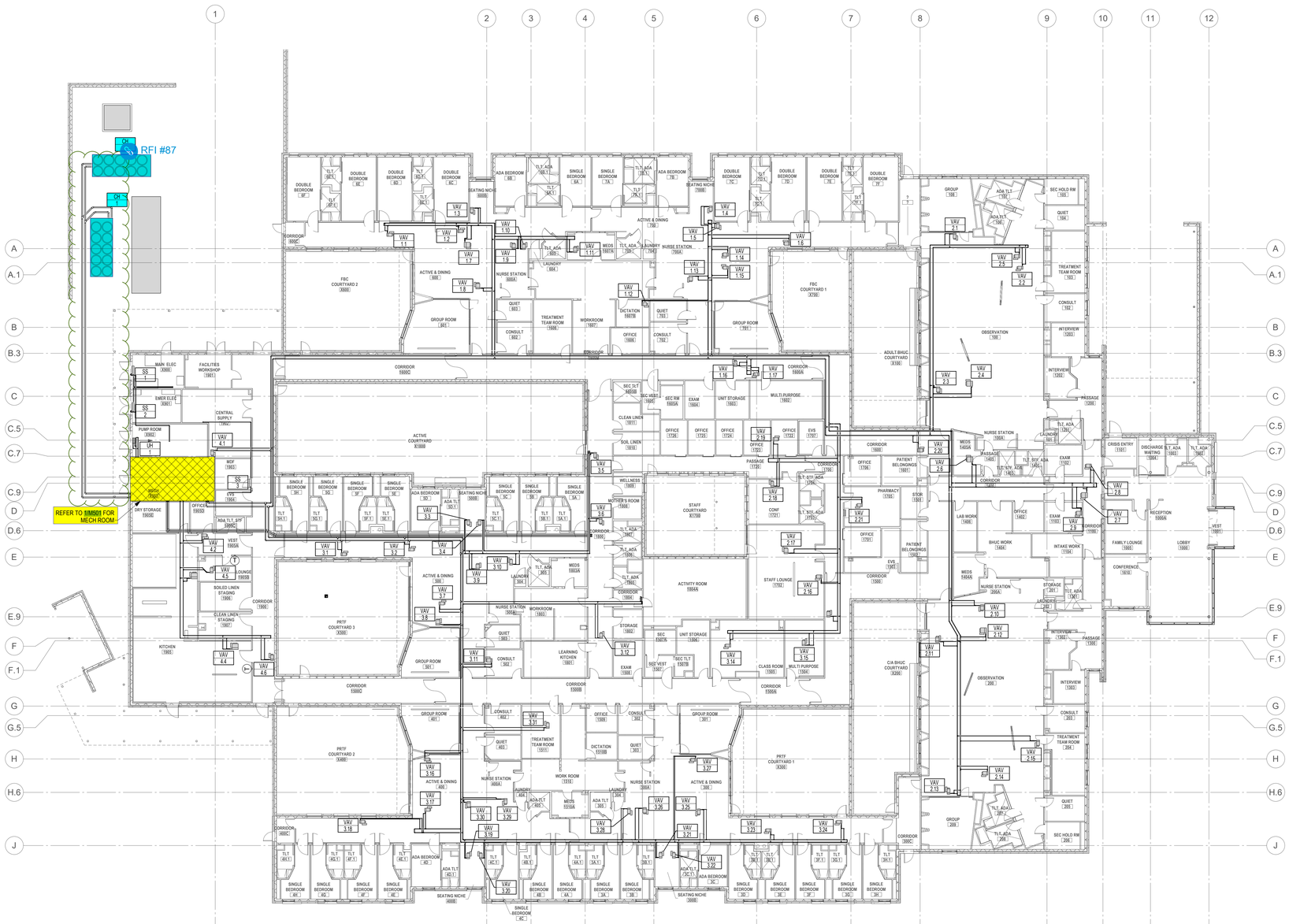
GENERAL NOTES - MECH

A. REFER TO GENERAL NOTES ON M001 FOR ADDITIONAL INFORMATION.



1 MECHANICAL FLOOR PLAN OVERALL - PIPING

1/16" = 1'-0"

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Project Number: D22-2545

NORTH CAROLINA PROFESSIONAL SEAL 032218 ENGINEER DOUGLAS R. HUNDLEY, JR.
07/12/2024

ISSUE FOR CONSTRUCTION

No.	Date	Description

Cabarrus County Regional Behavioral Health Center

DHSR Number: MHL-5188

Bid Package 3

LEVEL 1 - PIPING

DATE	JULY 12, 2024
SCALE	As indicated
DRAWN	RD / BES
PROJ. NO.	2022-A002.01
SHEET	M300

