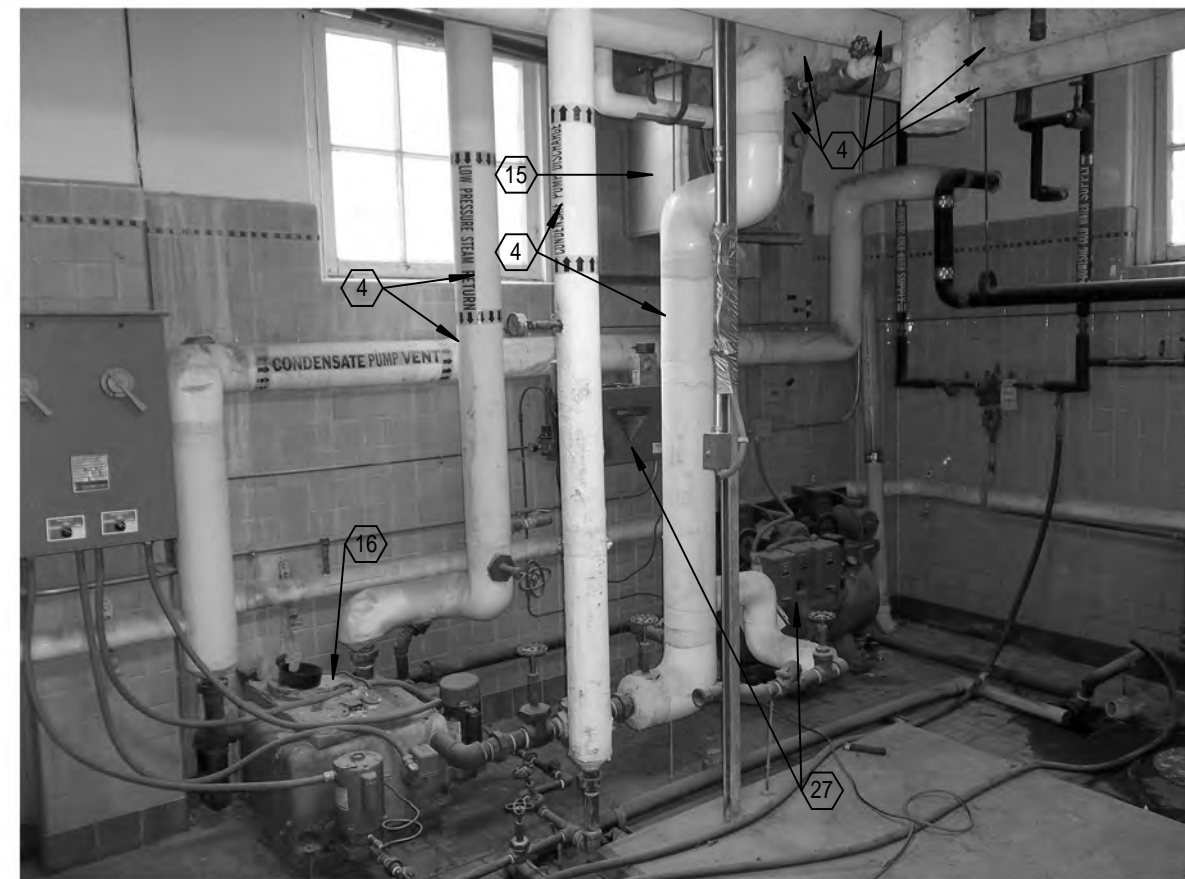


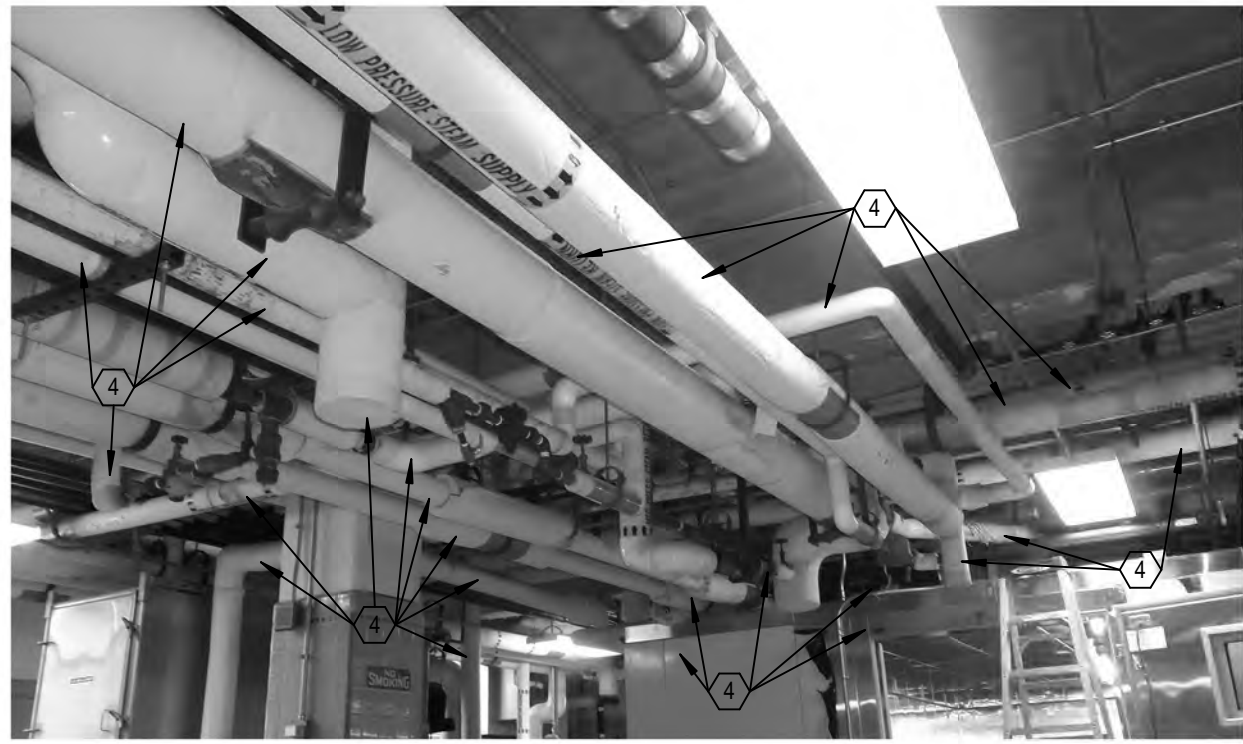
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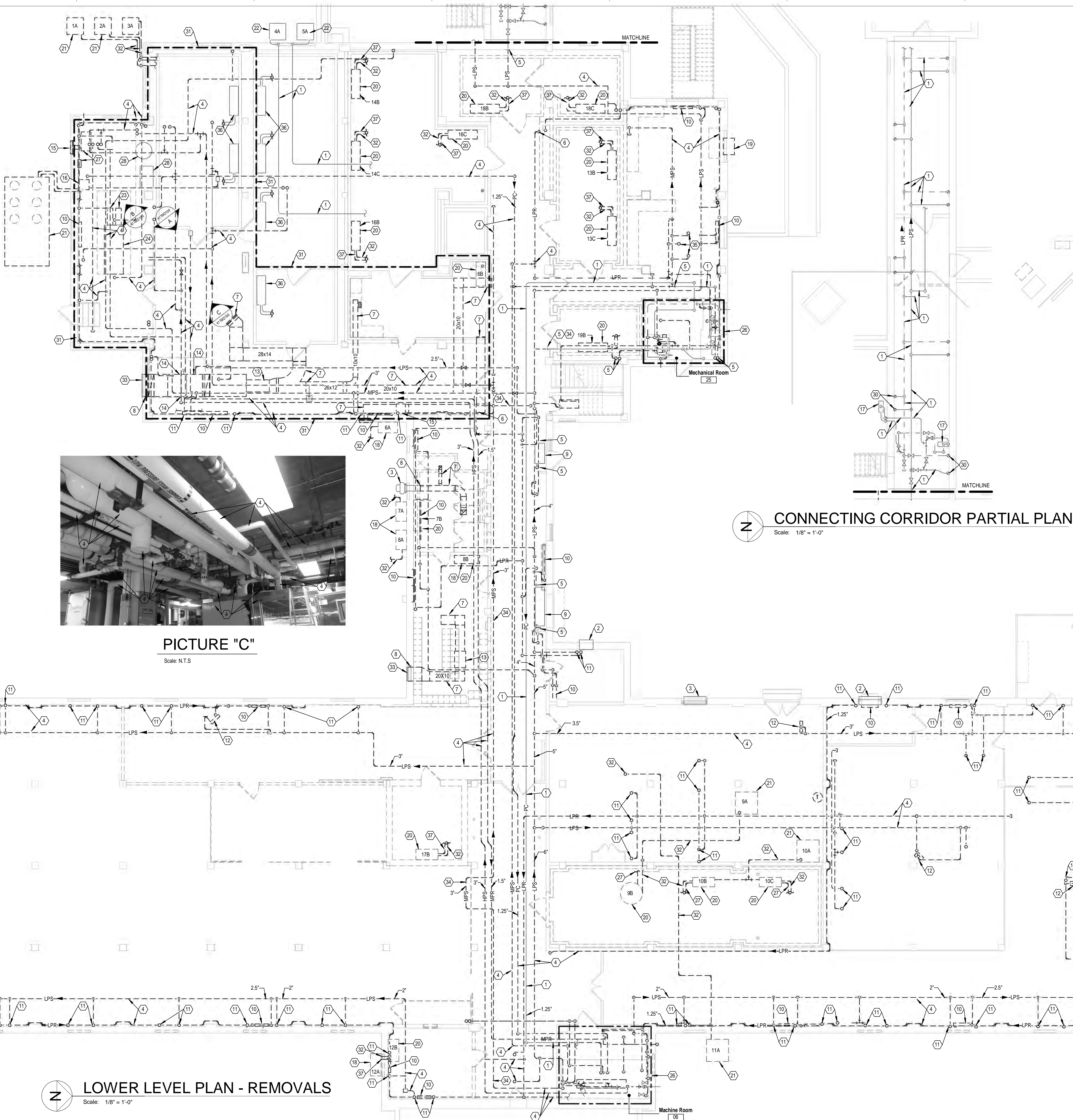
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Scale: N.T.S



PICTURE "B"
Scale: N.T.S



PICTURE "C"
Scale: N.T.S



CONNECTING CORRIDOR PARTIAL PLAN
Scale: 1/8" = 1'-0"

LOWER LEVEL PLAN - REMOVALS
Scale: 1/8" = 1'-0"

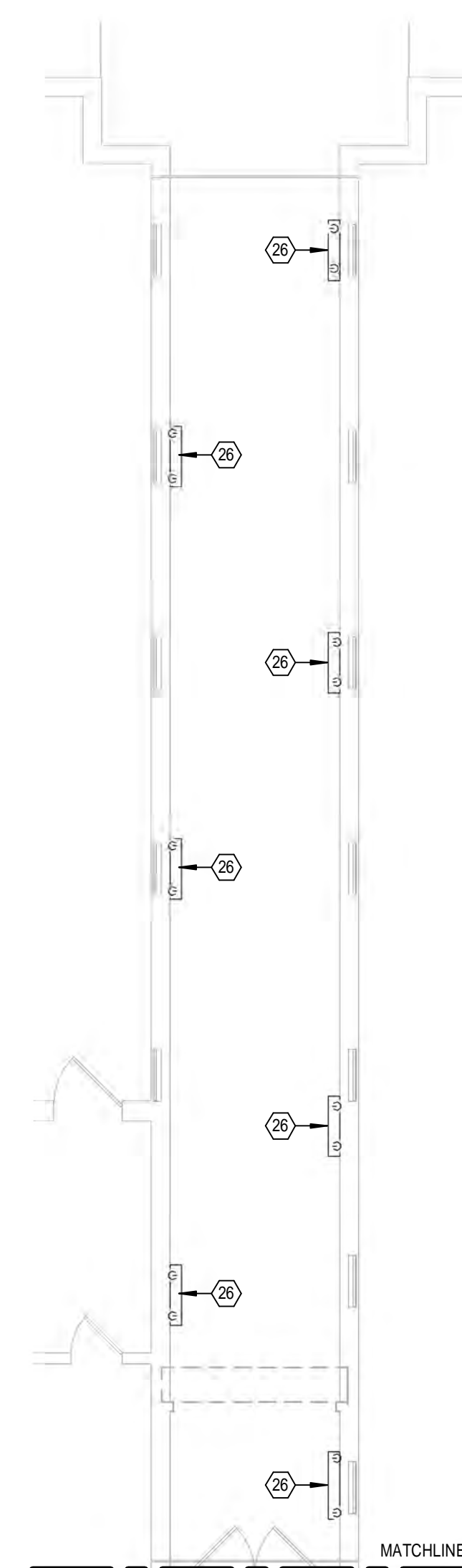
GENERAL NOTES

- A REFER TO SHEET 411M001 FOR LEGEND, ABBREVIATIONS AND ADDITIONAL GENERAL NOTES.
- B ALL EXISTING DUCTWORK, PIPING, EQUIPMENT, CONTROLS, ETC. SHOWN DASHED SHALL BE REMOVED. THE MAJORITY OF WORK TO BE REMOVED IS SHOWN. REMOVE ALL INCIDENTAL AND/OR ABANDONED DUCTWORK, PIPING, ETC. THAT MAY NOT BE SHOWN BUT IS ASSOCIATED WITH THE REMOVAL WORK.
- NOTES
- 1 EXISTING PIPING TO REMAIN.
- 2 EXISTING WINDOW AC UNIT TO REMAIN.
- 3 EXISTING EXHAUST FAN TO REMAIN.
- 4 REMOVE EXISTING PIPING AND ASSOCIATED VALVES, TRAPS, PRESSURE REDUCING VALVES, HANGERS, ETC.
- 5 REMOVE EXISTING PIPING BACK TO THIS POINT FOR RECONNECTION IN NEW WORK.
- 6 REMOVE EXISTING PIPING BACK TO THIS POINT AND CAP.
- 7 REMOVE EXISTING DUCTWORK AND ASSOCIATED DAMPERS, SUPPORTS, AIR DEVICE, ETC.
- 8 REMOVE EXISTING DUCTWORK BACK TO THIS POINT FOR RECONNECTION IN NEW WORK.
- 9 EXISTING AIR CURTAIN TO REMAIN.
- 10 REMOVE EXISTING STEAM RADIATOR AND ASSOCIATED PIPING, VALVES, CONTROLS, TRAPS, ETC.
- 11 REMOVE EXISTING PIPING AND ASSOCIATED VALVES, HANGERS, ETC. SERVING STEAM RADIATOR ON FLOOR ABOVE.
- 12 REMOVE EXISTING PROPELLER UNIT HEATER AND ASSOCIATED PIPING, VALVES, CONTROLS, ETC.
- 13 REMOVE EXISTING SUPPLY FAN AND ASSOCIATED DUCTWORK, HANGERS, CONTROLS, ACCESSORIES, ETC.
- 14 REMOVE EXISTING FILTER BANK, STEAM COIL, AND ASSOCIATED CONTROLS, ACCESSORIES, EQUIPMENT PAD, ETC.
- 15 REMOVE EXISTING EXHAUST FAN AND ASSOCIATED CONTROLS, HANGERS, DUCTWORK, ETC.
- 16 REMOVE EXISTING CONDENSATE PUMP AND ASSOCIATED CONTROLS, EQUIPMENT PAD, ETC.
- 17 EXISTING UNIT HEATER TO REMAIN.
- 18 REMOVE EXISTING AC SPLIT SYSTEM, INCLUDING OUTDOOR UNIT, INDOOR UNIT, REFRIGERANT PIPING, CONTROLS, HANGERS, ETC.
- 19 REMOVE EXISTING WINDOW AC UNIT.
- 20 REMOVE EXISTING EVAPORATOR UNIT AND ASSOCIATED REFRIGERANT PIPING, DRAIN PIPING, CONTROLS, CONDENSATE PUMP, HANGERS, ETC.
- 21 REMOVE EXISTING CONDENSING UNIT AND ASSOCIATED REFRIGERANT PIPING, CONTROLS, MOUNTING HARDWARE, ETC.
- 22 EXISTING CONDENSING UNIT TO REMAIN.
- 23 REMOVE EXISTING PUMP AND ASSOCIATED EQUIPMENT BASE, CONTROLS, ETC.
- 24 REMOVE EXISTING ICE MAKER TANK AND ASSOCIATED PIPING, CONTROLS, EQUIPMENT BASE, ETC.
- 25 REMOVE EXISTING UNIT HEATER AND ASSOCIATED PIPING, VALVES, CONTROLS, HANGERS, ETC.
- 26 REFER TO SHEET 411M001 FOR WORK IN THIS AREA.
- 27 REMOVE EXISTING AUTOMATIC TEMPERATURE CONTROLS, AIR COMPRESSOR AND ASSOCIATED WIRING, AIR DRYER, PNEUMATIC TUBING, EQUIPMENT BASE, ETC.
- 28 EXISTING AIR COMPRESSOR, TANK, ETC. TO REMAIN.
- 29 NOTE OMITTED.
- 30 PIPING UP TO HEATING UNITS ABOVE.
- 31 REMOVE ALL STEAM, CONDENSATE, AND PROCESS CHILLED WATER PIPING IN THIS AREA, ALONG WITH ALL ASSOCIATED TRAPS, PRESSURE REDUCING VALVES, STRAINERS, VALVES, ETC.
- 32 REMOVE EXISTING REFRIGERANT PIPING AND ASSOCIATED VALVES, HANGERS, ACCESSORIES, ETC.
- 33 EXISTING LOUVER TO REMAIN.
- 34 REMOVAL OF THIS STEAM PIPE WILL DISABLE THE DOMESTIC HOT WATER HEATERS. COORDINATE SHUT DOWN WITH C.O.R.
- 35 DISCONNECT AND REMOVE STEAM AND CONDENSATE PIPING FROM EQUIPMENT ABOVE.
- 36 EXISTING EVAPORATOR UNIT TO REMAIN.
- 37 REMOVE EXISTING DRAIN PIPING, HANGERS, ETC. BACK TO DISCHARGE POINT.

