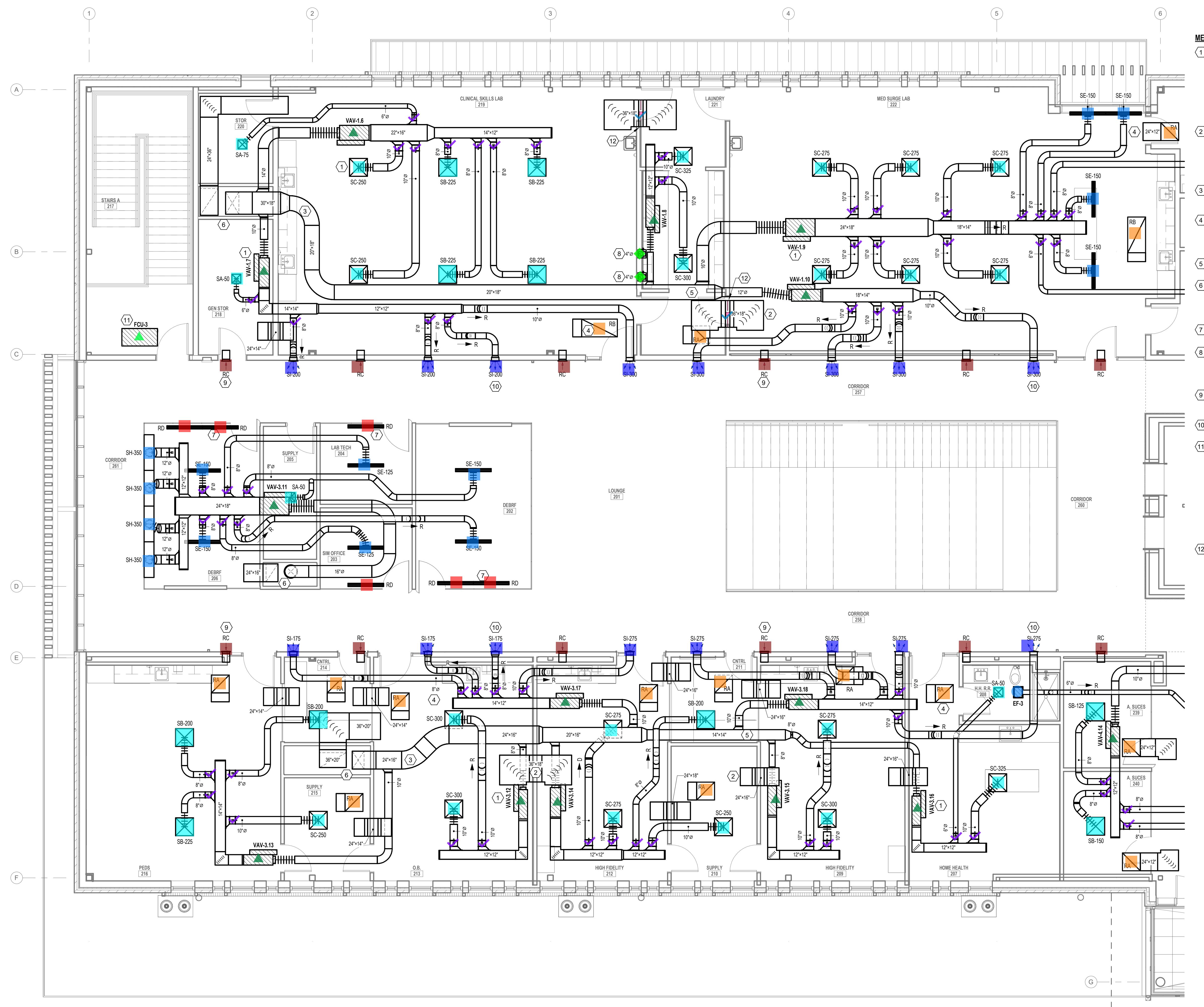
1 ENL - 1ST FLOOR - MECHANICAL (b)

3/16" = 1'-0"

The graphic scale at the bottom left corner of this drawing must measure 1"x1" otherwise all listed scales are null and void.

MECHANICAL KEY NOTES

- ① SUSPENDED VAV BOX ABOVE CEILING WITH ELECTRIC HEAT. PROVIDE FLANGED CONICAL FITTING. REFER TO FIGURE 4-6 "BRANCH DUCT CONNECTION" SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE (THIRD EDITION). PROVIDE THERMOSTAT AND DDC CONTROLS. PROVIDE MINIMUM 1.5x INLET DIAMETER OF STRAIGHT DUCT LINER & MAX 8'-0" FLEX DUCT AT CONNECTION TO VAV BOX. COORDINATE EXACT LOCATION AND CONTROLS ENCLOSURE SIDE WITH THE WORK OF OTHER TRADES TO MAINTAIN MINIMUM 3'-0" CLEAR IN FRONT OF CONTROLS ENCLOSURE. COORDINATE WITH ARCHITECT & ENGINEER WHERE ACCESS PANELS ARE REQUIRED TO ENSURE VAV BOX IS ACCESSIBLE FROM PANEL LOCATION. TYPICAL.
- ② PROVIDE TRANSFER AIR ASSEMBLY WITH 1" DUCT LINER INSULATION THROUGH WALL ABOVE CEILING UP HIGH SIZED AS SHOWN, WITH 90° ELBOW DIRECTED UPWARD ON EACH SIDE OR IN HORIZONTAL. INSTALL TRANSFER ASSEMBLY SUCH THAT THERE ARE NO OBSTRUCTIONS WITHIN 1' OF DUCT OPENINGS. COORDINATE WITH ARCHITECT AND GENERAL CONTRACTOR FOR EXACT QUANTITY AND LOCATIONS OF WALLS GOING UP TO DECK AND PROVIDE TRANSFER AIR ASSEMBLY AT ALL SUCH LOCATIONS TO DIRECT AIR BACK TO THE ASSOCIATED AIR HANDLING UNIT.
- ③ PROVIDE MEDIUM PRESSURE RECTANGULAR DUCT WITH SMOOTH RADIUS ELBOWS & TURNING VANES CONSTRUCTED IN ACCORDANCE WITH SMACNA. TYPICAL ALL MEDIUM PRESSURE SUPPLY AIR DUCT ELBOWS.
- ④ PROVIDE RETURN AIR GRILLES WITH SOUND ATTENUATION BOOT OF REAR OF GRILLE WITH 1" DUCT LINER PAINTED BLACK, FULL SIZE PLENUM ON REAR OF GRILLE. HEIGHT AS REQUIRED FOR DUCT CONNECTION. TYPICAL.
 - A. 24"x12" RA GRILLES TYPE "RA": PROVIDE MIN. 24"x12" DUCT OFF PLENUM.
 - B. 24"x8" RA GRILLES TYPE "RB": PROVIDE MIN. 24"x8" DUCT OFF PLENUM.
- ⑤ ROOF DRAIN WITH LIMITED CEILING CLEARANCE THIS AREA. COORDINATE DUCT INSTALLATION HEIGHT THIS AREA WITH PLUMBING & GENERAL CONTRACTOR TO ENSURE PROPER INSTALLATION OF MECHANICAL & PLUMBING SYSTEMS.
- ⑥ LINEAR SLOT DIFFUSER USED AT RETURN TO RETURN AIR PLENUM. PROVIDE RETURN AIR BAFFLE (OPEN TO PLENUM) BY AIR DEVICE MANUFACTURER. TYPICAL.
- ⑦ PROVIDE STATIC PRESSURE SENSOR IN DUCT APPROXIMATELY THIS LOCATION FOR AHU FAN CONTROL. COORDINATE WITH CONTROLS CONTRACTOR.
- ⑧ PROVIDE CO2 SENSORS DOWN LOW ON WALL WITHIN LECTURE #101 FOR DEMAND CONTROL VENTILATION. COORDINATE WITH ARCHITECT, GENERAL & CONTROLS CONTRACTOR ON EXACT LOCATION.



MECHANICAL KEY NOTES

- ① SUSPENDED VAV BOX ABOVE CEILING WITH ELECTRIC HEAT. PROVIDE FLANGED CONICAL FITTING, REFER TO FIGURE 4-6 "BRANCH DUCT CONNECTION" SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE (THIRD EDITION). PROVIDE THERMOSTAT AND DDC CONTROLS. PROVIDE MINIMUM 1.5x INLET DIAMETER OF STRAIGHT HARD DUCT & MAX 5'-0" FLEX DUCT AT CONNECTION TO VAV BOX. COORDINATE EXACT LOCATION AND CONTROLS ENCLOSURE SIDE WITH THE WORK OF OTHER TRADES TO MAINTAIN MINIMUM 3'-0" CLEAR IN FRONT OF CONTROLS ENCLOSURE. COORDINATE WITH ARCHITECT & ENGINEER WHERE ACCESS PANELS ARE REQUIRED TO ENSURE VAV BOX IS ACCESSIBLE FROM PANEL LOCATION. TYPICAL.
 - ② PROVIDE TRANSFER AIR ASSEMBLY WITH 1" DUCT LINER INSULATION THROUGH WALL ABOVE CEILING UP HIGH. SIZED AS SHOWN, WITH 90° ELBOW DIRECTED UPWARD ON EACH SIDE OR IN HORIZONTAL. INSTALL TRANSFER ASSEMBLY SUCH THAT THERE ARE NO OBSTRUCTIONS WITHIN 1'-0" OF DUCT OPENINGS. COORDINATE WITH ARCHITECT AND GENERAL CONTRACTOR FOR EXACT QUANTITY AND LOCATIONS OF WALLS GOING UP TO DECK AND PROVIDE TRANSFER AIR ASSEMBLY AT ALL SUCH LOCATIONS TO DIRECT AIR BACK TO THE ASSOCIATED AIR HANDLING UNIT.
 - ③ PROVIDE MEDIUM PRESSURE RECTANGULAR DUCT WITH SMOOTH RADIUS ELBOWS & TURNING VANES CONSTRUCTED IN ACCORDANCE WITH SMACNA. TYPICAL ALL MEDIUM PRESSURE SUPPLY AIR DUCT ELBOWS.
 - ④ PROVIDE RETURN AIR GRILLES WITH SOUND ATTENUATION BOOT OF REAR OF GRILLE WITH 1" DUCT LINER PAINTED BLACK, FULL SIZE PLENUM ON REAR OF GRILLE, HEIGHT AS REQUIRED FOR DUCT CONNECTION. TYPICAL.
 - A. 24"x24" RA GRILLES TYPE "RA": PROVIDE MIN. 24"x12" DUCT OFF PLENUM.
 - B. 24"x48" RA GRILLES TYPE "RB": PROVIDE MIN. 24"x16" DUCT OFF PLENUM.
 - ⑤ PROVIDE STATIC PRESSURE SENSOR IN DUCT APPROXIMATELY THIS LOCATION FOR AHU FAN CONTROL. COORDINATE WITH CONTROLS CONTRACTOR.
 - ⑥ DUCT UP THROUGH CHASE FROM FLOOR BELOW. PROVIDE VERTICAL DUCT SUPPORTS AS REQUIRED. COORDINATE WITH PLUMBING & SPRINKLER CONTRACTOR PRIOR TO ROUGH INS. PROVIDE 1-1/2 HOUR RATED FIRE DAMPER AT SHAFT PENETRATIONS WITH INTEGRAL SLEEVE, RATED FOR PRESSURE UP TO 4 in-wg AND VELOCITIES UP TO 4,000 FPM.
 - ⑦ LINEAR SLOT DIFFUSER USED AT RETURN TO RETURN AIR PLENUM. PROVIDE RETURN AIR BAFFLE (OPEN TO PLENUM) BY AIR DEVICE MANUFACTURER. TYPICAL.
 - ⑧ PROVIDE RECESSED DRYER EXHAUST BOX IN WALL WITH VERTICAL TOP DUCT CONNECTION. ROUTE 4" EXHAUST DUCT UP TO GOOSENECK GRAVITY VENTILATOR ON PREFABRICATED ROOF CURB. COORDINATE CURB HEIGHT AND LOCATION WITH ARCHITECT AND GENERAL CONTRACTOR. PROVIDE DRYERJACK #DB-425 (DRYER BOX) AND #DKJ486U (GRAVITY VENTILATOR) OR PRIOR APPROVED EQUAL.
 - ⑨ SIDEWALL RETURN AIR GRILLE & TRANSFER AIR DUCT WITH 1" LINER PAINTED BLACK. FULL SIZE RA DUCT ON REAR WITH MINIMUM ONE ELBOW DIRECTED UPWARDS OR HORIZONTAL.
 - ⑩ COORDINATE EXACT INSTALLATION HEIGHT & COLOR/FINISH OF SIDEWALL AIR DEVICES WITH ARCHITECT. TYPICAL.
 - ⑪ SUSPENDED CHILLED WATER FAN COIL UNIT, EXPOSED UNDER CEILING MOUNT WITH REAR STAMPED LOUVER RETURN AIR GRILLE & INTERNAL EXTENDED CONDENSATE DRAIN PAN. PROVIDE WITH CONDENSATE OVERFLOW SWITCH, EC MOTOR & HINGED RA GRILLE WITH FILTER. PROVIDE ISOLATION VALVES ON CHS/R PIPING, MOTORIZED CONTROL VALVE ON CHS, SUPPLY COMBO VALVE (UNION, BALL VALVE, Y-STRAINER WITH BLOWDOWN & P-T PORTS & AUTOMATIC AIR VENT ON CHR. PROVIDE PRE-PROGRAMMED BACNET BASED CONTROL OPTION & INTERCONNECT WITH THERMOSTAT / SENSOR BY CONTROLS CONTRACTOR. ROUTE INSULATED CONDENSATE DRAIN PIPING FROM UNIT TO HUB DRAIN. COORDINATE EXACT LOCATION & INSTALLATION HEIGHT OF HUB DRAIN WITH CONTROLS CONTRACTOR TO ENSURE GRAVITY FLOW (PROVIDE INTEGRAL CONDENSATE PUMP WHERE GRAVITY FLOW INSTALLATION NOT POSSIBLE). COORDINATE WITH CONTROLS CONTRACTOR FOR INTERCONNECTION WITH BAS & WITH ARCHITECT ON EXACT FINISH/COLOR.
 - ⑫ PROVIDE SMOKE DAMPER AT TRANSFER AIR ASSEMBLIES PENETRATING LAUNDRY ROOM SMOKE BARRIER AS SHOWN. SMOKE DAMPERS SHALL INCLUDE 1201/60 ACTUATOR. COORDINATE WITH ELECTRICAL AND FIRE ALARM CONTRACTORS TO PROVIDE POWER AND FIRE ALARM CONNECTIONS (INCLUDING ADDRESSABLE RELAY) AS REQUIRED.

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M302a

ENLARGED MECHANICAL
PLAN - 2ND FLOOR (a)

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SITE CODE: L-36-007

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STATE PROJECT NO. 19-617-23-02, E1902503

ST

MECHANICAL KEY NOTES

- ① SUSPENDED VAV BOX ABOVE CEILING WITH ELECTRIC HEAT. PROVIDE FLANGED CONICAL FITTING. REFER TO FIGURE 4-6 "BRANCH DUCT CONNECTION" SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE (THIRD EDITION). PROVIDE THERMOSTAT AND DDC CONTROLS. PROVIDE MINIMUM 1.5 INLET DIAMETER OF STRAIGHT HARD DUCT & MAX 5'-0" FLEX DUCT AT CONNECTION TO VAV BOX. COORDINATE EXACT LOCATION AND CONTROLS ENCLosURE SIDE WITH THE WORK OF OTHER TRADES TO MAINTAIN MINIMUM 3'-0" CLEAR IN FRONT OF CONTROLS ENCLOSURE. COORDINATE WITH ARCHITECT & ENGINEER WHERE ACCESS PANELS ARE REQUIRED TO ENSURE VAV BOX IS ACCESSIBLE FROM PANEL LOCATION. TYPICAL.
- ② PROVIDE TRANSFER AIR ASSEMBLY WITH 1" Duct LINER INSULATION THROUGH WALL ABOVE CEILING UP HIGH SIZE AS SHOWN, WITH 90° ELBOW DIRECTED UPWARD ON EACH SIDE OR IN HORIZONTAL INSTALLATION ASSEMBLY SUCH THAT THERE ARE NO OBSTRUCTIONS WITHIN 1'-0" OF Duct OPENINGS. COORDINATE WITH ARCHITECT AND GENERAL CONTRACTOR FOR EXACT QUANTITY AND LOCATIONS OF WALLS GOING UP TO DECK AND PROVIDE TRANSFER AIR ASSEMBLY AT ALL SUCH LOCATIONS TO DIRECT AIR BACK TO THE ASSOCIATED AIR HANDLING UNIT.
- ③ PROVIDE MEDIUM PRESSURE RECTANGULAR Duct WITH SMOOTH RADIUS ELBOWS & TURNING VANES CONSTRUCTED IN ACCORDANCE WITH SMACNA. TYPICAL ALL MEDIUM PRESSURE SUPPLY AIR Duct ELBOWS.
- ④ PROVIDE RETURN AIR GRILLES WITH SOUND ATTENUATION BOOT OF REAR OF GRILLE WITH 1" Duct LINER PAINTED BLACK, FULL SIZE PLenum ON REAR OF GRILLE, HEIGHT AS REQUIRED FOR Duct CONNECTION. TYPICAL.
 - A. 24"x24" RA GRILLES TYPE "RA": PROVIDE MIN. 24"x24" Duct OFF PLenum.
 - B. 24"x48" RA GRILLES TYPE "RB": PROVIDE MIN. 24"x48" Duct OFF PLenum.
- ⑤ PROVIDE STATIC PRESSURE SENSOR IN Duct APPROXIMATELY THIS LOCATION FOR AHU FAN CONTROL. COORDINATE WITH CONTROLS CONTRACTOR.
- ⑥ SUSPENDED CHILLED WATER FAN COIL UNIT, EXPOSED UNDER CEILING LUMPS WITH REAR STAMPED LOUVER RETURN AIR GRILLE & INTERNAL EXTENDED CONDENSATE DRAIN PAN. PROVIDE WITH CONDENSATE OVERFLOW SWITCH, EC MOTOR & Hinged RA GRILLE WITH FILTER. PROVIDE ISOLATION VALVES ON CHSR PIPING, MOTORIZED CONTROL VALVE ON CHS, SUPPLY COMBO VALVE (BALL VALVE, Y-STRAINER WITH BLOWDOWN & P-T PORTS & AUTOMATIC AIR VENT ON CHS) PROVIDE PRE-PROGRAMMED BACNET BASED CONTROL OPTION & INTERCONNECT WITH THERMOSTAT / SENSOR BY CONTROLS CONTRACTOR. ROUTE INSULATED CONDENSATE DRAIN PIPING FROM UNIT TO HUB DRAIN (ORDERS DETERMINE EXACT LOCATION & INSTALLATION HEIGHT OF HUB DRAIN WITH CONTROLS CONTRACTOR TO ENSURE GRAVITY FLOW (PROVIDE INTEGRAL CONDENSATE DUMP WHERE GRAVITY FLOW INSTALLATION NOT POSSIBLE). COORDINATE WITH CONTROLS CONTRACTOR FOR INTERCONNECTION WITH BAS & WITH ARCHITECT ON EXACT FINISH COLOR.
- ⑦ EXTERIOR WALL LOUVER: SEAL ALL AROUND WEATHER TIGHT. FULL SIZE PLenum AND BIRD SCREEN (1/2"x1x2") ON REAR TRANSITION AS SHOWN. MAINTAIN 10'-0" MINIMUM BETWEEN ALL EXHAUST AIR OUTLETS AND OUTSIDE AIR INLETS OR OPERABLE BUILDING OPENINGS (WINDOWS AND DOORS). COORDINATE INSTALLATION LOCATION AND COLOR SELECTION WITH ARCHITECT PRIOR TO ORDERING.
- ⑧ PROVIDE BACKDRAFT DAMPER ON BRANCH Duct CONNECTIONS FROM CABINET EXHAUST FANS AT EA Duct CONNECTION TO LOUVER.
- ⑨ INLINE EXHAUST FAN SUSPENDED FROM STRUCTURE ABOVE WITH SPRING VIBRATION ISOLATORS.



