FITZSIMONS BUILDING HEATING IMPROVEMENT WEST WING

PROJECT 21-174018

FOR CONSTRUCTION DOCUMENT SET

SEPTEMBER 1, 2023

MECHANICAL AND ELECTRICAL ENGINEER

RMH GROUP

Mechanical and Electrical Engineering
Energy Consulting Sustainable Design
EXISTING CONDITIONS.

EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION.
1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.

2. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

3. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.

4. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.

2. (2) STEAM PIPING RISERS TO UPPER FLOORS SHALL BE ADD ALTERNATE.

3. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.

4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

5. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.

6. STEAM PIPING TO WINDOW CONVECTOR RISERS TO REMAIN. REMOVE STEAM PIPING IN BASEMENT TO STAIRWELL 06 AND 07. REFER TO MD3.GO FOR REFERENCE.

7. INVENTORY ALL EXISTING CONTROLLERS TO BE REMOVED AND PROVIDE LIST TO OWNER AND ENGINEER TO DETERMINE IF ANY CONTROLLERS SHALL BE SALVAGED BY THE OWNER.

8. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.

9. REMOVABLE SLAB COVER TO BASEMENT.
Sheet Notes:
1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. 3/4" PIPING DEMOLITION PLAN ADD. ALT.
3. SCALE: 1/4" = 1'-0"

Key Notes:
1. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

Ground Floor Enlarged West Stairwell 06 Piping Demolition Plan - Add. Alt.

Ground Floor Enlarged Southwest Stairwell 07 Piping Demolition Plan - Add. Alt.
FIRST FLOOR ENLARGED WEST MECHANICAL ROOM PIPING DEMOLITION PLAN

**SHEET NOTES**

1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.
3. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.
4. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.
5. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.
6. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.

**EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.**

0. REMOVE EXISTING STEAM HEAT EXCHANGER, PUMPS, EXPANSION TANK, AIR SEPARATOR, AND ASSOCIATED PIPING AS SHOWN. REMOVE COLD WATER FEED WATER BACK TO MAIN AND CAP. REMOVE CONTROLS AND ASSOCIATED WIRING BACK TO CONTROL PANEL.
1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.

2. PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.

3. STEAM PIPING RISERS REMOVAL SHALL BE ADD ALTERNATE.

4. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.

5. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.

6. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

7. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.

8. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.

9. The drawing shows a piping demolition plan for the second floor enlarged west mechanical room. The plan includes existing and new construction details, and it is important to coordinate with the owner and ensure compliance with all applicable standards.

10. The drawing is a part of the heating upgrade master plan for the Fitzsimons Building, University of Colorado, which focuses on sustainability, energy efficiency, and green design principles.
THIRD FLOOR ENLARGED WEST MECHANICAL ROOM AREA PIPING DEMOLITION PLAN - ADD. ALT.

THIRD FLOOR ENLARGED WEST RESTROOM W3154 PIPING DEMOLITION PLAN - ADD. ALT.

THIRD FLOOR ENLARGED SOUTHWEST STAIRWELL 07 PIPING DEMOLITION PLAN - ADD. ALT.

THIRD FLOOR ENLARGED MECHANICAL ROOM AREA PIPING DEMOLITION PLAN - ADD. ALT.

Sheet Notes:
1. THIRD FLOOR ENLARGED WEST MECHANICAL ROOM AREA PIPING DEMOLITION PLAN - ADD. ALT.
   - LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
   - PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.
   - STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.
   - DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.
   - CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.
   - REMOVE EXISTING AHU HEATING WATER 3-WAY CONTROL VALVE AND HEATING WATER COIL PIPING.
   - REMOVE STEAM CONVECTOR HEATING ELEMENT. CABINET TO REMAIN.
   - DISCONNECT STAIRWELL STEAM CONVECTOR AND ABANDON IN PLACE.
   - REMOVE EXISTING STEAM HEAT EXCHANGER, PUMPS, EXPANSION TANK, AND AIR SEPARATOR MOUNTED ON SKID.
   - REMOVE ASSOCIATED STEAM PIPING.
   - REMOVE ASSOCIATED HEATING WATER SUPPLY PIPING UP TO JUST AFTER PUMP DISCHARGE CONNECTION.
   - REMOVE ASSOCIATED HEATING WATER RETURN PIPING DOWNSTREAM OF HEAT EXCHANGER RETURN CONNECTION.
   - REMOVE COLD WATER FEED PIPING BACK TO MAIN AND CAP.
   - REMOVE CONTROLS AND ASSOCIATED WIRING BACK TO CONTROL PANEL.
   - REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
   - EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS.
   - THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
   - REMOVE STEAM CONVECTOR HEATING ELEMENT. CABINET TO REMAIN.
   - REMOVE ASSOCIATED STEAM AND CONDENSATE PIPING AND FITTINGS BACK TO MAINS. CAP AT MAINS.
   - DISCONNECT STAIRWELL STEAM CONVECTOR AND ABANDON IN PLACE. REMOVE ITS ASSOCIATED PIPING AND FITTINGS BACK TO MAINS AND CAP.