FULLY SUPPRESSED

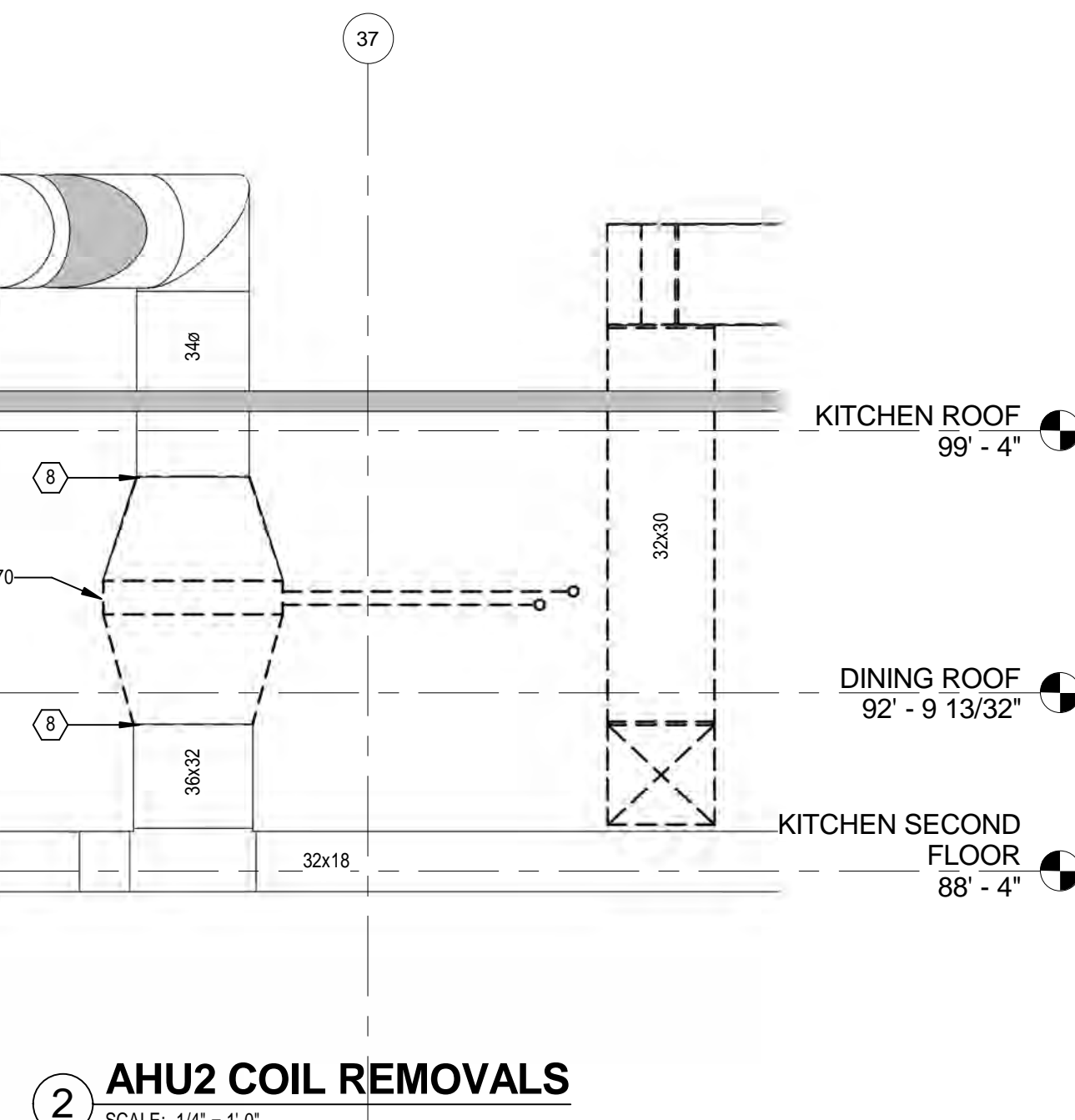
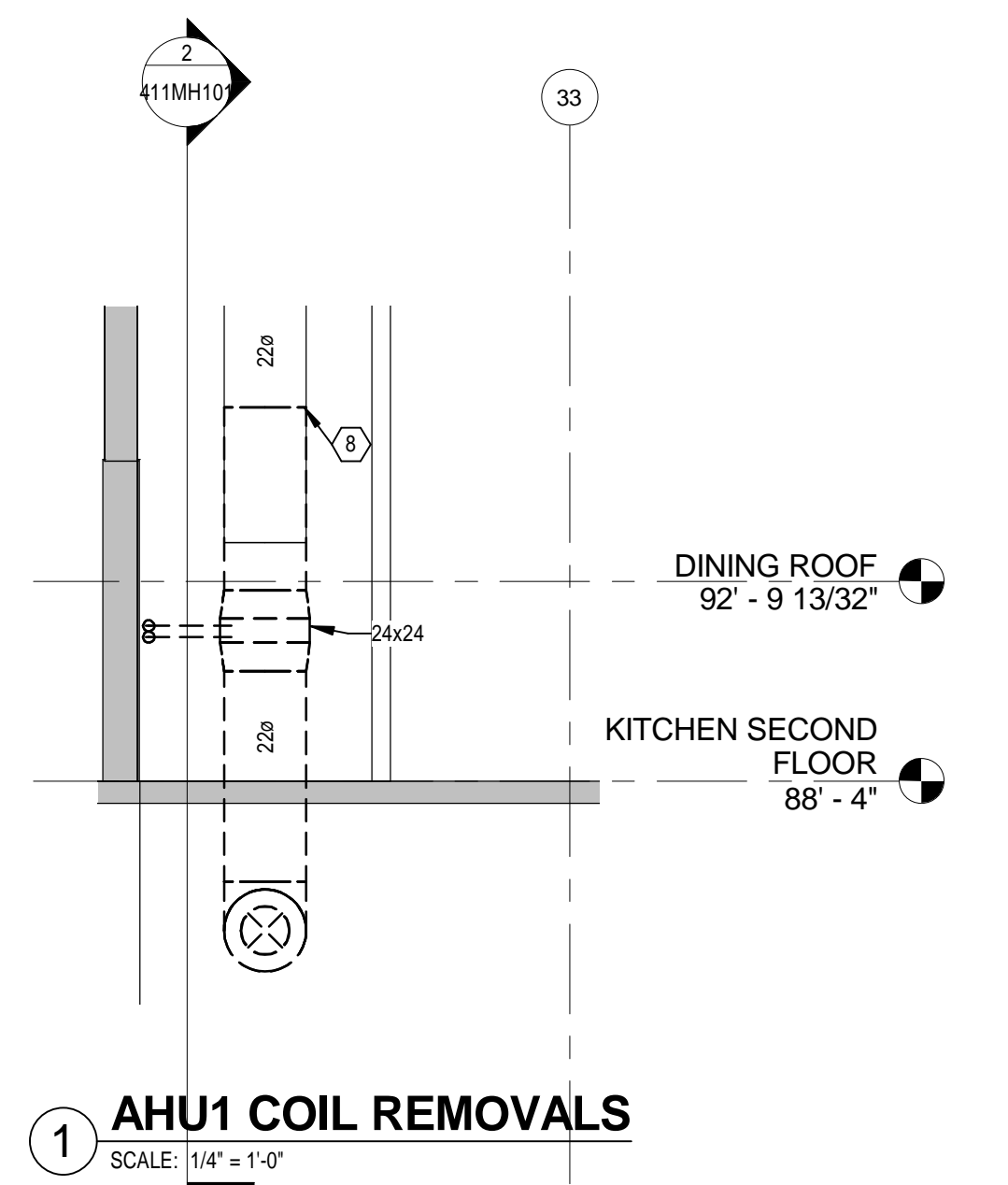
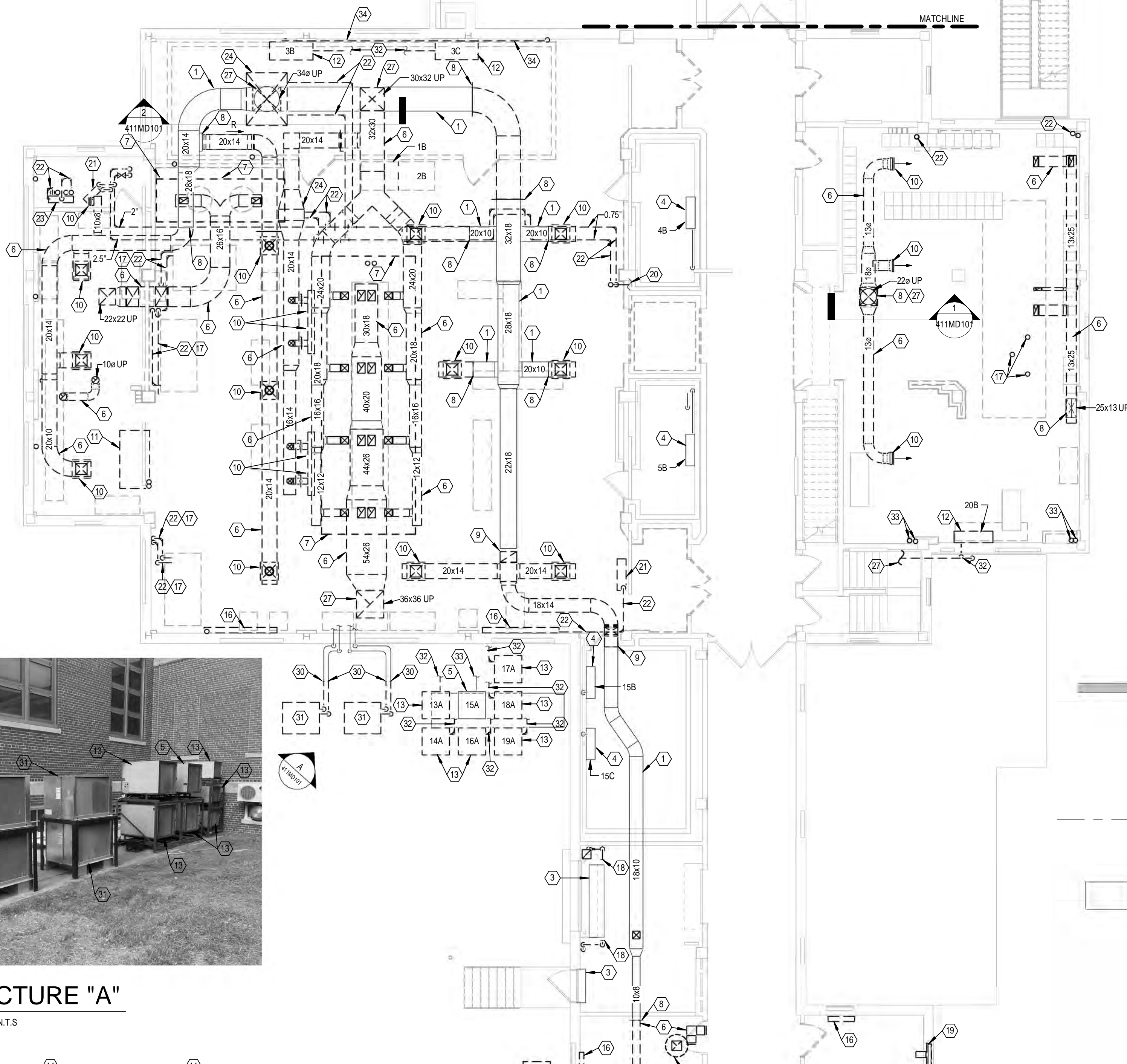
<table><tr><td>Revisions</td><td>Date</td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>	Revisions	Date							CONSULTANTS: JOHN DOE ARCHITECTS REITANO DESIGN GROUP TTP THE KLEINGERS GROUP	HEAPY PROJECT No.: 2013-04002 GARY S. EDDICE E-52755 REGISTERED PROFESSIONAL ENGINEER FIRM LICENSE No.: 01528	ARCHITECT/ENGINEERS: Heapy Engineering Mechanical Electrical Commissioning Technology Nationally Recognized Leader in Sustainability / LEED 1400 W Dorothy Lane, Dayton OH 45409-1310 Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com	Drawing Title LOWER LEVEL PLAN - REMOVALS Approved: Project Director	Project Title Correct Deficiencies Patient Kitchen B411 Location Dayton, OH Date 05/30/2014 Checked DLE Drawn PCW	Project No. VA Project No. 552-14-102 JPA Project No. 13001.00 Building Number B411 Drawing Number 411MD100 Dwg. of	Office of Construction and Facilities Management Department of Veterans Affairs
	Revisions	Date													

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PICTURE "A"
Scale: N.T.S.

FIRST FLOOR PLAN - REMOVALS
Scale: 1/8" = 1'-0"



GENERAL NOTES

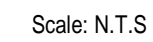
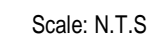
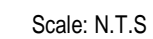
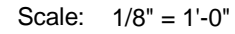
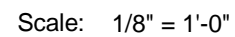
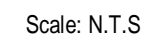
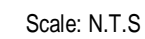
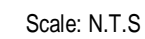
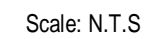
- A REFER TO SHEET 411MD01 FOR LEGEND, ABBREVIATIONS AND ADDITIONAL GENERAL NOTES.
B ALL EXISTING DUCTWORK, PIPING, EQUIPMENT, CONTROLS, ETC. SHOWN DASHED SHALL BE REMOVED. THE MAJORITY OF WORK TO BE REMOVED IS SHOWN. REMOVE ALL INCIDENTAL AND/OR ABANDONED DUCTWORK, PIPING, ETC. THAT MAY NOT BE SHOWN BUT IS ASSOCIATED WITH THE REMOVAL WORK.

NOTES

- EXISTING DUCTWORK TO REMAIN.
- EXISTING EXHAUST FAN TO REMAIN.
- EXISTING AIR CURTAIN TO REMAIN.
- EXISTING EVAPORATOR UNIT TO REMAIN.
- EXISTING CONDENSING UNIT TO REMAIN.
- REMOVE EXISTING DUCTWORK AND ASSOCIATED DAMPERS, SUPPORTS, ETC.
- REMOVE EXISTING KITCHEN HOOD AND ASSOCIATED ACCESSORIES, DUCTWORK, PIPING, HANGERS, CONTROLS, WASH CABINET, ETC. REMOVE STRUCTURAL STEEL SUPPORTS ABOVE CEILING.
- REMOVE EXISTING DUCTWORK BACK TO THIS POINT FOR RECONNECTION IN NEW WORK.
- REMOVE EXISTING DUCTWORK BACK TO THIS POINT AND CAP.
- REMOVE EXISTING AIR DEVICE AND ASSOCIATED DUCTWORK, ETC.
- REMOVE EXISTING UNIT HEATER AND ASSOCIATED PIPING, HANGERS, CONTROLS, VALVES, ETC.
- REMOVE EXISTING INDOOR EVAPORATOR UNIT AND ALL ASSOCIATED HANGERS, REFRIGERANT PIPING, DRAIN PIPING, CONTROLS, ETC.
- REMOVE EXISTING AIR COOLED CONDENSING UNIT AND ASSOCIATED REFRIGERANT PIPING, CONTROLS, CONCRETE BASE, ETC.
- REMOVE EXISTING WINDOW A/C UNIT.
- REMOVE EXISTING CEILING MOUNTED EXHAUST FAN AND ASSOCIATED DUCTWORK, CONTROLS, ETC.
- REMOVE EXISTING STEAM RADIATOR AND ASSOCIATED PIPING, VALVES, TRAP, CONTROLS, ETC.
- DISCONNECT AND REMOVE STEAM AND CONDENSATE PIPING FROM EQUIPMENT. REMOVE ALL ASSOCIATED STEAM SPECIALTIES, CONTROLS, ETC.
- REMOVE EXISTING PIPING BACK TO THIS POINT FOR RECONNECTION IN NEW WORK.
- REMOVE EXISTING EXHAUST FAN AND ASSOCIATED, CONTROLS, WIRING, ETC.
- REFER TO SECOND FLOOR PLAN ON SHEET 411MD102 FOR CONTINUATION.
- REMOVE EXISTING PROPELLER UNIT HEATER AND ASSOCIATED PIPING, VALVES, CONTROLS, ETC.
- REMOVE EXISTING PIPING AND ASSOCIATED VALVES, HANGERS, ETC.
- REMOVE EXISTING STEAM FIRED WATER HEATER AND ALL ASSOCIATED PIPING, VALVES, CONTROLS, ETC.
- REMOVE EXISTING STEAM HEATING COIL AND ASSOCIATED DUCTWORK, PIPING, HANGERS, VALVES, CONTROLS, ETC.
- REMOVE EXISTING AIR HANDLING UNIT AND ASSOCIATED FILTERS, COILS, DUCTWORK, PIPING, ETC.
- EXISTING STEAM RADIATOR TO REMAIN.
- SEE SHEET 411MD102 FOR CONTINUATION.
- REMOVE ROOF CURB MOUNTED EXHAUST FAN AND ASSOCIATED AIR DEVICE, DUCTWORK, CONTROLS, ETC. RE-USE ROOF CURB/PENETRATION IN NEW WORK.
- THIS EQUIPMENT IS ASSOCIATED WITH DEDUCT ALTERNATE #1. EQUIPMENT SHALL REMAIN IF DEDUCT IS ACCEPTED. ALL PIPING CONTROLS, SUPPORTS, ETC. ATTACHED TO WEST WALL SHALL BE REMOVED AND RELOCATED TO FACILITATE WALL REMOVAL/WINDOW REPLACEMENT.
- REMOVE REFRIGERANT PIPING (LIQUID AND SUCTION LINES) BACK TO THIS POINT FOR RECONNECTION IN NEW WORK.
- REMOVE CONDENSING UNIT (4 TOTAL) AND SHIFT WEST APPROXIMATELY 2'-0" TO ACCOMMODATE K.T.G. TRAILERS. COORDINATE EXACT LOCATIONS REQUIRED.
- REMOVE REFRIGERANT PIPING (LIQUID AND SUCTION LINES) BETWEEN INDOOR AND OUTDOOR UNITS AND ALL ASSOCIATED ACCESSORIES, HANGERS, VALVES, SPECIALTIES, ETC.
- EXISTING PIPING TO REMAIN.
- REMOVE EXISTING DRAIN PIPING, HANGERS, ETC. BACK TO DISCHARGE POINT.

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	Revisions	Date													



- 1 EXISTING DUCTWORK TO REMAIN.
- 2 EXISTING PIPING TO REMAIN.
- 3 EXISTING AIR HANDLING UNIT TO REMAIN.
- 4 EXISTING AIR COOLED CONDENSING UNIT TO REMAIN.
- 5 REMOVE EXISTING STEAM REHEAT COIL AND ASSOCIATED DUCT TRANSITIONS, HANGERS, VALVES, CONTROLS, ETC. FOR REPLACEMENT WITH HOT WATER COIL IN NEW WORK.
- 6 REMOVE EXISTING MAKE-UP AIR UNIT AND ASSOCIATED DUCTWORK, PIPING, CONTROLS ETC. REFER TO KITCHEN EQUIPMENT DRAWINGS FOR NEW WORK.
- 7 REMOVE EXISTING EXHAUST FAN AND ASSOCIATED DUCTWORK, CONTROLS, ETC. REFER TO SHEET 411MD102 FOR ADDITIONAL INFORMATION.
- 8 REMOVE EXISTING STEAM REFRIGERANT UNIT ALONG WITH ASSOCIATED AIR COOLED CONDENSING UNIT, ALL CONTROLS, PIPING, ETC. FOR REPLACEMENT IN NEW WORK.
- 9 REMOVE EXISTING DUCTWORK TO THIS POINT FOR RECONNECTION IN NEW WORK.
- 10 REMOVE EXISTING AIR COOLED CONDENSING UNIT AND ASSOCIATED HANGERS, PIPING, CONTROLS, ETC.
- 11 EXISTING ELEVATOR MACHINE ROOM SPLIT SYSTEM TO REMAIN.
- 12 EXISTING WINDOW AC UNIT TO REMAIN.
- 13 REMOVE EXISTING GA HOOD FOR REPLACEMENT WITH MIXING BOX IN NEW WORK.
- 14 REMOVE EXHAUST FAN AND ASSOCIATED DUCTWORK, CONTROLS, ETC. FOR REPLACEMENT IN NEW WORK.
- 15 REMOVE EXISTING PIPING AND ASSOCIATED VALVES, HANGERS, ETC.
- 16 REFER TO FIRST FLOOR PLAN ON SHEET 411MD101 FOR CONTINUATION.
- 17 REMOVE EXISTING STEAM RADIATOR AND ASSOCIATED PIPING, VALVES, TRAP, CONTROLS ETC.
- 18 REMOVE EXISTING STEAM UNIT HEATER AND ASSOCIATED PIPING, CONTROLS, HANGERS ETC.
- 19 EXISTING ROOF CURB TO REMAIN.
- 20 REMOVE EXISTING REFRIGERANT PIPING AND ASSOCIATED VALVES, HANGERS, ETC.
- 21 REMOVE EXISTING DUCTWORK AND ASSOCIATED DAMPERS, SUPPORTS, ETC.
- 22 STEEL FRAMING TO REMAIN. RE-USE IN NEW WORK.
- 23 REMOVE EXISTING DRAIN PIPING.

CONSULTANTS:

JOHN POE ARCHITECTS



ARCHITECT/ENGINEERS:



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Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com