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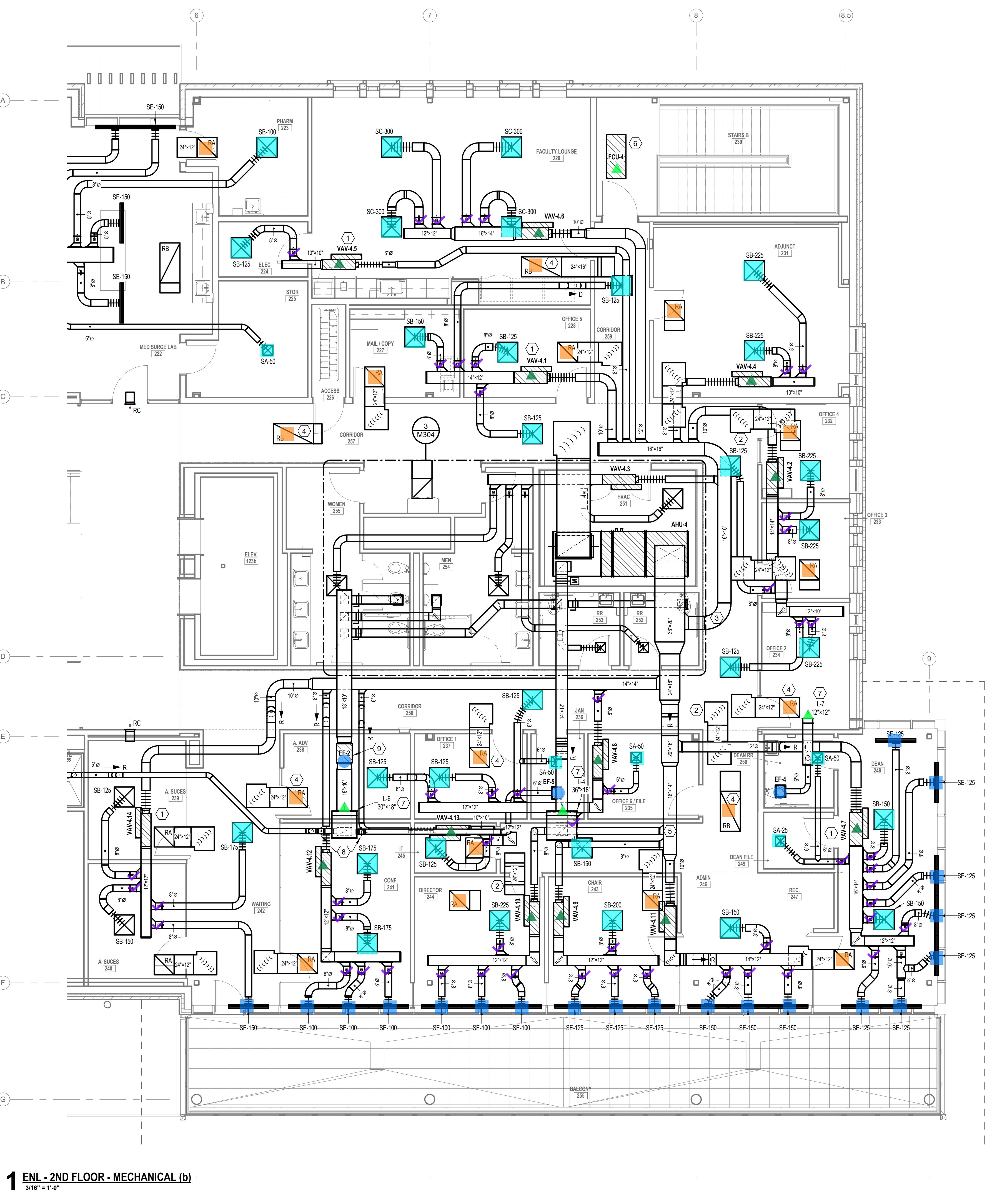
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NO. DESCRIPTION DATE

PROJECT NO. 23042

PHASE BD

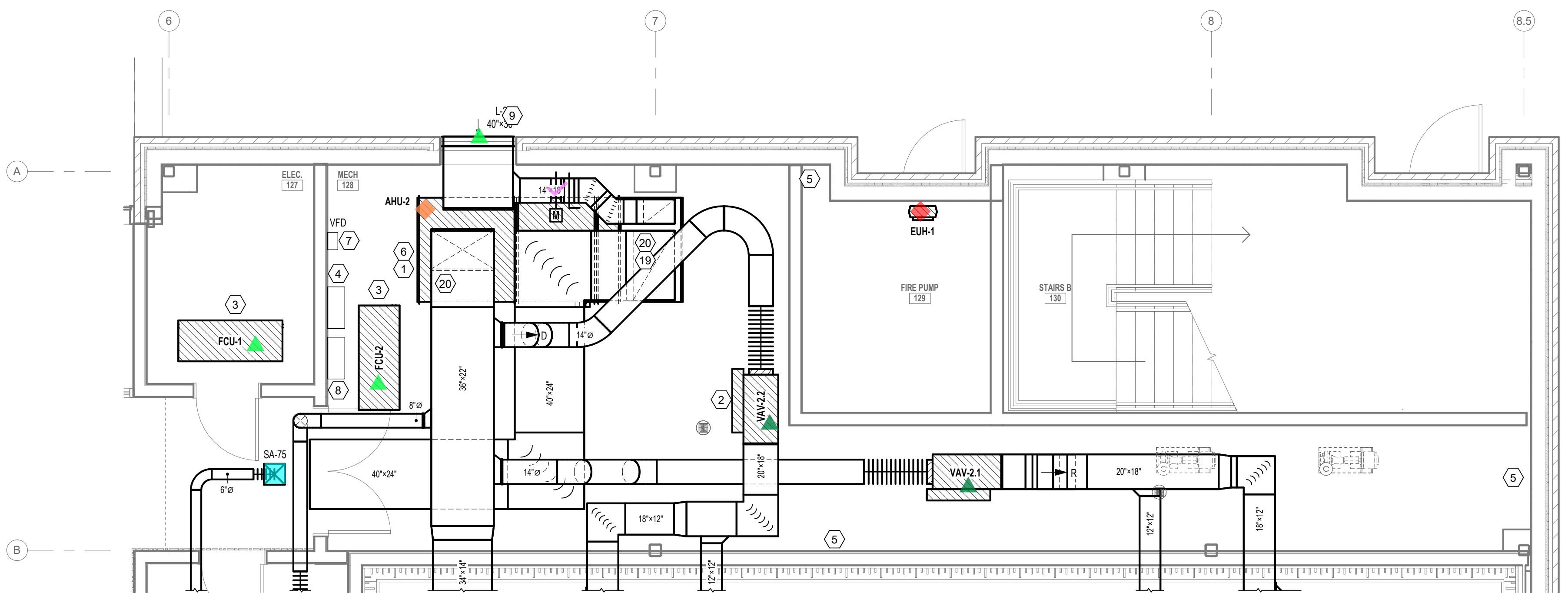
DATE 02.07.25

PROJECT MANAGER GM/DD

QUALITY CONTROL GM

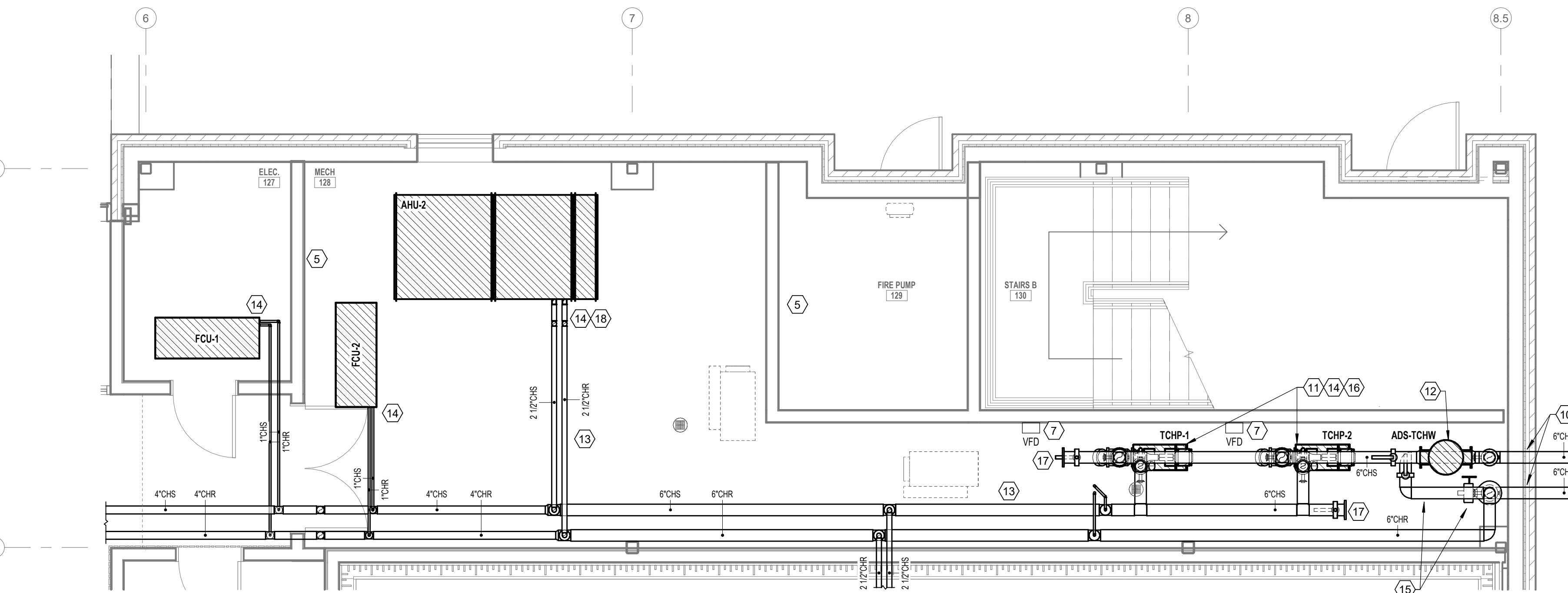
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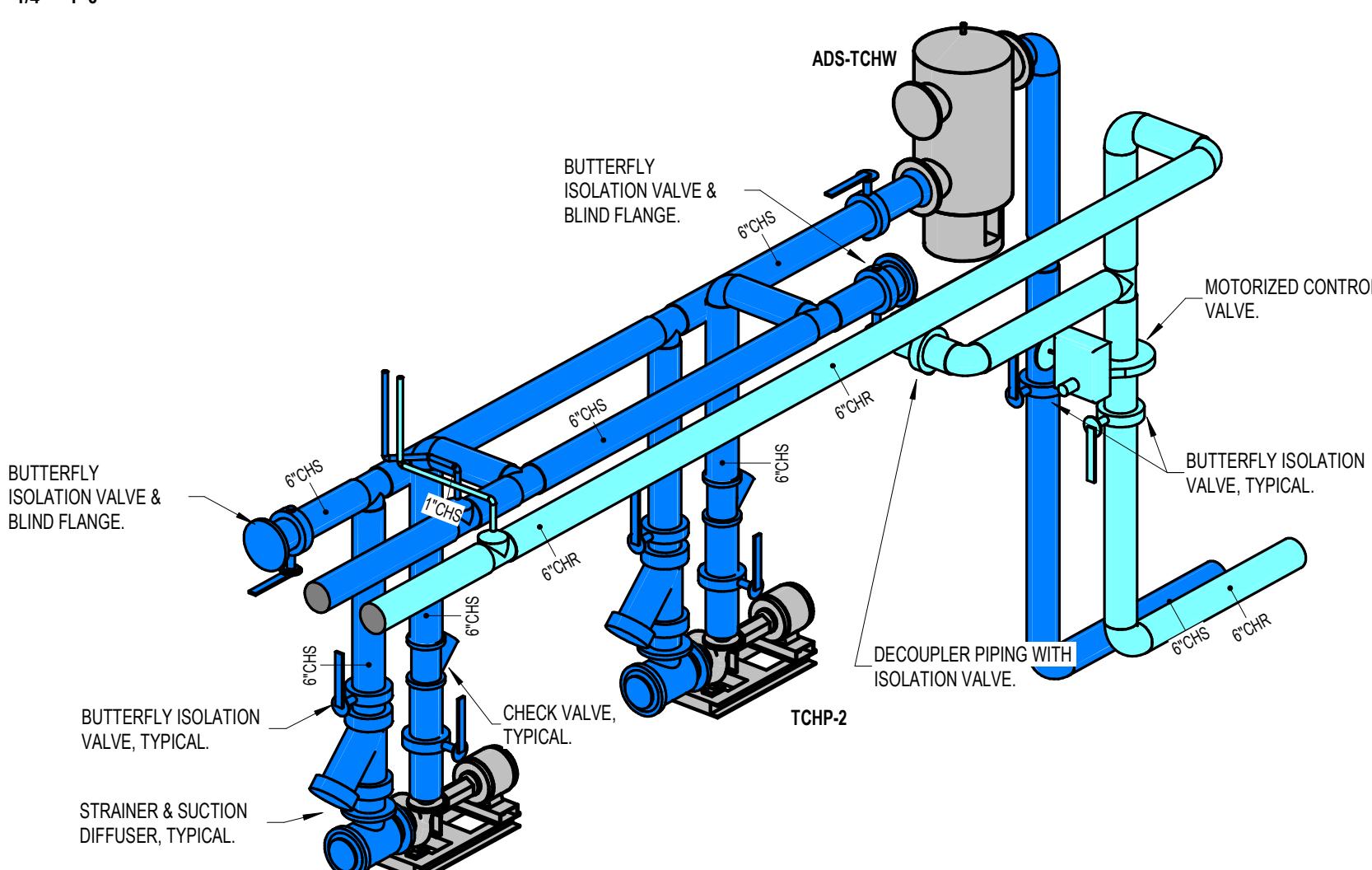
1 ENL - NORTHEAST EQUIPMENT ROOMS - AIRSIDE

1/4" = 1'-0"

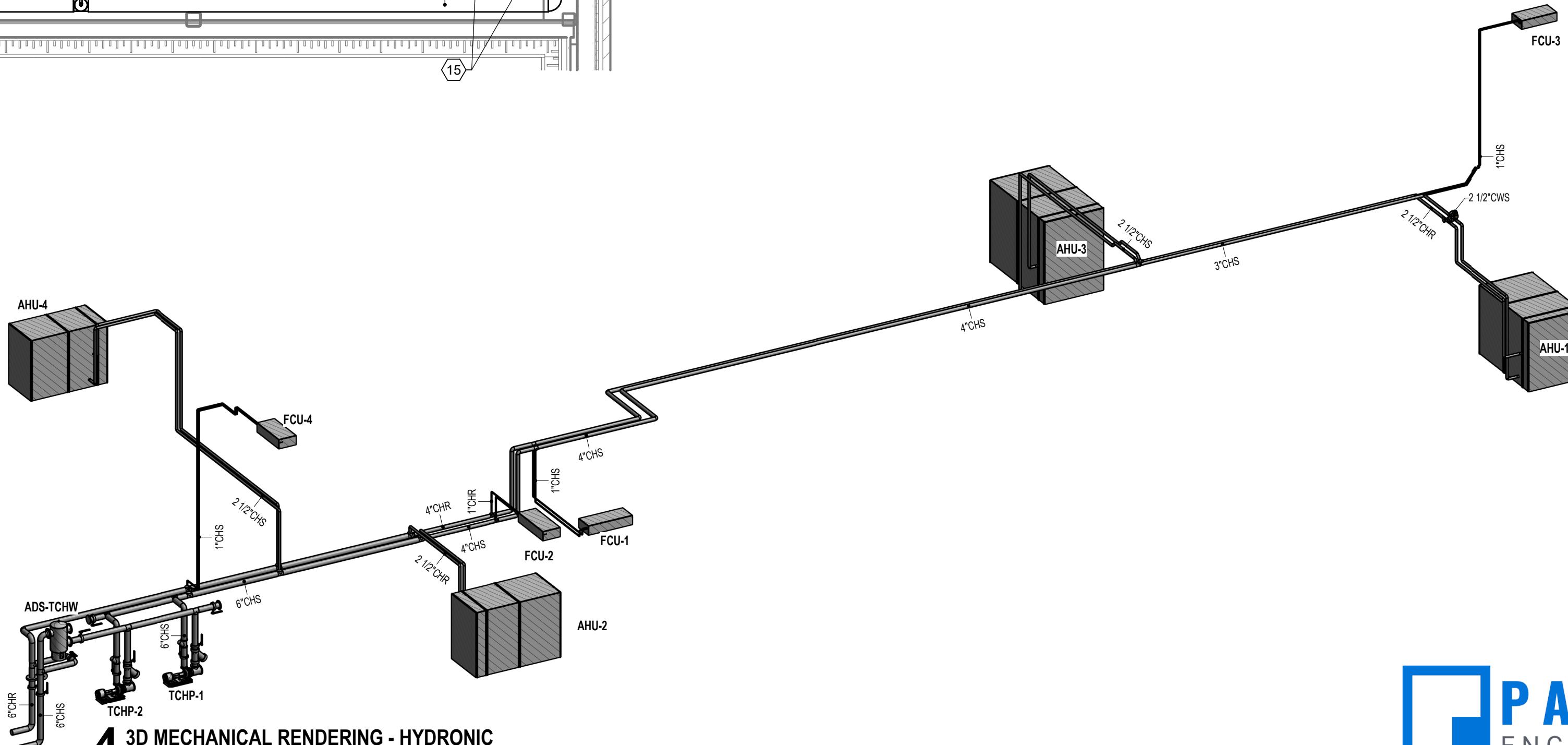


2 ENL - NORTHEAST EQUIPMENT ROOMS - WATERSIDE

1/4" = 1'-0"



