# FLORENCE RECREATION CENTER EQUIPMENT REPLACEMENTS

CITY OF MESQUITE



100% CONSTRUCTION DOCUMENTS Halff AVO# 55881

## PROJECT TEAM

## <u>MEP</u>

Halff Associates, Inc. 5000 West Military Highway, Ste. 100 McAllen, Texas 78503-7446 Tel:956.664.0286 Fax:956.664.0282

Lizbeth Guerra, P.E., (Electrical) Email:IGuerra@Halff.com

William Pryor, P.E., (Mechanical) Email:bPryor@halff.com

LOCATION

2501 WHITSON WAY, MESQUITE, TX 75150

## DRAWING INDEX

Sheet Number	Sheet Name	П
G-000	COVER SHEET	
M-001	GENERAL LEGEND AND ABBREVIATIONS	
M-002	MECHANICAL GENERAL NOTES	П
MD-100	MECHANICAL DEMOLITION OVERALL PLAN	
MD-101	MECHANICAL DEMOLITION ENLARGED PLANS	П
MD-102	MECHANICAL DEMOLITION PLANS - ISOMETRIC VIEWS	
M-100	MECHANICAL OVERALL PLAN	۽ ا
M-101	MECHANICAL ENLARGED PLANS	pvision
M-102	MECHANICAL PLAN - ISOMETRIC	Bell
M-201	MECHANICAL SCHEDULES	
M-202	MECHANICAL SCHEDULES	lΓ
M-301	MECHANICAL DETAILS	П
M-302	MECHANICAL DETAILS	
M-401	MECHANICAL CHILLED WATER FLOW DIAGRAM	
M-402	MECHANICAL HOT WATER FLOW DIAGRAM	П
M-501	MECHANICAL CONTROLS AND DIAGRAMS	
E-001	GENERAL NOTES AND LEGENDS	
ED-100	ELECTRICAL DEMOLITION PLAN	
E-100	ELECTRICAL PLAN	П
E-201	ELECTRICAL ONE-LINE DIAGRAM & SCHEDULES	П
E-202	ELECTRICAL SCHEDULES	
F-301	ELECTRICAL DETAILS	١L

SHEET INDEX

## TEXAS BOILER CODE NOTES

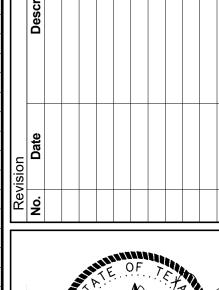
- 1. IF BOILER START-UP OCCURS PRIOR TO FINAL INSPECTION, A TEMPORARY OPERATING PERMIT IS REQUIRED.
- TO BE ELIGIBLE FOR A BOILER CERTIFICATE OF OPERATION, THE FOLLOWING REQUIREMENTS MUST BE MET:
- COMPLIANCE WITH NEW BOILER INSTALLATION SECTION 65.200
- COMPLETION AND SUBMISSION OF THE APPLICABLE INSPECTION REPORT
- REQUIRED REPAIRS COMPLETED.

AND APPROVED PRIOR TO TEST-FIRING.

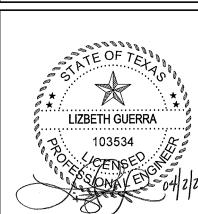
- PAYMENT OF FEES UNDER SECTION 65.300
- TEXAS HEALTH AND SAFETY CODE BOILERS SHALL BE CONSTRUCTED, INSPECTED AND STAMPED IN CONFORMITY WITH THE APPLICABLE SECTION OF THE ASME CODE
- NEW BOILER SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST REVISION OF THE APPLICABLE SECTION OF THE MANUFACTURER'S RECOMMENDATIONS, ASME CODE. BOILER SHALL BE INSPECTED PRIOR TO OPERATION OR TEST-FIRING. A TEMPORARY OPERATING PERMIT HAS TO BE FILED
- ALL CHIMNEY AND VENTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.





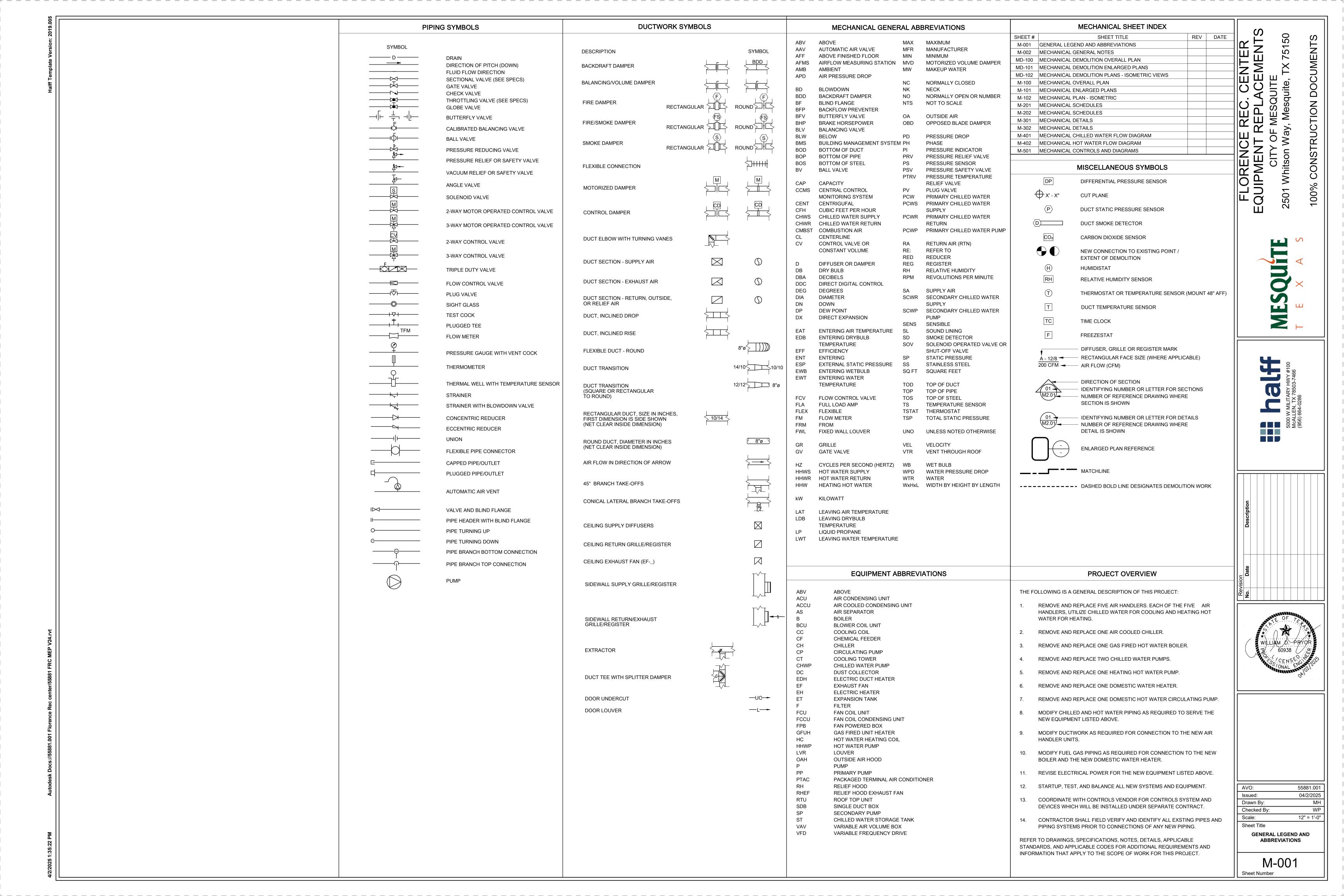






AVO:	55881.001
Issued:	04/2/2025
Drawn By:	МН
Checked By:	WP
Scale:	12" = 1'-0"
Sheet Title	
COVER	SHEET

G-000



### **GENERAL MECHANICAL NOTES**

REFER TO SPECIFICATIONS, GENERAL NOTES, SHEET SPECIFIC NOTES, AND NOTES OF OTHER DISCIPLINES FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

**GENERAL HVAC SUBNOTES** 

- DO NOT ALLOW REFRIGERANT FROM ANY MECHANICAL SYSTEMS TO VENT TO ATMOSPHERE. RECOVER REFRIGERANT FOR REUSE USING ASHRAE RECOMMENDED PROCEDURES AND CERTIFIED RECOVERY EQUIPMENT. FOLLOW ALL EPA GUIDELINES.
- FABRICATION AND INSTALLATION OF HVAC WORK IS TO COMPLY WITH THE LATEST REVISION OF SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE".
- IN ADDITION TO SPECIFIED PIPE HANGER SPACING, PIPE HANGERS SHALL BE LOCATED A) AT EACH CHANGE IN DIRECTION, B) NOT MORE THAN 2 FEET FROM ANY END-OF-RUN, AND C) ON EACH SIDE OF
- EXISTING MAKEUP WATER CONNECTIONS TO THE DOMESTIC WATER SYSTEM (INCLUDING BACKFLOW PREVENTERS) ARE TO REMAIN AND WILL BE REUSED FOR CONNECTIONS TO AND FILLING OF THE REVISED CHILLED AND HEATING HOT WATER SYSTEMS. COORDINATE WITH EXISTING CONDITIONS.
- DUCT SIZES SHOWN ON PLANS REPRESENT THE REQUIRED MINIMUM INSIDE CLEAR DIMENSIONS FOR AIRFLOW. ADJUST DUCT SIZES AT FABRICATION AS NECESSARY TO ACCOMMODATE THICKNESS OF ANY DUCT LINER WHERE APPLICABLE OR WHERE SHOWN SO AS TO MAINTAIN MINIMUM CLEAR DIMENSIONS FOR AIRFLOW. SEE NOTES AND/OR SPECIFICATIONS FOR INSULATION TYPE AND STANDARDS.
- PROVIDE FLEXIBLE CONNECTIONS ON DUCT INLET AND OUTLET CONNECTIONS TO ALL AIR HANDLER UNITS OR WHEREVER EQUIPMENT HAS ROTATING PARTS (MOTORS, ETC.).
- PROVIDE DUCT TRANSITIONS AS REQUIRED AT EQUIPMENT AND DEVICE CONNECTIONS WHERE DUCT SIZES INDICATED DIFFER FROM THE DUCT CONNECTION SIZE OR DUCT COLLAR.
- PROVIDE TURNING VANES AT ALL 90 DEGREE ELBOWS. TURNING VANE BLADES MUST BE INSTALLED TANGENT TO THE AIR STREAM. WHERE DUCT DIMENSIONS REQUIRE TURNING VANES TO BE 24 INCHES OR GREATER IN LENGTH, THE TURNING VANES MUST BE DOUBLE THICKNESS. ALL TURNING VANES LESS THAN 24" LONG MAY BE SINGLE THICKNESS.
- 10. SEAL AROUND ALL JOINTS, LOUVERS, DUCTS AND PIPES TO PROVIDE AIRTIGHT DUCT SYSTEMS, SUPPLY AIR PLENUMS, AND/OR RETURN AIR PLENUMS.
- 11. FOR ALL COOLING COILS, PROVIDE AND INSTALL TYPE "L" COPPER P-TRAPPED CONDENSATE DRAIN LINE. NOT THIS INSTRUCTION IS EXPLICITLY STATED. LINE SIZE TO BE 1-1/4" DIAMETER OR SAME DIAMETER AS DRAIN PAN TAP CONNECTION, WHICHEVER IS LARGER. CONDENSATE P-TRAPS ARE TO HAVE A MINIMUM DEPTH AS REQUIRED TO PROVIDE A TRAP SEAL STATIC HEIGHT EQUIVALENT OF TWICE THE STATIC PRESSURE RATING OF THE FAN, BUT NO LESS THAN 2 INCHES DEPTH. PROVIDE DRAIN PLUG IN BOTTOM OF EACH P-TRAP FOR CLEANING AND DRAIN DOWN PURPOSES. INSULATE CONDENSATE DRAIN LINES WHEN LOCATED WITHIN THE BUILDING.
- 12. FOR ALL CONDENSING FURNACES, PROVIDE PVC CONDENSATE DRAINS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE BOILER WITH CONDENSATE NEUTRALIZER KIT (SEE
- OUTSIDE AIR DUCTWORK, C) CHILLED WATER SUPPLY AND RETURN PIPING, D) HEATING HOT WATER SUPPLY AND RETURN PIPING. RETURN AIR DUCTWORK NEED NOT BE INSULATED EXCEPT WHERE SUCH DUCTS PASS THROUGH UNCONDITIONED AREAS, AREAS OUTSIDE THE BUILDING THERMAL ENVELOPE, OR WHERE DUCT LINING IS REQUIRED OR NOTED. EXHAUST OR RELIEF DUCTWORK DOES NOT NEED TO
- 14. WHERE DUCTS ARE NOTED OR SPECIFIED TO BE EXTERNALLY INSULATED, TEST FOR DUCT LEAKS AND SEAL ALL LEAKS PRIOR TO INSULATING DUCT.
- 15. WHERE INSULATED PIPING IS INSTALLED EXTERIOR TO THE BUILDING, PROVIDE ALUMINUM JACKET TO
- BE INTERNALLY LINED FOR THE FIRST TEN (10) FEET FROM THE A/C EQUIPMENT SERVED. THE BALANCE | GRAVITY DRAINAGE SYSTEMS OR OF THE INSTALLATION OF DUCTWORK AND EQUIPMENT. OF THE DUCTWORK IS TO BE EXTERNALLY INSULATED WITH FIBERGLASS DUCT WRAP INSULATION IN AREAS WHERE SPACE CONSTRAINTS MAY CAUSE THE COMPRESSION (AND THUS DEGRADED INSULATING CAPABILITY) OF EXTERNAL DUCT WRAP, PROVIDED THE LINER IS LIMITED ONLY TO AREAS WHERE SPACE CONSTRAINTS DICTATE.
- 17. DURING CONSTRUCTION, AFTER START-UP OF HVAC SYSTEMS, CONTRACTOR MUST MAINTAIN AND/OR REPLACE ON A REGULAR SCHEDULE ALL FILTERS IN THE HVAC SYSTEM. ONE (1) WEEK BEFORE THE FACILITY IS OCCUPIED (OR THE BUILDING IS OFFICIALLY TURNED OVER FOR OCCUPANCY), THE CONTRACTOR MUST REPLACE ALL AIR FILTERS WITH NEW FILTERS. DO NOT OPERATE HVAC SYSTEMS
- 18. BALANCE MECHANICAL SYSTEMS TO PROVIDE INDICATED FLOWS. SEE SPECIFICATIONS FOR OTHER TEST AND BALANCE REQUIREMENTS. SUBMIT FINAL BALANCE REPORT OF MECHANICAL SYSTEMS (INCLUDING FLOWS AND TEMPERATURES) FOR REVIEW.
- 19. EXISTING CHEMICAL SHOT FEEDERS ARE TO BE REPLACED WITH NEW IN BOTH THE NEW CHILLED AND HEATING HOT WATER SYSTEMS. CONNECT TO NEW PIPING AS REQUIRED. INITIAL WATER TREATMENT FOR ALL EQUIPMENT, PIPING AND COILS MUST BE AS RECOMMENDED BY THE RESPECTIVE MANUFACTURER. FLUSH ALL SYSTEMS PRIOR TO FINAL FILL AND CHEMICAL TREATMENT. COORDINATE WITH OWNER'S REPRESENTATIVE REGARDING CHEMICAL TREATMENT.
- 20. PROVIDE SHUT-OFF COCK, 6 INCH DIRT LEG, AND UNION IN GAS LINE AT ALL CONNECTIONS TO GAS BURNING EQUIPMENT. UNIONS MUST BE DIELECTRIC TYPE IF EQUIPMENT CONNECTION AND GAS PIPE ARE OF DIFFERENT METALS.
- 21. PAINT ALL MECHANICAL ROOM DUCT INSULATION.
- 22. PAINT ALL MECHANICAL ROOM PIPE INSUALTION EXCEPT WHERE COVERED WITH PVC COVER.
- 23. ALL EXTERIOR CHILLED WATER PIPING IS TO HAVE ALUMINUM COVER OVER INSULATION.
- 24. INSULATE EXPANSION TANKS AND AIR SEPARATORS. SEE SPECIFICATIONS.