7/11/2024 1:04:14 PM

1 MECHANICAL FLOOR PLAN - AREA A - PIPING

1/8" = 1'-0"

GENERAL NOTES - MECH

A. REFER TO GENERAL NOTES ON M001 FOR ADDITIONAL INFORMATION.

NOTES BY SYMBOL " ⬡ ":

MP01	PROVIDE 3-WAY CONTROL VALVE ON THIS VAV BOX.
MP03	PROVIDE END OF MAIN BYPASS WITH SHUT-OFF VALVES. REFER TO 01M803 FOR DETAIL.
MP10	PROVIDE BALL VALVES FOR LOOP ISOLATION. ENSURE THAT THERE IS ADEQUATE ACCESSIBILITY.
MP13	VAV BRANCH PIPING TO BE 3/4" UNLESS NOTED OTHERWISE ON THE DRAWINGS.

human eXperience

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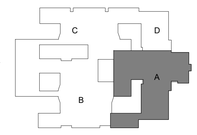
07/12/2024

ISSUE FOR CONSTRUCTION

No.	Date	Description

Cabarrus County Regional Behavioral Health Center

DHSR Number: MHL-5188



Bid Package 3

LEVEL 1 - AREA A - PIPING

DATE	JULY 12, 2024
SCALE	As indicated
DRAWN	RD / BES
PROJ. NO.	2022-A002.01
SHEET	M301A

7/10/2024 4:43:22 PM

1 MECHANICAL FLOOR PLAN - AREA B - PIPING

1/8" = 1'-0"

GENERAL NOTES - MECH

A. REFER TO GENERAL NOTES ON M001 FOR ADDITIONAL INFORMATION.

NOTES BY SYMBOL " ⬡ ":

MP01	PROVIDE 3-WAY CONTROL VALVE ON THIS VAV BOX.
MP02	PIPING UP TO/DOWN FROM FLOOR ABOVE. REFER TO M202 FOR CONTINUATION.
MP03	PROVIDE END OF MAIN BYPASS WITH SHUT-OFF VALVES. REFER TO 8/M803 FOR DETAIL.
MP05	PIPING CONTINUES INTO MECHANICAL ROOM. REFER TO 1/M501 FOR CONTINUATION.
MP06	7/8" SUCTION AND 3/8" LIQUID REFRIGERANT PIPING FROM INDOOR UNIT UP THROUGH ROOF. REFER TO 1S/M801 FOR ADDITIONAL INFORMATION.
MP08	ROUTE CONDENSATE TO OPEN RECEPTACLE AT THIS LOCATION. COORDINATE WITH PLUMBING PLANS FOR EXACT LOCATION.
MP10	PROVIDE BALL VALVES FOR LOOP ISOLATION. ENSURE THAT THERE IS ADEQUATE ACCESSIBILITY.
MP13	VAV BRANCH PIPING TO BE 3/4" UNLESS NOTED OTHERWISE ON THE DRAWINGS.

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NORTH CAROLINA PROFESSIONAL SEAL 032218 ENGINEER DOUGLAS R. HUNDLEY, JR.

07/12/2024

ISSUE FOR CONSTRUCTION

No.	Date	Description

Cabarrus County Regional Behavioral Health Center

DHSR Number: MHL-5188

Bid Package 3

LEVEL 1 - AREA B - PIPING

DATE JULY 12, 2024
SCALE As indicated
DRAWN RD / BES
PROJ. NO. 2022-A002.01
SHEET M301B

7/11/2024 1:04:22 PM

GENERAL NOTES - MECH

A. REFER TO GENERAL NOTES ON M001 FOR ADDITIONAL INFORMATION.

NOTES BY SYMBOL " ⬡ ":

MP01	PROVIDE 3-WAY CONTROL VALVE ON THIS VAV BOX.
MP03	PROVIDE END OF MAIN BYPASS WITH SHUT-OFF VALVES. REFER TO 8/M803 FOR DETAIL.
MP05	PIPING CONTINUES INTO MECHANICAL ROOM. REFER TO 1/M501 FOR CONTINUATION.
MP06	7/8" SUCTION AND 3/8" LIQUID REFRIGERANT PIPING FROM INDOOR UNIT UP THROUGH ROOF. REFER TO 15/M801 FOR ADDITIONAL INFORMATION.
MP08	ROUTE CONDENSATE TO OPEN RECEPTACLE AT THIS LOCATION. COORDINATE WITH PLUMBING PLANS FOR EXACT LOCATION.
MP10	PROVIDE BALL VALVES FOR LOOP ISOLATION. ENSURE THAT THERE IS ADEQUATE ACCESSIBILITY.
MP13	VAV BRANCH PIPING TO BE 3/4" UNLESS NOTED OTHERWISE ON THE DRAWINGS.

