

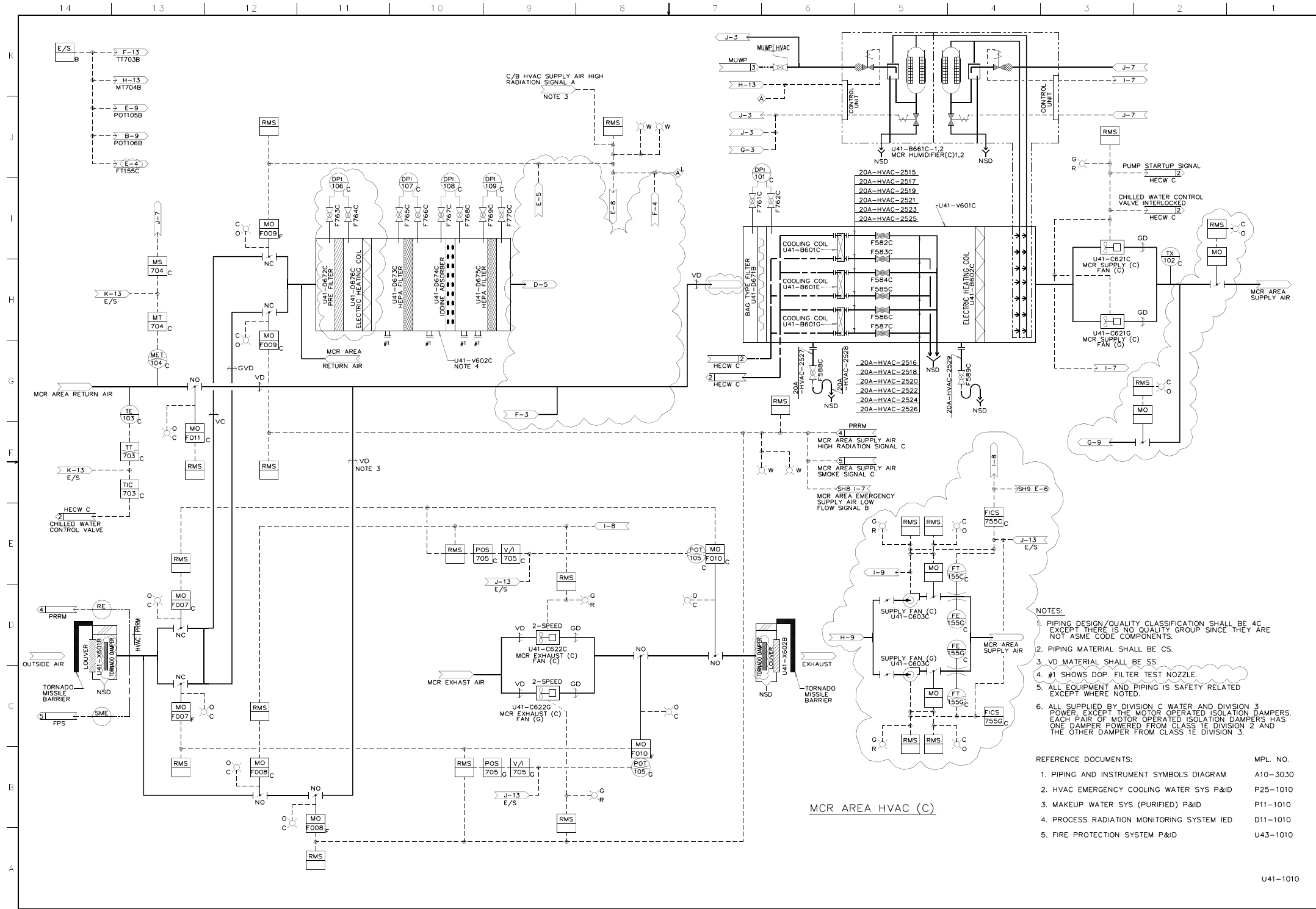
- NOTES:
1. PIPING DESIGN/QUALITY CLASSIFICATION SHALL BE 4C EXCEPT THERE IS NO QUALITY GROUP SINCE THEY ARE NOT ASME CODE COMPONENTS.
 2. PIPING MATERIAL SHALL BE CS.
 3. VD MATERIAL SHALL BE SS.
 4. #1 SHOWS DOP FILTER TEST NOZZLE.
 5. ALL EQUIPMENT AND PIPING IS SAFETY RELATED EXCEPT WHERE NOTED.
 6. ALL SUPPLIED BY DIVISION B WATER AND DIVISION 2 POWER, EXCEPT THE MOTOR OPERATED ISOLATION DAMPERS. EACH PAIR OF MOTOR OPERATED ISOLATION DAMPERS HAS ONE DAMPER POWERED FROM CLASS 1E DIVISION 2 AND THE OTHER DAMPER FROM CLASS 1E DIVISION 3.

REFERENCE DOCUMENTS:

REFERENCE DOCUMENTS:	MPL. NO.
1. PIPING AND INSTRUMENT SYMBOLS DIAGRAM	A10-3030
2. HVAC EMERGENCY COOLING WATER SYS P&ID	P25-1010
3. MAKEUP WATER SYS (PURIFIED) P&ID	P11-1010
4. PROCESS RADIATION MONITORING SYSTEM IED	D11-1010
5. FIRE PROTECTION SYSTEM P&ID	U43-1010

U41-1010

Figure 9.4-1 – Control Building HVAC Flow Diagram (Sheet 1 of 5)



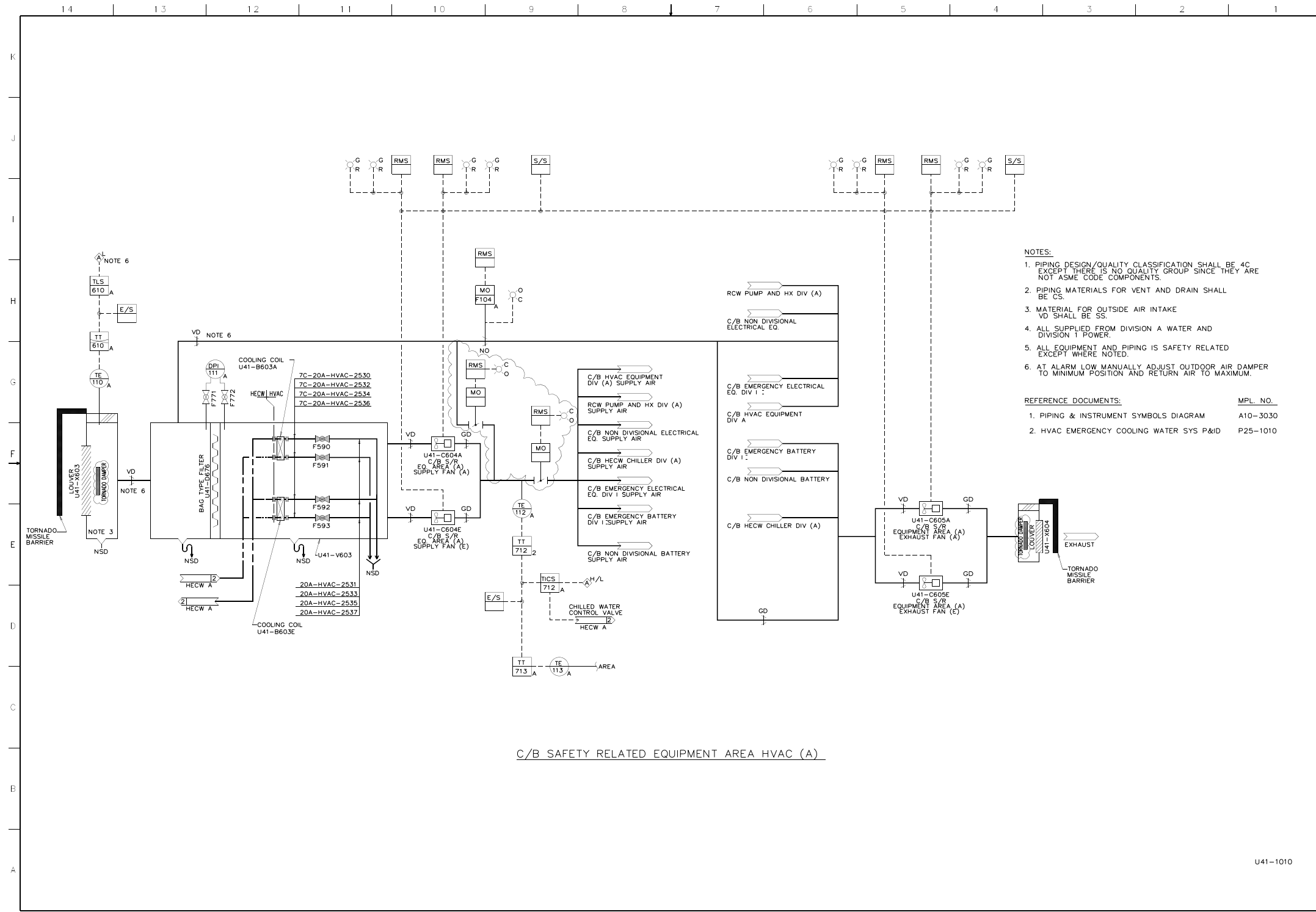
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1. PIPING DESIGN/QUALITY CLASSIFICATION SHALL BE 4C EXCEPT THERE IS NO QUALITY GROUP SINCE THEY ARE NOT ASME CODE COMPONENTS.
 2. PIPING MATERIAL SHALL BE CS.
 3. VD MATERIAL SHALL BE SS.
 4. #1 SHOWS DOP. FILTER TEST NOZZLE.
 5. ALL EQUIPMENT AND PIPING IS SAFETY RELATED EXCEPT WHERE NOTED.
 6. ALL SUPPLIED BY DIVISION C WATER AND DIVISION 3 POWER, EXCEPT THE MOTOR OPERATED ISOLATION DAMPERS. EACH PAIR OF MOTOR OPERATED ISOLATION DAMPERS HAS ONE DAMPER POWERED FROM CLASS 1E DIVISION 2 AND THE OTHER DAMPER FROM CLASS 1E DIVISION 3.