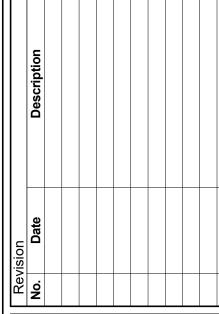
- REFER TO SPECIFICATIONS, SHEET SPECIFIC NOTES, AND NOTES OF OTHER DISCIPLINES FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- ALL WORK (MATERIALS, EQUIPMENT, DEVICES, COMPONENTS, SYSTEMS, SUPPORTS, ETC.) MUST COMPLY WITH THE REQUIREMENTS OF ALL CODES, CODE AMENDMENTS, AND ORDINANCES AS USED, ADOPTED AND/OR ENFORCED BY THE LOCAL JURISDICTION, COUNTY, AND STATE IN WHICH THE PROJECT IS LOCATED. WHERE INSPECTIONS ARE REQUIRED BY AUTHORITIES HAVING JURISDICTION (AHJ), WORK MUST NOT BE CONCEALED UNTIL INSPECTIONS AND TESTS ARE COMPLETED AND ACCEPTED.
- PRIOR TO BID, CONTRACTOR MUST BECOME THOROUGHLY FAMILIAR WITH THE REQUIREMENTS OF THE GENERAL NOTES AS WELL AS ALL OTHER INFORMATION SHOWN ON THE CONTRACT DOCUMENTS. VISIT THE SITE TO ESTABLISH THE EXISTING CONDITIONS PRIOR TO BID AND PRIOR TO FABRICATION OR PLACEMENT OF
- ANY DIMENSIONS OR QUANTITIES LISTED OR SCHEDULED ON THE PLANS RELATED TO THE WORK ARE ONLY FOR THE PURPOSES OF ASSISTING THE PLAN CHECK PROCESS OF THE LOCAL AUTHORITIES FOR THE PURPOSE OF OBTAINING A CONSTRUCTION PERMIT. SUCH LENGTHS OR QUANTITIES ARE NOT INTENDED FOR THE CONTRACTOR'S USE AS A SUBSTITUTE FOR PERFORMING AN ACTUAL MATERIALS TAKEOFF FOR BID PURPOSES OR AS A SUBSTITUTE FOR TAKING FIELD MEASUREMENTS PRIOR TO FABRICATION. NO EXTRAS WILL BE ALLOWED FOR FAILURE ON THE CONTRACTOR'S PART TO PERFORM A COMPLETE AND PROPER MATERIALS TAKEOFF FOR BID PURPOSES, NOR FOR FAILURE TO OBTAIN ADEQUATE FIELD MEASUREMENTS FOR FABRICATION PURPOSES.
- ALL WORK IS TO BE FABRICATED AND ERECTED USING THE CONTRACTOR'S FIELD MEASUREMENTS AND/OR INFORMATION FROM APPROVED SHOP DRAWINGS AND SUBMITTALS. DIMENSIONS SHOWN ON THE PLANS ARE NOT TO BE USED AS A SUBSTITUTE FOR FIELD MEASUREMENTS AND APPROVED SHOP DRAWING
- ALL CONTRACT DOCUMENTS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRICAL RELATIONSHIPS OF THE WORK. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, SEQUENCE, DEVICE, OPTION, FITTING, OR COMPONENT. DO NOT SCALE DRAWINGS.
- COMPONENTS AND WORK SHOWN ON DIAGRAMS OR DETAILS, BUT NOT SHOWN ON PLANS, AND VICE VERSA, MUST BE FURNISHED AND INSTALLED AS IF EXPRESSLY REQUIRED BY BOTH.
- 8. EXCEPT WHERE INDICATED OTHERWISE, THE NOTATION OR DESCRIPTION OF ANY ITEM IN THE CONTRACT DOCUMENTS CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM, WHETHER OR
- THE CONTRACT DOCUMENTS REFLECT WORK DESIGNED AROUND SPECIFIC REFERENCE OR BASIS-OF-DESIGN PRODUCTS, THE SELECTION OF WHICH HAS IMPACTED THE DESIGNS OF THIS AND OTHER TRADES. WHEREVER CONSIDERATION OF ALTERNATE MANUFACTURERS, SIZES, MODEL NUMBERS, ETC. IS ALLOWED, IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE ALL DIFFERENCES AND IMPACTS WITH AVAILABLE SPACE, POWER, AND ALL AFFECTED TRADES PRIOR TO BID, INCLUDING COSTS ASSOCIATED WITH REQUIRED CHANGES TO ALL OTHER TRADES. NO EXTRAS WILL BE ALLOWED FOR CHANGES REQUIRED TO THIS OR OTHER TRADES IF ALTERNATE WORK IS BID, PROPOSED, OR INSTALLED.
- 10. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL MODIFICATIONS TO OTHER DISCIPLINES 13. THE FOLLOWING HVAC ITEMS REQUIRE INSULATION UNDER THIS CONTRACT: A) SUPPLY DUCTWORK, B) WHEN MODIFICATIONS RESULT FROM ANY APPROVED SUBSTITUTION OF EQUIPMENT OR MATERIALS FROM THOSE SPECIFIED OR SCHEDULED. ALL PROPOSED SUBSTITUTIONS MUST BE SUBMITTED FOR REVIEW AND MUST HAVE BEEN ACCEPTED PRIOR TO EQUIPMENT PURCHASE. SUBSTITUTIONS WHICH ARE INSTALLED AND SUBSEQUENTLY ARE PROVEN UNSATISFACTORY BY OWNER AND/OR ENGINEER, WITHIN THE WARRANTY PERIOD, MUST BE REMOVED COMPLETELY BY THE CONTRACTOR AND REPLACED WITH THE ORIGINAL DESIGN OR CORRECTED AS DIRECTED BY THE ENGINEER WITHOUT ADDITIONAL COST TO THE OWNER.
  - 11. COORDINATE PLACEMENT OF ALL WORK WITH OTHER TRADES. DO NOT LOCATE, POSITION, OR INSTALL ANY WORK IN SUCH A WAY THAT SYSTEM COMPONENTS, MAINTENANCE CLEARANCES, OR ACCESS DOORS WILL BE INACCESSIBLE, UNUSABLE, OR UN-MAINTAINABLE AFTER CONSTRUCTION IS COMPLETED.
  - 12. GRAVITY DRAINAGE SYSTEMS, DUCTWORK AND EQUIPMENT HAVE PRIORITY OVER PRESSURIZED PIPING SYSTEMS AND PLUMBING VENT SYSTEMS WITH REGARD TO ROUTING AND VERTICAL POSITIONING. COORDINATE IN ADDITION TO EXTERNALLY WRAPPED DUCT INSULATION, ALL SUPPLY AND RETURN DUCTWORK IS TO THE INSTALLATION OF WORK SO AS NOT TO INHIBIT OR BLOCK THE INSTALLATION OR REQUIRED SLOPES FOR
  - UNLESS OTHERWISE INDICATED. THE CONTRACTOR MAY, AT CONTRACTOR'S OPTION, USE DUCT LINER | 13. UNLESS OTHERWISE INDICATED, ALL WORK IS TO BE SUPPORTED FROM STRUCTURE ABOVE, FROM WALLS, FROM COLUMNS, OR FROM THE FLOOR UNLESS OTHERWISE INDICATED. DO NOT USE THE INSTALLED WORK OF OTHER TRADES FOR SUPPORT OR BRACING.
    - 14. FLOOR-MOUNTED HOUSEKEEPING PADS:
      - a. EXISTING HOUSEKEEPING PADS ARE TO BE USED AS-IS WHENEVER POSSIBLE. ANY EXISTING HOUSEKEEPING PADS THAT ARE SMALLER THAN THE FOOTPRINT OF NEW EQUIPMENT ARE TO BE EXPANDED SO THAT THE HOUSEKEEPING PAD EXTENDS A MINIMUM OF 4" BEYOND SUPPORTED NEW EQUIPMENT ON ALL SIDES. TOPS OF PAD EXTENSIONS MUST BE FLUSH WITH EXISTING PAD.
      - CONCRETE WORK FOR FLOOR-MOUNTED HOUSEKEEPING PADS IS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR ACTING AS THE PRIME CONTRACTOR OR GC. PROVIDE 3000 PSI REINFORCED CONCRETE HOUSEKEEPING PADS UNLESS OTHERWISE INDICATED.
      - NEW PADS MUST BE 4 INCHES THICK WITH CHAMFERED EDGES. FOR PADS INSTALLED ON CONCRETE FLOORS, INSTALL DOWEL RODS MADE FROM STEEL REINFORCING BAR PENETRATING A MINIMUM OF 2" INTO BOTH THE PAD AND THE SUPPORTING FLOOR (MINIMUM OF FOUR (4) RODS PER PAD) TO ANCHOR PADS IN POSITION.
    - 15. GROUND-MOUNTED EQUIPMENT PADS:
      - a. EXISTING GROUND-MOUNTED EQUIPMENT PADS ARE TO BE USED AS-IS WHENEVER POSSIBLE. ANY EXISTING EQUIPMENT PADS THAT ARE SMALLER THAN THE FOOTPRINT OF NEW EQUIPMENT ARE TO BE EXPANDED SO THAT THE EQUIPMENT PAD EXTENDS A MINIMUM OF 4" BEYOND SUPPORTED NEW EQUIPMENT ON ALL SIDES. TOPS OF PAD EXTENSIONS MUST BE FLUSH WITH EXISTING PAD.
      - CONCRETE WORK FOR GROUND-MOUNTED EQUIPMENT PADS IS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR ACTING AS THE PRIME CONTRACTOR OR GC. PROVIDE 3000 PSI
      - REINFORCED CONCRETE EQUIPMENT PADS UNLESS OTHERWISE INDICATED. ANY NEW GROUND-MOUNTED EQUIPMENT PADS ARE TO BE MONOLITHIC AND MUST EXTEND BELOW GRADE A MINIMUM OF 6" AND ABOVE GRADE A MINIMUM OF 6 INCHES. ALL EDGES ARE TO BE CHAMFERED.
    - 16. REPLACE OR REPAIR ALL ARCHITECTURAL FEATURES OR ANY OTHER WORK REMOVED OR DAMAGED DURING THE COURSE OF THE WORK. REPAIR OR REPLACEMENT MUST, AS A MINIMUM, EQUAL ORIGINAL CONDITION. SPECIAL CARE MUST BE TAKEN ON ROOFS (NEW AND/OR EXISTING) TO PREVENT DAMAGE, AND ANY DAMAGE MUST BE PROMPTLY REPAIRED IN COMPLIANCE WITH BONDING REQUIREMENTS OF THE ROOFING MANUFACTURER AND AT NO EXPENSE TO THE OWNER.
    - 17. ALL NEW EXTERIOR GAS PIPING SHALL BE PRIMED AND FINISHED WITH A FINAL COAT OF OIL-BASED YELLOW PAINT.
    - 18. ALL WIRING FOR 120 VOLT AND HIGHER SYSTEMS FOR CONTROLS, POWER, INTERLOCKS, ETC. MUST BE INSTALLED IN CONDUIT AND THE INSTALLATION MUST COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NFPA, STATE AND LOCAL CODES AND ORDINANCES.
    - 19. ALL LOW VOLTAGE WIRING INSTALLED FOR CONTROLS, ETC. MUST BE INSTALLED IN CONDUIT OR, IF LOCATED ABOVE CEILINGS, MUST BE IN CONDUIT OR BE PLENUM RATED. MATERIALS AND INSTALLATION MUST COMPLY WITH NEC, NFPA, STATE AND LOCAL CODES AND ORDINANCES.
    - 20. SEAL ALL ROOF AND WALL PENETRATIONS OF DEMOLISHED EQUIPMENT AND MATERIALS WATERTIGHT. FLASH AND COUNTER-FLASH ALL NEW ROOF PENETRATIONS. MINIMUM ACCEPTABLE HEIGHT OF FLASHING IS TWELVE (12) INCHES ABOVE ROOF.
    - 21. MECHANICAL SYSTEMS. MATERIALS AND/OR DEVICES ARE NOT TO BE USED AS A MEANS OF ELECTRICAL GROUNDING.
    - 22. IT IS THE INTENT OF THE DESIGN THAT THE WORK SHOULD BE INSTALLED PERPENDICULAR AND PARALLEL TO BUILDING COLUMN LINES, FLOORS, WALLS, AND CEILINGS WHEREVER POSSIBLE. THIS DOES NOT APPLY TO SITUATIONS WHERE THE DRAWINGS INDICATE OTHERWISE OR WHERE FIELD CONDITIONS REQUIRE OFFSETS TO ACCOMMODATE THE WORK.

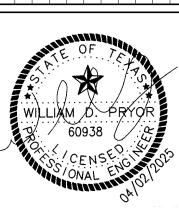
OREN

Ö









55881.001 Issued: 04/2/2025 Checked By 12" = 1'-0" Scale: Sheet Title

MECHANICAL GENERAL NOTES

M-002 Sheet Number

## **GENERAL DEMOLITION NOTES:**

- REFER TO SPECIFICATIONS, SHEET SPECIFIC NOTES, AND NOTES OF OTHER DISCIPLINES FOR ADDITIONAL INFORMATION AND REQUIREMENTS
- INFORMATION ON THE PLANS HAS BEEN OBTAINED FROM EXISTING DRAWINGS AND SITE SURVEY. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE.
- ANY INSTRUCTION TO DEMOLISH OR REMOVE AN ITEM, DEVICE, MATERIAL, OR EQUIPMENT IS INTENDED TO REQUIRE THE CONTRACTOR TO DISCONNECT, REMOVE, AND DISPOSE OF THE ITEM COMPLETELY UNLESS OTHERWISE NOTED.
- ANY AREAS ADJACENT TO DEMOLITION AREAS IN WHICH NO DEMOLITION IS TO TAKE PLACE MUST BE PROTECTED FROM DAMAGE, DUST, AND DEBRIS.
- ALL DUST PRODUCTION, SMOKE PRODUCTION AND NOISE SHALL BE SUBJECT TO REAL TIME REVIEW BY THE OWNER'S REPRESENTATIVE. WORK SHALL BE SHUT DOWN DURING CRITICAL ACTIVITIES BY FORMAL REQUEST FROM THE OWNER'S REPRESENTATIVE. WORK IN DUSTY AREAS SHALL BE CONTROLLED WITH TEMPORARY PARTITIONS. FLAME CUTTING SHALL BE MINIMIZED TO ELIMINATE SMOKE PRODUCTION. PROVIDE FIRE EXTINGUISHERS IN THE IMMEDIATE AREA OF ANY FLAME CUTTING ACTIVITIES.
- DEMOLITION WORK INDICATED BY THE CONTRACT DOCUMENTS MUST BE CLOSELY COORDINATED WITH THE OWNER'S REPRESENTATIVE AND OTHER TRADES. NO DEMOLITION OR ASSOCIATED SHUTDOWNS OF SERVICES IS TO TAKE PLACE IN ANY AREA OR BUILDING UNTIL THE CONTRACTOR HAS BEEN GIVEN APPROVAL TO PROCEED IN THAT SPECIFIC LOCATION. ALL DEMOLITION WORK MUST BE SCHEDULED AT LEAST 48 HOURS PRIOR TO START OF DEMOLITION. REFER TO DEMOLITION DRAWINGS AND/OR NOTES FOR ADDITIONAL INFORMATION AND DEMOLITION SCOPE OF WORK.
- IF IT BECOMES NECESSARY DURING DEMOLITION TO TEMPORARILY REMOVE ANY EXISTING WORK NOT SPECIFICALLY NOTED TO BE REMOVED OR RELOCATED (THEREBY IMPLYING THAT THEY ARE TO BE LEFT AS-IS FOR FUTURE USE), THE CONTRACTOR MUST REINSTALL SAID WORK TO FULLY OPERABLE CONDITION IN THE ORIGINAL LOCATION. FINISHES AFFECTED BY THE WORK MUST BE RESTORED TO MATCH EXISTING CONDITIONS.
- SCHEDULE UTILITY AND/OR SYSTEM SHUTDOWNS A MINIMUM OF ONE WEEK IN ADVANCE OF THE START OF THE WORK REQUIRING SHUTDOWN. SCHEDULE SHUTDOWNS WITH THE UTILITY AND THE OWNER'S REPRESENTATIVE. KEEP DOWNTIME TO A MINIMUM AND DO NOT INTERFERE WITH THE FACILITY'S DAILY SCHEDULE, IF POSSIBLE. ANY EXISTING WORK DESIGNATED TO BE REUSED WHICH IS FOUND TO BE
- DAMAGED OR NON-OPERABLE MUST BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY. INSPECT THE EXISTING SYSTEM AND NOTIFY OF ANY UNUSUAL, DAMAGED, OR NON-OPERATING CONDITIONS APPLICABLE TO THE SCOPE OF WORK BEFORE PROCEEDING. THE CONTRACTOR IS FULLY RESPONSIBLE FOR PERFORMING THE DEMOLITION WORK UNDER THIS SECTION OF THE PROJECT IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES. IF THE CONTRACTOR DETERMINES THAT THE CONTRACT DOCUMENTS AND PLANS ARE NOT IN COMPLIANCE WITH THE APPLICABLE CODES, SHALL INFORM THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION START.

FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF THE

DEMOLITION WORK SHALL INCLUDE THOSE PUBLISHED BY OSHA AND EPA. THE CONTRACTOR IS RESPONSIBLE FOR SEALING ALL ROOF AND WALL OPENINGS THAT REMAIN AFTER ITEMS ARE DEMOLISHED. SUCH OPENINGS

RESPONSIBILITY TO MEET CODE REQUIREMENTS AND REWORK SHALL BE AT THE CONTRACTOR'S EXPENSE. APPLICABLE CODES AND STANDARDS ON

- ARE TO BE SEALED WATERTIGHT. ALL OPENINGS CUT IN MASONRY AND PLASTER WALLS OR CONCRETE FLOORS SHALL BE CORE-DRILLED OR SAWED WHEN POSSIBLE. CONTRACTOR SHALL CHECK BUILDING CONSTRUCTION WITH STRUCTURAL ENGINEER BEFORE MAKING PENETRATIONS TO AVOID CUTTING THROUGH STRUCTURAL BEAMS AND REINFORCING. CONTRACTOR SHALL INFORM THE OWNER'S REPRESENTATIVE IF REINFORCING IS CUT OR DAMAGED WHILE MAKING OPENINGS AS REQUIRED BY DRAWINGS AND SPECIFICATIONS. PATCH AND SEAL OPENINGS WITH 8000 PSI CEMENT GROUT. INSTALL DECORATIVE TRIM (EQUIPMENT FLANGES, FRAMING, OR ESCUTCHEONS) AROUND OPENINGS IN FINISHED AREAS. COORDINATE ALL CUTTING AND PATCHING WITH THE
- OTHER TRADES. ALL SURFACES COVERED BY "SPRAY POLY" AND PROTECTED BY TEMPORARY PARTITIONS SHALL REMAIN PROTECTED THROUGHOUT THE PROJECT. REMOVE THE PROTECTIVE BARRIERS ONLY AFTER THE NEW EQUIPMENT PIPING AND DUCTWORK IS INSTALLED. PATCH AND MAINTAIN THE PROTECTIVE BARRIERS DURING CONSTRUCTION. COVER ALL EQUIPMENT OPENINGS WITH 4 MIL. POLY AND DUCT TAPE IN PLACE.
- ALL NEW ROOF PENETRATIONS SHALL BE ROUTED THRU EXISTING OPENINGS WHEREVER POSSIBLE. LARGER AND NEW OPENINGS SHALL BE KEPT TO A
- N. CONTRACTOR SHALL KEEP THE ENTIRE MEP DEMOLITION SITE CLEAN AT ALL
- COORDINATION AMONG OTHER CONSTRUCTION DISCIPLINES PRIOR TO DEMOLITION IS MANDATORY.

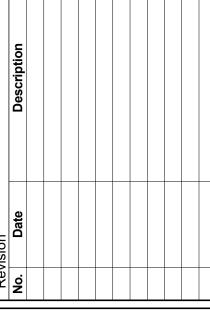
ENTER E REC. REPL

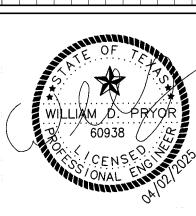
lli⊓ S



250





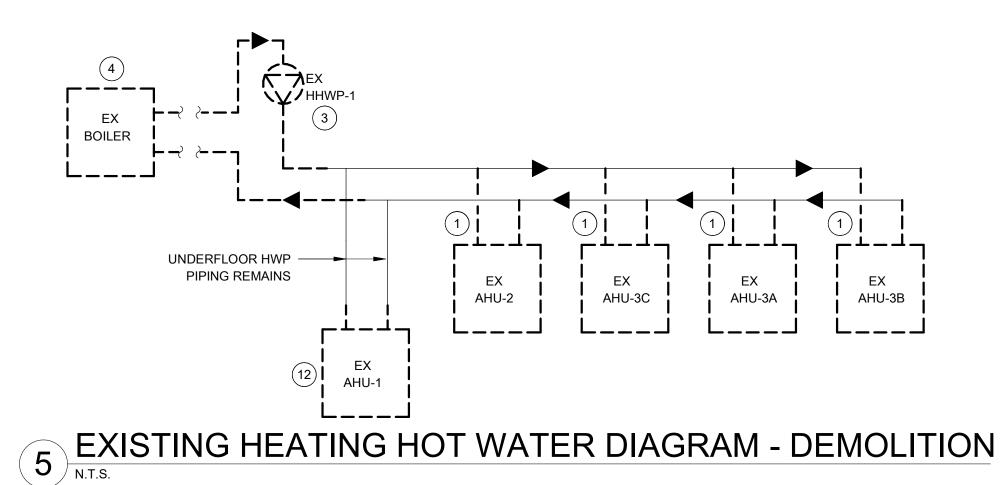


AVO:	55881.001
Issued:	04/2/2025
Drawn By:	МН
Checked By:	WP
Scale:	As indicated
Sheet Title	

Sheet Number

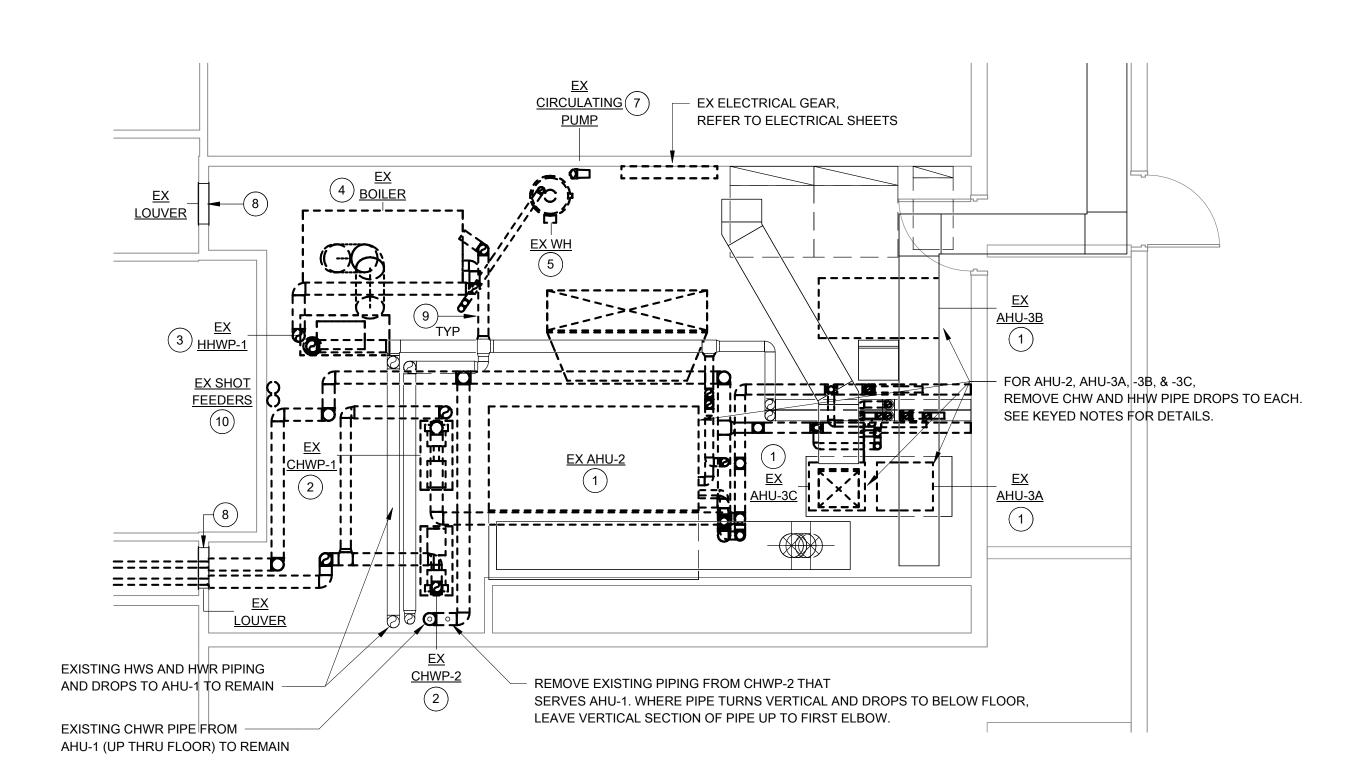
OVERALL PLAN MD-100

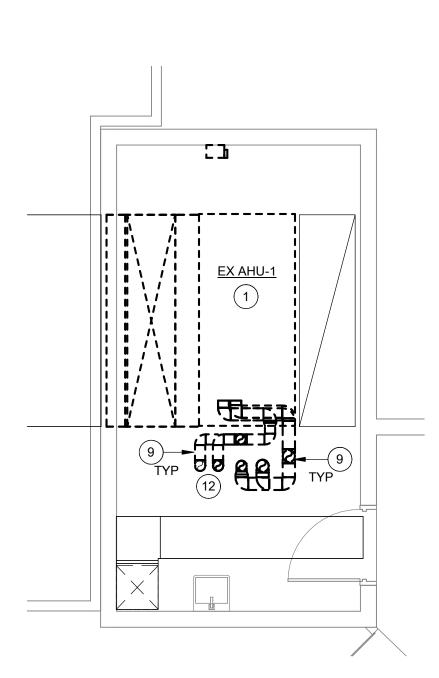
MECHANICAL DEMOLITION



REFER TO ELECTRICAL SHEETS - EXISTING GAS LINE EX ELECTRICAL CONDUIT EXISTING TRANSFORMER STUB UPS AND DEVICES LOCATION, REFER TO ELECTRICAL SHEETS EX CHILLER 6 R EX GAS REGULATOR REMOVE EX CHWR PIPE REMOVE EX CHWS PIPE H------

MECHANICAL DEMOLITION - CHILLER YARD





MECHANICAL DEMOLITION PLAN - MECHANICAL ROOM 2

1 MECHANICAL DEMOLITION PLAN - MECHANICAL ROOM 1

## **GENERAL DEMOLITION NOTES:**

REFER TO SHEET MD-100 FOR GENERAL DEMOLITION NOTES. NOTE THAT SOME EXISTING PIPE LABELING IS INCORRECT EITHER IN DIRECTION OF FLOW OR IN FLUID TYPE. CONTRACTOR SHALL VERIFY ALL DIRECTIONS OF FLOW AND FLUID TYPES BY TRACING PIPING FROM PUMP AND ALSO FROM PRIMARY EQUIPMENT CONNECTIONS.

## KEY NOTES: #

- REMOVE EXISTING AHU AND ASSOCIATED DUCTWORK AND HYDRONIC PIPING AS FOLLOWS:
- REMOVE AHU IN ITS ENTIRETY. HOUSEKEEPING PAD TO REMAIN. REMOVE DUCTWORK AS REQUIRED FOR THE REMOVAL OF EXISTING
- AHU AND INSTALLATION OF NEW AHU. FOR THE DUCTWORK THAT IS REMOVED, ALSO REMOVE DUCT

MOUNTED SMOKE DETECTORS AND OTHER DUCT MOUNTED DEVICES

- AND STORE FOR REINSTALLATION. DISCONNECT EXISTING OUTSIDE AIR DUCT ONLY IF OUTSIDE AIR OUTSIDE AIR DUCT AND BALANCING DAMPER ARE TO REMAIN.
- REMOVE HYDRONIC PIPING AS REQUIRED FOR AHU REMOVAL AND REPLACEMENT, AND FOR INSTALLATION OF NEW PIPE, VALVES, AND FITTINGS AS DETAILED ON SHEET M-301. REMOVE CONDENSATE
- REMOVE EXISTING CHILLED WATER PUMPS AS FOLLOWS:
- REMOVE EACH PUMP IN ITS ENTIRETY. HOUSEKEEPING PAD TO
- REMOVE ASSOCIATED PIPING, VALVES, AND FITTINGS.
- REMOVE EXISTING HEATING HOT WATER WATER PUMP AS FOLLOWS:
- REMOVE PUMP IN ITS ENTIRETY. HOUSEKEEPING PAD TO
- REMOVE ASSOCIATED PIPING, VALVES, AND FITTINGS UP TO WHERE PIPING TURNS HORIZONTAL
- TEMPORARILY CAP OR COVER PIPE OPENING TO PREVENT ENTRY OF
- REMOVE EXISTING HOT WATER BOILER AS FOLLOWS:
  - REMOVE BOILER IN ITS ENTIRETY. HOUSEKEEPING PAD TO REMAIN. REMOVE ASSOCIATED HEATING HOT WATER PIPING, VALVES, AND
  - FITTINGS UP TO WHERE INDICATED ON PLANS. TURN GAS OFF TO BUILDING AN REMOVE ASSOCIATED FUEL GAS
  - PIPING BACK TO WHERE GAS ENTERS THE BUILDING AT THE WALL LOUVER. TEMPORARILY CAP GAS PIPING REMOVE ASSOCIATED FLUE IN ITS ENTIRETY. CAP EXISTING ROOF PENETRATION WATERTIGHT. NOTE: IF EXISTING ROOF PENETRATION
  - TEMPORARILY CAP OR COVER GAS AND WATER PIPE OPENINGS TO

IS TO BE REUSED, THEN ROOF PENETRATION CAN BE TEMPORARILY

- PREVENT THE ENTRY OF DEBRIS.
- REMOVE EXITING WATER HEATER AS FOLLOWS:
- REMOVE WATER HEATER IN ITS ENTIRETY. ANY HOUSEKEEPING PAD REMOVE PIPING FROM CIRC PUMP BACK TO THE VALVED TEE FOR
- THE EXPANSION TANK. EXISTING EXPANSION TANK AND VALVED CONNECTION IS TO REMAIN.
- REMOVE OTHER ASSOCIATED PIPING BACK TO ISOLATION VALVE.

REMOVE ASSOCIATED HOT WATER CIRCULATING COLD WATER PIPING

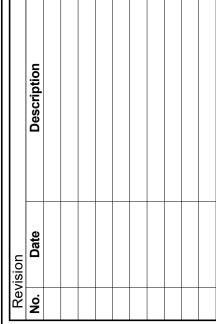
- BACK TO ISOLATION VALVE. ASSOCIATED FUEL GAS PIPING BACK TO WHERE GAS ENTERS THE
- BUILDING AT THE WALL LOUVER. REMOVE ASSOCIATED FLUE IN ITS ENTIRETY. CAP EXISTING ROOF PENETRATION WATERTIGHT. NOTE: IF EXISTING ROOF PENETRATION
- IS TO BE REUSED, THEN ROOF PENETRATION CAN BE TEMPORARILY
- TEMPORARILY CAP OR COVER GAS AND WATER PIPE OPENINGS TO PREVENT THE ENTRY OF DEBRIS.
- REMOVE EXISTING AIR COOLED CHILLER AS FOLLOWS:
  - REMOVE CHILLER IN ITS ENTIRETY. EQUIPMENT PAD TO REMAIN..
  - REMOVE ASSOCIATED CHILLED WATER PIPING, VALVES, AND FITTINGS AS INDICATED ON PLANS.
- REMOVE EXISTING DOMESTIC HOT WATER CIRCULATING PUMP AS FOLLOWS:
  - REMOVE PUMP IN ITS ENTIRETY.
- REMOVE ASSOCIATED PIPING, VALVES, AND FITTINGS UP TO ISOLATION VALVE LOCATED ADJACENT TO THE FLOOR.
- REMOVE PIPING ABOVE PUMP SUFFICIENT TO INSTALL NEW PUMP WITH ISOLATION VALVES ON EACH SIDE.
- TEMPORARILY CAP OR COVER PIPE OPENING TO PREVENT ENTRY OF
- EXISTING WALL LOUVER TO REMAIN. SEE NEW WORK PLANS REGARDING PARTIAL OR TOTAL BLANK-OFFS REQUIRED AS PART OF THIS PROJECT.
- FOR EXISTING CHILLED WATER AND HEATING HOT WATER PIPING THAT IS TO REMAIN, REMOVE ALL PIPE LABELING STICKERS (PIPE IDENTIFICATION AND DIRECTION OF FLOW ARROWS). WHERE REMOVAL OF EXISTING PIPE LABELS IS NOT POSSIBLE OR COULD DAMAGE EXISTING INSULATION, COVER EXISTING LABELS WITH WHITE ADHESIVE LABEL COVERING.
- EXISTING SHOT FEEDERS TO BE DEMOLISHED.
- CLEAN THE ENTIRE CHILLER YARD AREA OF ALL DEBRIS, GRAVEL, TRASH, AND EXTRANEOUS MATERIAL AND ITEMS AFTER DEMOLITION IS COMPLETE IN THIS AREA. POWER WASH SLAB PRIOR TO THE PLACEMENT OF NEW ITEMS OR NEW WORK.
- FOR AHU-1, CONTRACTOR SHALL REMOVE CHILLED WATER AND HEATING HOT WATER PIPING TO WHERE VERTICAL PIPES COME UP THRU FLOOR, AND INSTALL NEW SHUT-OFF VALVES AT EACH STUB-UP. INSTALL VALVES OF SUFFICIENT HEIGHT ABOVE FLOOR FOR VALVE OPERATION CLEARANCE. TEMPORARILY CAP PIPE TO PREVENT ENTRY OF DIRT AND DEBRIS. SEE KEYED NOTES AND DETAILS.

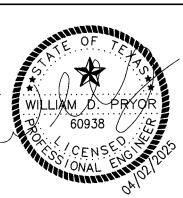
CENTER ACEMENTS

FLORENCE QUIPMENT 2501









55881.001 04/2/2025 Checked By: WP Scale: As indicated Sheet Title

MECHANICAL DEMOLITION **ENLARGED PLANS** 

MD-101 Sheet Number

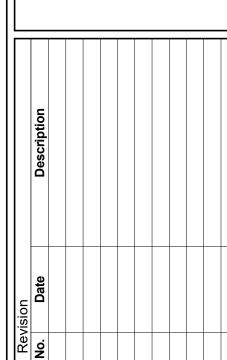
## **GENERAL DEMOLITION NOTES:**

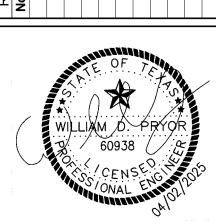
REFER TO SHEET MD-100 FOR GENERAL DEMOLITION NOTES. NOTE THAT SOME EXISTING PIPE LABELING IS INCORRECT EITHER IN DIRECTION OF FLOW OR IN FLUID TYPE. CONTRACTOR SHALL VERIFY ALL DIRECTIONS OF FLOW AND FLUID TYPE BY TRACING PIPING FROM PUMP AND ALSO FROM PRIMARY EQUIPMENT CONNECTIONS.