Drawing Title

SECOND FLOOR AND ROOF PLANS - REMOVALS

Approved: Project Director

Project Title

Correct Deficiencies Patient
Kitchen B411

Location Dayton, OH

Date
05/30/2014

Checked

Drawn

Project No.	
VA Project No.	552-14-102
JPA Project No.	13001.00

Building Number
B411

Drawing Number

411MD102

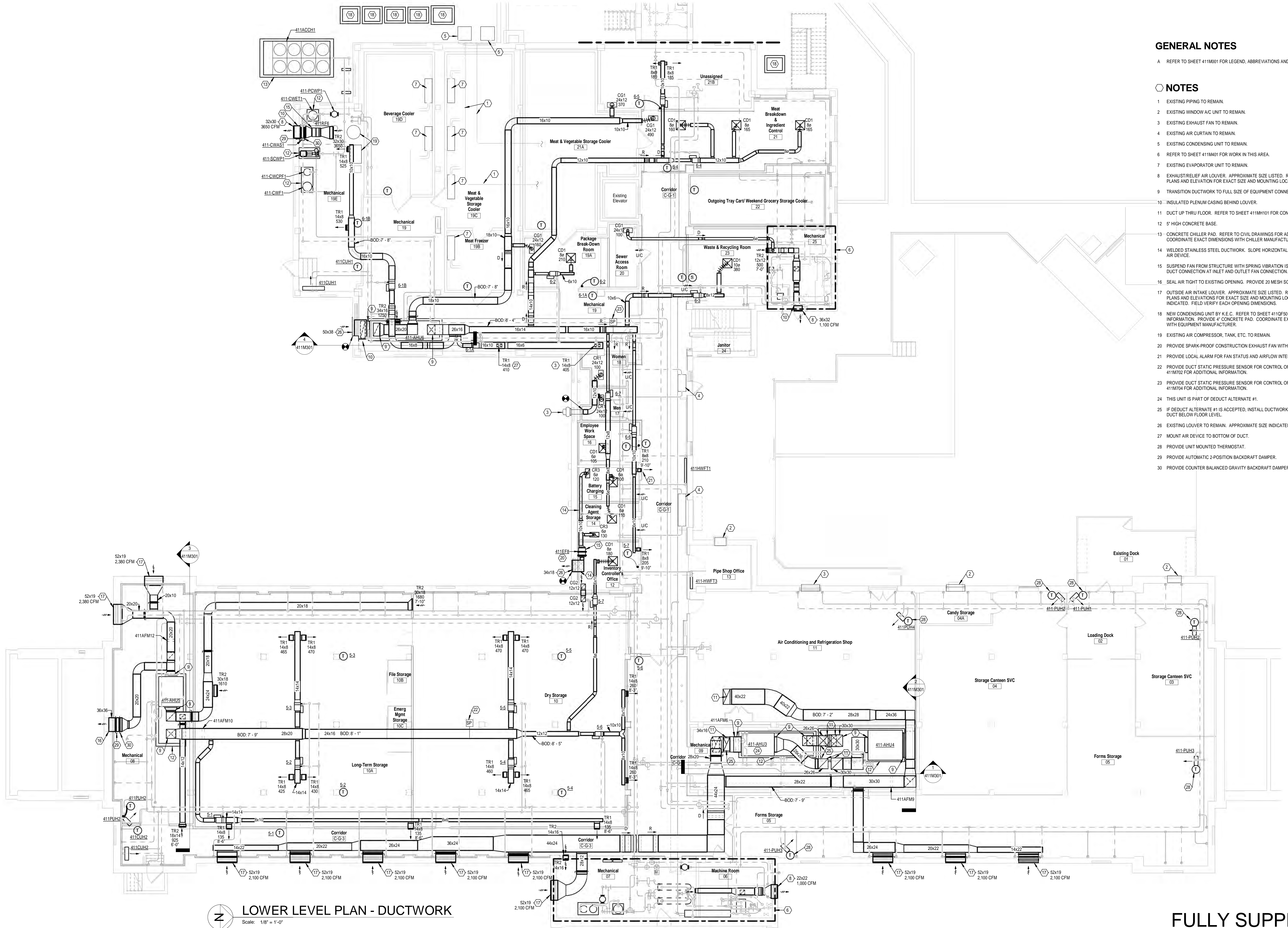
Dwg. of

Office of
Construction
and Facilities
Management



FULLY SUPPRESSED

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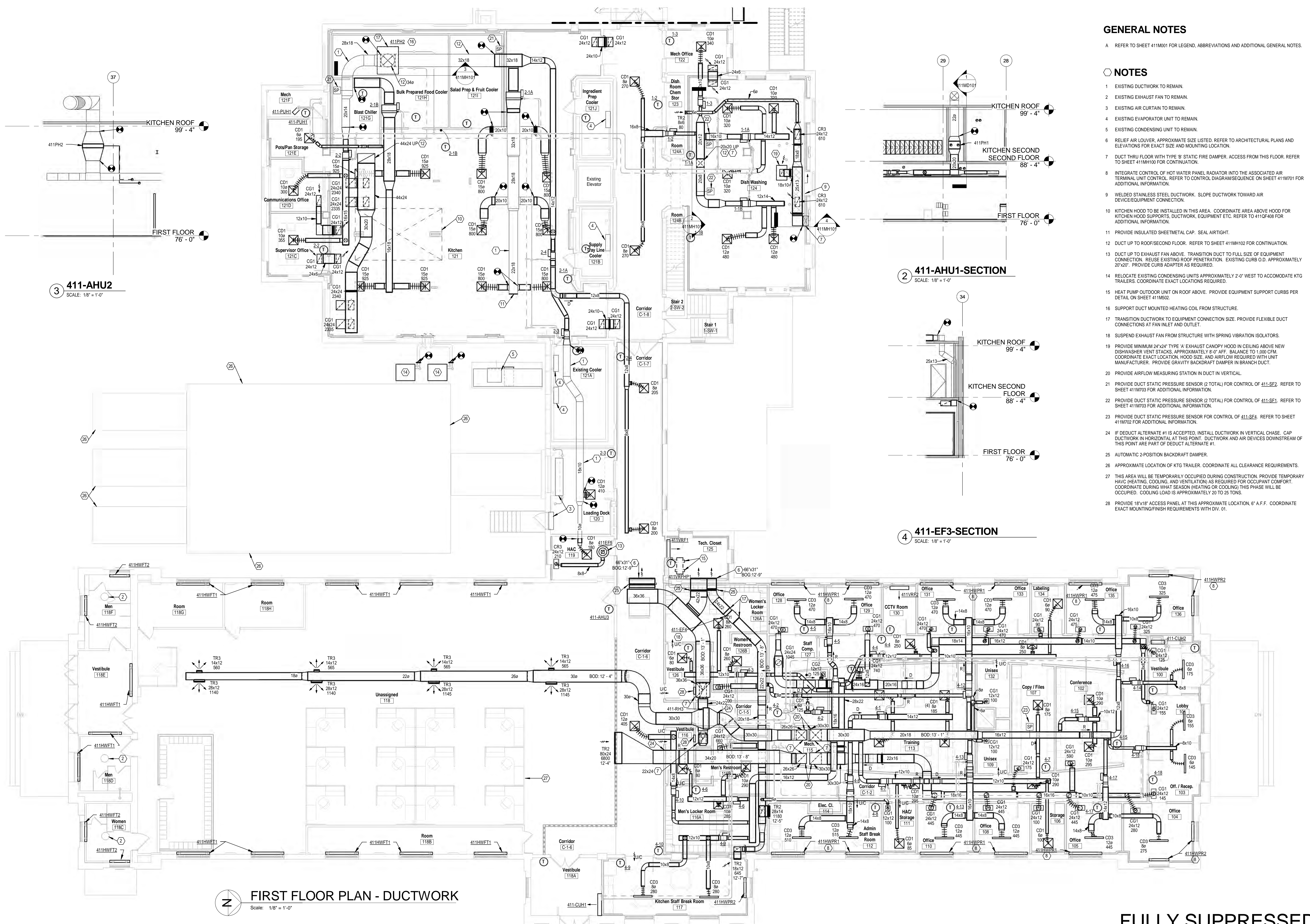


- ### GENERAL NOTES
- A REFER TO SHEET 411M001 FOR LEGEND, ABBREVIATIONS AND ADDITIONAL GENERAL NOTES.
- ### NOTES
- EXISTING PIPING TO REMAIN.
 - EXISTING WINDOW A/C UNIT TO REMAIN.
 - EXISTING EXHAUST FAN TO REMAIN.
 - EXISTING AIR CURTAIN TO REMAIN.
 - EXISTING CONDENSING UNIT TO REMAIN.
 - REFER TO SHEET 411M001 FOR WORK IN THIS AREA.
 - EXISTING EVAPORATOR UNIT TO REMAIN.
 - EXHAUST/RELIEF AIR LOUVER. APPROXIMATE SIZE LISTED. REFER TO ARCHITECTURAL PLANS AND ELEVATION FOR EXACT SIZE AND MOUNTING LOCATIONS.
 - TRANSITION DUCTWORK TO FULL SIZE OF EQUIPMENT CONNECTION.
 - INSULATED PLENUM CASING BEHIND LOUVER.
 - DUCT UP THRU FLOOR. REFER TO SHEET 411M001 FOR CONTINUATION.
 - 5" HIGH CONCRETE BASE.
 - CONCRETE CHILLER PAD. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE EXACT DIMENSIONS WITH CHILLER MANUFACTURER.
 - WELDED STAINLESS STEEL DUCTWORK. SLOPE HORIZONTAL DUCT RUNS TO DRAIN TOWARD AIR DEVICE.
 - SUSPEND FAN FROM STRUCTURE WITH SPRING VIBRATION ISOLATORS. PROVIDE FLEXIBLE DUCT CONNECTION AT INLET AND OUTLET FAN CONNECTION.
 - SEAL AIR TIGHT TO EXISTING OPENING. PROVIDE 20 MESH SCREEN OVER OPENING.
 - OUTSIDE AIR INTAKE LOUVER. APPROXIMATE SIZE LISTED. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT SIZE AND MOUNTING LOCATIONS. BALANCE TO CFM INDICATED. FIELD VERIFY EACH OPENING DIMENSIONS.
 - NEW CONDENSING UNIT BY K.E.C. REFER TO SHEET 411G001 FOR ADDITIONAL INFORMATION. PROVIDE 4" CONCRETE PAD. COORDINATE EXACT DIMENSIONS REQUIRED WITH EQUIPMENT MANUFACTURER.
 - EXISTING AIR COMPRESSOR, TANK, ETC. TO REMAIN.
 - PROVIDE SPARK-PROOF CONSTRUCTION EXHAUST FAN WITH EXPLOSION PROOF MOTOR.
 - PROVIDE LOCAL ALARM FOR FAN STATUS AND AIRFLOW INTERRUPTION FOR 411-EF8.
 - PROVIDE DUCT STATIC PRESSURE SENSOR FOR CONTROL OF 411-SF8. REFER TO SHEET 411M002 FOR ADDITIONAL INFORMATION.
 - PROVIDE DUCT STATIC PRESSURE SENSOR FOR CONTROL OF 411-SF8. REFER TO SHEET 411M004 FOR ADDITIONAL INFORMATION.
 - THIS UNIT IS PART OF DEDUCT ALTERNATE #1.
 - IF DEDUCT ALTERNATE #1 IS ACCEPTED, INSTALL DUCTWORK IN VERTICAL CHASE. CAP DUCT BELOW FLOOR LEVEL.
 - EXISTING LOUVER TO REMAIN. APPROXIMATE SIZE INDICATED.
 - MOUNT AIR DEVICE TO BOTTOM OF DUCT.
 - PROVIDE UNIT MOUNTED THERMOSTAT.
 - PROVIDE AUTOMATIC 2-POSITION BACKDRAFT DAMPER.
 - PROVIDE COUNTER BALANCED GRAVITY BACKDRAFT DAMPER.

LOWER LEVEL PLAN - DUCTWORK
Scale: 1/8" = 1'-0"

FULLY SUPPRESSED

<div>Revisions</div> <table border="1"><thead><tr><th>No.</th><th>Description</th><th>Date</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>	No.	Description	Date										<div>CONSULTANTS:</div> <div>JOHN DOE ARCHITECTS</div> <div>REITANO DESIGN GROUP</div> <div>THP</div> <div>THE KLEINGERS GROUP</div>	<div>HEAPY PROJECT NO.: 2013-04002</div> <div>ARCHITECT/ENGINEERS:</div> <div>Heapy Engineering Mechanical Electrical Commissioning Technology Nationally Recognized Leader in Sustainability / LEED 1400 W Dorothy Lane, Dayton OH 45409-1310 Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com</div> <div>STATE OF OHIO GARY S. EDDICE E-52755 REGISTERED PROFESSIONAL ENGINEER FIRM LICENSE NO.: 01528</div>	<div>Drawing Title</div> <div>LOWER LEVEL PLAN - DUCTWORK</div> <div>Approved: Project Director</div>	<div>Project Title</div> <div>Correct Deficiencies Patient Kitchen B411</div> <div>Location</div> <div>Dayton, OH</div> <div>Date</div> <div>05/30/2014</div> <div>Checked</div> <div>DLE</div> <div>Drawn</div> <div>PCW</div>	<div>Project No.</div> <div>VA Project No. 552-14-102 JPA Project No. 13001.00</div> <div>Building Number</div> <div>B411</div> <div>Drawing Number</div> <div>411MH100</div> <div>Dwg. of</div>	<div>Office of Construction and Facilities Management</div> <div>Department of Veterans Affairs</div>
	No.	Description	Date															



- ### GENERAL NOTES
- A REFER TO SHEET 411M001 FOR LEGEND, ABBREVIATIONS AND ADDITIONAL GENERAL NOTES.
- ### NOTES
- EXISTING DUCTWORK TO REMAIN.
 - EXISTING EXHAUST FAN TO REMAIN.
 - EXISTING AIR CURTAIN TO REMAIN.
 - EXISTING EVAPORATOR UNIT TO REMAIN.
 - EXISTING CONDENSING UNIT TO REMAIN.
 - RELIEF AIR LOUVER. APPROXIMATE SIZE LISTED. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT SIZE AND MOUNTING LOCATION.
 - DUCT THRU FLOOR WITH TYPE 'B' STATIC FIRE DAMPER. ACCESS FROM THIS FLOOR. REFER TO SHEET 411MH100 FOR CONTINUATION.
 - INTEGRATE CONTROL OF HOT WATER PANEL RADIATOR INTO THE ASSOCIATED AIR TERMINAL UNIT CONTROL. REFER TO CONTROL DIAGRAM/SEQUENCE ON SHEET 411M701 FOR ADDITIONAL INFORMATION.
 - WELDED STAINLESS STEEL DUCTWORK. SLOPE DUCTWORK TOWARD AIR DEVICE/EQUIPMENT CONNECTION.
 - KITCHEN HOOD TO BE INSTALLED IN THIS AREA. COORDINATE AREA ABOVE HOOD FOR KITCHEN HOOD SUPPORTS, DUCTWORK, EQUIPMENT ETC. REFER TO 411QF406 FOR ADDITIONAL INFORMATION.
 - PROVIDE INSULATED SHEETMETAL CAP. SEAL AIRTIGHT.
 - DUCT UP TO ROOF/SECOND FLOOR. REFER TO SHEET 411MH102 FOR CONTINUATION.
 - DUCT UP TO EXHAUST FAN ABOVE. TRANSITION DUCT TO FULL SIZE OF EQUIPMENT CONNECTION. REUSE EXISTING ROOF PENETRATION. EXISTING CURB O.D. APPROXIMATELY 20"x20". PROVIDE CURB ADAPTER AS REQUIRED.
 - RELOCATE EXISTING CONDENSING UNITS APPROXIMATELY 2'-0" WEST TO ACCOMMODATE KTG TRAILERS. COORDINATE EXACT LOCATIONS REQUIRED.
 - HEAT PUMP OUTDOOR UNIT ON ROOF ABOVE. PROVIDE EQUIPMENT SUPPORT CURBS PER DETAIL ON SHEET 411M502.
 - SUPPORT DUCT MOUNTED HEATING COIL FROM STRUCTURE.
 - TRANSITION DUCTWORK TO EQUIPMENT CONNECTION SIZE. PROVIDE FLEXIBLE DUCT CONNECTIONS AT FAN INLET AND OUTLET.
 - SUSPEND EXHAUST FAN FROM STRUCTURE WITH SPRING VIBRATION ISOLATORS.
 - PROVIDE MINIMUM 24"x24" TYPE 'X' EXHAUST CANOPY HOOD IN CEILING ABOVE NEW DISHWASHER VENT STACKS. APPROXIMATELY 5'-0" AFF. BALANCE TO 1,000 CFM. COORDINATE EXACT LOCATION, HOOD SIZE, AND AIRFLOW REQUIRED WITH UNIT MANUFACTURER. PROVIDE GRAVITY BACKDRAFT DAMPER IN BRANCH DUCT.
 - PROVIDE AIRFLOW MEASURING STATION IN DUCT IN VERTICAL.
 - PROVIDE DUCT STATIC PRESSURE SENSOR (2 TOTAL) FOR CONTROL OF 411-SF2. REFER TO SHEET 411M703 FOR ADDITIONAL INFORMATION.
 - PROVIDE DUCT STATIC PRESSURE SENSOR (2 TOTAL) FOR CONTROL OF 411-SF1. REFER TO SHEET 411M703 FOR ADDITIONAL INFORMATION.
 - PROVIDE DUCT STATIC PRESSURE SENSOR FOR CONTROL OF 411-SF3. REFER TO SHEET 411M702 FOR ADDITIONAL INFORMATION.
 - IF DEDUCT ALTERNATE #1 IS ACCEPTED, INSTALL DUCTWORK IN VERTICAL CHASE. CAP DUCTWORK IN HORIZONTAL AT THIS POINT. DUCTWORK AND AIR DEVICES DOWNSTREAM OF THIS POINT ARE PART OF DEDUCT ALTERNATE #1.
 - AUTOMATIC 2-POSITION BACKDRAFT DAMPER.
 - APPROXIMATE LOCATION OF KTG TRAILER. COORDINATE ALL CLEARANCE REQUIREMENTS.
 - THIS AREA WILL BE TEMPORARILY OCCUPIED DURING CONSTRUCTION. PROVIDE TEMPORARY HVAC HEATING, COOLING, AND VENTILATION AS REQUIRED FOR OCCUPANT COMFORT. COORDINATE DURING WHAT SEASON (HEATING OR COOLING) THIS PHASE WILL BE OCCUPIED. COOLING LOAD IS APPROXIMATELY 20 TO 25 TONS.
 - PROVIDE 18"x18" ACCESS PANEL AT THIS APPROXIMATE LOCATION, 6" A.F.F. COORDINATE EXACT MOUNTING/FINISH REQUIREMENTS WITH DIV. 01.

CONSULTANTS: JOHN DOE ARCHITECTS REITANO DESIGN GROUP TTP KLEINGERS GROUP		HEAPY PROJECT No: 2013-04002 GARY S. EDDICE E-52755 FIRM LICENSE No.: 01528		ARCHITECT/ENGINEERS: Heapy Engineering Mechanical Electrical Commissioning Technology Nationally Recognized Leader in Sustainability / LEED 1400 W Dorothy Lane, Dayton OH 45409-1310 Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com		Drawing Title FIRST FLOOR PLAN - DUCTWORK Approved: Project Director		Project Title Correct Deficiencies Patient Kitchen B411 Location Dayton, OH Date 05/30/2014 Checked DLE Drawn PCW		Project No. VA Project No. 552-14-102 JPA Project No. 13001.00 Building Number B411 Drawing Number 411MH101 Dwg. of		Office of Construction and Facilities Management Department of Veterans Affairs	
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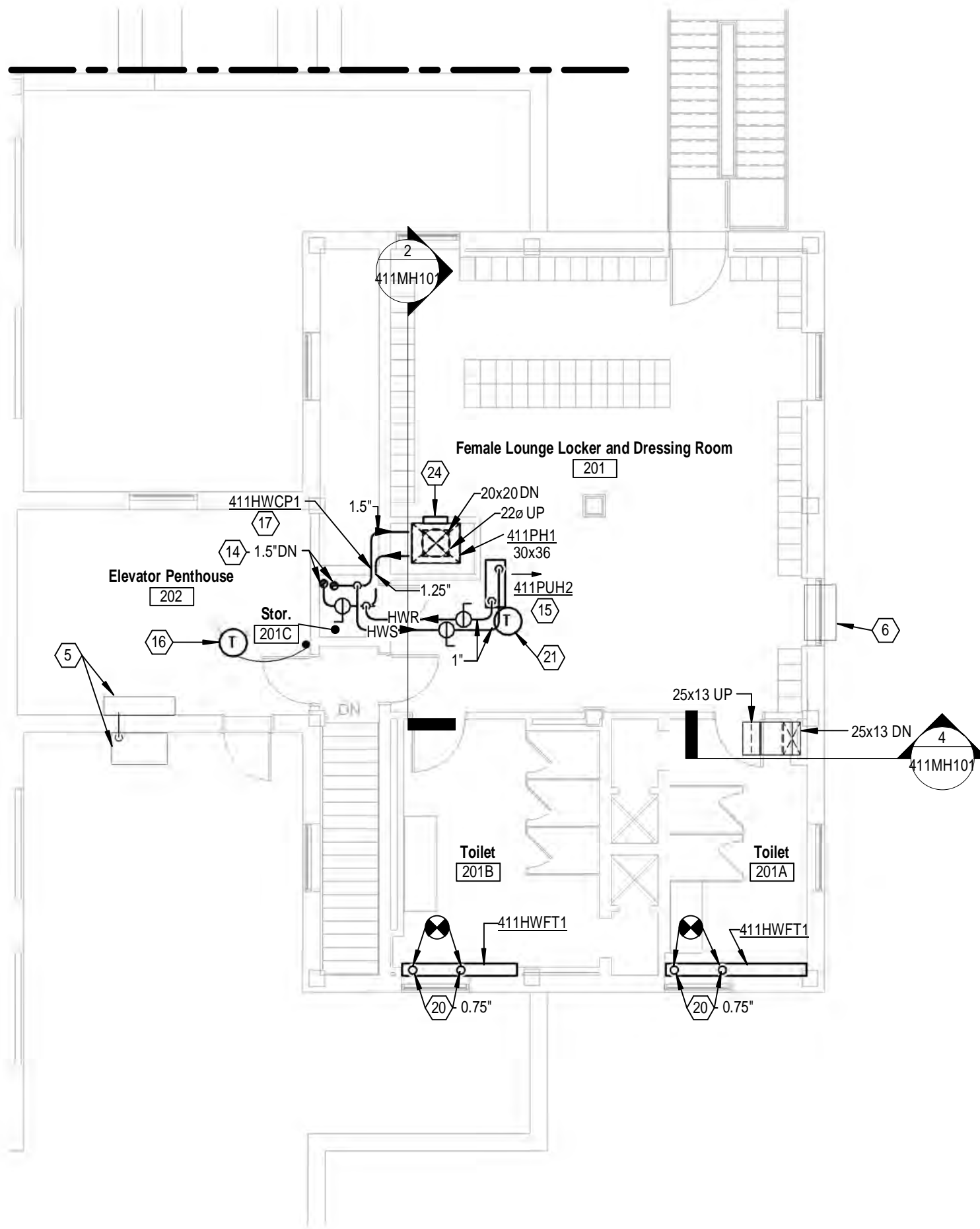
three inches = one foot
one and one-half inches = one foot
one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
three-eighths inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot

GENERAL NOTES

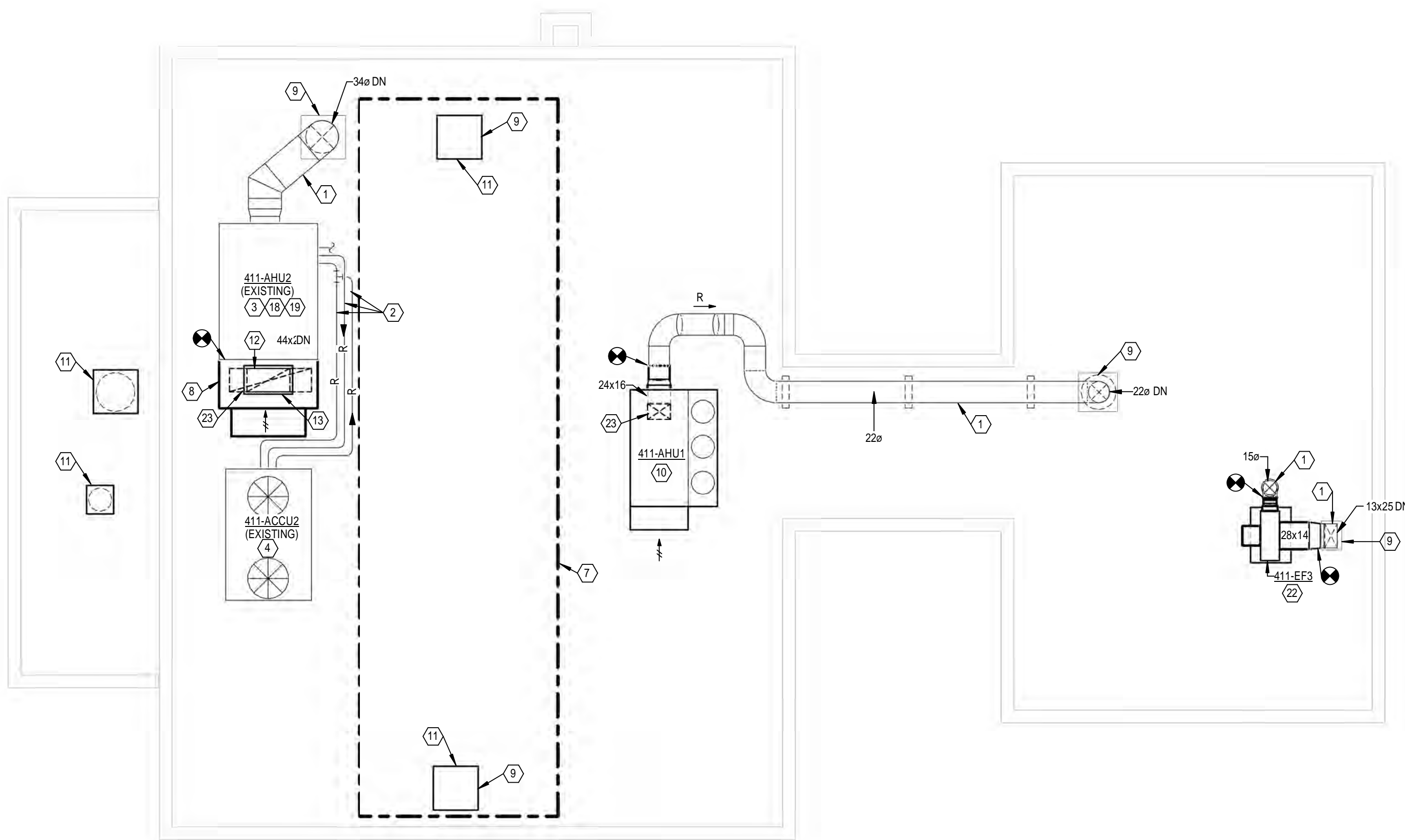
- A REFER TO SHEET 411M001 FOR LEGEND, ABBREVIATIONS AND ADDITIONAL GENERAL NOTES.
- B PROVIDE ALL ROOFING PENETRATION, REPAIR AND REINFORCEMENT IN THE EXISTING BUILDING FOR WORK INDICATED. ENGAGE A ROOFING SUB-CONTRACTOR TO PERFORM THE ROOFING WORK. WHERE ROOFING WORK IS REQUIRED, THE EXISTING ROOFING MEMBRANE AND INSULATION SHALL BE CUT, REMOVED AND RESTORED AS REQUIRED TO ATTAIN A WATERTIGHT CONDITION. THE ROOFING SUB-CONTRACTOR SHALL BE A CERTIFIED INSTALLER FOR SUCH INSTALLATION TO MAINTAIN THE EXISTING WARRANTY ON THE ROOF.
- C REFER TO 411MD102 FOR PICTURES RELATING TO EXISTING SUPPORTS, STEEL FRAMING, ETC.