REFERENCE DOCUMENTS:

REFERENCE DOCUMENTS:	MPL. NO.
1. PIPING AND INSTRUMENT SYMBOLS DIAGRAM	A10-3030
2. HVAC EMERGENCY COOLING WATER SYS P&ID	P25-1010
3. MAKEUP WATER SYS (PURIFIED) P&ID	P11-1010
4. PROCESS RADIATION MONITORING SYSTEM IED	D11-1010
5. FIRE PROTECTION SYSTEM P&ID	U43-1010

U41-1010

Figure 9.4-1 – Control Building HVAC Flow Diagram (Sheet 2 of 5)



- NOTES:**
1. PIPING DESIGN/QUALITY CLASSIFICATION SHALL BE 4C EXCEPT THERE IS NO QUALITY GROUP SINCE THEY ARE NOT ASME CODE COMPONENTS.
 2. PIPING MATERIALS FOR VENT AND DRAIN SHALL BE CS.
 3. MATERIAL FOR OUTSIDE AIR INTAKE VD SHALL BE SS.
 4. ALL SUPPLIED FROM DIVISION A WATER AND DIVISION 1 POWER.
 5. ALL EQUIPMENT AND PIPING IS SAFETY RELATED EXCEPT WHERE NOTED.
 6. AT ALARM LOW MANUALLY ADJUST OUTDOOR AIR DAMPER TO MINIMUM POSITION AND RETURN AIR TO MAXIMUM.
- REFERENCE DOCUMENTS:**
- | REFERENCE DOCUMENTS: | MPL. NO. |
|--|----------|
| 1. PIPING & INSTRUMENT SYMBOLS DIAGRAM | A10-3030 |
| 2. HVAC EMERGENCY COOLING WATER SYS P&ID | P25-1010 |

C/B SAFETY RELATED EQUIPMENT AREA HVAC (A)

U41-1010

Figure 9.4-1 – Control Building HVAC Flow Diagram (Sheet 3 of 5)

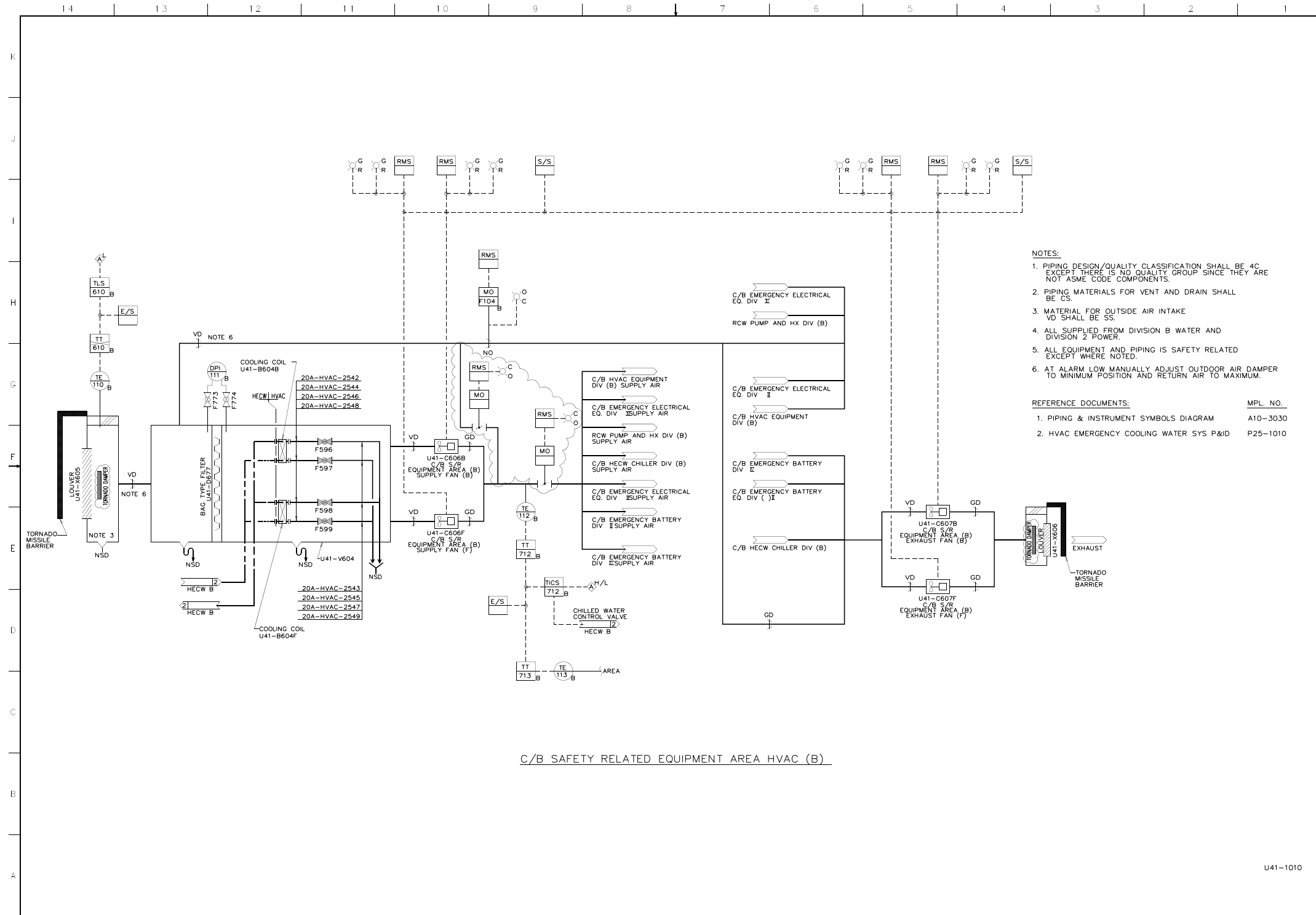


Figure 9.4-1 – Control Building HVAC Flow Diagram (Sheet 4 of 5)

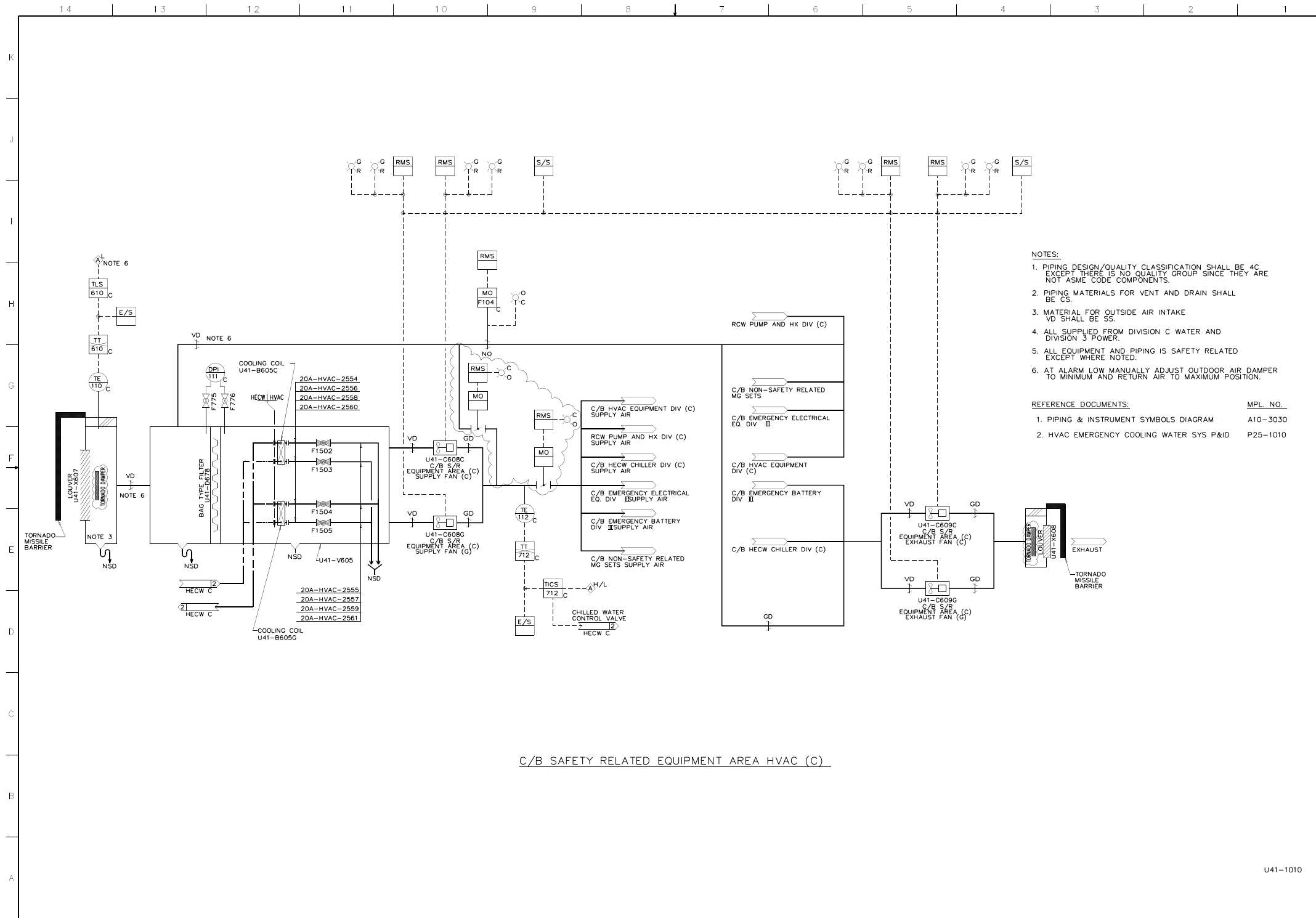


Figure 9.4-1 – Control Building HVAC Flow Diagram (Sheet 5 of 5)