1 MECHANICAL FLOOR PLAN - AREA C - PIPING

1/8" = 1'-0"

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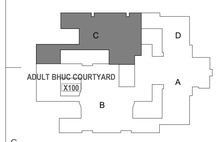
07/12/2024

ISSUE FOR CONSTRUCTION

No.	Date	Description

Cabarrus County Regional Behavioral Health Center

DHSR Number: MHL-5188



Bid Package 3

LEVEL 1 - AREA C - PIPING

DATE	JULY 12, 2024
SCALE	As indicated
DRAWN	RD / BES
PROJ. NO.	2022-A002.01
SHEET	M301C

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GENERAL NOTES - MECH

A. REFER TO GENERAL NOTES ON M001 FOR ADDITIONAL INFORMATION.

NOTES BY SYMBOL " ⬡ ":

MP01	PROVIDE 3-WAY CONTROL VALVE ON THIS VAV BOX.
MP03	PROVIDE END OF MAIN BYPASS WITH SHUT-OFF VALVES. REFER TO B/M803 FOR DETAIL.
MP10	PROVIDE BALL VALVES FOR LOOP ISOLATION. ENSURE THAT THERE IS ADEQUATE ACCESSIBILITY.
MP13	VAV BRANCH PIPING TO BE 3/4" UNLESS NOTED OTHERWISE ON THE DRAWINGS.

1 MECHANICAL FLOOR PLAN - AREA D - PIPING

1/8" = 1'-0"

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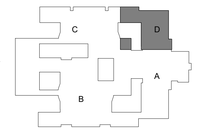
07/12/2024

ISSUE FOR CONSTRUCTION

No.	Date	Description

Cabarrus County Regional Behavioral Health Center

DHSR Number: MHL-5188



Bid Package 3

LEVEL 1 - AREA D - PIPING

DATE	JULY 12, 2024
SCALE	As indicated
DRAWN	RD / RES
PROJ. NO.	2022-A002.01
SHEET	M301D

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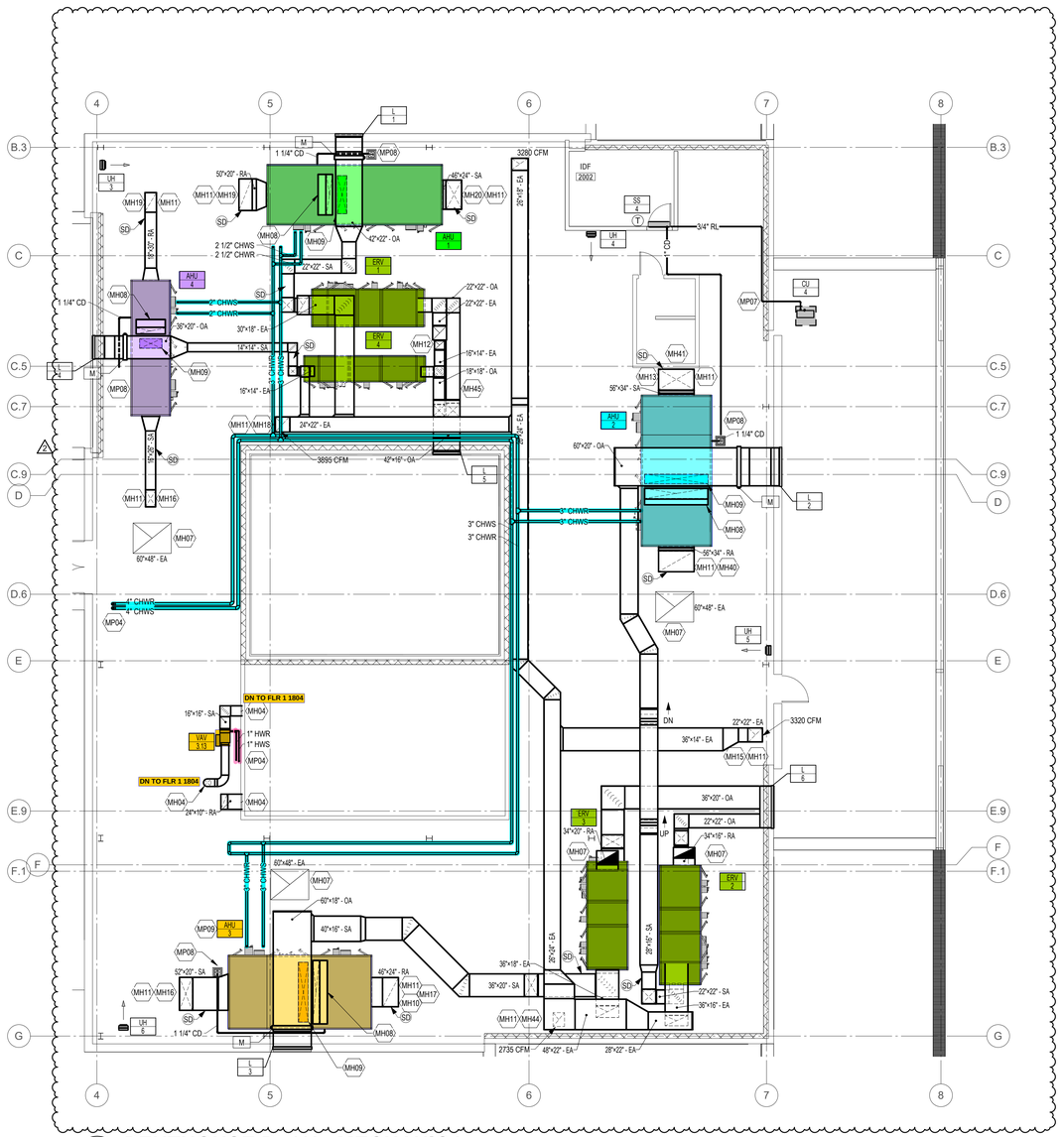

