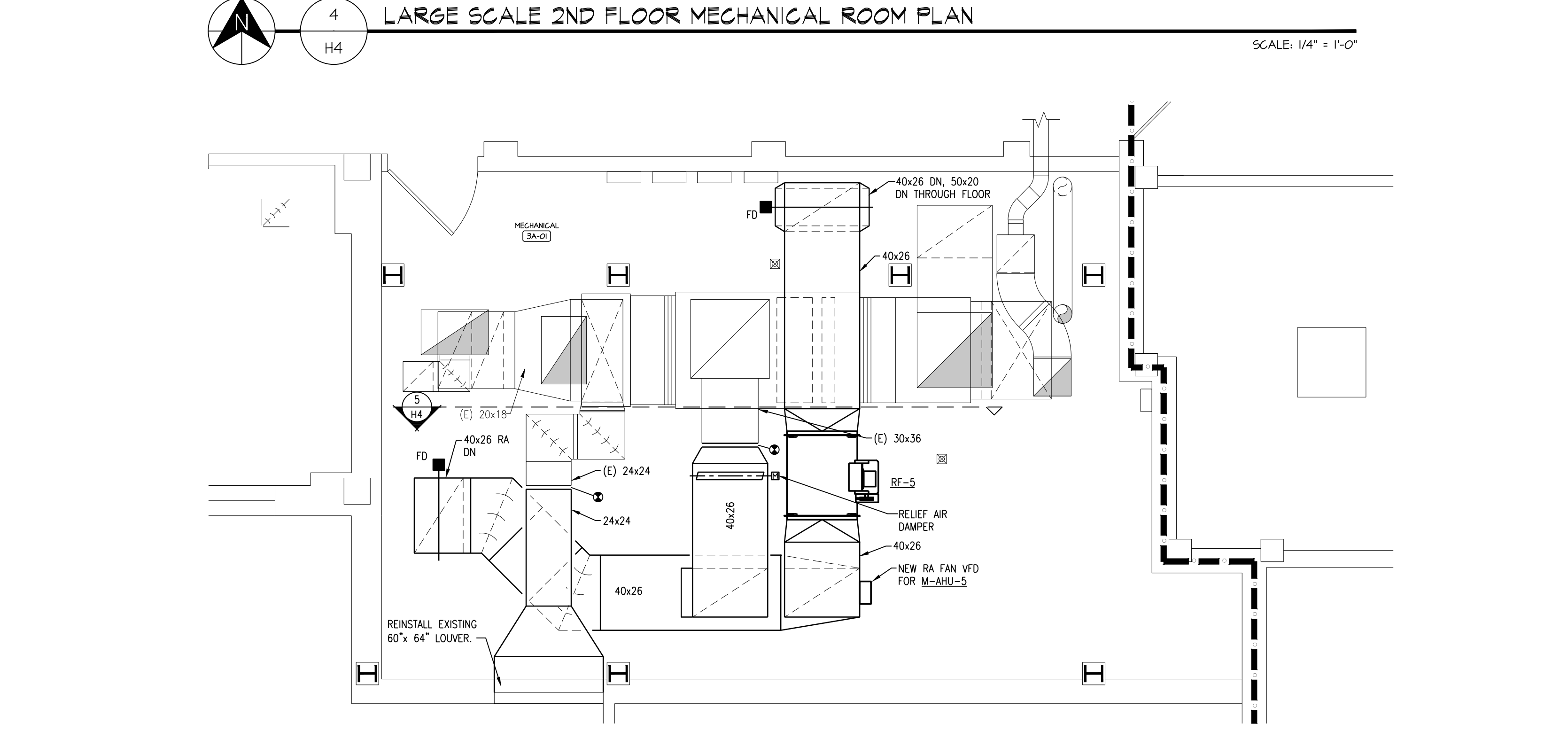
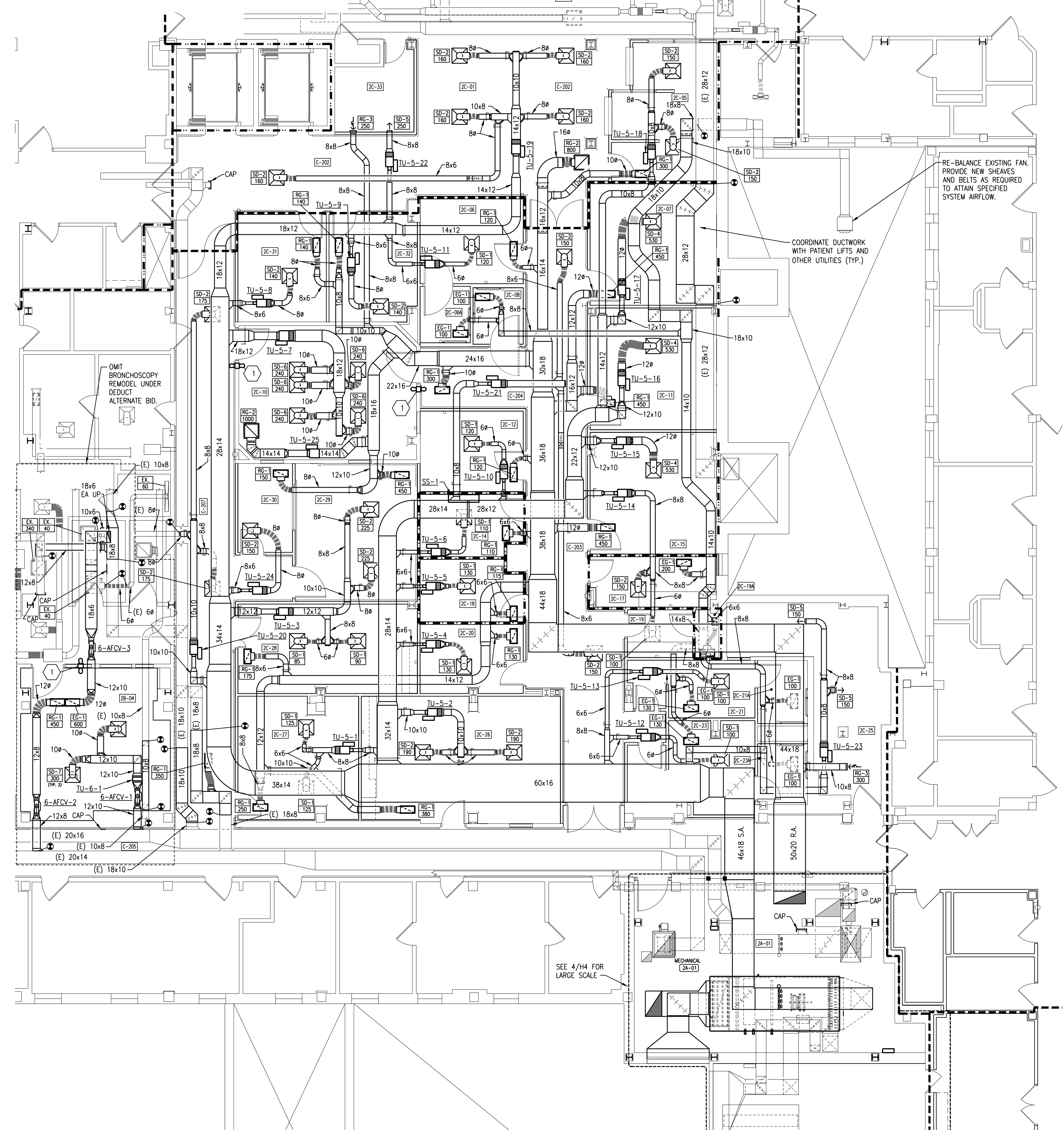
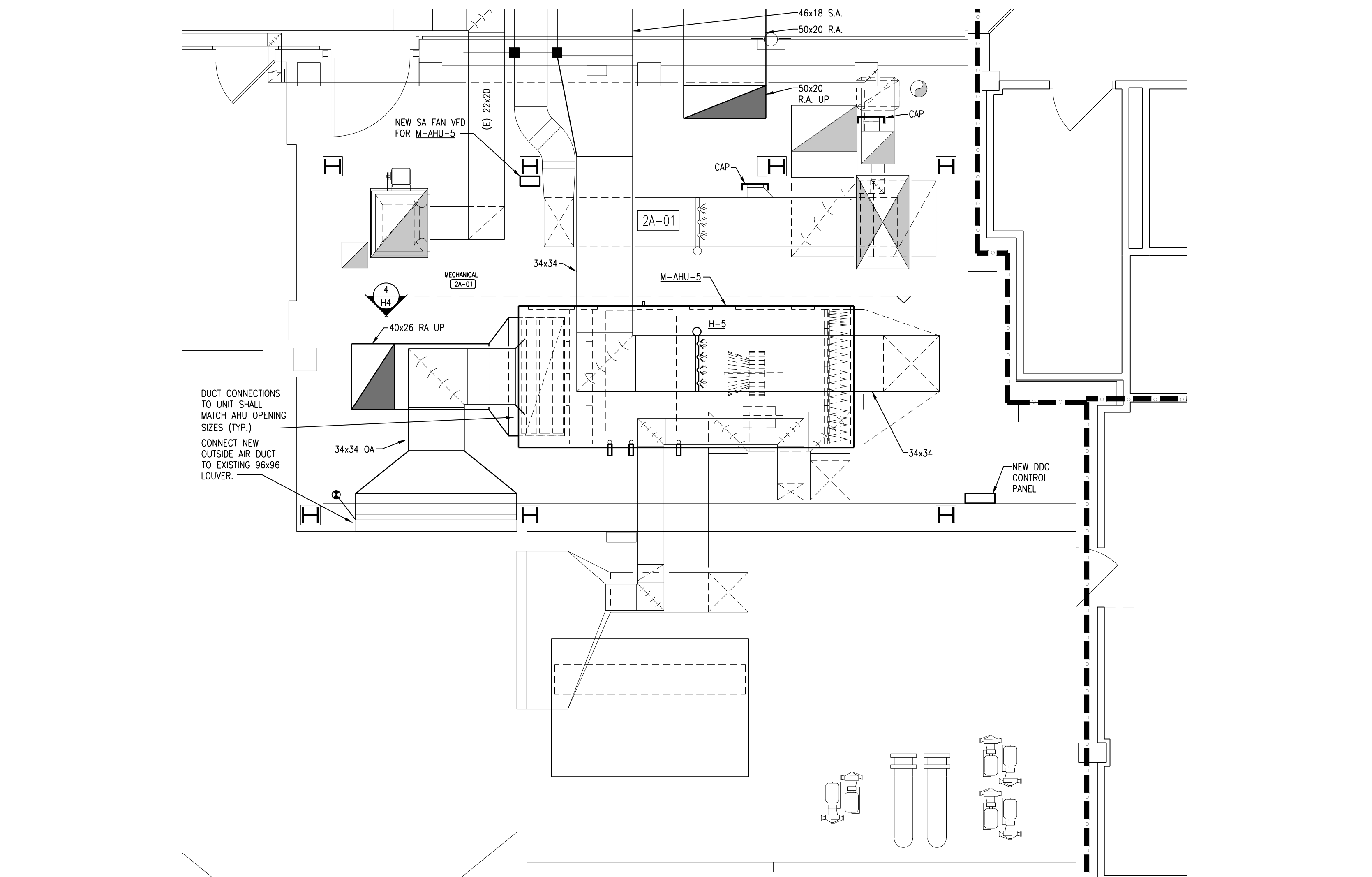


