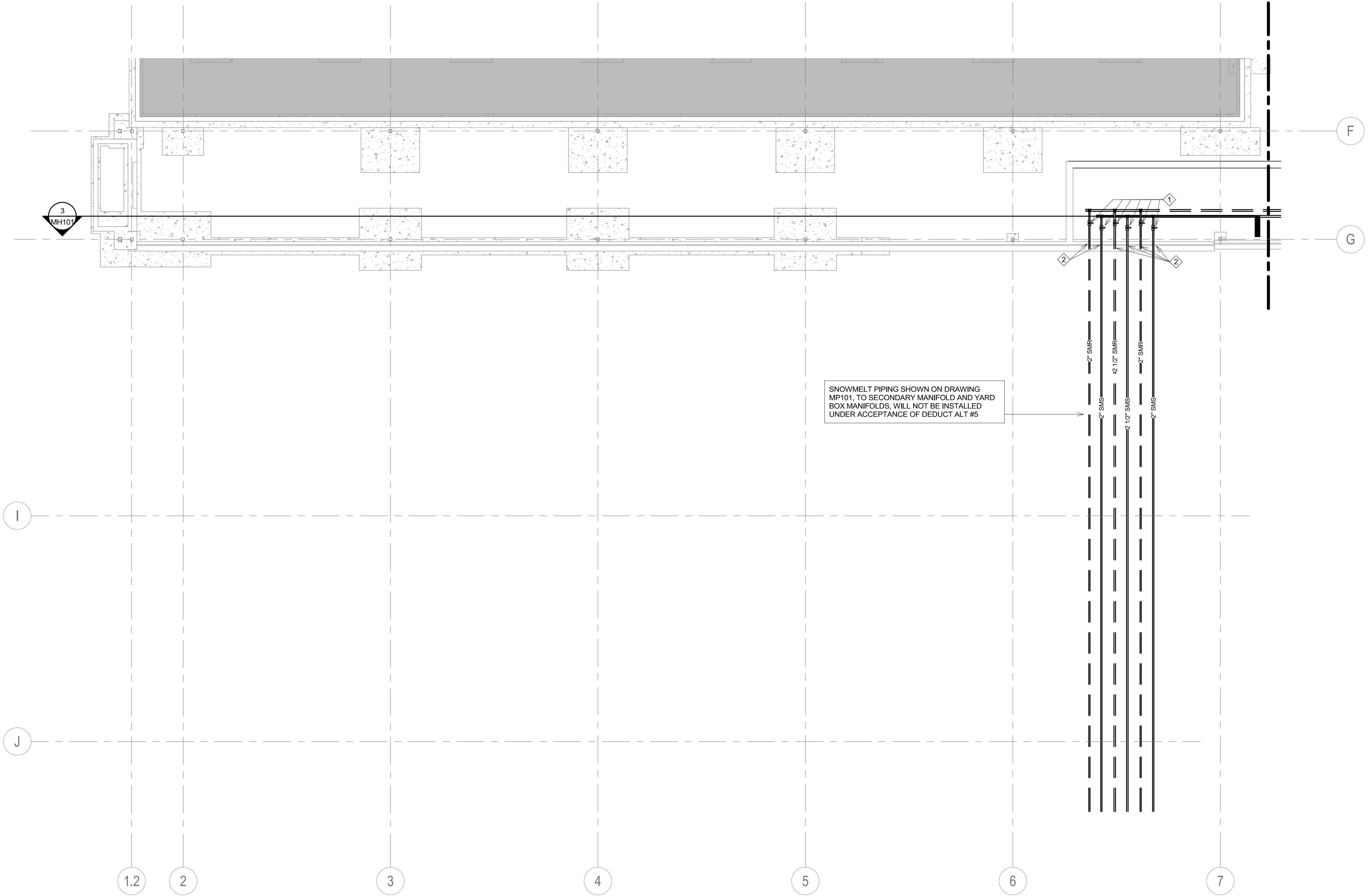


GENERAL NOTES:

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- B. CONTRACTOR WILL BE RESPONSIBLE TO REVIEW ACCESSIBILITY TO AREAS OUTSIDE THE CONSTRUCTION LIMITS TO DETERMINE APPROXIMATE AMOUNT OF OVERTIME REQUIRED TO PERFORM ALL MECHANICAL WORK INDICATED. COORDINATION OF SCHEDULES WITH ADJACENT DEPARTMENTS AND CLEANING OF ALL DEBRIS AFTER EACH WORK SHIFT SHOULD BE ASSUMED IN THE BASE BID SCOPE.
- C. ANY MAJOR OUTAGES INDICATED ON THESE DRAWINGS SHALL BE SCHEDULED TO BE PERFORMED AFTER NORMAL BUSINESS HOURS OR DURING WEEKEND PERIODS TO MINIMIZE HOSPITAL DISRUPTION. VA HOSPITAL FACILITIES WILL REQUIRE A MINIMUM OF TWO (2) WEEKS NOTICE PRIOR TO ANY SUCH OUTAGE.
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- L. ALL STEAM PIPING TAKE-OFFS TO INDIVIDUAL PIECES OF EQUIPMENT SHALL BE OFF THE TOP OF STEAM MAINS. HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS SHALL ALSO BE OFF THE TOP OR SIDE OF PIPING WHEREVER POSSIBLE.
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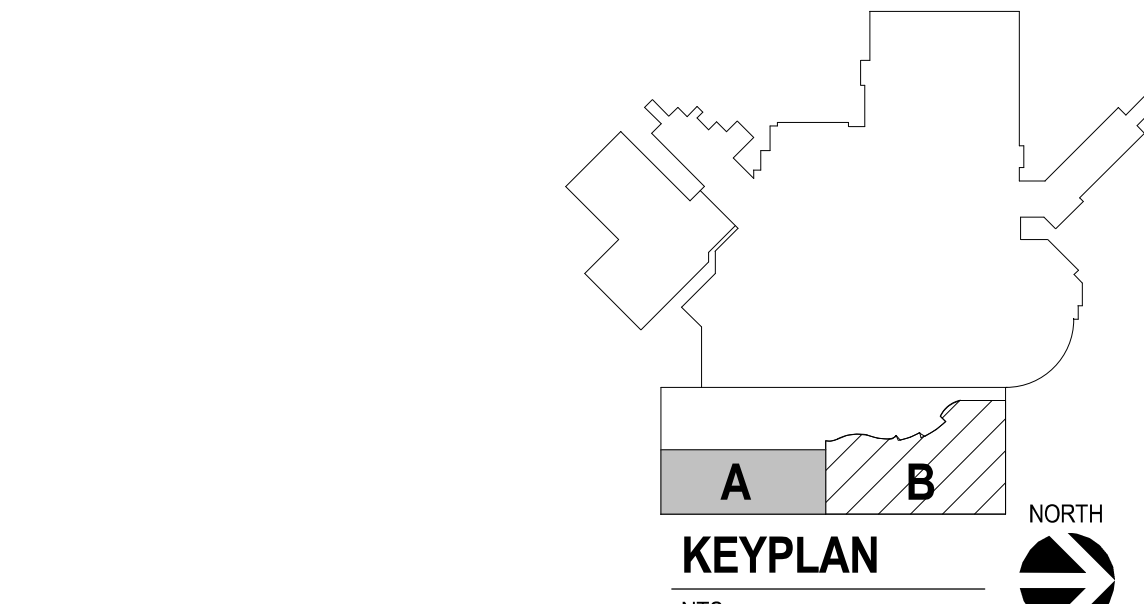
KEY NOTES:

- 1. PROVIDE ISOLATION VALVES, WITH LOW POINT DRAINS, FOR CARRIER PIPES GOING OUT TO MANIFOLDS WITHIN YARD BOXES OUTSIDE OF THE BUILDING. REFER TO DRAWING MP103 AND/OR MP104 FOR CONTINUATION. NOTE THIS PIPING WOULD NOT BE INSTALLED UNDER ACCEPTANCE OF DECAT ALTERNATE #5.
- 2. COORDINATE EXACT LOCATIONS OF LINK SEAL WALL SLEEVES THROUGH EXTERIOR WALL FOR TRANSITION TO DOUBLE WALLED UNDERGROUND PIPES TO/FROM YARD MANIFOLD BOXES ON SITE (REFER TO DRAWING MP104). SUBMIT DETAIL SHOWING EXACT ROUTING THROUGH SITE TO ARCHITECT/ENGINEER FOR APPROVAL.



SNOWMELT PIPING SHOWN ON DRAWING MP101, TO SECONDARY MANIFOLD AND YARD BOX MANIFOLDS, WILL NOT BE INSTALLED UNDER ACCEPTANCE OF DECAT ALT #5

1 FOUNDATION/TUNNEL PIPING PLAN - AREA A
1/8" = 1'-0"



<p>CONSULTANTS</p> <p>ARCHITECTURAL: BWB ERICKSEN ROAD ASSOCIATES 380 St. Peter St, Suite 600, St. Paul, MN 55102, Phone: 651-223-3701</p> <p>STRUCTURAL: ERA ERICKSEN ROAD ASSOCIATES 2250 University Ave W, Suite 423-S, St. Paul, MN 55402, Phone: 651-251-1770</p> <p>MEP: DUNHAM DUNHAM ASSOCIATES, INC. 50 South Sixth St, Suite 1100, Minneapolis, MN 55402, Phone: 612-685-7550, 612-1950-002-00</p> <p>CIVIL: EVS CONFLUENCE 10025 Valley View Rd, Suite 140, Eden Prairie, MN 55344, Phone: 952-646-0239</p> <p>LANDSCAPE: CONFLUENCE 524 N Main Ave, Suite 201, Sioux Falls, SD 57104, Phone: 605-339-1205</p>	<p>ARCHITECT OF RECORD</p> <p>Stone Group Architects 600 E 7th Street, Sioux Falls, SD 57103, 605-271-1144</p>	<p>STAMP</p> <p>REGISTERED PROFESSIONAL ENGINEER 14844 JASON R. GOTTMALT SOUTH DAKOTA</p>	<p>Office of Construction and Facilities Management</p> <p>VA U.S. Department of Veterans Affairs</p>	<p>Drawing Title</p> <p>FOUNDATION/TUNNEL PIPING PLAN - AREA A</p> <p>Approved:</p>	<p>Phase</p> <p>CONSTRUCTION DOCUMENTS</p>	<p>Project Title</p> <p>NEW FRONT LOBBY AND PRIMARY CARE ADDITION</p>	<p>Project Number</p> <p>VA #438-480 SGA #201909</p> <p>Building Number</p> <p>5</p> <p>Drawing Number</p> <p>MP001</p>
<p>Revision# Description Date:</p>							

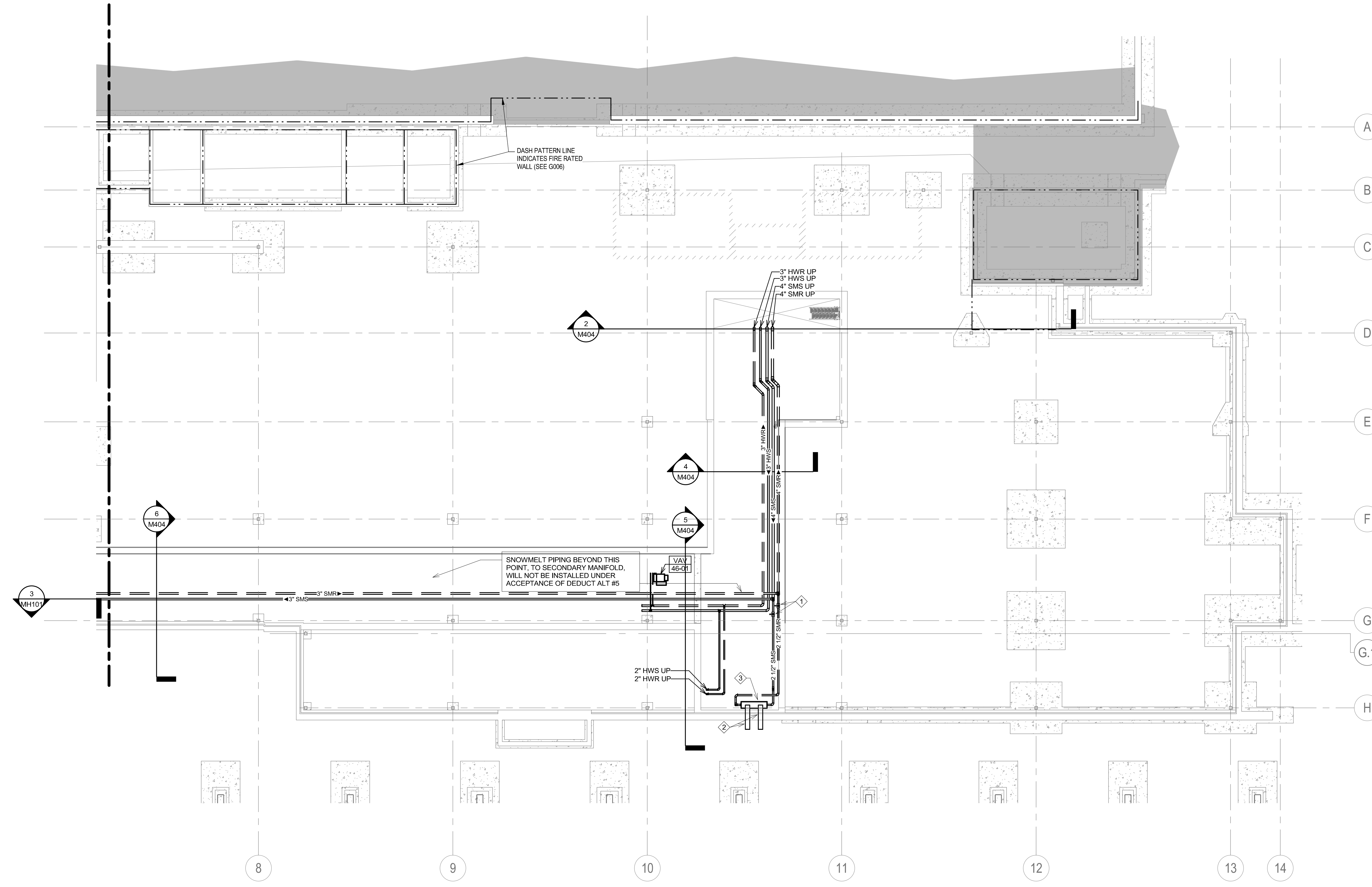
three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot

GENERAL NOTES:

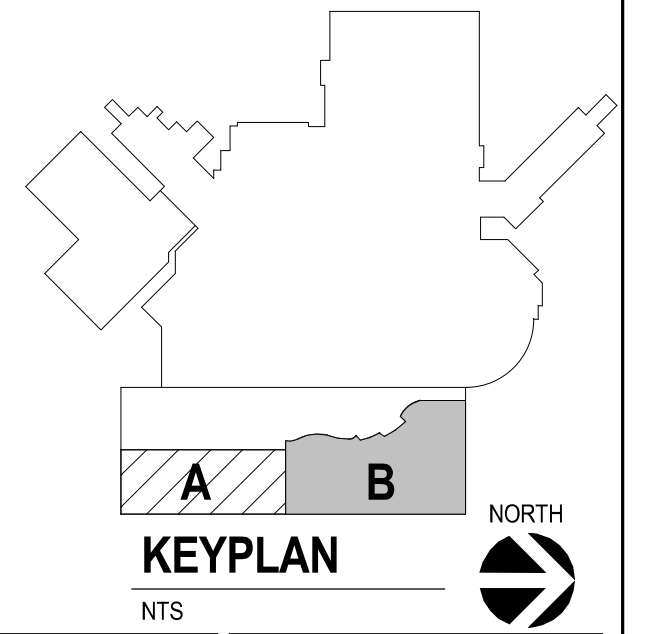
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KEY NOTES:

- ① PROVIDE ISOLATION VALVES WITH LOW POINT DRAINS, FOR BOTH INTERNAL SNOWMELT MANIFOLDS AND CARRIER PIPES GOING OUT TO MANIFOLDS WITHIN YARD BOXES OUTSIDE OF THE BUILDING. REFER TO DRAWING MP103 AND/OR MP104 FOR CONTINUATION.
- ② COORDINATE SIZE OF LINK SEAL WALL SLEEVE THROUGH EXTERIOR WALL AND INFILL WITH EXPANDABLE FOAM INSULATION AROUND ALL INDIVIDUAL PEX TUBING PENETRATIONS PASSING THROUGH EACH SLEEVE AS REQUIRED TO BE WATER TIGHT. SUBMIT DETAIL SHOWING EACH QUANTITIES OF TUBE TO ARCHITECT/ENGINEER FOR APPROVAL.
- ③ PROVIDE MANIFOLD TO SERVE A TOTAL AREA OF APPROXIMATELY 5,080 SQ FT WITHIN SIDEWALK AREA SHOWN ON DRAWINGS MP103 AND MP104. MANIFOLD TO HAVE INDIVIDUAL ISOLATION VALVES FOR AN ESTIMATED 36 ZONES EACH WITH 300' OF 5/8" PEX TUBING AND SHALL EXTEND THROUGH EXTERIOR WALL SLEEVES AS DESCRIBED IN KEY NOTE #3 ABOVE.