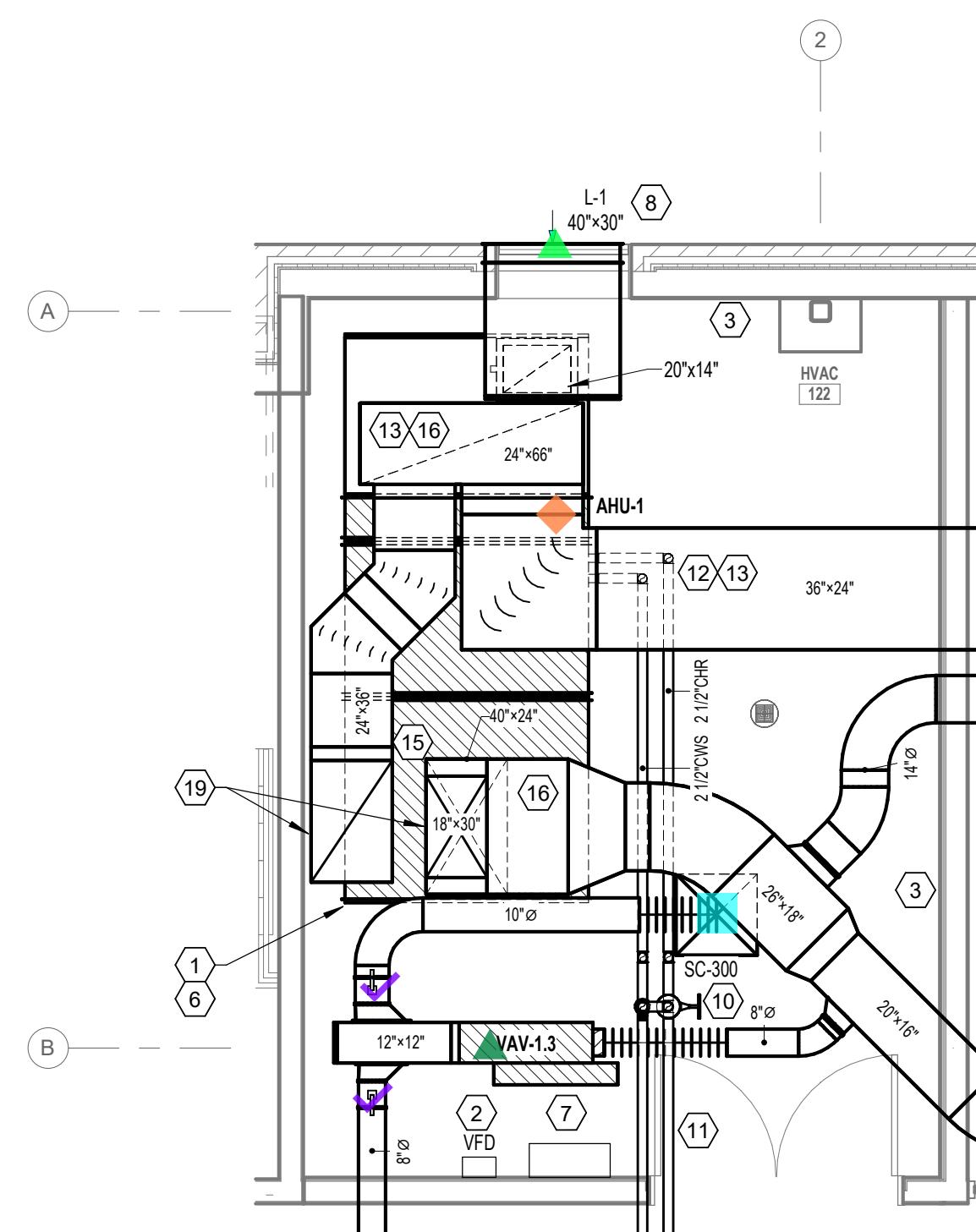
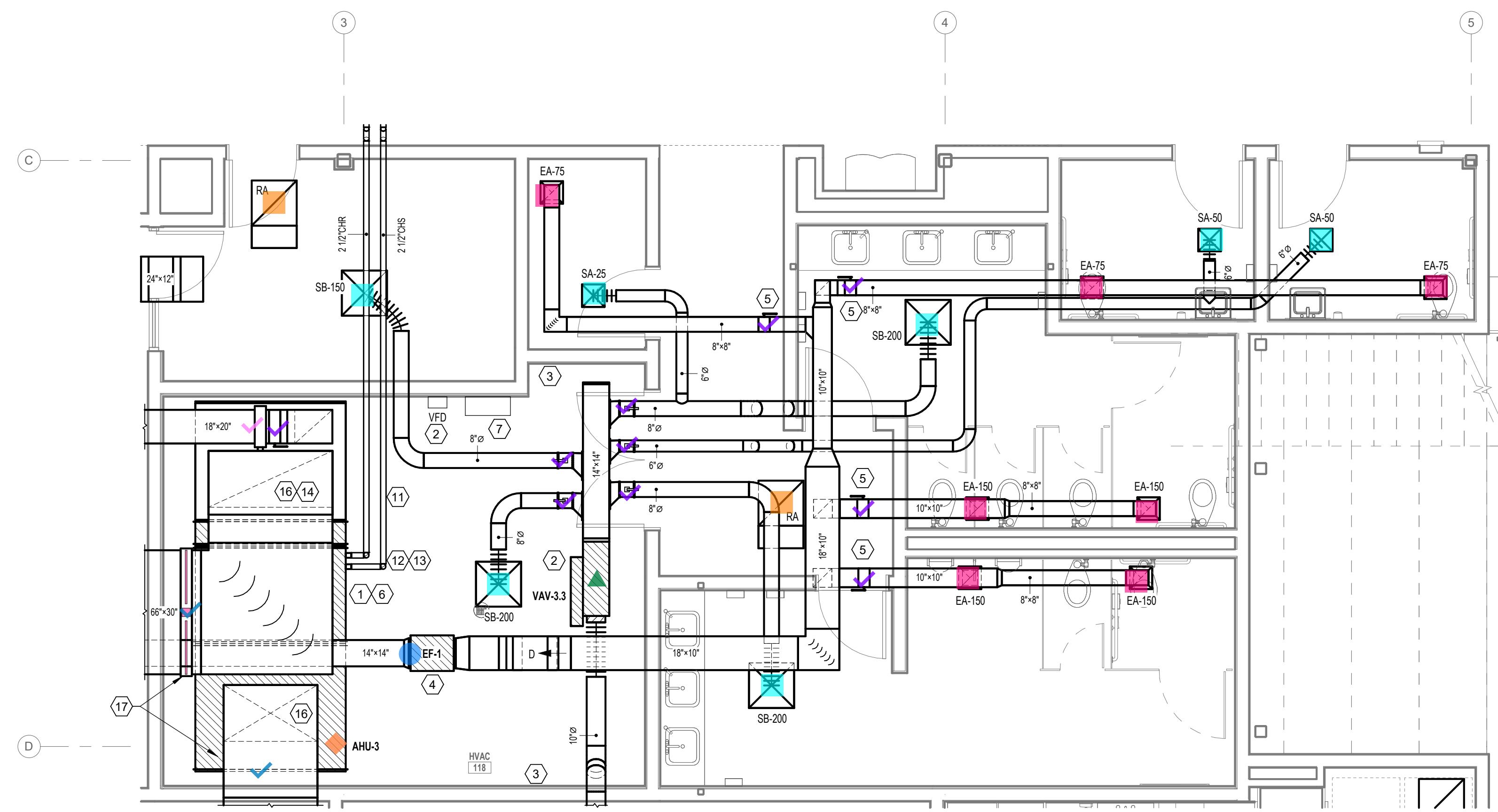
3 3D RENDERING - TERTIARY CHILLED WATER PUMPS



4 3D MECHANICAL RENDERING - HYDRONIC

02/11/25 2:06:03 PM

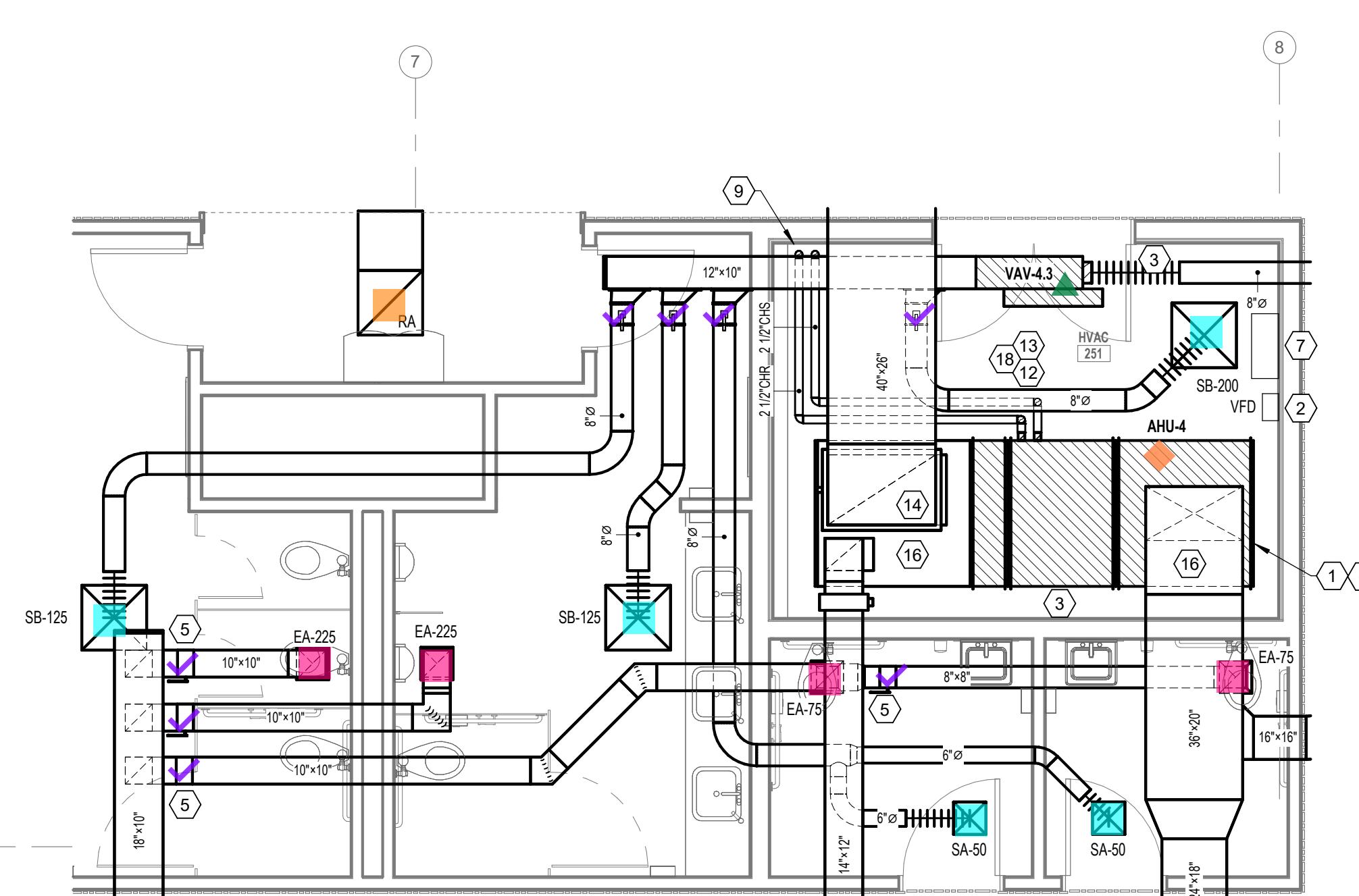
Autodesk Docs://SUNO Nursing School/MEP_SUNO_Nursing_r23.rvt



3 ENL - HVAC 251 - MECHANICAL
1/4" = 1'-0"

MECHANICAL KEY NOTES

- ① HORIZONTAL BUILT-UP AIR HANDLING UNIT ON 4" HIGH CONCRETE HOUSEKEEPING PAD WITH CHAMFERED EDGES. EXTEND MINIMUM 6' BEYOND UNIT FOOTPRINT & NEOPRENE VIBRATION ISOLATION PAD BEATHEN ENTIRE UNIT IN CONTACT WITH FLOOR/DRAIN PAN. PROVIDE FULL SIZE RETURN AIR PLENUM, LENGTH AS REQUIRED FOR BRANCH DUCT CONNECTIONS, WITH FLOOR MOUNTED DUCT SUPPORTS AS REQUIRED. PROVIDE A TALL 16 GA. 304 STAINLESS STEEL DRAIN PAN WITH FLOAT SWITCH (CHILLED WATER CONTROL VALVE TO CLOSE FULLY WHEN TRIPPED UNDER ENTIRE UNIT). PROVIDE NIPPLE ON AUXILIARY PAN WITH SHUT OFF VALVE (NORMALLY CLOSED) AND THREADED GARDEN HOSE CONNECTION. FIELD ROUTE 2" INSULATED COPPER CONDUIT FROM THE CHILLED WATER PUMP TO THE COOLING COIL. PROVIDE 1/2" GATE VALVE COORDINATE WITH PLUMBER CONTRACTOR FOR CONDENSATE DRAIN RECEPTACLE LOCATION. PROVIDE MANUAL VOLUME & SPEED DAMPERS ON OUTSIDE AIR AND RETURN AIR BRANCH DUCT CONNECTIONS. PROVIDE BI-POLAR IONIZATION DEVICE MOUNTED TO COOLING COILS INSIDE UNIT CABINET (COORDINATE WITH EQUIPMENT MANUFACTURER, RE: SCHEDULE). COORDINATE WITH ELECTRICAL CONTRACTOR FOR 120-160 ELECTRICAL SERVICE & CONTROL CONTRACTOR.
- ② PROVIDE VFD MOUNTED ON WALL WITH BACNET INTERFACE CARDS. COORDINATE EXACT LOCATION IN FIELD WITH ELECTRICAL, GENERAL & CONTROLS CONTRACTOR.
- ③ WITHIN MECHANICAL ROOMS, INTERIOR WALLS, CEILING, AND INTERIOR SIDE OF DOORS SHALL BE LINED WITH 1" ACOUSTICAL RIGID FIBERGLASS LINER BOARD. COORDINATE WITH WALL MOUNTED ITEMS AND THE WORK OF OTHER TRADES. RE: SPECIFICATIONS.
- ④ INLINE EXHAUST FAN SUSPENDED FROM STRUCTURE ABOVE WITH SPRING VIBRATION ISOLATORS.
- ⑤ PROVIDE MANUAL VOLUME DAMPERS ABOVE INACCESSIBLE CEILING WITH REMOTE DAMPER OPERATORS. REMOTE MANUAL DAMPER OPERATORS NOT REQUIRED WHERE TYPE "EA" EXHAUST GRILLE ARE PROVIDED WITH FACE OPERATED DAMPERS FOR AIR BALANCING.
- ⑥ PROVIDE STATIC PRESSURE SENSOR AT LONGEST RUN OF DUCTWORK FOR EACH AIR HANDLING UNIT. COORDINATE WITH CONTROLS CONTRACTOR.
- ⑦ PROVIDE BAS CONTROL PANEL. PROVIDE DEDICATED 20 AMP, 120-160 ELECTRICAL SERVICE & DATA DROP. COORDINATE WITH ELECTRICAL & CONTROLS CONTRACTOR.
- ⑧ EXTERIOR WALL LOUVER. SEAL ALL AROUND WEATHER TIGHT; FULL SIZE PLENUM AND BIRD SCREEN (1/2"x1") ON REAR; TRANSITION AS SHOWN. COORDINATE INSTALLATION LOCATION AND COLOR SELECTION WITH ARCHITECT PRIOR TO ORDERING.
- ⑨ CHILLED WATER PIPING DOWN TO FLOOR BELOW. COORDINATE WITH STRUCTURE & INSTALL PIPE PENETRATION THRU FLOOR WITH SLEEVE & CAULKING/SEALANT AS REQUIRED TO MAINTAIN RATING. TYPICAL.
- ⑩ PROVIDE 1/2" BYPASS PIPING WITH ISOLATION & CONTROL VALVE. CONTROL VALVE PROVIDED FOR OPERATION OF CHILLED WATER PUMP MINIMUM FLOW RATE. BALANCE AS REQUIRED FOR CHILLED WATER PUMP MINIMUM FLOW RATES (WHERE COIL 2-WAY VALVES ARE AT MINIMUM OR CLOSED POSITIONS). COORDINATE WITH CONTROLS & T&B CONTRACTOR.
- ⑪ PROVIDE COLOR CODED PVC JACKET, DIRECTIONAL FLOW ARROWS & PIPE LABELS ON CHILLED WATER PIPING WITHIN MECHANICAL ROOM. TYPICAL.
- ⑫ PROVIDE PRESSURE GAUGE & THERMOMETER ON INLET & OUTLET PIPING TO EQUIPMENT.
- ⑬ PROVIDE ISOLATION VALVES ON CHSR PIPING, STRAINER ON CHS, MODULATING CONTROL VALVE & BALANCING VALVE ON CHR PIPING TO AHU COIL CONNECTION. CONTROL VALVE POSITION SHALL BE MONITORED BY BAS AS REQUIRED FOR PUMP CONTROL. COORDINATE WITH CONTROLS CONTRACTOR.
- ⑭ PROVIDE CO₂ SENSOR IN RETURN AIR DUCT FOR DEMAND CONTROL VENTILATION. COORDINATE WITH CONTROLS CONTRACTOR.
- ⑮ DUCT UP THROUGH CHASE FROM FLOOR BELOW. PROVIDE VERTICAL DUCT SUPPORTS AS REQUIRED. COORDINATE WITH PLUMBING & SPRINKLER CONTRACTOR PRIOR TO ROUGH-INS.
- ⑯ PROVIDE SMOKE DETECTORS ON MAIN SUPPLY & RETURN AIR DUCTS AT AHU. INTERCONNECT WITH FIRE ALARM. COORDINATE WITH TEMPERATURE CONTROLS & FIRE ALARM CONTRACTOR.
- ⑰ PROVIDE UL LISTED SMOKE DAMPER AS SHOWN. COORDINATE WITH GENERAL, ELECTRICAL, AND FIRE ALARM CONTRACTORS TO PROVIDE 120/160 ELECTRICAL SERVICE, 120V TO 24V TRANSFORMER (AS REQUIRED), AND CONNECTION TO FIRE ALARM SYSTEM WITH ADDRESSABLE RELAY.
- ⑱ PROVIDE AUTOMATIC AIR VENT AT PIPING ON HIGH POINTS OF SYSTEM.
- ⑲ DUCT UP THROUGH CHASE TO FLOOR ABOVE. PROVIDE VERTICAL DUCT SUPPORTS AS REQUIRED. COORDINATE WITH PLUMBING & SPRINKLER CONTRACTOR PRIOR TO ROUGH-INS. PROVIDE 1-1/2 HOUR RATED FIRE DAMPER AT SHAFT PENETRATIONS WITH INTEGRAL SLEEVE. RATED FOR PRESSURE UP TO 4 in-wg AND VELOCITIES UP TO 4,000 FPM.



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ARCHITECTS

Williams & Williams
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A JOINT VENTURE
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NEW ORLEANS, LA 70130

Southern University at New Orleans
NURSING & ALLIED HEALTH

BUILDING

6400 Press Dr. New Orleans, LA 70126

STATE CODE: L36-07

STATE ID: NEW

STATE PROJECT NO. 19-617-23-02, E1902503

02/14/2025



NO. DESCRIPTION DATE

PROJECT NO. 23042

PHASE BD

DATE 02.07.25

PROJECT MANAGER GM/DD

QUALITY CONTROL GM

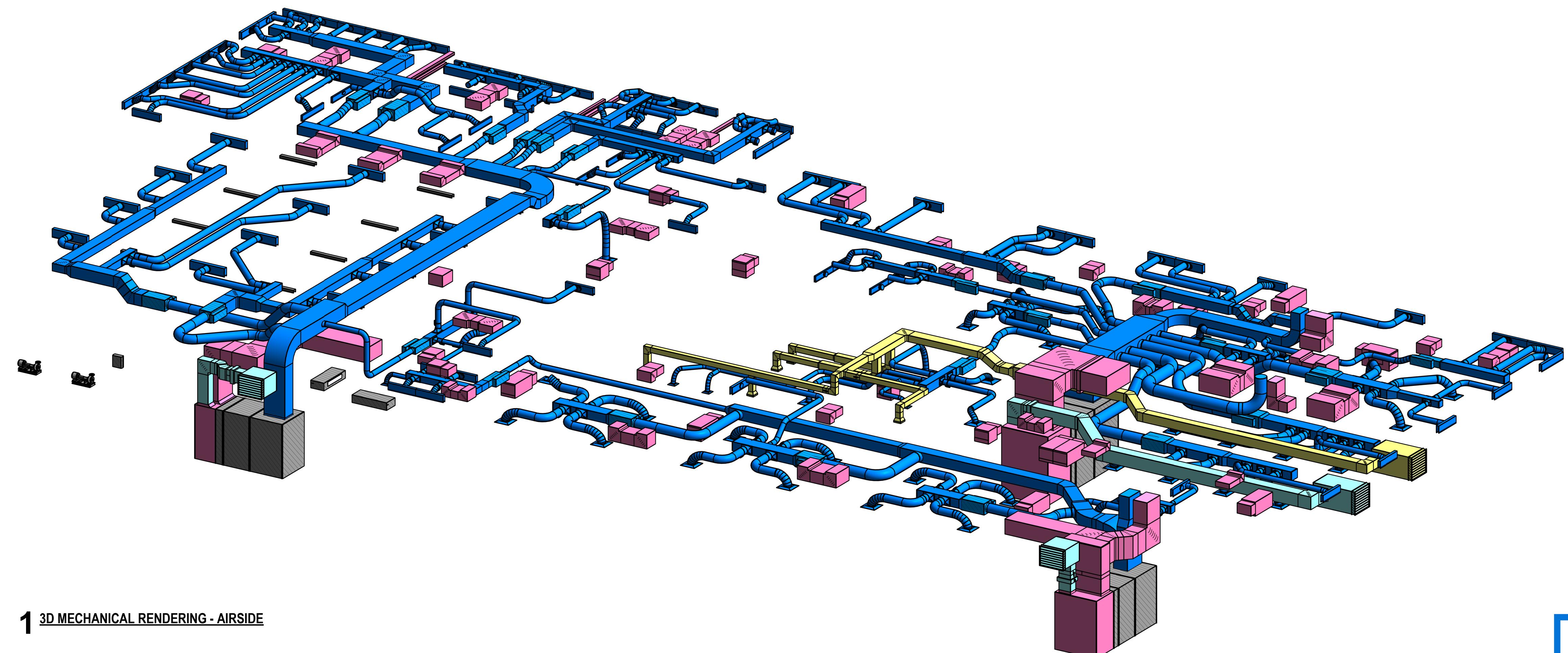
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M304

ENLARGED MECHANICAL PLANS

1 3D MECHANICAL RENDERING - AIRSIDE

The graphic scale at the bottom left corner of this drawing must measure 1"x1" otherwise all listed scales are null and void.