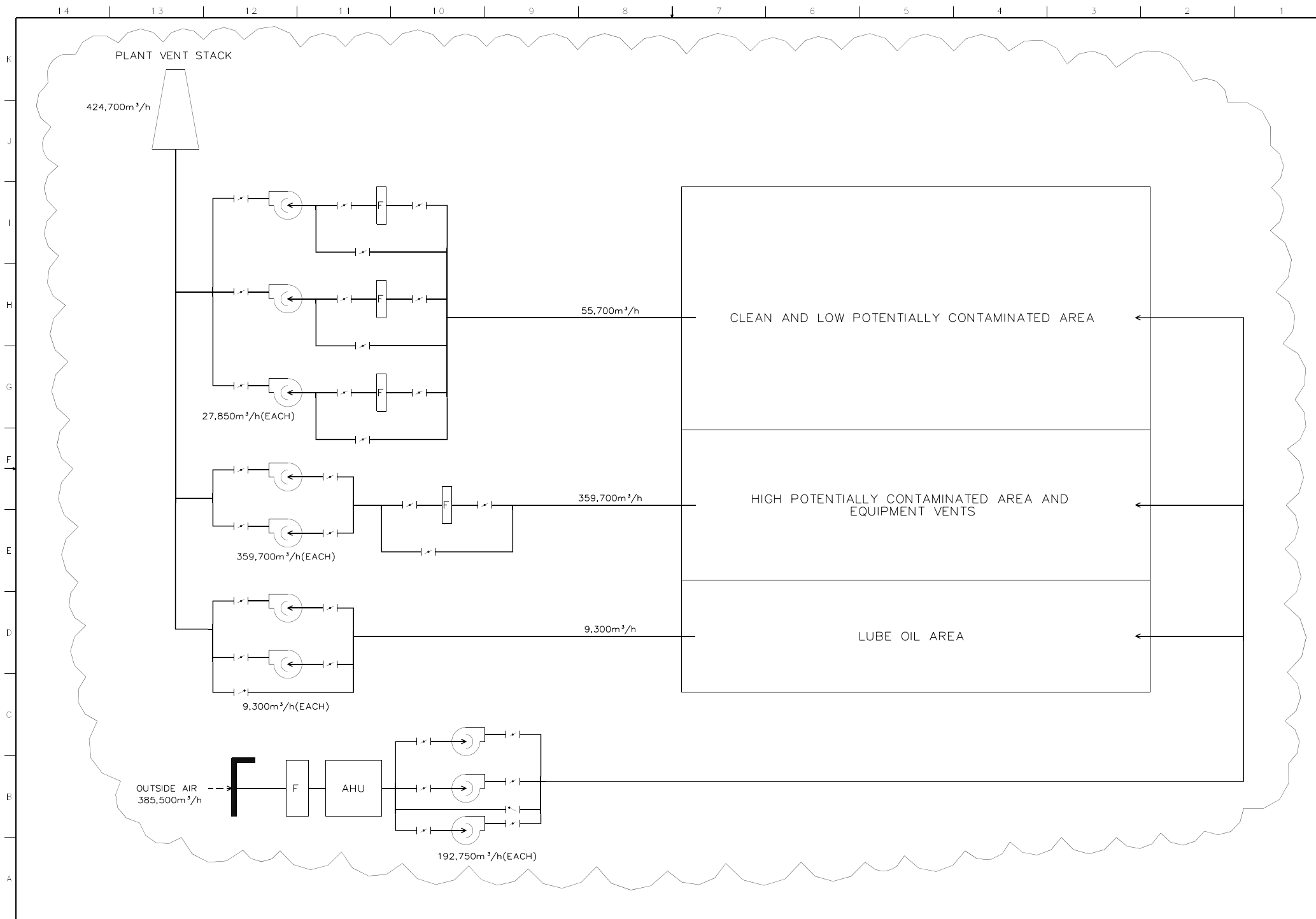


Figure 9.4-2a – Turbine Building Ventilation System Air Flow Diagram

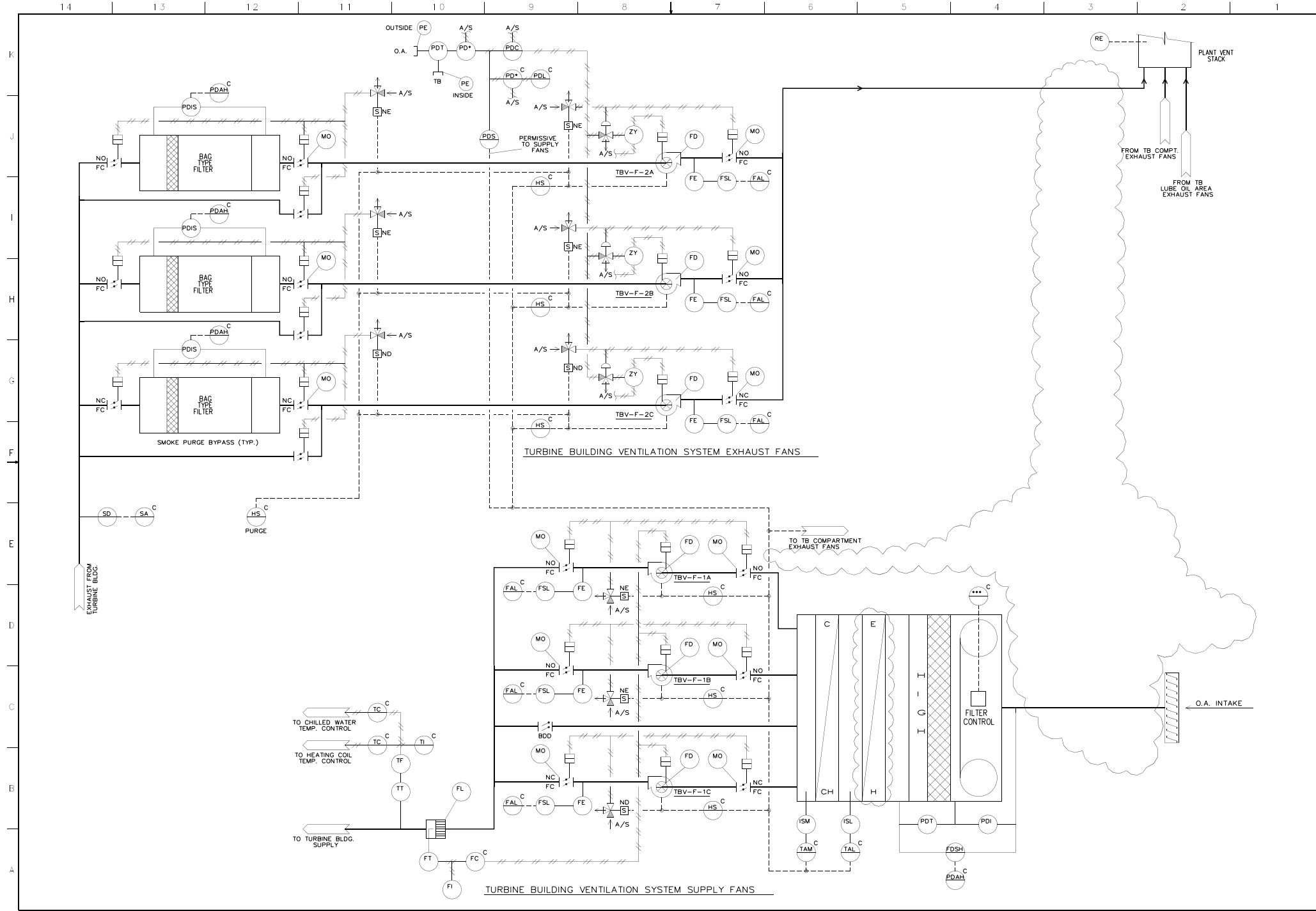


Figure 9.4-2b – Turbine Building Ventilation System Control Diagram (Sheet 1 of 2)

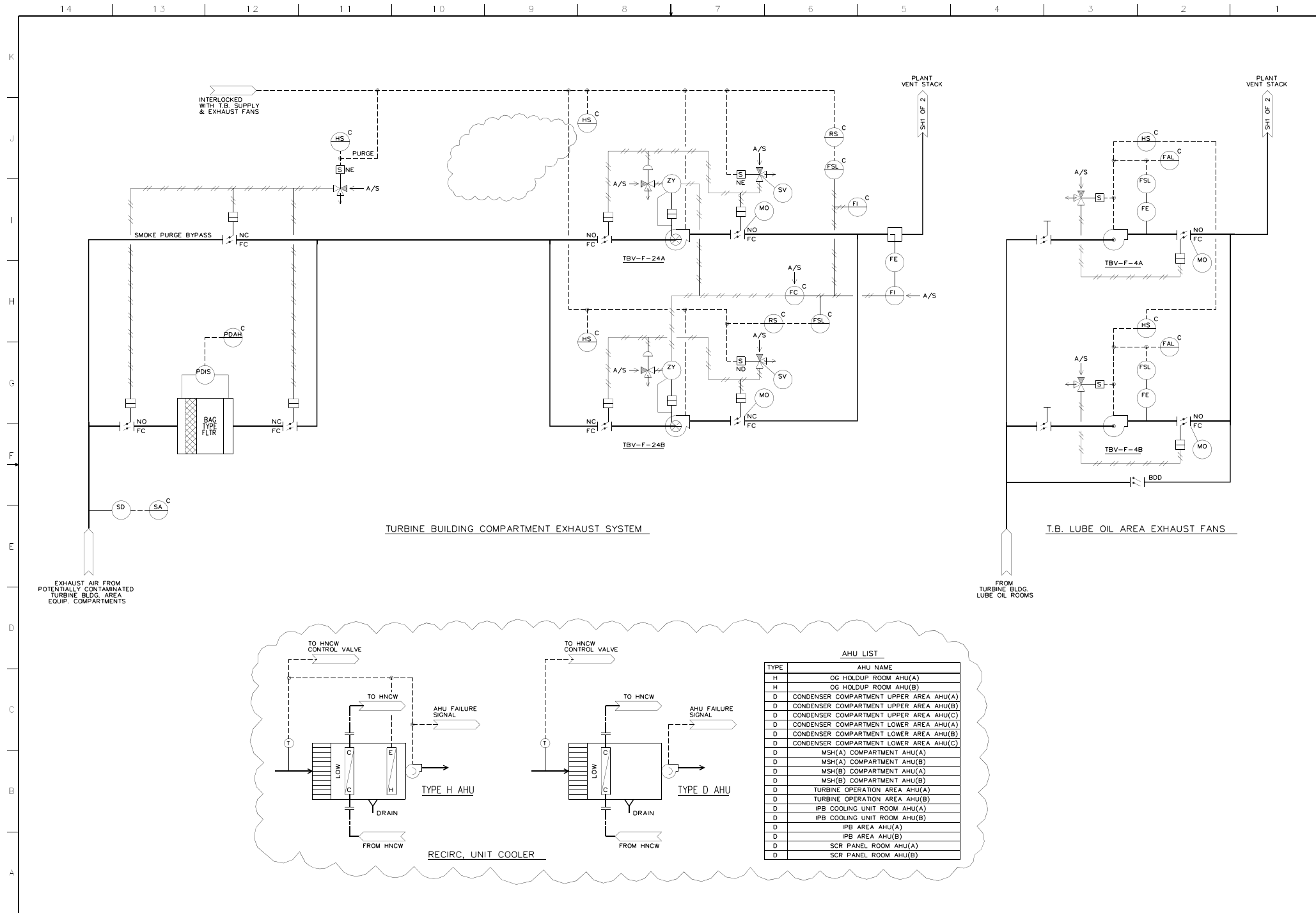


Figure 9.4-2b – Turbine Building Ventilation System Control Diagram (Sheet 2 of 2)