2. THIRD FLOOR ENLARGED WEST RESTROOM W3111 PIPING DEMOLITION PLAN - ADD. ALT.
   - REMOVE EXISTING STEAM HEAT EXCHANGER, PUMPS, EXPANSION TANK, AND AIR SEPARATOR MOUNTED ON SKID.
   - REMOVE ASSOCIATED STEAM PIPING.
   - REMOVE ASSOCIATED HEATING WATER SUPPLY PIPING UP TO JUST AFTER PUMP DISCHARGE CONNECTION.
   - REMOVE ASSOCIATED HEATING WATER RETURN PIPING DOWNSTREAM OF HEAT EXCHANGER RETURN CONNECTION.
   - REMOVE COLD WATER FEED PIPING BACK TO MAIN AND CAP.
   - REMOVE CONTROLS AND ASSOCIATED WIRING BACK TO CONTROL PANEL.

3. THIRD FLOOR ENLARGED WEST RESTROOM W3111 PIPING DEMOLITION PLAN - ADD. ALT.
   - REMOVE EXISTING STEAM HEAT EXCHANGER, PUMPS, EXPANSION TANK, AND AIR SEPARATOR MOUNTED ON SKID.
   - REMOVE ASSOCIATED STEAM PIPING.
   - REMOVE ASSOCIATED HEATING WATER SUPPLY PIPING UP TO JUST AFTER PUMP DISCHARGE CONNECTION.
1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.

2. PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.

3. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.

4. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.

5. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

6. SALVAGE PUMP VFD AND RETURN TO OWNER. REMOVE ASSOCIATED DIFFERENTIAL PRESSURE SENSOR.

7. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.

EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.

FOURTH FLOOR ENLARGED WEST MECHANICAL ROOM AREA PIPING DEMOLITION PLAN - ADD ALT.
1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.

2. STEAM PIPING LIKELY NEEDS ABATEMENT ON ITS INSULATION. COORDINATE WITH OWNER.

3. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE IN STAIRWELL.

4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

5. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.

6. INVENTORY ALL EXISTING CONTROLLERS TO BE REMOVED AND PROVIDE LIST TO OWNER AND ENGINEER TO DETERMINE IF ANY CONTROLLERS SHALL BE SALVAGED BY THE OWNER.

7. DISCONNECT STAIRWELL STEAM CONVECTOR AND ABANDON IN PLACE. REMOVE ITS ASSOCIATED PIPING BACK TO MAINS AND CAP.

8. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.

9. REMOVE EXISTING STEAM HEAT EXCHANGER, PUMP, EXPANSION TANK, AND AIR SEPARATOR MOUNTED ON SKID. REMOVE ASSOCIATED STEAM PIPING. REMOVE ASSOCIATED HEATING WATER PIPING BETWEEN PUMP DISCHARGE CONNECTION AND HEAT EXCHANGER RETURN CONNECTION. REMOVE COLD WATER FEED WATER BACK TO MAIN AND CAP. REMOVE CONTROLS AND ASSOCIATED WIRING BACK TO CONTROL PANEL.