① FOUNDATION/TUNNEL PIPING PLAN - AREA B
1/8" = 1'-0"



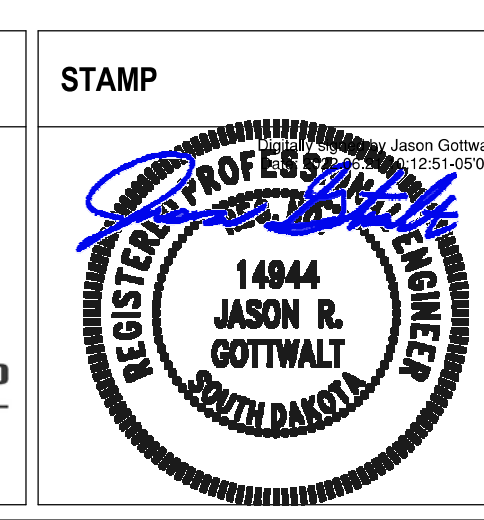
Revision#	Description	Date:

CONSULTANTS

ARCHITECTURAL: BWB 390 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-223-3701	STRUCTURAL: ERA 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1770	MEP: DUNHAM 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-685-7550 0421950-002-00	CIVIL: EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-646-0299	LANDSCAPE: CONFLUENCE 224 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205
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ARCHITECT OF RECORD
A/E
Stone Group Architects
600 E 7th Street
Sioux Falls, SD 57103
605-271-1144

STONE GROUP ARCHITECTS



Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

FOUNDATION/TUNNEL PIPING PLAN - AREA B

Approved: _____

CONSTRUCTION DOCUMENTS

NEW FRONT LOBBY AND PRIMARY CARE ADDITION

Location: SIOUX FALLS, SOUTH DAKOTA

Issue Date: 06/22/2022
Checked: JRG
Drawn: TNH

Project Number: VA #438-480
SGA #201909

Building Number: 5

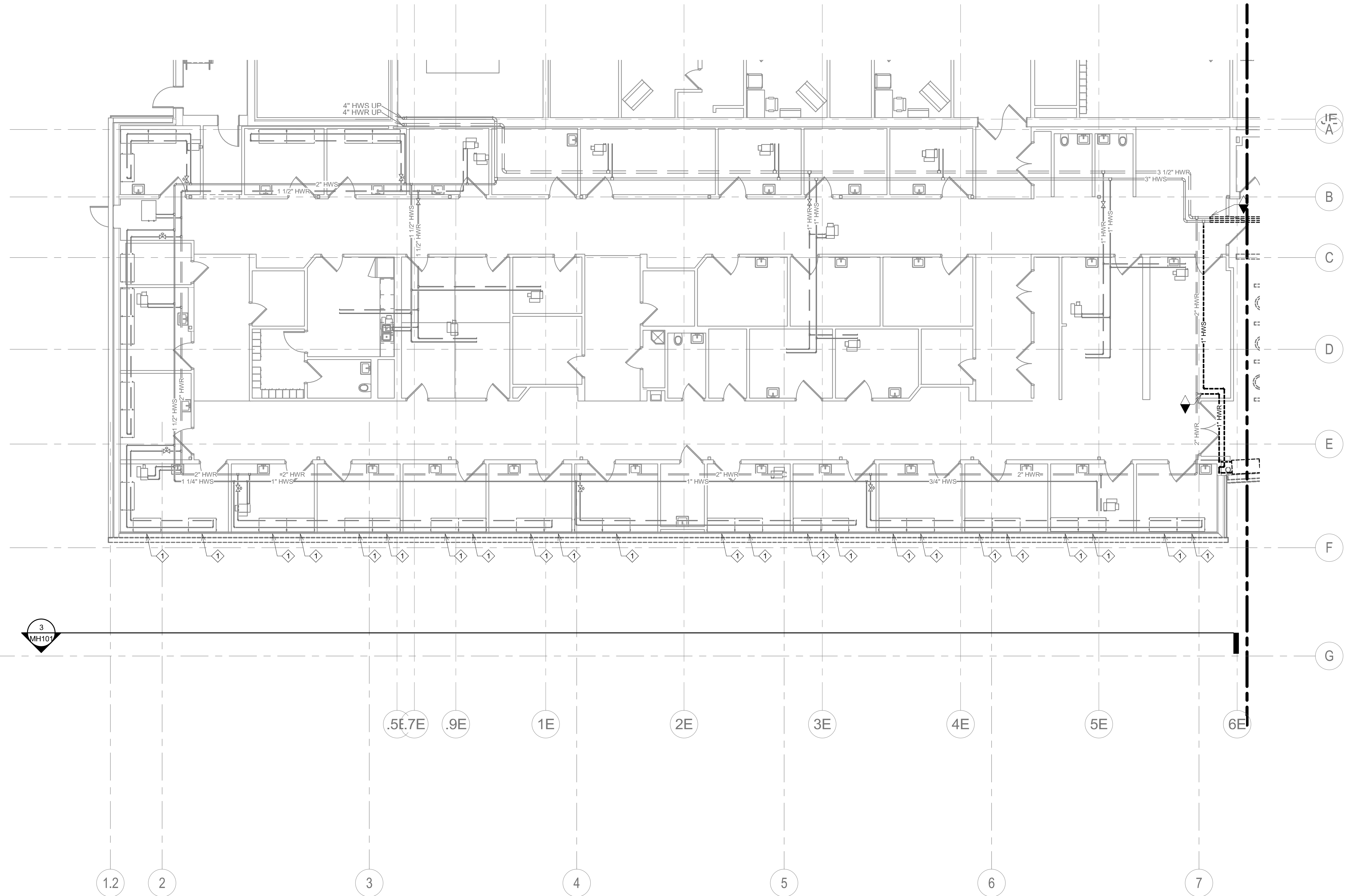
Drawing Number: MP002

GENERAL NOTES:

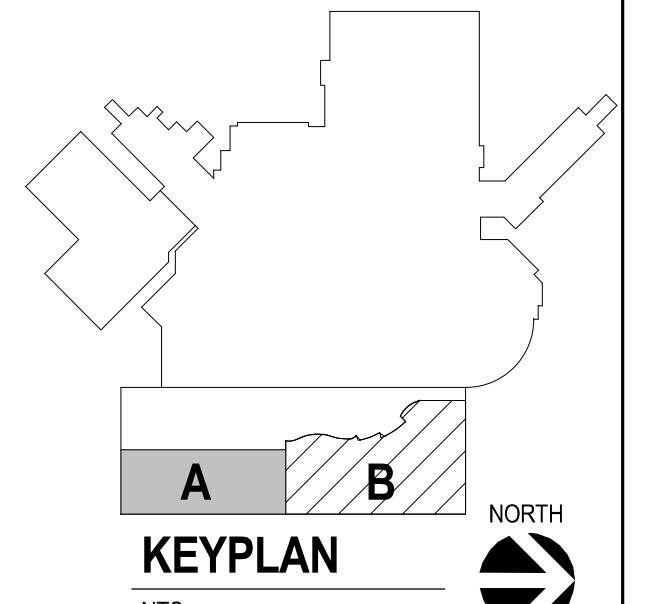
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KEY NOTES:

- ① DISCONNECT AND ABANDON RADIANT PANEL IN PLACE. DISABLE CONNECTED CONTROLS.



① GROUND LEVEL DEMOLITION PIPING PLAN - AREA A
1/8" = 1'-0"



CONSULTANTS ARCHITECTURAL: B W B R STRUCTURAL: ERA MEP: DUNHAM CIVIL: EVS LANDSCAPE: CONFLUENCE		ARCHITECT OF RECORD A E Stone Group Architects 600 E 7th Street Sioux Falls, SD 57103 605-271-1144		STAMP REGISTERED PROFESSIONAL ENGINEER 14844 JASON R. GOTTMALT SOUTH DAKOTA		Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs		Drawing Title GROUND LEVEL DEMOLITION PIPING PLAN - AREA A		Phase CONSTRUCTION DOCUMENTS		Project Title NEW FRONT LOBBY AND PRIMARY CARE ADDITION		Project Number VA #438-480 SGA #201909	
Approved: _____		STONE GROUP ARCHITECTS		Approved: _____		Approved: _____		Location SIoux FALLS, SOUTH DAKOTA		Issue Date 06/22/2022		Checked JRG		Drawn TNH	
Revision# Description Date:		BWRB 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-223-3701		ERAS Erickson Road Associates 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1770		DUNHAM Dunham Associates, Inc. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-685-7550 0421950-002-00		EVS EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-646-0299		CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205		Building Number 5		Drawing Number MPD101	

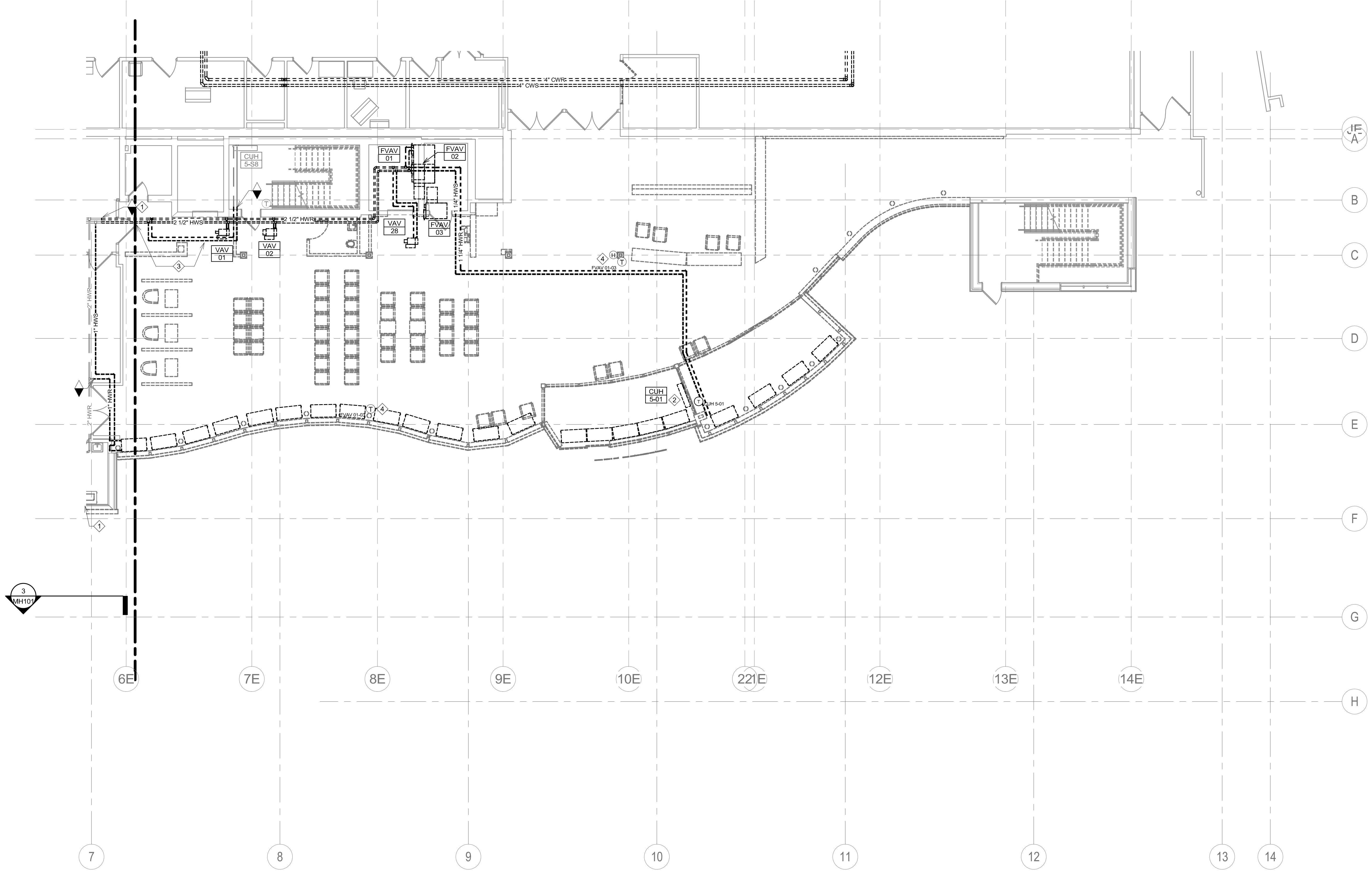
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GENERAL NOTES:

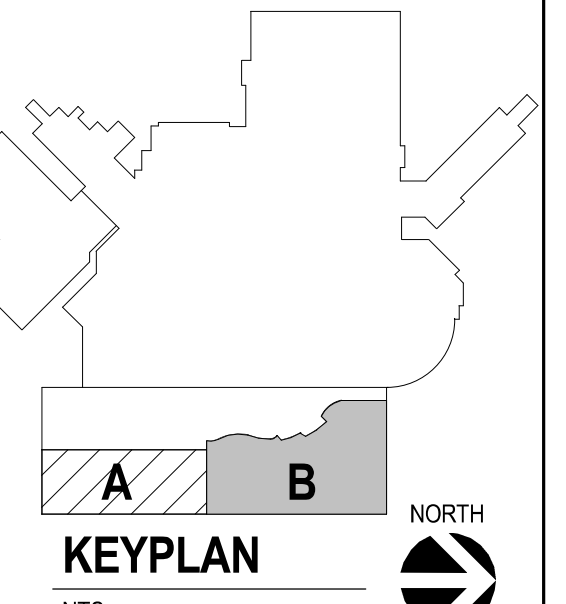
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KEY NOTES:

- ① DEMOLISH HEATING WATER SUPPLY AND RETURN MAINS BACK TO POINT OF DISCONNECT. DEMOLISH ALL ASSOCIATED HEATING WATER SUPPLY AND RETURN BRANCHES, VAV BOXES, PIPING, RADIANT PANELS AND THERMOSTATS/HUMIDISTS WITHIN AREA DEFINED BY DASHED LINE.
- ② DEMOLISH CABINET UNIT HEATER ALONG WITH ALL PIPING AND ASSOCIATED THERMOSTAT CONTROLS.
- ③ MODIFY EXISTING PIPING AS REQUIRED TO ACCOMMODATE NEW CEILING SYSTEM IN THIS AREA. FIELD VERIFY CURRENT ELEVATION AND ROUTING OF EXISTING HEATING LINES SERVING STAIRWELL CABINET UNIT HEATER.
- ④ REMOVE ALL DDC THERMOSTAT AND HUMIDISTS AND DELETE FROM EXISTING CENTRAL BUILDING AUTOMATION COMPUTER. MODIFY EXISTING GRAPHICS PACKAGES AND FLOOR PLAN REFERENCES WITHIN THAT JCI SYSTEM AS REQUIRED.



1 GROUND LEVEL DEMOLITION PIPING PLAN - AREA B
1/8" = 1'-0"



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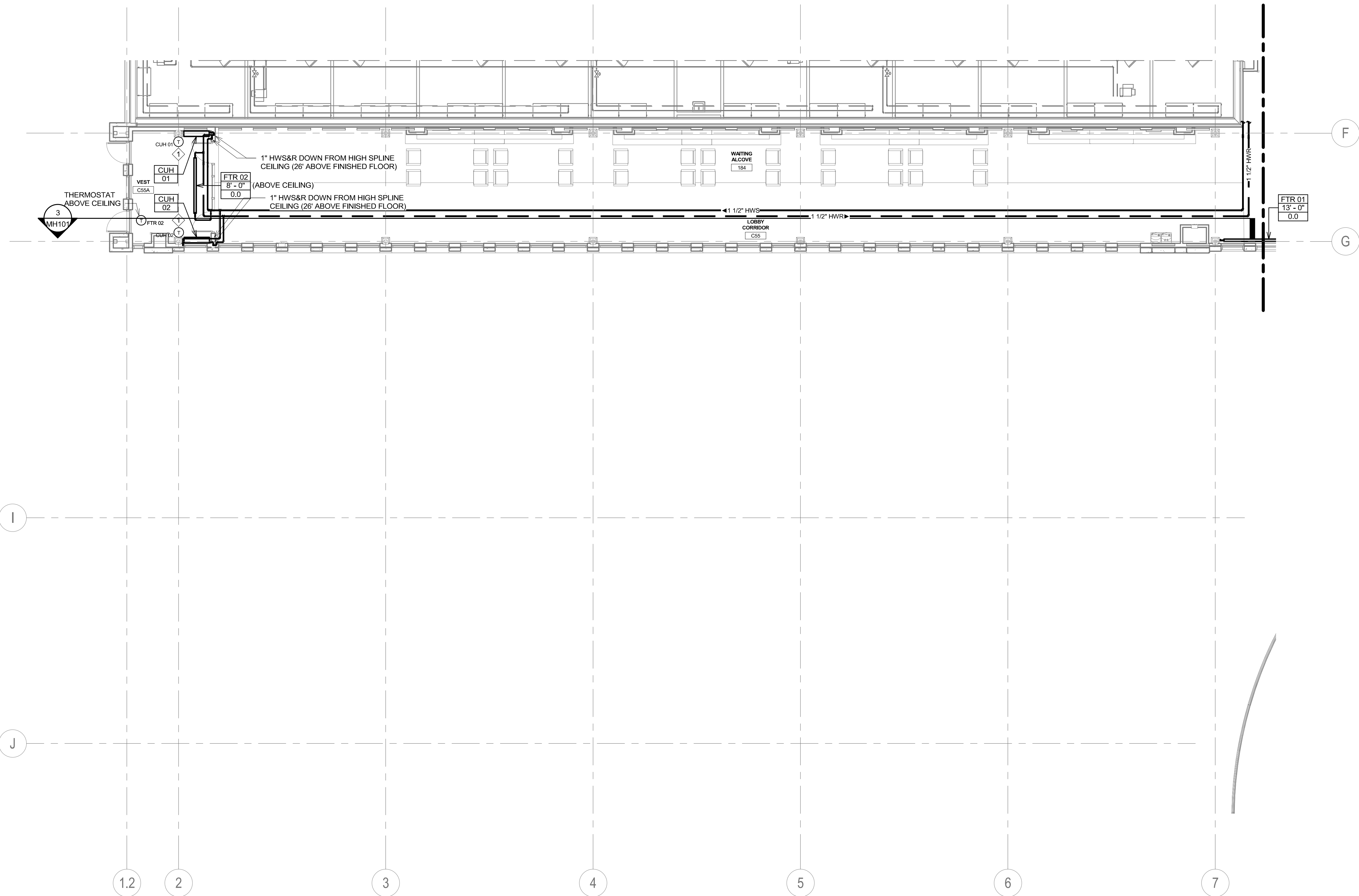
CONSULTANTS ARCHITECTURAL: B W B R STRUCTURAL: ERA MEP: DUNHAM CIVIL: EVS LANDSCAPE: CONFLUENCE BWR: 380 St. Peter St, Suite 600, St. Paul, MN 55102, Phone: 651-223-3701 ERA: Erickson Road Associates, 2250 University Ave W, Suite 423-S, St. Paul, MN 55402, Phone: 651-251-1970 DUNHAM: Dunham Associates, Inc., 50 South Sixth St, Suite 1100, Minneapolis, MN 55402, Phone: 612-465-7550 EVS: EVS, 10025 Valley View Rd, Suite 140, Eden Prairie, MN 55344, Phone: 952-446-0299 CONFLUENCE: 224 N Main Ave, Suite 201, Sioux Falls, SD 57104, Phone: 605-339-1205		ARCHITECT OF RECORD A E Stone Group Architects, 600 E 7th Street, Sioux Falls, SD 57103, 605-271-1144 STONE GROUP ARCHITECTS		STAMP REGISTERED PROFESSIONAL ENGINEER 14844 JASON R. GOTTWALT SOUTH DAKOTA		Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs		Drawing Title: GROUND LEVEL DEMOLITION PIPING PLAN - AREA B Approved:		Phase: CONSTRUCTION DOCUMENTS		Project Title: NEW FRONT LOBBY AND PRIMARY CARE ADDITION Location: SIOUX FALLS, SOUTH DAKOTA Issue Date: 06/22/2022 Checked: JRG Drawn: TNH		Project Number: VA #438-480 SGA #201909 Building Number: 5 Drawing Number: MPD102	
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GENERAL NOTES:

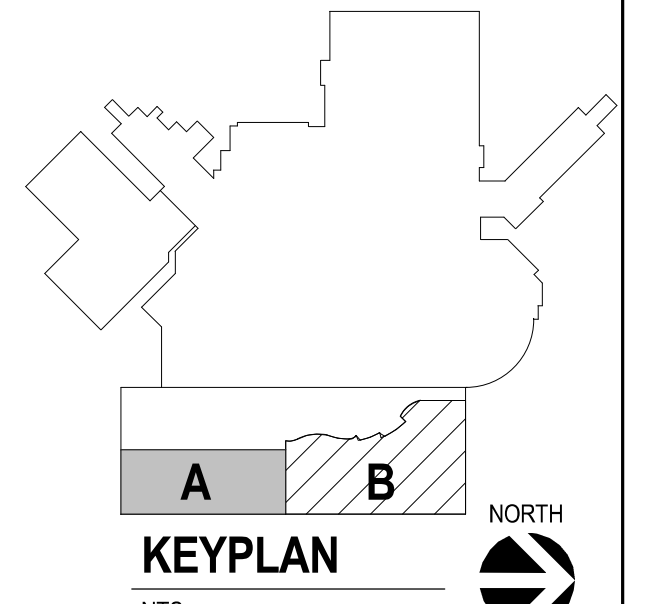
- A. CONTRACTOR SHALL REFER TO THE VA MASTER SPECIFICATION MANUAL EDITED FOR THIS PROJECT ALONG WITH ANY APPLICABLE STANDARDS WITHIN THE VA DESIGN GUIDES. ALL REQUIREMENTS OF THOSE MANUALS SHALL BE MAINTAINED IN ADDITION TO ALL NOTES AND DESCRIPTIONS INDICATED WITHIN THESE DRAWINGS. ANY CONFLICTS BETWEEN THE DOCUMENTS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR INTERPRETATION.
- B. CONTRACTOR WILL BE RESPONSIBLE TO REVIEW ACCESSIBILITY TO AREAS OUTSIDE THE CONSTRUCTION LIMITS TO DETERMINE APPROXIMATE AMOUNT OF OVERTIME REQUIRED TO PERFORM ALL MECHANICAL WORK INDICATED. COORDINATION OF SCHEDULES WITH ADJACENT DEPARTMENTS AND CLEANING OF ALL DEBRIS AFTER EACH WORK SHIFT SHOULD BE ASSUMED IN THE BASE BID SCOPE.
- C. ANY MAJOR OUTAGES INDICATED ON THESE DRAWINGS SHALL BE SCHEDULED TO BE PERFORMED AFTER NORMAL BUSINESS HOURS OR DURING WEEKEND PERIODS TO MINIMIZE HOSPITAL DISRUPTION. VA HOSPITAL FACILITIES WILL REQUIRE A MINIMUM OF TWO (2) WEEKS NOTICE PRIOR TO ANY SUCH OUTAGE.
- D. COORDINATE ALL NEW PIPE ROUTINGS WITH ALL OTHER TRADES TO ENSURE ADEQUATE CLEARANCES FOR ELECTRICAL CONDUIT, HVAC DUCTWORK & PIPING, STRUCTURAL SUPPORTS, ETC. ANY UNAVOIDABLE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OF RECORD. PROVIDE ALL OFFSETS & TRANSITIONS AS REQUIRED FOR A CLEAN INSTALLATION.
- E. THE EXACT LOCATION OF EQUIPMENT ROUGHINS SHALL BE VERIFIED WITH THE STAMPED APPROVED SHOP DRAWINGS PRIOR TO ANY FIELD INSTALLATION. NOTIFY ENGINEER OF ANY SIGNIFICANT VARIANCES.
- F. SUPPORT ALL PIPING DIRECTLY TO STRUCTURE. DO NOT SUPPORT ANY PIPING FROM DUCTWORK, CONDUIT OR OTHER PIPING ENCOUNTERED.
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- H. ALL EXISTING PIPING THROUGH NEW FIRE RATED WALLS SHALL BE ADEQUATELY FIRE SEALED AS REQUIRED. PIPING PENETRATIONS THROUGH INTERSTITIAL FLOOR SHALL BE DRILLED OR CUT BY THE CONTRACTOR AND FIRE SEALED AS REQUIRED.
- I. ALL CORE DRILLING OR ANY ACTIVITIES CAUSING EXTREME VIBRATION OR NOISE SHALL BE COORDINATED TO BE PERFORMED AFTER BUSINESS HOURS TO NOT AFFECT CRITICAL HOSPITAL FUNCTIONS IN ADJACENT AREAS. COORDINATE WITH VA REPRESENTATIVE.
- J. THE SMALLEST ALLOWABLE PIPE SIZE FOR HEATING WATER SUPPLY AND RETURN WILL BE 3/4" DIAMETER. UNLESS NOTED OTHERWISE, HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS TO INDIVIDUAL REHEAT COILS SHALL BE A MINIMUM OF 3/4" DIAMETER.
- K. PROVIDE 1/2" DRAIN VALVE AT NEW HEATING WATER SUPPLY AND RETURN PIPE LOWPOINTS, DOWNSTREAM OF ISOLATION VALVES. LARGER EQUIPMENT SUCH AS AHU COILS AND HEAT EXCHANGERS SHALL BE PROVIDED WITH LARGER 2" DRAINS TO EXPEDITE PROCESS.
- L. ALL STEAM PIPING TAKE-OFFS TO INDIVIDUAL PIECES OF EQUIPMENT SHALL BE OFF THE TOP OF STEAM MAINS. HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS SHALL ALSO BE OFF THE TOP OR SIDE OF PIPING WHEREVER POSSIBLE.
- M. THERMOSTATS AND HUMIDISTS SHOWN ARE ALL TO BE NEW DDC DEVICES AND BE INTEGRATED INTO BAS BY THE CONTROL CONTRACTOR. EXISTING PNEUMATIC DEVICES NO LONGER IN USE SHALL HAVE ALL TUBING REMOVED COMPLETELY.
- N. ALL CONTRACTORS TO REFERENCE THE INFECTION CONTROL NOTES IDENTIFIED WITHIN THE VENTILATION GENERAL NOTES ON THESE DRAWINGS. CONFORM TO ALL ICRS REQUIREMENTS.
- O. CONTRACTOR SHALL MAINTAIN ACCURATE RECORD DRAWINGS SHOWING ALL DISCREPANCIES WITH ANY EXISTING PIPING INDICATED OR REVISIONS TO THE HVAC PIPING LAYOUTS. ALL CHANGES WILL BE UPDATED WITHIN THE FINAL RECORD DRAWING SET.

KEY NOTES:

- ◇ PROVIDE WALL MOUNTED TEMPERATURE SENSOR WITH STAINLESS STEEL COVER. TEMPERATURE SETPOINT WITHIN VESTIBULE FOR CABINET UNIT HEATERS WILL BE MANAGED BY BUILDING AUTOMATION OPERATOR ONLY, AND SHALL HAVE A LOW TEMP ALARM NOTIFICATION WHENEVER SPACE DROPS BELOW 45 DEGREES (ADJ) FOR MORE THAN 5 MINUTES.



1 GROUND LEVEL PIPING PLAN - AREA A
1/8" = 1'-0"



CONSULTANTS ARCHITECTURAL: B W B R STRUCTURAL: ERA MEP: DUNHAM CIVIL: EVS LANDSCAPE: CONFLUENCE		ARCHITECT OF RECORD A E Stone Group Architects 600 E 7th Street Sioux Falls, SD 57103 605-271-1144		STAMP REGISTERED PROFESSIONAL ENGINEER 14844 JASON R. GOTTMALT SOUTH DAKOTA		Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs		Drawing Title GROUND LEVEL PIPING PLAN - AREA A Approved:		Phase CONSTRUCTION DOCUMENTS		Project Title NEW FRONT LOBBY AND PRIMARY CARE ADDITION		Project Number VA #438-480 SGA #201909 Building Number 5	
Revision# Description Date:		ARCHITECTS Stone Group Architects 600 E 7th Street Sioux Falls, SD 57103 605-271-1144		ENGINEER Jason R. Gottmalt 14844 South Dakota		VA U.S. Department of Veterans Affairs		Approved:		Phase: CONSTRUCTION DOCUMENTS		Project Title: NEW FRONT LOBBY AND PRIMARY CARE ADDITION		Project Number: VA #438-480, SGA #201909, Building Number: 5	
Issue Date: 06/22/2022		Checked: JRG		Drawn: TNH		Drawing Number: MP101									

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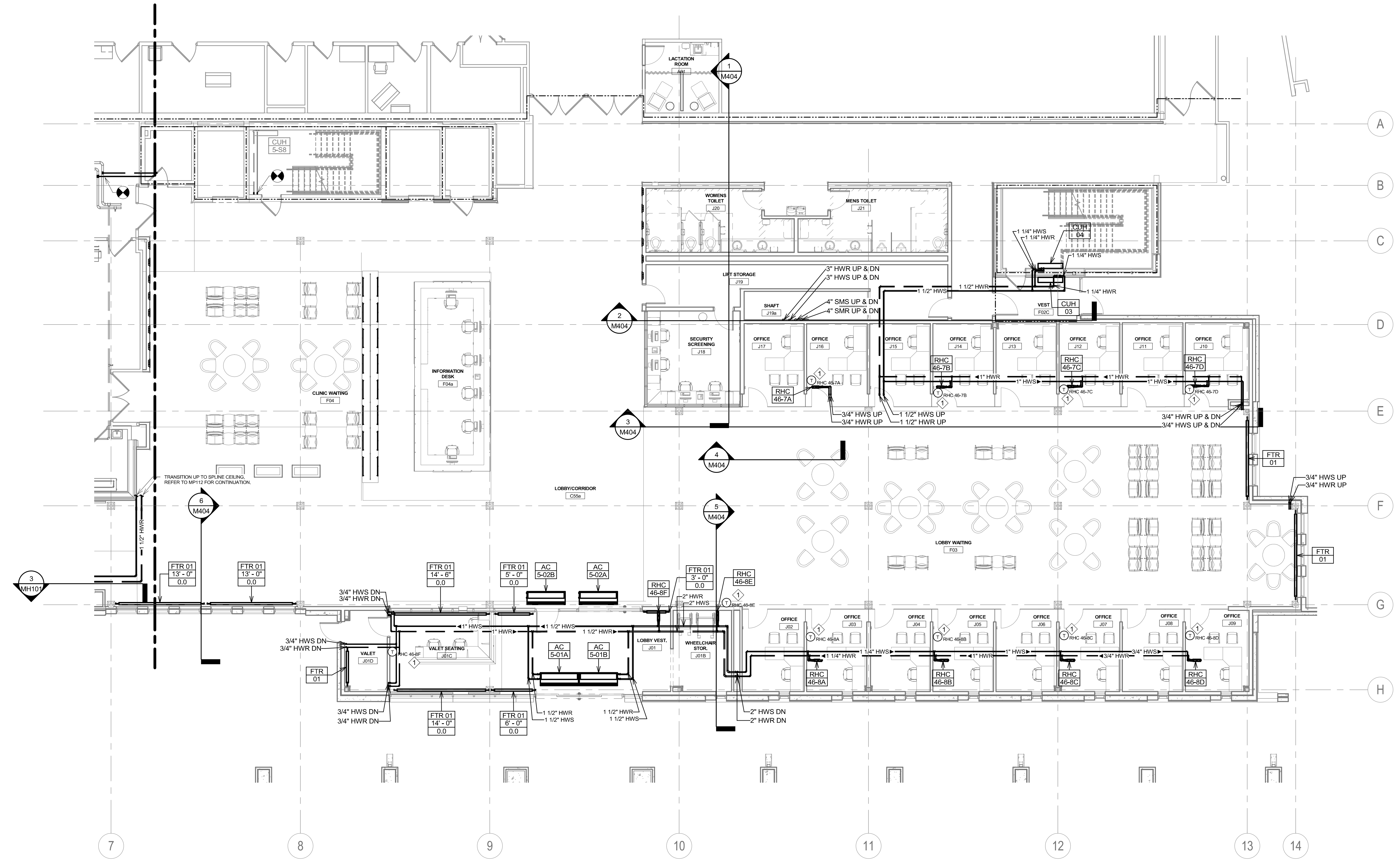
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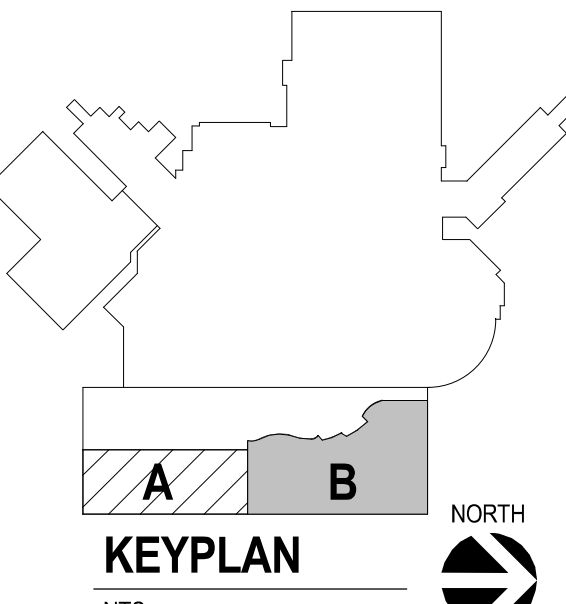
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- K. PROVIDE 1/2" DRAIN VALVE AT NEW HEATING WATER SUPPLY AND RETURN PIPE LOWPOINTS, DOWNSTREAM OF ISOLATION VALVES. LARGER EQUIPMENT SUCH AS AHU COILS AND HEAT EXCHANGERS SHALL BE PROVIDED WITH LARGER 2" DRAINS TO EXPEDITE PROCESS.
- L. ALL STEAM PIPING TAKE-OFFS TO INDIVIDUAL PIECES OF EQUIPMENT SHALL BE OFF THE TOP OF STEAM MAINS. HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS SHALL ALSO BE OFF THE TOP OR SIDE OF PIPING WHEREVER POSSIBLE.
- M. THERMOSTATS AND HUMIDISTATS ARE ALL TO BE NEW DDC DEVICES AND BE INTEGRATED INTO BAS BY THE CONTROL CONTRACTOR. EXISTING PNEUMATIC DEVICES NO LONGER IN USE SHALL HAVE ALL TUBING REMOVED COMPLETELY.
- N. ALL CONTRACTORS TO REFERENCE THE INFECTION CONTROL NOTES IDENTIFIED WITHIN THE VENTILATION GENERAL NOTES ON THESE DRAWINGS, CONFORM TO ALL ISRA REQUIREMENTS.
- O. CONTRACTOR SHALL MAINTAIN ACCURATE RECORD DRAWINGS SHOWING ALL DISCREPANCIES WITH ANY EXISTING PIPING INDICATED OR REVISIONS TO THE HVAC PIPING LAYOUTS. ALL CHANGES WILL BE UPDATED WITHIN THE FINAL RECORD DRAWING SET.

KEY NOTES:

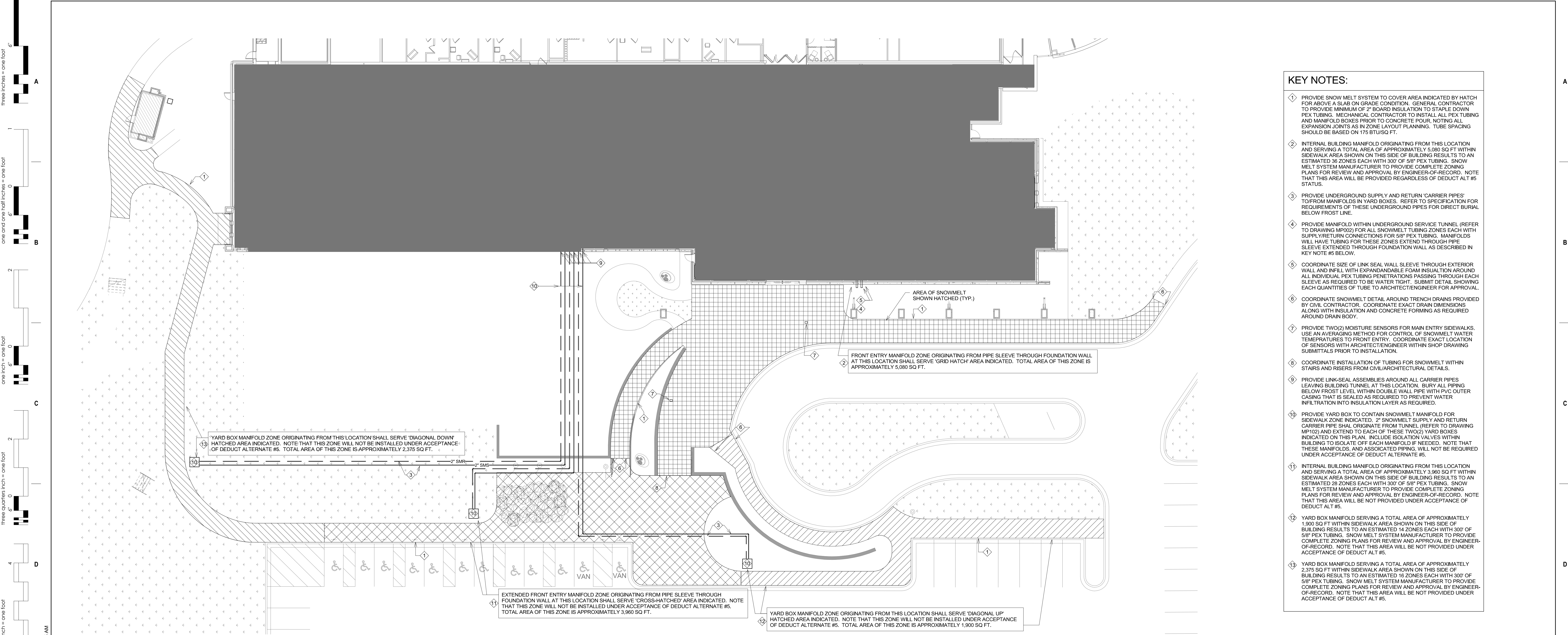
- ◇ ALL THERMOSTATS TO HAVE LCD DISPLAYS INDICATING BOTH ROOM TEMPERATURE AND SET POINT THAT IS ADJUSTABLE BY OCCUPANT (WITHIN RANGE LIMITATIONS SET BY BAS). REFER TO SEQUENCE OF OPERATION FOR VALV WITH REHEAT COIL (NOTE THERE IS NOT ANY AUXILIARY HEATING CONTROL WITHIN OFFICE/SUPPORT AREAS). MOUNT THERMOSTAT AT 60" AFF UNLESS NOTED OTHERWISE ON DRAWINGS.