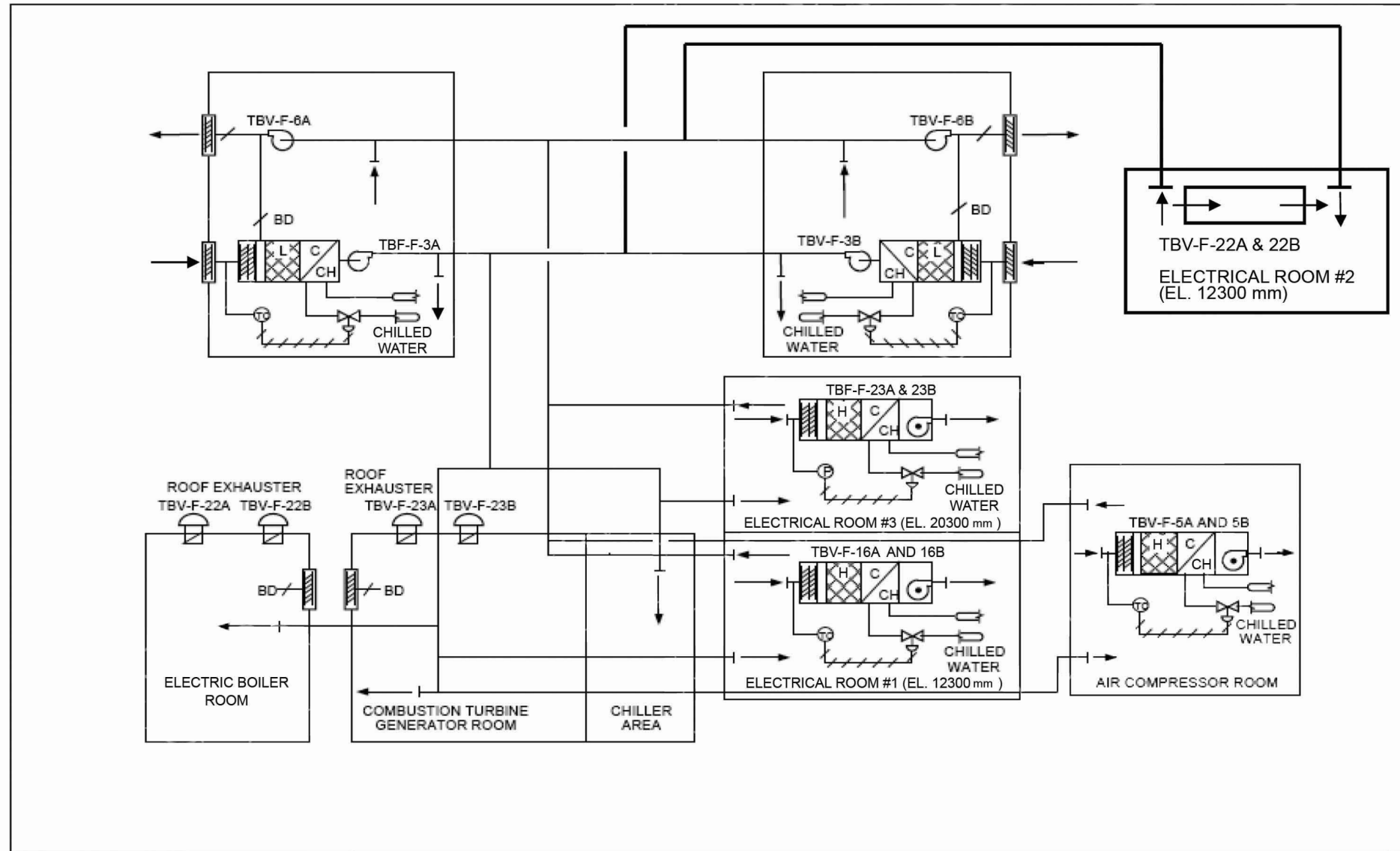


Figure 9.4-2c – Electrical Building HVAC System Diagram Turbine Building Electrical Equipment Areas (EEA) HVAC System Diagram

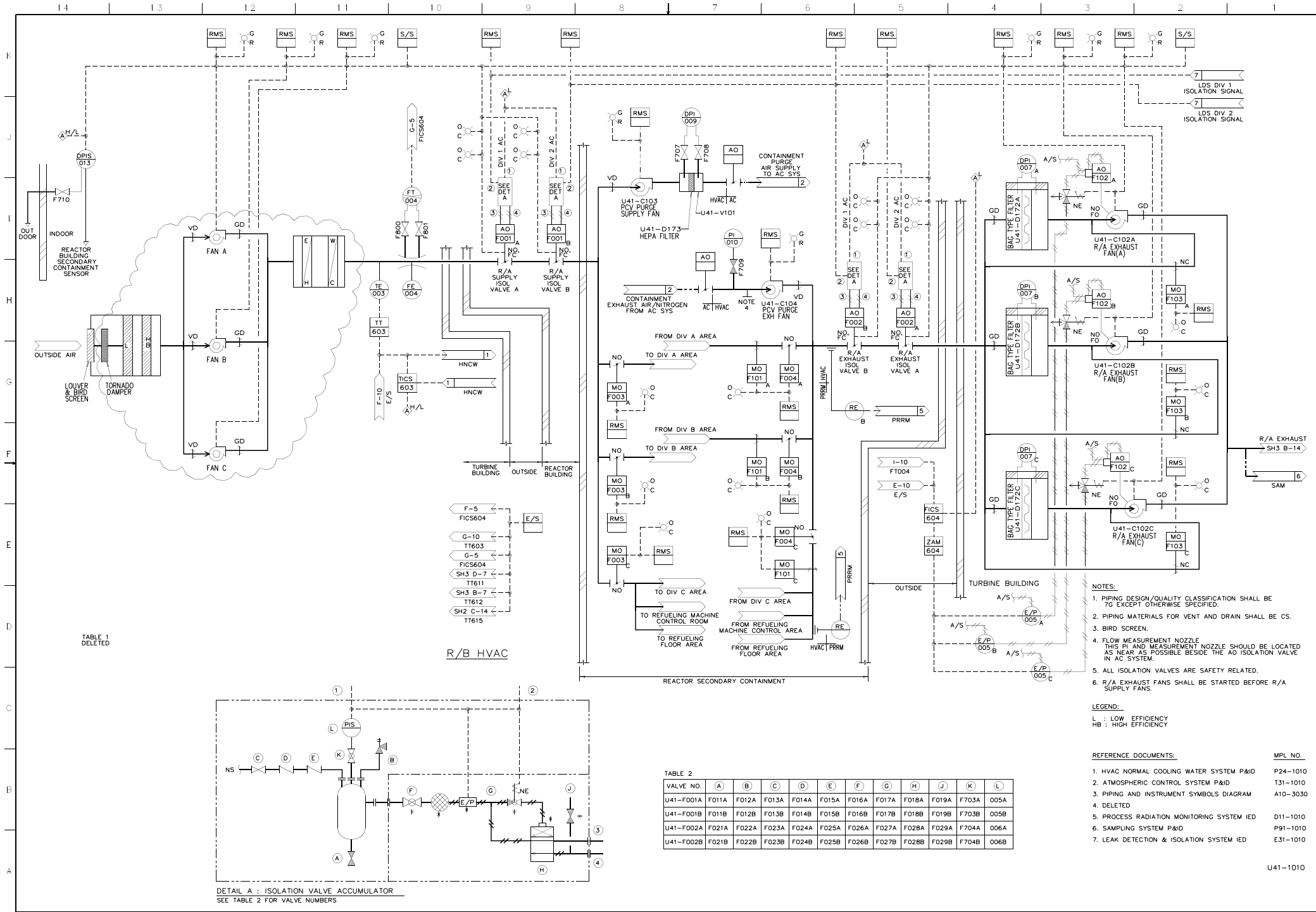


Figure 9.4-3 – Secondary Containment Hvac System P&ID (Sheet 1 of 3)