0"

1/2"

1"

1 1/2"

2"

3"

4"

5"

6"

7"

8"

9"

10"

11"

12"

13"

14"

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31"

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33"

34"

35"

36"

37"

38"

39"

40"

41"

42"

43"

44"

45"

46"

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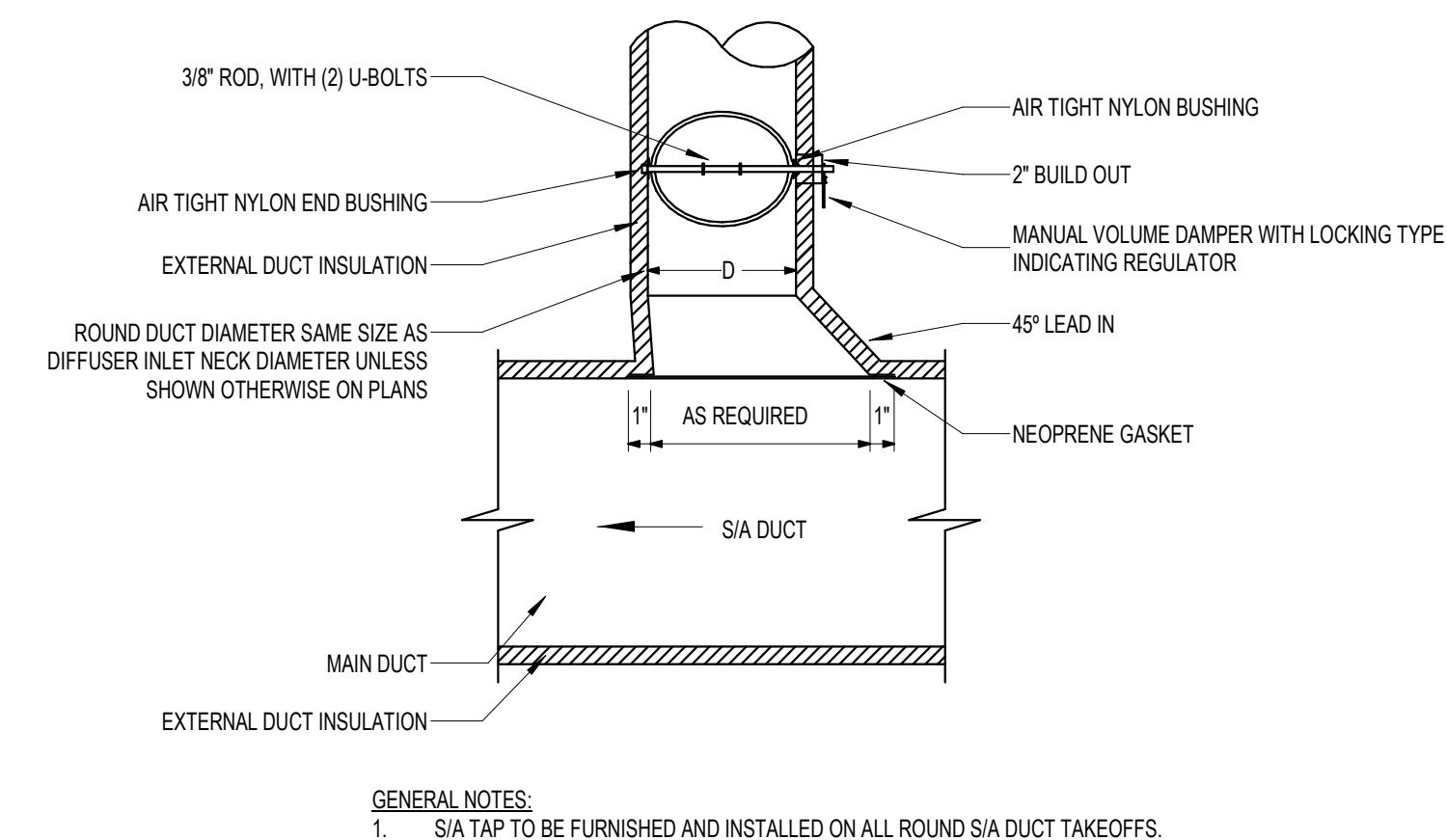
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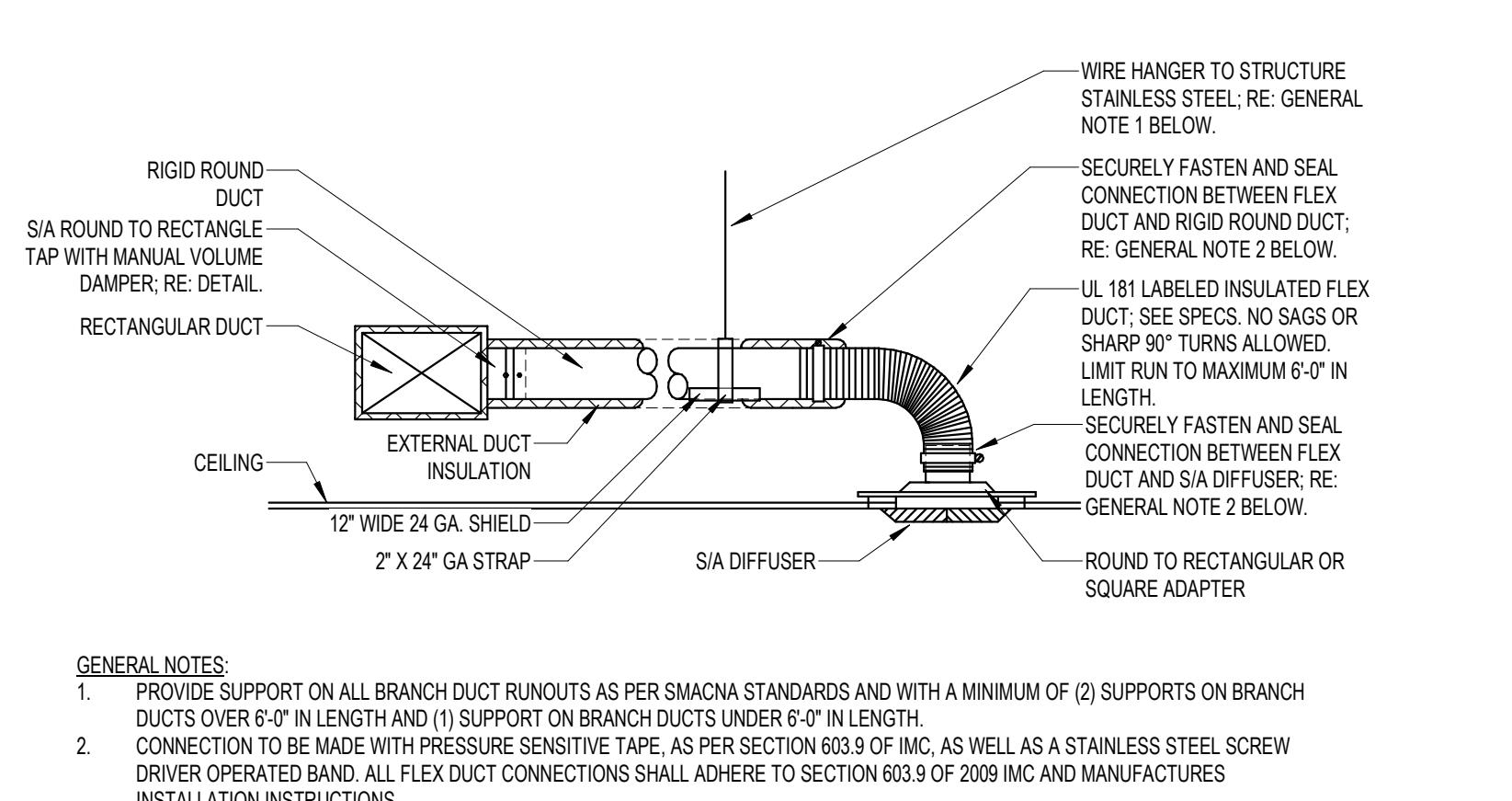
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M501

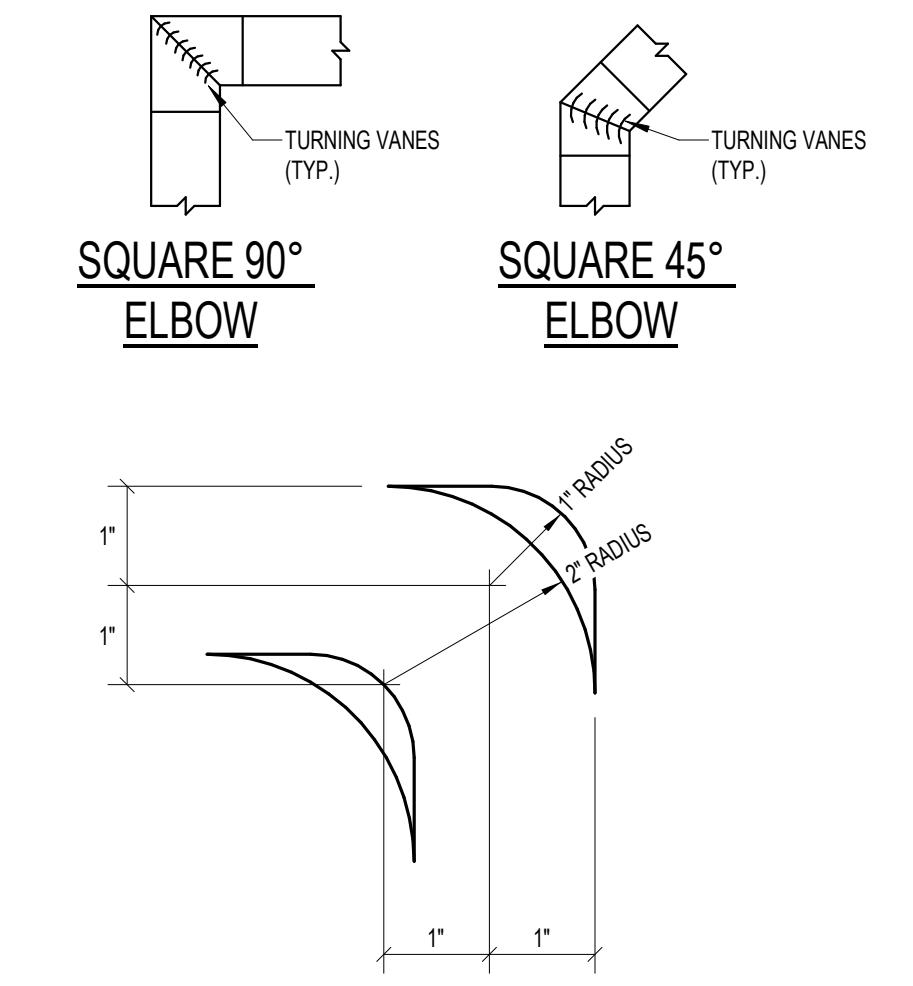
MECHANICAL DETAILS

 PARISH
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**1 DETAIL - S/A ROUND TO RECTANGLE TAP WITH MANUAL VOLUME DAMPER**

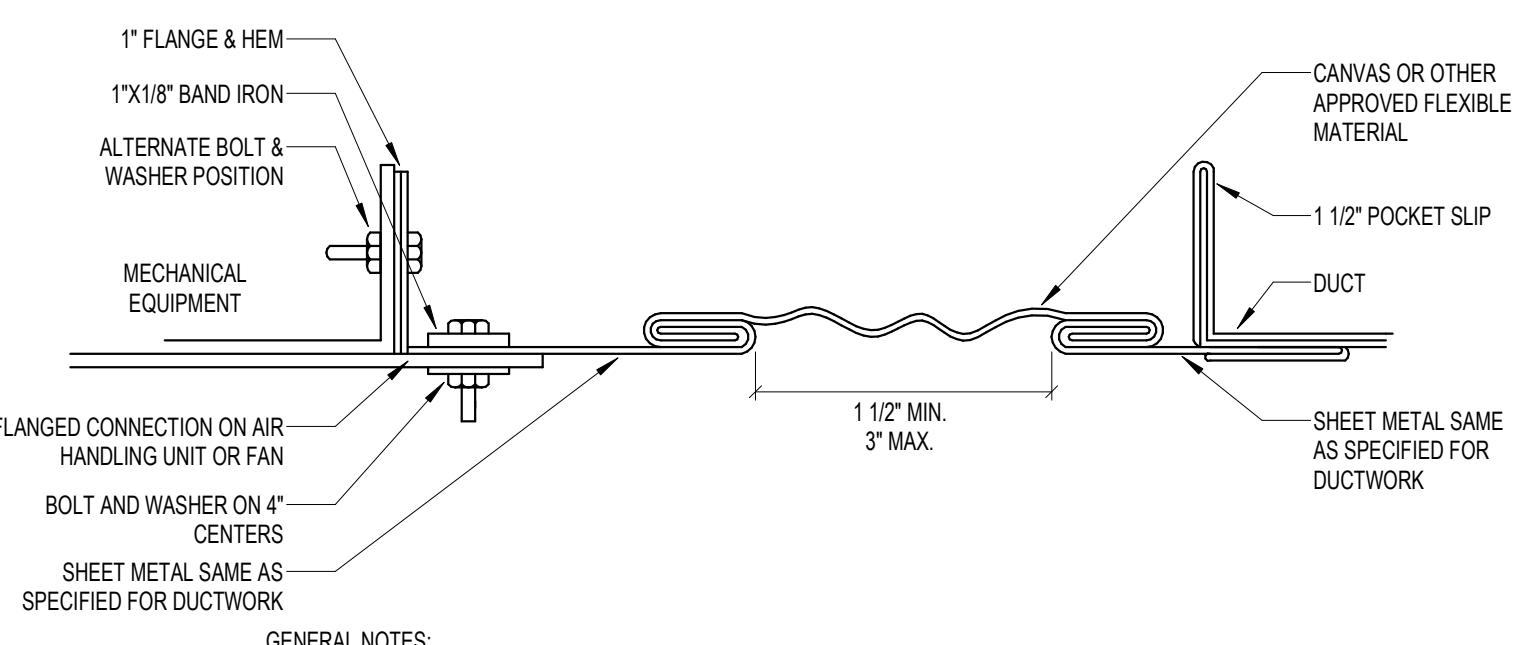
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**2 DETAIL - TYPICAL DIFFUSER CONNECTION**

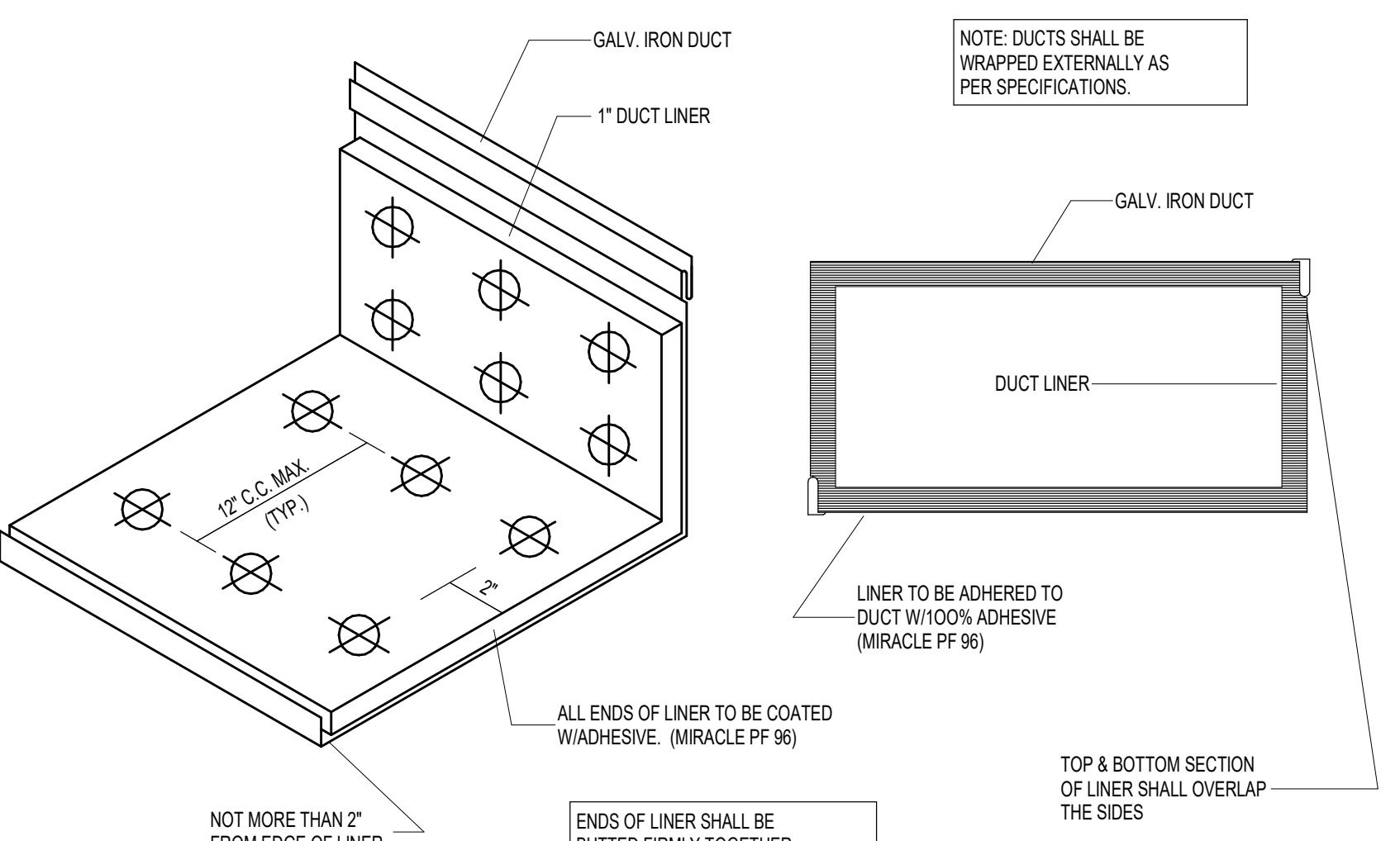
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**3 DETAIL - TURNING VANES**