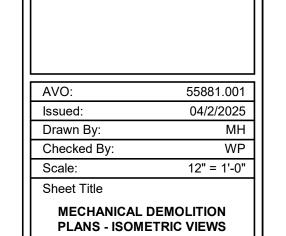
FLORENCE REC. CENTER
EQUIPMENT REPLACEMENTS
CITY OF MESQUITE
2501 Whitson Way, Mesquite, TX 75150



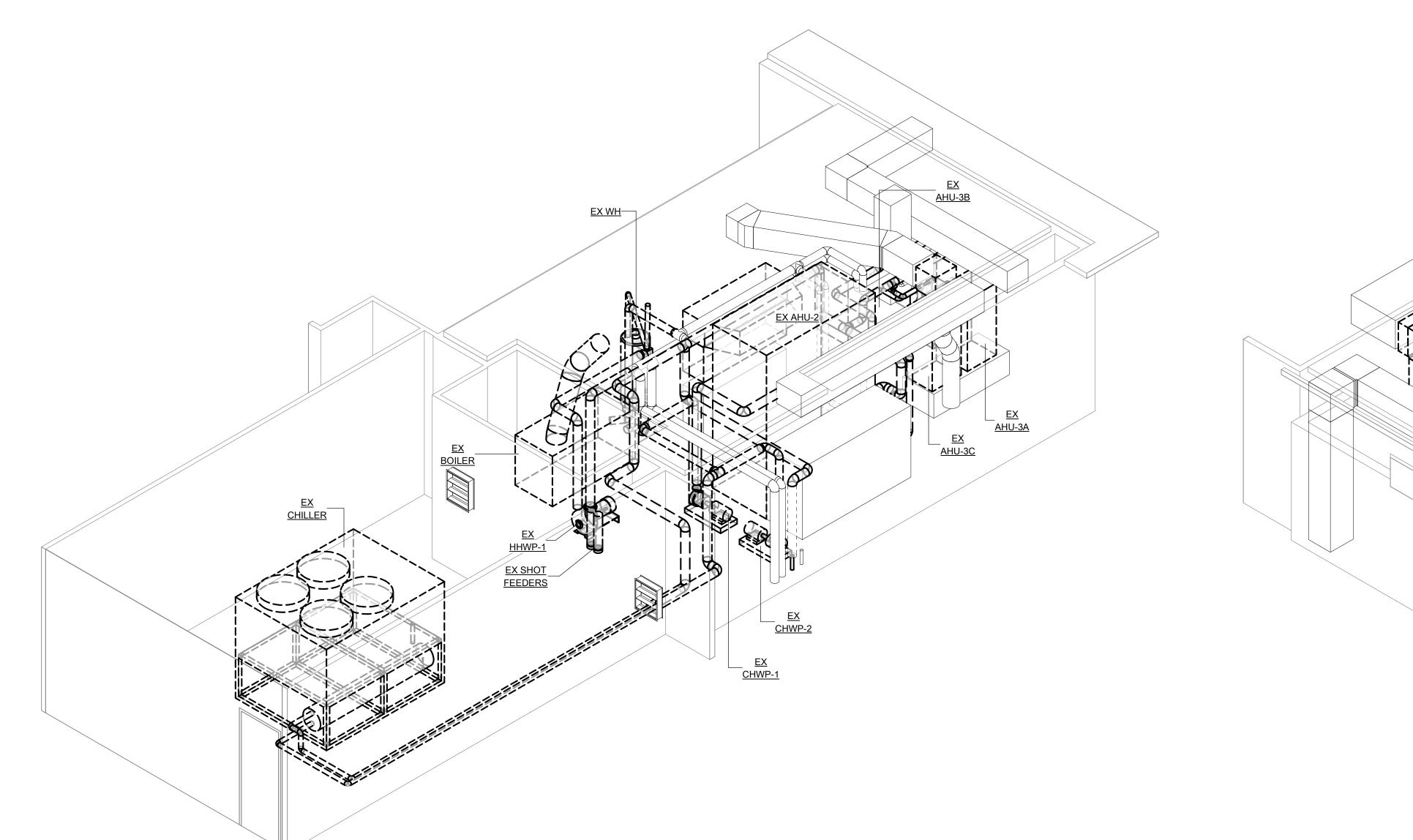






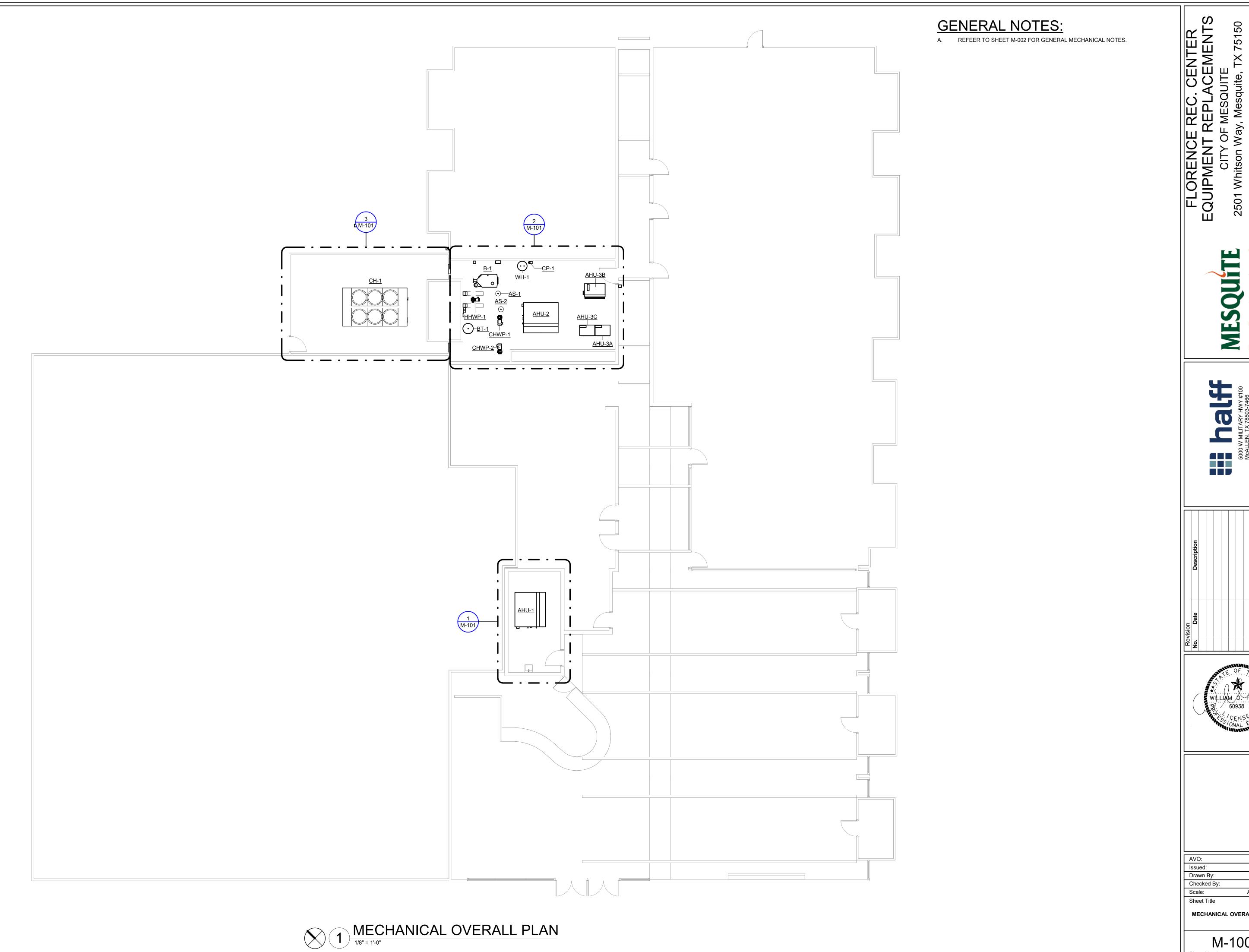


MD-102



MECHANICAL DEMOLITION - ISOMETRIC VIEW - MECHANICAL RM 1

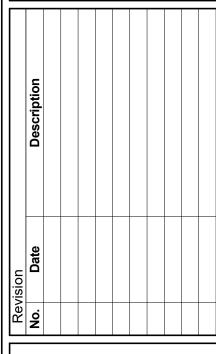
MECHANICAL DEMOLITION - ISOMETRIC VIEW - MECHANICAL RM 2 2 AND CHILLER YARD



100% CONSTRUCTION DOCUMENTS



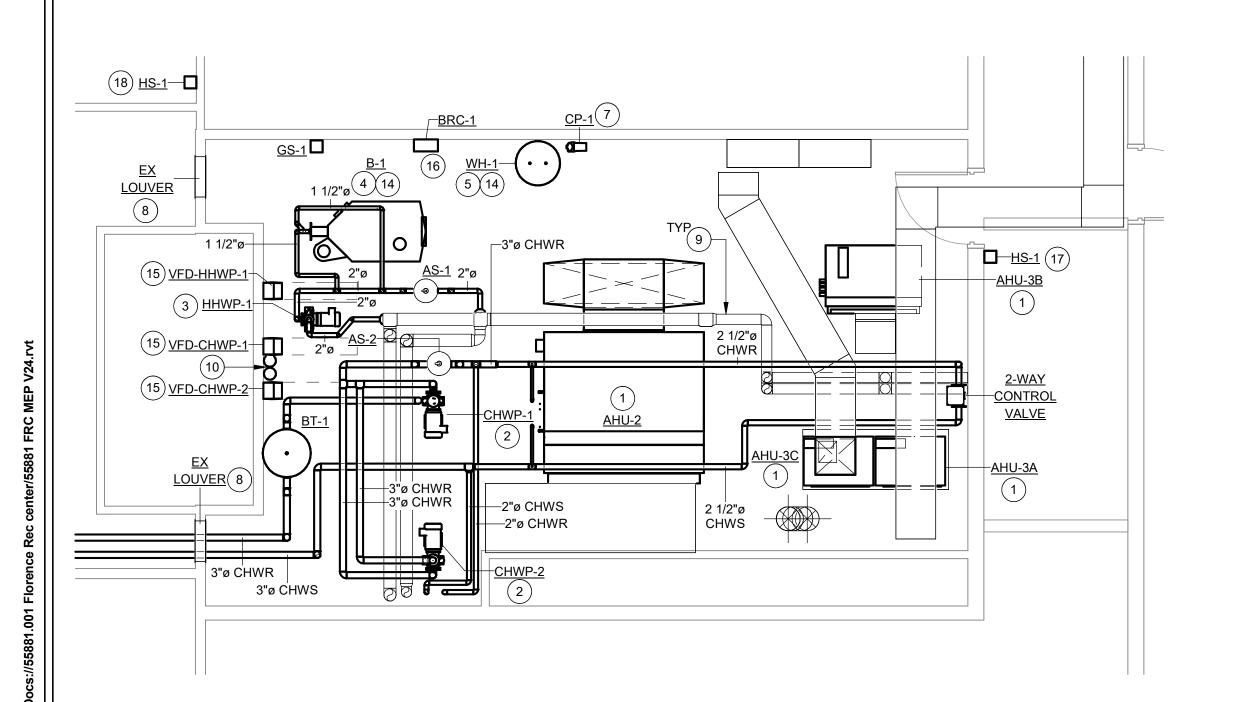


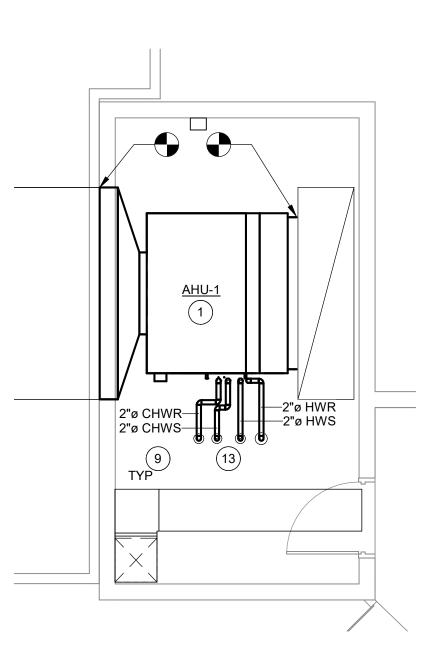




AVO:	55881.001
Issued:	04/2/2025
Drawn By:	MH
Checked By:	WF
Scale:	As indicated
Sheet Title	_
MECHANICAL	OVERALI DI AN

## MECHANICAL PLAN - CHILLER YARD 3/8" = 1'-0"





MECHANICAL HVAC PLAN - MECHANICAL ROOM 2



## **GENERAL NOTES:**

REFER TO SHEET M-002 FOR GENERAL MECHANICAL NOTES.

## KEY NOTES: #

### 1. FOR EACH NEW AHU:

- INSTALL NEW AHU ON EXISTING PAD AT LOCATION INDICATED. CONTRACTOR MAY ADJUST LOCATIONS SLIGHTLY TO ACCOMMODATE CONNECTION TO EXISTING DUCTS AND PIPING. NEW AHU'S MAY REQUIRE BREAKDOWN AND REBUILD BY THE CONTRACTOR (SEE NOTES ON AHU SCHEDULE).
  - TRANSITION NEW DUCTS AS REQUIRED TO MAKE DUCT CONNECTIONS TO EXISTING SUPPLY AND RETURN DUCTS (TYPICAL FOR ALL AHU'S). TRANSITIONS TO BE BASED ON APPROVED SUBMITTALS AND ON FIELD MEASUREMENTS OF EXISTING DUCTS. INSTALL FLEX CONNECTIONS AT SUPPLY AND RETURN OF EACH NEW
- AHU. SEE DETAILS. FIELD ROUTE AND INSTALL NEW INSULATED CHILLED AND HOT WATER PIPING TO AHU COIL CONNECTIONS. SEE DETAILS FOR REQUIRED
- CONTROL VALVE CONFIGURATIONS, VALVES AND DEVICE REQUIREMENTS, AND FITTINGS.
- EXISTING OUTSIDE AIR DROPS TO EACH AHU ARE TO REMAIN. DAMPERS ARE TO REMAIN AT EXISTING SETTINGS.
- REINSTALL ANY DUCT MOUNTED SMOKE DETECTORS THAT WERE REMOVED DURING DEMOLITION AND RECONNECT TO THE EXISTING ALARM SYSTEM AND ALSO INTERLOCK TO SHUT ASSOCIATED AHU ON ALARM.
- INSTALL NEW CONDENSATE PIPING ROUTED TO NEAREST FLOOR DRAIN. MINIMUM SIZE OF CONDENSATE PIPING TO BE 1-1/4" DIAMETER OR THE SIZE OF THE DRAIN PAN CONNECTION. WHICHEVER IS LARGER.
- INSULATE NEW PIPING, VALVES, AND FITTINGS COMPLETELY. COORDINATE WITH ELECTRICAL AND CONTROLS.

### 2. INSTALL NEW CHILLED WATER PUMPS AS FOLLOWS:

- INSTALL NEW PUMPS ON EXISTING CONCRETE PADS. INSTALL NEW INSULATED CHILLED WATER PIPING. SEE PUMP DETAILS FOR PIPE, VALVE, AND FITTING REQUIREMENTS. PROVIDE NEW PIPE AS REQUIRED TO MAKE COMPLETE CONNECTION TO NEW PUMP.
- INSULATE NEW PUMP, PIPING, VALVES, AND FITTINGS COMPLETELY. COORDINATE WITH ELECTRICAL AND CONTROLS.

### INSTALL NEW HEATING HOT WATER PUMP AS FOLLOWS:

- INSTALL NEW PUMP ON EXISTING CONCRETE PAD. REMOVE TEMPORARY CAP ON EXISTING PIPE THAT WAS INSTALLED DURING DEMOLITION. INSTALL NEW ISOLATION VALVES IN PLACE OF CAP.
- INSTALL NEW INSULATED HEATING HOT WATER PIPING BETWEEN THE PUMP AND THE NEW ISOLATION VALVES. SEE PUMP DETAILS FOR PIPE, VALVE, AND FITTING REQUIREMENTS. PROVIDE PIPE AS REQUIRED TO MAKE COMPLETE CONNECTION TO NEW PUMP.

### INSTALL NEW SEALED COMBUSTION GAS FIRED BOILER AS FOLLOWS:

### INSTALL BOILER ON EXISTING EQUIPMENT PAD.

- REMOVE TEMPORARY CAPS ON EXISTING HOT WATER PIPING AND ON EXISTING GAS PIPING THAT WERE INSTALLED DURING DEMOLITION. INSTALL IN PLACE OF CAPS, INSTALL NEW ISOLATION VALVES ON HEATING HOT WATER PIPING, AND NEW GAS COCK ON GAS PIPING. INSTALL NEW INSULATED HEATING HOT WATER PIPING, GAS PIPING
- VALVES, AND FITTINGS BETWEEN BOILER AND EXISTING PIPING CONNECTIONS. SEE BOILER DETAILS FOR PIPE, VALVE, AND FITTING REQUIREMENTS. REMOVE TEMPORARY CAP ON EXISTING GAS PIPE THAT WAS

PENETRATION TO BE WATERTIGHT. FLASH AND COUNTER-FLASH AS

- INSTALLED DURING DEMOLITION. INSTALL NEW GAS COCK IN PLACE OF CAP. GAS LINE SIZE TO MATCH EXISTING BOILER GAS PIPE SIZE. INSTALL NEW FLUE AND COMBUSTION INTAKE UP THRU ROOF. ROOF
- REQUIRED. PROTECT ROOF. INSULATE NEW PIPING, VALVES, AND FITTINGS COMPLETELY.
- COORDINATE WITH ELECTRICAL AND CONTROLS.

