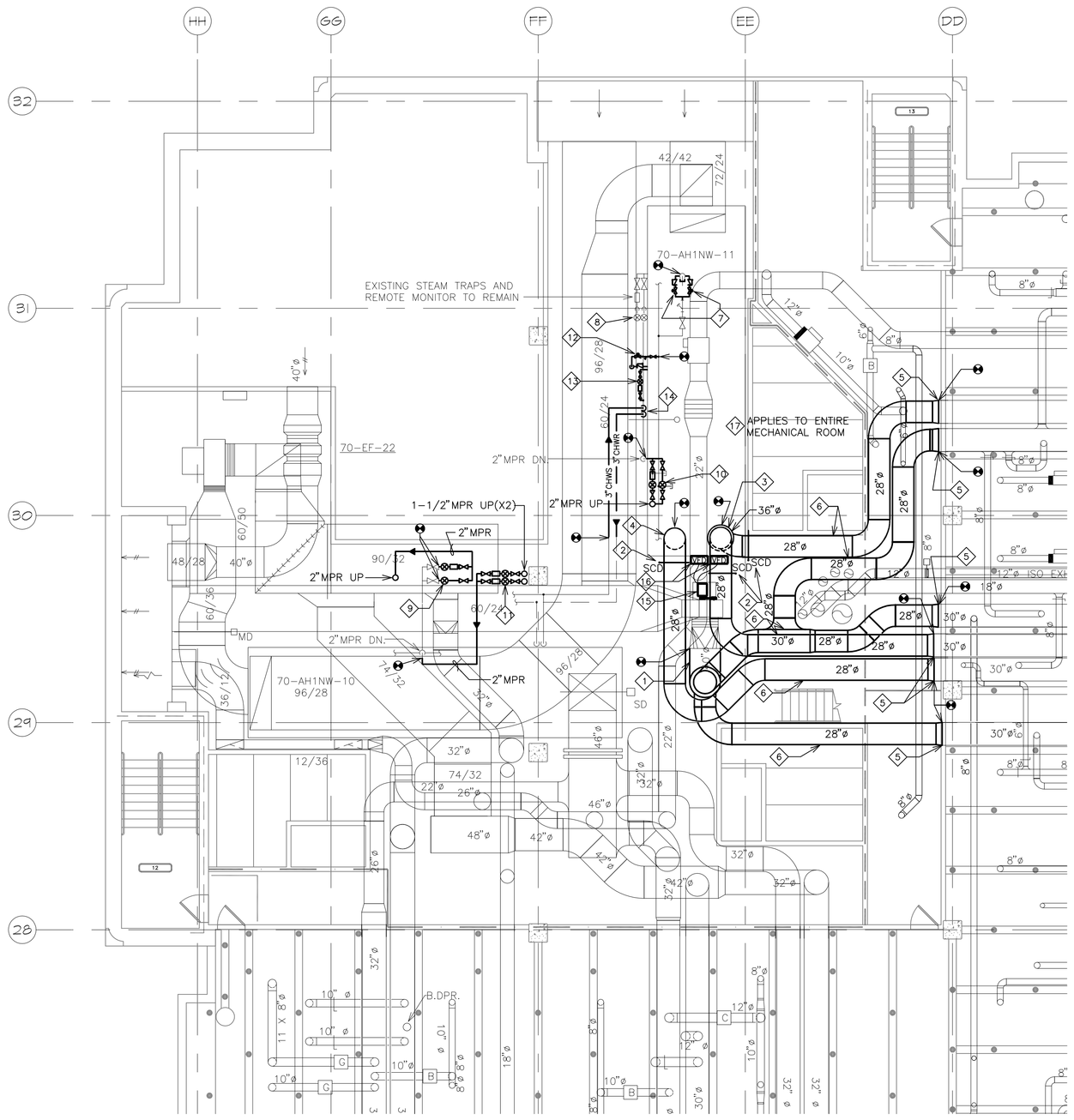

1 1ST FLOOR MECHANCIAL ROOM NW PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. SEE SHEET 1293-70-MH1.0 FOR HVAC AND INFECTION CONTROL GENERAL NOTES.

B. COORDINATE HVAC WORK INDICATED ON THIS DRAWING WITH PROPOSED PHASING SHUTDOWNS INDICATED ON SHEET 1293-70-MH1.0. DUCTWORK SHOWN CAN BE PARTIALLY COMPLETED DURING EACH PHASED OUTAGE BUT MUST BE CONNECTED FOR OPERATION AT COMPLETION OF EACH OUTAGE

C. COORDINATE ALL NEW DUCTWORK AND PIPING WITH EXISTING CONDUIT, RACEWAYS, PIPES AND DUCTWORK. PROVIDE OFFSETS AND ELBOWS AS REQUIRED FOR DUCT AND PIPE ROUTING.