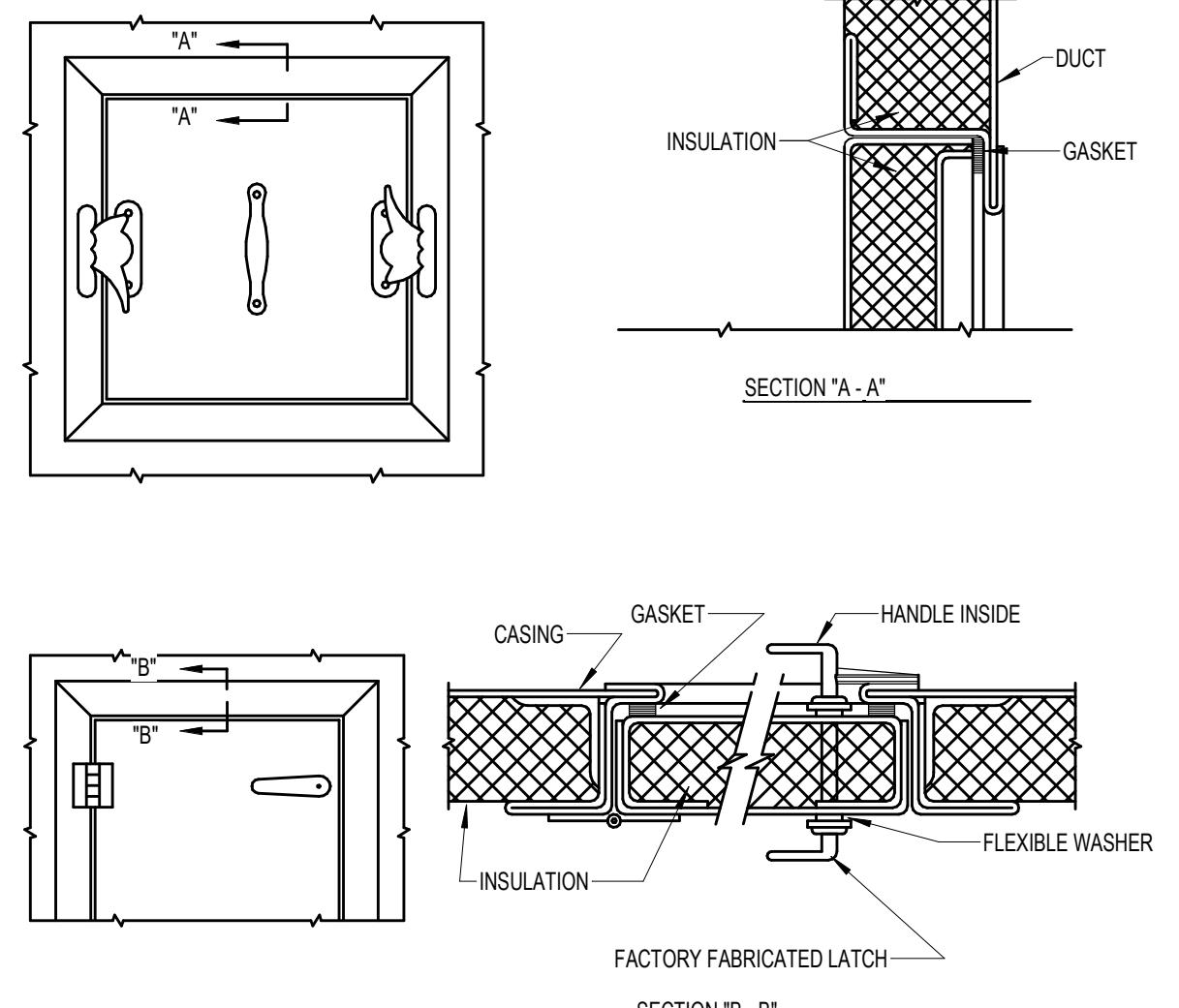
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**4 DETAIL - FLEX CONNECTION**

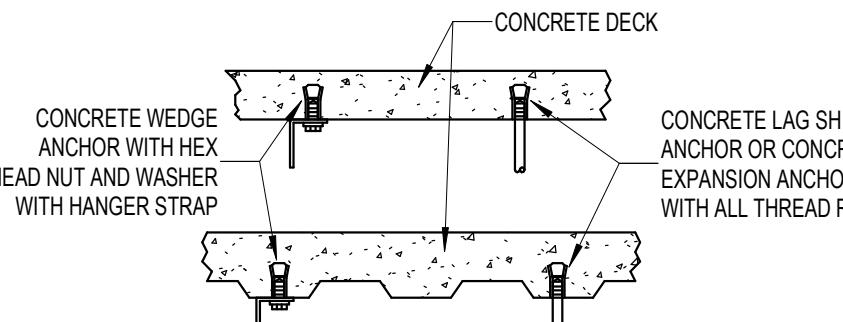
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**5 DETAIL - DUCT LINER INSTALLATION**

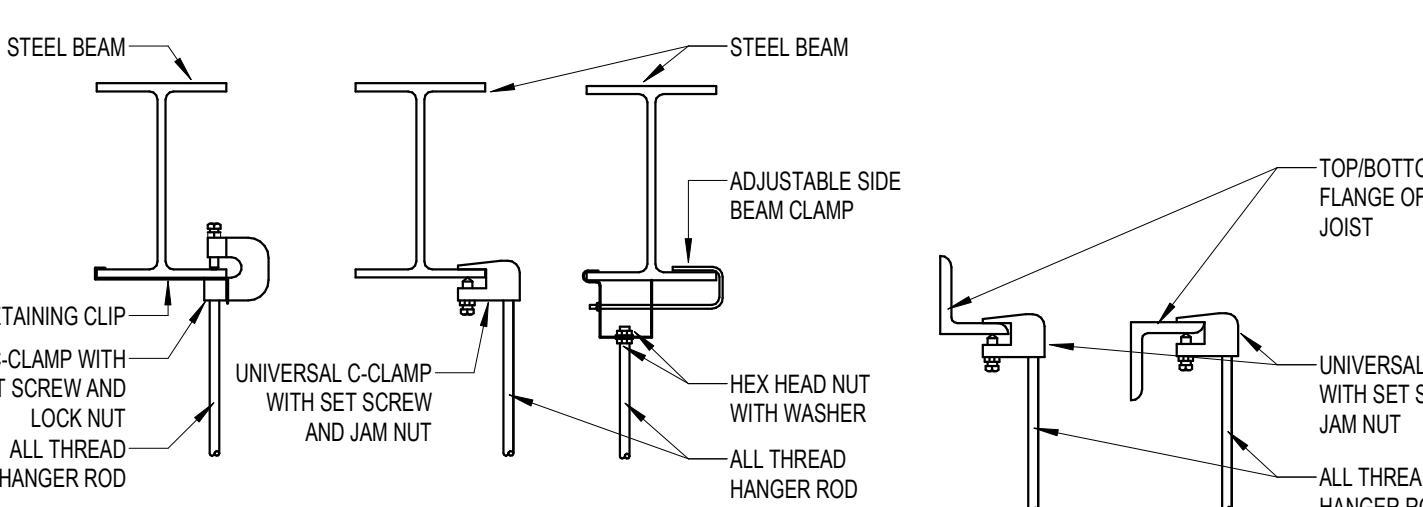
1/4" = 1'-0"

**6 DETAIL - ACCESS DOOR**

1/4" = 1'-0"



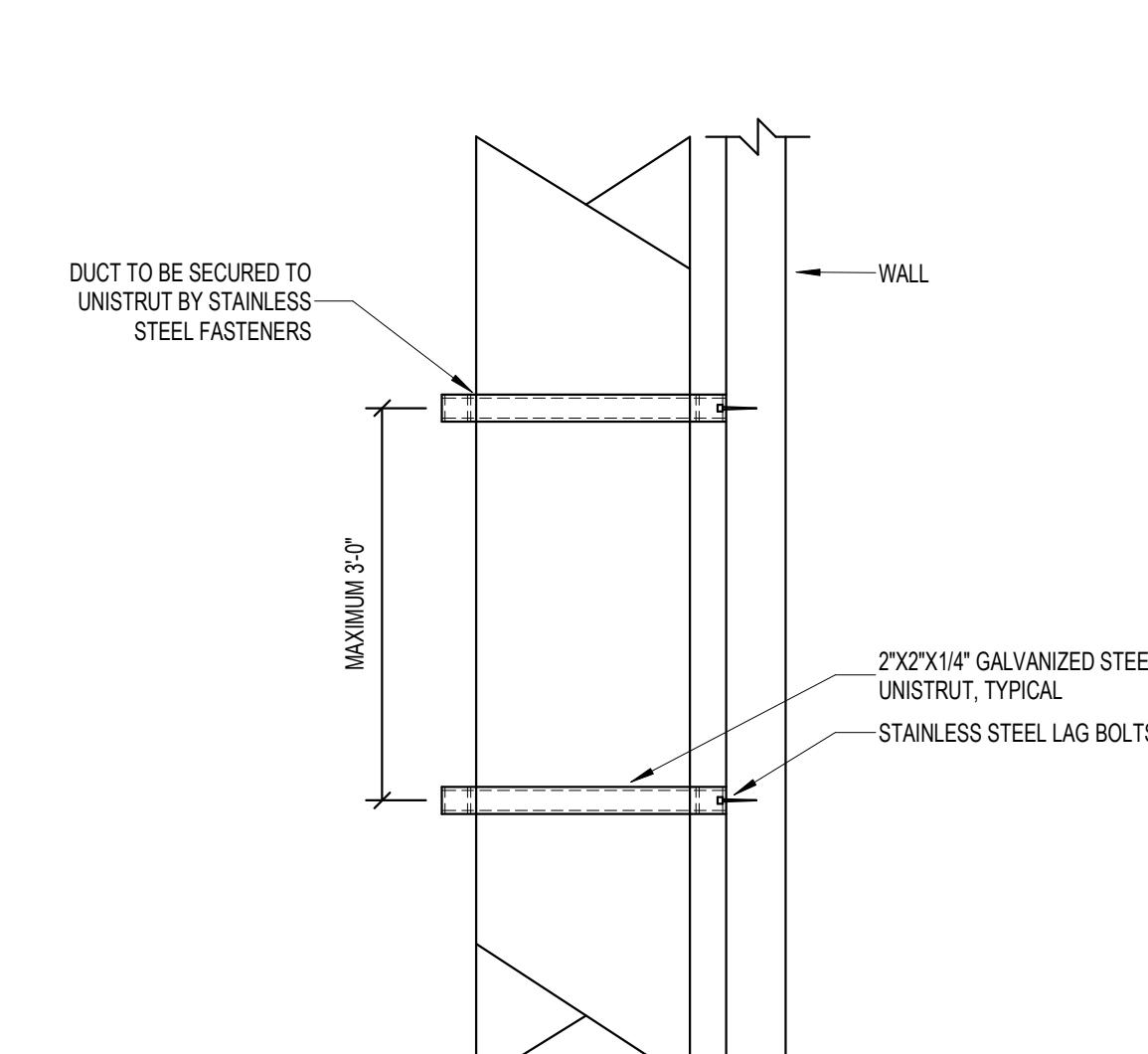
CONCRETE DECK ANCHORS



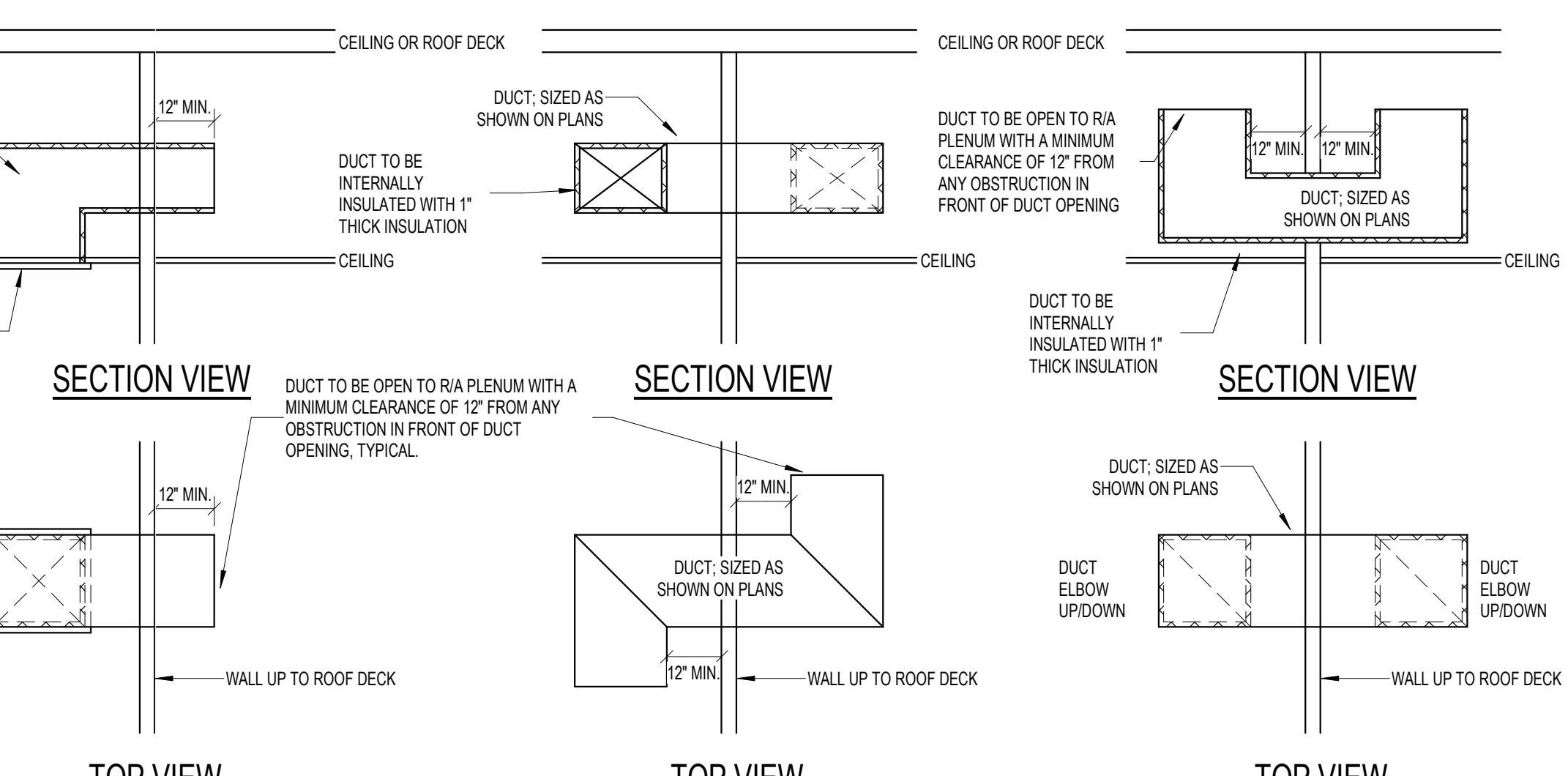
I-BEAM ANCHORS

STEEL BEAM
ADJUSTABLE SIDE BEAM CLAMP
TOP/BOTTOM FLANGE OF BAR JOIST
UNIVERSAL C-CLAMP WITH SET SCREW AND JAM NUT
HEX HEAD NUT WITH WASHER
ALL THREAD HANGER RODRETAINING CLIP
C-CLAMP WITH SET SCREW AND LOCK NUT
ALL THREAD HANGER RODUNIVERSAL C-CLAMP WITH SET SCREW AND JAM NUT
HEX HEAD NUT WITH WASHER
ALL THREAD HANGER ROD**7 DETAIL - DUCT/PIPE HANGER ANCHORS**

N.T.S.

**8 DETAIL - DUCT WALL SUPPORT**

N.T.S.

**9 DETAIL - RA TRANSFER ASSEMBLY**

N.T.S.