ROOM SCHEDULE	
2B-04	BRONCHOSCOPY
2C-01	WAITING
2C-05	RECEPTION
2C-06	EXAM ROOM
2C-06A	TOILET
2C-07	PROCEDURE ROOM
2C-08	TOILET
2C-10	CYTOSCOPIC SURGERY
2C-11	PROCEDURE ROOM
2C-12	EXAM ROOM
2C-14	STERILE SUPPLIES
2C-15	PROCEDURE ROOM
2C-17	SOILED UTILITY
2C-18	CLEAN STORAGE
2C-19	MEDS
2C-19A	CYTOGENIC STORAGE
2C-20	NURSE MANAGER
2C-21	MEN'S LOCKER
2C-21A	MEN'S TOILET
2C-23	WOMEN'S LOCKER
2C-23A	WOMEN'S TOILET
2C-25	ELECTRICAL
2C-26	BREAK / CONFERENCE
2C-27	DEBRIER
2C-28	CONFERENCE
2C-29	CONFERENCE
2C-29	SIMULATION CONTROL ROOM
2C-30	EXAM ROOM
2C-31	PREP CENTER
2C-33	IBRA
2C-33	IBRA
C-201	CORRIDOR
C-202	CORRIDOR
C-203	CORRIDOR
C-204	HALL
C-205	CORRIDOR
C-206	CORRIDOR
C-207	CORRIDOR

- VENTILATION NOTES:**
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES BETWEEN THE "AS-BUILT" CONDITIONS AND THESE DRAWINGS.
 - COORDINATE ALL DUCTWORK INSTALLATION WITH GENERAL PLUMBING, FIRE PROTECTION, AND ELECTRICAL CONTRACTORS. INSTALL ALL DUCTWORK AS HIGH AS POSSIBLE. PROVIDE ALL NECESSARY OFFSETS (DROPS AND RISERS) TO KEEP DUCTWORK TIGHT TO THE STRUCTURE ABOVE AND INSTALLATION BY ALL TRADES. OFFSET DUCTWORK TO AVOID BEAMS.
 - REFER TO AND COORDINATE WITH THE ARCHITECTURAL PLANS FOR CEILING TYPES, HEIGHTS, SOFFIT AREAS, AND ELEVATIONS FOR INSTALLATION OF NEW VENTILATION DUCTWORK, EQUIPMENT, ETC.
 - THIS CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND RE-INSTALLING OF EXISTING CEILING TILE NOT REMOVED BY THE GENERAL CONTRACTOR FOR THE INSTALLATION OF NEW VENTILATION DUCTWORK, EQUIPMENT, ETC. VERIFY WITH ARCHITECTURAL PLANS FOR CEILING WORK BY THE GENERAL CONTRACTOR. ANY CEILING TILE OR GRID DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH NEW BY THIS CONTRACTOR.
 - THIS CONTRACTOR SHALL OPEN ALL EXISTING WALLS AND/OR CEILINGS FOR INSTALLATION OF NEW VENTILATION DUCTWORK, EQUIPMENT, ETC. AS REQUIRED. PATCH WALLS AND/OR CEILINGS TO MATCH EXISTING.
 - MAINTAIN 3"-0" CLEAR SPACE IN FRONT OF ALL ELECTRICAL CONTROL AND ACCESS PANELS FOR ACCESSIBILITY.
 - ALL DAMPERS, ETC., SHALL BE INSTALLED IN ACCESSIBLE CEILINGS.
 - ALL OPEN ENDS OF DUCTS SHALL BE CAPPED AT THE END OF CONSTRUCTION EACH DAY.
 - ALL VAV BOXES, TERMINAL COILS, ETC., SHALL BE LOCATED AS ACCESSIBLE AS POSSIBLE TO THE CONTROLLED DEVICE.
- 1 AIRFLOW DIRECTION INDICATOR. MOUNT AT 7'-0" AFF.
- 2 PREFAB CURB AND EXHAUST FAN ON ROOF ABOVE. SEE FAN DETAIL FOR MORE INFORMATION. MAINTAIN WARRANTY OF EXISTING ROOF.



Dept. of Veterans Affairs
Health Care System
2101 Elm Street North
Fargo, ND 58102

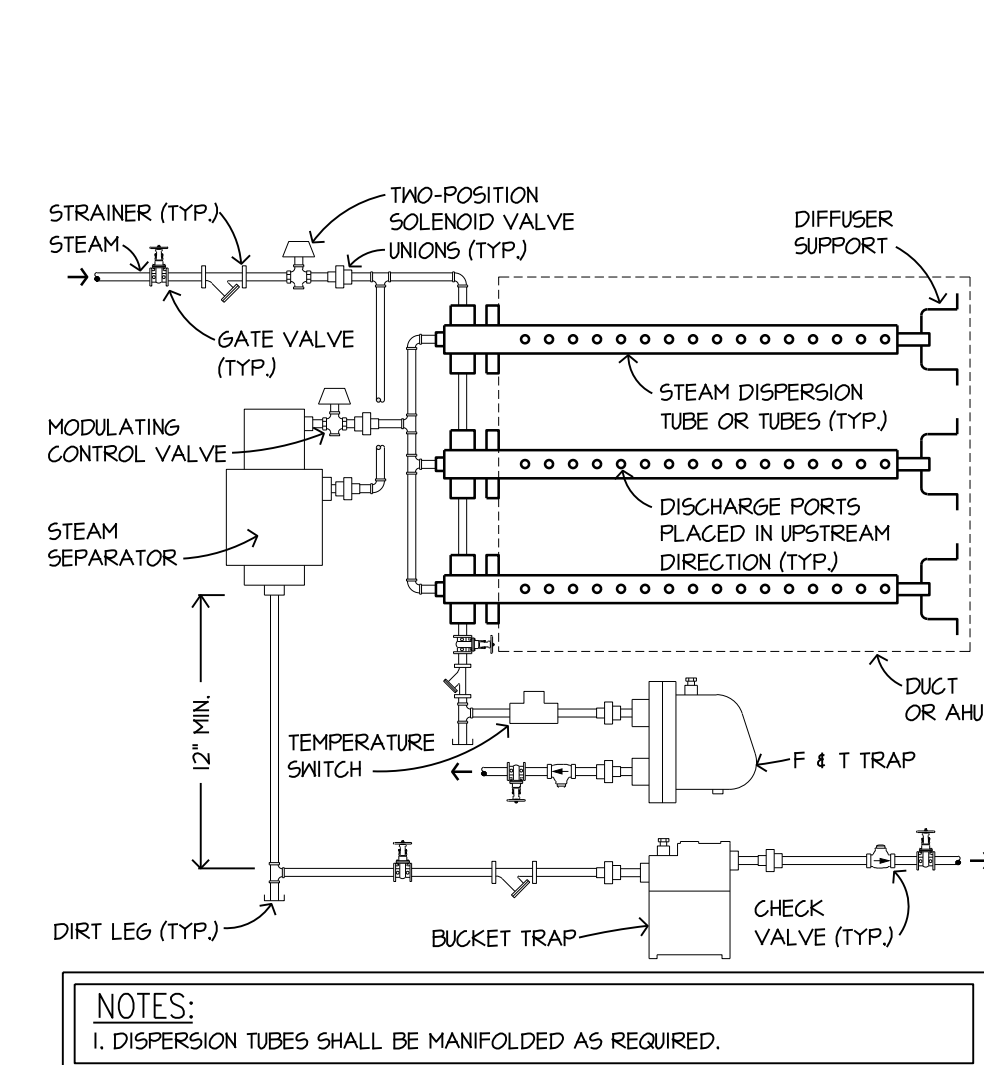
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IMAGE GROUP INC., Architecture & Interiors
OBERMILLER NELSON ENGINEERING, Mechanical Engineers
MBI ENGINEERING, Electrical Engineers
TRIO ENVIRONMENTAL, Environmental Consultants