## INSTALL NEW DOMESTIC WATER HEATER AS FOLLOWS:

- MOUNT WATER HEATER ON FLOOR WITH DRIP PAN BENEATH. CONNECT TO EXISTING CW AND HW PIPING (MATCH EXISTING SIZES). INSTALL NEW PIPING, VALVES AND FITTINGS AS INDICATED ON DETAILS.
- EXISTING EXPANSION TANK AND VALVED CONNECTION IS TO REMAIN. INSTALL NEW GAS LINE AND CONNECT TO EXISTING GAS LINE ENTERING AT WALL LOUVER. PROVIDE A QUARTER TURN GAS
- SHUTOFF VALVE. INSTALL NEW FLUE AND COMBUSTION INTAKE UP THRU ROOF. ROOF PENETRATION TO BE WATERTIGHT. FLASH AND COUNTER-FLASH AS REQUIRED. PROTECT ROOF.
- INSULATE NEW PIPING, VALVES, AND FITTINGS COMPLETELY.
- COORDINATE WITH ELECTRICAL.

## INSTALL NEW AIR-COOLED CHILLER AS FOLLOWS:

- INSTALL CHILLER IN IN CHILLER YARD AS INDICATED. CHILLER TO BE LEVEL, WITH ELASTOMERIC ISOLATORS BENEATH CHILLER FRAMING.
- INSTALL NEW INSULATED CHILLED WATER PIPING. SEE DETAILS FOR PIPE, VALVE, AND FITTING REQUIREMENTS.
- INSULATE, PIPING, VALVES, AND FITTINGS COMPLETELY.
- COORDINATE WITH ELECTRICAL AND CONTROLS.

## 7. INSTALL NEW DOMESTIC HOT WATER CIRCULATING PUMP AS FOLLOWS:

- MOUNT PUMP IN-LINE. PROVIDE REDUCERS AND ENLARGERS AS
- PROVIDE VALVES AND FITTINGS AS DETAILED.
- COORDINATE INSTALLATION OF AQUASTAT AND TIMER WITH DIVISION

- 8. AT EXISTING WALL LOUVERS, INSTALL INSULATED TWO-SIDED GALV. SHEET
- - BLANKOFF OF LOUVER WHERE CHILLED WATER LINES PENETRATE IS SERVING AS VENTILATION AIR INTAKE FOR AHU-2, 3A, 3B, AND 3C IS

The Q

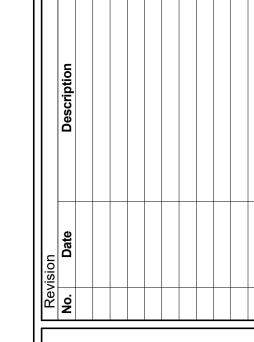
250

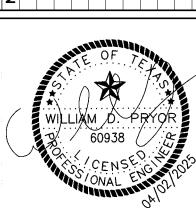
- EACH BLANKOFF IS TO ALLOW FOR PIPE AND CONDUIT PENETRATIONS. ALL PIPE AND CONDUIT PENETRATIONS ARE TO BE SEALED AIRTIGHT. THIS INCLUDES CHILLED WATER PIPING, GAS PIPING, ELECTRICAL CONDUITS, AND OTHER PENETRATIONS.
- PERIMETER OF EACH BLANKOFF IS TO BE SEALED AIRTIGHT.
- FOR EXISTING AND NEW CHILLED WATER AND HEATING HOT WATER PIPING, INSTALL STICK-ON IDENTIFICATION LABELS THAT IDENTIFY THE FOLLOWING:
- CHILLED WATER SUPPLY AND DIRECTION OF FLOW. CHILLED WATER RETURN AND DIRECTION OF FLOW.
- HEATING HOT WATER SUPPLY AND DIRECTION OF FLOW. HEATING HOT WATER SUPPLY AND DIRECTION OF FLOW.
- 10. ASSURE NEW SHOT FEEDERS ARE CONNECTED TO PUMPING SYSTEMS. SEE DETAILS AND ONE LINE DIAGRAMS.
- 12. FIELD LOCATE EXPANSION TANKS FOR CHILLED AND HEATING HOT WATER SYSTEMS, WITH TANKS PIPED AS SHOWN ON RESPECTIVE PIPING DIAGRAMS AS INDICATED ON M-401 AND M-402. SEE DETAILS FOR ADDITIONAL REQUIREMENTS.
- AT AHU-1, CONNECT NEW CHW AND HHW PIPES TO VALVED EXISTING PIPES UP THROUGH FLOOR AND FIELD ROUTE TO COIL CONNECTIONS. SEE
- 15. VFDS SHALL BE FURNISHED BY MECHANICAL CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR. FIELD COORDINATE FINAL LOCATION OF VFDS.
- APPROXIMATE LOCATION OF NEW BRC-1. WALL MOUNT GAS DETECTION CONTROL PANEL, BRC-1, +/- 48 INCHES TO BOTTOM OF PANEL. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER REQUIREMENTS. REFER TO MECHANICAL CONTROLS DRAWINGS FOR INTERLOCK TO BOILER SHUT-DOWN. FIELD COORDINATE FINAL LOCATION.
- 17. WALL MOUNTED HORN/STROBE ASSEMBLY.
- EXTERIOR WALL MOUNTED HORN/STROBE ASSEMBLY FOR GAS DETECTION

- METAL BLANK-OFF. INSULATION TO GRID TYPE, 2" THICK, R-10 MINIMUM.
- BLANKOFF OF LOUVER ADJACENT TO BOILER B-1 IS TO BE FULL SIZE OF LOUVER.
- TO BE FULL SIZE OF OPEN LOUVER AREA, BUT THE LOUVER SECTION NOT TO BE BLANKED OFF.

- 11. IN CHILLER YARD, SUPPORT NEW CHILLED WATER PIPING WITH PRE-MANUFACTURED PIPE SUPPORTS.
- DETAILS FOR COIL PIPING REQUIEMENTS.
- 14. EXTEND GAS PIPING TO NEW BOILER AND NEW WH-1. MATCH EXISTING GAS PIPE SIZES TO EACH.
- PROVIDE A MINIMUM 3-FEET OF CLEARANCE IN FRONT OF EACH VFD.

- SYSTEM. DEVICE SHALL BE MOUNTED AT 78-INCHES ABOVE GRADE LEVEL OR SIDEWALK., DEVICE SHALL BE RATED FOR OUTDOOR APPLICATIONS. DEVICE SHALL BE MOUNTED ON EXTERIOR BUILDING WALL AT VISIBLE LINE OF SIGHT. FIELD COORDINATE FINAL LOCATION.



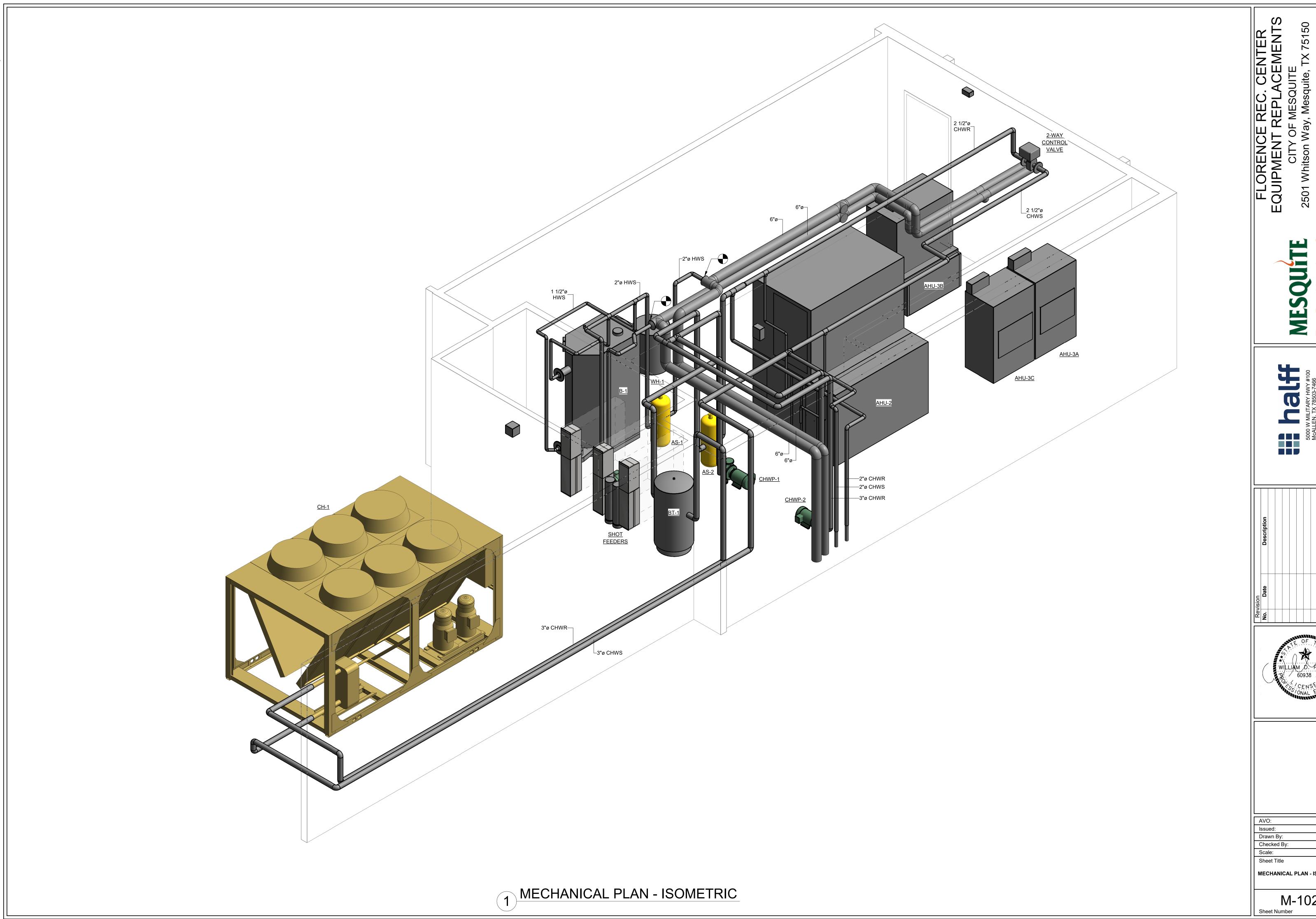


AVO:	55881.001
Issued:	04/2/2025
Drawn By:	МН
Checked By:	WP
Scale:	As indicated

Sheet Title **MECHANICAL ENLARGED PLANS** 

M-101

Sheet Number



100% CONSTRUCTION DOCUMENTS

5000 W M MCALLEN (956) 664



MECHANICAL PLAN - ISOMETRIC

MECHANICAL SCHEDULES

M-201

AIR HANDI ING UNITS

			UNIT							SUPPLY	FAN								С	HILLED WA	TER COIL								HEA	TING WATE	.R COIL				
	BASIS O	F DESIGN							FAN(S)				MOTOR (	EACH F	AN)	TOTAL	SENSIBLE	EAT	LAT			FLOW									FLOW	,			NOTES
MARK	MFR	MODEL	AIRFLOW CONFIG	SERVES	WEIGHT (LB)	DRIVE TYPE	FAN TYPE	QTY FANS	TOT. FLOW (CFM)	RPM BHF	ESP (in H20)	VOLTS/ PHASE	POWER (HP)	RPM	CONTROL	CAPACITY (MBH)	CAPACITY (MBH)	DB/WB (°F)	DB/WB (°F)	APD (in H20)	(°F) (°F	' RATE	WPD (ft H20)	ROWS	CONTROL VALVE	CAPACITY (MBH)	eat (°F)	LAT (°F)	APD (in H20)	(°F)	(°F) RATE (GPM)	WPD	ROWS	CONTROL VALVE	NOTES
AHU-1	TRANE	CSAA030	UPFLOW	GYM	2,646	DIRECT	PLENUM	2	12,500	1,882 8.05	1.0	208/3	10	1,882	2 BMS	474.9	355.1	81/67	55/54.5	0.82	44 56	79.1	4.77	8	2-WAY	570.4	61.8	104	0.20	150	120 38.0	3.07	2	2-WAY	1,2,3,4,5,6,7,8,9,10
AHU-2	TRANE	CSAA025	UPFLOW	LOBBY	2,622	DIRECT	PLENUM	2	11,200	1,839 8.05	1.0	208/3	10	1,839	BMS	425.5	318.1	81/67	55/54.5	0.65	44 56	70.1	5.55	8	2-WAY	511.1	61.8	104	0.19	150	120 34.1	1.94	2	2-WAY	1,2,3,4,5,6,7,8,9,10
HU-3A	MAGIC AIRE	BVE12ABAA	UPFLOW	MULTI-USE	-	DIRECT	CENT	1	1,200	1,261 0.69	0.4	115	0.75	1,261	I BMS	37.0	25.8	80/67	55/54.5	-	44 56	9.0	5.20	6	2-WAY	54.8	61.8	104	-	150	120 4.0	9.80	2	2-WAY	5,6,7,8,9,10,11
HU-3B	MAGIC AIRE	BMB30DCAA	DOWNFLOW	COMMUNITY RM	-	DIRECT	CENT	1	2,600	975 1.67	1.0	208/1	2	975	BMS	98.8	73.9	80/67	55/54.5	-	44 56	16.5	7.39	6	2-WAY	118.6	61.8	104	-	150	120 8.0	2.45	2	2-WAY	5,6,7,8,9,10,11
HU-3C	MAGIC AIRE	BVE12ABAA	UPFLOW	MULTI-USE	-	DIRECT	CENT	1	1,200	1,261 0.69	0.4	115	0.75	1,261	I BMS	37.0	25.8	80/67	55/54.5	-	44 56	9.0	5.20	6	2-WAY	54.8	61.8	104	-	150	120 4.0	9.80	2	2-WAY	5,6,7,8,9,10,11

- 1. FOR AHU-1 & AHU-2, PROVIDE 2-INCH DOUBLE WALL R-13 CONSTRUCTION FOR PANELS AND DOORS, WITH ALL AHU PANELS AND DOORS CONSTRUCTED OF GALVANIZED STEEL.
- 2. FOR AHU-1 & AHU-2, COORDINATE CONFIGURATION TO MATCH EXISTING AHUS WITH REGARD TO INTAKE AND DISCHARGE CONNECTIONS.
- 3. AHU-1 & AHU-2 REQUIRE FIELD BREAKDOWN AND RE-ASSEMBLY IN THE AHU ROOM. BREAKDOWN AND REASSEMBLY IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 4. FOR AHU-1 & AHU-2, PROVIDE EACH UNIT WITH FACTORY MOUNTED VFD.
- 5. PROVIDE EACH UNIT WITH FILTER FRAME AND 2" PLEATED MERV 8 FILTERS. FILTER FRAME TO HAVE HINGED SIDE DOOR FOR FILTER ACCESS.
- 6. ALL ACCESS DOORS (INCLUDING FILTER ACCESS) ARE TO BE HINGED.
- 7. MAXIMUM FACE VELOCITY ON ALL COOLING COILS IS 525 FPM.
- 8. UNLESS OTHERWISE INDICATED, EACH AHU IS DRAW-THRU CONFIGURATION POSITION 1 FILTER, POSITION 2 COOLING COIL, POSITION 3 HEATING COIL, POSITION 4 FAN SECTION.
- 9. INTERLOCK AHU'S VIA BMS TO DE-ENERGIZE ON ANY FIRE ALARM/SMOKE DETECTION.
- 10. PROVIDE EACH UNIT WITH FACTORY MOUNTED FREEZESTAT.
- 11. ALL AHU'S SHALL BE FACTORY CONFIGURED FOR SINGLE POINT POWER CONNECTIONS.