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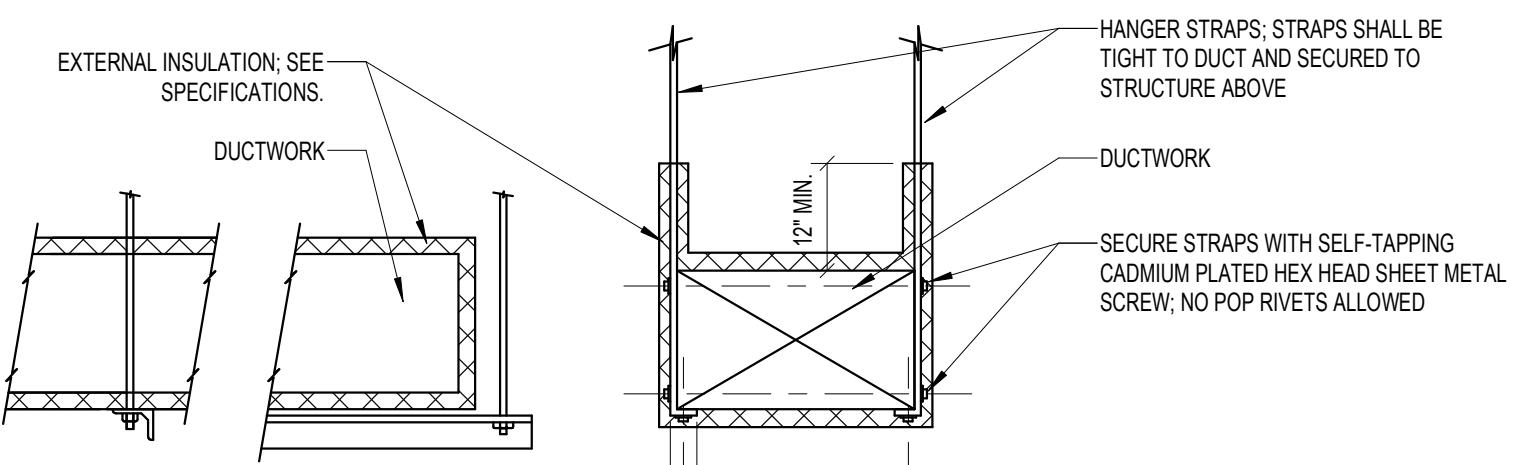
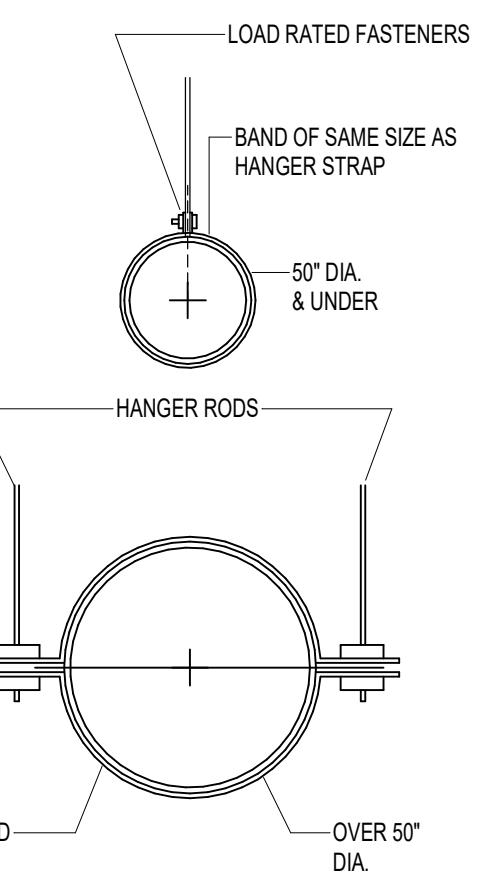
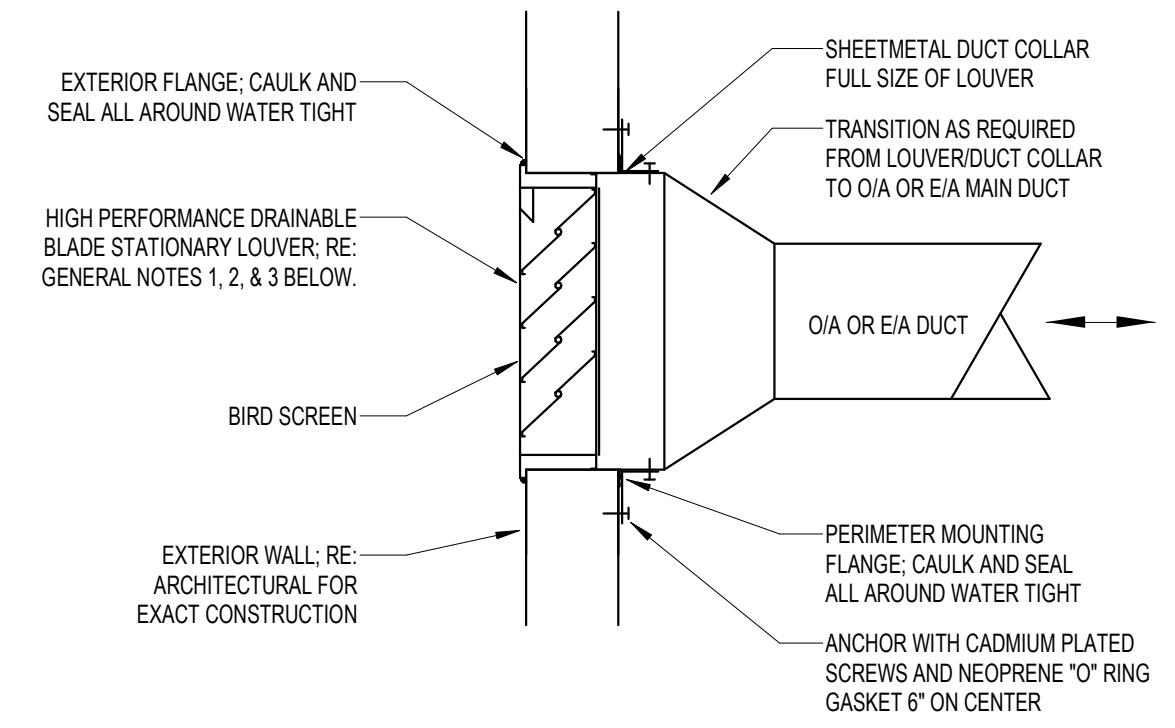
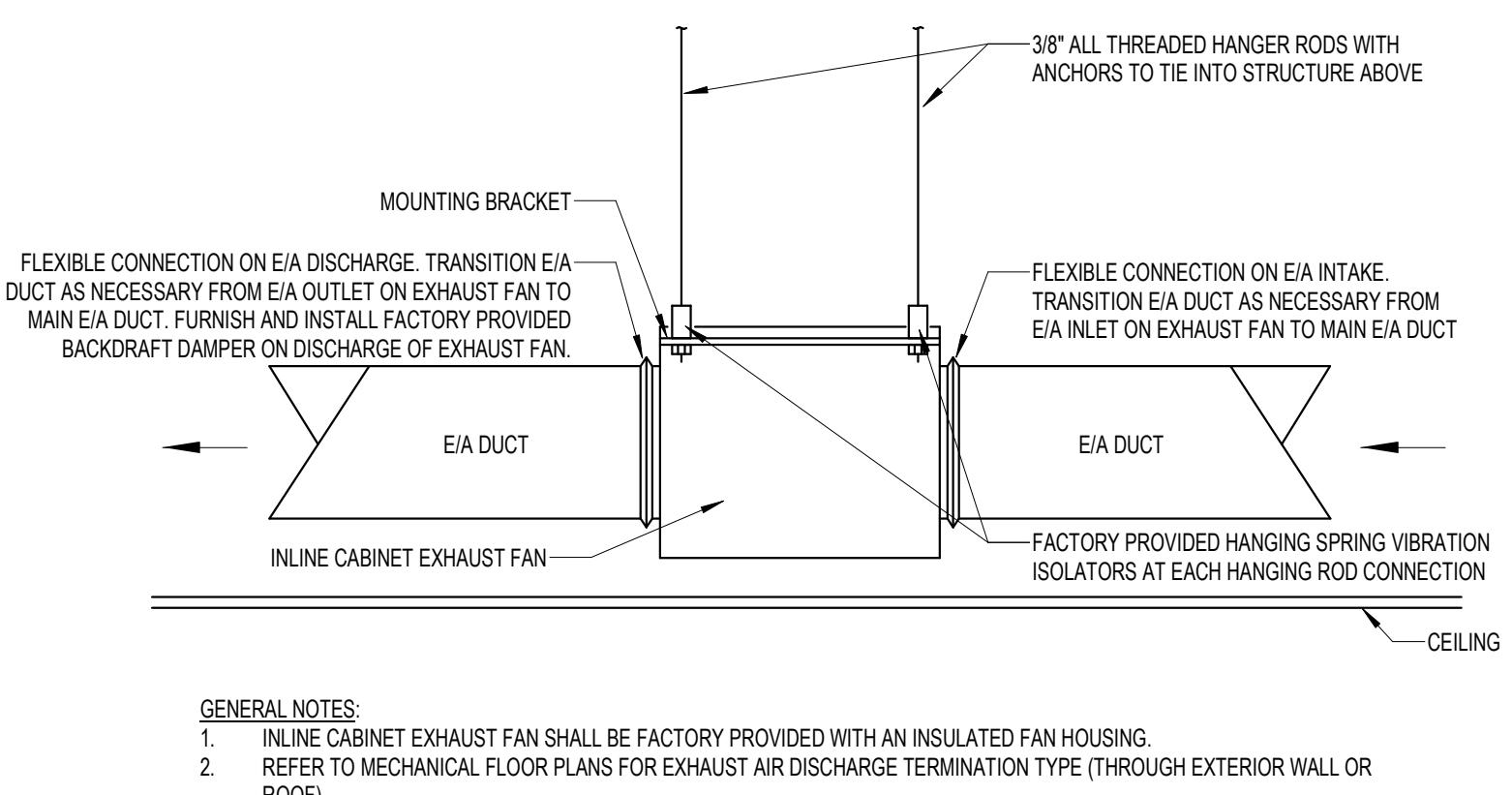
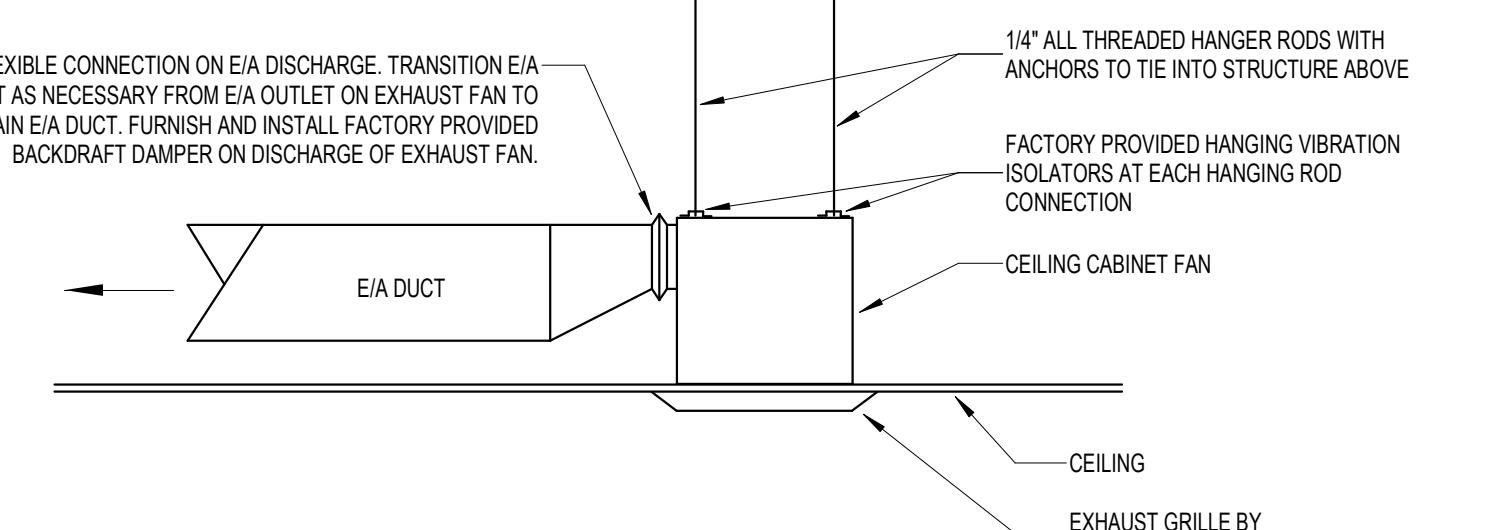
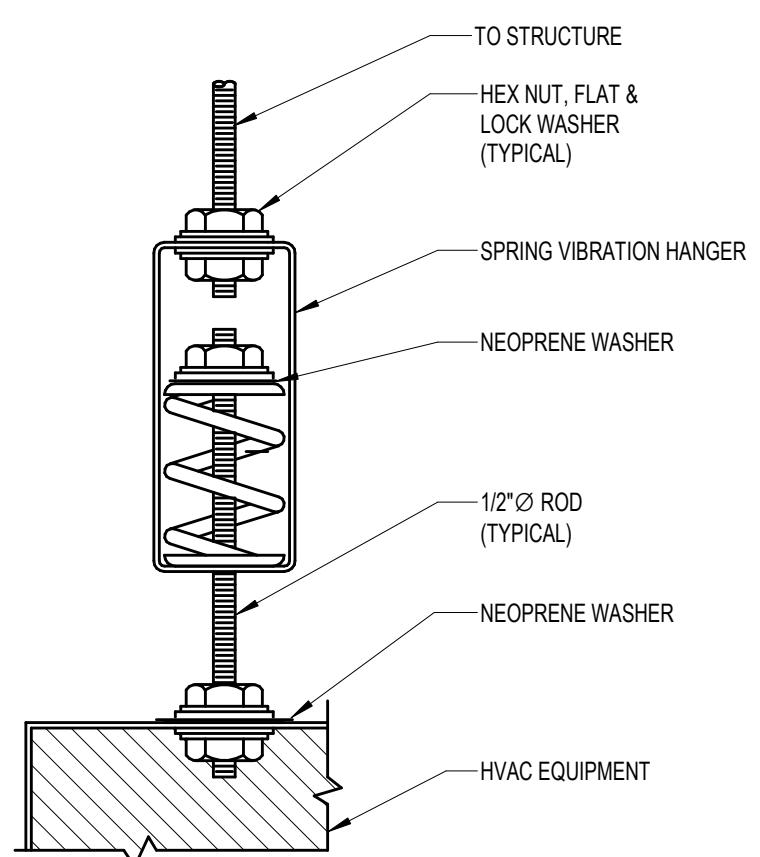
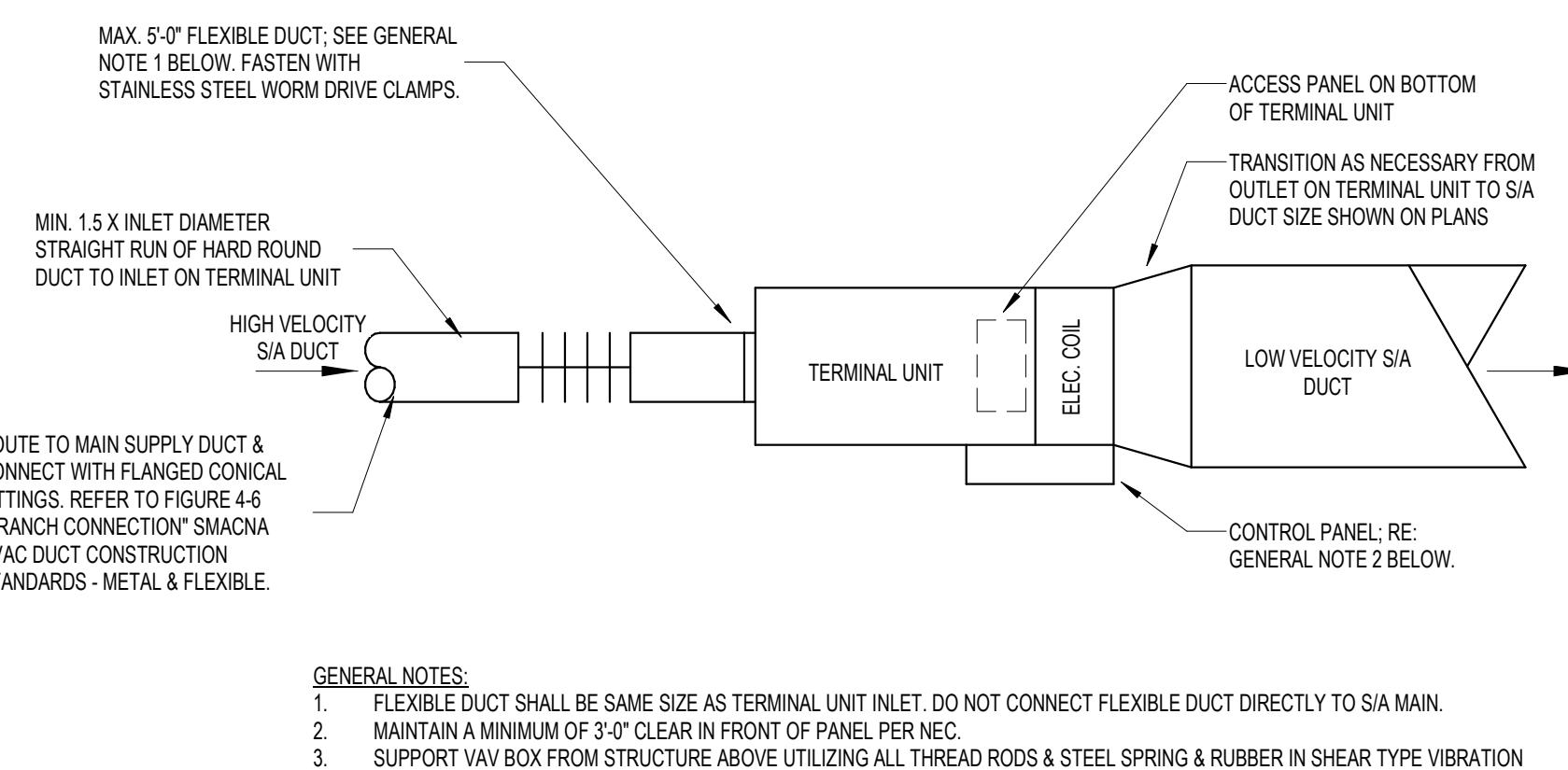
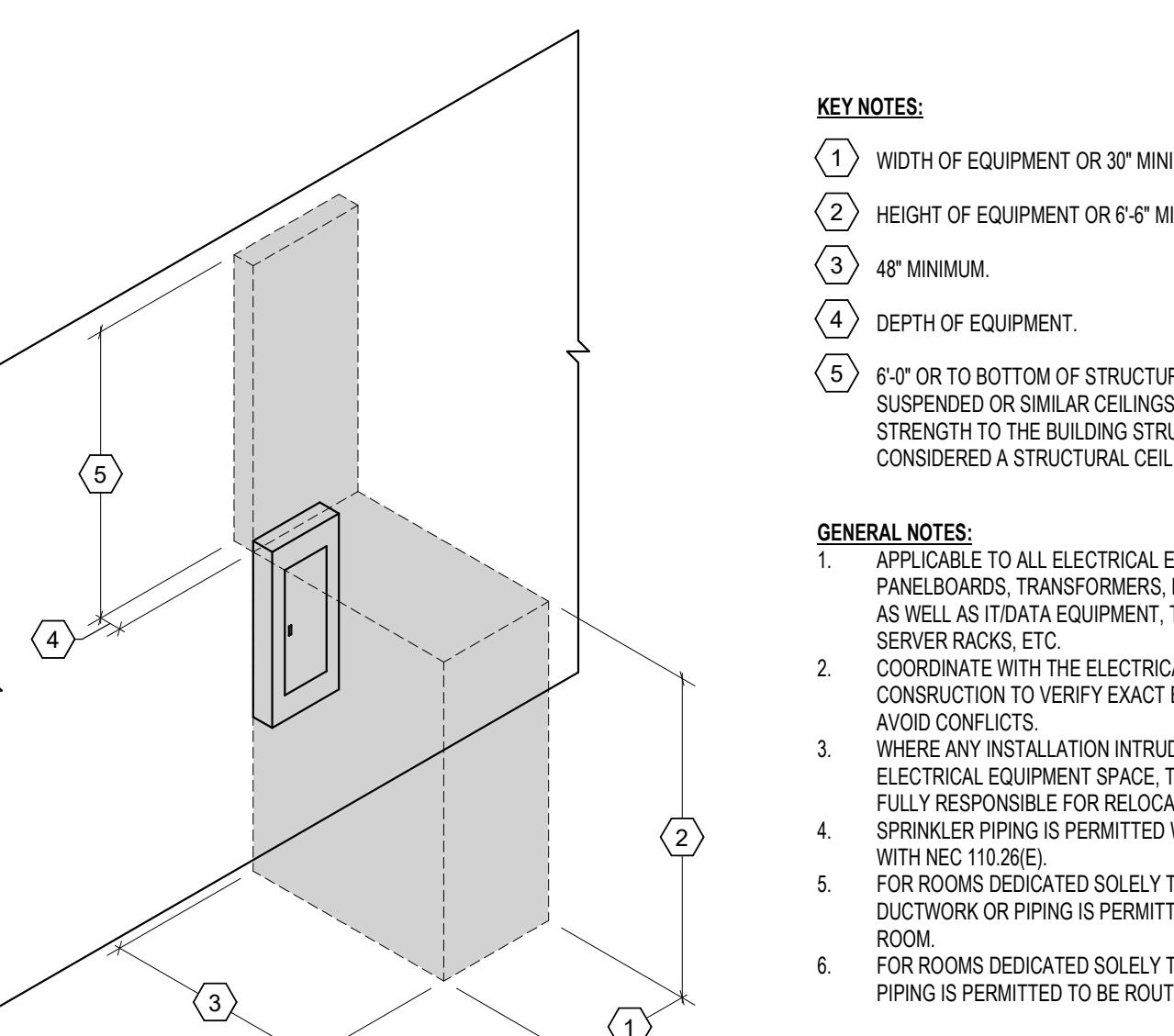
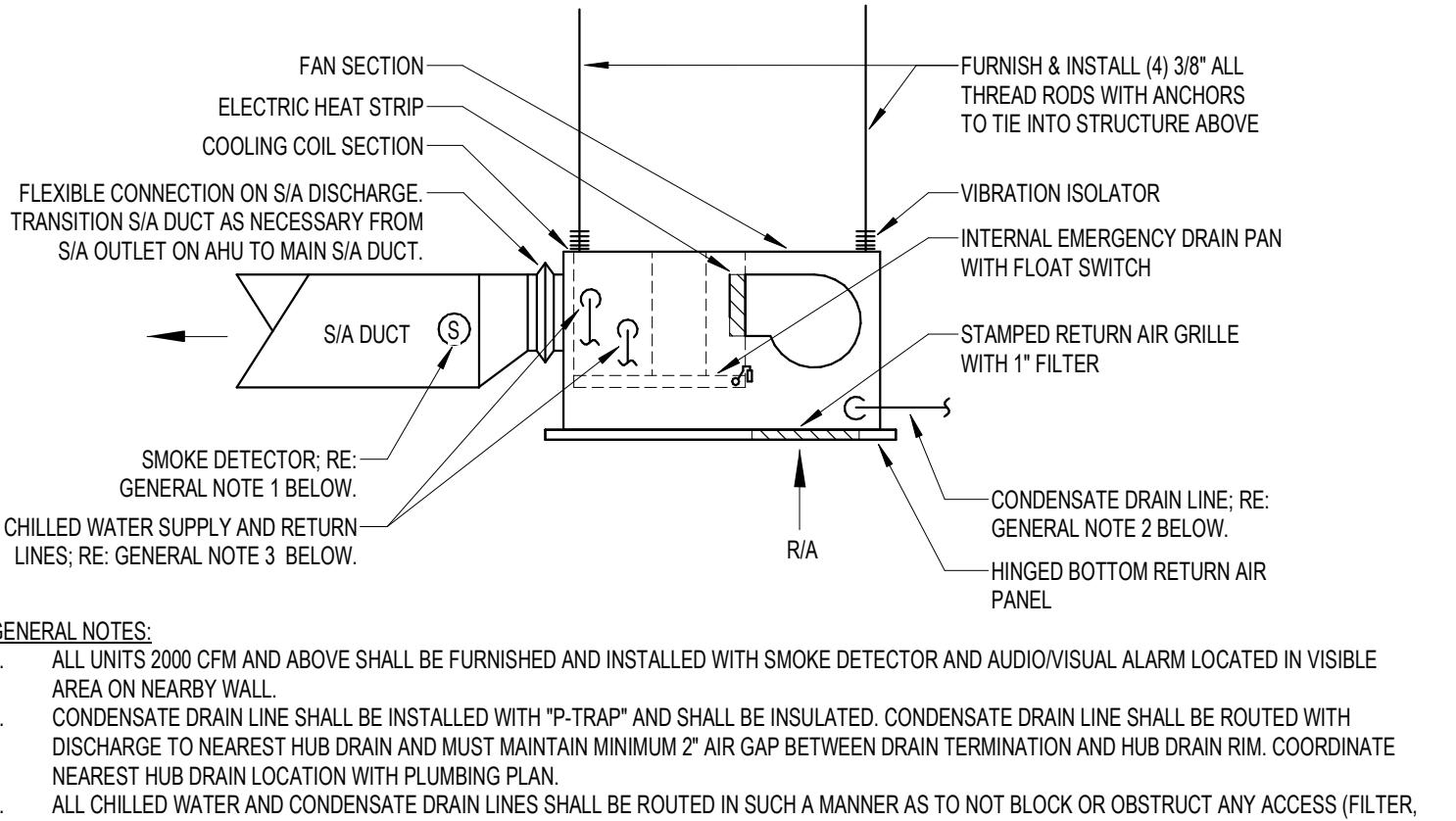
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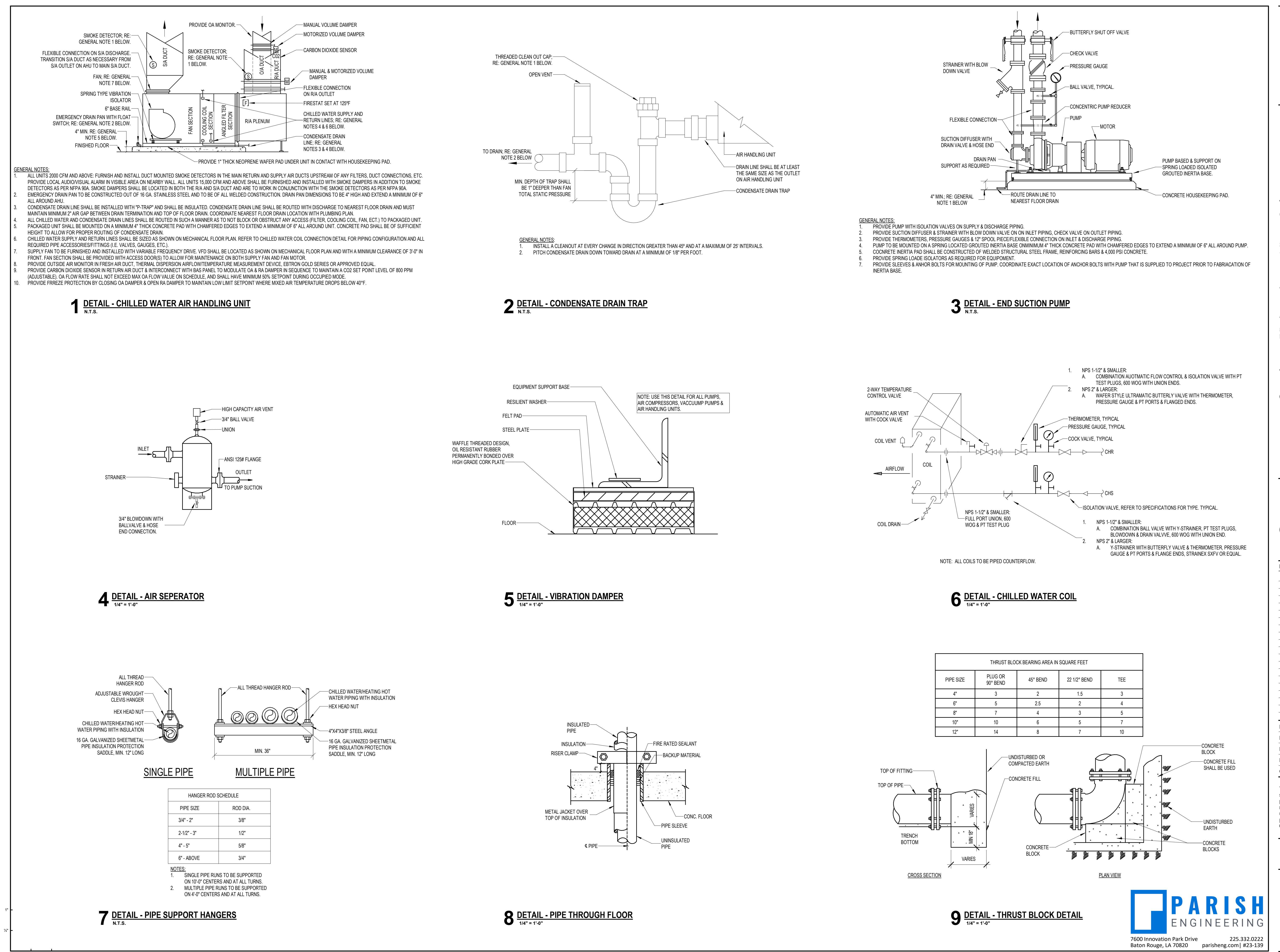
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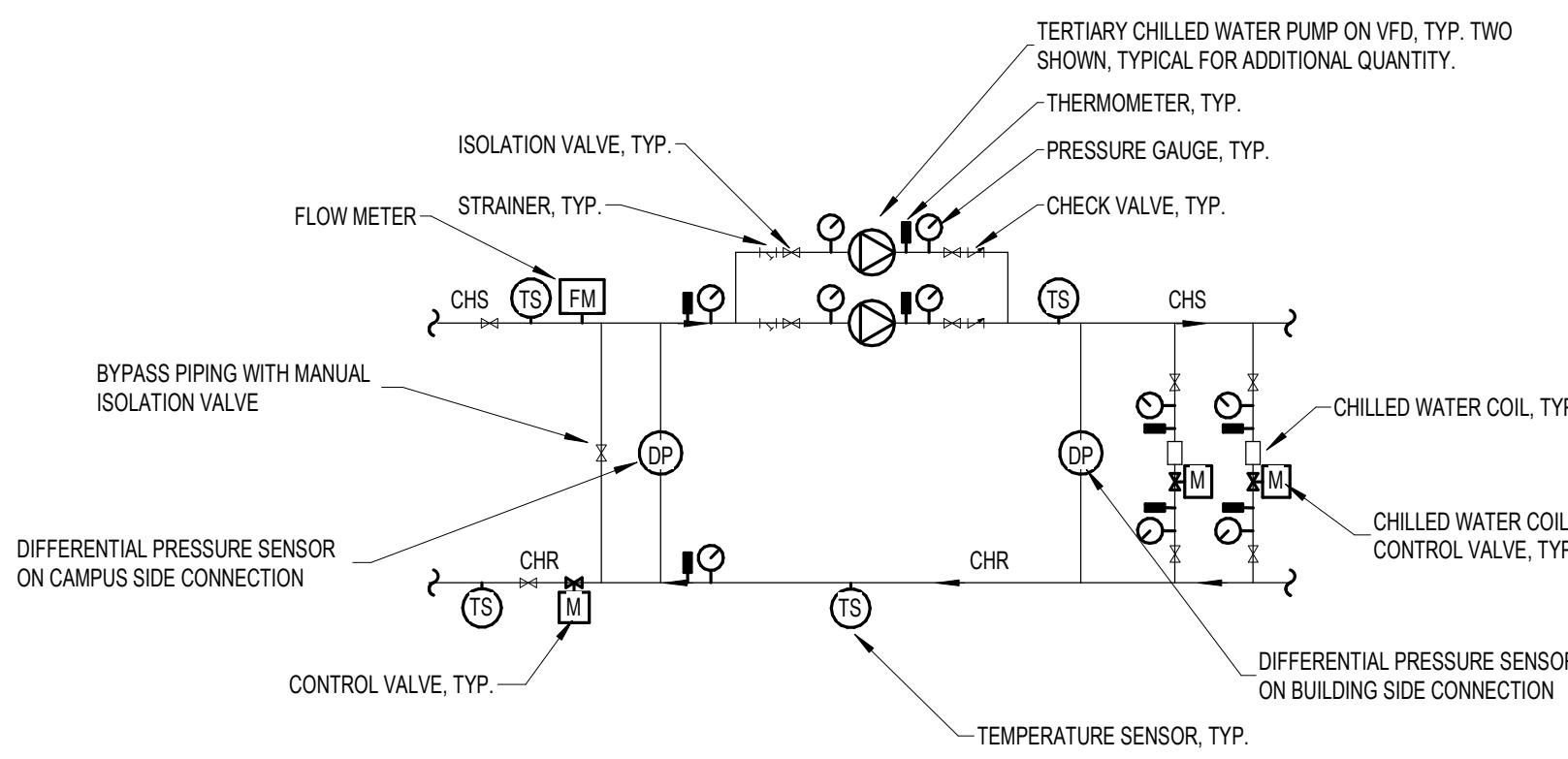
M502
MECHANICAL DETAILS