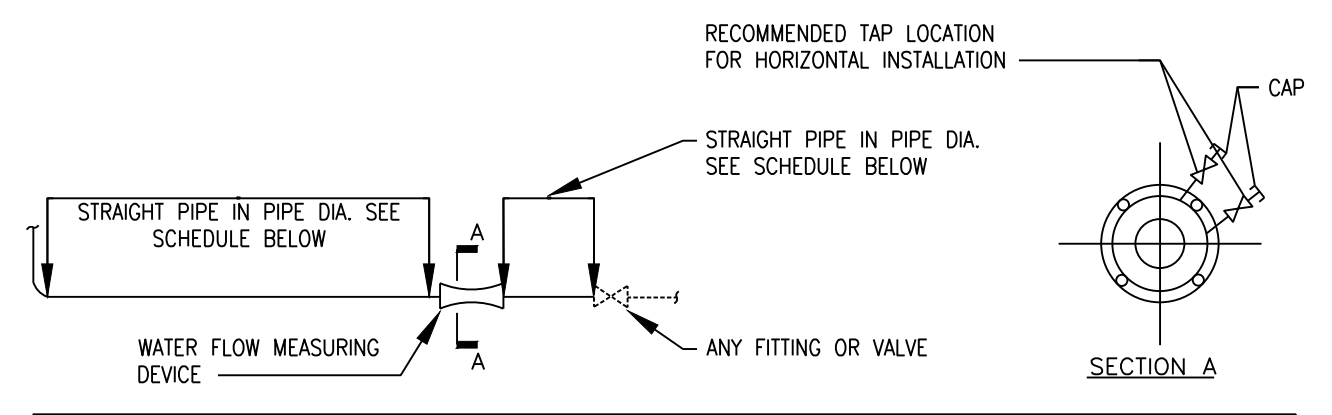
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Drawing Title SECOND AND THIRD FLOOR VENTILATION PLANS AND VENTILATION SECTIONS		Project Title RENOVATE 2ND FLOOR, BLDG 46 FOR MEDICAL SPECIALTIES		Date JULY 29, 2016
VA Project No. 437-14-110	Contract No. VA263-P-1217 VA263-C-	Designed By JCP	Checked By JCP	Scale AS NOTED
Building No. 46	AutoCAD File Name 2014241-H4.dwg	Drawn By MCW	Location FARGO VA HEALTH CARE SYSTEM FARGO, ND	Drawing No. H4
				Dwg. 25 of 36

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15 STEAM HUMIDIFIER (HORI. TYPE)
DETAIL MULTIPLE DISPERSION
SCALE: NTS

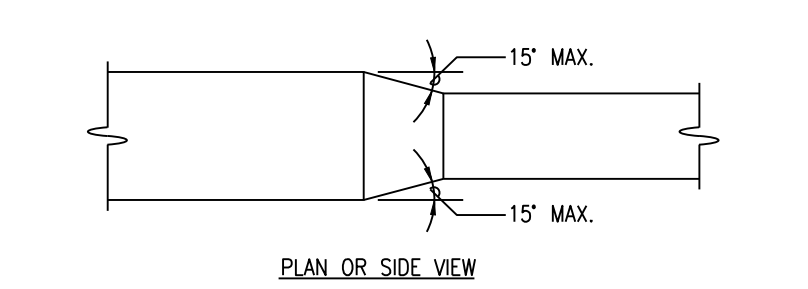
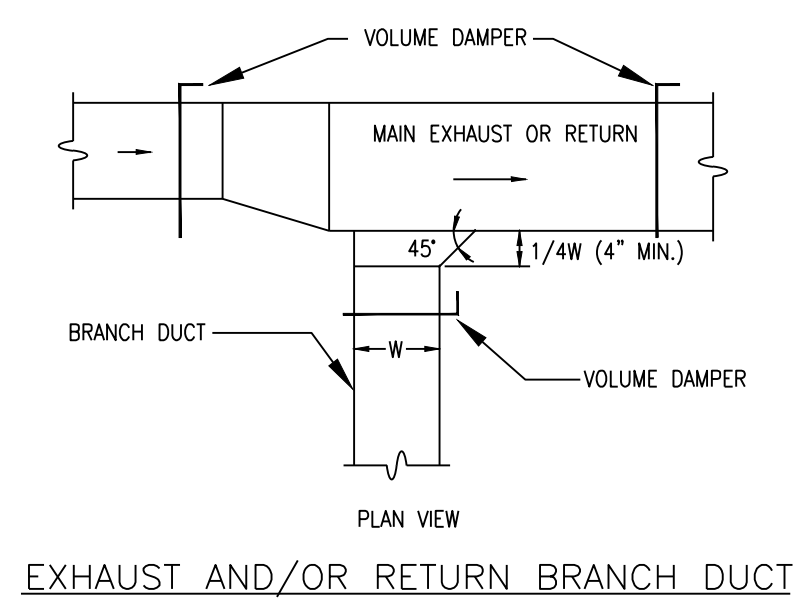


WATER FLOW MEASURING DEVICE INSTALLATION SCHEDULE

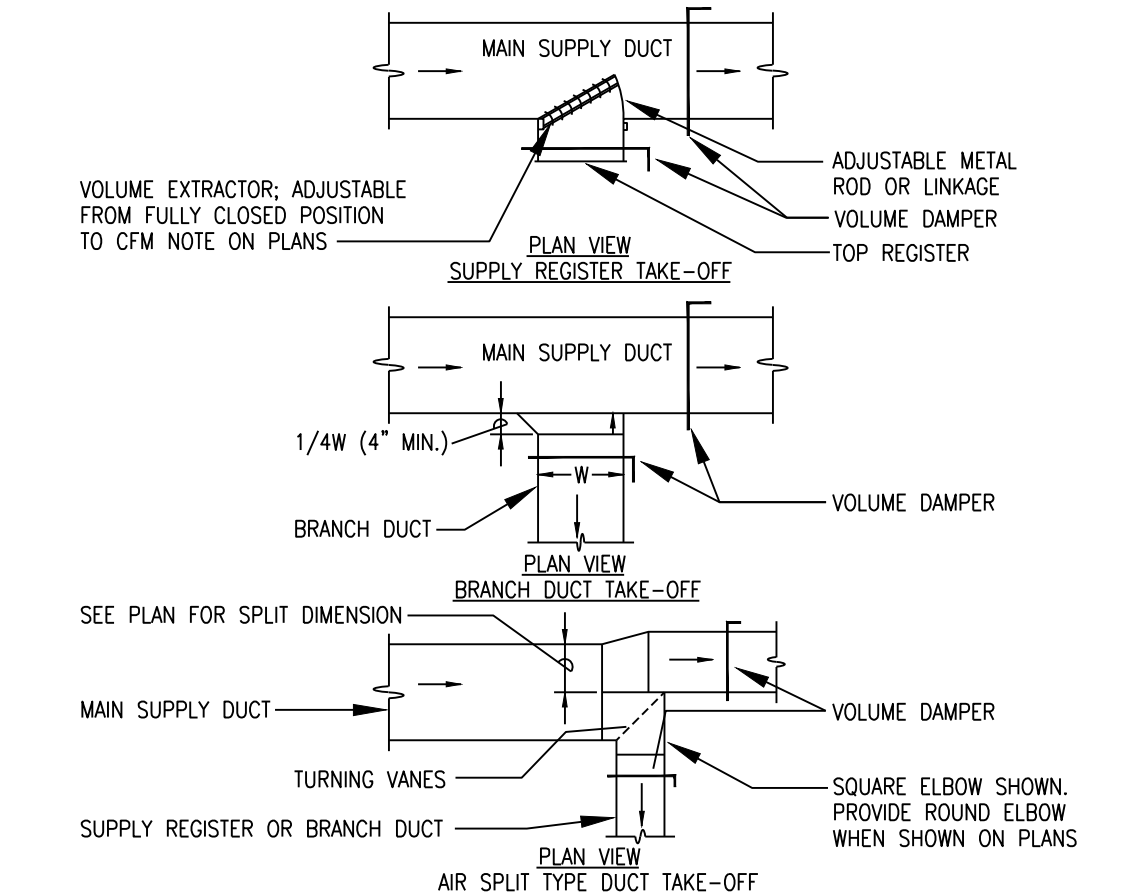
TYPE	MIN. UPSTREAM LENGTH OF STRAIGHT PIPE IN PIPE DIA.		MIN. DOWNSTREAM LENGTH OF STRAIGHT PIPE IN PIPE DIAMETERS
	FOR SIDE TEE	FOR VALVE OR OTHER FITTING	
ORIFICE FLANGE OR FLOATING BALL WITH IMPACT TUBE	20	10	5
VENTURI, AUTOMATIC BALANCING CONTROL VALVE, OR INSERTION VELOCITY AVERAGING AND MEASURING TUBE	10	5	2

- NOTES:
- DIMENSIONS SHOWN IN SCHEDULE ARE MINIMUM REQUIRED; IF MANUFACTURER OF FURNISHED WATER FLOW MEASURING DEVICE RECOMMENDS A GREATER DIMENSION, USE THOSE DIMENSIONS.
 - INSTALL THE WATER FLOW MEASURING DEVICE SO THE FLOW ARROW ON THE DEVICE IS IN THE SAME DIRECTION AS THE FLOW.
 - THE WATER FLOW MEASURING DEVICE MAY BE INSTALLED IN EITHER HORIZONTAL OR VERTICAL PIPE. UNITS REQUIRING REMOTE METERS SHALL HAVE THE METER CONNECTIONS LOCATED ON OR NEAR THE SIDE WHEN INSTALLED IN HORIZONTAL PIPE. SEE SECTION A. THE METER CONNECTIONS CAN BE INSTALLED IN ANY POSITION WHEN INSTALLED IN VERTICAL PIPE.