													A	AIR CO	OOLE	D CH	ILLEI	RS													
					UNIT								COMPRE	SSOR DATA					EVAPORA	ATOR DATA			СО	NDENSER D	ATA		ELE	CTRICAL DA	ATA		
	BASIS O	F DESIGN	NORMNAL	LINUT			QTY	LINUT	EER @	MEIOUT		001100	OTABTED	DI A	1.04			F\A/T	LVACT	FLOW	EVAP. &		AMBIENT	OT)(		VOLTO/	TOTAL				NOTES
MARK	MFR	MODEL	NOMINAL TONS	UNIT TYPE	SERVES	REFRIG.		UNIT EER/IPLV	ARI CONDITIONS	WEIGHT (LB)	QTY	COMPR. TYPE	STARTER TYPE	RLA (EACH)	LRA (EACH)	OTHER	FLUID	EWT (°F)	LWT (°F)	FLOW RATE (GPM)	STRAINER WPD (ft H20)	OTHER	AIR TEMP (°F)	QTY FANS	OTHER	VOLTS/ PHASE	POWER (KW)	MCA	MOCP	OTHER	NOTES
CH-1	TRANE	CGAM	70	AIR COOLED	SEE PLANS	R-454B	2	9.143/15.95	9.143	5,194	6	SCROLL	ACROSS THE LINE	1A&2B-50.6	1A&2B-345	-	WATER	56.0	44.0	130.2	12.40	-	105.0	6	-	208/3	85.69	313	400	-	ALL NOTES APPLY

- 1. SINGLE POINT POWER CONNECTION, UNIT MOUNTED STARTER
- 2. FIELD POWER INTERFACE SHALL BE TO WIRE LUGS..COORDINATE WITH MFR FOR LUG SIZE
- 3. COMPRESSOR ISOLATION SERVICE VALVES
- 4. CONDENSER COIL CORROSION PROTECTION PER ASTM-B117, 5000 HOUR SALT SPRAY RATING
- 5. PROVIDE BACNET CONTROLS DEVICE FOR INTERFACE WITH DDC SYSTEM
- 6. FACTORY INSULATE (ALL COLD PARTS)
- 7. PROVIDE PHASE REVERSAL PROTECTION.

						Pl	JMP SC	HEDULE							
	BASIS O	F DESIGN					FLUID DATA						MOTOR	DATA	
MARK	MFR	MODEL	TYPE	SERVES	IMPELLER SIZE	FLOW (GPM)	HEAD (FT)	RPM	FLUID	MINIMUM EFF%	MIN. NPSH REQ.	HP	AMPS	VOLTS/ PHASE	NOTES
CHWP-1	TACO	2007D	END SUCTION	CHW	7.20	130.2	43.6	1,760.0	H20	78	3 FT	3		208/3	1,2,3,4,5,6,7,9,10
CHWP-2	TACO	2007D	END SUCTION	CHW	7.20	130.2	43.6	1,760.0	H20	78	3 FT	3		208/3	1,2,3,4,5,6,7,9,10
HHWP-1	TACO	1207D	END SUCTION	HHW	7.05	90.2	47.8	1,760.0	H20	71	3 FT	2		208/3	1,2,3,4,5,6,7,9,10
CP-1	TACO	009 SF5	IN-LINE	DOM. HW CIRC		4.0			H20			1/8	1.4	120	8

- 1. ALL PUMP SELECTIONS ARE TO BE NON-OVERLOADING AT ANY POINT ON THE PUMP CURVE.
- 2. PROVIDE END SUCTION PUMPS WITH RIGID ALUMINUM COUPLING THAT REQUIRES NO FIELD ALIGNMENT. IF NOT AVAILABLE, LASER ALIGNMENT SHALL REQUIRED.
- 3. PROVIDE WITH NEMA PREMIUM EFFICIENCY, INVERTER DUTY, AND TEFC MOTOR.
- 4. PROVIDE LIFETIME WARRANTY ON PUMP ALIGNMENT.
- 5. PROVIDE SHAFT GROUNDING RINGS.
- 6. PROVIDE INERTIA BASE SIZED SPECIFICALLY FOR SUBMITTED PUMP.
- 7. PROVIDE INLINE PUMP ISOLATION BASE THAT MOUNTS TO PUMP FLANGE. PROVIDE VIBRO ACOUSTICS NEO+, NEOPRENE PAD BASE WITH STEEL FLANGE MOUNTS.
- 8. FOR CP-1: STAINLESS STEEL BODY, ALUMINUM STATOR HOUSING, STAINLESS STEEL CARTRIDGE, NON-METALLIC IMPELLER, CERAMIC SHAFT, CARBON BEARINGS, EPDM O-RINGS AND GASKETS. PROVIDE WITH AQUASTAT AND TIMER FOR CONTROL. 9. PROVIDE CHWP-1, CHWP-2, AND HHWP-1 WITH VFD. FIELD MOUNT VFD'S. NOTE THAT VFDS WILL BE CONTROLLED BY BAS SYSTEM. SEE BAS NOTES ON M-302.
- 10. PROVIDE ALL END-SUCTION PUMPS WITH END-SUCTION DIFFUSERS
- 11. PROVIDE VFD'S WITH INTEGRAL DISCONNECTS FOR CHWP-1, CHWP-2, AND HHWP-1

					HVA	C PIPING MATERIALS SC	HEDULE		
OFD/IOF	0175	DIDE	FITTINGS	IONITO	HANGERO		INSULATION		
SERVICE	SIZE	PIPE	FITTINGS	JOINTS	HANGERS	CONDITIONED SPACES	UNCONDITIONED SPACES	OUTDOORS	NOTES
Chilled Water Above Grade	0-2"	Type L Copper	Wrot copper	95-5 Solder	Copper Plated	1.5" Cellular Glass PVC Jacket(Exposed) / FSP Factory (Concealed)	1.5" Cellular Glass PVC Jacket(Exposed) / FSP Factory (Concealed)	3" Cellular Glass Alum Jacket	
Chilled Water Above Grade	2 1/2-4"	Blk. Stl. Sch 40 P. E.	Butt Weld	Welded	Galvanized	1.5" Cellular Glass PVC Jacket(Exposed) / FSP Factory (Concealed)	1.5" Cellular Glass PVC Jacket(Exposed) / FSP Factory (Concealed)	3" Cellular Glass Alum Jacket	
Condensate	All	Type K Copper	Wrot copper	95-5 Solder	Copper Plated	3/4" Flexible Elastomeric - PVC Jacket	3/4" Flexible Elastomeric - PVC Jacket	3/4" Flexible Elastomeric - Aluminum Jacket	

NOTES:

1. PROVIDE BOILER CONTROLLER WITH LATCHING RELAY TO STOP BOILER DURING ALARM. LATCHING RELAY TO HAVE MANUAL RESET PER TEXAS BOILER CODE COMPLIANCE.

2. GAS SENSOR SHALL BE WIRED FOR MULTIPLE HORN STROBES.

3. MOUNT HORN / STROBE WHERE SHOWN ON PLANS.

4. PROVIDE INITIÁL CALIBRATION CERTIFICATE OF CARBON MONOXIDE DETECTORS PER TEXAS BOILER CODES.

5. PROVIDE HS-SYNC FOR MULTIPLE HORN/ STROBE MODULES

					WA	TER H	EATE	RS					
	BASI	S OF DESIGN							<b>-</b> V-1101011	UNIFORM	ELECT	RICAL	
MARK	MFR	MODEL	TYPE	SERVES	FUEL	RATED CAPACITY	INPUT (MBH)	RECOVERY	EXPANSION TANK	ENERGY FACTOR	VOLTS/ PHASE	BRKR	NOTES
WH-1	RHEEM	PRO050-36N RH60 DV	DIRECT VENT	DOM. HOT WTR LOOP	N GAS	48 GALLON	36.0	36.4 GPH @ 90°F Rise	(SEE BELOW)	0.61	120	20	ALL NOTES APPLY
NOTES:													

1. PROVIDE W/HORIZONTAL ROOF VENT KIT W/ ALUMINUM VENT & CAP, ADJUSTING VENT KIT LENGTH FOR FINAL PLACEMENT OF HEATER (DO NOT EXCEED MFR MAX. VENTING DISTANCE).

2. PROVIDE WITH PREMIUM GRADE ANODE, DRAIN VALVE, T&P RELIEF VALVE, GLASS TANK, PIEZO IGNITION (NO STANDING PILOT LIGHT).

3. PROVIDE WITH OPTIONAL 10 YEAR WARRANTY.

4. ET-1 IS THE EXISTING EXPANSION TANK WHICH IS TO BE REUSED.

											GA	S FIRE	D BOIL	.ERS										
					UNIT									HEATING DATA					FLUE	DATA		ELECTRICAL DAT	A	
	BASIS OF	F DESIGN							ODED		MAN	HIGH	LOW	TUDN										
MARK	MFR	MODEL	LOCATION	TYPE	THERMAL EFFICIENCY	SERVES	FUEL TYPE	MINIMUM INLET PRESS. ("W.C.)	OPER. WEIGHT (LB)	FLUID	MAX INPUT (MBH)	FIRE OUTPUT MBH)	FIRE OUTPUT MBH)	TURN DOWN RATIO	EWT (°F)	EWT (°F)	FLOW RATE (GPM)	HEAD LOSS (FT)	COMB AIR	FLUE OUTLET	VOLTS/ PHASE	FLA (AMPS)	MCA (AMPS)	NOTES
B-1	LOCHINVAR	CREST FBN1501	MECH ROOM	SEALED COMBUSTION	96.2%	HEATING HOT WATER LOOP	NATURAL GAS	8"	2,307	WATER	1,500	1,443	-	25:1	120	150		12.3	8"	8"	120	-	13	ALL NOTES APPLY

1. MODULATING BURNER, FACTORY EQUIPPED FOR OUTDOOR RESET OPERATION, DIRECT SPARK IGNITION, 304L STAINLESS STEEL HEAT EXCHANGER, LEVELING LEGS, FACTORY BOILER SERVICE SWITCH, FIELD INSTALLED ASME SAFETY RELIEF VALVE, P&T GAUGE (LOOSE), OUTDOOR SENSOR, INTEGRATED CONNECTIONS FOR LOW WATER CUT OFF OR FLOW SWITCH, MANUAL RESET 1. HIGH TEMPERATURE LIMIT, WARM WEATHER SHUT DOWN, BUILT-IN CONDENSATE TRAP WITH NEUTRALIZATION, BLOCKED CONDENSATE SWITCH

2. OPTIONS: BMS GATEWAY, CONDENSATE NEUTRALIZATION KIT, VARIABLE SPEED BOILER CIRCULATOR. NOTE: BOILER CIRCULATOR TO PROVIDE LOOSE WITH BOILER AND FIELD INSTALLED PER MANUFACTURER RECOMMENDATIONS. CIRCULATOR IS CONTROLLED BY BOILERS INTERNAL CONTROLS.

3. ITEMS FURNISHED WITH BOILER PACKAGE BUT FIELD INSTALLED: ASME SAFETY RELIEF VALVE, P&T GAUGE (LOOSE), OUTDOOR AIR SENSOR, VENT AND INTAKE ASSEMBLIES.

4. REQUIRED STAMPS AND CERTIFICATIONS: ASME STAMPED ASME BOILER & PRESSURE VESSEL CODE, SECTION IV, DESIGN, CERTIFIED TO ANSI Z21.13, CSD-1 COMPLIANT.

5. WARRANTIES: ONE YEAR PARTS, ONE YEAR PARTS WARRANTY, 10 YEAR LIMITED HEAT EXCHANGER WARRANTY.

6. CONTRACTOR SHALL FURNISH FACTORY SUPPLIED CONCENTRIC PVC VENT TERMINATION.

					PLUM	BING PIPING MATERIAL	S SCHEDULE		
SERVICE	SIZE	DIDE	FITTINGS	IOINTE	HANCERS		INSULATION		
SERVICE	SIZE	PIPE	FITTINGS	JOINTS	HANGERS	CONDITIONED SPACES	UNCONDITIONED SPACES	OUTDOORS	NOTES
Domestic Water Above Grade	0-3"	Type L Copper	Propress	Compression	Copper plated	1/2" MINERAL FIBER	1/2" MINERAL FIBER	Heat Trace	
Makeup Water Above Grade	0-3"	Type L Copper	Propress	Compression	Copper plated	1/2" MINERAL FIBER	1-1/2" MINERAL FIBER	Heat Trace	Piping serving mechanical system makeup

## CHILLED WATER BUFFER TANK

- 1. EQUAL TO "TACO" BTH0125F-125NN
- 2. 125 GALLON CAPACITY, ASME, CODE SECTION VIII DIC.1
- 3. COMPLIANT, CARBON STEEL, RED OXIDE PRIMER FINISH.
- 4. BUFFER TANK TO FACTORY INSULATED.
- 5. PROVIDE NEW HOUSEKEEPING PAD
- 6. NET WEIGHT 300LBS, OPERATING WEIGHT 1,164LBS

## **EXPANSIONS TANKS**

## ET-1 (SERVES CHILLED WATER LOOP)

BELL & GOSSETT BLADDER STYLE, 20 GALLON. TANK SHALL BE PRE-CHARGED TO 12 PSI. CONTRACTOR TO SET INITIAL TANK PRESSURE TO HEIGHT OF BUILDING PLUS 5 PSI TO HOLD PRESSURE. TANK TO BE COMPLIANT WITH ASME SECTION VIII, DIVISION 1. FLANGED INLET & OUTLET. VESSEL SHALL BE RATED FOR 125 PSI MAX WORKING

## ET-2 (SERVES HEATING HOT WATER LOOP)

BELL & GOSSETT BLADDER STYLE, 30 GALLON. TANK SHALL BE PRE-CHARGED TO 12 PSI. CONTRACTOR TO SET INITIAL TANK PRESSURE TO HEIGHT OF BUILDING PLUS 5 PSI TO HOLD PRESSURE. TANK TO BE COMPLIANT WITH ASME SECTION VIII, DIVISION 1. FLANGED INLET & OUTLET. VESSEL SHALL BE RATED FOR 125 PSI MAX WORKING PRESSURE.

## AIR SEPARATORS

## AS-1 (SERVES CHILLED WATER LOOP)

BELL & GOSSETT ROLAIRTROL MODEL R-3F CENTRIFUGAL AIR SEPARATOR, WITH STRAINER. CHILLED WATER FLOW RATE OF 130.2 GPM. COMPLIANT WITH ASME SECTION VIII, DIVISION 1. FLANGED INLET & OUTLET. VESSEL SHALL BE RATED FOR 125 PSI MAX WORKING PRESSURE AND 350 DEG F MAX OPERATING TEMPERATURE.

## AS-2 (SERVES HEATING HOT WATER LOOP)

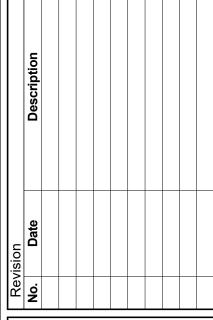
BELL & GOSSETT ROLAIRTROL MODEL R-3F CENTRIFUGAL AIR SEPARATOR, WITH STRAINER. HEATING HOT WATER FLOW RATE OF 90.2 GPM. COMPLIANT WITH ASME SECTION VIII, DIVISION 1. FLANGED INLET & OUTLET. VESSEL SHALL BE RATED FOR 125 PSI MAX WORKING PRESSURE AND 350 DEG F MAX OPERATING TEMPERATURE.

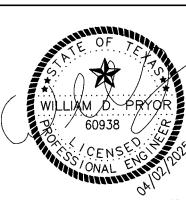
FLORENCE REC. CENTER
EQUIPMENT REPLACEMENTS
CITY OF MESQUITE

2501 Whitson Way, Mesquite, TX 75150









AVO:	55881.001
AVU:	00001.001
Issued:	04/2/2025
Drawn By:	МН
Checked By:	WP
Scale:	