1 GROUND LEVEL PIPING PLAN - AREA B
1/8" = 1'-0"



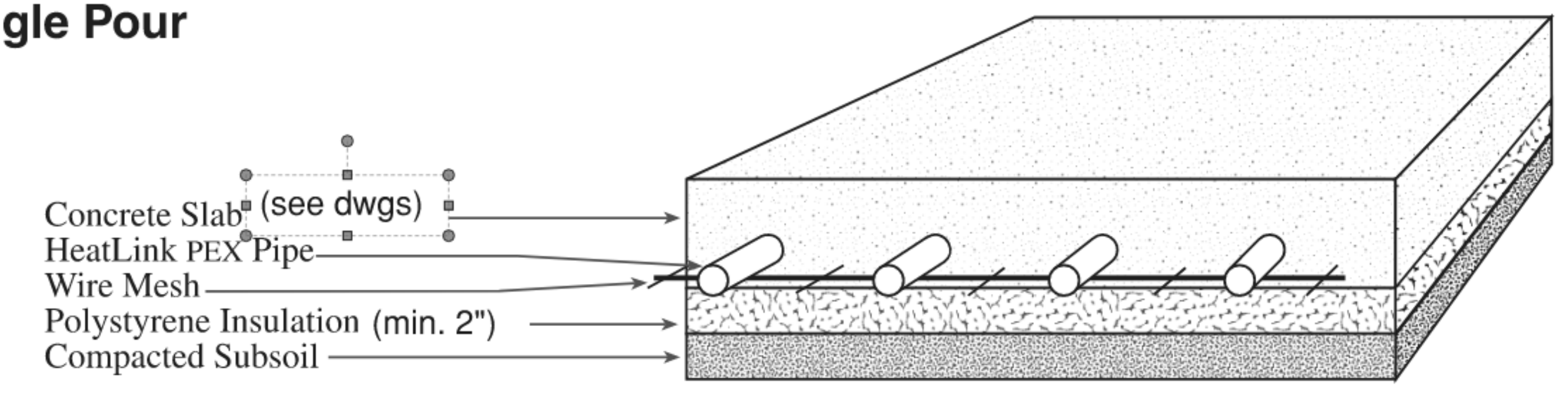
CONSULTANTS ARCHITECTURAL: BWBR STRUCTURAL: ERA MEP: DUNHAM CIVIL: EVS LANDSCAPE: CONFLUENCE		ARCHITECT OF RECORD A/E Stone Group Architects 600 E 7th Street Sioux Falls, SD 57103 605-271-1144		STAMP Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs		Drawing Title GROUND LEVEL PIPING PLAN - AREA B Approved: _____		Phase CONSTRUCTION DOCUMENTS		Project Title NEW FRONT LOBBY AND PRIMARY CARE ADDITION		Project Number VA #438-480 SGA #201909	
Revision# Description Date:		ARCHITECTS STONE GROUP ARCHITECTS		Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs		Location SIoux FALLS, SOUTH DAKOTA		Issue Date 06/22/2022		Checked JRG		Drawn TNH	
Revision# Description Date:		ARCHITECTS STONE GROUP ARCHITECTS		Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs		Location SIoux FALLS, SOUTH DAKOTA		Issue Date 06/22/2022		Checked JRG		Drawing Number MP102	



- KEY NOTES:**
- PROVIDE SNOW MELT SYSTEM TO COVER AREA INDICATED BY HATCH FOR ABOVE A SLAB ON GRADE CONDITION. GENERAL CONTRACTOR TO PROVIDE MINIMUM OF 2" BOARD INSULATION TO STAPLE DOWN PEX TUBING. MECHANICAL CONTRACTOR TO INSTALL ALL PEX TUBING AND MANIFOLD BOXES PRIOR TO CONCRETE POUR, NOTING ALL EXPANSION JOINTS AS IN ZONE LAYOUT PLANNING. TUBE SPACING SHOULD BE BASED ON 175 BTU/SQ FT.
 - INTERNAL BUILDING MANIFOLD ORIGINATING FROM THIS LOCATION AND SERVING A TOTAL AREA OF APPROXIMATELY 5,180 SQ FT WITHIN SIDEWALK AREA SHOWN ON THIS SIDE OF BUILDING RESULTS TO AN ESTIMATED 28 ZONES EACH WITH 300' OF 5/8" PEX TUBING. SNOW MELT SYSTEM MANUFACTURER TO PROVIDE COMPLETE ZONING PLANS FOR REVIEW AND APPROVAL BY ENGINEER-OF-RECORD. NOTE THAT THIS AREA WILL BE PROVIDED REGARDLESS OF DEDUCT ALT #5 STATUS.
 - PROVIDE UNDERGROUND SUPPLY AND RETURN 'CARRIER PIPES' TO/FROM MANIFOLDS IN YARD BOXES. REFER TO SPECIFICATION FOR REQUIREMENTS OF THESE UNDERGROUND PIPES FOR DIRECT BURIAL BELOW FROST LINE.
 - PROVIDE MANIFOLD WITHIN UNDERGROUND SERVICE TUNNEL (REFER TO DRAWING MP102) FOR ALL SNOWMELT TUBING ZONES EACH WITH SUPPLY/RETURN CONNECTIONS FOR 5/8" PEX TUBING. MANIFOLDS WILL HAVE TUBING FOR THESE ZONES EXTEND THROUGH PIPE SLEEVE EXTENDED THROUGH FOUNDATION WALL AS DESCRIBED IN KEY NOTE #5 BELOW.
 - COORDINATE SIZE OF LINK SEAL WALL SLEEVE THROUGH EXTERIOR WALL AND INFILL WITH EXPANDABLE FOAM INSULATION AROUND ALL INDIVIDUAL PEX TUBING PENETRATIONS PASSING THROUGH EACH SLEEVE AS REQUIRED TO BE WATER TIGHT. SUBMIT DETAIL SHOWING EACH QUANTITIES OF TUBE TO ARCHITECT/ENGINEER FOR APPROVAL.
 - COORDINATE SNOWMELT DETAIL AROUND TRENCH DRAINS PROVIDED BY CIVIL CONTRACTOR. COORDINATE EXACT DRAIN DIMENSIONS ALONG WITH INSULATION AND CONCRETE FORMING AS REQUIRED AROUND DRAIN BODY.
 - PROVIDE TWO(2) MOISTURE SENSORS FOR MAIN ENTRY SIDEWALKS. USE AN AVERAGING METHOD FOR CONTROL OF SNOWMELT WATER TEMPERATURES TO FRONT ENTRY. COORDINATE EXACT LOCATION OF SENSORS WITH ARCHITECT/ENGINEER WITHIN SHOP DRAWING SUBMITTALS PRIOR TO INSTALLATION.
 - COORDINATE INSTALLATION OF TUBING FOR SNOWMELT WITHIN STAIRS AND RISERS FROM CIVIL/ARCHITECTURAL DETAILS.
 - PROVIDE LINK-SEAL ASSEMBLIES AROUND ALL CARRIER PIPES LEAVING BUILDING TUNNEL AT THIS LOCATION. BURY ALL PIPING BELOW FROST LEVEL WITHIN DOUBLE WALL PIPE WITH PVC OUTER CASING THAT IS SEALED AS REQUIRED TO PREVENT WATER INFILTRATION INTO INSULATION LAYER AS REQUIRED.
 - PROVIDE YARD BOX TO CONTAIN SNOWMELT MANIFOLD FOR SIDEWALK ZONE INDICATED. 2" SNOWMELT SUPPLY AND RETURN CARRIER PIPES SHALL ORIGINATE FROM TUNNEL (REFER TO DRAWING MP102) AND EXTEND TO EACH OF THESE TWO(2) YARD BOXES INDICATED ON THIS PLAN. INCLUDE ISOLATION VALVES WITHIN BUILDING TO ISOLATE OFF EACH MANIFOLD IF NEEDED. NOTE THAT THESE MANIFOLDS, AND ASSOCIATED PIPING, WILL NOT BE REQUIRED UNDER ACCEPTANCE OF DEDUCT ALTERNATE #5.
 - INTERNAL BUILDING MANIFOLD ORIGINATING FROM THIS LOCATION AND SERVING A TOTAL AREA OF APPROXIMATELY 3,960 SQ FT WITHIN SIDEWALK AREA SHOWN ON THIS SIDE OF BUILDING RESULTS TO AN ESTIMATED 28 ZONES EACH WITH 300' OF 5/8" PEX TUBING. SNOW MELT SYSTEM MANUFACTURER TO PROVIDE COMPLETE ZONING PLANS FOR REVIEW AND APPROVAL BY ENGINEER-OF-RECORD. NOTE THAT THIS AREA WILL BE NOT PROVIDED UNDER ACCEPTANCE OF DEDUCT ALT #5.
 - YARD BOX MANIFOLD SERVING A TOTAL AREA OF APPROXIMATELY 1,900 SQ FT WITHIN SIDEWALK AREA SHOWN ON THIS SIDE OF BUILDING RESULTS TO AN ESTIMATED 14 ZONES EACH WITH 300' OF 5/8" PEX TUBING. SNOW MELT SYSTEM MANUFACTURER TO PROVIDE COMPLETE ZONING PLANS FOR REVIEW AND APPROVAL BY ENGINEER-OF-RECORD. NOTE THAT THIS AREA WILL BE NOT PROVIDED UNDER ACCEPTANCE OF DEDUCT ALT #5.
 - YARD BOX MANIFOLD SERVING A TOTAL AREA OF APPROXIMATELY 2,375 SQ FT WITHIN SIDEWALK AREA SHOWN ON THIS SIDE OF BUILDING RESULTS TO AN ESTIMATED 18 ZONES EACH WITH 300' OF 5/8" PEX TUBING. SNOW MELT SYSTEM MANUFACTURER TO PROVIDE COMPLETE ZONING PLANS FOR REVIEW AND APPROVAL BY ENGINEER-OF-RECORD. NOTE THAT THIS AREA WILL BE NOT PROVIDED UNDER ACCEPTANCE OF DEDUCT ALT #5.

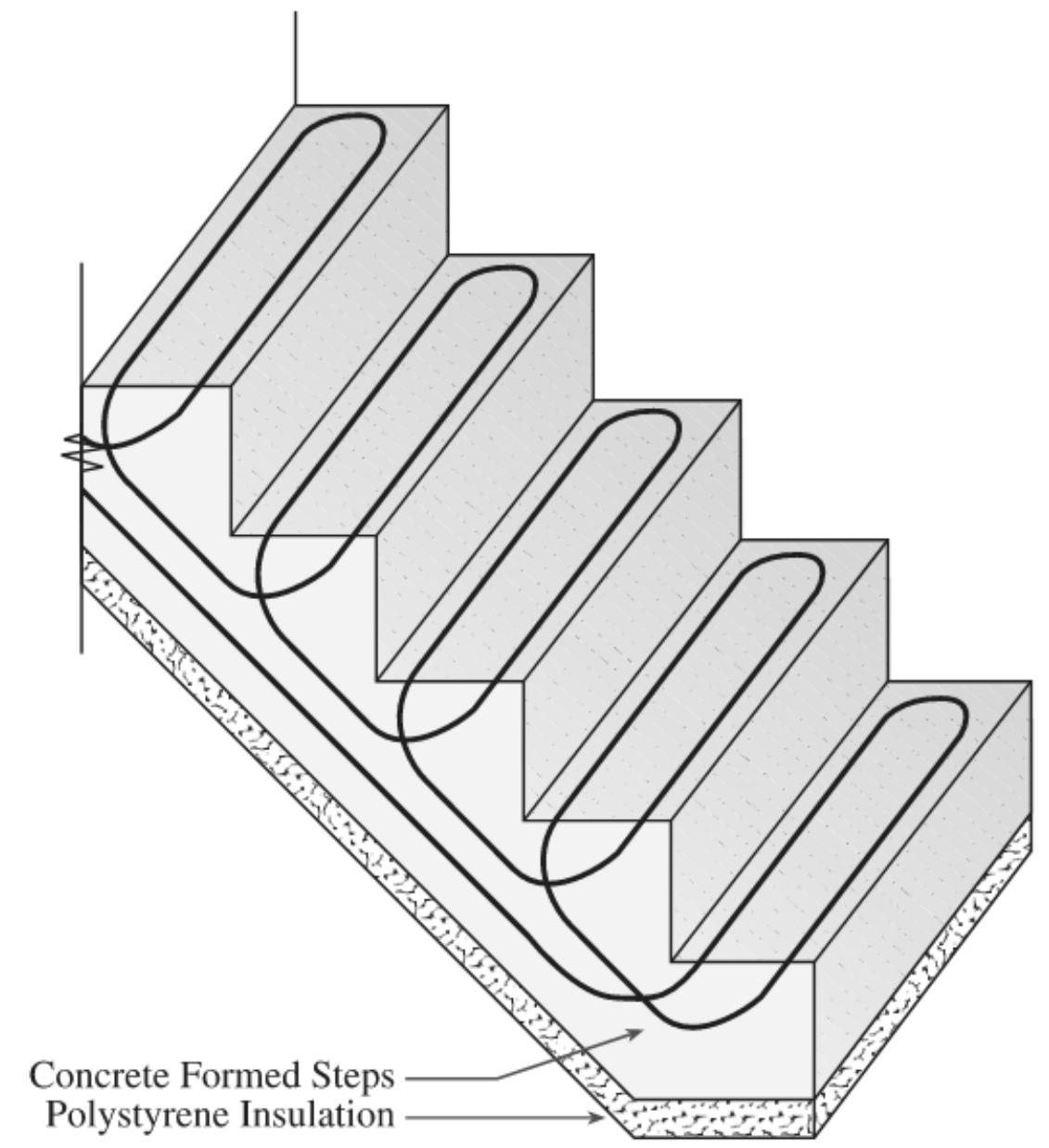
1 GROUND LEVEL PIPING PLAN - SNOWMELT
1/16" = 1'-0"

Single Pour

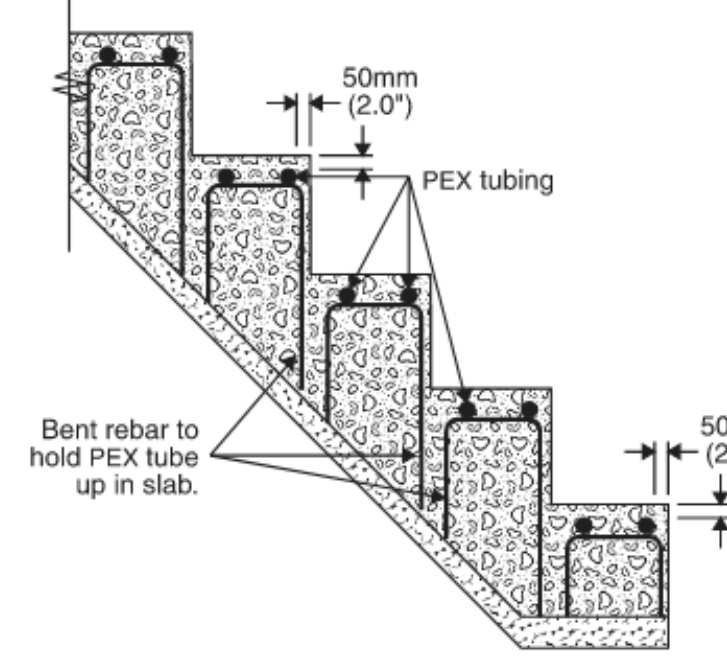


CONTRACTOR SHALL REFER TO MANUFACTURER SPECIFIC INSTALLATION GUIDELINES AND METHODS OF SECURING TUBING FOR CONSISTENT SPACING REQUIRED FOR PERFORMANCE CAPACITIES LISTED ON DRAWINGS. SUBMIT COMPLETE SNOWMELT LOOP ZONING PLANS AND DETAILS WITHIN SHOP DRAWING SUBMITTALS FOR REVIEW BY BOTH ENGINEER AND VA COTR FOR APPROVAL. INCLUDE COMPLETE HYDRONIC TUBING INSTALLATION DETAILS FOR SLAB ON GRADE CONDITION, STAIRS, CURB, TRENCH DRAIN BODIES, AND ACCEPTABLE METHOD FOR CROSSING EXPANSION JOINTS TO MAINTAIN MANUFACTURER WARRANTIES.

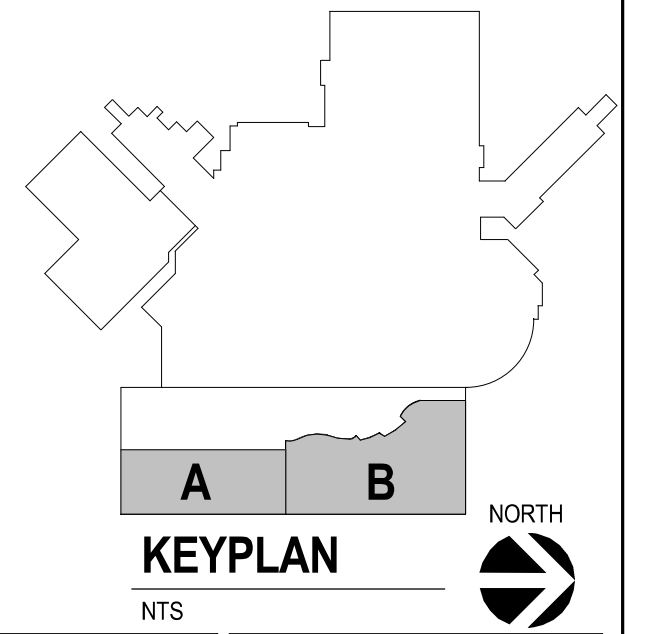
Method 2:



Stair Cross Section Detail



Note: The piping pattern shown is similar to that of an under subfloor or dry system. It is critical that placement of the piping to the leading edge of the steps is no more than 2" from the front and top of the step. This will allow as much heat as possible to migrate to the step edges to prevent an ice cap from forming on the leading edge of the step. A 1-1/2" maximum distance is important when a paving stone or cast slab is placed on the step; the final distance from tubing to finished stone edge should be no more than 2".