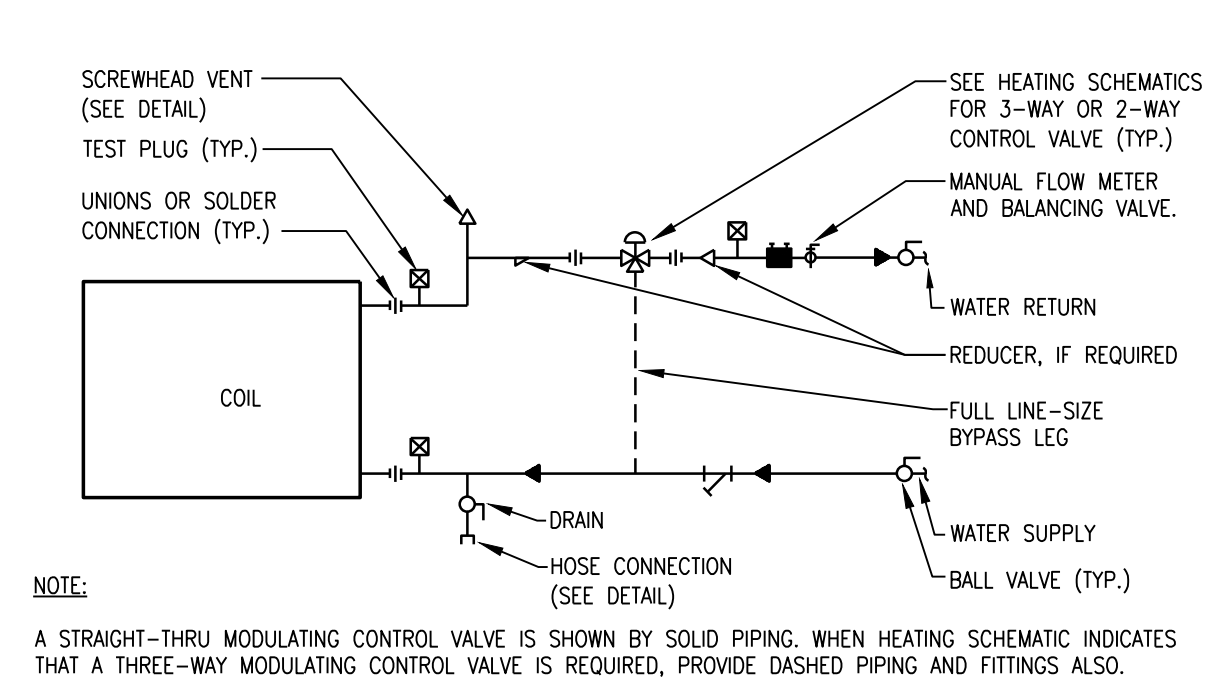
12 WATER FLOW MEASURING DEVICE INSTALLATION
DETAIL AND INSTALLATION SCHEDULE
SCALE: NTS