NOTES

- 1 EXISTING DUCTWORK TO REMAIN.
- 2 EXISTING PIPING TO REMAIN.
- 3 EXISTING AIR HANDLING UNIT TO REMAIN. REBALANCE SUPPLY FAN TO OPERATE IN A VAV SYSTEM WITH A MAXIMUM AIRFLOW OF 10,345 CFM. BALANCE FAN TO OPERATE DOWN TO 3,150 CFM OR MINIMUM ALLOWABLE BASED ON EXISTING FAN CURVE. COORDINATE WITH MANUFACTURER OF EXISTING AHU. PROVIDE NEW MERV 8 PRE AND MERV 13 FINAL FILTERS IN EXISTING UNIT.
- 4 EXISTING AIR COOLED CONDENSING UNIT TO REMAIN.
- 5 EXISTING ELEVATOR MACHINE ROOM SPLIT SYSTEM TO REMAIN.
- 6 EXISTING WINDOW AC UNIT TO REMAIN.
- 7 REFER TO KITCHEN EQUIPMENT DRAWING FOR WORK IN THIS AREA.
- 8 PROVIDE NEW AHU MIXING SECTION WITH RETURN AIR AND OUTSIDE AIR CONNECTIONS. REFER TO AHU DETAIL ON SHEET 411M501. COORDINATE WITH EXISTING AHU MANUFACTURER. MODIFY/ADD TO EXISTING STRUCTURAL STEEL FRAME AS REQUIRED.
- 9 EXISTING ROOF CURB TO REMAIN.
- 10 PROVIDE STEEL FRAMING BETWEEN UNIT AND EXISTING STRUCTURAL STEEL TO ELEVATE UNIT APPROXIMATELY 18" TO ALLOW CLEARANCE FOR VERTICAL DISCHARGE DUCTWORK FROM AHU.
- 11 PROVIDE DOUBLE WALL INSULATED STAINLESS STEEL CAP FOR EXISTING FAN CURB. SEAL AIR TIGHT.
- 12 DUCT DOWN THRU ROOF. REFER TO SHEET 411MH101 FOR CONTINUATION.
- 13 PROVIDE DUCT PENETRATION ROOF CURB FOR DUCT THRU ROOF.
- 14 PROVIDE MANUAL AIR VENTS AT PIPE DROPS. REFER TO 411MP101 FOR CONTINUATION.
- 15 PROVIDE TEMPORARY HEAT IF PHASING OF PROJECT REQUIRES THESE ROOMS 201, 201A, AND 201B) OCCUPIED PRIOR TO HEATING HOT WATER SYSTEM IS OPERATIONAL.
- 16 SUSPEND FAN FROM STRUCTURE WITH SPRING VIBRATION ISOLATORS.
- 17 PROVIDE COIL RE-CIRCULATION PUMP IN SUPPLY HOT WATER PIPING PER DETAIL ON SHEET 411M503.
- 18 ATC TO PROVIDE FROST PREVENTION CONTROL FOR EXISTING AHU DX COIL IN VAV OPERATION. COORDINATE WITH MANUFACTURER OF EXISTING AHU TO INSURE PROPER OPERATION.
- 19 PROVIDE AGIS SHAFT GROUNDING KIT FOR EXISTING AHU SUPPLY FAN MOTOR.
- 20 CONNECT 0.75" HEATING HOT WATER PIPES TO EXISTING STEAM PIPES AT FLOOR LEVEL. REFER TO SHEET 411MP100 FOR CONTINUATION.
- 21 PROVIDE UNIT MOUNTED THERMOSTAT.
- 22 INSTALL FAN ON EXISTING STRUCTURAL STEEL FRAME WITH RESTRAINED SPRING ISOLATORS. PROVIDE FLEXIBLE DUCT CONNECTION AT FAN INLET. MODIFY/ADD SUPPLEMENTAL STEEL AS REQUIRED.
- 23 TRANSITION DUCT TO CONNECTION SIZE OF EQUIPMENT.
- 24 PROVIDE 18"x18" ACCESS PANEL AT THIS APPROXIMATE LOCATION, 6" A.F.F. COORDINATE EXACT MOUNTING/FINISH REQUIREMENTS WITH DIV. 01.



SECOND FLOOR PLAN
Scale: 1/8" = 1'-0"



ROOF PLAN
Scale: 1/8" = 1'-0"

FULLY SUPPRESSED

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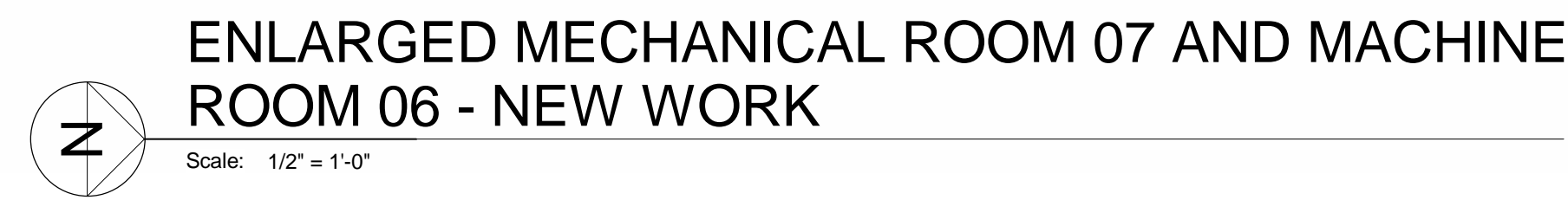
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- 1 EXISTING EVAPORATIVE UNIT TO REMAIN.
- 2 EXISTING CONDENSING UNIT TO REMAIN.
- 3 EXISTING AIR CURTAIN UNIT TO REMAIN.
- 4 HEATING HOT WATER PIPES FROM FLOOR BELOW. REFER TO SHEET 411MP100 FOR CONTINUATION.
- 5 REFER TO SHEET 411MH102 FOR CONTINUATION.
- 6 INTEGRATE CONTROL OF HOT WATER PANEL RADIATOR INTO THE ASSOCIATED AIR TERMINAL UNIT CONTROL. REFER TO CONTROL DIAGRAM SEQUENCE ON SHEET 411MT01 FOR ADDITIONAL INFORMATION.
- 7 REFRIGERANT PIPING (LIQUID & SUCCTION) TO 411VREZ. SIZE PIPING AND PROVIDE ALL REFRIGERATION SPECIAL REQUIREMENTS PER MANUFACTURER'S RECOMMENDATIONS.
- 8 REFRIGERANT PIPING (LIQUID & SUCCTION) UP TO ROOF MOUNTED HEAT PUMP UNIT. SIZE AND PROVIDE ACCESSORIES PER MANUFACTURER'S REQUIREMENTS.
- 9 EXISTING HEATING UNIT TO REMAIN.
- 10 WALL MOUNTED DDC TEMPERATURE SENSOR FOR MONITORING AND ALARM OF ROOM TEMPERATURE. REFER TO CONTROL DIAGRAM AND SEQUENCES ON SHEET 411MT01 FOR ADDITIONAL INFORMATION.
- 11 PROVIDE COIL RE-CIRCULATION PIPING IN SUPPLY HOT WATER PIPING PER DETAIL ON SHEET 411M503.
- 12 0.75" DRAIN PIPING DOWN TO FLOOR BELOW. REFER TO SHEET 411MP100 FOR CONTINUATION.
- 13 DROP 0.75" DRAIN PIPING DOWN TO LOW ROOF BELOW. DISCHARGE 6" ABOVE ROOF LEVEL. PROVIDE SPLASH BLOCK AT DISCHARGE.
- 14 EXTEND VENT PIPING UP TO 6'-0" ABOVE NEAREST OPERABLE WINDOW.
- 15 CONNECTION TO DISH MACHINE FROM BELOW. COORDINATE EXACT CONNECTION REQUIREMENTS (SIZE, SERVICE, LOCATION, ETC.) WITH ACTUAL EQUIPMENT MANUFACTURER.
- 16 DISCHARGE DRAIN LINE INTO FUNNEL DRAIN. COORDINATE EXACT LOCATION WITH DW. 22.
- 17 PROVIDE DDC DIFFERENTIAL PRESSURE SENSOR (2 TOTAL) ACROSS HEATING HOT WATER SUPPLY AND RETURN MAINS FOR CONTROL OF 411HWPI1 AND 411HWPI2.

FULLY SUPPRESSED

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- 33 RISE PIPE UP WALL THROUGH LOW ROOF. TERMINATE AT 6'-0" ABOVE LOW ROOF.
- 34 RISE PIPE UP WALL. TERMINATE AT 6'-0" ABOVE GRADE.
- 35 EXHAUST AIR LOUVER. APPROXIMATE SIZE LISTED. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT SIZE AND MOUNTING LOCATIONS. BALANCE TO CFM INDICATED.
- 36 EXISTING STEAM TRAP TO REMAIN.
- 37 PIPE ANCHOR.
- 38 REFER TO STEAM SYSTEM SCHEMATIC ON SHEET 411M063 FOR CONTROL VALVES AND PIPE SIZES.
- 39 DOMESTIC WATER FLOW METER. COORDINATE EXACT INSTALLATION LOCATION WITH DIVISION 22. REFER TO SHEET 411M01 FOR ADDITIONAL INFORMATION.
- 40 SUSPEND EXHAUST FAN FROM STRUCTURE WITH SPRING VIBRATION ISOLATORS.
- 41 CUP PIPING.
- 42 AUTOMATIC 3-WAY MODULATING MIXING VALVE.
- 43 CONCRETE BASE TO REMAIN.
- 44 EXISTING SAFETY RELIEF VALVE TO REMAIN.

CONSULTANTS:

JOHN POE ARCHITECTS

REITANO
DESIGN GROUP

THP


THE
KLEINGERS
GROUP

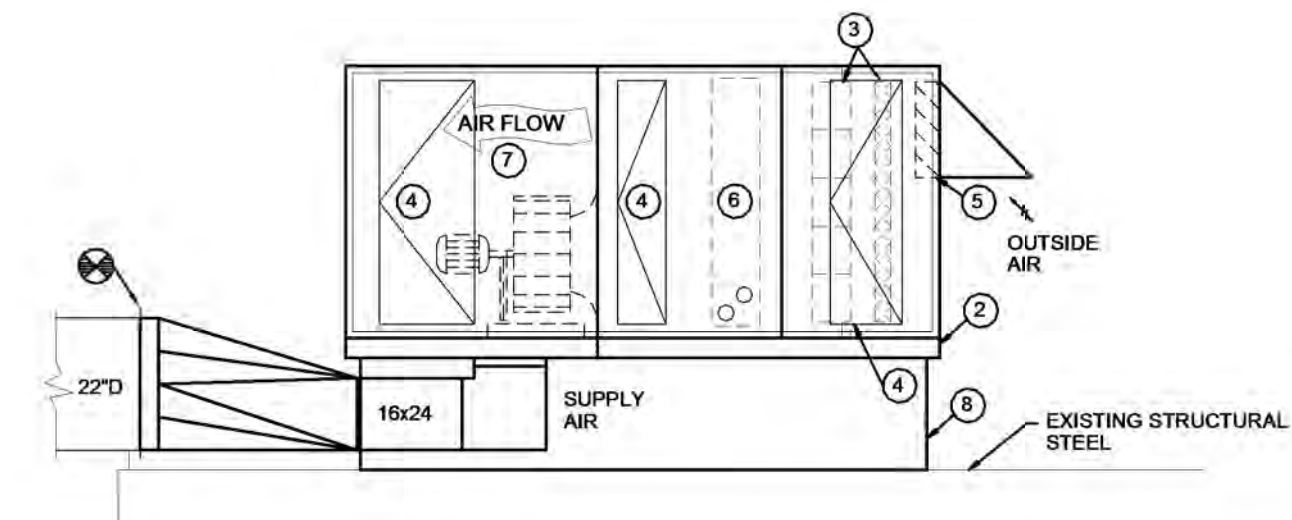
ARCHITECT/ENGINEERS:



Heapy Engineering
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1400 W Dorothy Lane, Dayton OH 45409-1310
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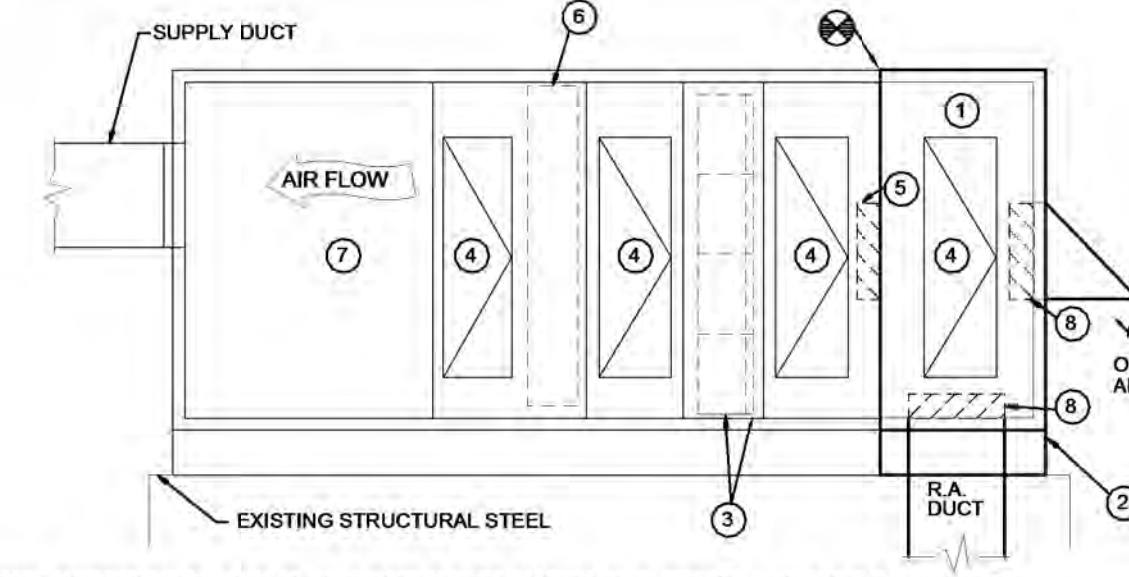
Project Title Correct Deficiencies Patient Kitchen B411			Project No. VA Project No. 552-14-102 JPA Project No. 13001.00		Office of Construction and Facilities Management
Location Dayton, OH			Building Number B411		
Date 05/30/2014			Drawing Number 411M401		
Checked DLE		Drawn PCW	Dwg. of		 Department of Veterans Affairs



NOTE: REFER TO FLOOR PLANS FOR DOOR SWING AND PIPING HAND OF EACH UNIT.
APPROXIMATE AIR HANDLING UNIT DIMENSIONS: 144" L X 64" H X 97" W.

AIR HANDLING UNIT 411-AHU1 SECTION

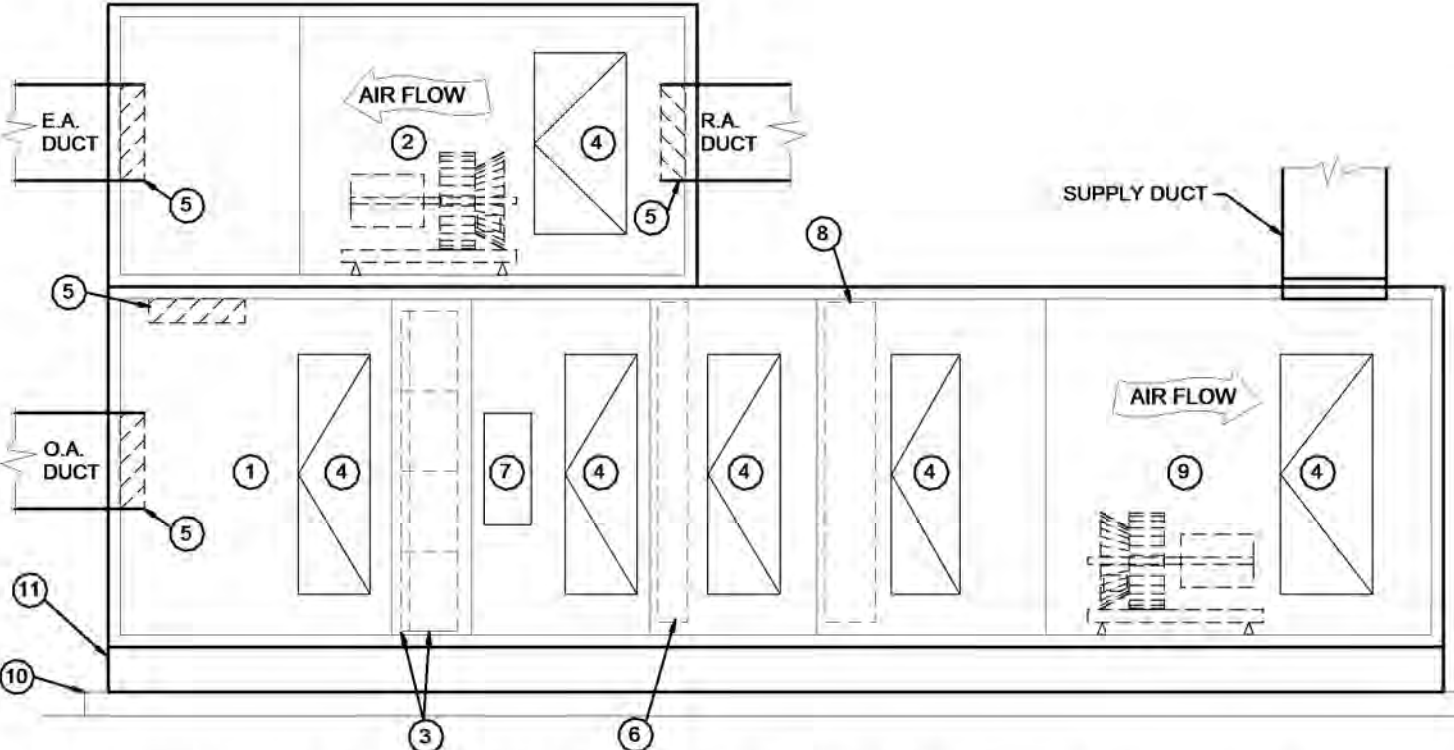
SCALE: NONE



NOTE: REFER TO FLOOR PLANS FOR DOOR SWING AND PIPING HAND OF EACH UNIT.
APPROXIMATE NEW MIXING BOX DIMENSIONS: 32" L X 60" H X 96" W, 6" BASE RAIL.