CONSULTANTS ARCHITECTURAL: B W B R STRUCTURAL: ERA MEP: DUNHAM CIVIL: EVS LANDSCAPE: CONFLUENCE		ARCHITECT OF RECORD A/E: Stone Group Architects 600 E 7th Street Sioux Falls, SD 57103 605-271-1144		STAMP REGISTERED PROFESSIONAL ENGINEER 14844 JASON R. GOTTWALT SOUTH DAKOTA		Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs		Drawing Title: GROUND LEVEL PIPING PLAN - BASE BID SNOWMELT AREA Approved:		Phase: CONSTRUCTION DOCUMENTS		Project Title: NEW FRONT LOBBY AND PRIMARY CARE ADDITION Location: SIOUX FALLS, SOUTH DAKOTA Issue Date: 06/22/2022 Checked: JRG Drawn: TNH		Project Number: VA #438-480 SGA #201909 Building Number: 5 Drawing Number: MP103	
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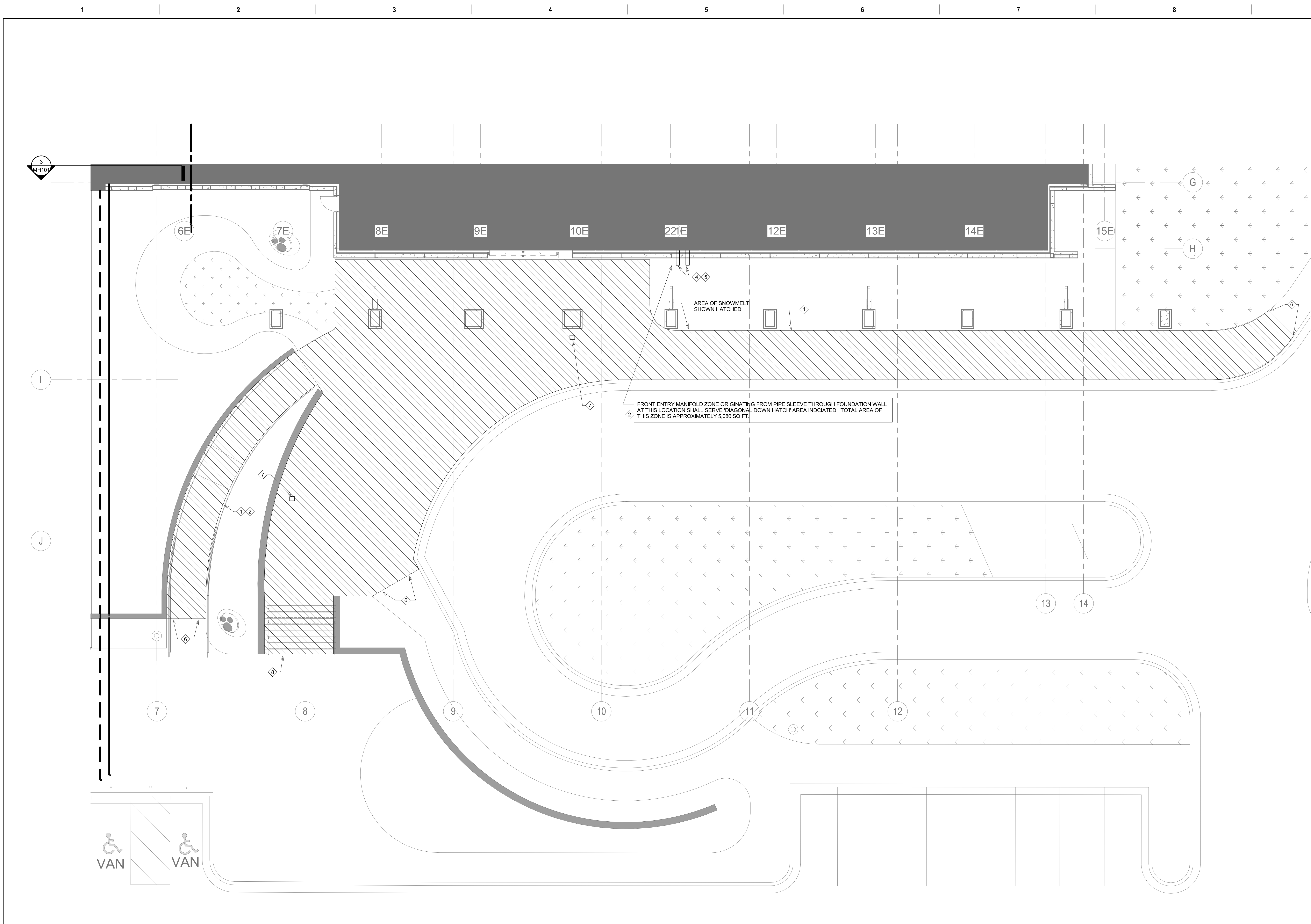
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GENERAL NOTES:

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- B. CONTRACTOR WILL BE RESPONSIBLE TO REVIEW ACCESSIBILITY TO AREAS OUTSIDE THE CONSTRUCTION LIMITS TO DETERMINE APPROXIMATE AMOUNT OF OVERTIME REQUIRED TO PERFORM ALL MECHANICAL WORK INDICATED. COORDINATION OF SCHEDULES WITH ADJACENT DEPARTMENTS AND CLEANING OF ALL DEBRIS AFTER EACH WORK SHIFT SHOULD BE ASSUMED IN THE BASE BID SCOPE.
- C. ANY MAJOR OUTAGES INDICATED ON THESE DRAWINGS SHALL BE SCHEDULED TO BE PERFORMED AFTER NORMAL BUSINESS HOURS OR DURING WEEKEND PERIODS TO MINIMIZE HOSPITAL DISRUPTION. VA HOSPITAL FACILITIES WILL REQUIRE A MINIMUM OF TWO (2) WEEKS NOTICE PRIOR TO ANY SUCH OUTAGE.
- D. COORDINATE ALL NEW PIPE ROUTING WITH ALL OTHER TRADES TO ENSURE ADEQUATE CLEARANCES FOR ELECTRICAL CONDUIT, HVAC DUCTWORK & PIPING, STRUCTURAL SUPPORTS, ETC. ANY UNAVOIDABLE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OF RECORD. PROVIDE ALL OFFSETS & TRANSITIONS AS REQUIRED FOR A CLEAN INSTALLATION.
- E. THE EXACT LOCATION OF EQUIPMENT ROUGHINS SHALL BE VERIFIED WITH THE STAMPED SHOP DRAWINGS PRIOR TO ANY FIELD INSTALLATION. NOTIFY ENGINEER OF ANY SIGNIFICANT VARIANCES.
- F. SUPPORT ALL PIPING DIRECTLY TO STRUCTURE. DO NOT SUPPORT ANY PIPING FROM DUCTWORK, CONDUIT OR OTHER PIPING ENCOUNTERED.
- G. WHERE MECHANICAL SYSTEMS TO REMAIN ARE DAMAGED OR DISTURBED DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE TO REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL QUALITY AND FUNCTIONALITY.
- H. ALL EXISTING PIPING THROUGH NEW FIRE RATED WALLS SHALL BE PROPERLY FIRE SEALED AS REQUIRED. PIPING PENETRATIONS THROUGH INTERSTITIAL FLOOR SHALL BE DRILLED OR CUT BY THE CONTRACTOR AND FIRE SEALED AS REQUIRED.
- I. ALL CORE DRILLING OR ANY ACTIVITIES CAUSING EXTREME VIBRATION OR NOISE SHALL BE COORDINATED TO BE PERFORMED AFTER BUSINESS HOURS TO NOT AFFECT CRITICAL HOSPITAL FUNCTIONS IN ADJACENT AREAS. COORDINATE WITH VA REPRESENTATIVE.
- J. THE SMALLEST ALLOWABLE PIPE SIZE FOR HEATING WATER SUPPLY AND RETURN WILL BE 3/4" DIAMETER. UNLESS NOTED OTHERWISE, HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS TO INDIVIDUAL REHEAT COILS SHALL BE A MINIMUM OF 3/4" DIAMETER.
- K. PROVIDE 1/2" DRAIN VALVE AT NEW HEATING WATER SUPPLY AND RETURN PIPE LOWPOINTS, DOWNSTREAM OF ISOLATION VALVES. LARGER EQUIPMENT SUCH AS AHU COILS AND HEAT EXCHANGERS SHALL BE PROVIDED WITH LARGER 2" DRAINS TO EXPEDITE PROCESS.
- L. ALL STEAM PIPING TAKE-OFFS TO INDIVIDUAL PIECES OF EQUIPMENT SHALL BE OFF THE TOP OF STEAM MAINS. HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS SHALL ALSO BE OFF THE TOP OR SIDE OF PIPING WHEREVER POSSIBLE.
- M. THERMOSTATS AND HUMIDSTATS SHOWN ARE ALL TO BE NEW DDC DEVICES AND BE INTEGRATED INTO BAS BY THE CONTROL CONTRACTOR. EXISTING PNEUMATIC DEVICES NO LONGER IN USE SHALL HAVE ALL TUBING REMOVED COMPLETELY.
- N. ALL CONTRACTORS TO REFERENCE THE INFECTON CONTROL NOTES IDENTIFIED WITHIN THE VENTILATION GENERAL NOTES ON THESE DRAWINGS. CONFORM TO ALL ICRA REQUIREMENTS.
- O. CONTRACTOR SHALL MAINTAIN ACCURATE RECORD DRAWINGS SHOWING ALL DISCREPANCIES WITH ANY EXISTING PIPING INDICATED OR REVISIONS TO THE HVAC PIPING LAYOUTS. ALL CHANGES WILL BE UPDATED WITHIN THE FINAL RECORD DRAWING SET.

KEY NOTES:

- 1 PROVIDE SNOW MELT SYSTEM TO COVER AREA INDICATED BY HATCH FOR ABOVE A SLAB ON GRADE CONDITION. GENERAL CONTRACTOR TO PROVIDE MINIMUM OF 2" BOARD INSULATION TO STAPLE DOWN PEX TUBING. MECHANICAL CONTRACTOR TO INSTALL ALL PEX TUBING AND MANIFOLD BOXES PRIOR TO CONCRETE POUR. NOTING ALL EXPANSION JOINTS AS IN ZONE LAYOUT PLANNING. TUBE SPACING SHOULD BE BASED ON 175 BTU/SQ FT.
- 2 INTERNAL BUILDING MANIFOLD ORIGINATING FROM THIS LOCATION AND SERVING A TOTAL AREA OF APPROXIMATELY 5,080 SQ FT WITHIN SIDEWALK AREA SHOWN ON THIS SIDE OF BUILDING RESULTS TO AN ESTIMATED 36 ZONES EACH WITH 300' OF 5/8" PEX TUBING. SNOW MELT SYSTEM MANUFACTURER TO PROVIDE COMPLETE ZONING PLANS FOR REVIEW AND APPROVAL BY ENGINEER-OF-RECORD. NOTE THAT THIS AREA WILL BE PROVIDED REGARDLESS OF DEDUCT ALT #5 STATUS.
- 3 NOT USED.
- 4 PROVIDE MANIFOLD WITHIN UNDERGROUND SERVICE TUNNEL (REFER TO DRAWING MP102) FOR ALL SNOWMELT TUBING ZONES EACH WITH SUPPLY/RETURN CONNECTIONS FOR 5/8" PEX TUBING. MANIFOLDS WILL HAVE TUBING FOR THESE ZONES EXTEND THROUGH PIPE SLEEVE EXTENDED THROUGH FOUNDATION WALL AS DESCRIBED IN KEY NOTE #5 BELOW.
- 5 COORDINATE SIZE OF LINK SEAL WALL SLEEVE THROUGH EXTERIOR WALL AND INFILL WITH EXPANDABLE FOAM INSULATION AROUND ALL INDIVIDUAL PEX TUBING PENETRATIONS PASSING THROUGH EACH SLEEVE AS REQUIRED TO BE WATER TIGHT. SUBMIT DETAIL SHOWING EACH QUANTITIES OF TUBE TO ARCHITECT/ENGINEER FOR APPROVAL.
- 6 COORDINATE SNOWMELT DETAIL AROUND TRENCH DRAINS PROVIDED BY CIVIL CONTRACTOR. COORDINATE EXACT DRAIN DIMENSIONS ALONG WITH INSULATION AND CONCRETE FORMING AS REQUIRED AROUND DRAIN BODY.
- 7 PROVIDE TWO(2) MOISTURE SENSORS FOR MAIN ENTRY SIDEWALKS. USE AN AVERAGING METHOD FOR CONTROL OF SNOWMELT WATER TEMPERATURES TO FRONT ENTRY. COORDINATE EXACT LOCATION OF SENSORS WITH ARCHITECT/ENGINEER WITHIN SHOP DRAWING SUBMITTALS PRIOR TO INSTALLATION.
- 8 COORDINATE INSTALLATION OF TUBING FOR SNOWMELT WITHIN STAIRS AND RISERS FROM CIVIL/ARCHITECTURAL DETAILS.



1 GROUND LEVEL PIPING PLAN - SNOWMELT
1/8" = 1'-0"

Revision#	Description	Date:

CONSULTANTS

ARCHITECTURAL: BWB 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-223-3701	STRUCTURAL: ERA 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1770	MEP: DUNHAM 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-646-7550 0421950-002-00	CIVIL: EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55444 Phone: 952-646-0209	LANDSCAPE: CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205
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ARCHITECT OF RECORD

A/E:
Stone Group Architects
600 E 7th Street
Sioux Falls, SD 57103
605-271-1144

STAMP

Office of
Construction
and Facilities
Management

Drawing Title
GROUND LEVEL PIPING PLAN - DEDUCT ALT #5 SNOWMELT AREA

Approved: _____

Phase
CONSTRUCTION DOCUMENTS

Project Title
NEW FRONT LOBBY AND PRIMARY CARE ADDITION

Location
SIOUX FALLS, SOUTH DAKOTA

Issue Date
06/22/2022

Checked
JRG

Drawn
TNH

Project Number
VA #438-480
SGA #201909

Building Number
5

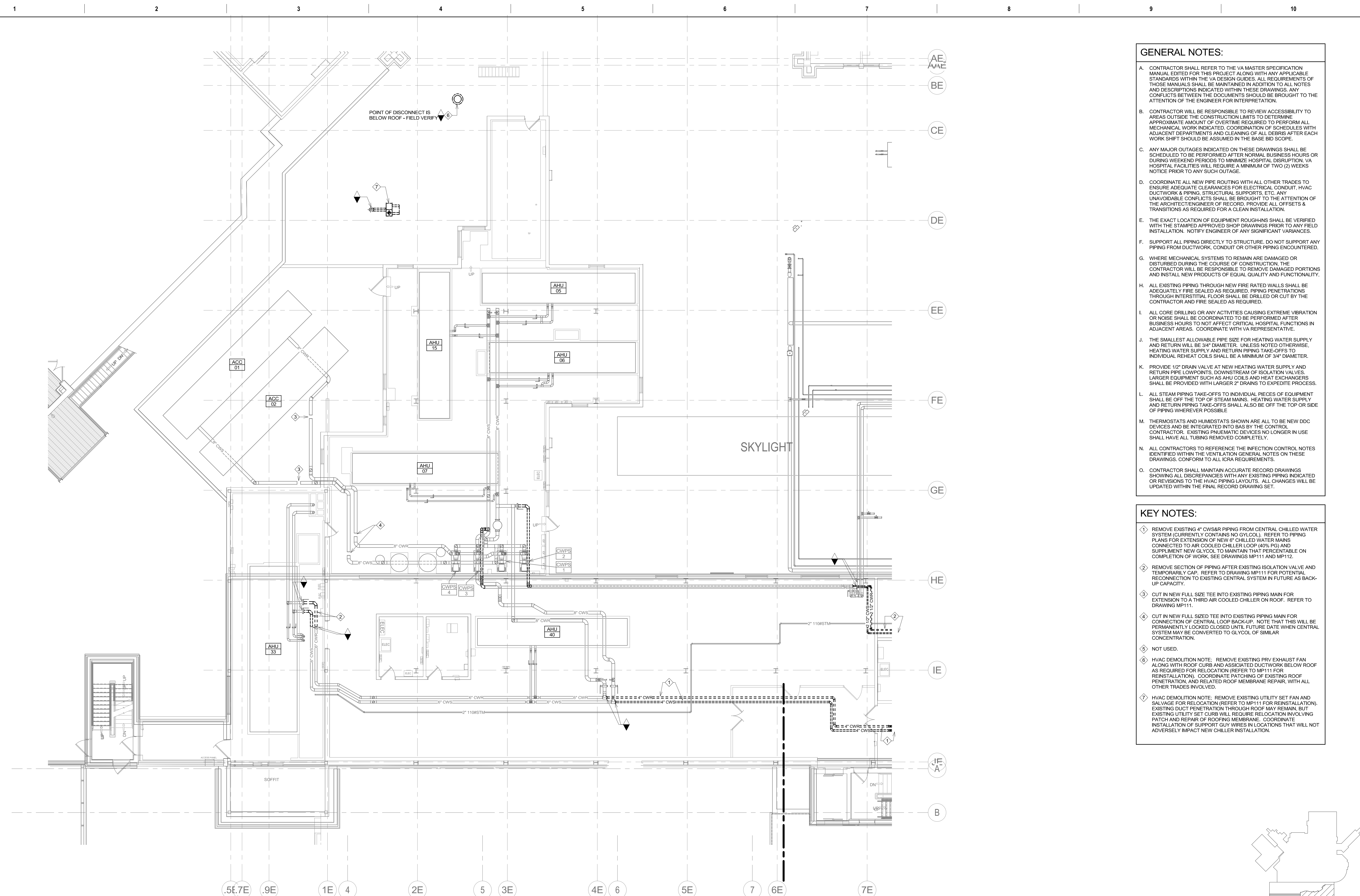
Drawing Number
MP104

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- C. ANY MAJOR OUTAGES INDICATED ON THESE DRAWINGS SHALL BE SCHEDULED TO BE PERFORMED AFTER NORMAL BUSINESS HOURS OR DURING WEEKEND PERIODS TO MINIMIZE HOSPITAL DISRUPTION. VA HOSPITAL FACILITIES WILL REQUIRE A MINIMUM OF TWO (2) WEEKS NOTICE PRIOR TO ANY SUCH OUTAGE.
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- E. THE EXACT LOCATION OF EQUIPMENT ROUGH-INS SHALL BE VERIFIED WITH THE STAMPED APPROVED SHOP DRAWINGS PRIOR TO ANY FIELD INSTALLATION. NOTIFY ENGINEER OF ANY SIGNIFICANT VARIANCES.
- F. SUPPORT ALL PIPING DIRECTLY TO STRUCTURE. DO NOT SUPPORT ANY PIPING FROM DUCTWORK, CONDUIT OR OTHER PIPING ENCOUNTERED.
- G. WHERE MECHANICAL SYSTEMS TO REMAIN ARE DAMAGED OR DISTURBED DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE TO REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL QUALITY AND FUNCTIONALITY.
- H. ALL EXISTING PIPING THROUGH NEW FIRE RATED WALLS SHALL BE ADEQUATELY FIRE SEALED AS REQUIRED. PIPING PENETRATIONS THROUGH INTERSTITIAL FLOOR SHALL BE DRILLED OR CUT BY THE CONTRACTOR AND FIRE SEALED AS REQUIRED.
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- J. THE SMALLEST ALLOWABLE PIPE SIZE FOR HEATING WATER SUPPLY AND RETURN WILL BE 3/4" DIAMETER. UNLESS NOTED OTHERWISE, HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS TO INDIVIDUAL REHEAT COILS SHALL BE A MINIMUM OF 3/4" DIAMETER.
- K. PROVIDE 1/2" DRAIN VALVE AT NEW HEATING WATER SUPPLY AND RETURN PIPE LOWPOINTS, DOWNSTREAM OF ISOLATION VALVES. LARGER EQUIPMENT SUCH AS AHU COILS AND HEAT EXCHANGERS SHALL BE PROVIDED WITH LARGER 2" DRAINS TO EXPEDITE PROCESS.
- L. ALL STEAM PIPING TAKE-OFFS TO INDIVIDUAL PIECES OF EQUIPMENT SHALL BE OFF THE TOP OF STEAM MAINS. HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS SHALL ALSO BE OFF THE TOP OR SIDE OF PIPING WHEREVER POSSIBLE.
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- O. CONTRACTOR SHALL MAINTAIN ACCURATE RECORD DRAWINGS SHOWING ALL DISCREPANCIES WITH ANY EXISTING PIPING INDICATED OR REVISIONS TO THE HVAC PIPING LAYOUTS. ALL CHANGES WILL BE UPDATED WITHIN THE FINAL RECORD DRAWING SET.