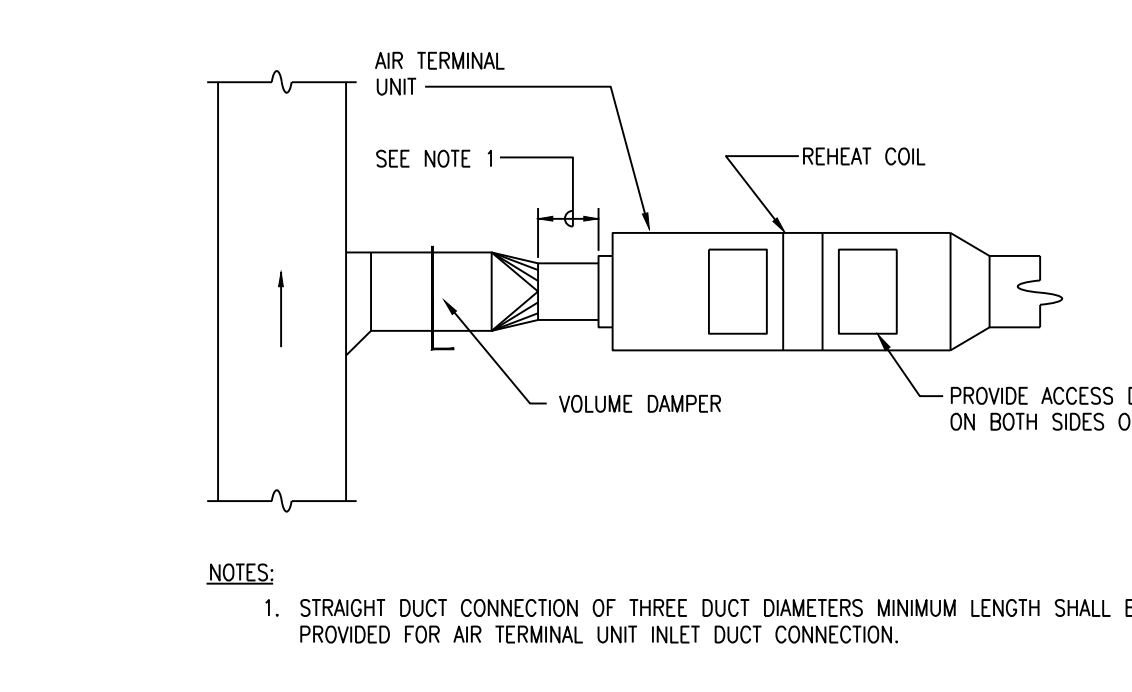
8 DUCT TRANSITION
SCALE: NTS



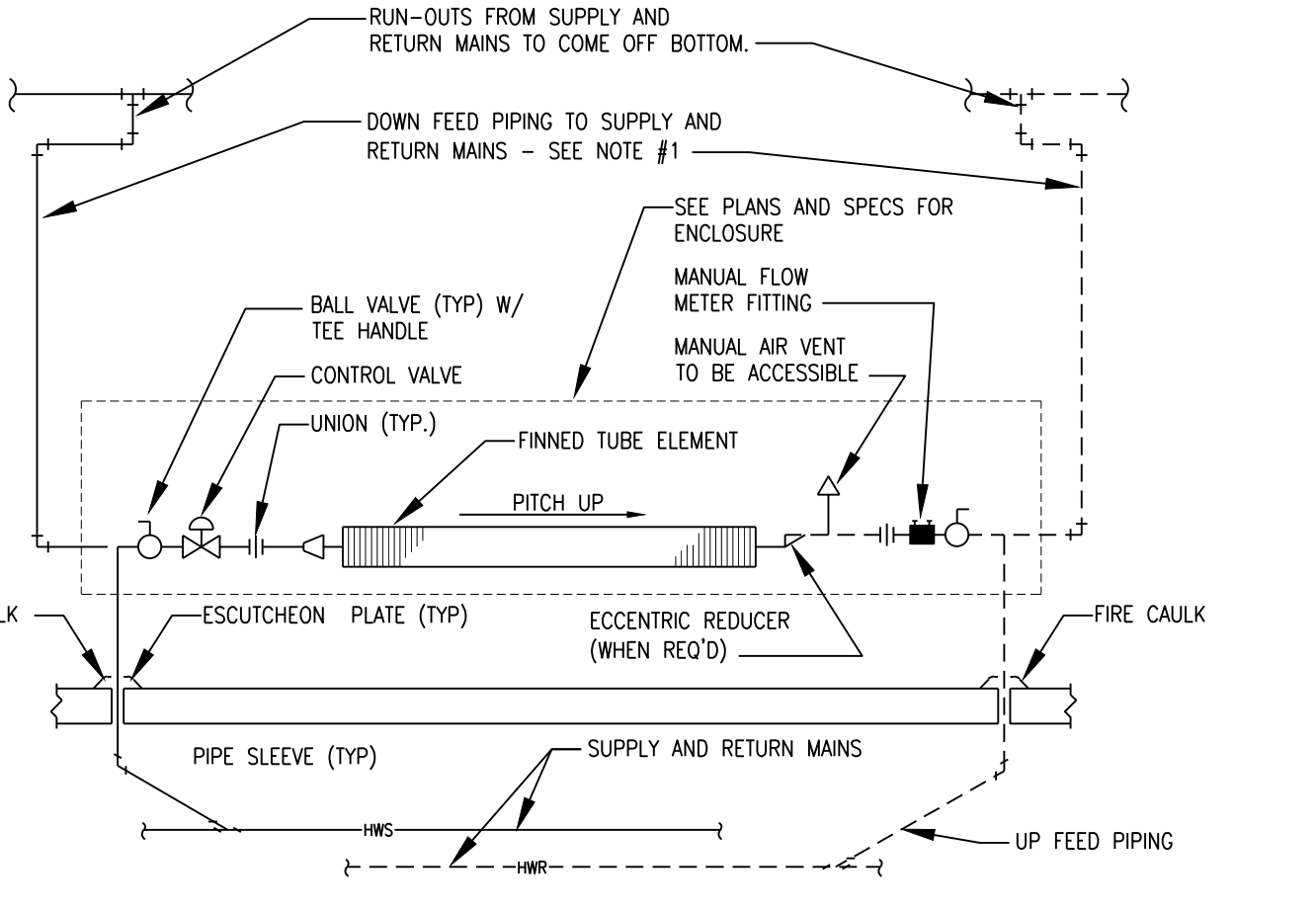
4 SUPPLY DUCT TAKE-OFFS
SCALE: NTS



7 TYPICAL PIPING CONNECTIONS TO VAV BOX COIL DETAIL
SCALE: NTS

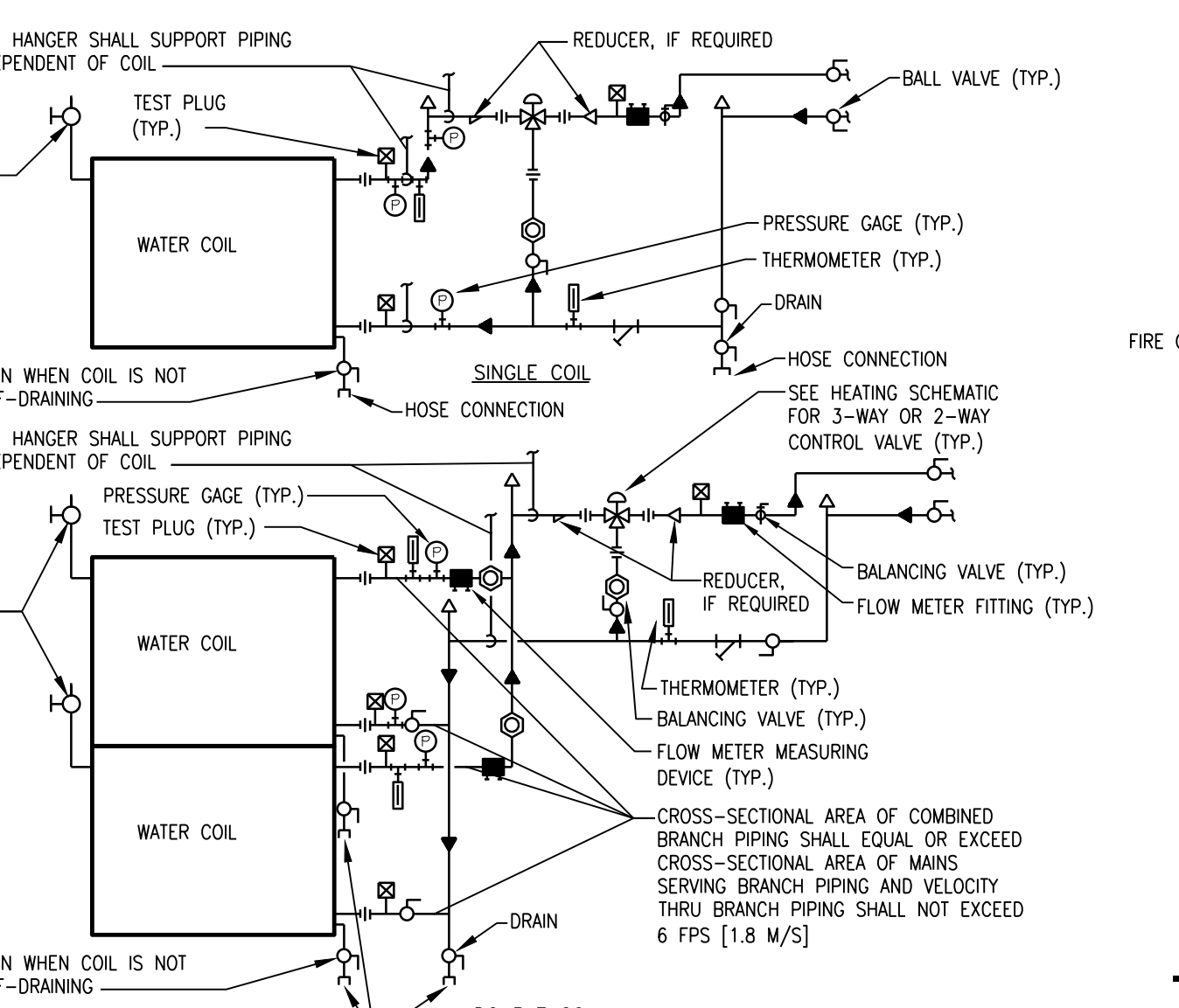


3 DUCT CONNECTION FOR AIR TERMINAL UNITS
SCALE: NTS



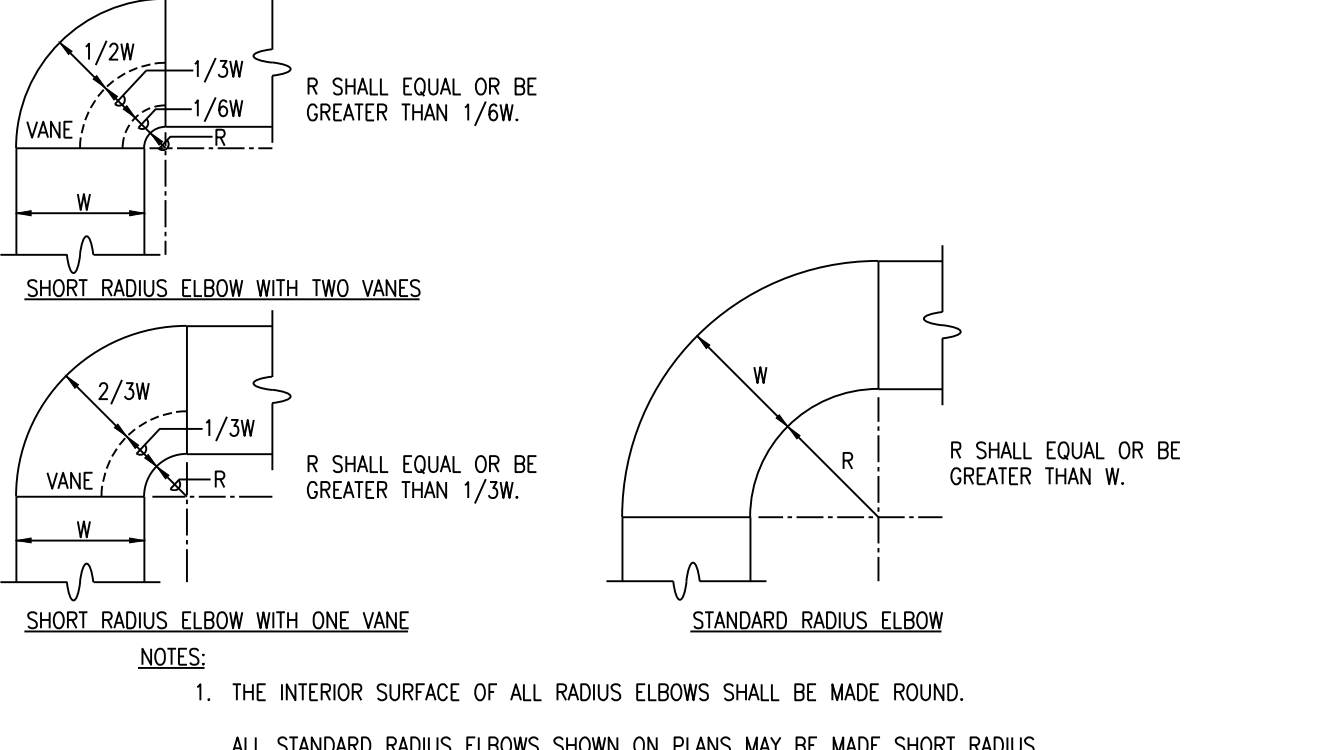
- NOTES:
- WHEN PLANS INDICATE UP FEED RATHER THAN DOWN FEED PIPING, OMIT MANUAL AIR VENT.
 - ELEMENTS PIPED IN SERIES REQUIRE ACCESSORIES AT EACH END OF SERIES ONLY.
 - SEE SCHEDULE FOR ELEMENT REQUIREMENTS.
 - PIPE SIZED BETWEEN SERIES ELEMENTS SAME SIZED AS FIN TUBE.
 - PROVIDE ACCESS PANEL IN FRONT OF VALVES FOR SERVICING.