AIR HANDLING UNIT 411-AHU2 SECTION

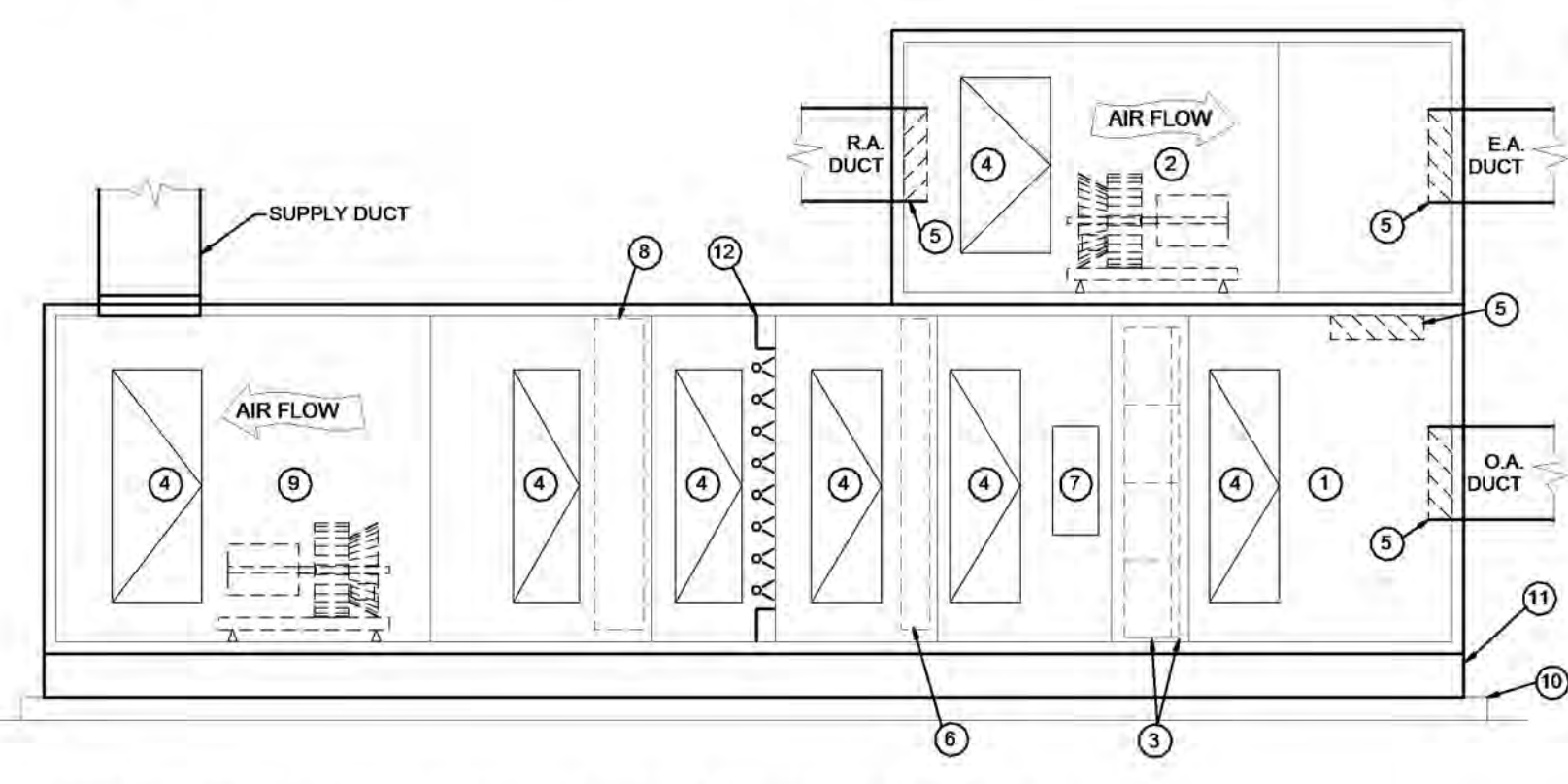
SCALE: NONE



NOTE: REFER TO FLOOR PLANS FOR DOOR SWING AND PIPING HAND OF EACH UNIT.
APPROXIMATE AIR HANDLING UNIT 3 DIMENSIONS: (LOWER) 188" L X 54" H X 60" W, 6" BASE RAIL; (UPPER) 90" L X 42" H X 60" W.
APPROXIMATE AIR HANDLING UNIT 5 DIMENSIONS: (LOWER) 174" L X 36" H X 64" W, 6" BASE RAIL; (UPPER) 70" L X 36" H X 64" W.

AIR HANDLING UNIT 411-AHU3 & 5 SECTION

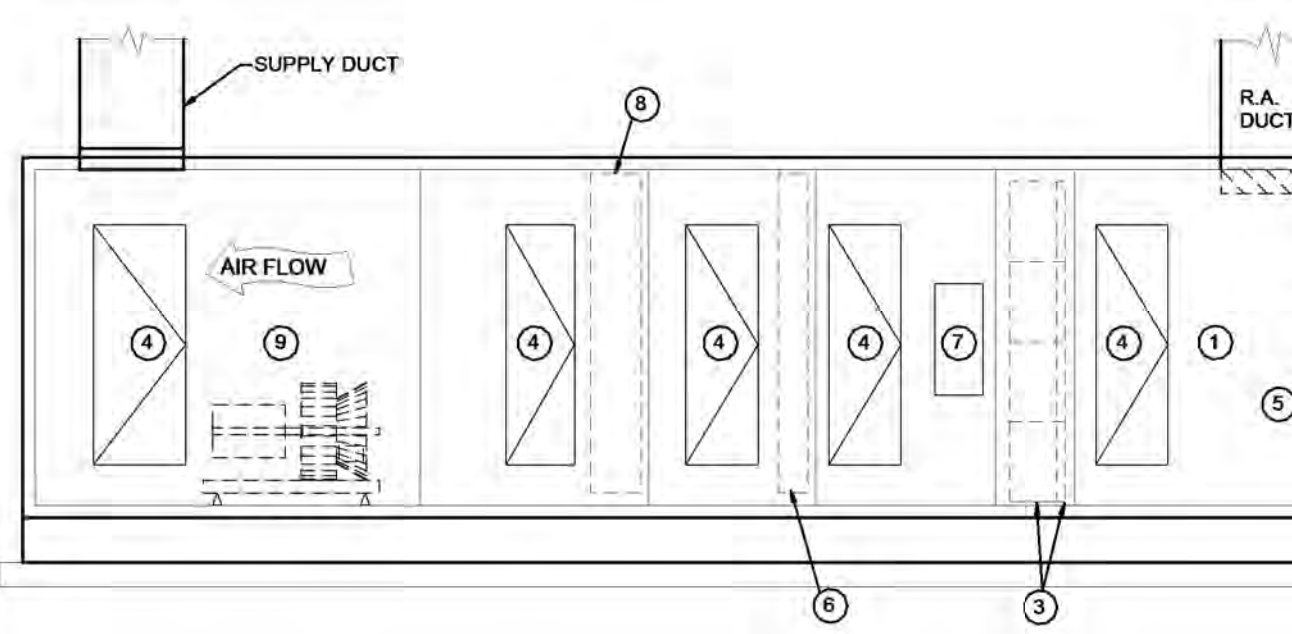
SCALE: NONE



NOTE: REFER TO FLOOR PLANS FOR DOOR SWING AND PIPING HAND OF EACH UNIT.
APPROXIMATE AIR HANDLING UNIT DIMENSIONS: (LOWER) 212" L X 66" H X 78" W, 6" BASE RAIL; (UPPER) 86" L X 44" H X 78" W.

AIR HANDLING UNIT 411-AHU4 SECTION

SCALE: NONE



NOTE: REFER TO FLOOR PLANS FOR DOOR SWING AND PIPING HAND OF EACH UNIT.
APPROXIMATE AIR HANDLING UNIT DIMENSIONS: 182" L X 46" H X 46" W, 6" BASE RAIL.

AIR HANDLING UNIT 411-AHU6 SECTION

SCALE: NONE

AHU SECTION NOTES

- 1 ECONOMIZER SECTION.
- 2 BASE RAIL.
- 3 PRE AND FINAL FILTERS.
- 4 ACCESS DOOR.
- 5 AUTOMATIC DAMPER.
- 6 DX COOLING COIL.
- 7 SUPPLY FAN.
- 8 PROVIDE SUPPLEMENTAL UNIT SUPPORT TO ALLOW VERTICAL DISCHARGE SUPPLY AIR DUCTWORK TO CONNECT TO EXISTING. RAISE UNIT APPROXIMATELY 24".

AHU SECTION NOTES

- 1 NEW ECONOMIZER SECTION.
- 2 BASE RAIL.
- 3 PRE AND FINAL FILTERS.
- 4 ACCESS DOOR.
- 5 EXISTING AUTOMATIC DAMPER.
- 6 COOLING COIL.
- 7 SUPPLY FAN.
- 8 AUTOMATIC DAMPER WITH INTEGRAL AIRFLOW MEASURING.

AHU SECTION NOTES

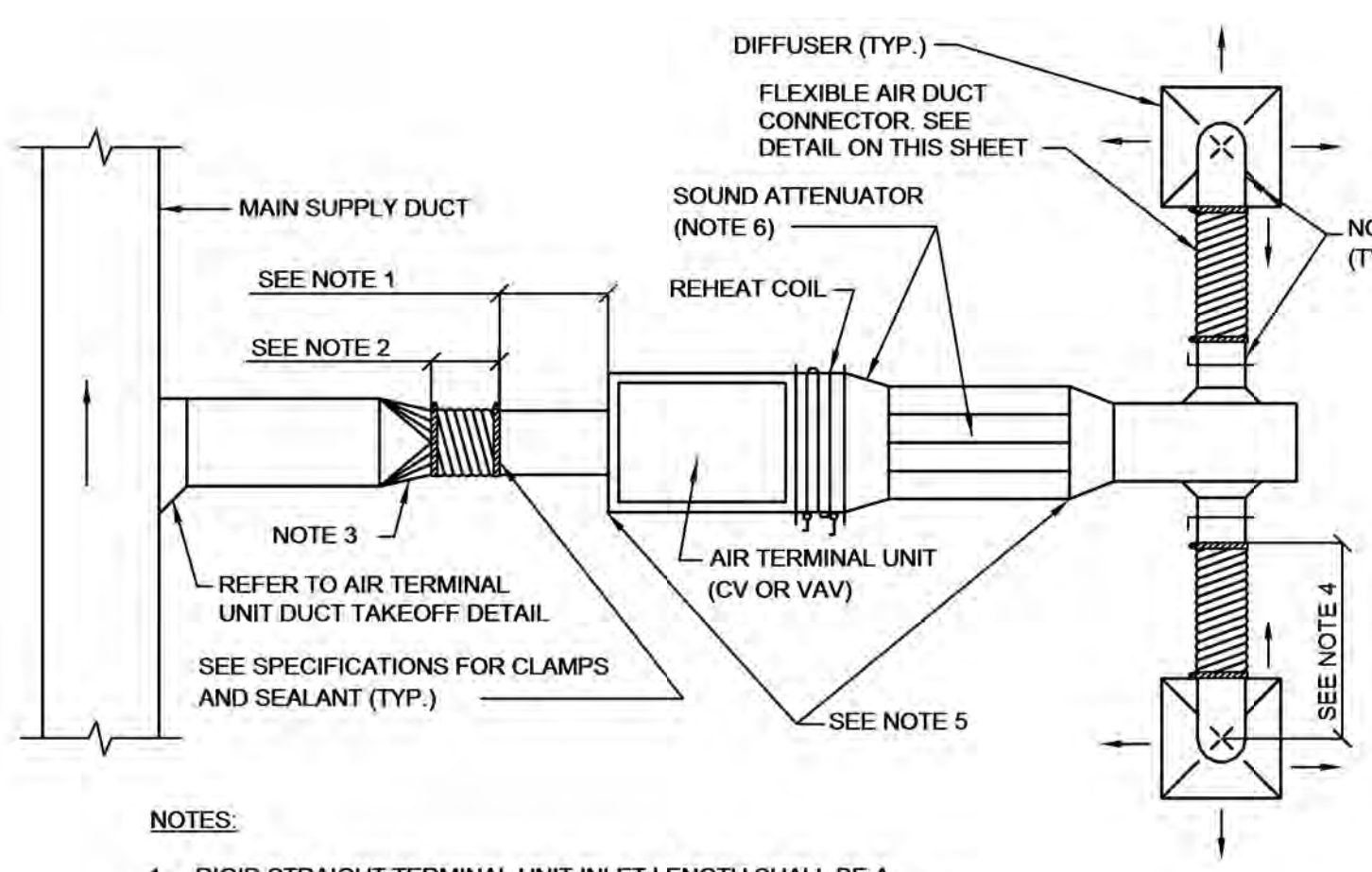
- 1 ECONOMIZER SECTION.
- 2 RETURN FAN.
- 3 PRE AND FINAL FILTERS.
- 4 ACCESS DOOR.
- 5 AUTOMATIC DAMPER (WITH INTEGRAL AIRFLOW MEASURING (AHUS R.A.)).
- 6 PREHEAT COIL.
- 7 AIR BLENDER.
- 8 COOLING COIL.
- 9 SUPPLY FAN.
- 10 5" HIGH CONCRETE HOUSEKEEPING PAD.
- 11 BASE RAIL, SIZE TO ACCOMMODATE COOLING COIL CONDENSATE TRAP, MINIMUM 6" HIGH.

AHU SECTION NOTES

- 1 ECONOMIZER SECTION.
- 2 RETURN FAN.
- 3 PRE AND FINAL FILTERS.
- 4 ACCESS DOOR.
- 5 AUTOMATIC DAMPER.
- 6 PREHEAT COIL.
- 7 AIR BLENDER.
- 8 COOLING COIL.
- 9 SUPPLY FAN.
- 10 5" HIGH CONCRETE HOUSEKEEPING PAD.
- 11 BASE RAIL, SIZE TO ACCOMMODATE COOLING COIL CONDENSATE TRAP, MINIMUM 6" HIGH.
- 12 HUMIDIFIER WITH BLANK OFF PANEL.

AHU SECTION NOTES

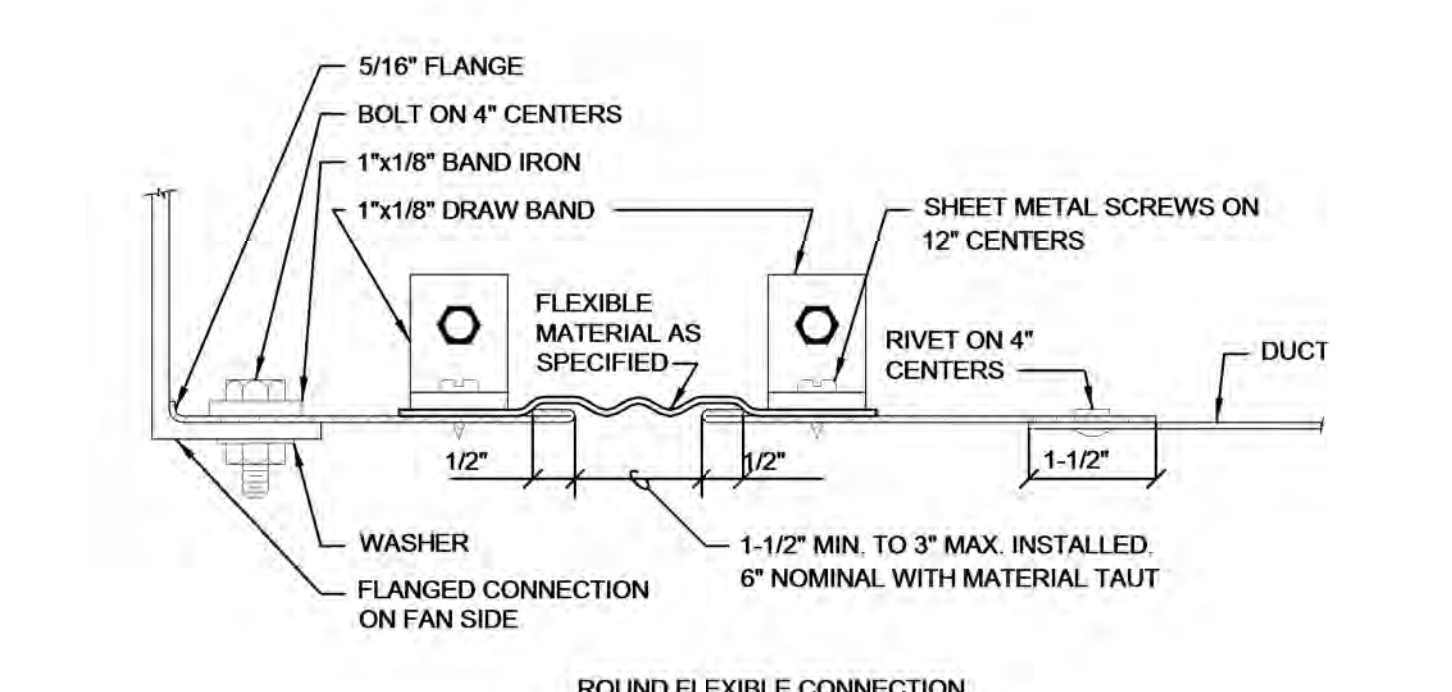
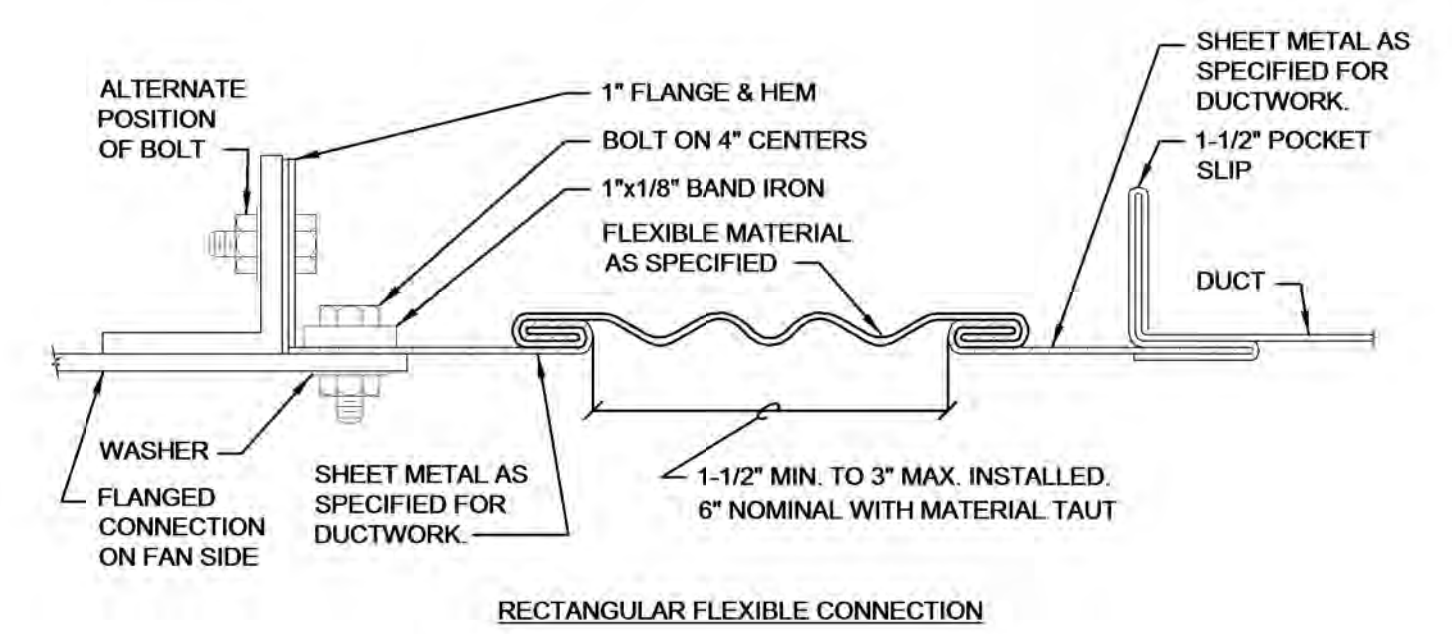
- 1 ECONOMIZER SECTION.
- 2 BASE RAIL, SIZE TO ACCOMMODATE COOLING COIL CONDENSATE TRAP, MINIMUM 6" HIGH.
- 3 PRE AND FINAL FILTERS.
- 4 ACCESS DOOR.
- 5 AUTOMATIC DAMPER WITH INTEGRAL AIRFLOW MEASURING.
- 6 PREHEAT COIL.
- 7 AIR BLENDER.
- 8 COOLING COIL.
- 9 SUPPLY FAN.
- 10 5" HIGH CONCRETE HOUSEKEEPING PAD.



