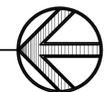


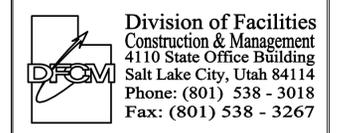
**MAIN FLOOR DEMOLITION PLAN**  
SCALE: 1/8" = 1'-0"



**SHEET NOTES**

- ① SEE LARGE SCALE SHEET MD401 FOR THIS AREA.
- ② THIS AREA NOT IN CONTRACT.
- ③ EXISTING HOT WATER CONVECTOR SHALL REMAIN.
- ④ EXISTING WINDOW MOUNT A/C SHALL REMAIN AT THIS TIME.
- ⑤ EXISTING HOT WATER SUPPLY AND RETURN RISERS SHALL REMAIN.
- ⑥ SIDEWALL KITCHEN EXHAUST FAN SHALL REMAIN.
- ⑦ EXISTING THERMOSTAT SHALL BE REMOVED ALONG WITH ALL EXPOSED WIRING TO BOILER ROOM CONTROL PANEL.
- ⑧ EXISTING HEATER SHALL REMAIN.

**GENERAL NOTE:**  
1. REMOVE EXISTING THERMOSTATS AND ZONE CONTROL VALVES SERVING THE EXISTING HOT WATER LOOPS.



Internet: <http://www.dfc.state.ut.us>

**CONSULTANTS**



**PROJECT NAME & ADDRESS**

**AMERICAN FORK ARMORY,  
REPLACEMENT OF WINDOW AIR  
CONDITIONER UNITS  
AND BOILER**  
DFCM No. 06142470  
American Fork, Utah

MARK	DATE	REVISION

PROJECT MANAGER:  
SLW  
DRAWN BY:  
LGD  
CHECKED BY:  
WP  
DATE:  
2/02/07  
WHW JOB NO.:  
06022



SHEET TITLE  
**MAIN FLOOR DEMOLITION PLAN**

SHEET NO.  
**MD101**

SHEET NOTES

- ① EXISTING HEATING WATER RISERS FROM BOILER ROOM SHALL REMAIN. SEE MD101 FOR CONTINUATION.
- ② EXISTING ROOF MOUNTED EVAPORATIVE COOLERS SHALL REMAIN.
- ③ EXISTING HOT WATER CONVECTORS SHALL REMAIN.
- ④ EXISTING WINDOW MOUNT A/C SHALL REMAIN AT THIS TIME.
- ⑤ EXISTING HEATING AND VENTILATING UNIT SHALL REMAIN. REMOVE EXISTING CIRCULATING PUMP, PIPING, AND COIL CONNECTIONS.
- ⑥ REMOVE EXISTING HOTWATER UNIT HEATER AND PIPING CONNECTIONS.
- ⑦ EXISTING CONTROLS FOR EXISTING EVAP. COOLERS IN THIS AREA SHALL REMAIN.
- ⑧ EXISTING THERMOSTAT FOR EXISTING UNIT HEATER SHALL BE REMOVED.