11 TYP. FINNED TUBE RADIATION DETAIL
SCALE: NTS



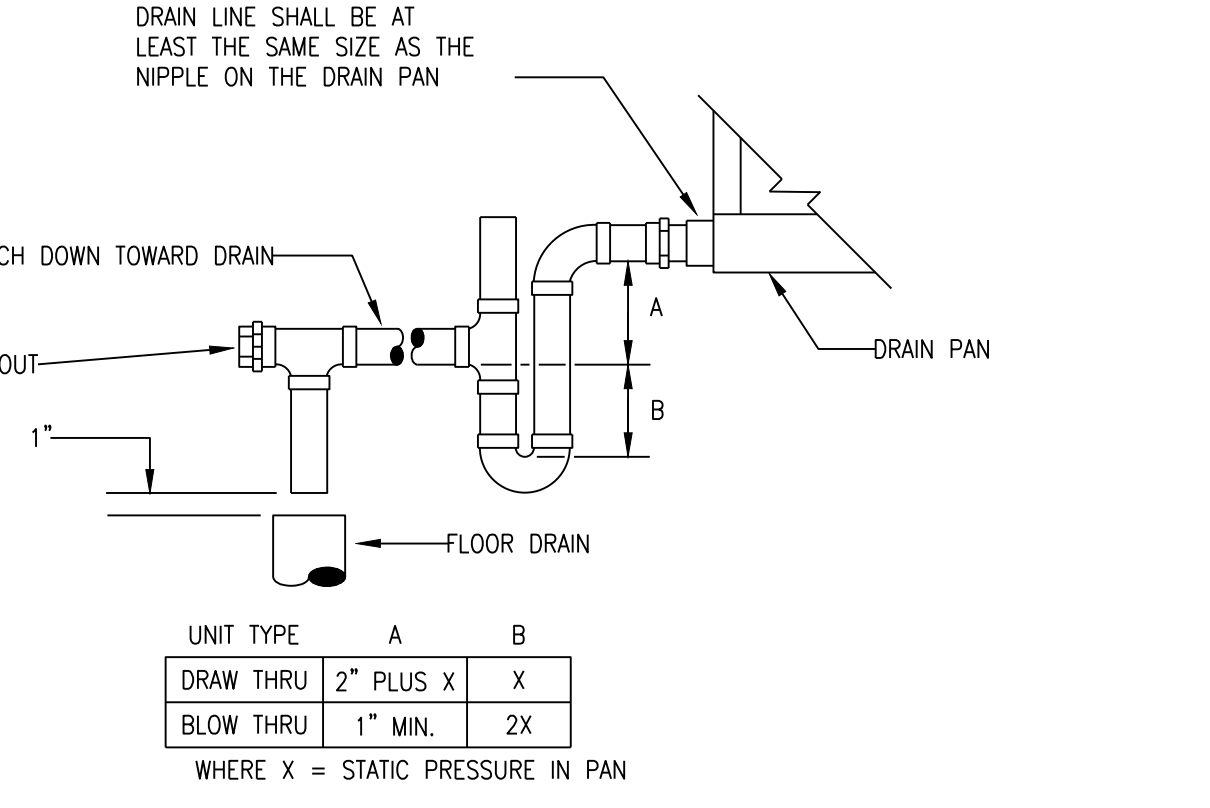
- NOTE:
- WHEN COIL IS INCLUDED IN CASING MOUNTED ON VIBRATION ISOLATORS THE FIRST 2 HANGERS FOR EACH PIPE SHALL BE SPRING & NEOPRENE TYPE. TYPE "H" FOR 4" PIPE & SMALLER, TYPE "H-P" FOR 5" (125mm) PIPE & LARGER.
 - PIPING SHALL BE INSTALLED IN SUCH MANNER THAT IT WILL NOT BLOCK THE SWING OR USE OF ACCESS DOORS OR PANELS; NEITHER SHALL IT BLOCK THE SERVICING OF FILTERS, VALVES, OR EQUIPMENT.
 - A STRAIGHT-THRU MODULATING CONTROL VALVE IS SHOWN BY SOLID PIPING. WHEN CONTROL DIAGRAMS INDICATE A THREE-WAY MODULATING CONTROL VALVE IS REQUIRED, PROVIDE DASHED PIPING ALSO.

14 TYPICAL PIPING CONNECTIONS TO WATER COILS DETAIL
SCALE: NTS

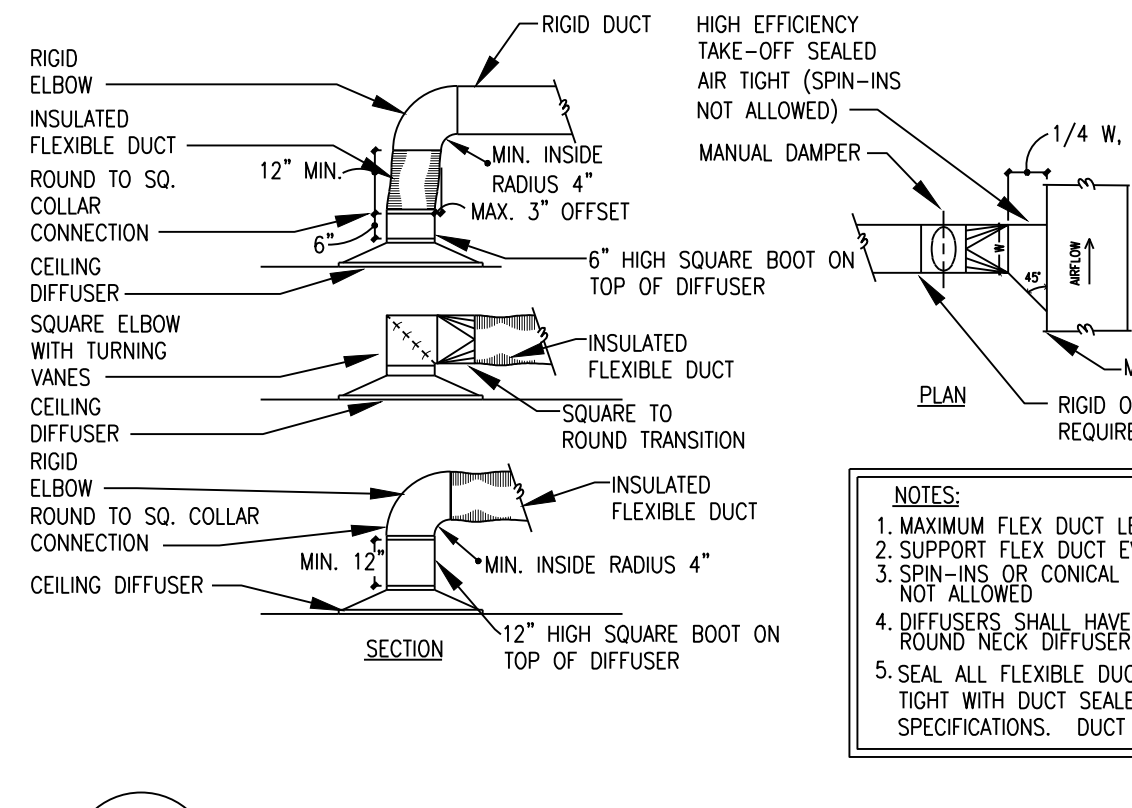


- NOTES:
- THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
 - ALL STANDARD RADIUS ELBOWS SHOWN ON PLANS MAY BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