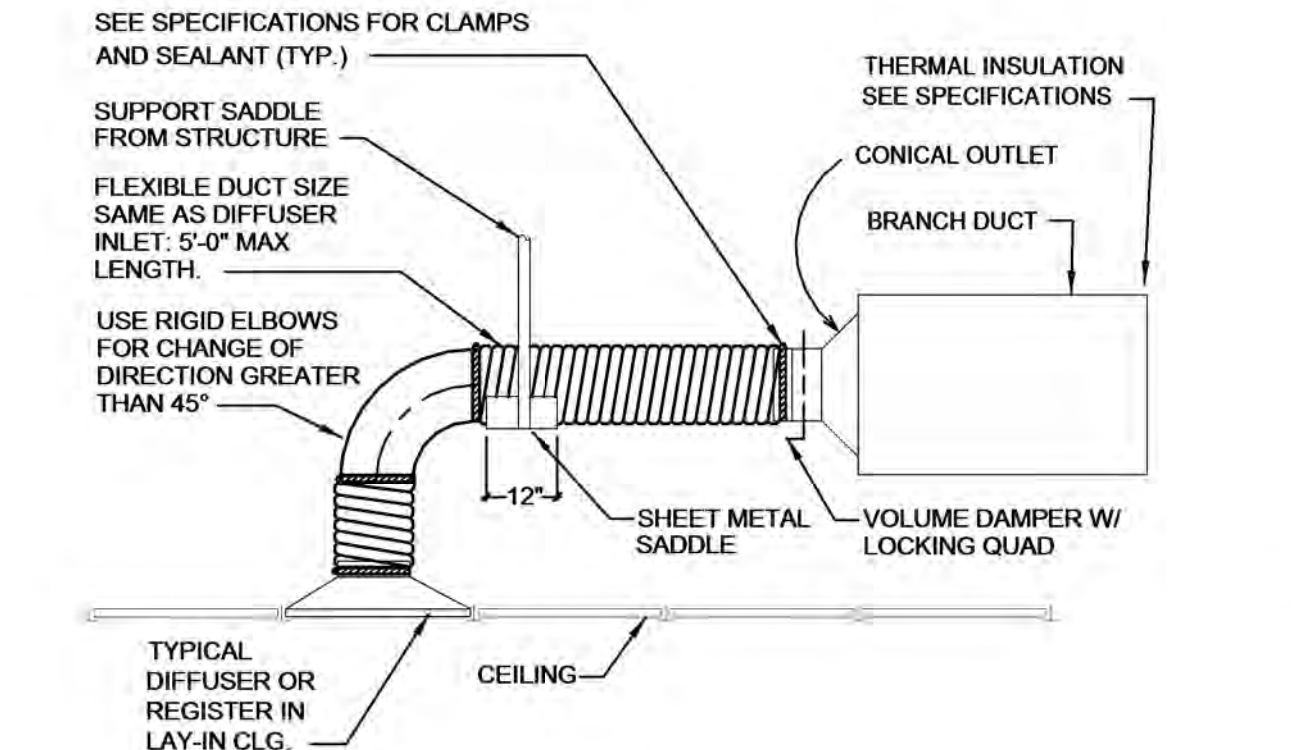
NOTES:

1. RIGID STRAIGHT TERMINAL UNIT INLET LENGTH SHALL BE A MINIMUM OF 3 TIMES THE DIAMETER OF INLET SO AS TO ACHIEVE ACCURATE AIRFLOW SENSOR READINGS.
2. A FLEXIBLE AIR DUCT CONNECTOR IS NOT MANDATORY FOR INLET TO THIS BOX, BUT ALLOWED TO ACCOMMODATE MINOR OFFSETS, MAXIMUM LENGTH 3'-0".
3. PROVIDE DUCT TRANSITION WHERE SCHEDULED DUCT RUNOUT SIZE TO UNIT IS DIFFERENT THAN TERMINAL UNIT INLET SIZE.
4. FLEXIBLE AIR DUCT CONNECTORS, WHEN USED FROM TERMINAL UNIT SUPPLY AIR DUCT TO DIFFUSER, SHALL NOT EXCEED 5'-0". USE RIGID ELBOWS FOR CHANGE OF DIRECTION GREATER THAN 45°.
5. COMPONENT ARRANGEMENT MAY VARY BY MANUFACTURER. PROVIDE INSULATION W/VAPOR BARRIER FOR CONNECTING DUCT SECTIONS.
6. PROVIDE SOUND ATTENUATOR IF REQUIRED TO MEET DESIGN ROOM NC. PROVIDE DUCT TRANSITION BETWEEN TERMINAL UNIT AND SOUND ATTENUATOR WHERE ATTENUATOR SIZE DIFFERS FROM TERMINAL UNIT OUTLET SIZE.
7. DUCT RUNOUT TO DIFFUSERS SHALL BE SAME SIZE AS THE DIFFUSER NECK SIZE UNLESS OTHERWISE NOTED.

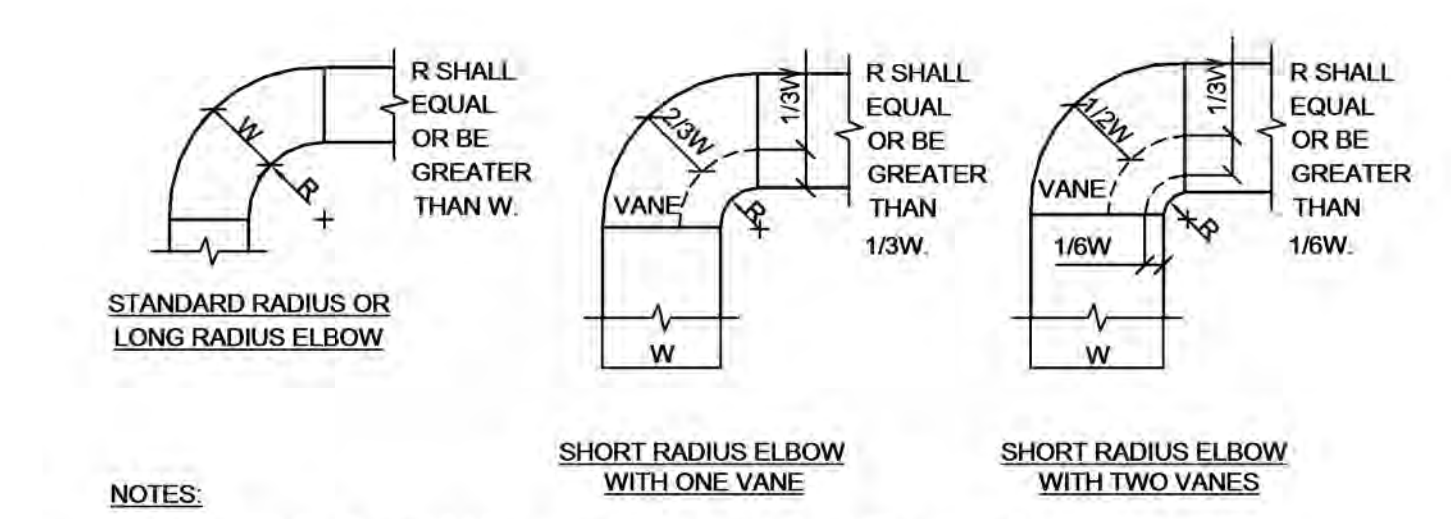
DUCT CONNECTIONS-AIR TERMINAL UNITS



FLEXIBLE DUCT CONNECTIONS



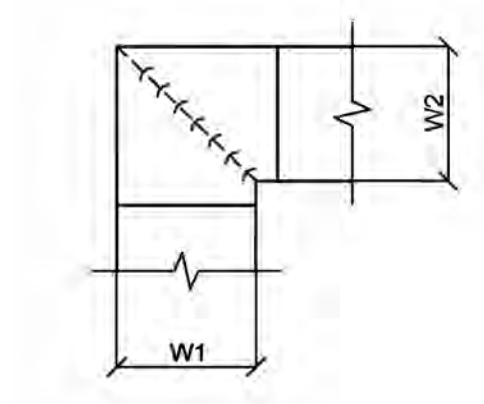
FLEXIBLE AIR DUCT CONNECTOR



NOTES:

1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
2. ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

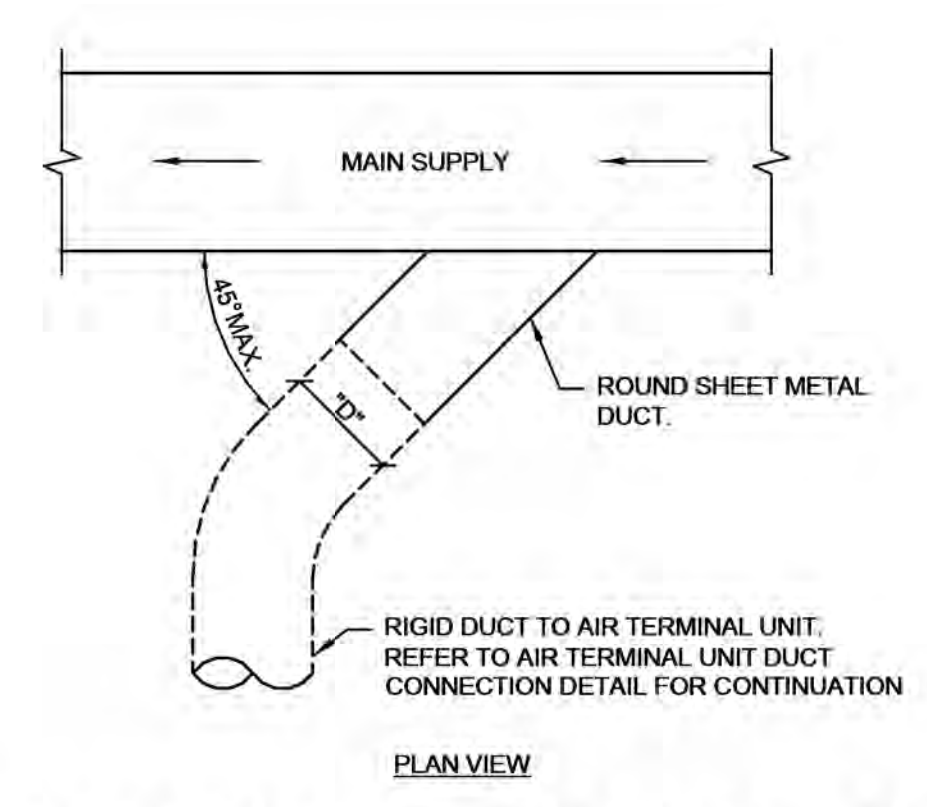
DUCTWORK RADIUS ELBOWS



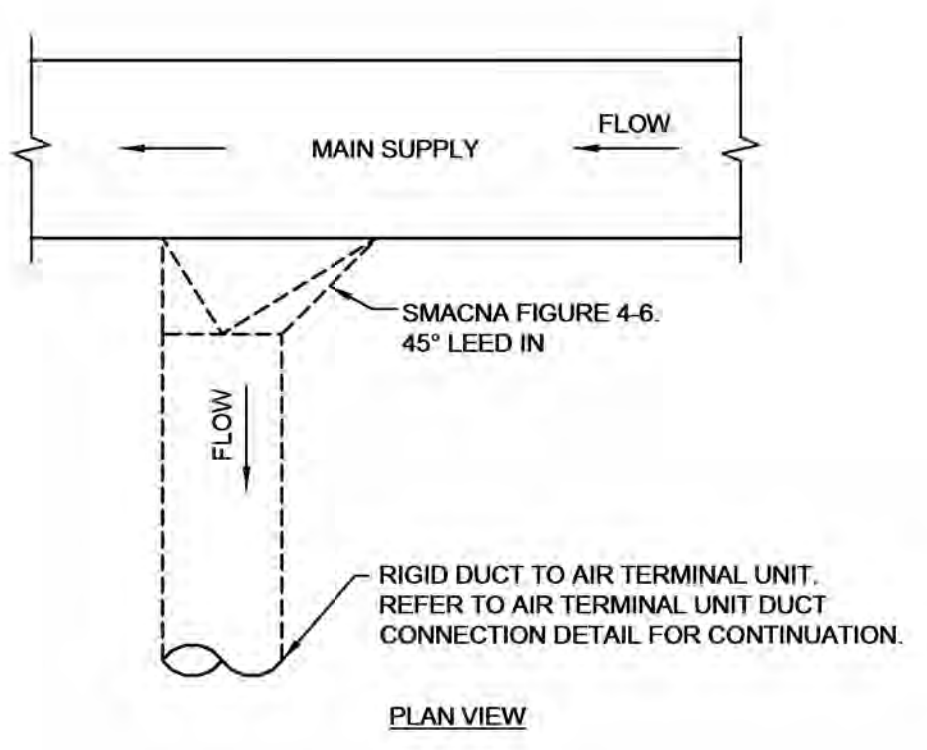
NOTES:

1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" RADIUS, 1 1/2" MAXIMUM SPACE BETWEEN VANES AND A 3/4" TRAILING EDGE.
4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20", VANES SHALL BE DOUBLE VANE TYPE.

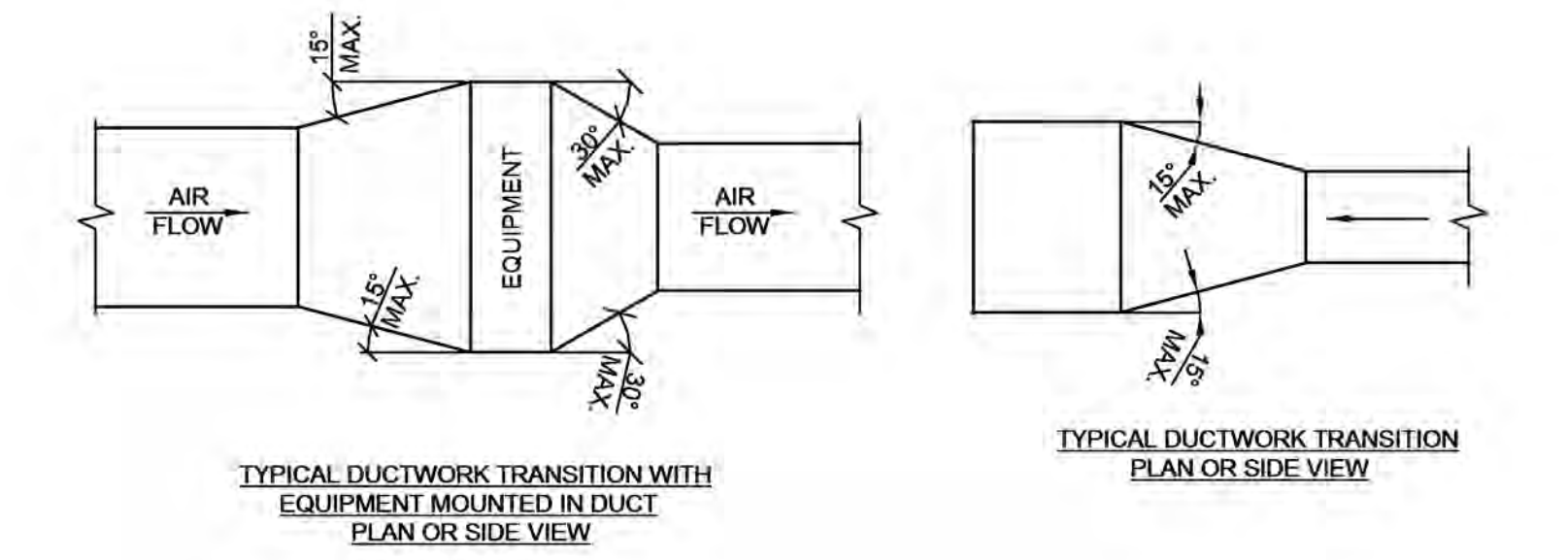
DUCTWORK SQUARE VANE ELBOWS



SUPPLY DUCT TAKEOFF - AIR TERMINAL UNITS

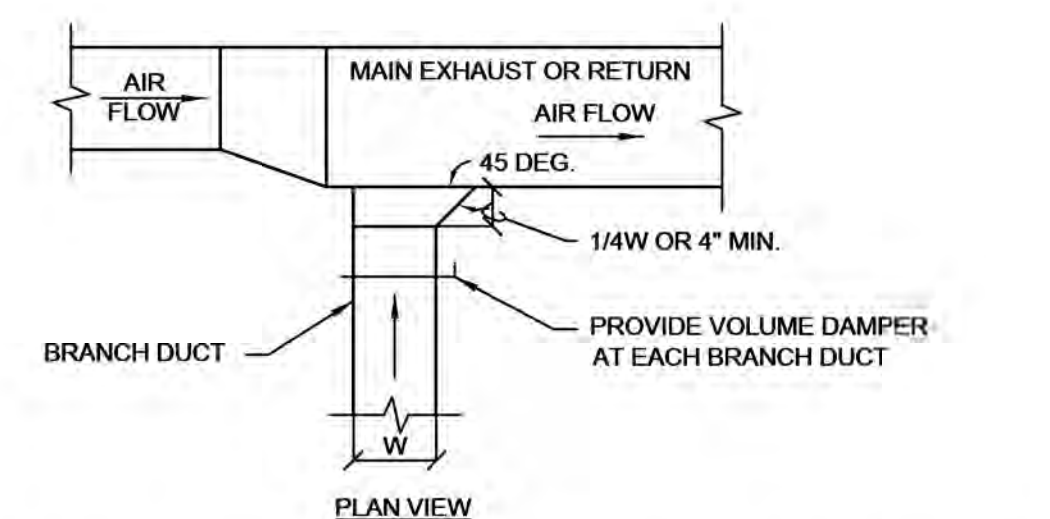


ALTERNATE SUPPLY DUCT TAKEOFF - AIR TERMINAL UNITS

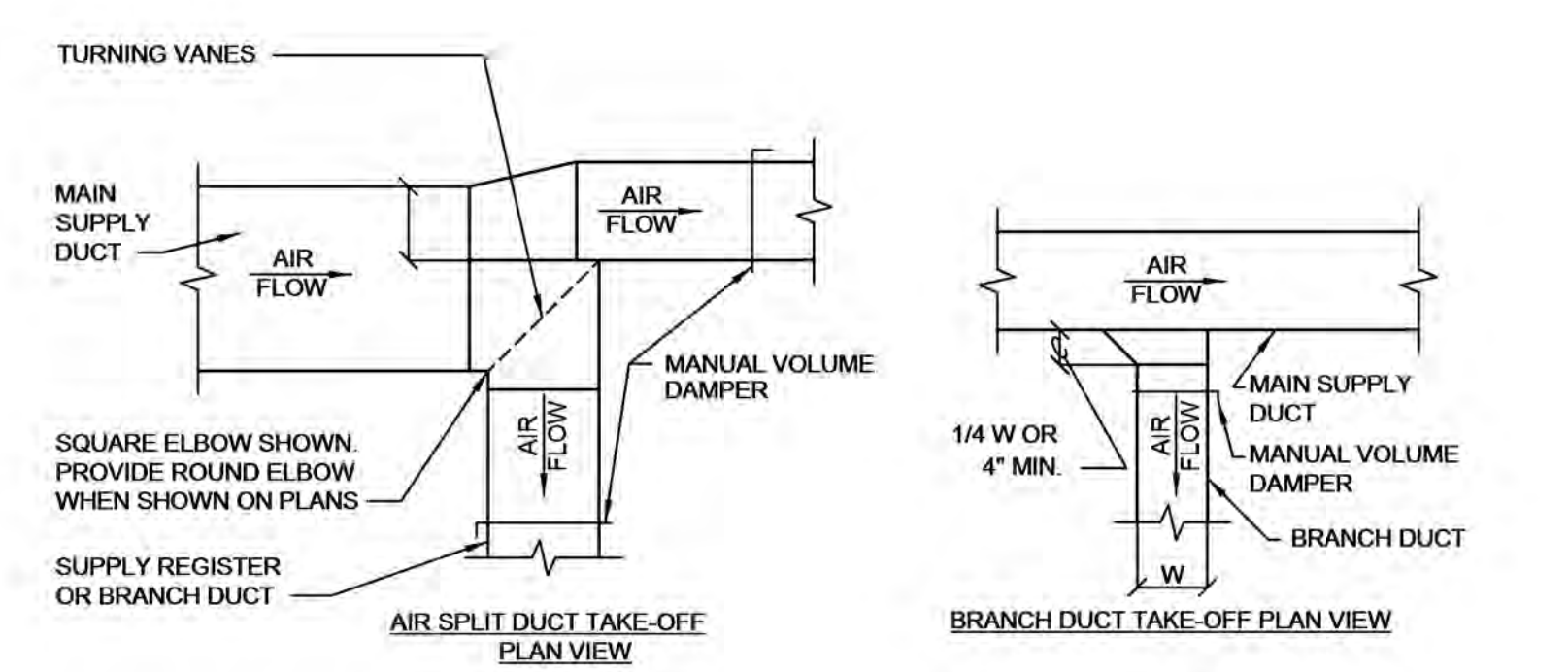


NOTE: UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.

DUCTWORK TRANSITIONS

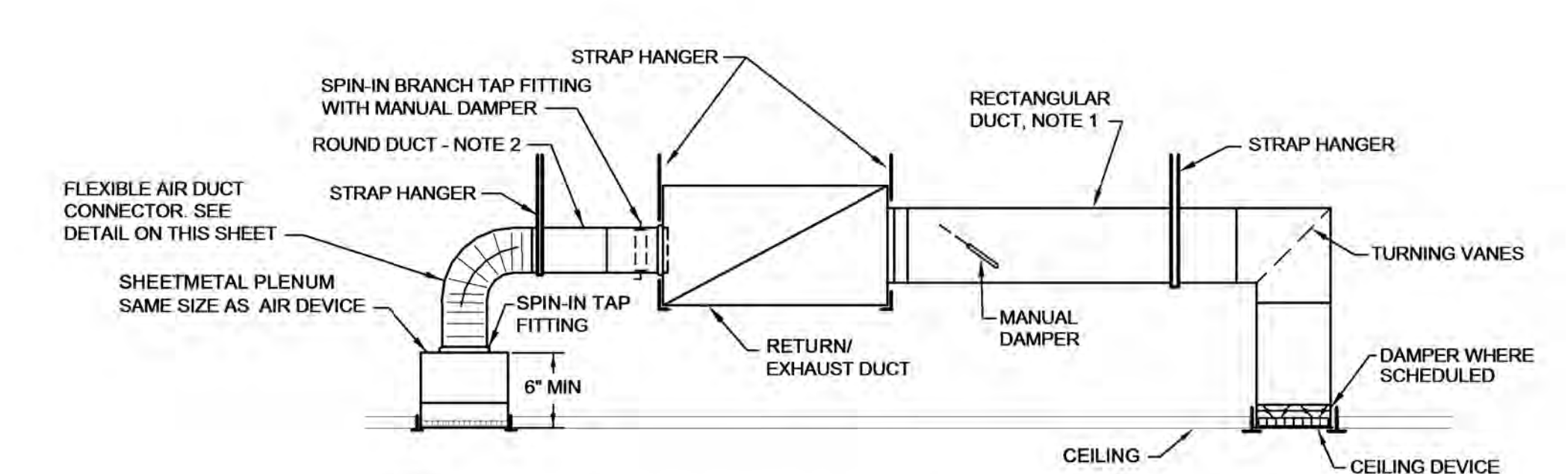


EXHAUST OR RETURN BRANCH DUCTWORK



THE BRANCH DUCT TAKE-OFF MAY BE USED FOR UP TO 15% OF THE MAIN DUCT CFM ANYTIME, AND UP TO 40% WHEN THE MAIN DUCT VELOCITY IS 1000 FPM OR LESS. THE AIR SPLIT DUCT TAKE-OFF SHALL BE USED IN ALL OTHER CASES.