KEY NOTES:

- 1 REMOVE EXISTING 4" CWS&R PIPING FROM CENTRAL CHILLED WATER SYSTEM (CURRENTLY CONTAINS NO GLYCOL). REFER TO PIPING PLANS FOR EXTENSION OF NEW 6" CHILLED WATER MAINS CONNECTED TO AIR COOLED CHILLER LOOP (40% PG) AND SUPPLEMENT NEW GLYCOL TO MAINTAIN THAT PERCENTABLE ON COMPLETION OF WORK, SEE DRAWINGS MP111 AND MP112.
- 2 REMOVE SECTION OF PIPING AFTER EXISTING ISOLATION VALVE AND TEMPORARILY CAP. REFER TO DRAWING MP111 FOR POTENTIAL RECONNECTION TO EXISTING CENTRAL SYSTEM IN FUTURE AS BACK-UP CAPACITY.
- 3 CUT IN NEW FULL SIZE TEE INTO EXISTING PIPING MAIN FOR EXTENSION TO A THIRD AIR COOLED CHILLER ON ROOF. REFER TO DRAWING MP111.
- 4 CUT IN NEW FULL SIZED TEE INTO EXISTING PIPING MAIN FOR CONNECTION OF CENTRAL LOOP BACK-UP. NOTE THAT THIS WILL BE PERMANENTLY LOCKED CLOSED UNTIL FUTURE DATE WHEN CENTRAL SYSTEM MAY BE CONVERTED TO GLYCOL OF SIMILAR CONCENTRATION.
- 5 NOT USED.
- 6 HVAC DEMOLITION NOTE: REMOVE EXISTING PRV EXHAUST FAN ALONG WITH ROOF CURB AND ASSOCIATED DUCTWORK BELOW ROOF AS REQUIRED FOR RELOCATION (REFER TO MP111 FOR REINSTALLATION). COORDINATE PATCHING OF EXISTING ROOF PENETRATION, AND RELATED ROOF MEMBRANE REPAIR, WITH ALL OTHER TRADES INVOLVED.
- 7 HVAC DEMOLITION NOTE: REMOVE EXISTING UTILITY SET FAN AND SALVAGE FOR RELOCATION (REFER TO MP111 FOR REINSTALLATION). EXISTING DUCT PENETRATION THROUGH ROOF MAY REMAIN, BUT EXISTING UTILITY SET CURBS WILL REQUIRE RELOCATION INVOLVING PATCH AND REPAIR OF ROOFING MEMBRANE. COORDINATE INSTALLATION OF SUPPORT GUY WIRES IN LOCATIONS THAT WILL NOT ADVERSELY IMPACT NEW CHILLER INSTALLATION.



1 INTERSTITIAL DEMOLITION PIPING PLAN
1/8" = 1'-0"

Revision#	Description	Date:

CONSULTANTS

ARCHITECTURAL: BWB 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-223-3701	STRUCTURAL: ERA 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1970	MEP: DUNHAM 200 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-685-7559 0421950-002-00	CIVIL: EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-646-0239	LANDSCAPE: CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205
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ARCHITECT OF RECORD

A/E:
Stone Group Architects
600 E 7th Street
Sioux Falls, SD 57103
605-271-1144

STONE GROUP ARCHITECTS

STAMP

REGISTERED PROFESSIONAL ENGINEER
14844
JASON R. GOTTWALT
SOUTH DAKOTA

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title
FIRST FLOOR DEMOLITION PIPING PLAN - AREA A

Approved:

Phase
CONSTRUCTION DOCUMENTS

Project Title
NEW FRONT LOBBY AND PRIMARY CARE ADDITION

Location
SIoux FALLS, SOUTH DAKOTA

Issue Date
06/22/2022

Checked
JRG

Drawn
TNH

Project Number
VA #438-480
SGA #201909

Building Number
5

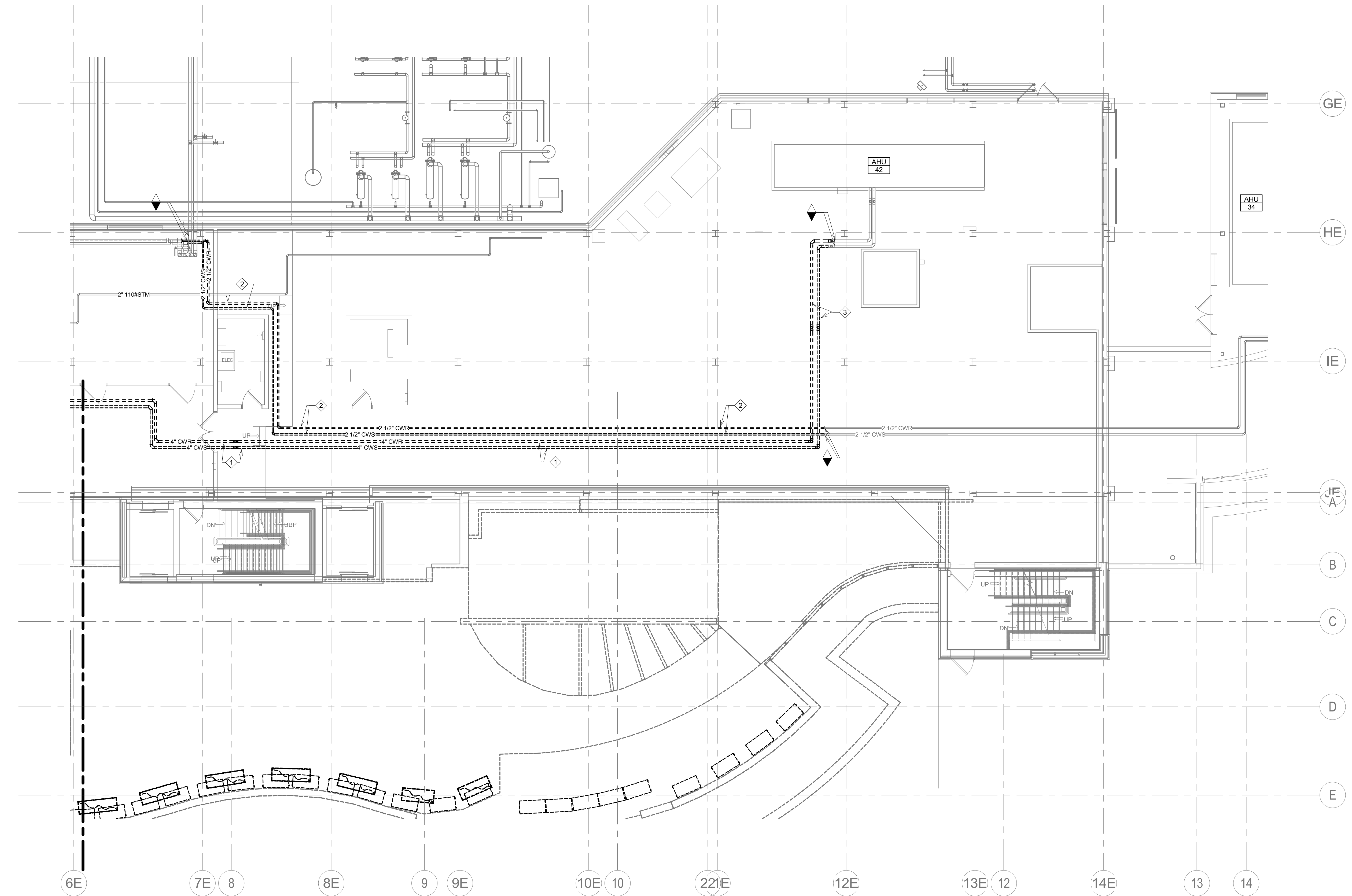
Drawing Number
MPD111

GENERAL NOTES:

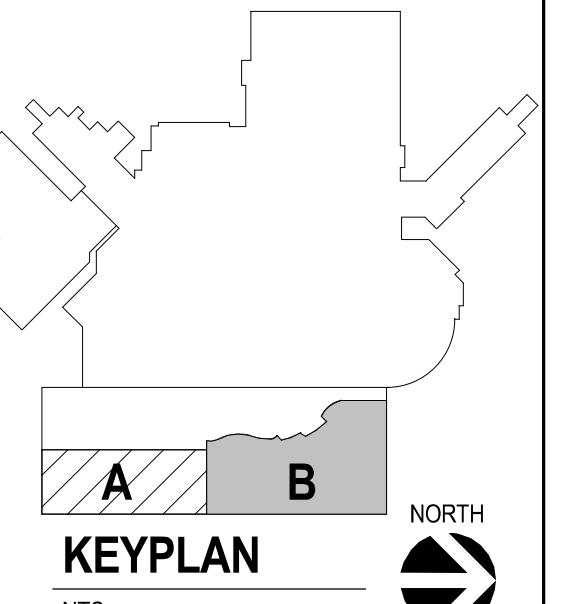
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- K. PROVIDE 1/2" DRAIN VALVE AT NEW HEATING WATER SUPPLY AND RETURN PIPE LOWPOINTS, DOWNSTREAM OF ISOLATION VALVES. LARGER EQUIPMENT SUCH AS AHU COILS AND HEAT EXCHANGERS SHALL BE PROVIDED WITH LARGER 2" DRAINS TO EXPEDITE PROCESS.
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KEY NOTES:

- ① REMOVE EXISTING 4" CWS&R PIPING FROM CENTRAL CHILLED WATER SYSTEM (CURRENTLY CONTAINS NO GLYCOL). REFER TO PIPING PLANS FOR EXTENSION OF NEW 6" CHILLED WATER MAINS CONNECTED TO AIR COOLED CHILLER LOOP (40% PG) AND SUPPLEMENT NEW GLYCOL TO MAINTAIN THAT PERCENTAGE ON COMPLETION OF WORK. SEE DRAWINGS MP-111 AND MP-112.
- ② REMOVE EXISTING 2.5" CWS&R PIPING TO EXISTING AHU-34 ON NORTH END OF INTERSTITIAL SPACE. PERFORM THIS WORK ON SEASONAL DAY WHERE CHILLED WATER IS NOT REQUIRED, OR PROVIDE TEMPORARY PIPING CONNECTIONS TO AVOID OUTGAGE TO AREAS SERVED BY THIS PIPING. NOTE THAT THIS SYSTEM CONTAINS 40% PROPYLENE GLYCOL THAT WILL NEED TO BE RECLAIMED, OR REPLACED, BY THE CONTRACTOR UPON COMPLETION OF PIPING MODIFICATIONS. REFER TO PIPING PLANS FOR RECONNECTION TO NEW 6" CHILLED WATER GRID/LOOP SYSTEM.
- ③ SIMILAR TO KEY NOTE #2 ABOVE. COORDINATE TIMING OF PIPING MODIFICATIONS WITH AHU-42 SERVICE.



① INTERSTITIAL DEMOLITION PIPING PLAN
1/8" = 1'-0"



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 one eighth inch = one foot
 one quarter inch = one foot
 one half inch = one foot
 three quarters inch = one foot
 one inch = one foot
 one and one half inches = one foot
 three inches = one foot
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CONSULTANTS

ARCHITECTURAL: BWBR 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-223-3701	STRUCTURAL: ERA ERICKSEN ROAD ASSOCIATES 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1770	MEP: DUNHAM DUNHAM ASSOCIATES, INC. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-685-7550 0421950-002-00	CIVIL: EVS EVENSON VALLEY VIEW RD Suite 140 Eden Prairie, MN 55344 Phone: 952-646-4236	LANDSCAPE: CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205
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ARCHITECT OF RECORD

A/E:
Stone Group Architects
600 E 7th Street
Sioux Falls, SD 57103
605-271-1144

STAMP

Office of
Construction
and Facilities
Management

Drawing Title
FIRST FLOOR DEMOLITION PIPING PLAN - AREA B

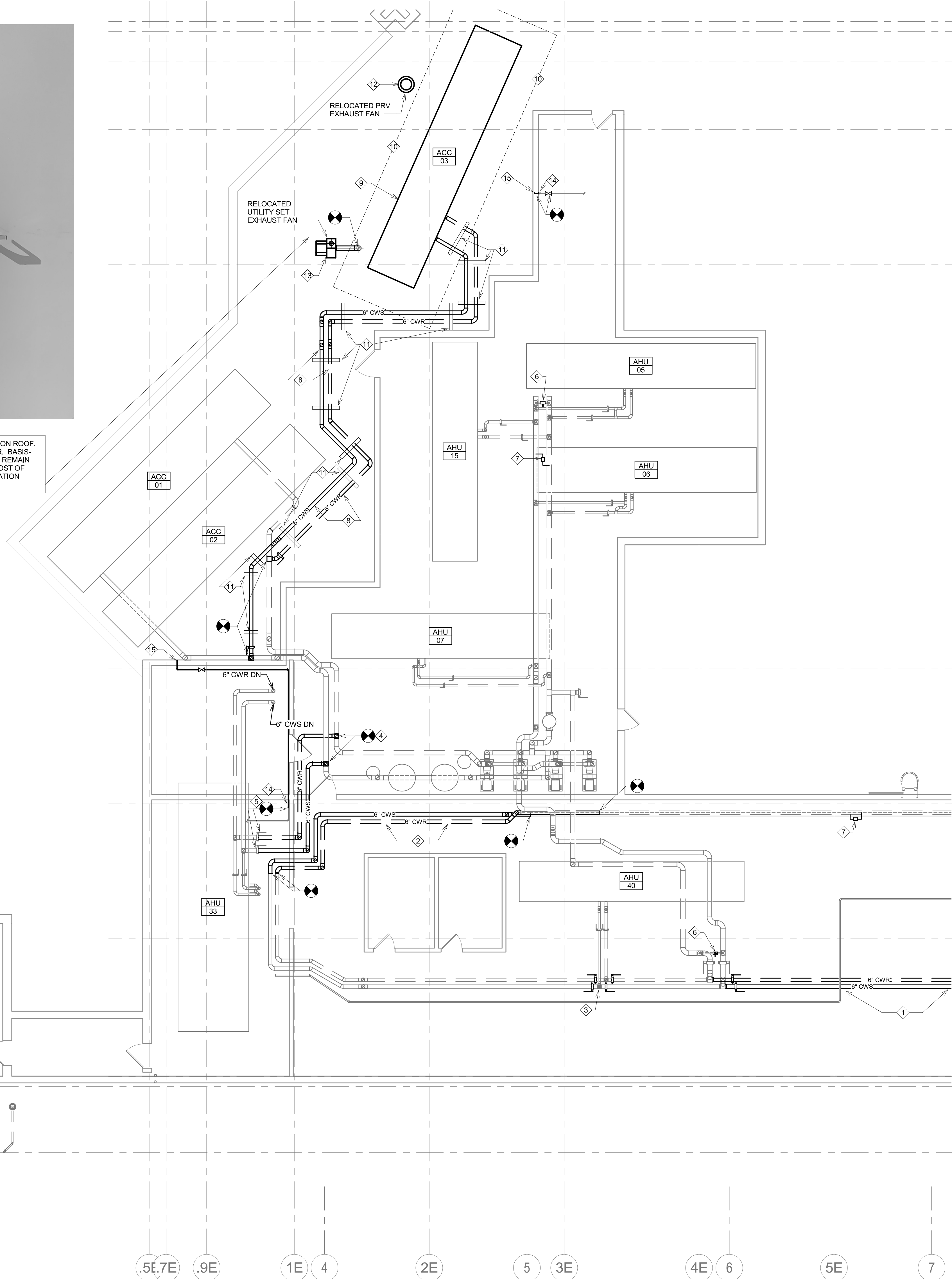
Approved:

Phase
CONSTRUCTION DOCUMENTS

Project Title NEW FRONT LOBBY AND PRIMARY CARE ADDITION		Project Number VA #438-480 SGA #201909
Location SIoux FALLS, SOUTH DAKOTA		Building Number 5
Issue Date 06/22/2022	Checked JRG	Drawn TNH
		Drawing Number MPD112



NOTE THE TWO(2) EXISTING EXHAUST FANS IN PHOTO ABOVE WITHIN GENERAL PROXIMITY OF NEW CHILLER INSTALLATION ON ROOF. CONTRACTOR SHALL RELOCATE BOTH THESE FANS TO OUTSIDE OF SERVICE AREA REQUIRED BY CHILLER MANUFACTURER. BASIS-OF-DESIGN CHILLER HAS ADEQUATE CLEARANCE FOR THE EXISTING DUCT PENETRATION FOR UTILITY FAN WITH STACK TO REMAIN WHILE FAN IS RELOCATED, AND THE PRV FAN IN BACKGROUND OF PICTURE WILL ALSO REQUIRE RELOCATION. INCLUDE COST OF NEW ROOF CURB AND REDIRECTING OF EXHAUST DUCT APPROXIMATELY 120' ON FLOOR BELOW, TO NEW ROOF PENETRATION LOCATION. EXISTING FANS MAY BOTH BE REUTILIZED IF UNDAMAGED DURING THE DISCONNECT/RECONNECT PROCESS.