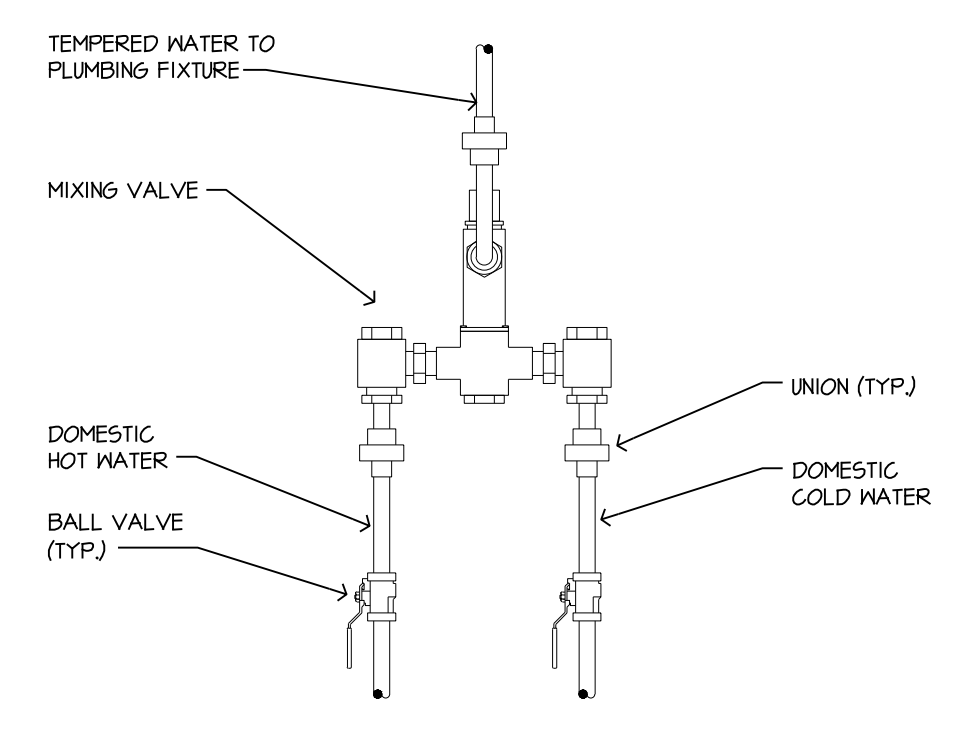
10 RADIUS ELBOWS
SCALE: NTS



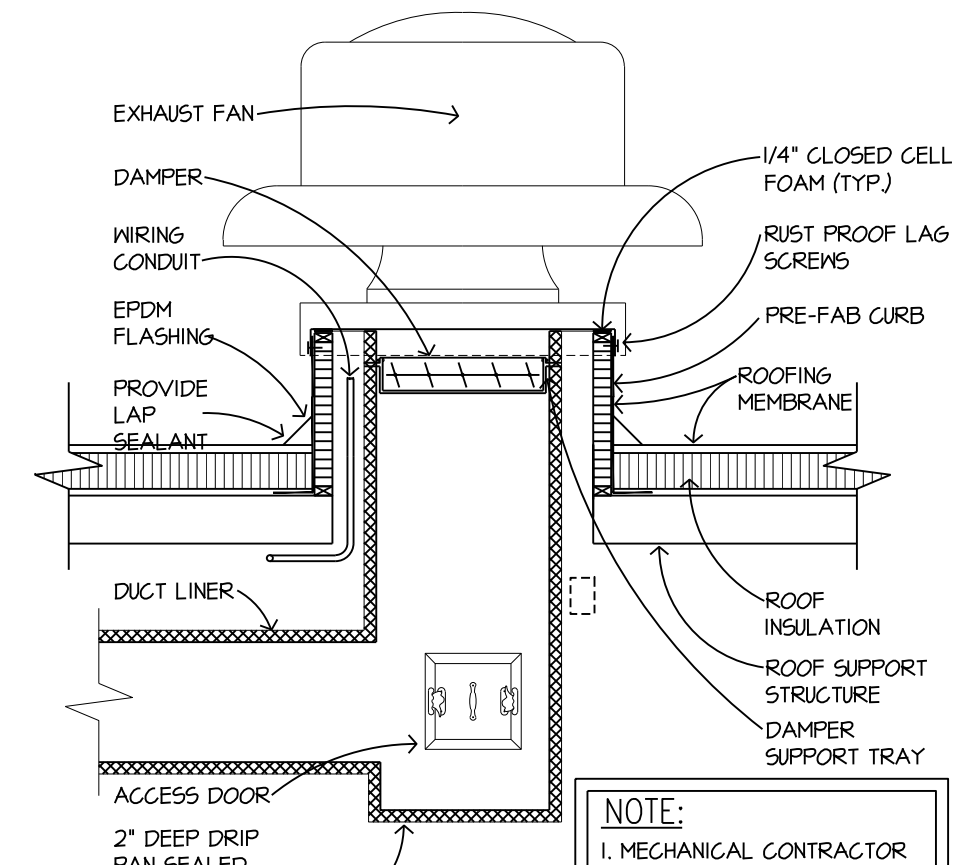
6 AIR HANDLING UNIT DRAIN TRAP
SCALE: NTS



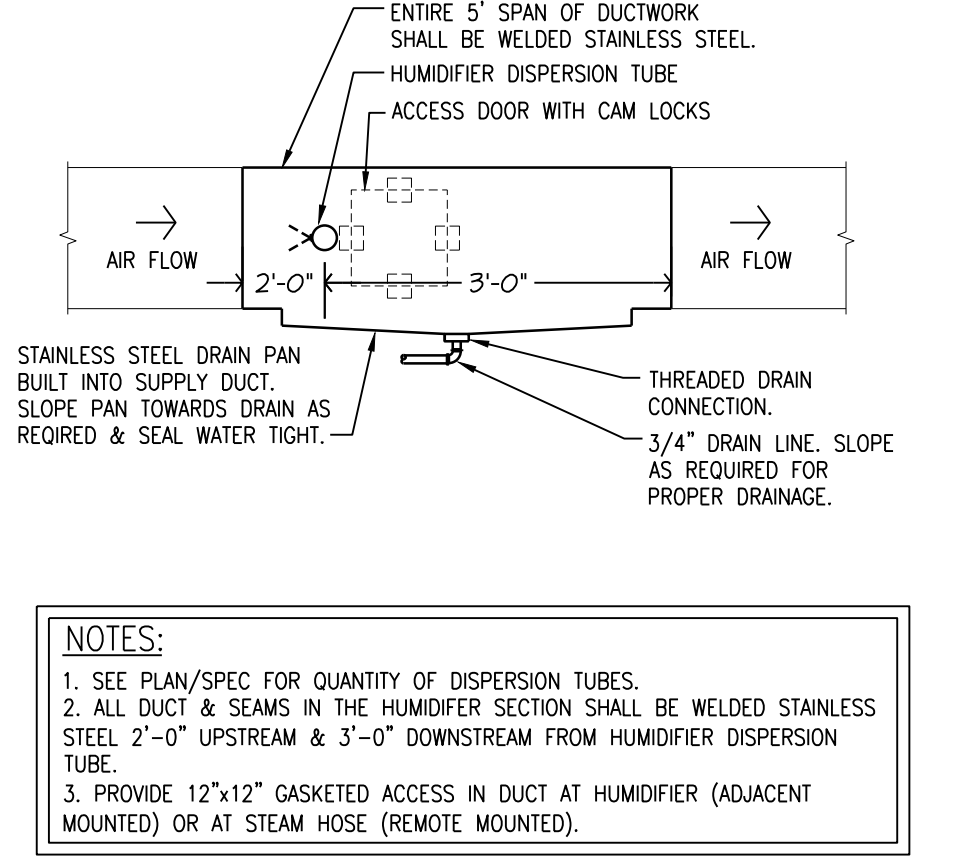
2 SUPPLY DUCT TO DIFFUSER DETAIL
SCALE: NTS



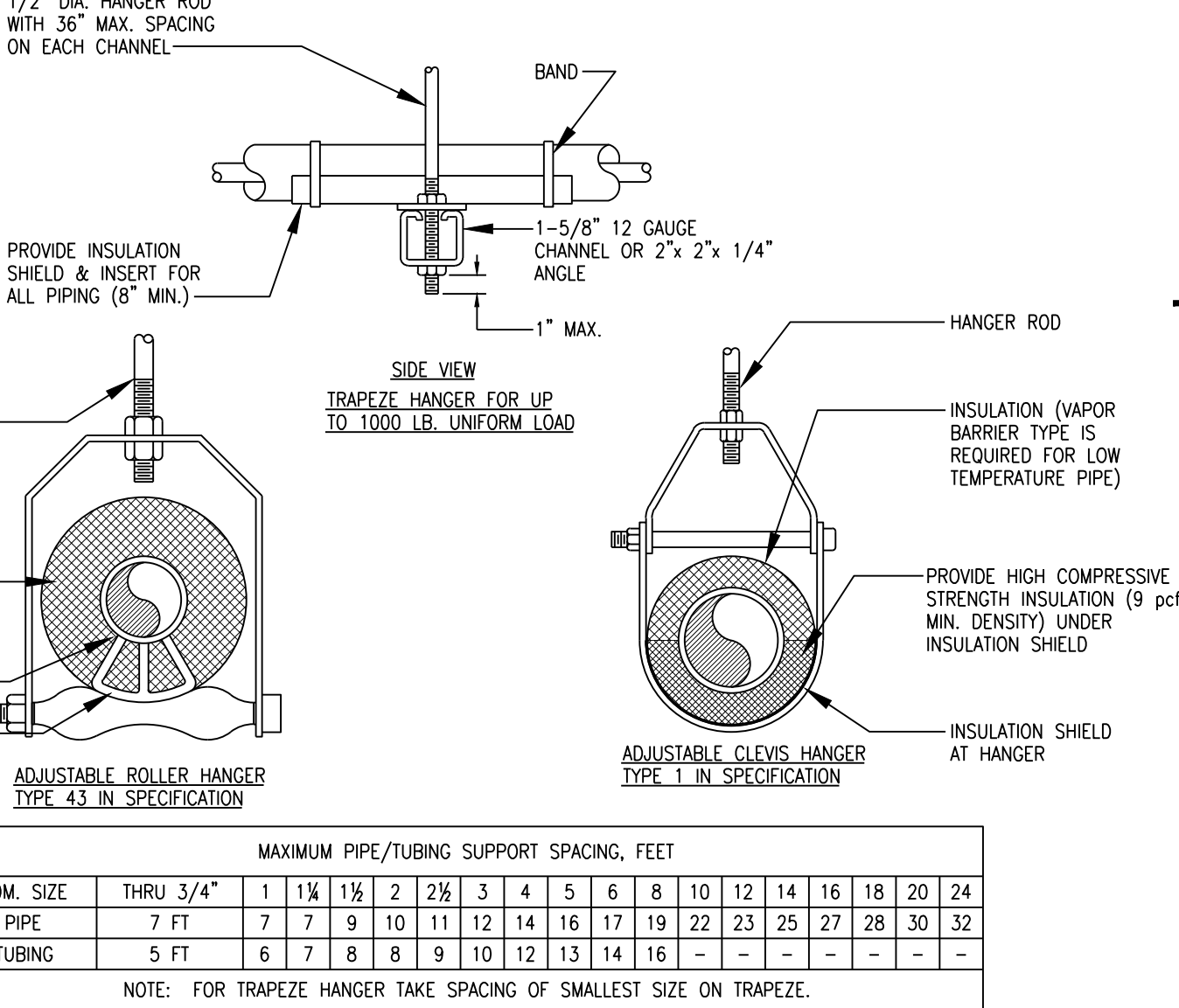
10 PLUMBING MIXING VALVE DETAIL
SCALE: NTS