SUPPLY DUCTWORK TAKE-OFFS



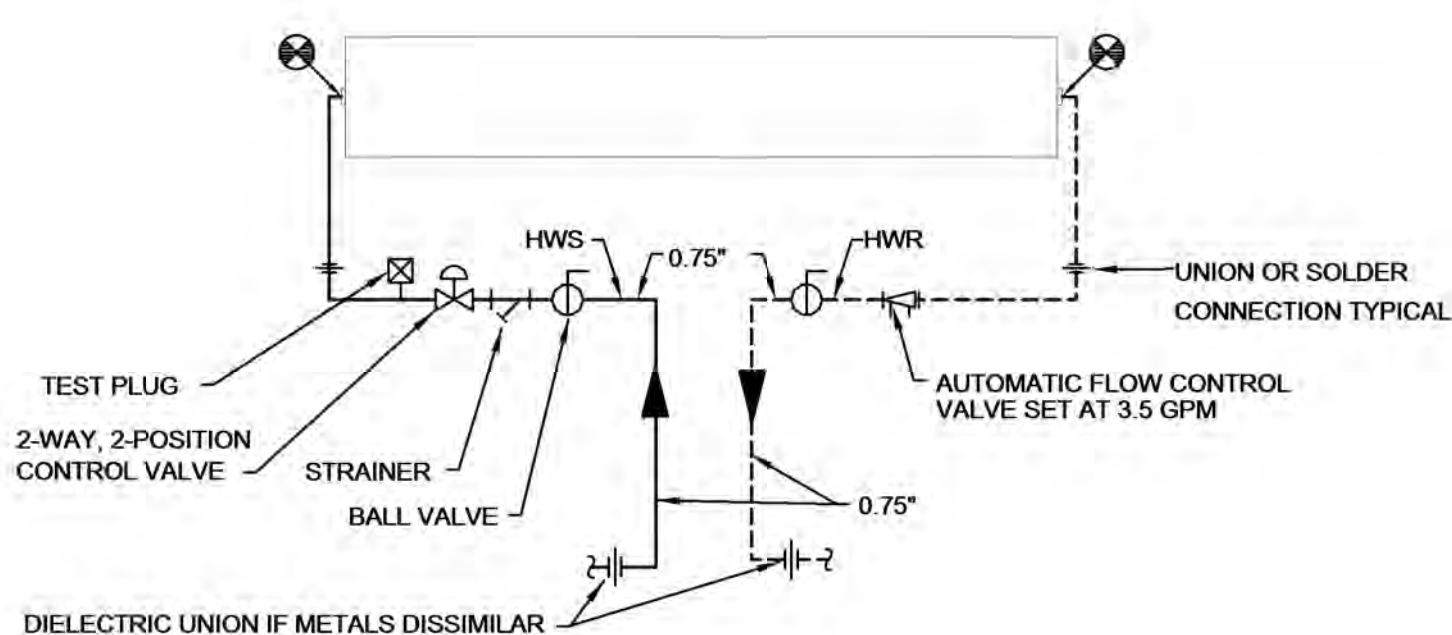
NOTES:

- 1 BRANCH DUCT TAKE-OFF WITH MANUAL DAMPER.
- 2 BRANCH DUCT SIZES, UNLESS NOTED ON PLANS ARE TO BE SIZED AS FOLLOWS:
100 CFM AND LESS - 8" DIA.
101 CFM TO 250 CFM - 10" DIA.
251 CFM TO 400 CFM - 12" DIA.
401 CFM TO 700 CFM - 14" DIA.

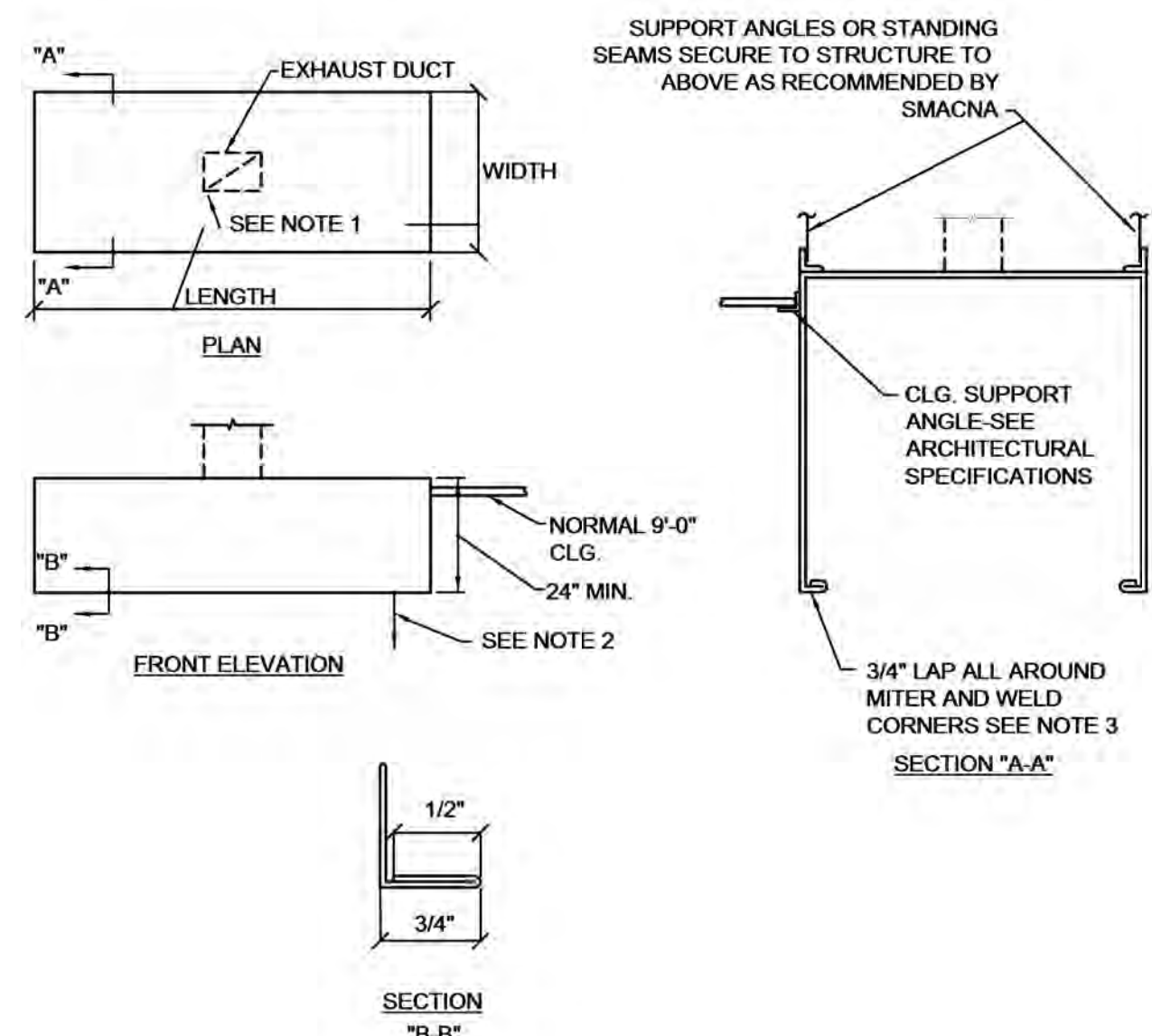
RETURN OR EXHAUST GRILLE/REGISTER CONNECTION

FULLY SUPPRESSED

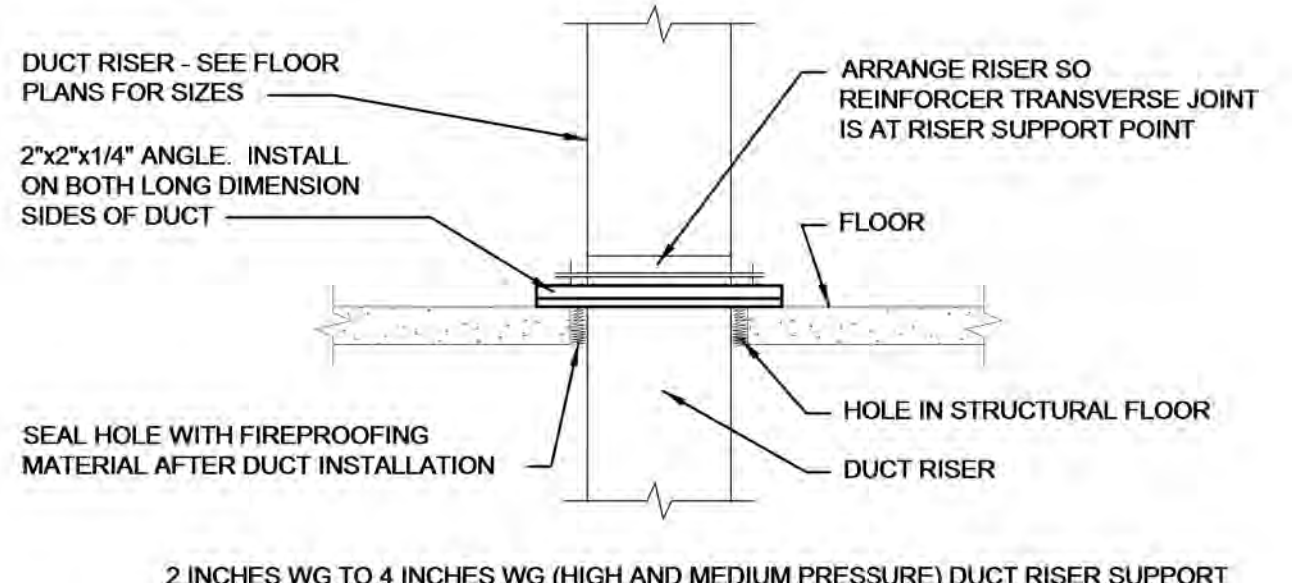
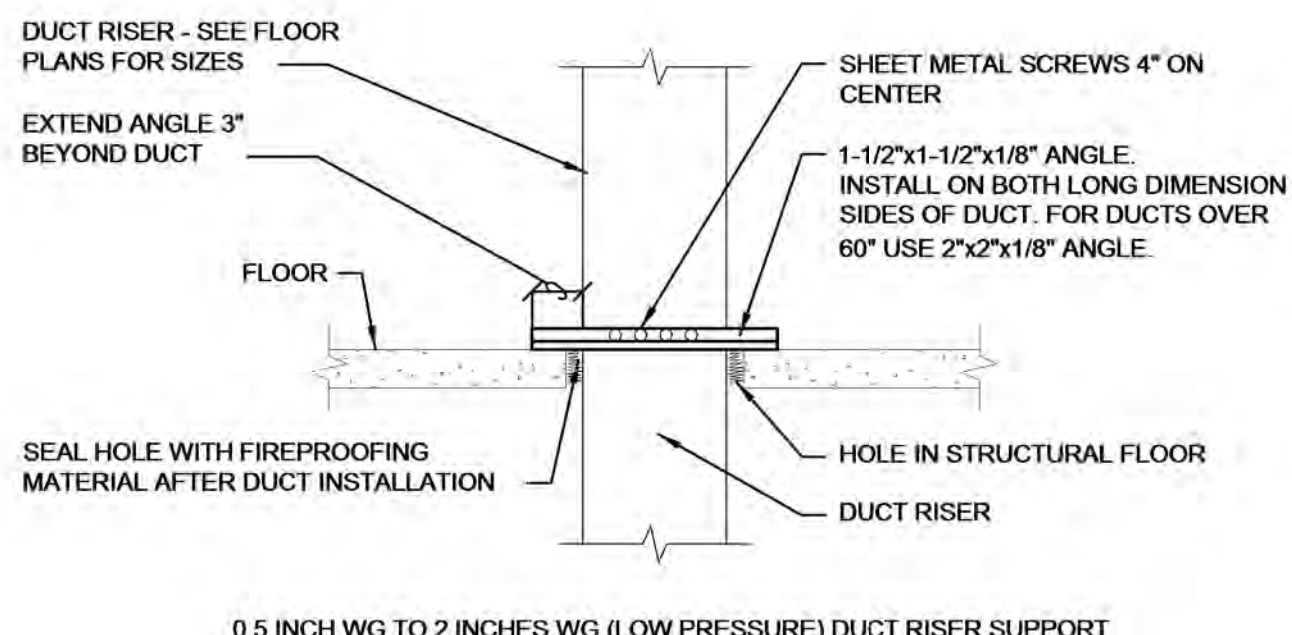
<div>Revisions</div> <table border="1"><thead><tr><th>Revisions</th><th>Date</th></tr></thead><tbody><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></tbody></table>	Revisions	Date							<div>CONSULTANTS:</div> <div>JOHN DOE ARCHITECTS</div> <div>REITANO DESIGN GROUP</div> <div>THP</div> <div>KLEINGERS GROUP</div>	<div>HEAPY PROJECT No.: 2013-04002</div> <div>ARCHITECT/ENGINEERS:</div> <div>Heapy Engineering</div> <div>Mechanical Electrical Commissioning Technology</div> <div>Nationally Recognized Leader in Sustainability / LEED</div> <div>1400 W Dorothy Lane, Dayton OH 45409-1310</div> <div>Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com</div>	<div>Drawing Title</div> <div>DETAILS</div> <div>Approved: Project Director</div>	<div>Project Title</div> <div>Correct Deficiencies Patient Kitchen B411</div> <div>Location</div> <div>Dayton, OH</div> <div>Date</div> <div>05/30/2014</div> <div>Checked</div> <div>DLE</div> <div>Drawn</div> <div>PCW</div>	<div>Project No.</div> <div>VA Project No. 552-14-102</div> <div>JPA Project No. 13001.00</div> <div>Building Number</div> <div>B411</div> <div>Drawing Number</div> <div>411M501</div> <div>Dwg. of</div>	<div>Office of Construction and Facilities Management</div> <div>Department of Veterans Affairs</div>
	Revisions	Date												



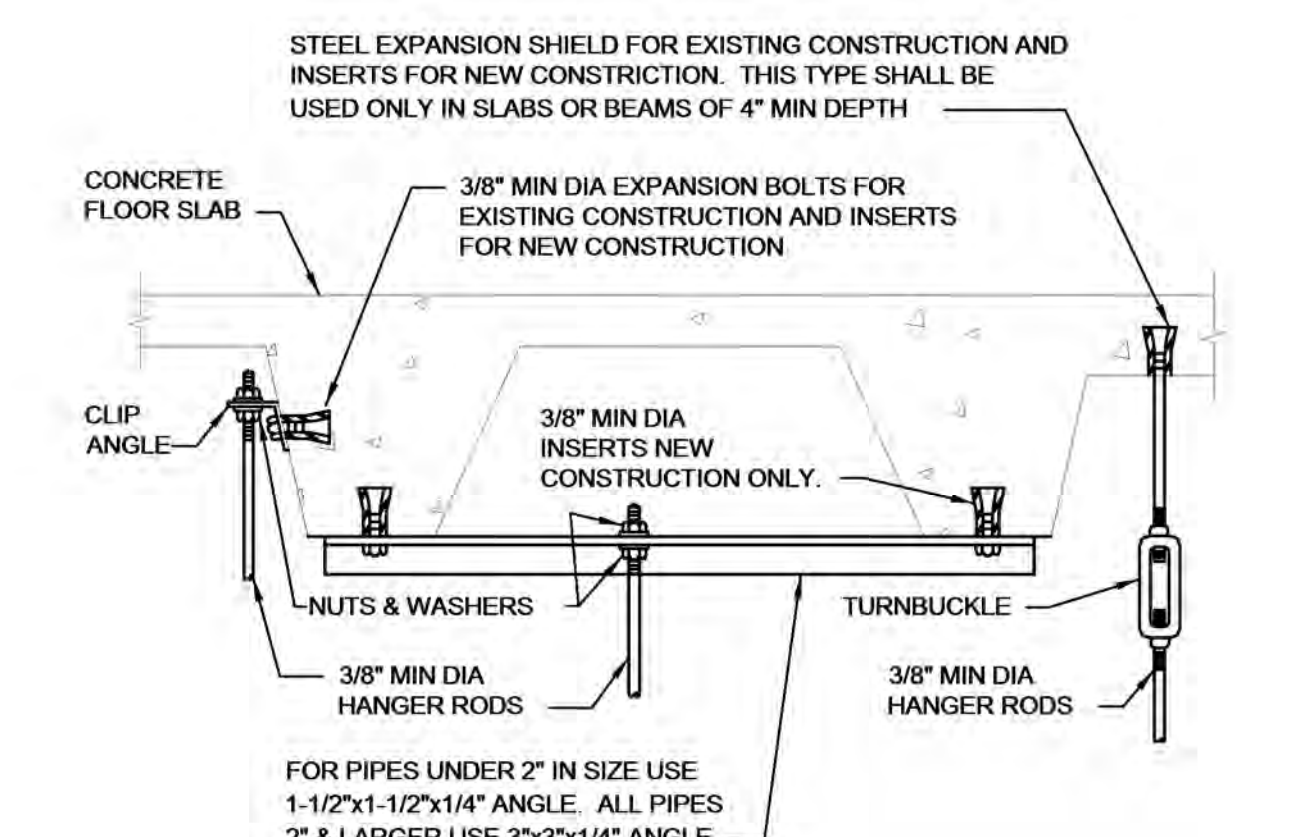
TYPICAL WATER PIPING CONNECTIONS TO EXISTING AIR CURTAIN



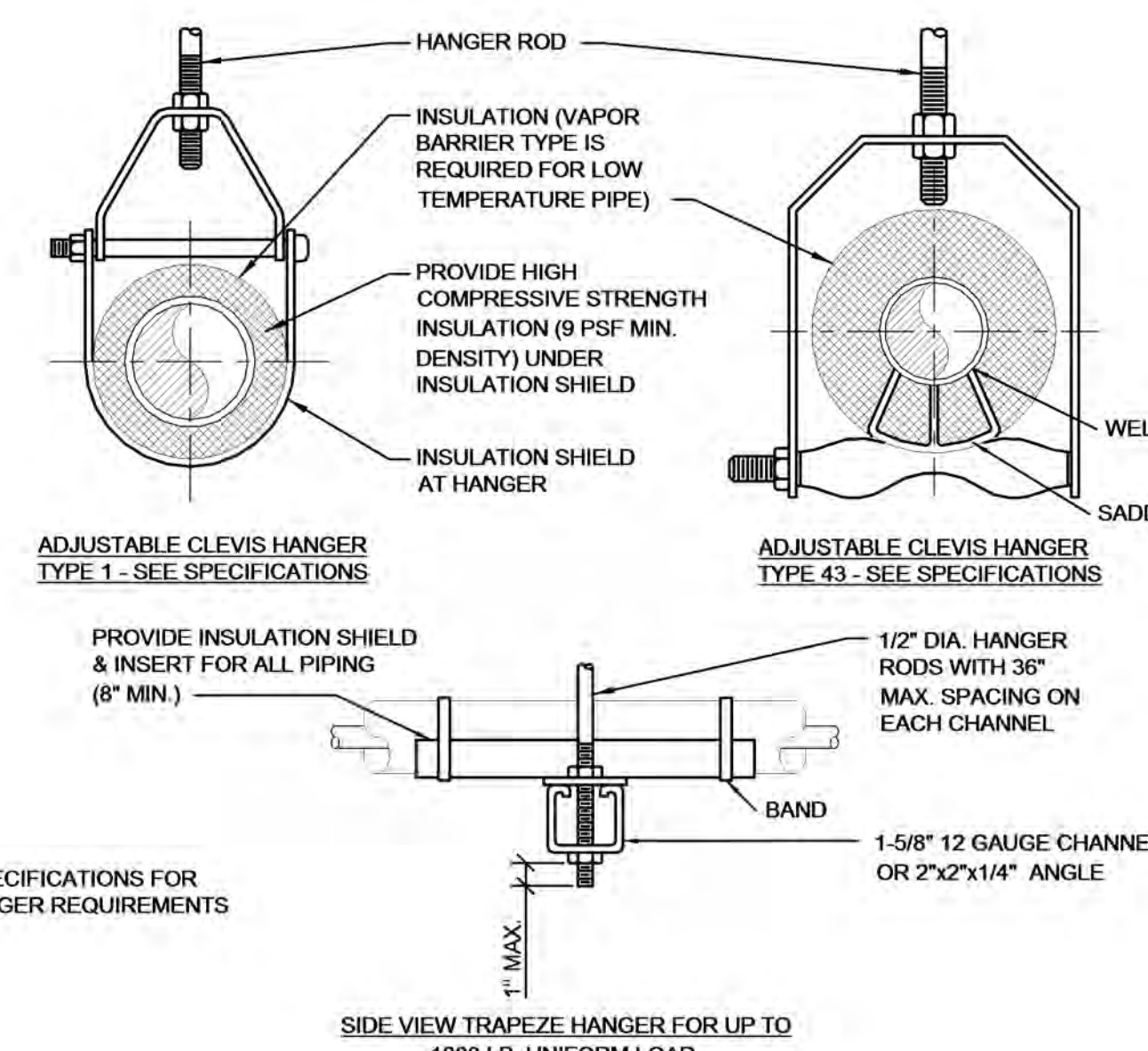
CANOPY HOOD TYPE "A"