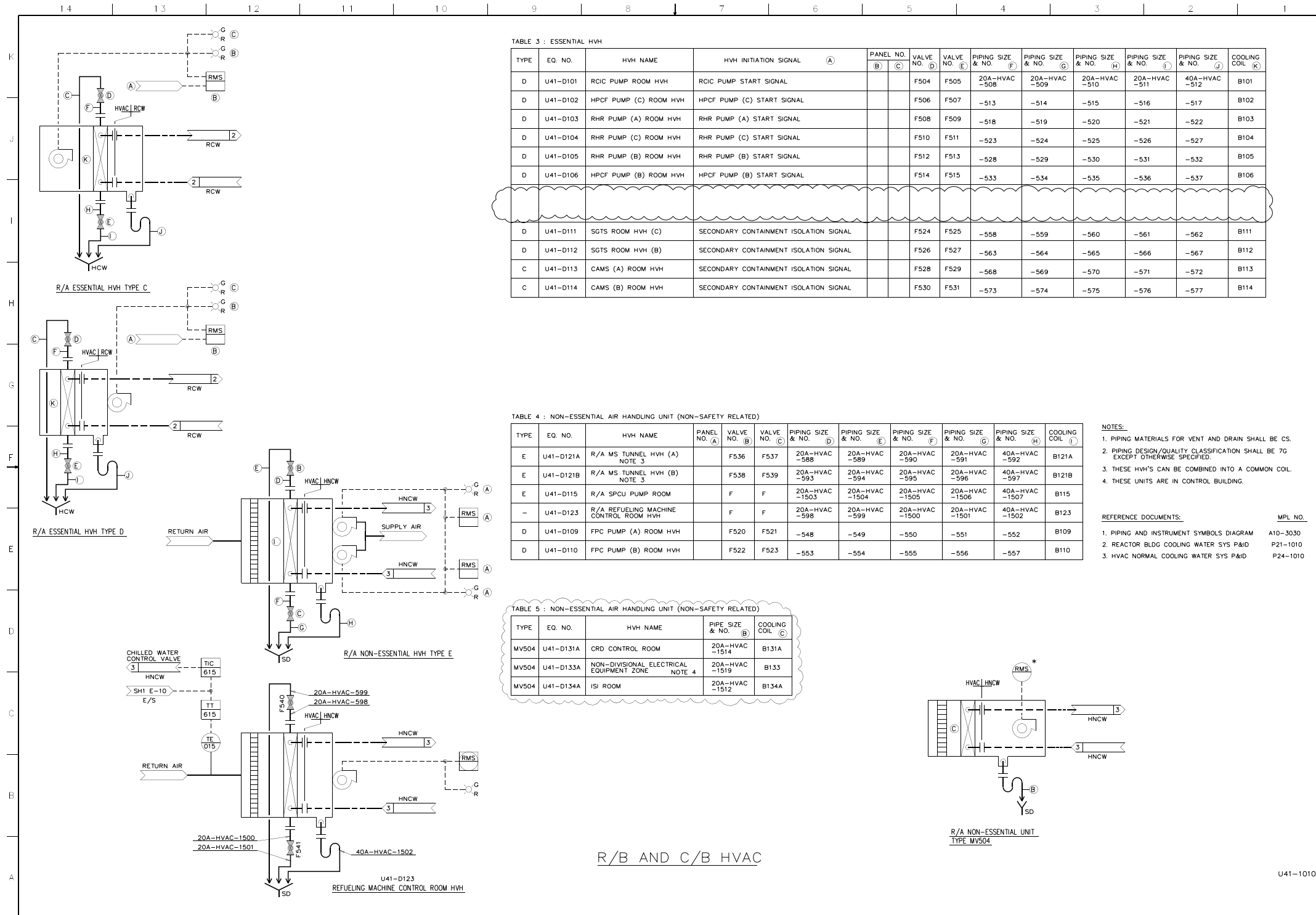
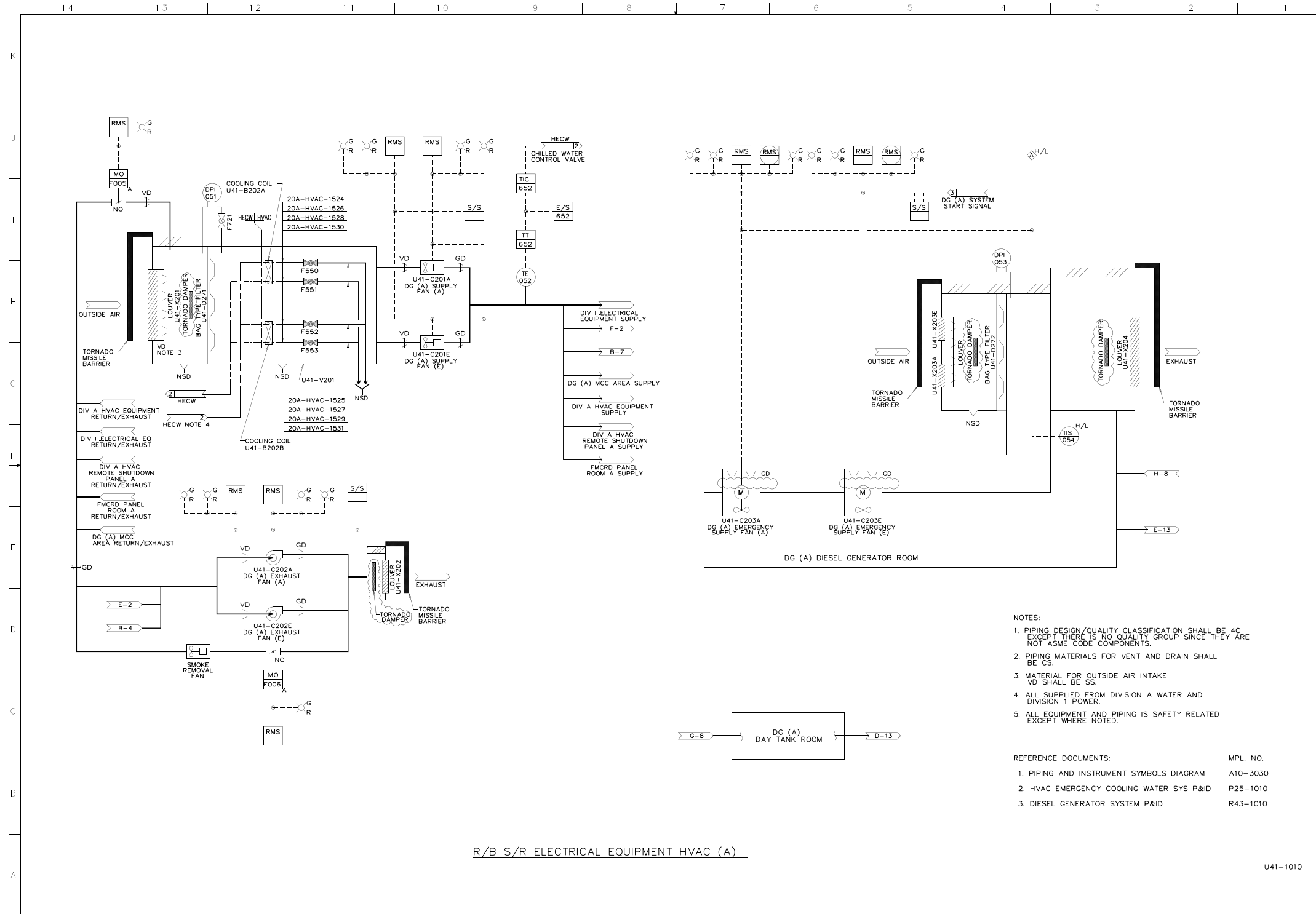


Figure 9.4-3 – Secondary Containment Hvac System P&ID (Sheet 2 of 3)

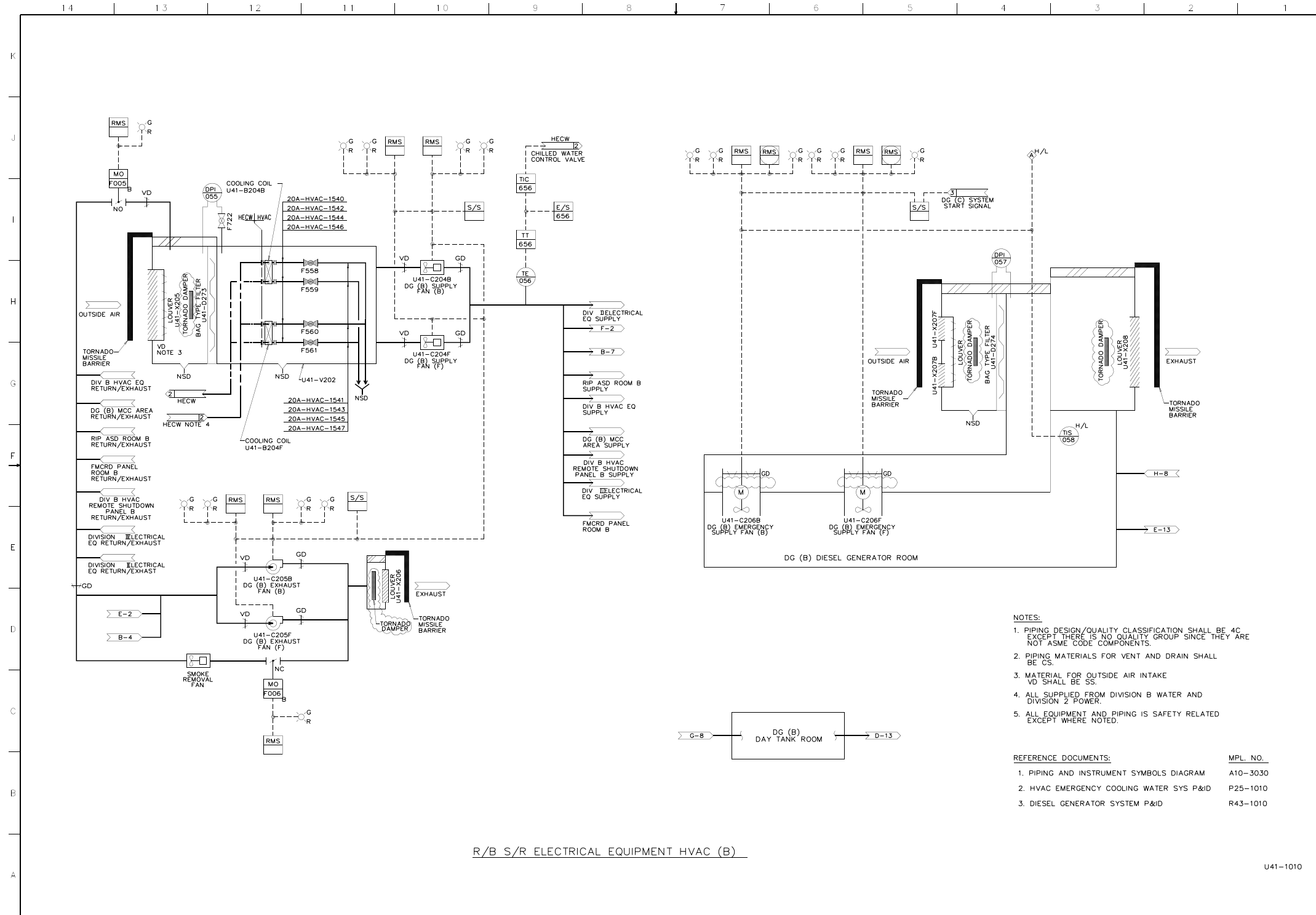


- NOTES:
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 2. PIPING MATERIALS FOR VENT AND DRAIN SHALL BE CS.
 3. MATERIAL FOR OUTSIDE AIR INTAKE VD SHALL BE SS.
 4. ALL SUPPLIED FROM DIVISION A WATER AND DIVISION 1 POWER.
 5. ALL EQUIPMENT AND PIPING IS SAFETY RELATED EXCEPT WHERE NOTED.