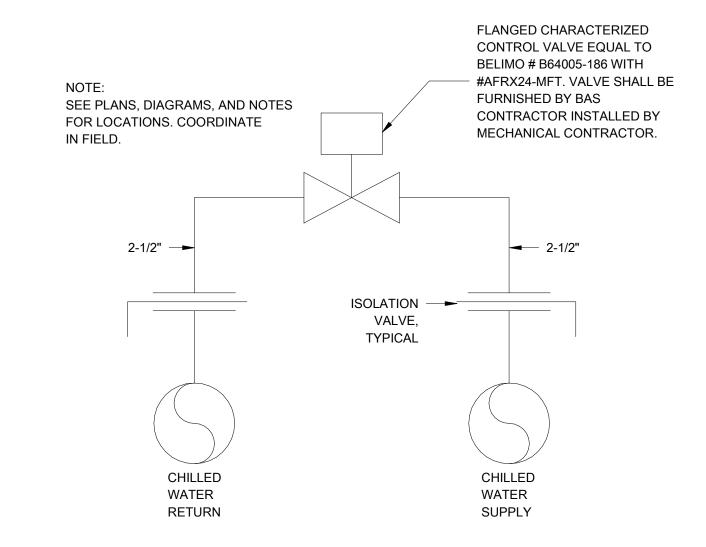
Sheet Title

MECHANICAL SCHEDULES

M-202
Sheet Number

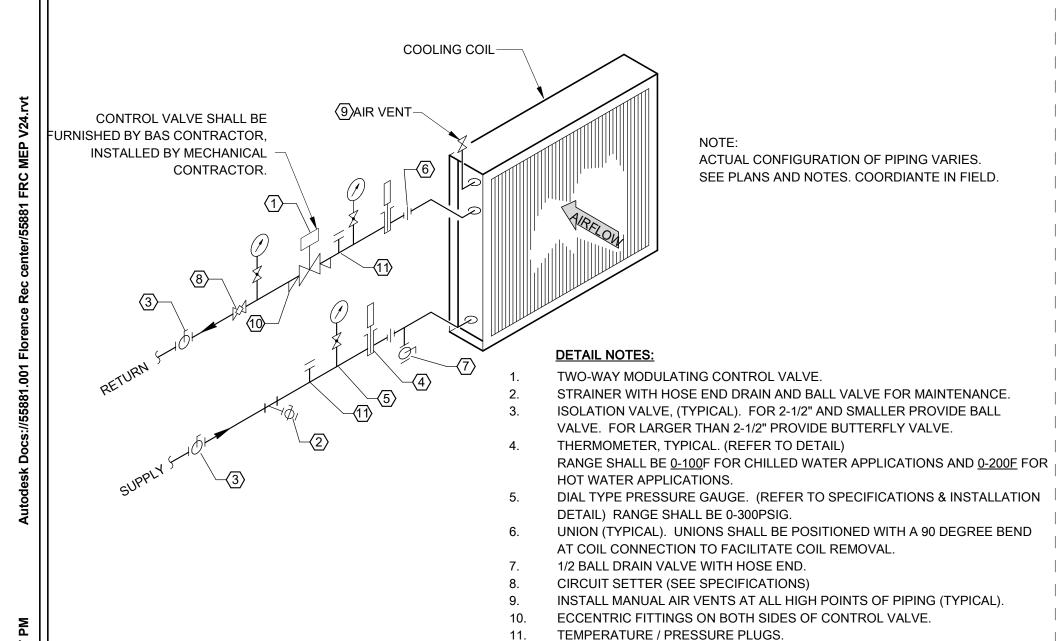
/2/2025 1:35:27 PM

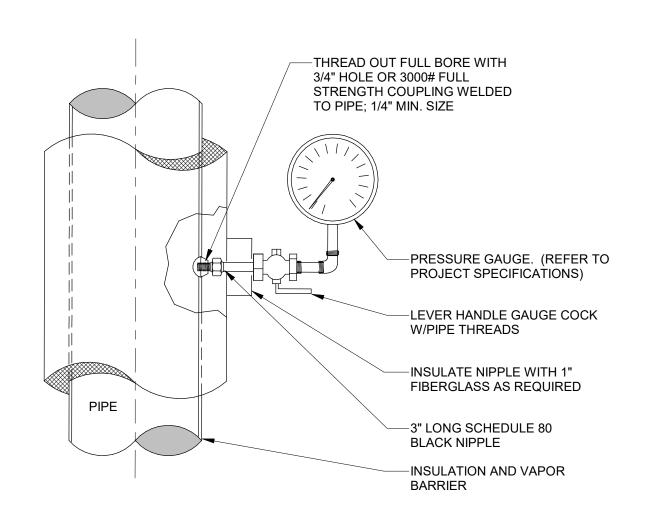
## 9 AUTOMATIC AIR VENT



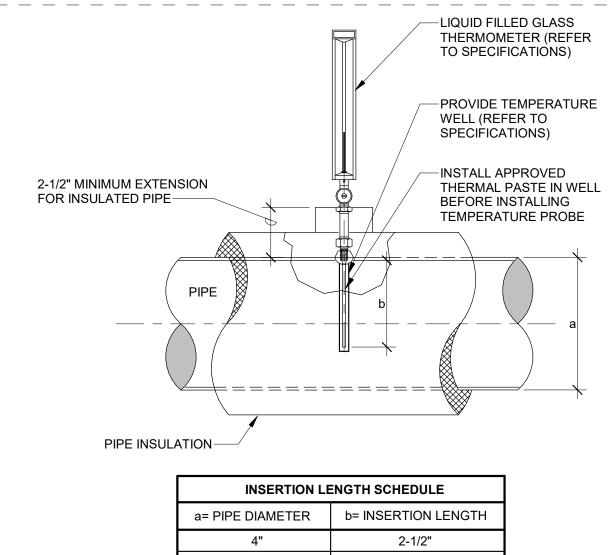
# 8 CHILLED WATER BY-PASS VALVE

7 CHILLED & HOT WATER COIL PIPING



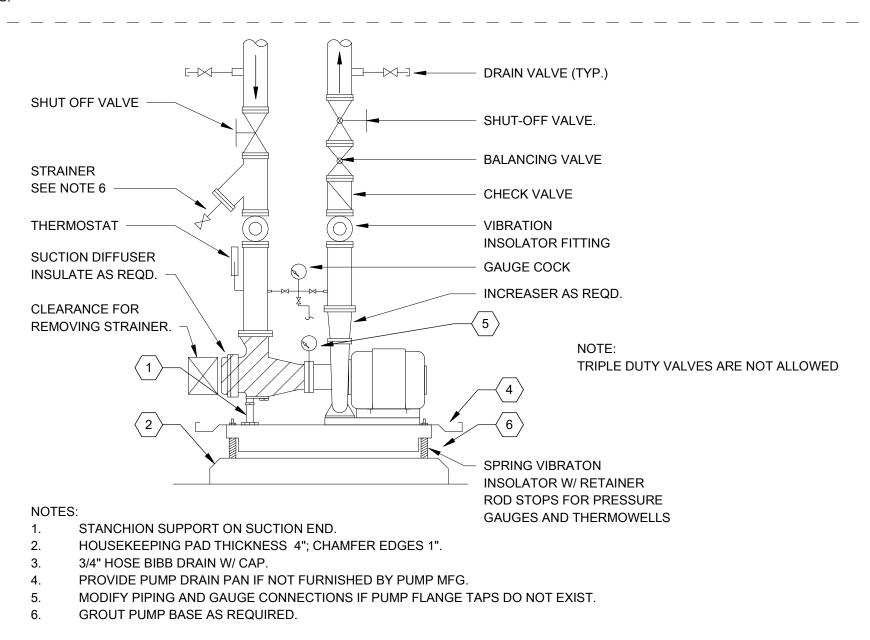


## PRESSURE GAUGE INSTALLATION DETAIL 8 N.T.S.

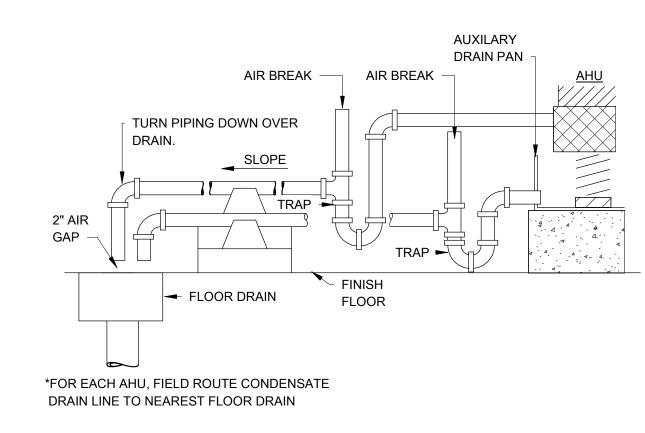


INSERTION LENGTH SCHEDULE		
a= PIPE DIAMETER	b= INSERTION LENGTH	
4"	2-1/2"	
6" AND 8"	5"	
10" AND LARGER	8"	

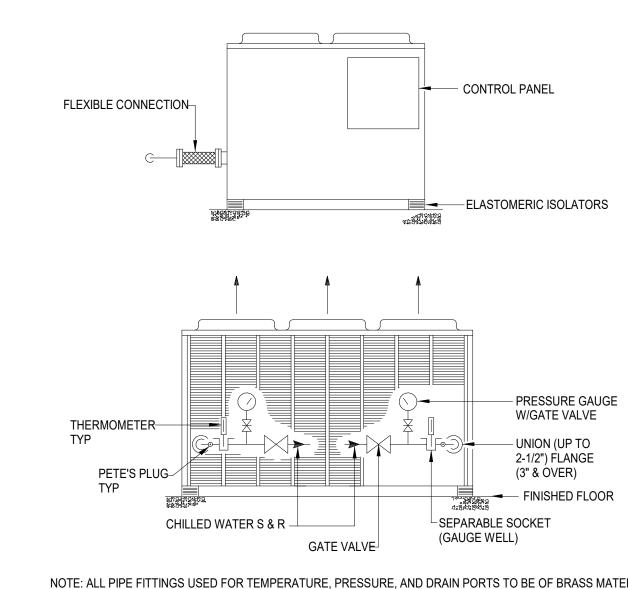
## THERMOMETER WELL INSTALLATION N.T.S.



## PIPING FOR END SUCTION PUMP WITH DIFFUSER N.T.S.

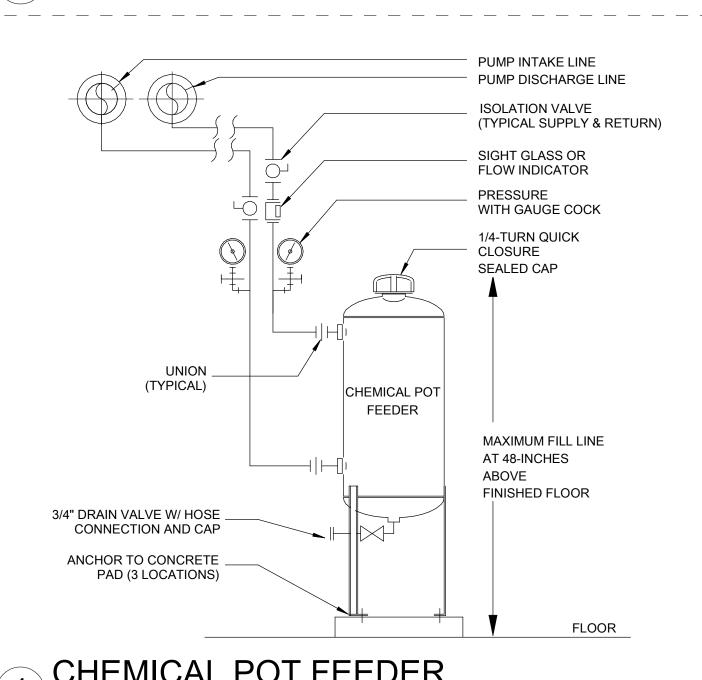


## (3) CONDENSATE DRAIN-FLOOR MTD.



NOTE: ALL PIPE FITTINGS USED FOR TEMPERATURE, PRESSURE, AND DRAIN PORTS TO BE OF BRASS MATERIAL

## AIR COOLED CHILLER SCHEMATIC N.T.S.

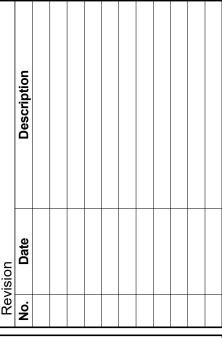


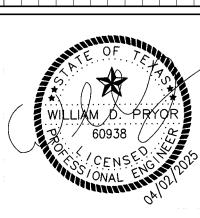
1 CHEMICAL POT FEEDER

FLORENCE EQUIPMENT



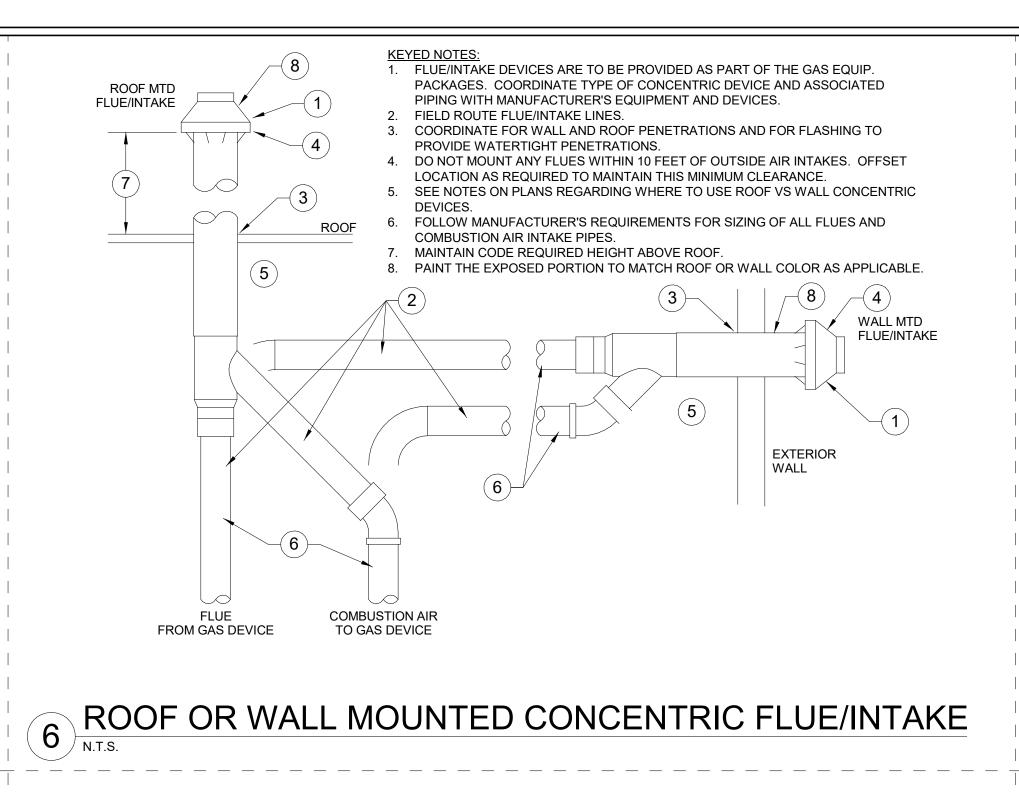


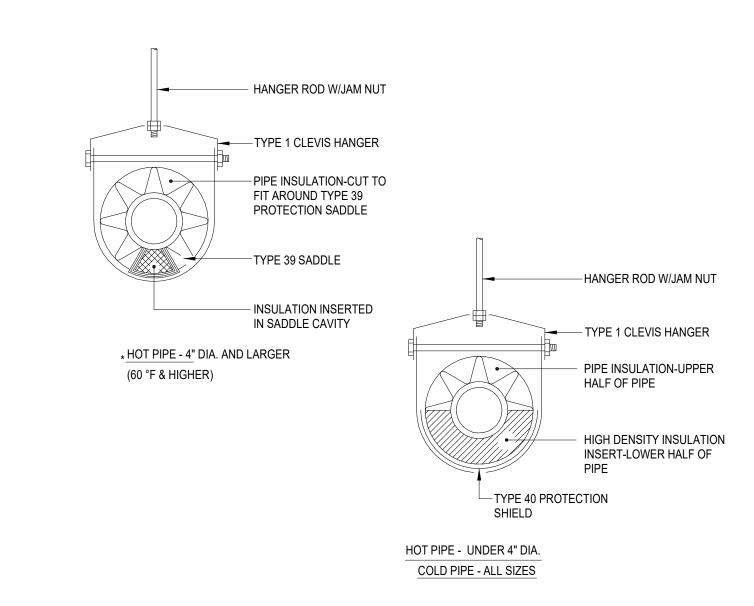




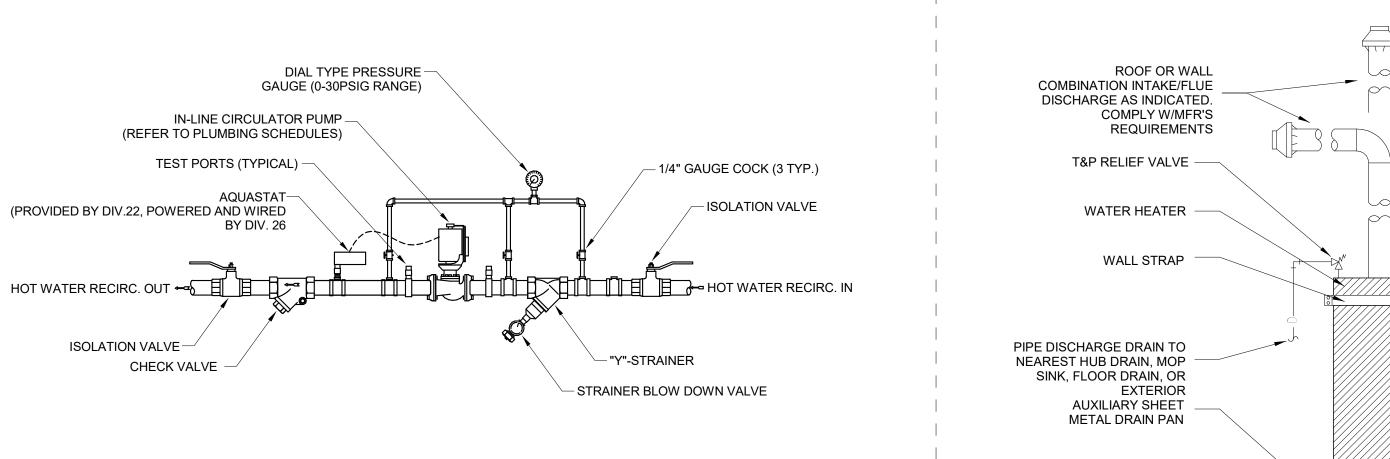


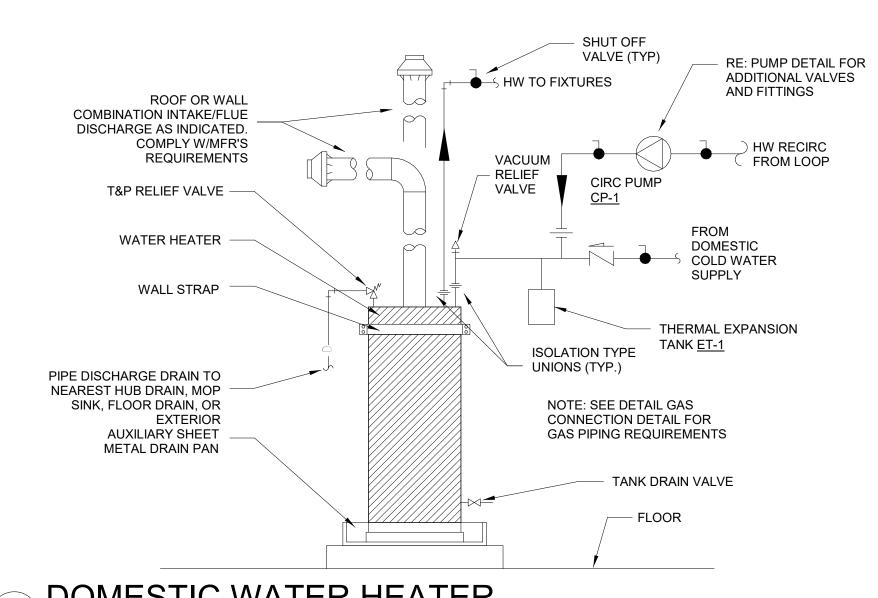
04/2/2025 Drawn By: Checked By: As indicated Sheet Title **MECHANICAL DETAILS** 