1 **PENTHOUSE PLAN - MECHANICAL**
1/8" = 1'-0"

GENERAL NOTES - MECH

A. REFER TO GENERAL NOTES ON **M001** FOR ADDITIONAL INFORMATION.

NOTES BY SYMBOL " ⬡ ":

MH04	DUCT ENTERS/EXITS PENTHOUSE TO SERVE ACTIVITY ROOM 1804A.
MH07	EXHAUST DUCT UP TO RELIEF HOOD ABOVE. REFER TO **M401** FOR CONTINUATION.
MH08	EXTEND FULL SIZE EXHAUST DUCT UP 1' AND ELBOW 1'-8" OVER TO PROVIDE PATH FOR RELIEF AIR DURING ECONOMIZING MODE.
MH09	EXTEND FULL SIZE DUCT UP FROM OUTDOOR AIR INTAKE TO DUCT ABOVE.
MH10	RETURN DUCT TRANSITIONS FROM 48" X 24" TO 60" X 24" IN VERTICAL. TRANSITION BEFORE FLOOR PENETRATION.
MH11	PROVIDE FIRE AND SMOKE DAMPER AT FLOOR PENETRATION. ENSURE DAMPER ACTUATOR IS ACCESSIBLE FROM PENTHOUSE.
MH12	JOIN BOTH EXHAUST DUCTS IN VERTICAL. TAKE UP AND CONNECT INTO SHARED RELIEF HOOD. REFER TO **M401** FOR CONTINUATION.
MH13	SUPPLY DUCT DOWN TO FLOOR BELOW. REFER TO **M201A** FOR CONTINUATION.
MH15	EXHAUST DUCT UP FROM FLOOR BELOW. REFER TO **M201A** FOR CONTINUATION.
MH16	SUPPLY DUCT DOWN TO FLOOR BELOW. REFER TO **M201B** FOR CONTINUATION.
MH17	RETURN DUCT UP FROM FLOOR BELOW. REFER TO **M201B** FOR CONTINUATION.
MH18	EXHAUST DUCT UP FROM FLOOR BELOW. REFER TO **M201B** FOR CONTINUATION.
MH19	RETURN DUCT UP FROM FLOOR BELOW. REFER TO **M201C** FOR CONTINUATION.
MH20	SUPPLY DUCT DOWN TO FLOOR BELOW. REFER TO **M201C** FOR CONTINUATION.
MH40	RETURN DUCT TRANSITIONS FROM 56" X 34" TO 72" X 24" IN VERTICAL. TRANSITION BEFORE FLOOR PENETRATION.
MH41	SUPPLY DUCT TRANSITIONS FROM 56" X 44" TO 66" X 20" IN VERTICAL. TRANSITION BEFORE FLOOR PENETRATION.
MH44	22" X 18" EXHAUST DUCT UP FROM FLOOR BELOW TO CONNECT INTO BOTTOM OF ELBOW CONNECTOR HERE. NO TURNING VANES ON THIS ELBOW. REFER TO **M201A** FOR CONTINUATION.
MH45	42" X 16" DUCT TO TAP OFF OF LOUVER AND CONTINUE INTO PENTHOUSE UNTIL BOTH ERV OA CONNECTIONS TAP INTO BOTTOM AND THEN TERMINATE AND CAP.
MP04	PIPING DOWN TO/UP FROM FLOOR BELOW. REFER TO **M301B** FOR CONTINUATION.
MP07	1-1/8" SUCTION AND 7/8" LIQUID REFRIGERANT PIPING FROM INDOOR UNIT IN PENTHOUSE THROUGH EXTERIOR WALL. REFER TO **15IM801** FOR ADDITIONAL INFORMATION.
MP08	ROUTE CONDENSATE TO OPEN RECEPTACLE AT THIS LOCATION. COORDINATE WITH PLUMBING PLANS FOR EXACT LOCATION.
MP09	PROVIDE 3-WAY CONTROL VALVE ON THIS AHU INSTEAD OF 2-WAY VALVE.