REFERENCE DOCUMENTS:

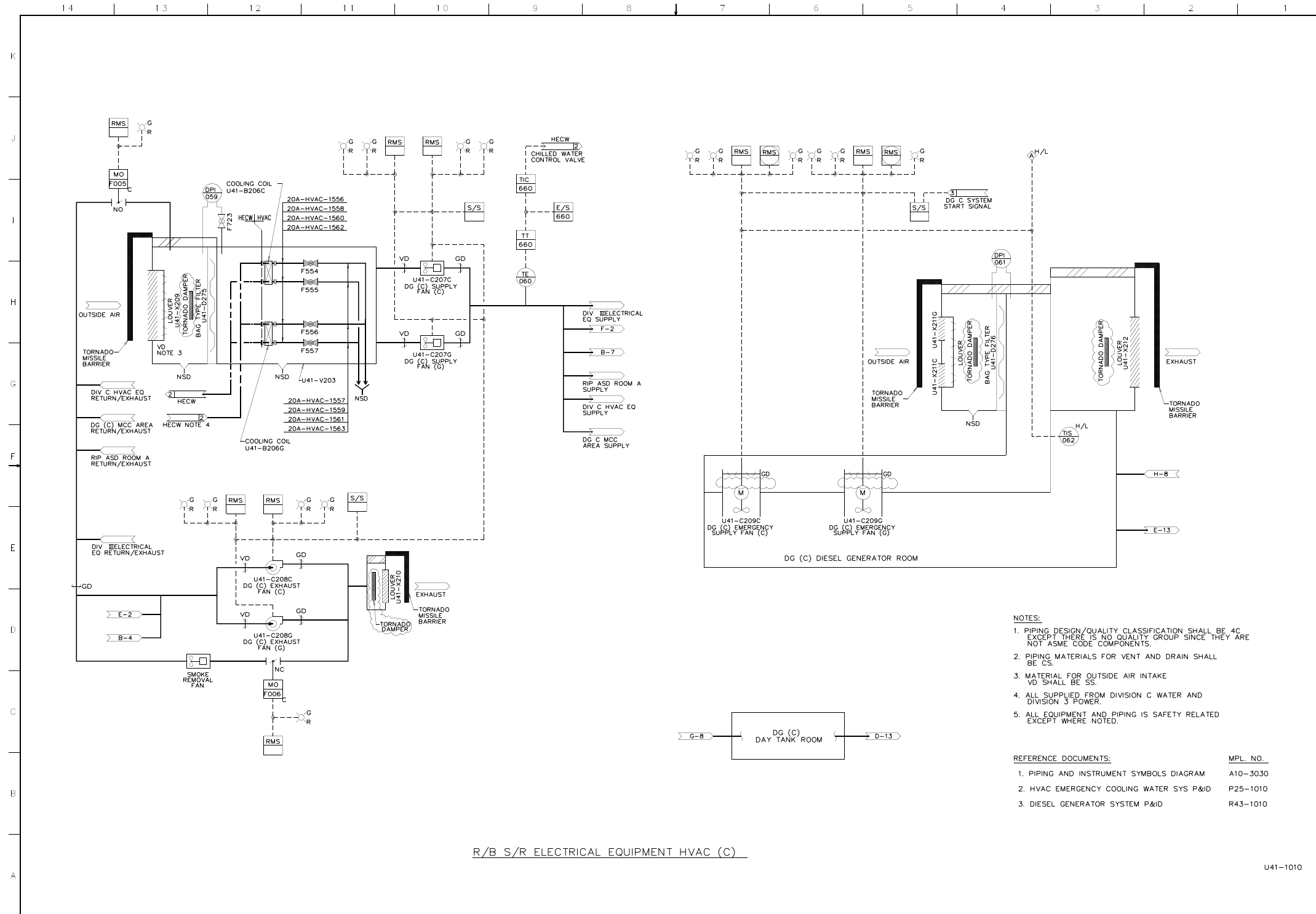
REF. NO.	MPL. NO.
1. PIPING AND INSTRUMENT SYMBOLS DIAGRAM	A10-3030
2. HVAC EMERGENCY COOLING WATER SYS P&ID	P25-1010
3. DIESEL GENERATOR SYSTEM P&ID	R43-1010

Figure 9.4-4 – R/B Safety-related Electrical Equipment Hvac System (Sheet 1 of 3)



Rev. 11

Figure 9.4-4 – R/B Safety-related Electrical Equipment Hvac System (Sheet 2 of 3)



- NOTES:
1. PIPING DESIGN/QUALITY CLASSIFICATION SHALL BE 4C EXCEPT THERE IS NO QUALITY GROUP SINCE THEY ARE NOT ASME CODE COMPONENTS.
 2. PIPING MATERIALS FOR VENT AND DRAIN SHALL BE CS.
 3. MATERIAL FOR OUTSIDE AIR INTAKE VD SHALL BE SS.
 4. ALL SUPPLIED FROM DIVISION C WATER AND DIVISION 3 POWER.
 5. ALL EQUIPMENT AND PIPING IS SAFETY RELATED EXCEPT WHERE NOTED.

REFERENCE DOCUMENTS:	MPL. NO.
1. PIPING AND INSTRUMENT SYMBOLS DIAGRAM	A10-3030
2. HVAC EMERGENCY COOLING WATER SYS P&ID	P25-1010
3. DIESEL GENERATOR SYSTEM P&ID	R43-1010

Figure 9.4-4 – R/B Safety-related Electrical Equipment Hvac System (Sheet 3 of 3)

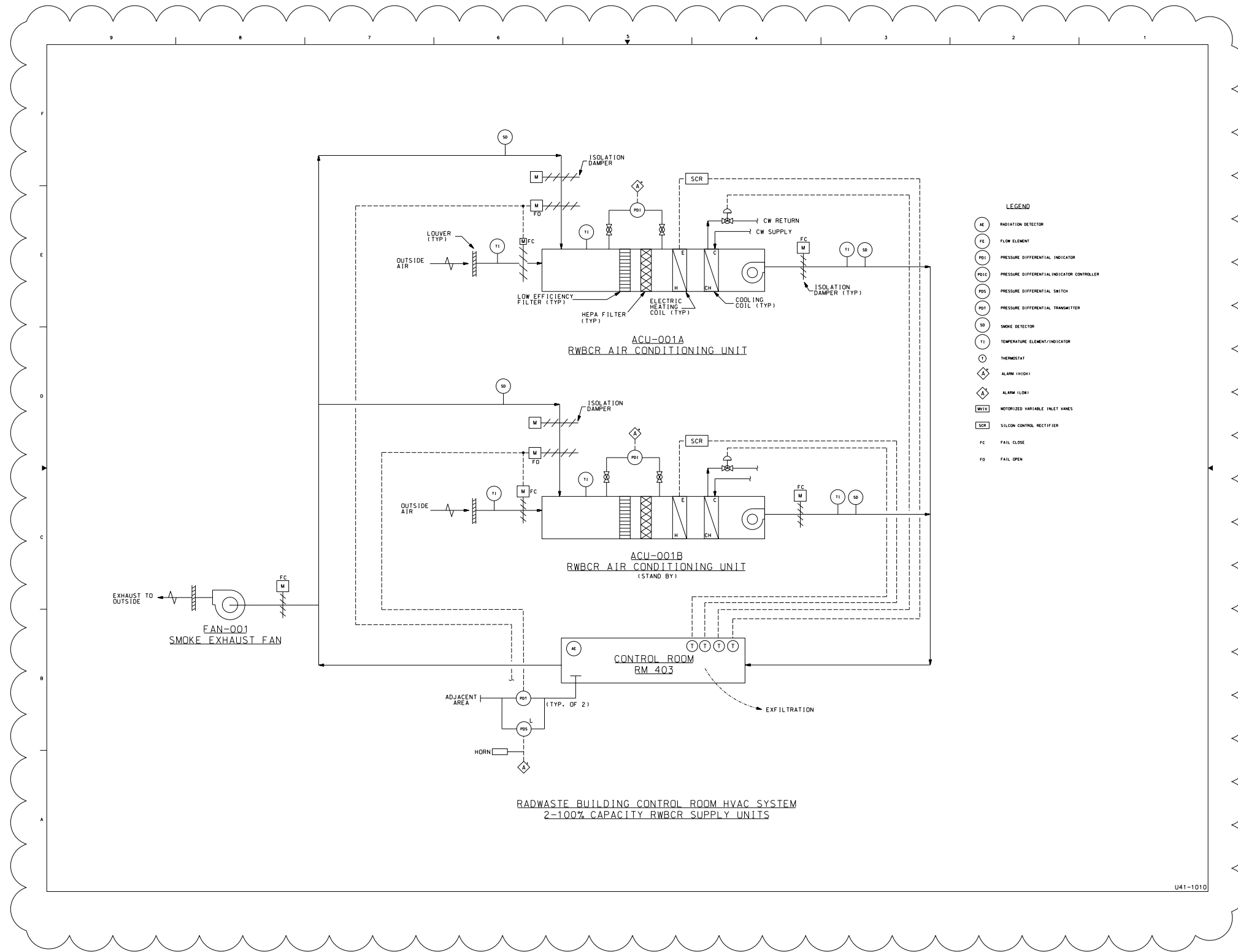


Figure 9.4-10 – Radwaste Building HVAC P&ID (Sheet 1 of 3)