KEY NOTES:

1. INSTALL NEW LONG SWEEP ELBOW ON RETURN FAN INLET. COORDINATE CLEARANCES REQUIRED WITH DUCTWORK TO DETERMINE SMOOTHEST INLET CONDITION POSSIBLE.

2. INSTALL NEW SMOKE CONTROL DAMPER. COORDINATE INTEGRAL WITH EXISTING CONTROL SIGNAL WITH NEW RELAY TO DAMPER.

3. INSTALL NEW 36"ø SUPPLY DUCT BELL MOUTH TAKEOFF. COORDINATE WHICH PHASED OUTAGE WORK WILL OCCUR.

4. INSTALL NEW 28"ø SUPPLY DUCT BELL MOUTH TAKEOFF. COORDINATE WHICH PHASED OUTAGE WORK WILL OCCUR.

5. CONNECT TO EXISTING SUPPLY OR RETURN DUCT MAIN AT MECHANICAL ROOM WALL. PERFORM STAIC PRESSURE READINGS BEFORE DEMOLITION, AND AFTER INSTALLATION IS COMPLETE. REFER TO BALANCING PLANS ON DRAWING MH1.3.

6. COORDINATE DUCTWORK WITH EXISTING DUCTWORK, PIPING, CONDUIT, ETC. AND PROVIDE ADDITIONAL ELBOWS AND OFFSETS AS REQUIRED. COORDINATE CLEARANCES NEEDED BY INSULATION SUBCONTRACT.

7. REPLACE EXISTING IFB PREHEAT COIL CONTROL VALVE WITH DUAL VALVES SIZED FOR ⅓ AND ⅔ TOTAL LOAD. SEE EQUIPMENT SCHEDULE FOR SIZING AND REFERENCE STEAM SUPPLY SIDE PORTION OF DETAIL 3/M4.1 FOR INSTALLATION. EXISTING ISOLATION VALVE AND STRAINER MAY REMAIN IF THERE IS ENOUGH CLEARANCE FOR OTHER COMPONENTS.

8. EXISTING DUAL STEAM TRAPS AND REMOTE MONITOR TO REMAIN UNCHANGED. VA MAY DECIDE TO DROP CONDENSATE PIPING TO FLOOR BELOW (infomation only – N.I.C.). CONTRACTORS TO COORDINATE PHASING WORK WITH VA IF REQUESTED.

9. PROVIDE DUAL STEAM TRAPS, EACH REDUNDANTLY SIZED FOR 3X NORMAL LOAD (or full smoke purge mode capacity, whichever is greater) FOR AH2NW-19 PREHEAT COIL ABOVE. PROVIDE MANUAL ISOLATION VALVES TO SWITCH SERVICE BETWEEN STEAM TRAPS AND ONLY PROVIDE THE MAIN TRAP WITH A REMOTE MONITOR CONNECTED INTO BUILDING AUTOMATION. ACCESS FOR MAINTENANCE SERVICE WOULD BE FROM A SERVICE LIFT BENEATH THIS LOCATION, VERIFY CLEARANCE WITH VA EQUIPMENT. REFER TO DETAIL 3/M4.1 FOR ADDITIONAL INFORMATION AND PIPING COMPONENTS REQUIRED. PIPING CONTINUATION ON FLOOR ABOVE SHOWN ON DRAWING MH2.3.

10. SAME AS KEYED NOTE #9 ABOVE, EXCEPT SERVING AH2NW-20 PREHEAT COIL ABOVE. ACCESS WILL BE FROM ON TOP OF AIR HANDLER #11 ON THIS LEVEL. CONFIRM ADEQUATE SAFETY RAILING, OR TIE-OFF POINT, IF REQUIRED TO CONFORM WITH OSHA SAFETY STANDARDS.

11. PROVIDE SINGLE STEAM TRAP FOR EACH OF THE TWO(2) HUMDIFIERS ON AH2NW-19&20 ABOVE THIS LOCATION. PROVIDE EACH STEAM TRAP WITH ISOLATION VALVES ON EITHER SIDE, CHECK VALVE, STRAINER, AND REMOTE STEAM MONITOR CONNECTED INTO BUILDING AUTOMATION. ACCESS FOR MAINTENANCE SERVICE WOULD BE FROM A SERVICE LIFT BENEATH THIS LOCATION, VERIFY CLEARANCE WITH VA EQUIPMENT. REFER TO DRAWING MH2.3, AND DETAIL 8/M4.1, FOR CONTINUATION.

12. PROVIDE NEW CONTROL VALVE, STRAINER, AND ISOLATION VALVE TO CONNECT NEW STEAM HUMIDIFIER PER DETAIL 8/M4.1.

13. PROVIDE STEAM TRAP AT FLOOR LEVEL WITH REMOTE STEAM MONITOR CONNECTED INTO BUILDING AUTOMATION. RECONNECT TO EXISTING CONDENSATE RETURN ALONG FLOOR.