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NORTH CAROLINA PROFESSIONAL SEAL 032218 ENGINEER DOUGLAS R. HUNDLEY, JR.
09/05/2024

ISSUE FOR CONSTRUCTION

No.	Date	Description
2	09/05/2024	BP3 Addendum 2

Cabarrus County Regional Behavioral Health Center

DHSR Number: MHL-5188

Bid Package 3

PENTHOUSE PLAN - MECHANICAL

DATE JULY 12, 2024
SCALE As indicated
DRAWN RD / BES
PROJ. NO. 2022-A002.01
SHEET **M202.3**

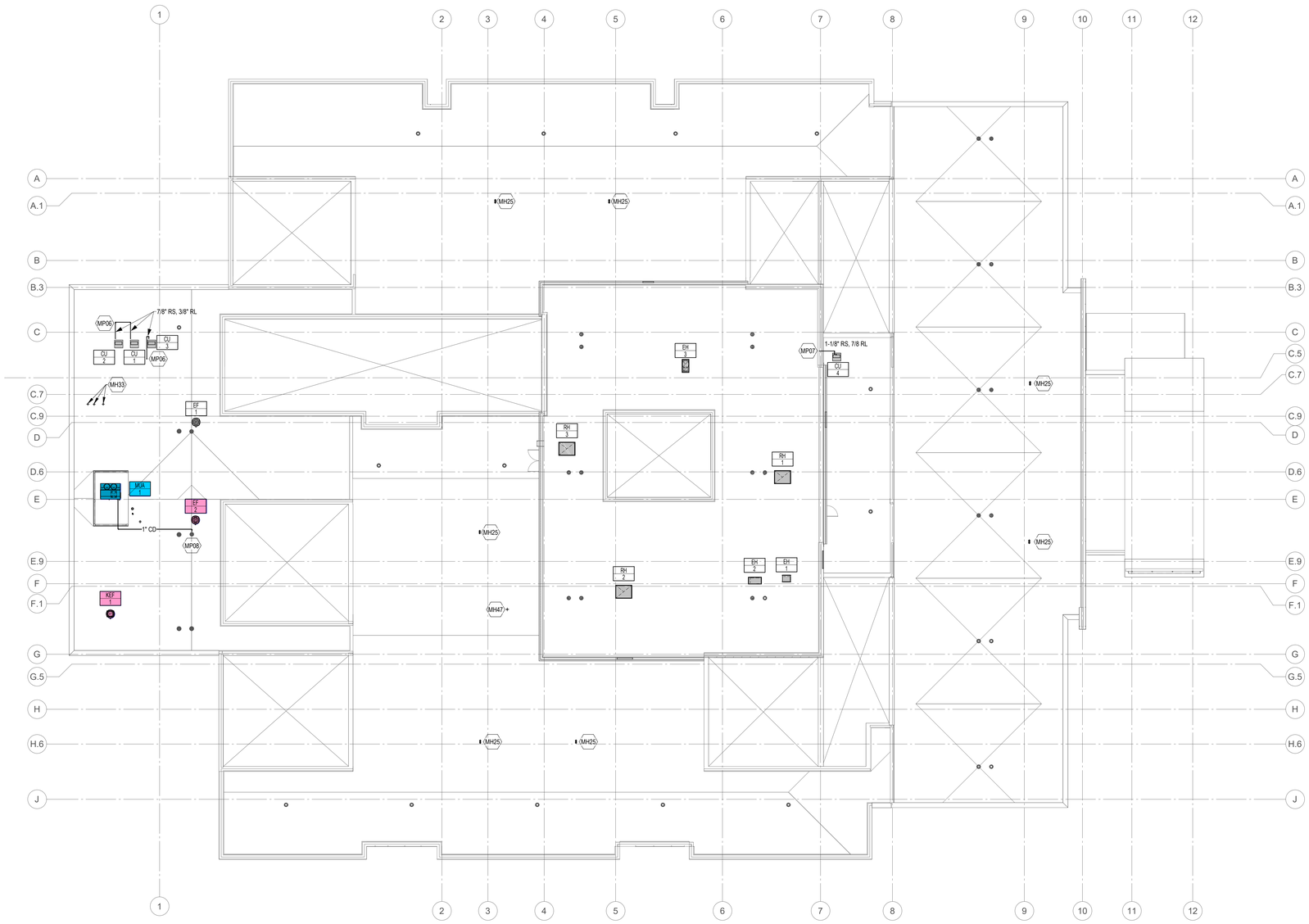
9/4/2024 4:32:01 PM

GENERAL NOTES - MECH

A. REFER TO GENERAL NOTES ON M001 FOR ADDITIONAL INFORMATION.

NOTES BY SYMBOL " ⬡ ":

MH25	LAUNDRY EXHAUST UP FROM BELOW. REFER TO 8/M801 FOR REFERENCE DETAIL.
MH33	6" FLUE UP FROM BELOW. REFER TO 7/M501 FOR ADDITIONAL INFORMATION.
MH47	LEARNING KITCHEN EXHAUST UP FROM BELOW. REFER TO M201B FOR CONTINUATION.