HANGER SIZES FOR RECTANGULAR DUCT			
MAX. SIZE	HANGER	HORIZONTAL SUPPORT ANGLE	MAX. SPACING
30"	1x18 GAGE STRAP	NONE REQUIRED	10'-0"
36"	1/4" ROUND ROD	1.5x1.5x1/8"	8'-0"
48"	1/4" ROUND ROD	2x2x1/8"	8'-0"
60"	5/16" ROUND ROD	2x2x1/8"	8'-0"
84"	3/8" ROUND ROD	2x2x1/8"	8'-0"

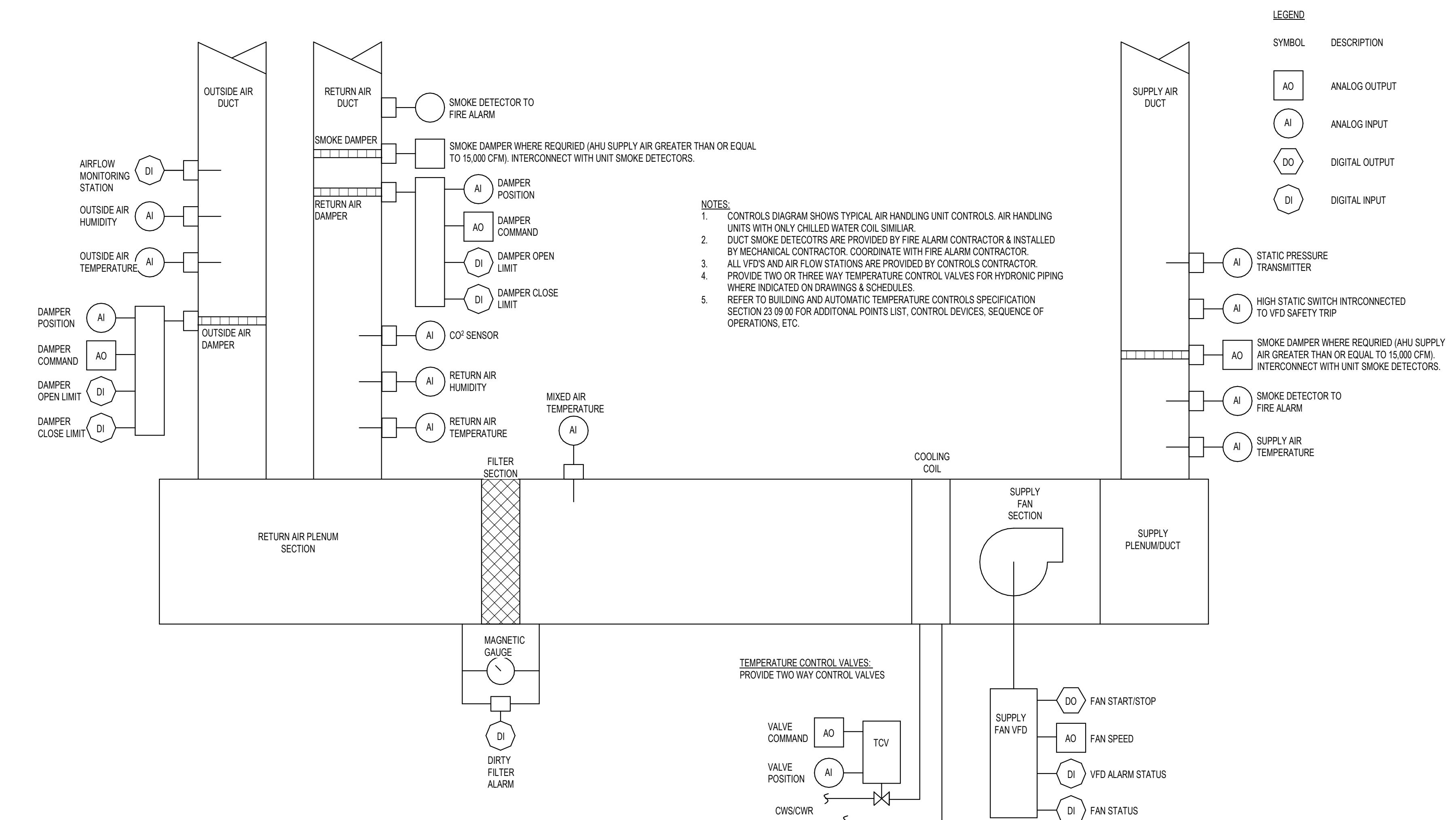
HANGER STRAPS OR RODS				
MAX. DUCT DIA.	HANGER	MAX. LOAD LBS.	MAX. SPACING FT.	
26"	ONE 1" X 22 GA STRAP	260	12	
36"	ONE 1" X 18 GA STRAP	420	12	
50"	ONE 1" X 16 GA STRAP	700	12	

**1 DETAIL - DUCT SUPPORT HANGERS**
N.T.S.**2 DETAIL - ROUND DUCT HANGER**
N.T.S.**3 DETAIL - EXTERIOR WALL LOUVER**
N.T.S.**4 DETAIL - INLINE CABINET EXHAUST FAN**
N.T.S.**5 DETAIL - CEILING CABINET EXHAUST FAN**
N.T.S.**6 DETAIL - SUSPENDED VIBRATION ISOLATOR**
N.T.S.**7 DETAIL - VAV BOX**
N.T.S.**8 DETAIL - DEDICATED ELECTRICAL EQUIPMENT SPACE COORDINATION**
N.T.S.**9 DETAIL - CABINET FAN COIL UNIT**
N.T.S.





1 DETAIL - TERTIARY CHILLED WATER PIPING DIAGRAM
N.T.S.



2 CONTROLS DIAGRAM - TYPICAL AIR HANDLING UNIT
1/8" = 1'-0"

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Southern University at New Orleans NURSING & ALLIED HEALTH BUILDING
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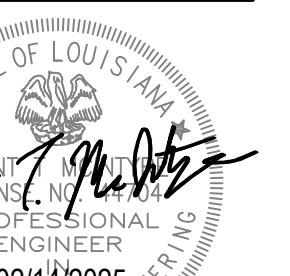
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SCHEDULE - AIR HANDLING UNITS - CHILLED WATER

MARK	SUPPLY FAN				CHILLED WATER COOLING COIL								ELECTRICAL SERVICE				MANUFACTURER / MODEL								
	AIRFLOW		MOTOR		AIRFLOW				WATER				VOLTS		PH	FREQ	FLA								
SA	OA	TOTAL SP	EXT SP	SIZE	QTY	RPM	TOT CAP	SENS CAP	EADB	EAWB	LADB	LAWB	MAX FACE VELOCITY	PD	FLOW	EWT	LWT	PD	VOLTS	PH	FREQ	FLA	WEIGHT		
AHU-1	12750 CFM	1500 CFM	4.89 in-wg	2.75 in-wg	20 hp	1	1200	407350.0 Btu/h	316460.0 Btu/h	76.5 °F	64.1 °F	52.9 °F	52.9 °F	500 FPM	0.70 in-wg	67.7 GPM	45 °F	57 °F	3.3 ft ² /h	480 V	3	60 Hz	27 A	4250 lb	CARRIER AERO 39MN SIZE 30T OR PRIOR APPROVED EQUAL
AHU-2	10150 CFM	1500 CFM	4.56 in-wg	2.25 in-wg	15 hp	1	1200	348890.0 Btu/h	262960.0 Btu/h	77.1 °F	64.7 °F	52.4 °F	52.4 °F	500 FPM	0.86 in-wg	58 GPM	45 °F	57 °F	2.4 ft ² /h	480 V	3	60 Hz	20.5 A	3250 lb	CARRIER AERO 39MN SIZE 22T OR PRIOR APPROVED EQUAL
AHU-3	19650 CFM	2250 CFM	5.01 in-wg	2.75 in-wg	30 hp	1	1200	626450.0 Btu/h	484280.0 Btu/h	76.4 °F	64.1 °F	52.9 °F	52.9 °F	500 FPM	0.81 in-wg	104.1 GPM	45 °F	57 °F	5.3 ft ² /h	480 V	3	60 Hz	38 A	5250 lb	CARRIER AERO 39MN SIZE 42T OR PRIOR APPROVED EQUAL
AHU-4	8725 CFM	800 CFM	4.67 in-wg	2.25 in-wg	15 hp	1	1800	247830.0 Btu/h	202570.0 Btu/h	75.9 °F	63.7 °F	53.8 °F	53.8 °F	500 FPM	0.98 in-wg	41.2 GPM	45 °F	57 °F	1.5 ft ² /h	480 V	3	60 Hz	17.7 A	2750 lb	CARRIER AERO 39MN SIZE 18T OR PRIOR APPROVED EQUAL

NOTES:

1. PROVIDE AHU'S VFD'S (MOUNTED ON WALL). FACTORY WIRED FOR SINGLE POINT ELECTRICAL SERVICE CONNECTION.
2. EXTERNAL STATIC PRESSURE LOSS DOES NOT INCLUDE DIRTY FILTER LOSS.
3. PROVIDE AUXILIARY DRAIN PAN WITH FLOAT SWITCH. AUXILIARY DRAIN PAN SHALL BE 4" TALL, 16 GAUGE 304 STAINLESS STEEL WITH WELDED SEAMS. FLOAT SWITCH TRIP SHALL CAUSE CHILLED WATER CONTROL VALVE TO FULLY CLOSE WHEN TRIPPED.
4. PROVIDE 2 RIGID, INSULATED COPPER FOR CONDENSATE DRAIN LINES. PROVIDE NIPPLE ON AUXILIARY DRAIN PAN. PROVIDE AUXILIARY DRAIN PAN DRAIN LINE WITH SHUT OFF VALVE (NORMALLY CLOSED). ROUTE AUXILIARY DRAIN LINE TO FLOOR DRAIN & TURN DOWN. COORDINATE EXACT LOCATION OF FLOOR DRAIN. RELOCATE EXISTING FLOOR DRAIN AS REQUIRED. NOTIFY MECHANICAL ENGINEER IF EXISTING FLOOR DRAIN LOCATION DOES NOT ALLOW FOR INSTALLATION OF NEW AHU'S & ASSOCIATED DRAIN LINES.
5. AHU'S SHALL HAVE INTERNAL STAINLESS STEEL DRAIN PANS FOR ALL COIL SECTION.
6. AHU'S SHALL HAVE STAINLESS STEEL DRAIN PANS FOR ALL COIL SECTION, 6" BASE RAIL BY EQUIPMENT MANUFACTURER, FILTER PRESSURE GAUGES (FACTORY INSTALLED), FACTORY FILTER RETENTION (7" ANGLE FILTER).
7. AHU'S SHALL HAVE DIRECT DRIVE PLenum FANS WITH FACTORY SUPPLIED SUPPLY AIR PLenum. OPENINGS FOR SUPPLY AIR DUCTS FROM FACTORY SUPPLIED PLenum SHALL BE BY UNIT MANUFACTURER CONCECT DIMENSIONS OF Duct HAVE BEEN FABRICATED. LOCATED LOCATIONS OF Duct CONNECTIONS SHALL BE COORDINATE WITH EQUIPMENT MANUFACTURER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AS TO MAINTAIN ALL AIR LEAKAGE RATES, THERMAL PERFORMANCE, ETC.
8. PROVIDE 4 HIGH CONCRETE HOUSEKEEPING PAD WITH CHAMFERED EDGES (REINFORCED WITH RODS) 6' BEYOND THE EDGE OF THE UNIT FOOTPRINT ON ALL SIDES.
9. PROVIDE SMOKE DETECTOR IN SUPPLY AIR & RETURN AIR Duct IF UNIT EXCEEDS 2,000 CFM. INTERCONNECT SMOKE DETECTORS WITH FIRE ALARM. UNIT TO BE ENERGIZED WHEN SMOKE IS DETECTED.
10. PROVIDE SMOKE DAMPERS IN SUPPLY AIR & RETURN AIR Duct IF UNIT EXCEEDS 15,000 CFM. SMOKE DAMPERS SHALL CLOSE WHEN SMOKE IS DETECTED.
11. COORDINATE INTERFACING HVAC SMOKE/FIRE DETECTORS FOR HVAC SYSTEM SHUTDOWNS REQUIRED BY CODE.
12. PROVIDE MOTORIZED DAMPERS IN RETURN & OUTSIDE AIR Duct. PROVIDE 120-160 ELECTRICAL SERVICE. COORDINATE WITH ELECTRICAL CONTRACTOR.
13. PROVIDE CO₂ SENSOR IN RETURN AIR Duct TO CONTROL MOTORIZED DAMPER FOR DEMAND CONTROL VENTILATION. CO₂ SETPOINT SHALL BE 800 PPM. OUTSIDE AIR DAMPER SHALL OPEN TO FULL POSITION WHEN AT OR ABOVE SETPOINT. REFER TO CONTROLS SPECIFICATIONS FOR EXACT SEQUENCE OF OPERATION OF MOTORIZED DAMPERS.