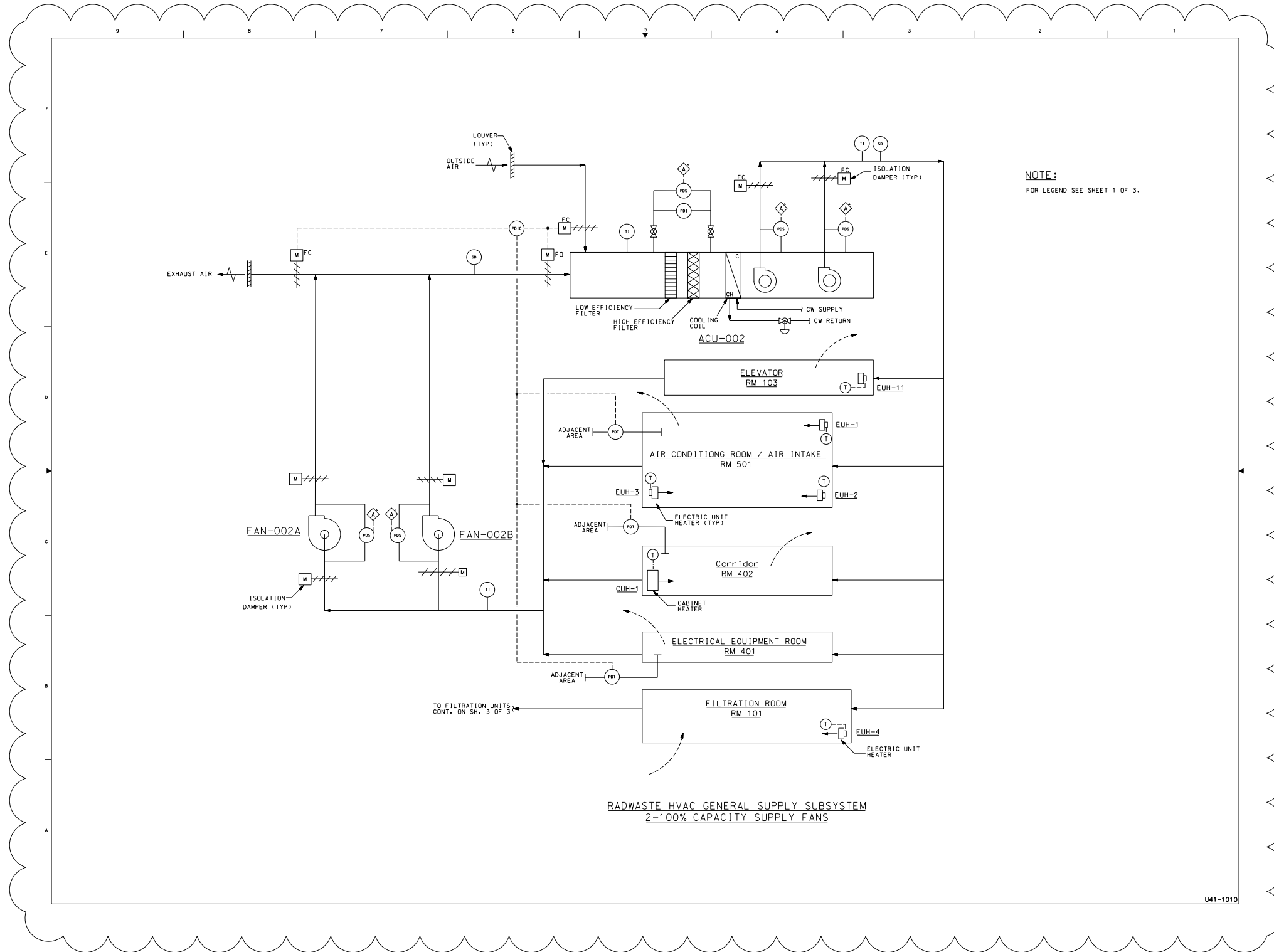


Figure 9.4-10 – Radwaste Building HVAC P&ID (Sheet 2 of 3)

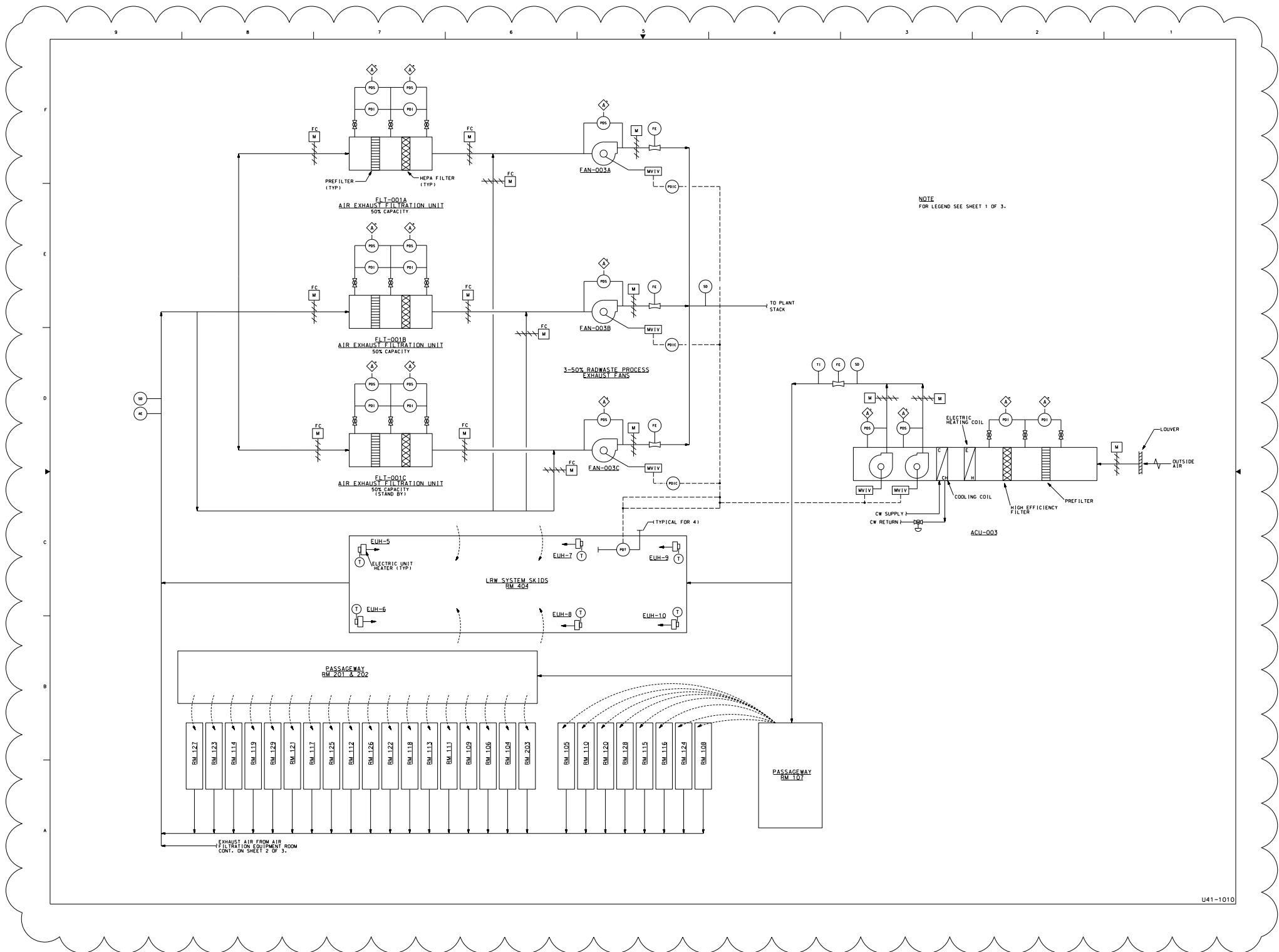


Figure 9.4-10 – Radwaste Building HVAC P&ID (Sheet 3 of 3)

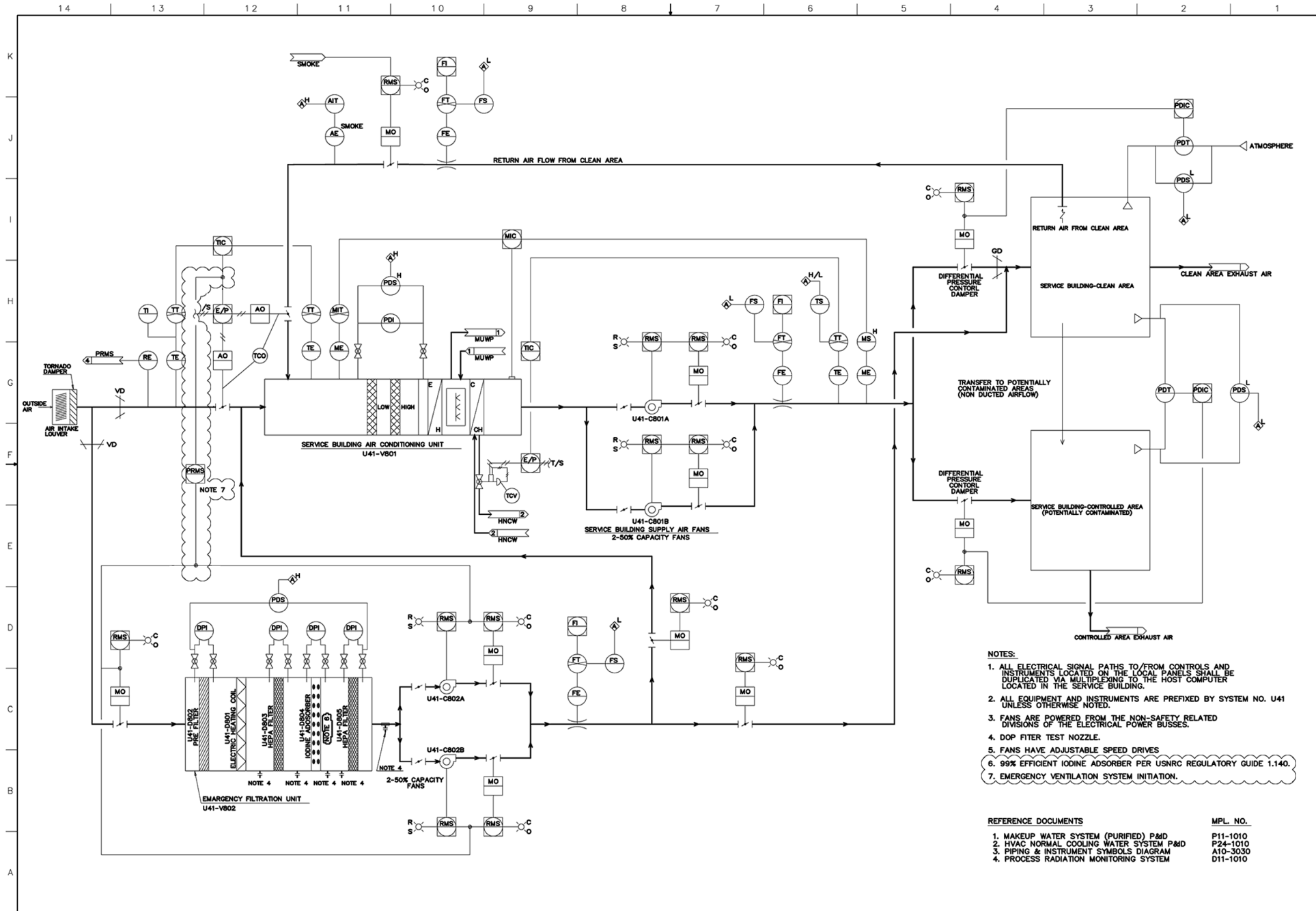


Figure 9.4-11 – Service Building HVAC P&ID (SHEET 1 OF 2)