MP06	7/8" SUCTION AND 3/8" LIQUID REFRIGERANT PIPING FROM INDOOR UNIT UP THROUGH ROOF. REFER TO 15/M801 FOR ADDITIONAL INFORMATION.
MP07	1-1/8" SUCTION AND 7/8" LIQUID REFRIGERANT PIPING FROM INDOOR UNIT IN PENTHOUSE THROUGH EXTERIOR WALL. REFER TO 15/M801 FOR ADDITIONAL INFORMATION.
MP08	ROUTE CONDENSATE TO OPEN RECEPTACLE AT THIS LOCATION. COORDINATE WITH PLUMBING PLANS FOR EXACT LOCATION.



1 MECHANICAL ROOF PLAN - HVAC

1/16" = 1'-0"

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07/12/2024

ISSUE FOR CONSTRUCTION

No.	Date	Description

Cabarrus County Regional Behavioral Health Center

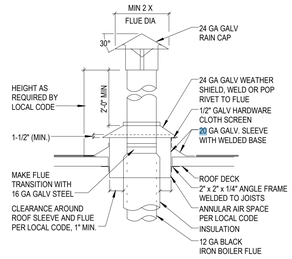
DHSR Number: MHL-5188

Bid Package 3

ROOF PLAN - MECHANICAL

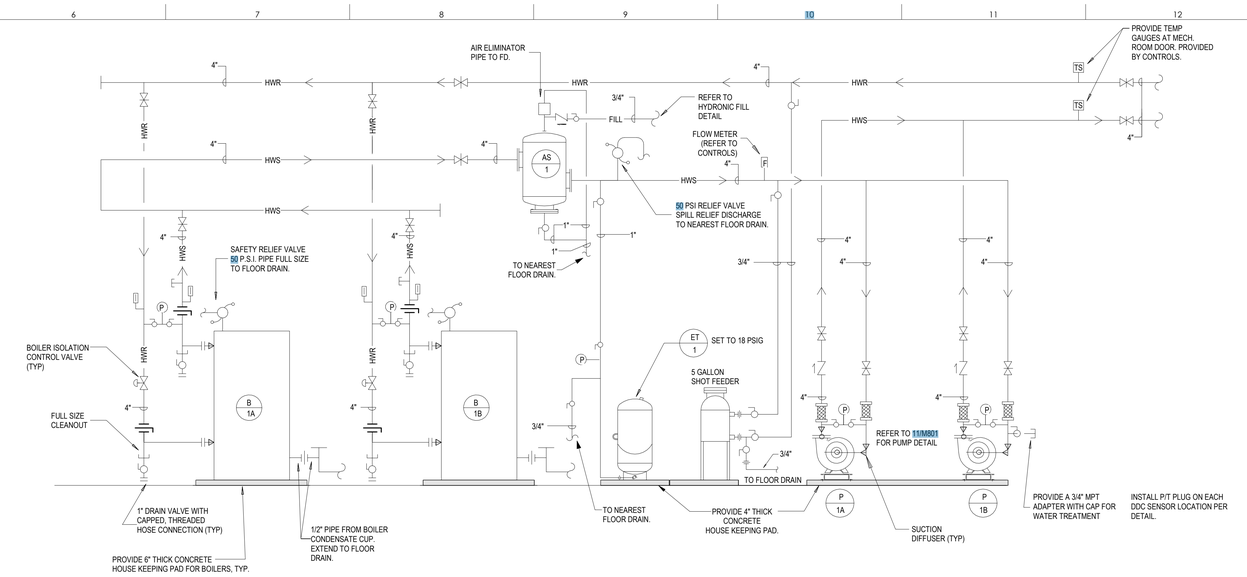
DATE JULY 12, 2024
SCALE As indicated
DRAWN RD / BES
PROJ. NO. 2022-A002.01
SHEET **M401**