SCHEDULE - VAV TERMINAL UNITS - ELECTRIC HEAT

GENERAL	AIRFLOW				ELECTRICAL SERVICE				MANUFACTURER / MODEL	
	MARK	INLET DIA	MIN CFM SETPOINT	COOLING AIRFLOW	EADB	LADB	VOLTS	PH	FREQ	
AHU-1										
VAV-1.1	14"	40%	1750 CFM	700 CFM	55 °F	90 °F	7 kW	277 V	1	60 Hz
VAV-1.2	16"	40%	1975 CFM	900 CFM	55 °F	90 °F	7.5 kW	277 V	1	60 Hz
VAV-1.3	8"	50%	425 CFM	213 CFM	55 °F	90 °F	2 kW	277 V	1	60 Hz
VAV-1.4	14"	40%	1450 CFM	580 CFM	55 °F	90 °F	5.5 kW	277 V	1	60 Hz
VAV-1.5	8"	50%	500 CFM	250 CFM	55 °F	90 °F	2.5 kW	277 V	1	60 Hz
VAV-1.6	14"	40%	1475 CFM	590 CFM	55 °F	90 °F	5.5 kW	277 V	1	60 Hz
VAV-1.7	10"	40%	950 CFM	380 CFM	55 °F	90 °F	3.5 kW	277 V	1	60 Hz
VAV-1.8	8"	50%	625 CFM	313 CFM	55 °F	90 °F	3 kW	277 V	1	60 Hz
VAV-1.9	16"	40%	2400 CFM	960 CFM	55 °F	90 °F	9 kW	277 V	1	60 Hz
VAV-1.10	12"	40%	1200 CFM	480 CFM	55 °F	90 °F	5 kW	277 V	1	60 Hz
AHU-2										
VAV-2.1	14"	40%	1650 CFM	660 CFM	55 °F	90 °F	6.5 kW	277 V	1	60 Hz
VAV-2.2	14"	40%	1650 CFM	660 CFM	55 °F	90 °F	6.5 kW	277 V	1	60 Hz
VAV-2.3	8"	50%	575 CFM	288 CFM	55 °F	90 °F	3 kW	277 V	1	60 Hz
VAV-2.4	6"	50%	300 CFM	0 CFM	55 °F	90 °F	0 kW	120 V	1	60 Hz
VAV-2.5a	8"	50%	500 CFM	250 CFM	55 °F	90 °F	2.5 kW	277 V	1	60 Hz
VAV-2.5b	12"	40%	1300 CFM	520 CFM	55 °F	90 °F	5 kW	277 V	1	60 Hz
VAV-2.6	10"	40%	750 CFM	300 CFM	55 °F	90 °F	3 kW	277 V	1	60 Hz
VAV-2.7	10"	40%	825 CFM	330 CFM	55 °F	90 °F	3.5 kW	277 V	1	60 Hz
VAV-2.8	10"	40%	1000 CFM	400 CFM	55 °F	90 °F	4 kW	277 V	1	60 Hz
VAV-2.9	14"	40%	1500 CFM	600 CFM	55 °F	90 °F	6 kW	277 V	1	60 Hz
AHU-3										
VAV-3.1	16"	40%	1850 CFM	740 CFM	55 °F	90 °F	7 kW	277 V	1	60 Hz
VAV-3.2	16"	40%	1850 CFM	740 CFM	55 °F	90 °F	7 kW	277 V	1	60 Hz
VAV-3.3	10"	40%	675 CFM	350 CFM	55 °F	90 °F	3.5 kW	277 V	1	60 Hz
VAV-3.4	10"	40%	1000 CFM	400 CFM	55 °F	90 °F	4 kW	277 V	1	60 Hz
VAV-3.5	8"	50%	550 CFM	275 CFM	55 °F	90 °F	3 kW	277 V	1	60 Hz
VAV-3.6	16"	40%	1700 CFM	680 CFM	55 °F	90 °F	6.5 kW	277 V	1	60 Hz
VAV-3.7	10"	40%	1000 CFM	400 CFM	55 °F	90 °F	4 kW	277 V	1	60 Hz
VAV-3.8	12"	40%	1225 CFM	490 CFM	55 °F	90 °F	5 kW	277 V	1	60 Hz
VAV-3.9	12"	40%	1225 CFM	490 CFM	55 °F	90 °F	5 kW	277 V	1	60 Hz
VAV-3.10	8"	40%	750 CFM	300 CFM	55 °F	90 °F	3 kW	277 V	1	60 Hz
VAV-3.11	16"	40%	2300 CFM	920 CFM	55 °F	90 °F	9 kW	277 V	1	60 Hz
VAV-3.12	8"	50%	600 CFM	300 CFM	55 °F	90 °F	3 kW	277 V	1	60 Hz
VAV-3.13	10"	40%	875 CFM	350 CFM	55 °F	90 °F	3.5 kW	277 V	1	60 Hz

SCHEDULE - FANS														
MARK	LOCATION	TYPE	FAN			FAN MOTOR			CONTROLS			MANUFACTURER / MODEL		
			AIRFLOW	MIN EXT ESP	MAX SONES	RPM	DRIVE	POWER	VOLTS	PH	FREQ	WEIGHT		
EF-1	HVAC 118	INLINE FAN WITH INLINE DISCHARGE	825 CFM	0.35 in-wg	2.2	1038	DIRECT	0.5 hp	277 V	1	60 Hz	150 lb	INTERCONNECTED TO LIGHTING CONTROLS IN ROOMS SERVED	GREENHECK SQ-120-VG OR PRIOR APPROVED EQUAL
EF-2	MEN 254	INLINE FAN WITH INLINE DISCHARGE	600 CFM	0.35 in-wg	2.7	900	DIRECT	0.5 hp	277 V	1	60 Hz	150 lb	INTERCONNECTED TO LIGHTING CONTROLS IN ROOMS SERVED	GREENHECK SQ-120-VG OR PRIOR APPROVED EQUAL
EF-3	H.H.R.207	CABINET EXHAUST	75 CFM	0.25 in-wg	0.4	870	DIRECT	17 W	120 V	1	60 Hz	15 lb	OCCUPANCY SENSOR ON FACE OF EXHAUST FAN	GREENHECK SP-A90 OR PRIOR APPROVED EQUAL
EF-4	DEAN RR 235	CABINET EXHAUST	75 CFM	0.25 in-wg	0.4	870	DIRECT	17 W	120 V	1	60 Hz	15 lb	OCCUPANCY SENSOR ON FACE OF EXHAUST FAN	GREENHECK SP-A90 OR PRIOR APPROVED EQUAL
EF-5	JAN 236	CABINET EXHAUST	75 CFM	0.25 in-wg	0.4	870	DIRECT	17 W	120 V	1	60 Hz	15 lb	SEPARATE TOGGLE SWITCH ON WALL	GREENHECK SP-A90 OR PRIOR APPROVED EQUAL

NOTES:

1. PROVIDE INSULATED FAN HOUSING.
2. PROVIDE FACTORY MOUNTED AND WIRED SPEED CONTROLLERS FOR ALL DIRECT DRIVE FANS FOR AIR BALANCING.
3. PROVIDE BACKDRAFT DAMPERS FOR ALL RESTROOM EXHAUST FANS.
4. PROVIDE INTEGRAL DISCONNECTING MEANS.
5. PROVIDE MOTORS WITH BUILT-IN THERMAL OVERLOAD PROTECTION FOR ALL FANS.
6. ALL EXHAUST AND SUPPLY FANS SHALL BE AMCA RATED FOR BOTH AIR AND SOUND.
7. PROVIDE FACTORY FINISHES ON ALL SURFACE EXPOSED TO VIEW.

SCHEDULE - AIR DEVICES

MARK	SERVICE	GRILLE	DIFFUSER	SLOT	CEILING	WALL	DAMPER	DUCT	DESCRIPTION			FACE SIZE	TYPE	SIZE	MATERIAL	FINISH	MANUFACTURER / MODEL
									NECK								
SA	SUPPLY	X	X						SQUARE PLAQUE DIFFUSER	12 X 12	ROUND	6	ALUMINUM	BAKED ENAMEL	PRICE ASPD OR PRIOR APPROVED EQUAL		
SB	SUPPLY	X	X						SQUARE PLAQUE DIFFUSER	24 X 24	ROUND	8	ALUMINUM	BAKED ENAMEL	PRICE ASPD OR PRIOR APPROVED EQUAL		
SC	SUPPLY	X	X						SQUARE PLAQUE DIFFUSER	24 X 24	ROUND	10	ALUMINUM	BAKED ENAMEL	PRICE ASPD OR PRIOR APPROVED EQUAL		
SD	SUPPLY	X	X						SQUARE PLAQUE DIFFUSER	24 X 24	ROUND	12	ALUMINUM	BAKED ENAMEL	PRICE ASPD OR PRIOR APPROVED EQUAL		
SE	SUPPLY	X	X	X					TWO (2) 1" SLOT, 48" LONG LINEAR SLOT DIFFUSER WITH FACTORY SLOPED PLENUM	-	ROUND	8	ALUMINUM	BAKED ENAMEL	PRICE SDS100 WITH SDA PLENUM OR PRIOR APPROVED EQUAL		
SF	SUPPLY	X	X	X					TWO (2) 1" SLOT, 60" LONG LINEAR SLOT DIFFUSER WITH FACTORY SLOPED PLENUM	-	ROUND	8	ALUMINUM	BAKED ENAMEL	PRICE SDS100 WITH SDA PLENUM OR PRIOR APPROVED EQUAL		
SG	SUPPLY	X	X	X					THREE (3) 1" SLOT, 60" LONG LINEAR SLOT DIFFUSER WITH FACTORY SLOPED PLENUM	-	ROUND	10	ALUMINUM	BAKED ENAMEL	PRICE SDS100 WITH SDA PLENUM OR PRIOR APPROVED EQUAL		
SH	SUPPLY	X	X	X					48" LINEAR SLOT DIFFUSER WITH (3) 1-1/2" SLOTS	-	ROUND	10	ALUMINUM	BAKED ENAMEL	PRICE SDS100 WITH SDA PLENUM OR PRIOR APPROVED EQUAL		
SI	SUPPLY								ROUND NOZZLE DIFFUSER WITH 60° ADJUSTABLE CORE	12-1/4	ROUND	10	ALUMINUM	BAKED ENAMEL	PRICE AND OR PRIOR APPROVED EQUAL		
SJ	SUPPLY	X	X	X					60° LINEAR SLOT DIFFUSER WITH (1) 1-1/2" SLOT	-	ROUND	6	ALUMINUM	BAKED ENAMEL	PRICE SDS150 WITH SDA PLENUM OR PRIOR APPROVED EQUAL		
SK	SUPPLY	X	X	X					48" LINEAR SLOT DIFFUSER WITH (1) 1-1/2" SLOT	-	ROUND	6	ALUMINUM	BAKED ENAMEL	PRICE SDS150 WITH SDA PLENUM OR PRIOR APPROVED EQUAL		
RA	RETURN	X							LOUVER FACE WITH 3/4" BLADE SPACING	24 X 24	RECT	24 X 24	ALUMINUM	BAKED ENAMEL	PRICE 630 OR PRIOR APPROVED EQUAL		
RB	RETURN	X		X					LOUVER FACE WITH 3/4" BLADE SPACING	24 X 48	RECT	24 X 48	ALUMINUM	BAKED ENAMEL	PRICE 630 OR PRIOR APPROVED EQUAL		
RC	RETURN								ROUND NOZZLE DIFFUSER WITH OPEN CORE	12-1/4	ROUND	10	ALUMINUM	BAKED ENAMEL	PRICE ANF OR PRIOR APPROVED EQUAL		
RD	RETURN	X	X						48" LINEAR SLOT DIFFUSER WITH (2) 1" SLOTS	-	BAFFLE	-	ALUMINUM	BAKED ENAMEL	PRICE SDR100 WITH RBL RETURN BAFFLE OR PRIOR APPROVED EQUAL		
RE	RETURN								60° LINEAR SLOT DIFFUSER WITH (2) 1" SLOTS	-	BAFFLE	-	ALUMINUM	BAKED ENAMEL	PRICE SDR100 WITH RBL RETURN BAFFLE OR PRIOR APPROVED EQUAL		
RF	RETURN	X	X						134" LINEAR SLOT DIFFUSER WITH (3) 1" SLOTS	-	BAFFLE	-	ALUMINUM	BAKED ENAMEL	PRICE SDR100 WITH RBL RETURN BAFFLE OR PRIOR APPROVED EQUAL		
RG	RETURN	X	X						134" LINEAR SLOT DIFFUSER WITH (4) 1" SLOTS	-	BAFFLE	-	ALUMINUM	BAKED ENAMEL	PRICE SDR100 WITH RBL RETURN BAFFLE OR PRIOR APPROVED EQUAL		
RH	RETURN	X	X						60° LINEAR SLOT DIFFUSER WITH (3) 1" SLOTS	-	BAFFLE	-	ALUMINUM	BAKED ENAMEL	PRICE SDR100 WITH PBL PERFORATED LINEAR BAFFLE OR PRIOR APPROVED EQUAL		
EA	EXHAUST	X		X					12" x 1/2" x 1" EGGRATE WITH FACE OPERATED OPPOSED BLADE DAMPER	12 X 12	RECT	12 X 12	ALUMINUM	BAKED ENAMEL	PRICE 80 OR PRIOR APPROVED EQUAL		

NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPE. PROVIDE PLASTER FRAME FOR GYPSUM BOARD CEILING INSTALLATION.
2. ARCHITECT TO SELECT AIR DEVICE COLOR DURING SUBMITTAL REVIEW. FIGURE IN BID CUSTOM COLOR FOR AIR DEVICES. AIR DEVICES SHALL HAVE WHITE FINISH UNLESS COLOR OTHERWISE SPECIFIED SELECTED BY ARCHITECT DURING SUBMITTAL REVIEW. AIR DEVICE FINISH SHALL BE SUITABLE FOR PAINTING WITHOUT ANY ADDITIONAL PREPARATION.
3. MANUFACTURERS AND MODEL NUMBERS LISTED REPRESENT BASIS OF DESIGN AND QUALITY OF EQUIPMENT TO BE INSTALLED.
4. FOR BIDDING, FIGURE SQUARE TO ROUND TRANSITIONS FOR ALL SQUARE NECK GRILLES AND DIFFUSERS FOR CONNECTION TO ROUND BRANCH DUCTS.
5. RADIATED SOUND LEVELS:
 - A. SUBMIT PERFORMANCE DATA FOR AIR DEVICES AT MAXIMUM CFM'S LISTED.
 - B. AIR DEVICES SHALL HAVE A MAXIMUM 30 NC RADIATED SOUND LEVEL AT DESIGN FLOWS.
6. LINEAR SLOTS (SUPPLY APPLICATION):
 - A. PROVIDE WITH FACTORY INSTALLED INTERNALLY LINED PLENUMS WITH SLOPED SHOULDERS ON REAR.
 - B. PROVIDE & FIGURE IN BID MID IN CONCEALED FRAME FOR ALL LINEAR SLOTS INSTALLED WITHIN GYPSUM BOARD CEILINGS.
 - C. MOUNT ALL LINEAR SLOT DIFFUSERS IN LAY IN CEILING WITH CONCEALED FASTENERS.
7. LINEAR SLOTS (RETURN APPLICATION):
 - A. SAME AS LINEAR SLOT DIFFUSERS (SUPPLY APPLICATION) BUT WITH PERFORATED LINEAR BAFFLE IN LIEU OF PLENUM.
 - B. RETURN AIR GRILLES:
 - A. PROVIDE SOUND ATTENUATING BOOT ON REAR OF RETURN AIR GRILLES WITH 1" INTERNAL LINER PAINTED BLACK.
 - B. SOUND ATTENUATING BOOT HEIGHT AS REQUIRED FOR BRANCH / ELBOW CONNECTION.
 - C. PROVIDE OPEN EDGED INTERNAL LINED BRANCH DUCT, SIZE AS SHOWN ON DRAWINGS WHERE SIZE NOT INDICATED; PROVIDE 24" x 16" TAP.

SCHEDULE - LOUVERS

MARK	SERVICE	BPWP	SIZE		AIRFLOW	FREE AREA	STATIC	PRESSURE DROP	MATERIAL	MANUFACTURER / MODEL	
			W	H							
L-1	AHU-1 OA	1083 FPM	40"	30"	5 1/2"	1500 CFM	3.66 ft ²	410	0.06 in-wg	ALUMINUM	GREENHECK EHV-550 OR APPROVED EQUAL
L-2	AHU-2 OA	1083 FPM	40"	30"	5 1/2"	1500 CFM	3.66 ft ²	410	0.06 in-wg	ALUMINUM	GREENHECK EHV-550 OR APPROVED EQUAL
L-3	AHU-3 OA	1083 FPM	40"	36"	5 1/2"	250 CFM	4.63 ft ²	486	0.09 in-wg	ALUMINUM	GREENHECK EHV-550 OR APPROVED EQUAL
L-4	AHU-4 OA	1083 FPM	36"	18"	5 1/2"	675 CFM	1.6 ft ²	422	0.09 in-wg	ALUMINUM	GREENHECK EHV-550 OR APPROVED EQUAL
L-5	1F RR EA	1083 FPM	40"	36"	5 1/2"	825 CFM	4.63 ft ²	178	0.01 in-wg	ALUMINUM	GREENHECK EHV-550 OR APPROVED EQUAL
L-6	2F RR EA	1083 FPM	30"	16"	5 1/2"	675 CFM	1.32 ft ²	511	0.10 in-wg	ALUMINUM	GREENHECK EHV-550 OR APPROVED EQUAL
L-7	DEAN RR EA	1083 FPM	12"	12"	5 1/2"	75 CFM	0.18 ft ²	417	0.07 in-wg	ALUMINUM	GREENHECK EHV-550 OR APPROVED EQUAL