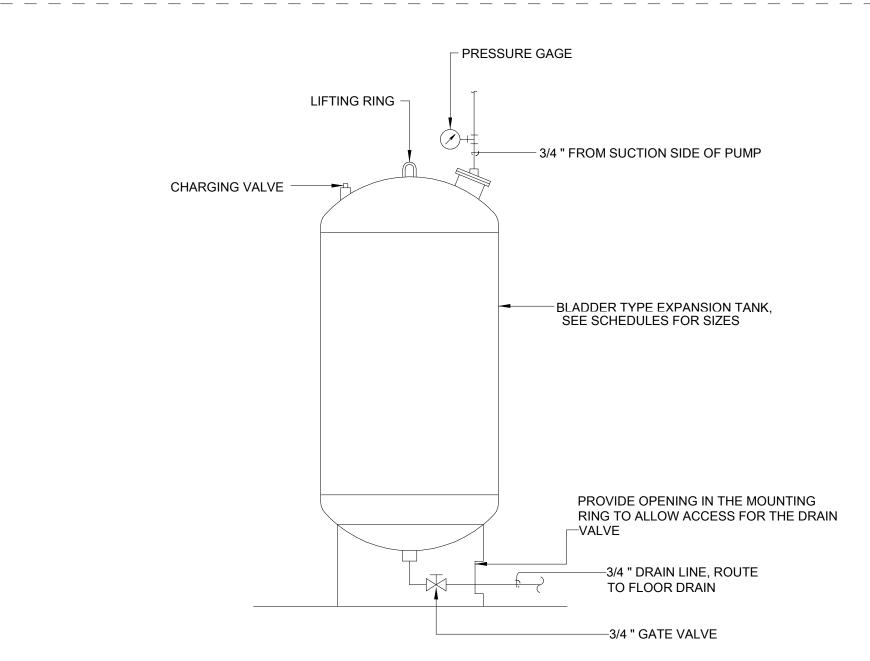


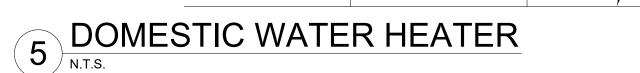


## PIPE HANGER INSULATED N.T.S.

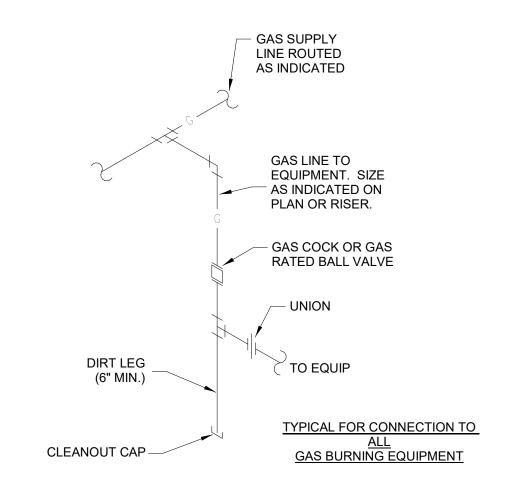








## 2 EXPANSION TANK N.T.S.



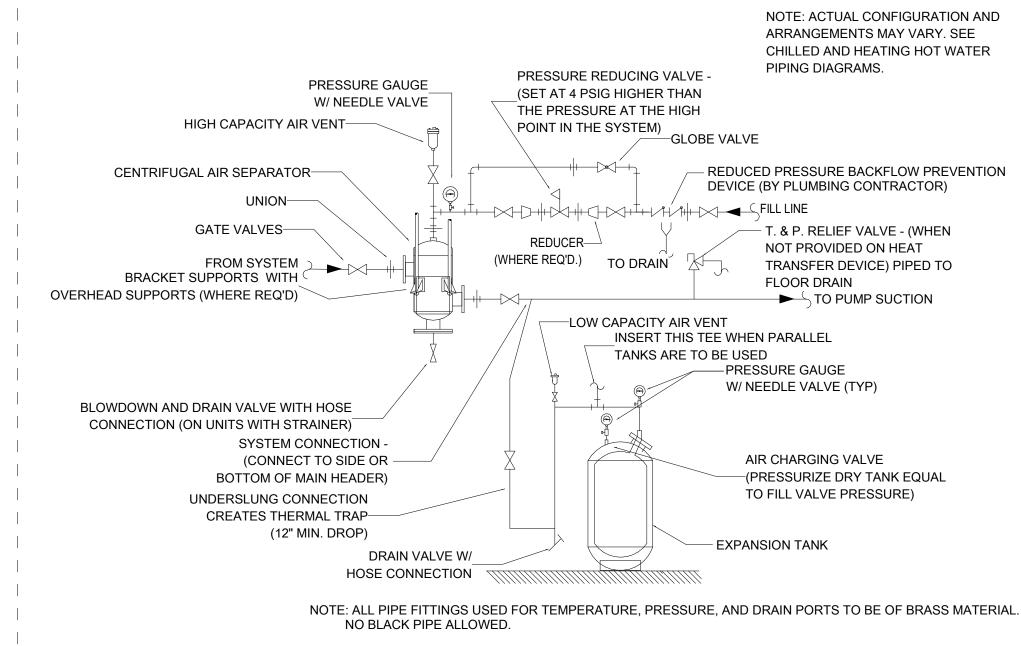
8 IN-LINE HOT WATER CIRCULATOR PUMP

NOTE: MAKE FINAL CONNECTION TO EQUIPMENT. COORDINATE CONNECTION AND LOCATION WITH ACTUAL EQUIPMENT SUPPLIED AND WITH SHOP DRAWINGS.

**HOT WATER** NOTE THAT BOILER CIRCULATOR MAY BE PIPING -SCHEDULED AS INTEGRAL OR FURNISHED WITH THE BOILER. SEE BOILER AND PUMP SCHEDULES. - ALT LOC'N FOR ASME PRESSURE GAS PIPING -VALVE IF NO CONN ON BOILER ISOLATION VALVE COMBUSTION AIR INTAKE AND FLUE. ROUTE TO CONCENTRIC INTAKE/FLUE. COORDINATE THERMOMETER MATERIAL WITH MFR'S T AND P PLUG — REQUIREMENTS DRAIN VALVE WITH HOSE CONNECTION ASME PRESSURE RELIEF - RELIEF DRAIN FULL SIZE TO FLOOR DRAIN GAS COCK -GAS FIRED BOILER - DRAIN VALVE MODIFY EXISTING PAD AS REQUIRED TO SUPPORT PIPING INDEPENDENTLY ACCOMODATE NEW BOILER IF NEEDED FROM EQP CONNECTIONS. PIPE -ISOLATION UNIONS (TYP) SUPPORT LOADS ARE NOT TO BE BORN BY FLEX CONNECTIONS OR EQP CONNECTION POINTS.

DIAGRAM IS SCHEMATIC ONLY. COORDINATE WITH SCHEDULED BOILER INFO AND MANUFACTURER'S DETAILS AND MAKE FINAL CONNECTIONS TO EQUIPMENT. COORDINATE INSTALLATION, CONNECTIONS AND LOCATIONS WITH ACTUAL EQUIPMENT SUPPLIED AND WITH MANUFACTURER'S REQUIREMENTS.

**BOILER PIPING** 



AIR SEPARATOR AND EXPANSION TANK

FLORENCE QUIPMENT R

2501

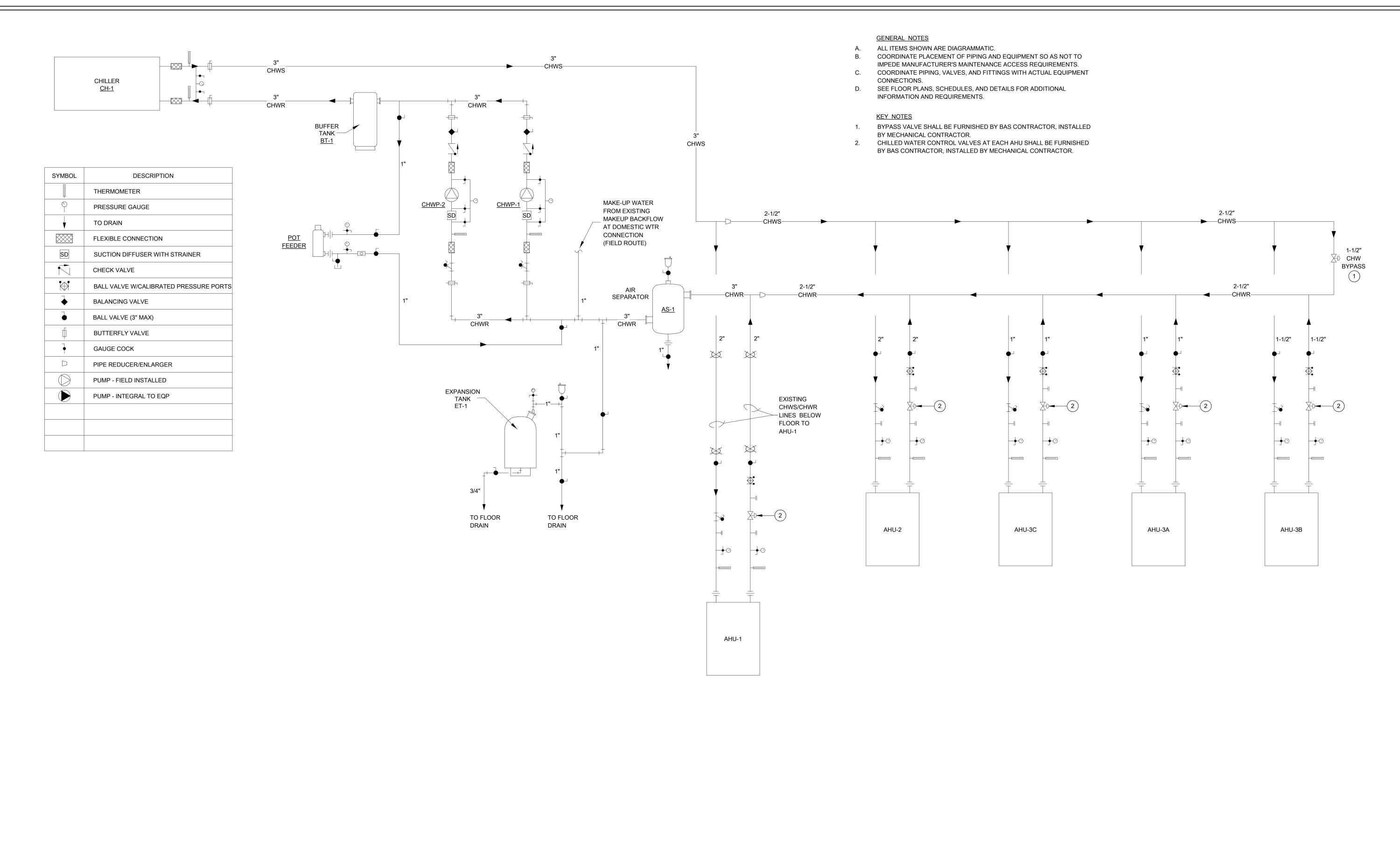
55881.001 Issued: 04/2/2025 Drawn By: Checked By: WP Scale: As indicated

Sheet Title **MECHANICAL DETAILS** 

M-302 Sheet Number

GAS CONNECTION

N.T.S.



FLORENCE REC. CENTER
EQUIPMENT REPLACEMENTS
CITY OF MESQUITE
2501 Whitson Way, Mesquite, TX 75150

MESQUITE T E X A S

5000 W MILITARY HWY #100 MCALLEN, TX 78503-7466 (956) 664-0286

No. Date Description



AVO: 55881.001

Issued: 04/2/2025

Drawn By: MH

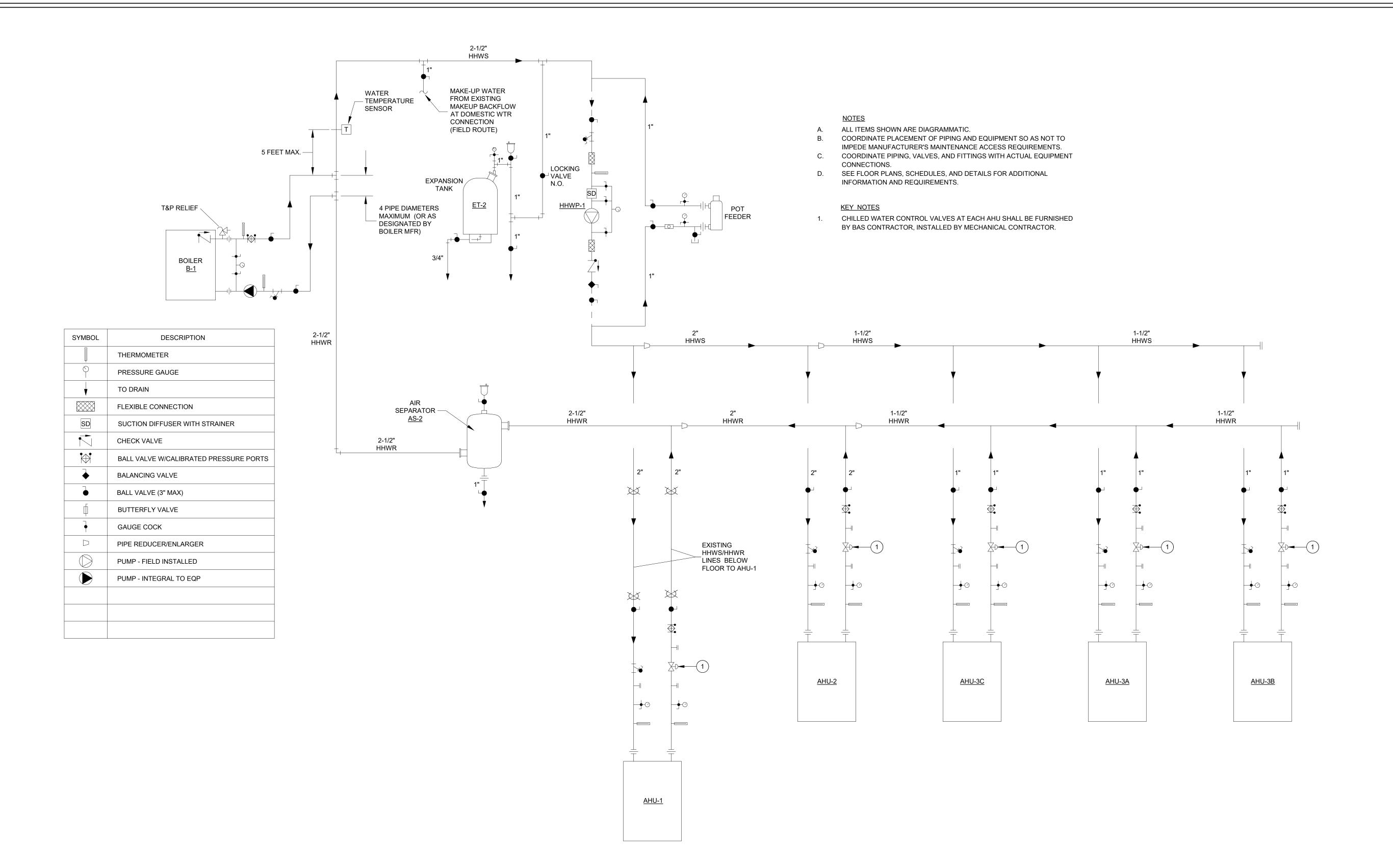
Checked By: WP

Scale: 1/8" = 1'-0"

Sheet Title

MECHANICAL CHILLED WATER
FLOW DIAGRAM

M-401
Sheet Number

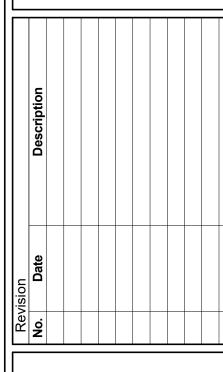


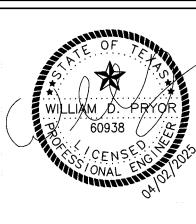
FLORENCE REC. CENTER
EQUIPMENT REPLACEMENTS
CITY OF MESQUITE
2501 Whitson Way, Mesquite, TX 75150

MESQUITE

T E X A S







AVO:	55881.001
Issued:	04/2/2025
Drawn By:	MH
Checked By:	WP
Scale:	1/8" = 1'-0"
Sheet Title	
MECHANICAL HOT WATER FLOW DIAGRAM	