7/10/2024 4:43:42 PM

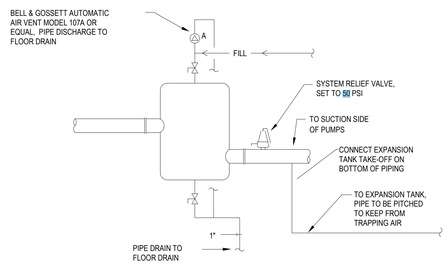


NOTES:
1. SPUD BACK GRVEL A MIN OF 30" IN ALL DIRECTIONS. STRIP WITH 3 LAYERS ROOFING FELT EMBEDDED IN HOT ASPHALT, GRAVEL TO MATCH EXISTING.
2. FLASH INTO METAL ROOF DECKING IN ACCORDANCE WITH BUILDING SUPPLIERS RECOMMENDATION.

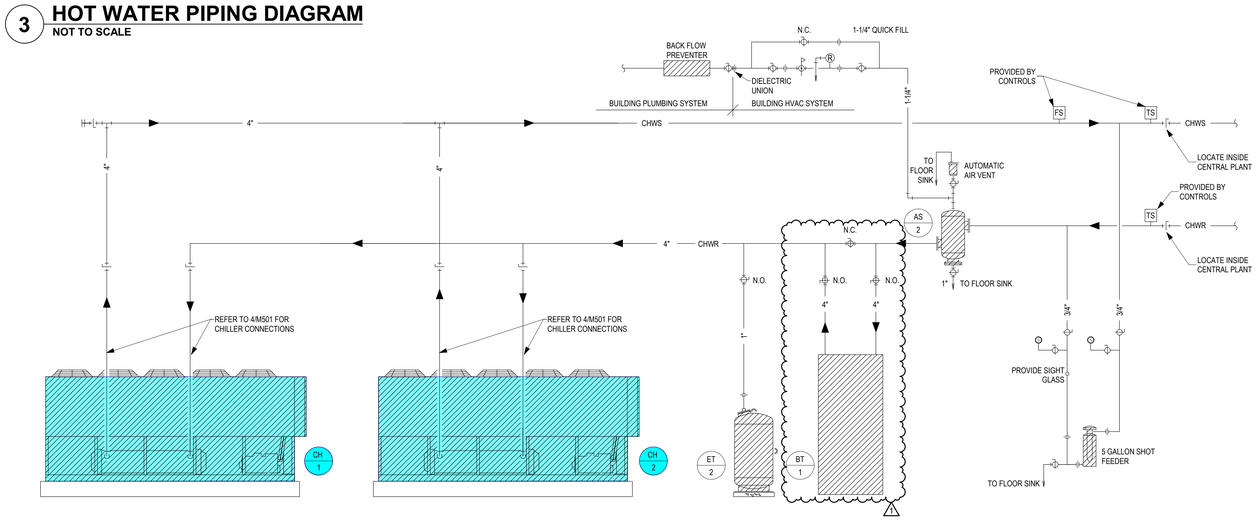
7 BOILER/WATER HEATER FLUE STACK OUTLET
NOT TO SCALE