DUCT RISER SUPPORTS

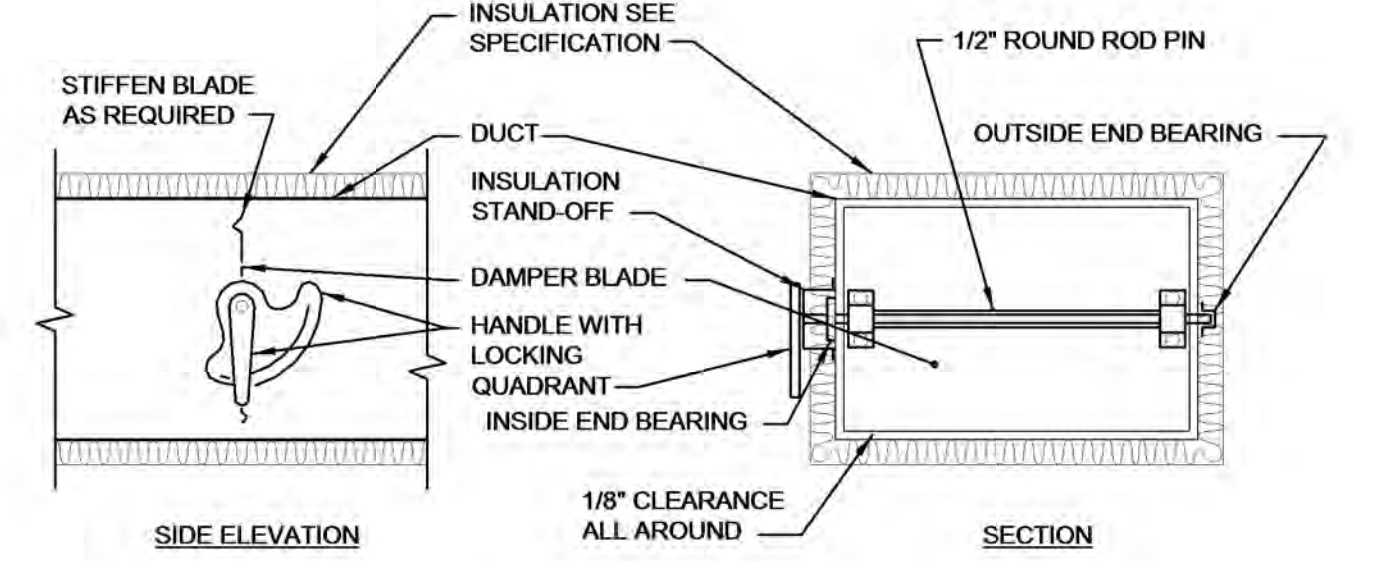


SECURING HANGER RODS IN CONCRETE



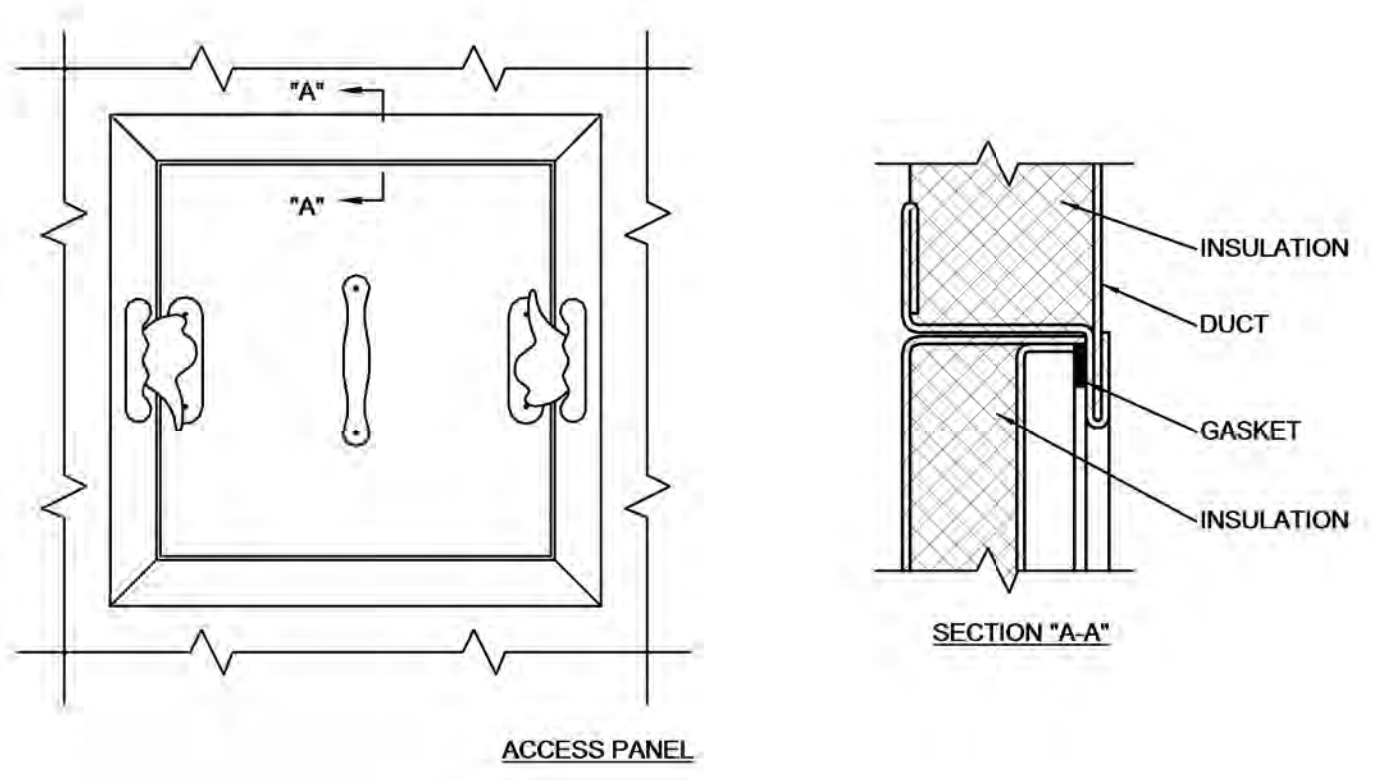
MAXIMUM PIPE/TUBING SUPPORT SPACING																				
NOM. SIZE	IN.	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	
PIPE	FT.	7	7	7	9	10	11	12	14	16	17	19	22	23	25	27	28	30	32	
TUBING	FT.	5 FT	6	7	8	8	9	10	12	13	14	16	-	-	-	-	-	-	-	
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.																				

PIPE HANGERS



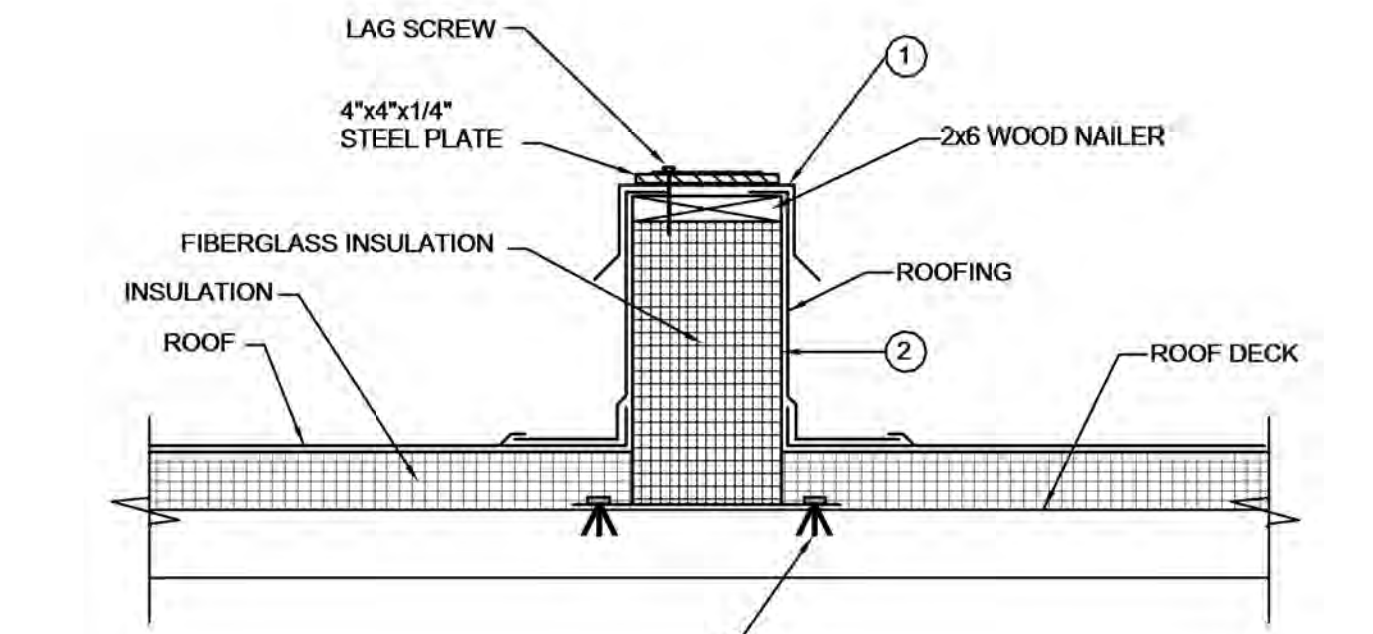
- NOTES:
- DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
 - DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

VOLUME DAMPER DETAIL



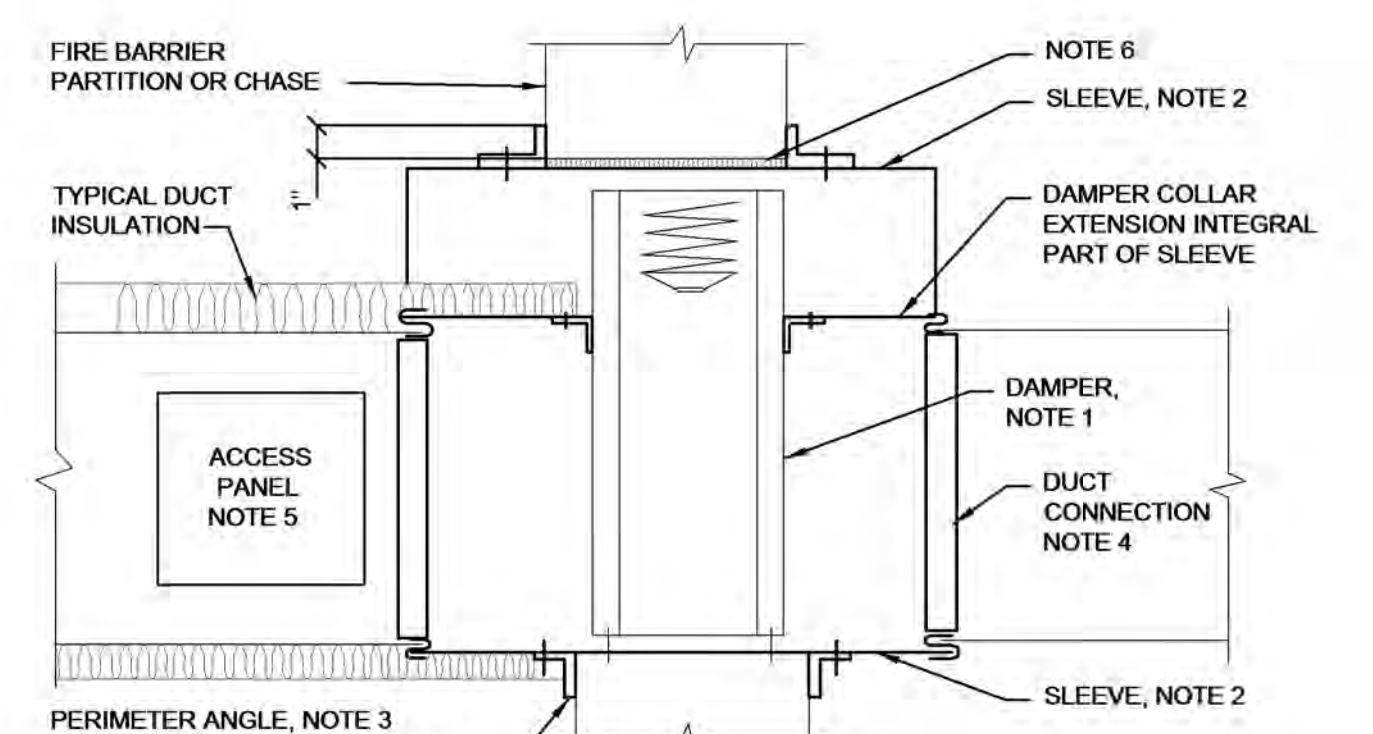
- NOTES:
- LATCHES SHALL BE OF THE WEDGE TYPE TO CLOSE DOORS TIGHTLY.
 - HINGES ON THE ACCESS DOORS SHALL HAVE NON-CORROSIVE PIN.
 - SEE SMACNA 2005, FIGURE 9-15

ACCESS PANEL AND DOOR DETAIL



- NOTES:
- 18 GAUGE GALVANIZED STEEL COUNTER-FLASHING.
 - WELDED 14 GAUGE EQUIPMENT SUPPORT CURB, MEETING ASTM A-446, 525, 526 AND 527 REQUIREMENTS, WITH WELDED CORNERS WITH SEAMS JOINED BY CONTINUOUS WELDS. CURB SHALL BE INTERNALLY REINFORCED WITH BULKHEADS AND SPREADERS, 24" ON CENTER TO MEET LOAD RATING OF EQUIPMENT. CURB TO EXTEND 6" BEYOND EQUIPMENT, REFER TO FLOOR PLANS FOR HEIGHT.
 - SECURE CURB TO ROOF WITH EXPANSION BOLTS (CONCRETE ROOF) OR RUST RESISTANT BOLTS (METAL DECK AND BAR JOIST ROOF), 12" O.C.

EQUIPMENT/DUCT SUPPORT ROOF CURB



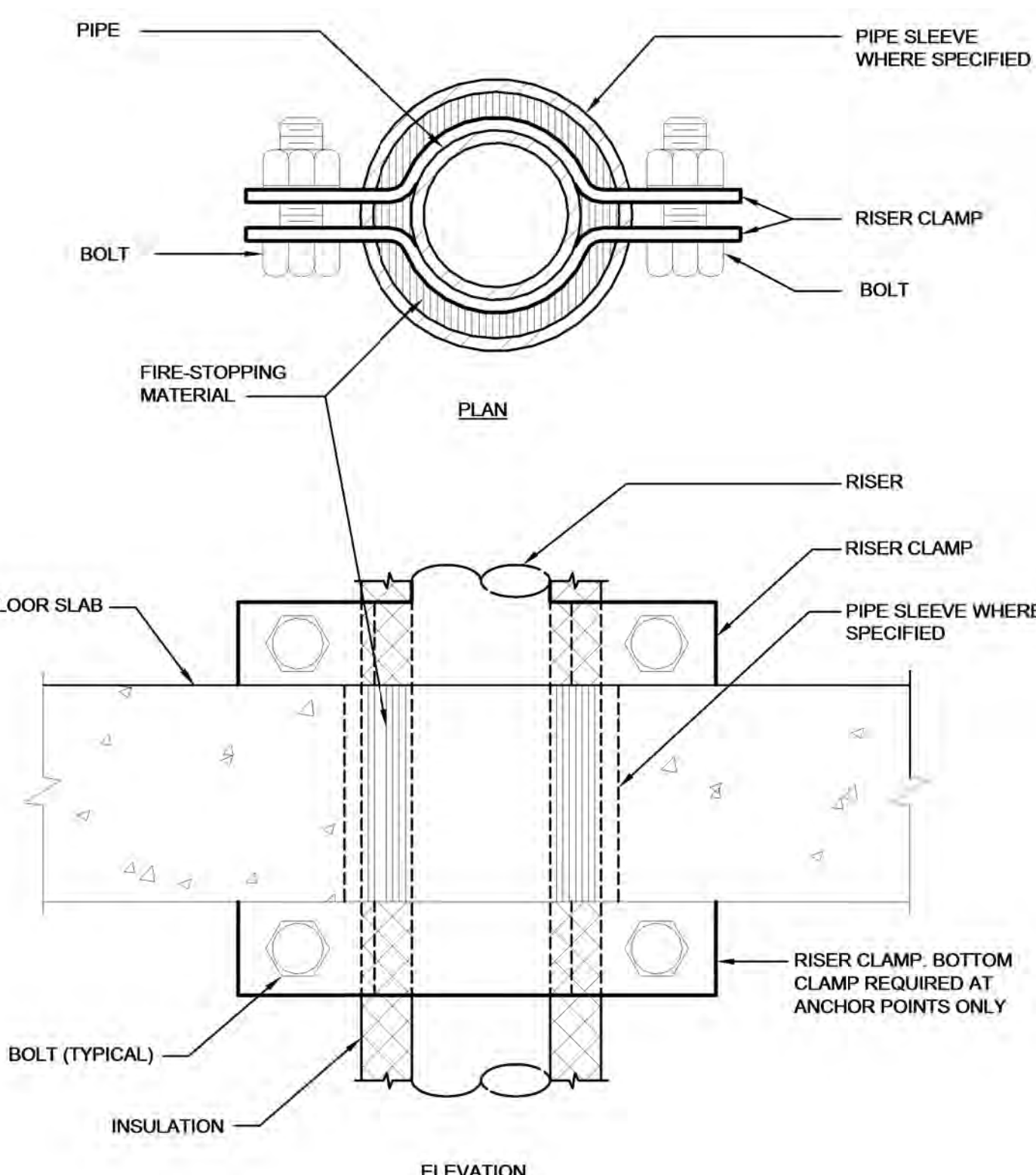
- NOTES:
- A VERTICAL DAMPER IS SHOWN. HORIZONTAL DAMPER INSTALLATION, IS SIMILAR. FOLLOW DAMPER MANUFACTURER'S INSTRUCTIONS, INCLUDING FASTENER OPTIONS AND GAGES FOR SLEEVE AND PERIMETER ANGLES. FIRE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR AND NOT OUTSIDE THE PENETRATION.
 - GALVANIZED SLEEVE: GAGE NOT LESS THAN CONNECTING DUCT. FASTEN SLEEVE TO DAMPER FRAME AND TO PERIMETER ANGLES.
 - PERIMETER ANGLES: GALVANIZED STEEL, NOT LESS THAN 1-1/2"x1-1/2", 14 GAGE, TO PROVIDE 1" MINIMUM OVERLAP OF OPENING ON ALL 4 SIDES.
 - BREAKAWAY DUCT CONNECTION: CONTRACTOR'S OPTION OF TYPES SHOWN IN SMACNA.
 - ACCESS PANELS: SIZE AND LOCATION TO PERMIT SERVICING THE FUSIBLE LINK OR LINKS.
 - PROVIDE 1/4" TO 1/2" CLEARANCE ON HEIGHT AND WIDTH. IN ORDER TO MAINTAIN U.L. RATING FOR FIRE DAMPER, DO NOT FILL THIS OPEN SPACE WITH FIRESTOP MATERIAL.
 - ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED, SUCH AS THRU ATTIC FLOORS AND MECHANICAL ROOM FLOORS, SHALL BE PROVIDED WITH 3" HIGH CONCRETE CURB AROUND OPENING FOR DUCT.

SECTION THRU FIRE DAMPER INSTALLATION

HANGER STRAPS OR RODS			
MAX. DUCT DIA. - IN.	QUANTITY/SIZE IN.	MAX. LOAD LBS.	MAX. SPACING IN.
26	ONE 1 x 22 GA. STRAP	260	144
36	ONE 1 x 18 GA. STRAP	420	144
50	ONE 1 x 18 GA. STRAP	700	144
60	TWO 3/8 DIA. RODS	1320	144
84	TWO 1/2 DIA. RODS	2500	144

NOTE: TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

ROUND DUCT HANGERS



SUPPORT/ANCHOR FOR PIPE RISERS

FULLY SUPPRESSED

<p>Revisions</p> <p>Date</p>	<p>CONSULTANTS:</p> <p>JOHN DOE ARCHITECTS</p> <p>REITANO DESIGN GROUP</p> <p>THP</p> <p>KLEINGERS GROUP</p>	<p>HEAPY PROJECT No.: 2013-04002</p> <p>GARY S. EDDICE E-52755</p> <p>FIRM LICENSE No.: 01528</p>	<p>ARCHITECT/ENGINEERS:</p> <p>Heapy Engineering</p> <p>Mechanical Electrical Commissioning Technology</p> <p>Nationally Recognized Leader in Sustainability / LEED</p> <p>1400 W Dorothy Lane, Dayton OH 45409-1310</p> <p>Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com</p>	<p>Drawing Title</p> <p>DETAILS</p> <p>Approved: Project Director</p>	<p>Project Title</p> <p>Correct Deficiencies Patient Kitchen B411</p> <p>Location</p> <p>Dayton, OH</p> <p>Date</p> <p>05/30/2014</p> <p>Checked</p> <p>DLE</p> <p>Drawn</p> <p>PCW</p> <p>Dwg. of</p> <p>411M502</p> <p>Office of Construction and Facilities Management</p> <p>Department of Veterans Affairs</p>
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