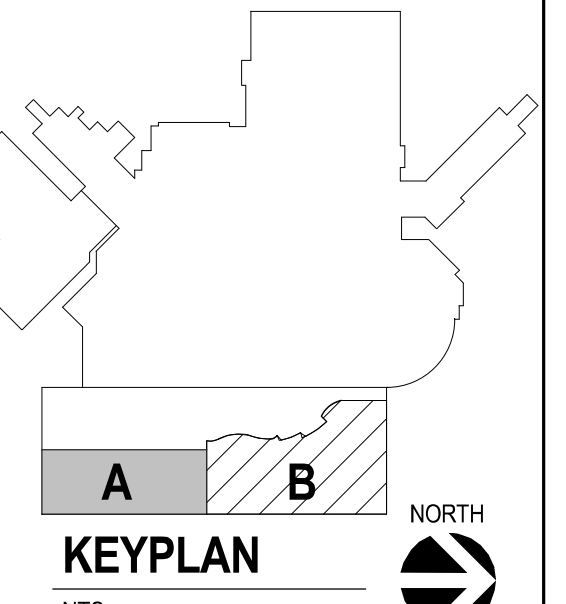
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- H. ALL EXISTING PIPING THROUGH NEW FIRE RATED WALLS SHALL BE ADEQUATELY FIRE SEALED AS REQUIRED. PIPING PENETRATIONS THROUGH INTERSTITIAL FLOOR SHALL BE DRILLED OR CUT BY THE CONTRACTOR AND FIRE SEALED AS REQUIRED.
- I. ALL CORE DRILLING OR ANY ACTIVITIES CAUSING EXTREME VIBRATION OR NOISE SHALL BE COORDINATED TO BE PERFORMED AFTER BUSINESS HOURS TO NOT AFFECT CRITICAL HOSPITAL FUNCTIONS IN ADJACENT AREAS. COORDINATE WITH VA REPRESENTATIVE.
- J. THE SMALLEST ALLOWABLE PIPE SIZE FOR HEATING WATER SUPPLY AND RETURN WILL BE 3/4" DIAMETER. UNLESS NOTED OTHERWISE, HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS TO INDIVIDUAL REHEAT COILS SHALL BE A MINIMUM OF 3/4" DIAMETER.
- K. PROVIDE 1/2" DRAIN VALVE AT NEW HEATING WATER SUPPLY AND RETURN PIPE LOWPOINTS, DOWNSTREAM OF ISOLATION VALVES. LARGER EQUIPMENT SUCH AS AHU COILS AND HEAT EXCHANGERS SHALL BE PROVIDED WITH LARGER 2" DRAINS TO EXPEDITE PROCESS.
- L. ALL STEAM PIPING TAKE-OFFS TO INDIVIDUAL PIECES OF EQUIPMENT SHALL BE OFF THE TOP OF STEAM MAINS. HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS SHALL ALSO BE OFF THE TOP OR SIDE OF PIPING WHEREVER POSSIBLE.
- M. THERMOSTATS AND HUMIDSTATS SHOWN ARE ALL TO BE NEW DDC DEVICES AND BE INTEGRATED INTO BAS BY THE CONTROL CONTRACTOR. EXISTING PNEUMATIC DEVICES NO LONGER IN USE SHALL HAVE ALL TUBING REMOVED COMPLETELY.
- N. ALL CONTRACTORS TO REFERENCE THE INFECTION CONTROL NOTES IDENTIFIED WITHIN THE VENTILATION GENERAL NOTES ON THESE DRAWINGS. CONFORM TO ALL ICRA REQUIREMENTS.
- O. CONTRACTOR SHALL MAINTAIN ACCURATE RECORD DRAWINGS SHOWING ALL DISCREPANCIES WITH ANY EXISTING PIPING INDICATED OR REVISIONS TO THE HVAC PIPING LAYOUTS. ALL CHANGES WILL BE UPDATED WITHIN THE FINAL RECORD DRAWING SET.

KEY NOTES:

- 1. REPLACE PREVIOUSLY REMOVED SECTION OF CHILLED WATER SUPPLY AND RETURN PIPING WITH LARGER 6" PIPES INDICATED TO COMPLETE THE CHILLED WATER LOOP SHOWN. COORDINATE EXISTING OBSTACLES AND MODIFY TO RELOCATE, OR TRANSITION NEW PIPING, AS REQUIRED FOR ROUTING THROUGH THIS AREA.
- 2. SECTION OF 6" CHILLED WATER PIPING INSTALLED TO CLOSE THE PIPING LOOP AND ALLOW BIDIRECTIONAL FLOW. COORDINATE EXISTING OBSTACLES AND MODIFY TO RELOCATE, OR TRANSITION NEW PIPING, AS REQUIRED FOR ROUTING THROUGH THIS AREA.
- 3. AT ALL CHILLED WATER TAKE-OFFS INDICATED TO AHU COOLING COILS AND/OR EQUIPMENT PROVIDE FULL SIZED 6" ISOLATION VALVES ON BOTH SIDES OF TAKE-OFF (MIT UNDER ACCEPTANCE OF DUCTWORK ALTERNATE #10), AND A THIRD ISOLATION VALVE ON BRANCH PIPING TAKE-OFF TO MATCH SIZE OF PIPE. ALL ISOLATION VALVES SHALL BE DOUBLE OFFSET HIGH PERFORMANCE BUTTERFLY VALVES AND LOW POINT DRAINS FOR ALL SECTIONS OF PIPING BETWEEN. INCLUDE ALL REQUIRED VALVE TAGGING AND CHECK VALVE SEALS DURING INSTALLATION.
- 4. REPLACE EXISTING TEE FITTING TO EXTEND FULL SIZED 6" CHILLED WATER SUPPLY AND RETURN PIPING AS INDICATED TO FORM A CONTINUOUS FULL SIZED PIPE LOOP.
- 5. LOCK CLOSE EXISTING VALVES FROM CENTRAL CHILLED WATER PLANT. PROVIDE OPTIONAL LINE ITEM PRICING TO CONNECT THESE 6" PIPES INTO EXISTING PRIMARY LOOP TO ACT AS ADDITIONAL SOURCE OF COOLING UPON LOSS OF ONE OR MORE AIR COOLED CHILLERS. NOTE THAT CENTRALIZED SYSTEM DOES NOT USE GLYCOL AND THEREFORE THESE VALVES WOULD REMAIN LOCKED UNTIL A FUTURE DATE WHEN THAT SYSTEM MAY BE INTEGRATED AND FLUSHED WITH CONCENTRATION AS THIS SEPARATE CHILLED WATER LOOP SERVED BY ADJACENT AIR COOLED CHILLERS INDICATED.
- 6. PROVIDE NEW CONTROL VALVE ON EXISTING BYPASS (X2 LOCATIONS ON THIS LEVEL) TO ACT AS MINIMUM FLOW CONTROL DEVICES. REFER TO SEQUENCE OF OPERATION FOR FLOW AND PRESSURE SETPOINT OF MINIMUM FLOW REQ.
- 7. INSTALL NEW DIFFERENTIAL PRESSURE SENSORS ON TWO DISTINCT LOCATION (LOOPS) INDICATED. REFER TO SEQUENCE OF OPERATION FOR SWITCHING OF SECONDARY PUMP CONTROL BETWEEN THESE SENSORS ALONG WITH SETPOINT RESET/ADJUSTMENT VIA COOLING COOL DEMAND POLLING.
- 8. CHILLED WATER PIPING ON ROOF EXPOSED TO WEATHER. CONTRACTOR TO PROVIDE ALUMINUM JACKETING SEALED WEATHERTIGHT AROUND ALL PIPING INSULATION. INSTALL ROOF CURBS FOR PIPING SUPPORT THAT IS INTEGRATED AND FLASHED INTO EXISTING ROOFING SYSTEM BY SAME CONTRACTOR THAT CARRIES CURRENT ROOFING WARRANTY.
- 9. REFER TO STRUCTURAL PLANS FOR ELEVATED STEEL BEAMS TO SUPPORT NEW CHILLER SYSTEM.
- 10. ALLOW FOR 48" CLEARANCE AROUND ENTIRE CHILLER FOR BOTH MAINTENANCE SERVICE AND PROVIDING ADEQUATE AIRFLOW THROUGH CONDENSER COILS. COORDINATE ANY AREAS WHERE FULL CLEARANCE CANNOT BE MAINTAINED WITH ENGINEER OF RECORD.
- 11. PROVIDE PIPING SUPPORTS FLASHED INTO ROOFING MEMBRANE (TYPICAL). ALL ROOFING WORK TO BE PERFORMED BY ORIGINAL ROOFING CONTRACTOR TO MAINTAIN ANY EXISTING WARRANTIES.
- 12. HVAC NOTE: RELOCATE PREVIOUSLY REMOVED PRV EXHAUST FAN TO THIS LOCATION. MECHANICAL CONTRACTOR TO VERIFY WORKING CONDITIONS ON FLOOR BELOW FOR ICRA CONTAINMENT AND OVERTIME SCHEDULING TO OFFSET DUCTWORK TO NEW LOCATION.
- 13. HVAC NOTE: EXISTING DUCT PENETRATION THROUGH ROOF TO REMAIN WITH RELOCATED UTILITY SET FAN APPROXIMATELY WHERE INDICATED OUTSIDE OF CHILLER SERVICE AREA. COORDINATE OUTAGE AND INSTALLATION OF NEW SUPPORT CURB FOR UTILITY SET FAN. REINSTALL 10" DUCT STACK AND SUPPORT WITH GUY WIRES.
- 14. PLUMBING NOTE: DEMOLISH EXISTING HOSE BIBB. PROTECT EXISTING PIPE FOR CONNECTION TO NEW.
- 15. PLUMBING NOTE: ROUTE 3/4" COLD WATER PIPE DOWN. PROVIDE WOODFORD MODEL 68 FREEZELESS WALL HYDRANT, INLET 'C' OPERATING ROD 55420, PROTECTED BY INTEGRAL COVER AND ASSE 1002 DOUBLE CHECK BACK FLOW PREVENTER. INSTALL WALL HYDRANT 18 TO 24 INCHES ABOVE FINISHED ROOF.

1 INTERSTITIAL PIPING PLAN - AREA A
1/8" = 1'-0"



Revision#	Description	Date:

CONSULTANTS

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ARCHITECT OF RECORD

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STAMP

Office of
Construction
and Facilities
Management

VA U.S. Department
of Veterans Affairs

Drawing Title
FIRST FLOOR HVAC PIPING PLAN - AREA A

Phase
CONSTRUCTION DOCUMENTS

Project Title
NEW FRONT LOBBY AND PRIMARY CARE ADDITION

Location
SIoux FALLS, SOUTH DAKOTA

Issue Date
06/22/2022

Checked
JRG

Drawn
TNH

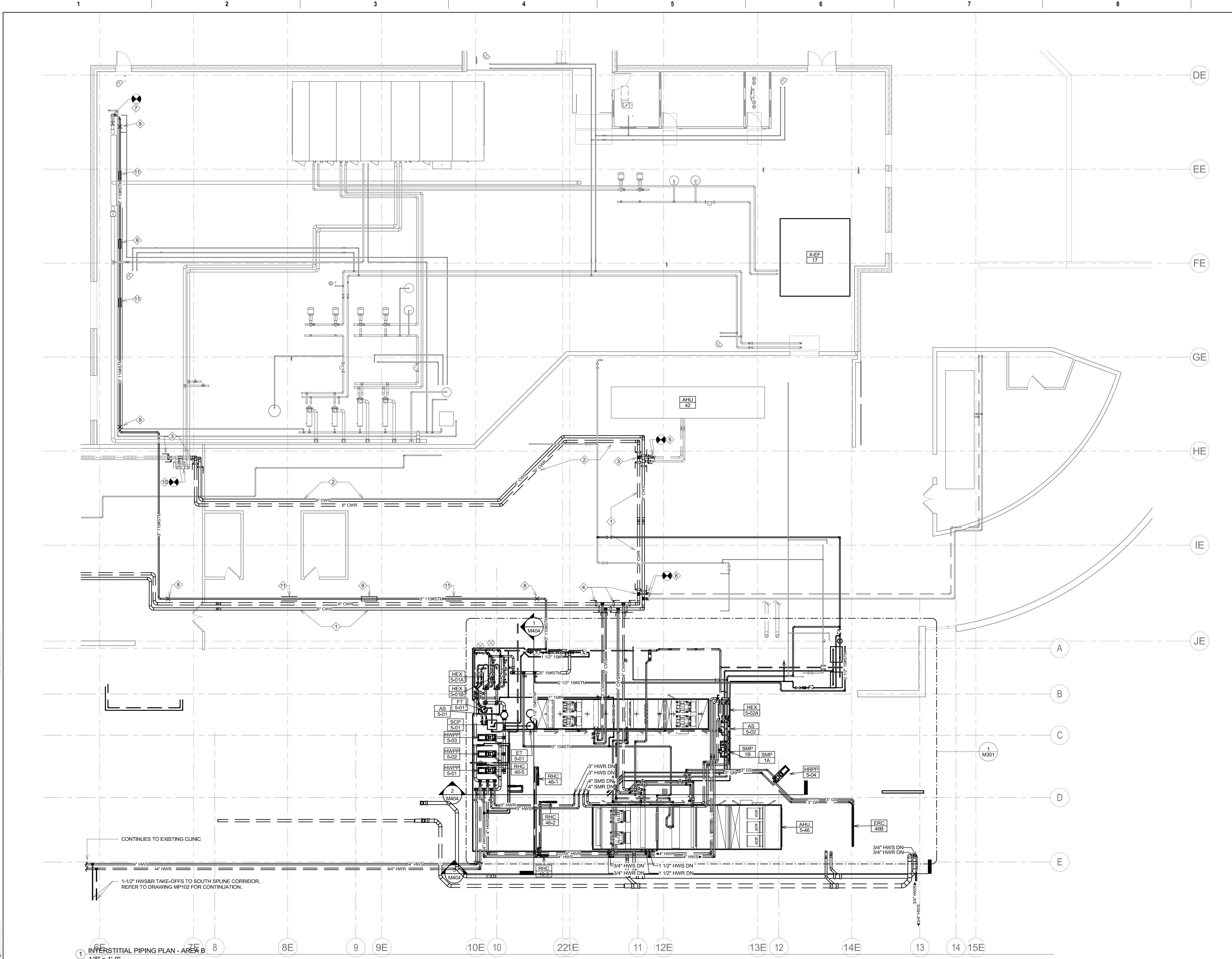
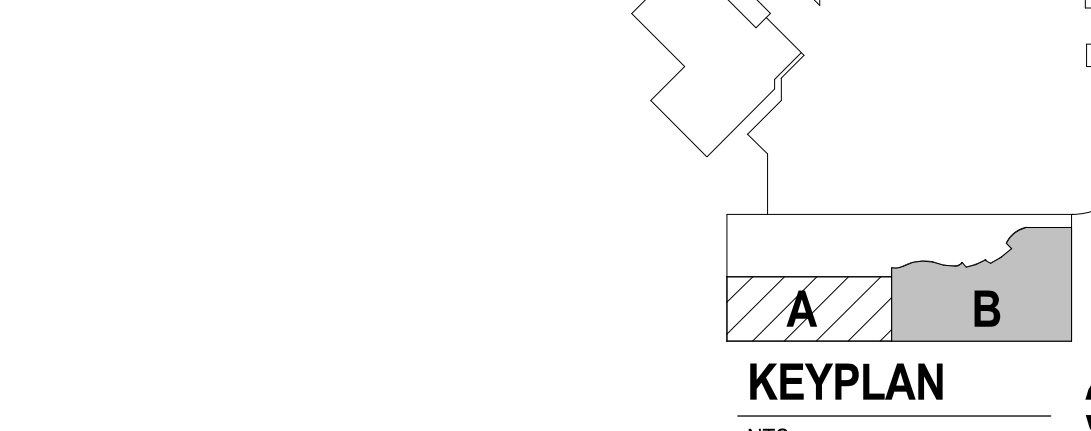
Drawing Number
MP111

GENERAL NOTES:

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- B. CONTRACTOR WILL BE RESPONSIBLE TO REVIEW ACCESSIBILITY TO AREAS OUTSIDE THE CONSTRUCTION LIMITS TO DETERMINE APPROXIMATE AMOUNT OF OVERTIME REQUIRED TO PERFORM ALL MECHANICAL WORK INDICATED. COORDINATION OF SCHEDULES WITH ADJACENT DEPARTMENTS AND CLEANING OF ALL DEBRIS AFTER EACH WORK SHIFT SHOULD BE ASSUMED IN THE BASE BID SCOPE.
- C. ANY MAJOR OUTAGES INDICATED ON THESE DRAWINGS SHALL BE SCHEDULED TO BE PERFORMED AFTER NORMAL BUSINESS HOURS OR DURING WEEKEND PERIODS TO MINIMIZE HOSPITAL DISRUPTION. VA HOSPITAL FACILITIES WILL REQUIRE A MINIMUM OF TWO (2) WEEKS NOTICE PRIOR TO ANY SUCH OUTAGE.
- D. COORDINATE ALL NEW PIPE ROUTING WITH ALL OTHER TRADES TO ENSURE ADEQUATE CLEARANCES FOR ELECTRICAL CONDUIT, HVAC DUCTWORK & PIPING, STRUCTURAL SUPPORTS, ETC. ANY UNAVOIDABLE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OF RECORD. PROVIDE ALL OFFSETS & TRANSITIONS AS REQUIRED FOR A CLEAN INSTALLATION.
- E. THE EXACT LOCATION OF EQUIPMENT ROUGHINS SHALL BE VERIFIED WITH THE STAMPED APPROVED SHOP DRAWINGS PRIOR TO ANY FIELD INSTALLATION. NOTIFY ENGINEER OF ANY SIGNIFICANT VARIANCES.
- F. SUPPORT ALL PIPING DIRECTLY TO STRUCTURE. DO NOT SUPPORT ANY PIPING FROM DUCTWORK, CONDUIT OR OTHER PIPING ENCOUNTERED.
- G. WHERE MECHANICAL SYSTEMS TO REMAIN ARE DAMAGED OR DISTURBED DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE TO REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL QUALITY AND FUNCTIONALITY.
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- J. THE SMALLEST ALLOWABLE PIPE SIZE FOR HEATING WATER SUPPLY AND RETURN WILL BE 3/4" DIAMETER. UNLESS NOTED OTHERWISE, HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS TO INDIVIDUAL REHEAT COILS SHALL BE A MINIMUM OF 3/4" DIAMETER.
- K. PROVIDE 1/2" DRAIN VALVE AT NEW HEATING WATER SUPPLY AND RETURN PIPE LOWPOINTS, DOWNSTREAM OF ISOLATION VALVES. LARGER EQUIPMENT SUCH AS AHU COILS AND HEAT EXCHANGERS SHALL BE PROVIDED WITH LARGER 2" DRAINS TO EXPEDITE PROCESS.
- L. ALL STEAM PIPING TAKE-OFFS TO INDIVIDUAL PIECES OF EQUIPMENT SHALL BE OFF THE TOP OF STEAM MAINS. HEATING WATER SUPPLY AND RETURN PIPING TAKE-OFFS SHALL ALSO BE OFF THE TOP OR SIDE OF PIPING WHEREVER POSSIBLE.
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- N. ALL CONTRACTORS TO REFERENCE THE INFECTION CONTROL NOTES IDENTIFIED WITHIN THE VENTILATION GENERAL NOTES ON THESE DRAWINGS TO CONFORM TO ALL ICRA REQUIREMENTS.
- O. CONTRACTOR SHALL MAINTAIN ACCURATE RECORD DRAWINGS SHOWING ALL DISCREPANCIES WITH ANY EXISTING PIPING INDICATED OR REVISIONS TO THE HVAC PIPING LAYOUTS. ALL CHANGES WILL BE UPDATED WITHIN THE FINAL RECORD DRAWING SET.