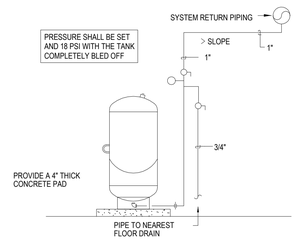
3 HOT WATER PIPING DIAGRAM
NOT TO SCALE



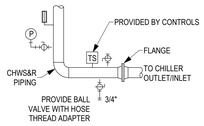
6 AIR SEPARATOR
NOT TO SCALE



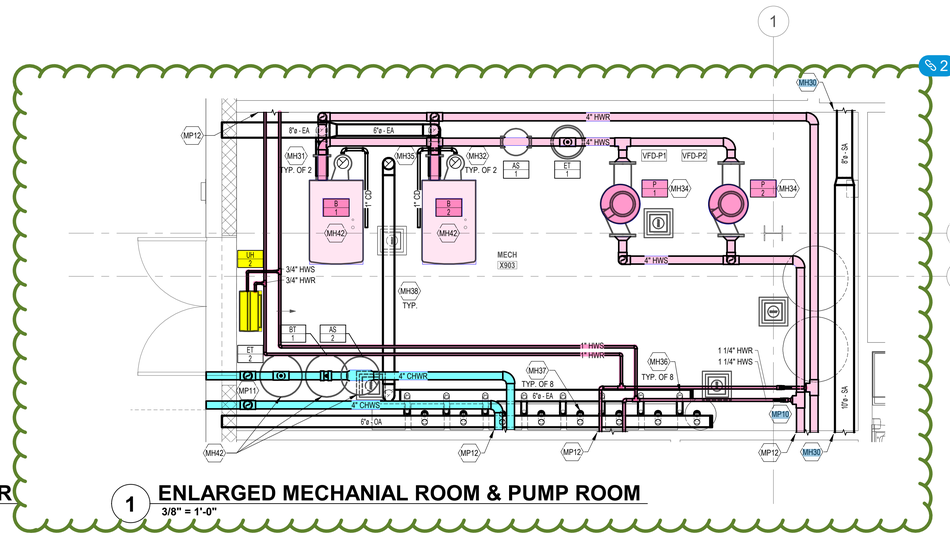
2 CHILLED WATER PIPING DIAGRAM
NOT TO SCALE



5 EXPANSION TANK PIPING
NOT TO SCALE



4 TYPICAL PIPING AT INLET AND OUTLET OF CHILLER
NOT TO SCALE



1 ENLARGED MECHANIAL ROOM & PUMP ROOM
3/8" = 1'-0"

NOTES BY SYMBOL " ⬡ ":

MH30	DUCT SERVING VAV-4.1 ENTERS/EXITS MECHANICAL ROOM HERE. REFER TO M201B FOR CONTINUATION.
MH31	6" COMBUSTION AIR DUCT TO COME OUT OF REAR OF BOILER, TURN UP AND CONNECT INTO MANIFOLD. DUCT MANIFOLD TO TERMINATE AT EXTERIOR WALL PER MANUFACTURERS REQUIREMENTS.
MH32	6" BOILER FLUE TO CONNECT TO EXHAUST MANIFOLD PER MANUFACTURES INSTRUCTIONS. DUCT CONTINUES UP THROUGH ROOF. REFER TO 7/M501 FOR ADDITIONAL INFORMATION.
MH34	REFER TO 11/M801 FOR ADDITIONAL INFORMATION ON VERTICAL INLINE PUMP MOUNTING.
MH35	6" INSTANTANEOUS WATER HEATER DUCT UP THROUGH ROOF. REFER TO 7/M501 FOR ADDITIONAL INFORMATION.
MH36	2" INSTANTANEOUS WATER HEATER FLUE OUT OF TOP OF EQUIPMENT AND UP TO MANIFOLD.
MH37	2" COMBUSTION AIR DUCT TO COME OUT OF TOP OF INSTANTANEOUS WATER HEATER AND INTO DUCT MANIFOLD. DUCT MANIFOLD TO TERMINATE AT EXTERIOR WALL PER MANUFACTURERS REQUIREMENTS.
MH38	HORIZONTAL FLUE DUCTWORK FOR BOTH INSTANTANEOUS WATER HEATERS AND BOILERS SHALL BE SUPPORTED TO AVOID SAGGING AND PITCHED BACK TOWARD THE UNITS AT 1/4" PER FOOT (2%) TO PREVENT CONDENSATION POOLING.
MH42	EQUIPMENT TO BE AS CLOSE TO WALL AS POSSIBLE WHILE MAINTAINING MANUFACTURERS CLEARANCE AND INSTALLATION REQUIREMENTS. SHOWN OFFSET ON DRAWING FOR CLARITY.
MP10	PROVIDE BALL VALVES FOR LOOP ISOLATION. ENSURE THAT THERE IS ADEQUATE ACCESSIBILITY.
MP11	4" CHILLED WATER SUPPLY/RETURN PIPING TO TURN DOWN AND CONTINUE BELOW SLAB AND OUT OF BUILDING TOWARDS CHILLERS. REFER TO M300 AND M301C CONTINUATION.
MP12	PIPING CONTINUES OUT OF MECHANICAL ROOM. REFER TO M301B FOR CONTINUATION.

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NORTH CAROLINA PROFESSIONAL SEAL 032218 ENGINEER DOUGLAS R. HUNDLEY, JR.
06/26/2025

ISSUE FOR CONSTRUCTION

No.	Date	Description
1	09/26/2025	BP3 Bulletin 21

Cabarrus County Regional Behavioral Health Center

DHSR Number: MHL-5188

Bid Package 3

ENLARGED PLANS - MECHANICAL

DATE JULY 12, 2024
SCALE As indicated
DRAWN RD / BES
PROJ. NO. 2022-A002.01
SHEET M501

9/30/2025 9:18:18 AM