10. PATCH AND REPAIR HOLES IN CONCRETE FLOOR NOT USED BY NEW WORK.

11. SALVAGE PUMP VFD AND RETURN TO OWNER. REMOVE ASSOCIATED DIFFERENTIAL PRESSURE SENSOR.
1. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

KEY NOTES
1. REMOVE EXISTING STEAM HEAT EXCHANGERS.
2. 2" HWS/R 35 GPM S•H (2)
3. REMOVE STEAM PIPING SERVING HEAT EXCHANGER BACK TO EXISTING MAIN.
4. REMOVE STEAM PIPING SERVING STAIRWELL CONVECTORS BACK TO EXISTING MAIN.
5. 2" 8 3" HWS/R 85 GPM S
6. 3" 7 5 o T
7. r 3" HWS/R 75 GPM
8. 2" 8 3" HWS/R 75 GPM
9. 3" HWS/R 85 GPM
10. ADD ALT. 1 2 2/4" HWS/R
11. 4" HWS/R » 85 GPM
12. 2000200202/ 2 HX-Q20-01-001
13. 4" HWS/R HX-Q20-01-002
14. 4"-4" HWS/R — IZH — IZH S 3" HWS/R (FUTURE) — IZH
15. 4" HWS/R 2" HWS/R
16. WINDOW CONVECTOR RISERS 4" HWS/R 170 GPM
17. STEAM FROM PRV
18. NORTH/CENTRAL RISER
19. WEST RISER
20. EAST RISER
21. BASEMENT

EXISTING INFORMATION IS TAKEN FROM SITE INVESTIGATION AND EXISTING DRAWINGS. CONTRACTOR SHALL VERIFY ACCURACY PRIOR TO COMMENCING WORK.

ALL RISERS AND HEAT EXCHANGERS SHALL REMAIN IN SERVICE AT THIS TIME UNTIL NEW RISERS AND HEAT EXCHANGERS ARE INSTALLED TO SERVE THE AREA.

SHEET NOTES
1. REMOVE EXISTING STEAM HEAT EXCHANGERS.
2. REMOVE STEAM PIPING SERVING HEAT EXCHANGER BACK TO EXISTING MAIN.
3. REMOVE STEAM PIPING SERVING STAIRWELL CONVECTORS BACK TO EXISTING MAIN.

EXISTING HEATING WATER RISER DIAGRAM AND DEMOLITION
TENTH FLOOR OVERALL PIPING PLAN - ASB ALT.

**Sheet Notes**
1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.
2. PROVIDE HW RECESSED CABINET UNIT HEATER WITH INTEGRAL THERMOSTAT.
3. ROUTE HEATING WATER PIPING BACK TO HYDRONIC MAINS LOCATED ON THIS FLOOR.
4. STACK HEATING WATER SUPPLY AND RETURN PIPING MOUNTED TO WALL. PROVIDE SOFFIT AROUND PIPING, REFER TO DETAIL.
5. FIELD VERIFY INNER CONVECTOR CABINET DIMENSIONS AFTER DEMOLITION AND BEFORE ORDERING NEW FIN TUBE. COORDINATE DISCREPANCIES WITH ENGINEER.
6. NEW HWS/R PIPING SERVING STAIRWELLS IS SHOWN AT INTENDED INSTALLATION LOCATIONS.
7. REPORT FINDINGS AND DISCREPANCIES TO ENGINEER.
8. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
9. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE.
10. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.
11. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
12. FIELD VERIFY INNER CONVECTOR CABINET DIMENSIONS AFTER DEMOLITION AND BEFORE ORDERING NEW FIN TUBE. COORDINATE DISCREPANCIES WITH ENGINEER.

**Key Notes**

1. SHEET NOTES

2. KEY NOTES

3. EIGHTH FLOOR OVERALL PIPING PLAN
4. ROOF TOP
5. KEY NOTES
6. SHEET NOTES
7. TENTH FLOOR OVERALL PIPING PLAN - ASB ALT.
8. SHEET NOTES
9. KEY NOTES
1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION. (1) PROVIDE 1-1/2" HWS/R VALVED AND CAPPED STUBOUTS. CONNECTED IN ADD. ALT.

2. PROVIDE STEAM TRAP FOR RISE. ROUTE TO MEDIUM PRESSURE RETURN PIPING MAIN.

4. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

ROUTE HEATING WATER PIPING TO NEAREST FLOOR DRAIN IN MECHANICAL ROOM CB003. REFER TO SHEET M3.B.

REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.

EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.