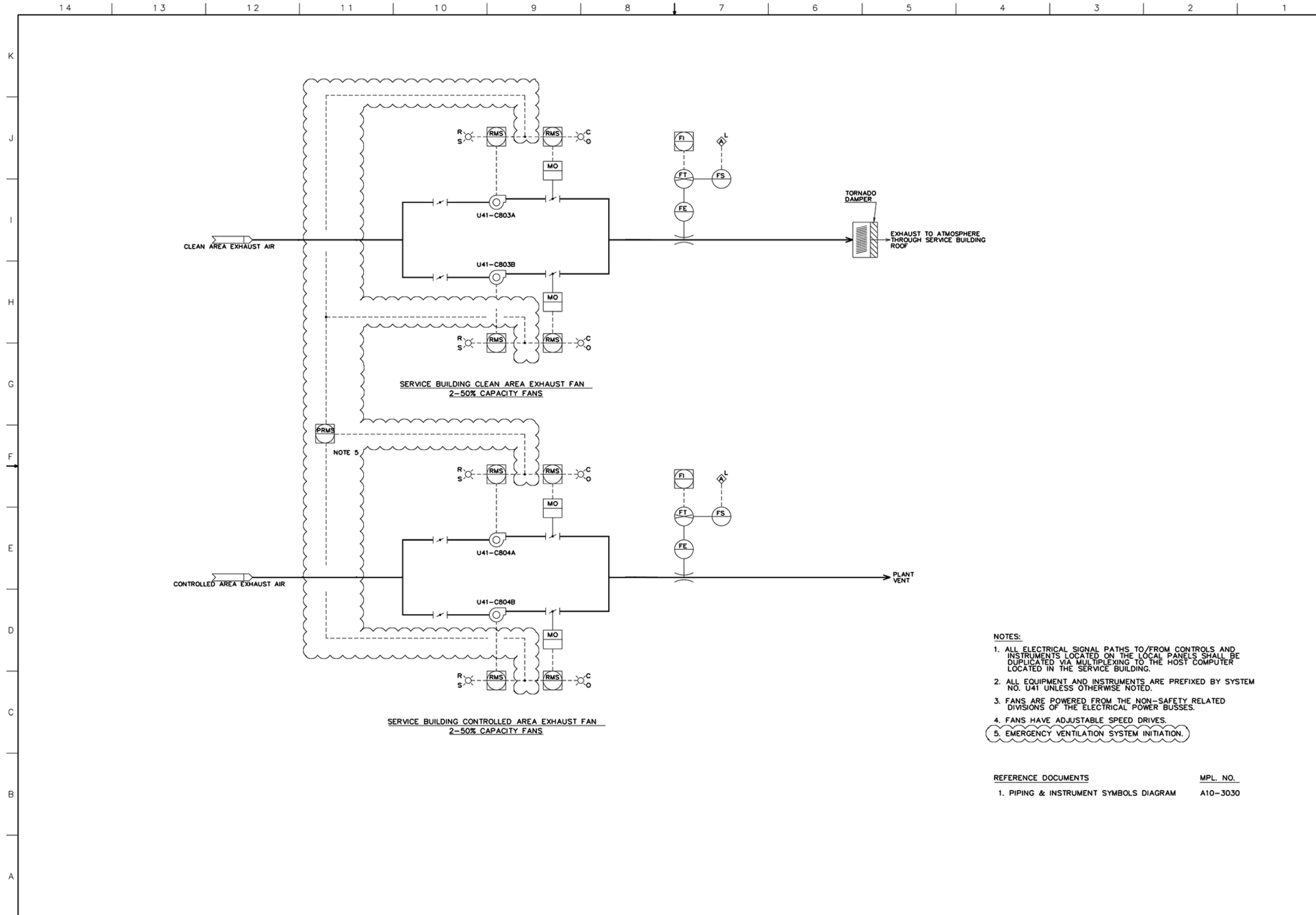
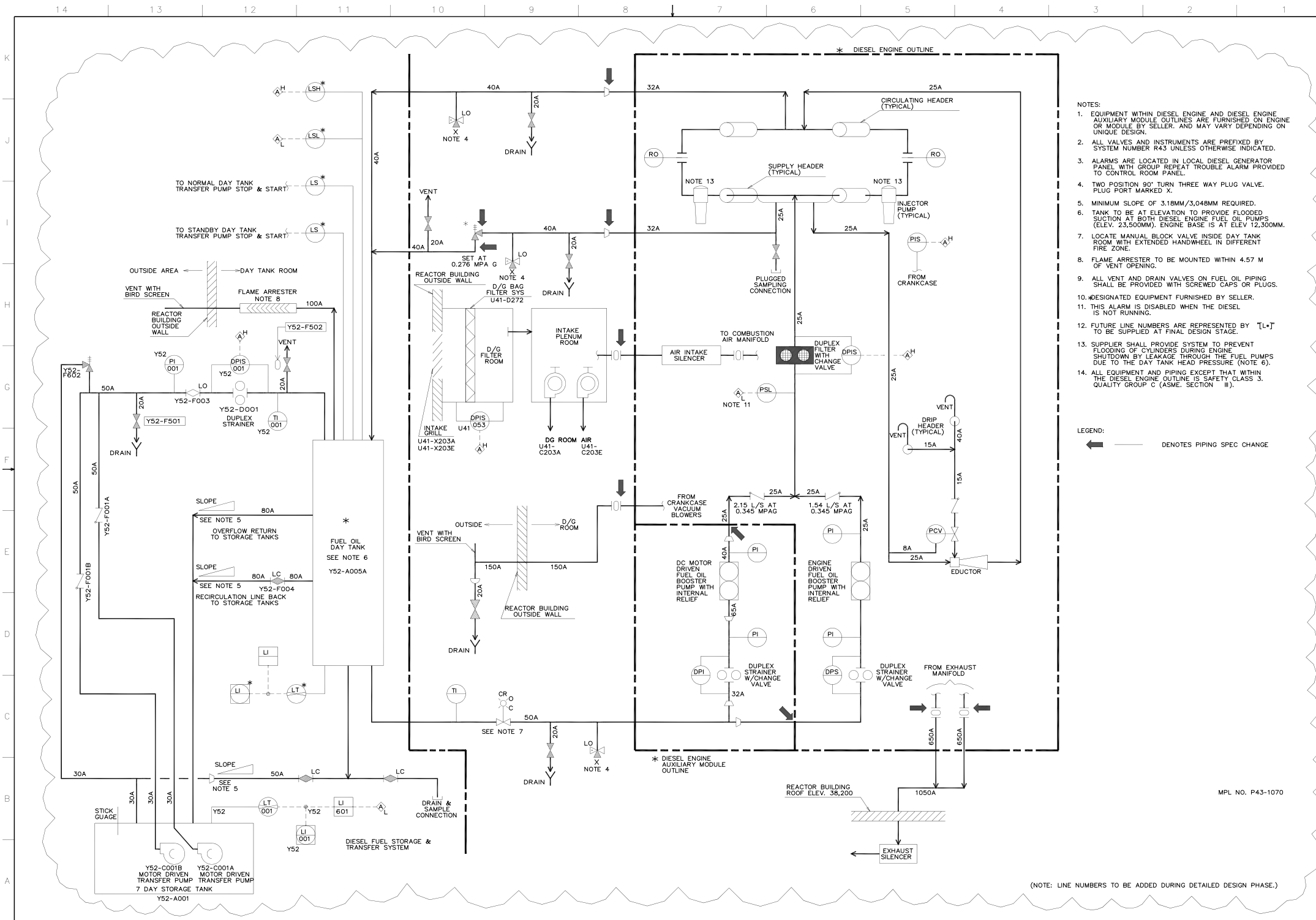


Figure 9.4-11 – Service Building HVAC P&ID (Sheet 2 OF 2)



- NOTES:
- EQUIPMENT WITHIN DIESEL ENGINE AND DIESEL ENGINE AUXILIARY MODULE OUTLINES ARE FURNISHED ON ENGINE OR MODULE BY SELLER, AND MAY VARY DEPENDING ON UNIQUE DESIGN.
 - ALL VALVES AND INSTRUMENTS ARE PREFIXED BY SYSTEM NUMBER R43 UNLESS OTHERWISE INDICATED.
 - ALARMS ARE LOCATED IN LOCAL DIESEL GENERATOR PANEL WITH GROUP REPEAT TROUBLE ALARM PROVIDED TO CONTROL ROOM PANEL.
 - TWO POSITION 90° TURN THREE WAY PLUG VALVE. PLUG PORT MARKED X.
 - MINIMUM SLOPE OF 3.18MM/3.048MM REQUIRED.
 - TANK TO BE AT ELEVATION TO PROVIDE FLOODED SUCTION AT BOTH DIESEL ENGINE FUEL OIL PUMPS (ELEV. 23,500MM). ENGINE BASE IS AT ELEV 12,300MM.
 - LOCATE MANUAL BLOCK VALVE INSIDE DAY TANK ROOM WITH EXTENDED HANDWHEEL IN DIFFERENT FIRE ZONE.
 - FLAME ARRESTER TO BE MOUNTED WITHIN 4.57 M OF VENT OPENING.
 - ALL VENT AND DRAIN VALVES ON FUEL OIL PIPING SHALL BE PROVIDED WITH SCREWED CAPS OR PLUGS.
 - DESIGNATED EQUIPMENT FURNISHED BY SELLER.
 - THIS ALARM IS DISABLED WHEN THE DIESEL IS NOT RUNNING.
 - FUTURE LINE NUMBERS ARE REPRESENTED BY "[L-]" TO BE SUPPLIED AT FINAL DESIGN STAGE.
 - SUPPLIER SHALL PROVIDE SYSTEM TO PREVENT FLOODING OF CYLINDERS DURING ENGINE SHUTDOWN BY LEAKAGE THROUGH THE FUEL PUMPS DUE TO THE DAY TANK HEAD PRESSURE (NOTE 6).
 - ALL EQUIPMENT AND PIPING EXCEPT THAT WITHIN THE DIESEL ENGINE OUTLINE IS SAFETY CLASS 3, QUALITY GROUP C (ASME SECTION II).

LEGEND:
 ——— DENOTES PIPING SPEC CHANGE

MPL NO. P43-1070

Figure 9.5-6 – Standby Diesel Generator Fuel Oil And Intake And Exhaust Systems