14. RECONNECT TO NEW COOLING COIL. REFER TO DETAIL 1/M4.1 FOR ALL PIPING COMPONENTS REQUIRED FOR COMPLETE INSTALLATION. COORDINATE SYSTEM DRAIN AND REFILL WITH VA FACILITIES ENGINEERS AND ASSIST IN VENTING OUT AS MUCH AIR AS POSSIBLE DURING START-UP.

15. REPLACE EXISTING 5 HP MOTOR WITH NEW 10 HP PREMIUM EFFICIENCY MOTOR (refer to electrical drawings for disconnect and reconnection of power service). MODIFY FRAME AS REQUIRED FOR MOUNTING OF NEW MOTOR. ALSO PROVIDE NEW BELTS AND SHEAVES TO INCREASE FAN RPM FROM CURRENT 534 RPM TO A HIGHER ROTATIONAL RATE OF 750 RPM AT MAXIMUM SPEED. BALANCING CONTRACTOR TO ADJUST TO LOWER SPEED VIA NEW VFD PROVIDED AND PROGRAM VFD LIMIT STOP AS REQUIRED TO NOT EXCEED DESIGN AIRFLOW.

16. PROVIDE TWO(2) VFD FOR THE NEW SINGLE 10 HP RETURN FAN MOTOR INDICATED. EACH VFD WILL BE REDUNDANT IN CASE OF DRIVE FAILURE. ELECTRICAL CONTRACTOR SHALL PROVIDE A MANUAL CHANGE-OVER SWITCH AND WIRE INTO EACH VFD AND BE CAPABLE OF BEING MANUALLY SWITCHED INTO OPERATION ON A PERIODIC BASIS TO SWAP ACTIVE VFD CONTROLLER.

17. MODIFY ALL FIRE SPRINKLER PIPING, AND HEAD LOCATIONS, AS REQUIRED TO ACCOMODATE NEW DUCTWORK OBSTRUCTIONS PER NFPA 13 REQUIREMENTS. PROVIDE SECURITY CAGES AROUND ALL UPRIGHT HEADS INSTALLED WITHIN MECHANICAL ROOM.

CD ISSUE
FULLY SPRINKLERED

GENERAL NOTES:

GENERAL CONTRACTOR AND/OR ALL SUBCONTRACTORS SHALL FIELD VERIFY ALL DIMENSIONS SHOWN ON THESE PLANS AND SHALL BE RESPONSIBLE FOR VARIATIONS BETWEEN PLAN DIMENSIONS AND ACTUAL FIELD DIMENSIONS. WHERE VARIATIONS ARE FOUND TO OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING PRIOR TO PROCEEDING WITH CONSTRUCTION; NO ADJUSTMENT TO THE WORK WILL BE MADE WITHOUT THE PRIOR APPROVAL OF THE PROJECT ENGINEER.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL DEMOLITION INCLUDING REMOVAL OF WALLS, PARTITIONS, DOORS & CEILING & FLOORS. ANY AND ALL CUTTING OF CONCRETE FLOORS, WALLS OR STRUCTURE SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY. CORE DRILLING THROUGH CONCRETE WALLS, FLOORS OR STRUCTURE FOR PIPING OR CONDUIT SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR BY TRADE; FIRESTOPPING OF THESE OPENINGS SHALL BE DONE BY THE RESPECTIVE SUBCONTRACTOR. REMOVAL OF DEBRIS RESULTING FROM DEMOLITION, CUTTING, AND/OR DRILLING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. PATCHING AND REPAIR OF CONCRETE WALLS, FLOOR, OR STRUCTURE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR; THIS WILL BE ACCOMPLISHED UPON COMPLETION OF THE INSTALLATION OF ANY AND ALL UTILITIES INSTALLED BY THE VARIOUS SUBCONTRACTORS.

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PLAN NORTH

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
JASON GOTTWALT, PE
Date 08/08/2014 Reg. No. 41360

Drawing Title
1ST FLOOR MECHANICAL ROOM
NORTHWEST MECHANICAL PLAN

Project Title
UPGRADE AHU'S PHASE 2

Project No. 618-13-130
Building Number 70

Drawing Scale AS NOTED
Plot Scale 12" = 1'-0"

Approved: Catherine Joyce, Chief, Projects Section
Approved: Steven Challeen, Director, Engineering

Location V.A. MEDICAL CENTER
ONE VETERANS DRIVE
MINNEAPOLIS, MN 55417

Date 08/08/2014 | Checked JRG | Drawn JG/RF

DRAWING NO. 1293-70-MH1.2
Dwg. 07 of 30

Office of Facilities Management
Department of Veterans Affairs