6" HWS/R

HEATING WATER PIPING INTENDED FOR PIPE RISERS DRAIN DURING MAINTENANCE. SHUTOFF VALVES NORMALLY CLOSED.
1. Provide HW recessed cabinet unit heater with integral thermostat.
2. Provide new steam heat exchanger system. Refer to steam heat exchanger piping and control diagram.
3. Provide unit heater in similar location to removed steam unit heater mounted up high. Connect heating water supply and return piping to main distribution piping.
4. Do not damage or modify existing floor and wall tile.
5. Light line weight indicates existing. Heavy line weight indicates new construction.
6. X-ray all new floor penetrations.
7. Modify fire sprinkler system as required to accommodate new work.
9. Provide allowance for 100 soft of drywall and repairs.
10. Provide new temperature control panel. Coordinate with owner for providing new data drop connection.
11. Provide pot feeder. Refer to steam heat exchanger piping and control diagram.
12. Provide new steam manifold. Connect existing heating water floor mains to new heating manifold.
13. Provide unit heater in similar location to removed steam unit heater mounted up high. Connect heating water supply and return piping to main distribution piping.
14. Do not close system after filling expansion tank. Do not close system after filling expansion tank.
15. Provide new expansion tank. Do not close system after filling expansion tank.
16. Steam piping risers to remain existing as add alternate.

Key Notes:

1. Plan details are subject to design, construction, and engineering requirements.
2. All work to be performed in strict accordance with the plans and specifications.
3. All work to be coordinated with other trades.
4. All work to be completed in a timely manner and in accordance with the schedule.
5. All work to be performed in a safe manner and in compliance with safety regulations.
6. All work to be performed in accordance with applicable building codes and regulations.
7. All work to be completed to the satisfaction of the owner and the architect.
8. All work to be performed in accordance with the approved change orders.
9. All work to be performed in accordance with the approved specifications.
10. All work to be performed in accordance with the approved construction documents.
11. All work to be performed in accordance with the approved budget.
12. All work to be performed in accordance with the approved schedule.
13. All work to be performed in accordance with the approved quality control program.
14. All work to be performed in accordance with the approved safety program.
15. All work to be performed in accordance with the approved environmental program.
16. All work to be performed in accordance with the approved record retention program.
17. All work to be performed in accordance with the approved maintenance program.

Ground Floor Enlarged West Stairwell 06 Piping Plan Add. Alt.

Ground Floor Enlarged Southwest Stairwell 07 Piping Plan Add. Alt.

Sheet Notes:

1. Plan details are subject to design, construction, and engineering requirements.
2. All work to be performed in strict accordance with the plans and specifications.
3. All work to be coordinated with other trades.
4. All work to be completed in a timely manner and in accordance with the schedule.
5. All work to be performed in a safe manner and in compliance with safety regulations.
6. All work to be performed in accordance with applicable building codes and regulations.
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11. All work to be performed in accordance with the approved budget.
12. All work to be performed in accordance with the approved schedule.
13. All work to be performed in accordance with the approved quality control program.
14. All work to be performed in accordance with the approved safety program.
15. All work to be performed in accordance with the approved environmental program.
16. All work to be performed in accordance with the approved record retention program.
17. All work to be performed in accordance with the approved maintenance program.
1. Light line weight indicates existing. Heavy line weight indicates new construction.
2. (3) Provide allowance for 50 SQFT of drywall and repairs.
3. Modify fire sprinkler system as required to accommodate new work.
4. Do not damage or modify existing floor and wall tile.
5. X-ray all new floor penetrations.
6. Contractor to provide bid with add alternate scope separated from base bid costs.

Paint mechanical room floor with two part water based paint. Coordinate color with owner.

New heating water piping mains has been coordinated and provided with concurrent project under construction. Connect existing AHU heating water piping to new piping mains.

First floor enlarged west mechanical room area piping plan

Scale: 1/4"=1'-0"
1. Light line weight indicates existing. Heavy line weight indicates new construction.

2. Provide allowance for 50 SOF of drywall and repairs.

3. Steam piping risers to remain existing as alternate.

4. Modify fire sprinkler system as required to accommodate new work.

5. Provide modulating bypass valve sized. Refer to control diagram.

6. Do not damage or modify existing floor and wall tile.

7. X-ray all new floor penetrations.

8. Contractor to provide bid with alternate scope separated from base bid costs.

9. Provide differential pressure sensor for new heating water pump control approximately 2/3 distance to most remote device as alternate.

10. Connect new heating water floor piping mains to existing heating water mains to serve entire floor.


12. Repair all surfaces and finishes damaged due to demolition or construction to match existing conditions.

13. Field verify inner convector cabinet dimensions after demolition and before ordering new fin tube. Coordinate discrepancies with engineer.