KEY NOTES:

- ① REPLACE PREVIOUSLY REMOVED SECTION OF CHILLED WATER SUPPLY AND RETURN PIPING WITH LARGER 6" PIPES INDICATED TO COMPLETE THE CHILLED WATER LOOP SHOWN. COORDINATE NEW PIPING HANGERS, OR MODIFICATIONS TO EXISTING, TO ROUTE IN THE APPROXIMATE SAME AREA AS DEMOLISHED PIPING.
- ② SECTION OF 6" CHILLED WATER PIPING INSTALLED TO CLOSE THE PIPING LOOP AND ALLOW BIDIRECTIONAL FLOW. COORDINATE EXISTING OBSTACLES AND MODIFY TO RELOCATE, OR TRANSFER NEW PIPING, AS REQUIRED FOR ROUTING THROUGH THIS AREA.
- ③ AT ALL CHILLED WATER TAKE-OFFS INDICATED TO AHU COOLING COILS AND/OR EQUIPMENT PROVIDE FULL SIZED 6" ISOLATION VALVES ON BOTH SIDES OF TAKE-OFF (OMIT UNDER ACCEPTANCE OF DUCT/ALTERNATE #10), AND A THIRD ISOLATION VALVE ON BRANCH PIPING TAKE-OFF TO MATCH SIZE OF PIPE. ALL ISOLATION VALVES SHALL BE DOUBLE OFFSET HIGH PERFORMANCE BUTTERFLY VALVES AND LOW POINT DRAINS FOR ALL SECTIONS OF PIPING BETWEEN. INCLUDE ALL REQUIRED VALVE TAGGING AND CHECK VALVE SEALS DURING INSTALLATION.
- ④ SAME AS KEY NOTE #3 ABOVE EXCEPT THAT SECTIONS OF PIPING BETWEEN TAKE-OFFS IS TOO SHORT TO NECESSITATE TWO FULL SIZED 6" VALVE BETWEEN TAKE-OFFS. A SINGLE VALVE BETWEEN TAKE-OFF IN THIS AREA WILL BE SUFFICIENT. (SIMILARLY TO KEY NOTE #3, THESE FULL SIZED 6" VALVES BETWEEN TAKE-OFFS MAY BE DELETED UNDER ACCEPTANCE OF DUCT/ALTERNATE #6.)
- ⑤ RECONNECT 4" PIPING TO PREVIOUS POINTS OF DISCONNECT.
- ⑥ RECONNECT TO 2.5" PIPING AT PREVIOUS POINTS OF DISCONNECT.
- ⑦ CONNECT 3" HIGH PRESSURE STEAM PIPING INTO EXISTING 4" PIPING PRIOR TO EXISTING STEAM REDUCING STATION FOR LAB. NOTE THAT THERE IS AN EXISTING ISOLATION VALVE IN ADJACENT INTERSTITIAL SPACE. REFER TO DRAWING MP11 FOR LOCATION. TO MINIMIZE OUTAGE TO THIS STEAM REDUCING STATION ONLY, BUT WILL STILL NEED TO BE PERFORMED ON NIGHTS/WEEKENDS TO REDUCE IMPACT TO LAB AND OTHER AREAS SERVED. INSTALL A NEW 3" TRIPLE OFFSET HIGH PERFORMANCE BUTTERFLY VALVE, OR PISTON VALVE, WITH 1" BYPASS VALVE TO EQUALIZE PRESSURE AT POINT OF CONNECTION.
- ⑧ INSTALL STEAM PIPING ANCHOR AT APPROXIMATE LOCATION INDICATED. SECURE ANCHOR TO STRUCTURAL STEEL BEAMS AND REPAIR FIREPROOFING ON COMPLETION. REFER TO DRAWING DETAIL.
- ⑨ PROVIDE A FULL PIPE SIZE SLIP TYPE EXPANSION JOINT AT APPROXIMATE LOCATION INDICATED. ADVANCE THERMAL SYSTEMS MODEL TP2W-224-350-BR2-A OR EQUAL. ALLOW/SCHEDULE TIME FOR FULL INSPECTION OF WELDING ON COMPLETION OF INSTALLATION. INCLUDE APPROPRIATELY SPACED PIPE GUIDE ON EITHER SIDE OF EXPANSION JOINT PER MANUFACTURER RECOMMENDATIONS.
- ⑩ REPLACE EXISTING TEE FITTING TO EXTEND FULL SIZED 6" CHILLED WATER SUPPLY AND RETURN PIPING AS INDICATED TO FORM A CONTINUOUS FULL SIZED PIPE LOOP.
- ⑪ PROVIDE STEAM LINE EXPANSION GUIDES.



Revision#	Description	Date:

CONSULTANTS

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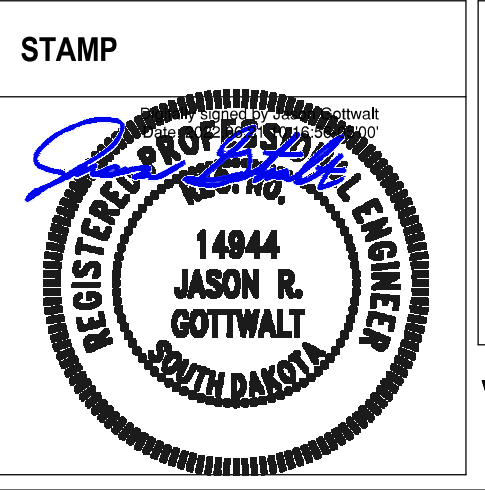
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STONE GROUP ARCHITECTS



Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title
FIRST FLOOR HVAC PIPING PLAN - AREA B

Approved: _____

Phase
CONSTRUCTION DOCUMENTS

Project Title
NEW FRONT LOBBY AND PRIMARY CARE ADDITION

Location
SIoux FALLS, SOUTH DAKOTA

Issue Date
 06/22/2022

Checked
 JRG

Drawn
 TNH

Project Number
 VA #438-480
 SGA #201909

Building Number
 5

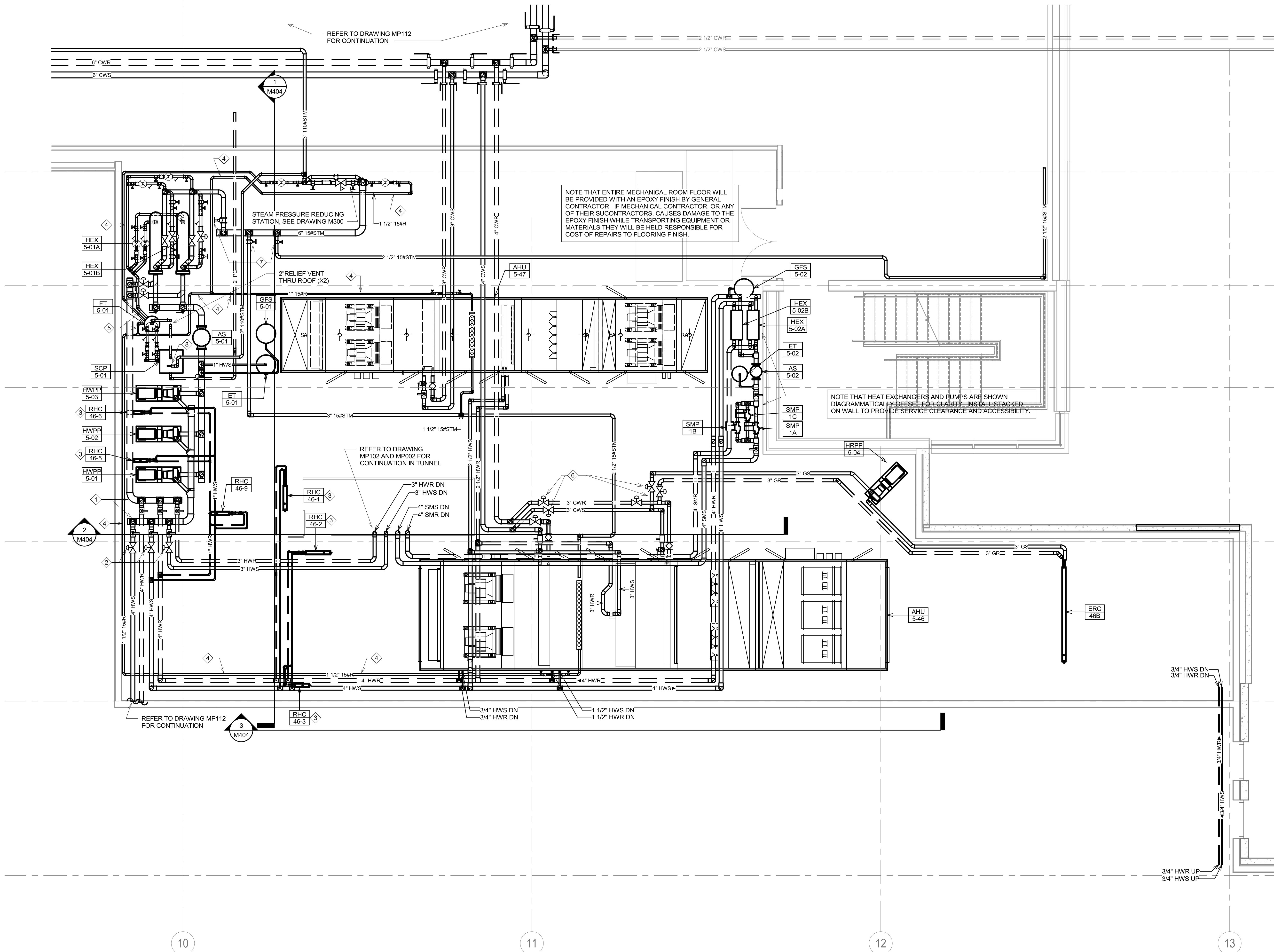
Drawing Number
MP112

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KEY NOTES:

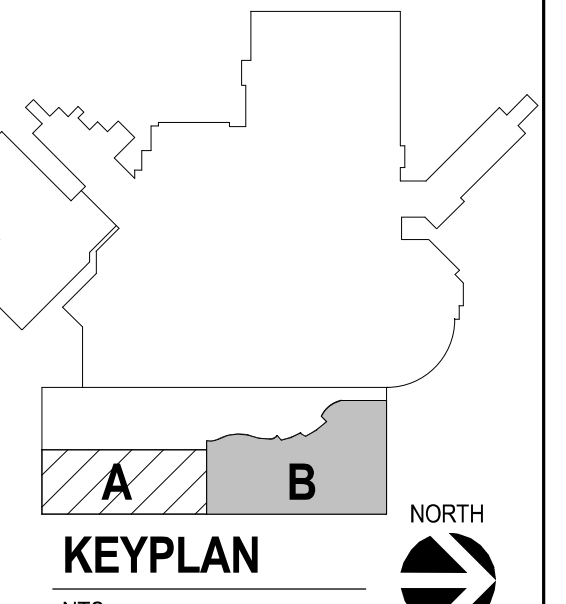
- 1. PRIMARY 6" SUPPLY/RETURN PIPING HEADERS FOR CONNECTION OF 3 PIPING LOOPS AS FOLLOWS: FIRST TO PRIMARY CARE CLINIC THROUGH TUNNEL. SECOND TO ALL REHEAT COILS SERVING LOBBY AREA, AND THIRD TO FUTURE PACT REMODELS. INCLUDE MAIN VENT AND DRAIN ON EACH LOOP DOWNSTREAM OF ISOLATION VALVES INDICATED.
- 2. INSTALL CONTROL VALVES ON SUPPLY SIDE OF 3 PIPING LOOP ZONES INDICATED. CONTROL CONTRACTOR TO AUTOMATICALLY CONTROL DIFFERENTIAL PRESSURE ON EACH LOOP. REFER TO SEQUENCE OF OPERATION.
- 3. REHEAT COILS BEING INSTALLED INTO CONGESTED AREA OF MECHANICAL ROOM. REFER TO 3D ISOMETRIC ON DRAWING M403 FOR RECOMMENDED PIPE ROUTING. VERIFY MAINTENANCE ACCESSIBILITY TO ALL REQUIRED PIPING COMPONENTS AND CONTROLS/SENSORS. IN ADDITION, PROVIDE ADEQUATE ACCESS TO REMOVABLE PANELS ON EITHER SIDE OF COIL USED FOR CLEANING PURPOSES.
- 4. ROUTE LOW PRESSURE STEAM CONDENSATE PIPING CLOSE TO FLOOR LEVEL WITH A SLIGHT CONTINUOUS PITCH BACK TO FLASH TANK (OFFSET PIPING UP TO FLASH TANK CONNECTION ELEVATION RIGHT AT UNIT. SEE DRAWING M403). REFER TO DRAWING MH113 FOR SERVICE WALKWAY PATHS AND PROVIDE STEEL RAMPS PAINTED A VISIBLE YELLOW TO ALLOW CARTS/EQUIPMENT TO TRAVEL OVER THIS CONDENSATE PIPING WHEREVER IT CROSSES THAT MAINTENANCE PATH.
- 5. OFFSET PIPING UP TO FLASH TANK CONNECTION. PROVIDE LOW POINT DRAIN AT EACH CONDENSATE LINE ROUTED TO NEARBY FLOOR DRAIN FOR MAINTENANCE OR EMERGENCY EQUIPMENT FAILURE PURPOSES.
- 6. PROVIDE FULL PORT BALL VALVES WITH MOTORIZED ACTUATORS TIED INTO BUILDING AUTOMATION. REFER TO SEQUENCE OF OPERATION FOR SWITCHING SERVICE TO COIL AHURC-46A BETWEEN CHILLED WATER AND HEAT RECOVERY LOOP.
- 7. PROVIDE ISOLATION VALVES ON ALL STEAM PIPING TAKE-OFFS FROM MAIN HEADER (TYPICAL). REFER TO SPECIFICATION TABLE ON DRAWING M300 TO DETERMINE TYPE OF VALVE REQUIRED (GATE, PISTON, OR TRIPLE OFFSET BUTTERFLY) AND POTENTIAL NEED FOR BYPASS.
- 8. PROVIDE ENLARGED 2" HIGH PRESSURE STEAM FOR MOTIVE DRIVEN CONDENSATE PUMP. REDUCE CONNECTION DOWN TO 3/4" CLOSE FINAL TO POINT OF CONNECTION (REFERENCE MANUFACTURER INSTALLATION DETAIL FOR EXACT CONNECTION SIZE).



NOTE THAT ENTIRE MECHANICAL ROOM FLOOR WILL BE PROVIDED WITH AN EPOXY FINISH BY GENERAL CONTRACTOR. IF MECHANICAL CONTRACTOR, OR ANY OF THEIR SUBCONTRACTORS, CAUSES DAMAGE TO THE EPOXY FINISH WHILE TRANSPORTING EQUIPMENT OR MATERIALS THEY WILL BE HELD RESPONSIBLE FOR COST OF REPAIRS TO FLOORING FINISH.

NOTE THAT HEAT EXCHANGERS AND PUMPS ARE SHOWN DIAGMATTICALLY DESET FOR CLARITY. INSTALL STACKED ON WALL TO PROVIDE SERVICE CLEARANCE AND ACCESSIBILITY.

1 ENLARGED INTERSTITIAL MECHANICAL ROOM - HVAC PIPING PLANS
1/4" = 1'-0"



CONSULTANTS ARCHITECTURAL: B W B STRUCTURAL: ERA MEP: DUNHAM CIVIL: EVS LANDSCAPE: CONFLUENCE		ARCHITECT OF RECORD A/E: Stone Group Architects 600 E 7th Street Sioux Falls, SD 57103 605-271-1144		STAMP REGISTERED PROFESSIONAL ENGINEER 14844 JASON R. GOTTWALT SOUTH DAKOTA		Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs		Drawing Title: FIRST FLOOR MECHANICAL ROOM HVAC PIPING PLAN Approved:		Phase: CONSTRUCTION DOCUMENTS		Project Title: NEW FRONT LOBBY AND PRIMARY CARE ADDITION Location: SIOUX FALLS, SOUTH DAKOTA		Project Number: VA #438-480 SGA #201909 Building Number: 5 Drawing Number: MP113	
Revision# Description Date:		ARCHITECT OF RECORD A/E: Stone Group Architects 600 E 7th Street Sioux Falls, SD 57103 605-271-1144		STAMP REGISTERED PROFESSIONAL ENGINEER 14844 JASON R. GOTTWALT SOUTH DAKOTA		Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs		Drawing Title: FIRST FLOOR MECHANICAL ROOM HVAC PIPING PLAN Approved:		Phase: CONSTRUCTION DOCUMENTS		Project Title: NEW FRONT LOBBY AND PRIMARY CARE ADDITION Location: SIOUX FALLS, SOUTH DAKOTA		Project Number: VA #438-480 SGA #201909 Building Number: 5 Drawing Number: MP113	

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