17 EXHAUST FAN DETAIL
SCALE: NTS



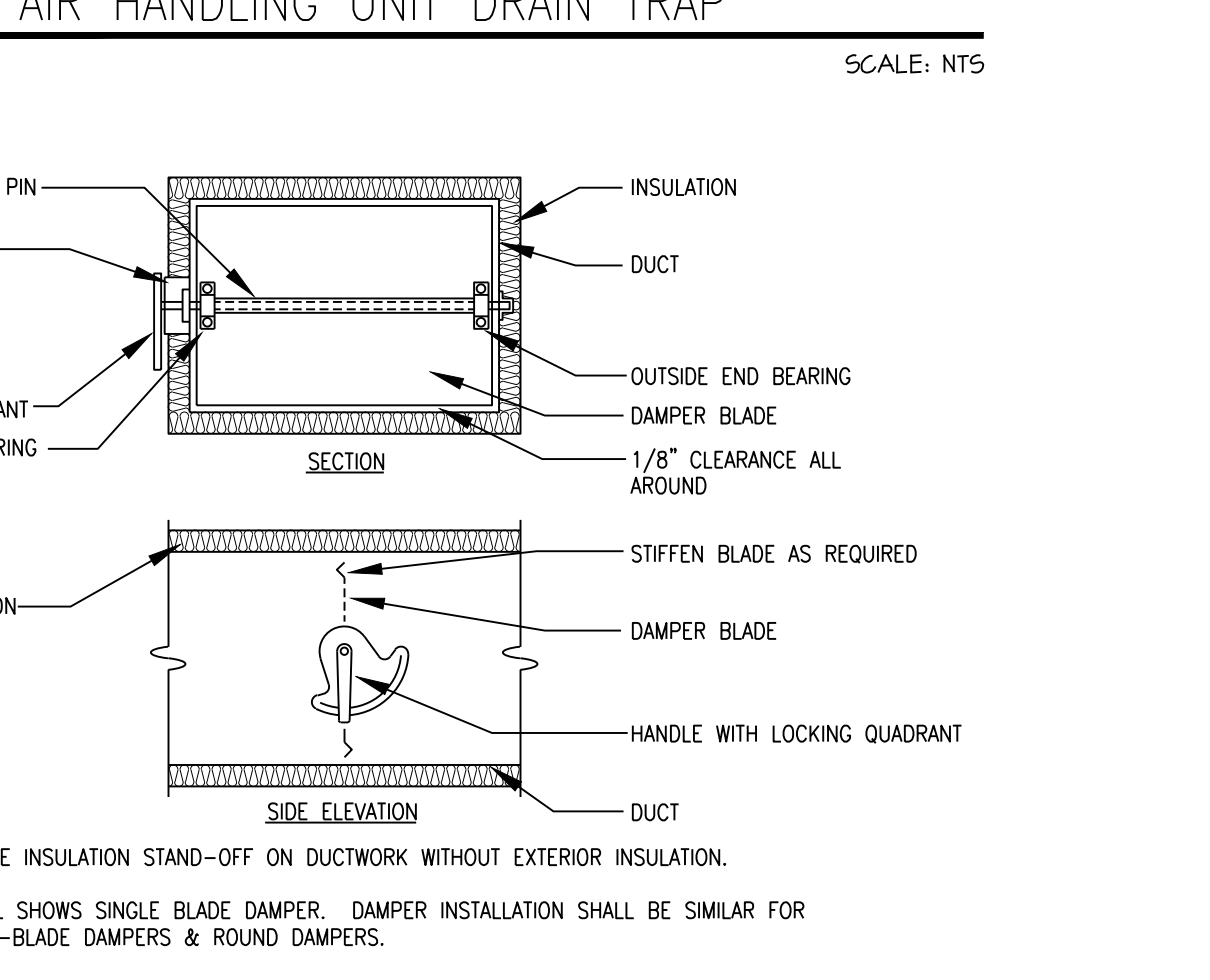
16 HUMIDIFIER DRAIN PAN DETAIL
SCALE: NTS



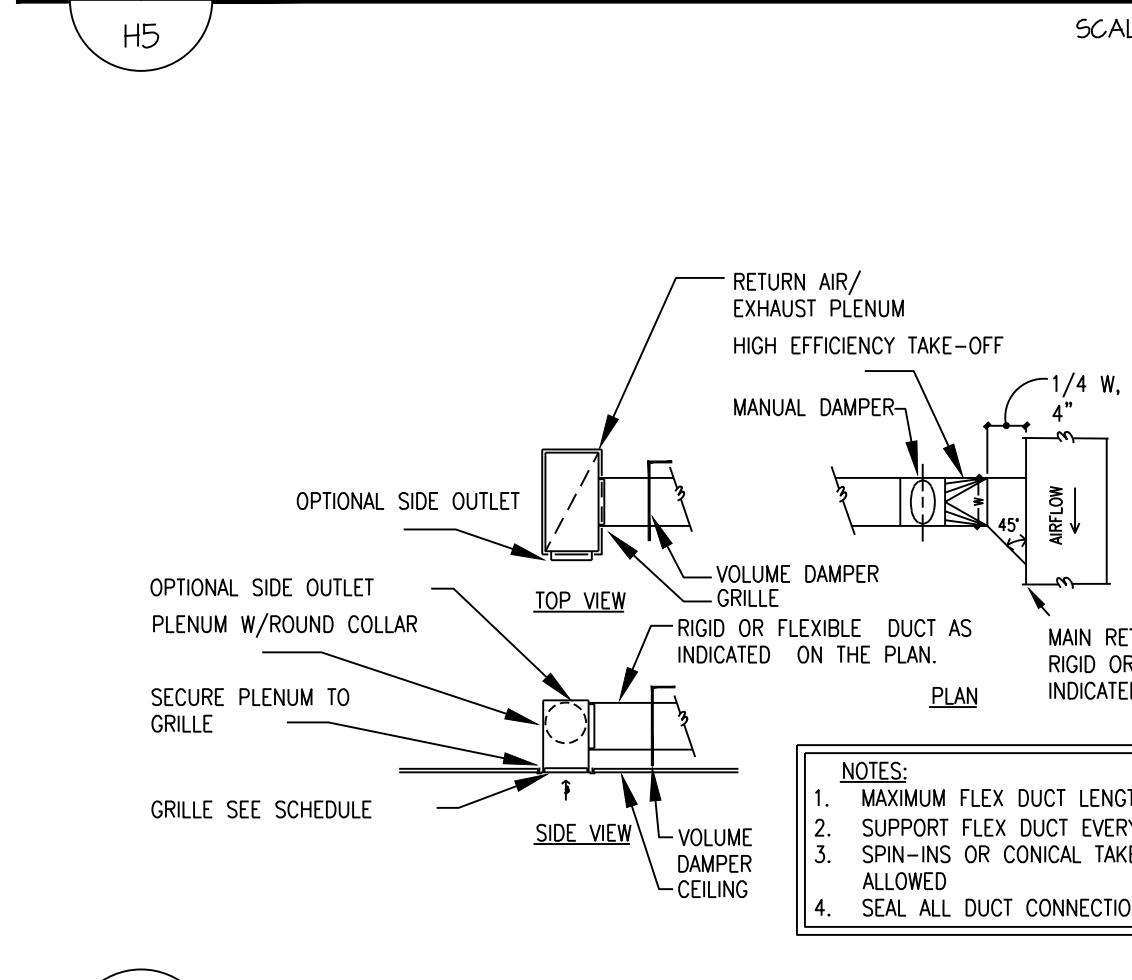
13 TYPICAL PIPE HANGERS
SCALE: NTS

- NOTES:
- ALL WELDED ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
 - WHEN W1 DOES NOT EQUAL W2 WANE SHALL BE SINGLE VANE TYPE REGARDLESS OF W1 OR W2 DIMENSION.
 - ALL SINGLE VANES SHALL HAVE A 2 INCH RADII, 1-1/2 INCH MAXIMUM SPACE BETWEEN VANES AND A 3/4 INCH TRAILING EDGE.
 - WHEN W1 EQUALS W2 AND W1 IS GREATER THAN 20 INCHES VANES SHALL BE DOUBLE VANE TYPE.
 - VANES NOT ALLOWED IN RETURN OR EXHAUST DUCTS

9 SQUARE VANED ELBOW
SCALE: NTS



5 VOLUME DAMPER DETAIL
SCALE: NTS



1 RETURN/EXHAUST DUCT TO GRILLE DETAIL
SCALE: NTS

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Drawing Title
MECHANICAL DETAILS

VA Project No.
437-14-110

Building No.
46

Project Title
RENOVATE 2ND FLOOR, BLDG 46 FOR MEDICAL SPECIALTIES

Contract No.
VA263-P-1217 VA263-C-

AutoCAD File Name
2014241-H5.dwg

Location
FARGO VA HEALTH CARE SYSTEM FARGO, ND

Date
JULY 29, 2016

Scale
AS NOTED

Designed By
JCP

Checked By
JCP

Drawn By
MCW

Drawing No.
H5

Dwg. 26 of 36