14. Equipment and piping shown on this drawing are based on record information provided in part by others. The contractor is responsible for field verification of existing condition prior to starting work and shall notify the architect/engineer of any discrepancies for resolution.
THIRD FLOOR ENLARGED WEST MECHANICAL ROOM AREA PIPING PLAN – ADD ALT.

SHEET NOTES

1. USE ARC LINE WEIGHT TO INDICATE EXISTING. LINE WEIGHT TO INDICATE NEW CONSTRUCTION.
2. NEW CONVECTOR – ADD ALT. REFER TO SCHEDULE AND DETAIL.
3. MODIFY FIRE SPRINKLER SYSTEM AS REQUIRED TO ACCOMMODATE NEW WORK.
4. PROVIDE ALLOWANCE FOR 50 SQFT OF DRYWALL AND REPAIRS.
5. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE.
6. X-RAY ALL NEW FLOOR PENETRATIONS.
7. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.
8. INSTALL EXISTING HAND RAIL AND TOILET PAPER DISPENSER TO FACE OF CONVECTOR SIMILAR TO EXISTING. REFER TO DEMO WORK.
9. PAINT MECHANICAL ROOM FLOOR WITH IWO PART WATER BASED PAINT. COORDINATE COLOR WITH OWNER.
10. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.
11. FIELD VERIFY INNER CONVECTOR CABINET DIMENSIONS AFTER DEMOLITION AND BEFORE ORDERING NEW FIN TUBE. COORDINATE DISCREPANCIES WITH ENGINEER.
12. EQUIPMENT AND PIPING SHOWN ON THIS DRAWING ARE BASED ON RECORD INFORMATION PROVIDED IN PART BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITION PRIOR TO STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
13. RECONFIGURE AHU HEATING WATER COIL PIPING AND COIL PUMP TO PROVIDE 2-WAY CONTROL VALVE. REFER TO DETAIL ON SHEET M4.1. EXISTING COIL PUMP TO BE REUSED.
14. CONNECT NEW HEATING WATER FLOOR PIPING MAINS TO EXISTING HEATING WATER MAINS TO SERVE ENTIRE FLOOR.
1. Light line weight indicates existing. Heavy line weight indicates new construction.

2. Provide allowance for 50 soft of drywall and repairs.

3. Modify fire sprinkler system as required to accommodate new work.

4. Do not damage or modify existing floor and wall tile.

5. X-ray all new floor penetrations.

6. Contractor to provide bid with add alternate scope separated from base bid costs.

7. Field verify inner convector cabinet dimensions after demolition and before ordering new fin tube. Coordinate discrepancies with engineer.

8. Connect new heating water floor piping mains to existing heating water mains to serve entire floor.

9. Equipment and piping shown on this drawing are based on record information provided in part by others. The contractor is responsible for field verification of existing condition prior to starting work and shall notify the architect/engineer of any discrepancies for resolution.

10. Provide differential pressure sensor for new heating water pump control approximately 2/3 distance to most remote device.

11. Paint mechanical room floor with two part water based paint. Coordinate color with owner.

12. Contracted for heating and cooling.
1. LIGHT LINE WEIGHT INDICATES EXISTING. HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION.

2. MODIFY FIRE SPRINKLER SYSTEM AS REQUIRED TO ACCOMMODATE NEW WORK.

3. DO NOT DAMAGE OR MODIFY EXISTING FLOOR AND WALL TILE.

4. X-RAY ALL NEW FLOOR PENETRATIONS.

5. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

6. REPAIR ALL SURFACES AND FINISHES DAMAGED DUE TO DEMOLITION OR CONSTRUCTION TO MATCH EXISTING CONDITIONS.

7. FIELD VERIFY INNER CONVECTOR CABINET DIMENSIONS AFTER DEMOLITION AND BEFORE ORDERING NEW FIN TUBE. COORDINATE DISCREPANCIES WITH ENGINEER.

8. CONNECT NEW HEATING WATER FLOOR PIPING MAINS TO EXISTING HEATING WATER MAINS TO SERVE ENTIRE FLOOR.
SHEET NOTES

NORTH/CENTRAL AND EAST RISERS INSTALLED AS PART OF PREVIOUS PROJECT.

1. WEST RISER INSTALLED AS PART OF THIS PROJECT.

2. CONTRACTOR TO PROVIDE BID WITH ADD ALTERNATE SCOPE SEPARATED FROM BASE BID COSTS.

NEW HEATING WATER RISER DIAGRAM