**GENERAL NOTE:**

1. REMOVE EXISTING THERMOSTATS AND ZONE CONTROL VALVES SERVING THE EXISTING HOT WATER LOOPS.



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CONSULTANTS



PROJECT NAME & ADDRESS

**AMERICAN FORK ARMORY,  
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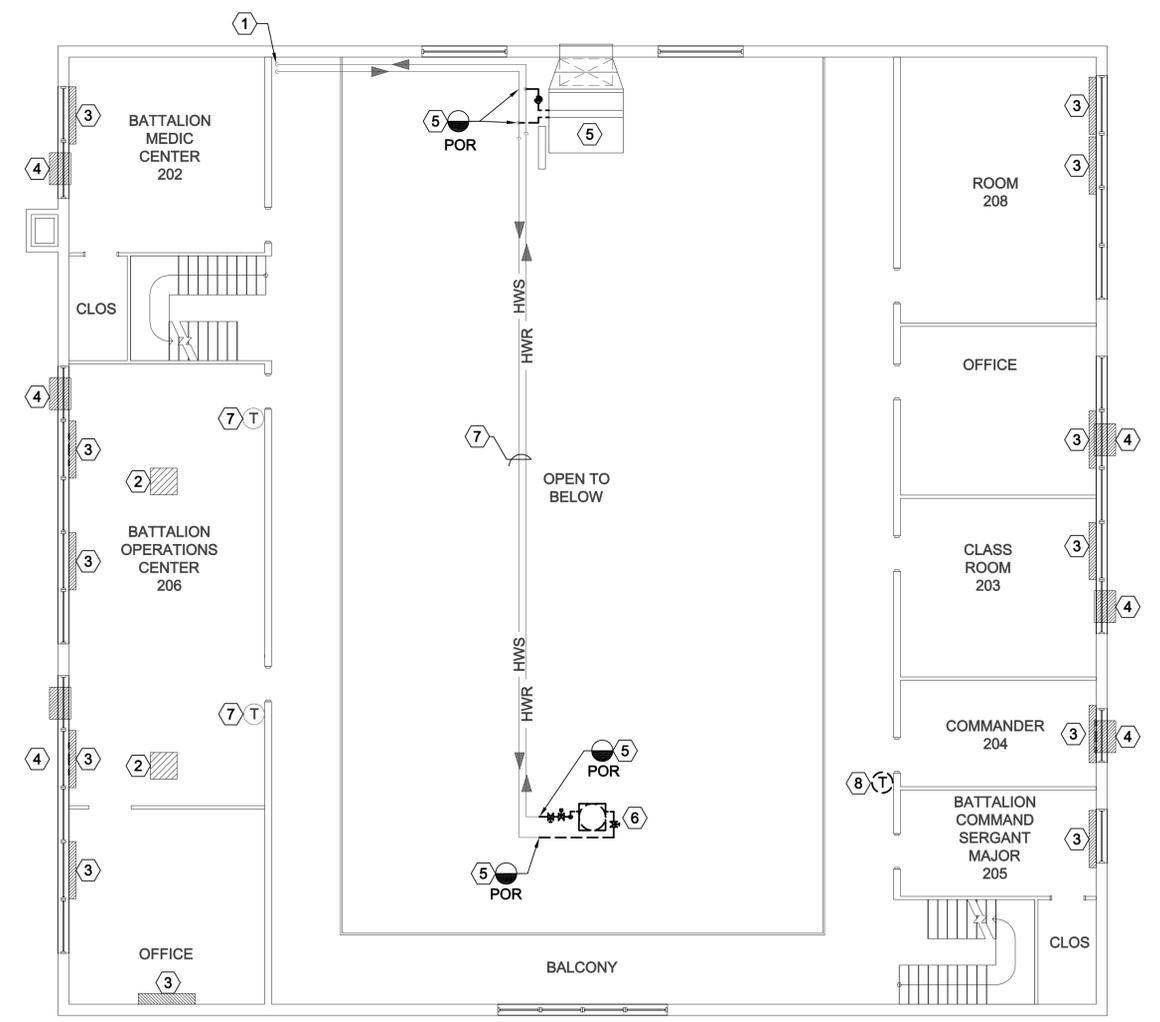
MARK	DATE	REVISION

PROJECT MANAGER: SLW  
DRAWN BY: LGD  
CHECKED BY: WP  
DATE: 2/02/07  
WHW JOB NO.: 06022  
SHEET TITLE



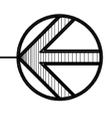
**BALCONY DEMOLITION PLAN**

SHEET NO. **MD102**



**BALCONY DEMOLITION PLAN**

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



SHEET NOTES

- ① REMOVE EXISTING HOTWATER BOILER, BREECHING, ELECTRICAL, CONTROLS, PIPING ETC. SEE PHOTOS C1 AND C2/MD403.
- ② REMOVE EXISTING HWR PIPING WITHIN BOILER ROOM INCLUDING VALVES, FITTINGS, HANGERS ETC. SEE PHOTOS ON SHEET MD403.
- ③ REMOVE EXISTING CHEMICAL PIPING. SEE PHOTO B3/MD403.
- ④ EXISTING GAS PIPING FROM METER TO UNIT HEATERS SHALL REMAIN.
- ⑤ EXISTING CHIMNEY SHALL REMAIN.
- ⑥ REMOVE HWR PIPING TO THIS POINT. LEAVE ENOUGH PIPING ON BOILER ROOM SIDE FOR CONNECTION TO NEW PIPING.
- ⑦ REMOVE EXISTING HWR PUMPS, SUPPORTS, DISCONNECTS, ELECTRICAL ETC. SEE PHOTO B2/MD403.
- ⑧ REMOVE EXISTING BREECHING AND FLUE.
- ⑨ REMOVE EXISTING GAS TRAIN AND PIPING BACK TO POINT SHOWN, INCLUDING ALL VALVES, FITTINGS, SUPPORTS ETC. SEE C3/MD403.
- ⑩ HOT WATER RETURN FROM ASSEMBLY HALL SHALL REMAIN.
- ⑪ EXISTING HWR THRU WALL AND CEILING FROM UNIT HEATER AND 2ND FLOOR CONVECTORS SHALL REMAIN.
- ⑫ REMOVE EXISTING COLD WATER MAKE-UP COMPLETE WITH PRV VALVE, SHUT-OFF VALVES, BACKFLOW PREVENTER, DRAINS ETC. SEE PHOTO B3/MD403.
- ⑬ REMOVE EXISTING FLOOR MOUNTED CHEMICAL POT FEEDER TANK AND ALL PIPING, SUPPORTS, VALVES, ETC. SEE PHOTO B3/MD403.
- ⑭ REMOVE EXISTING CULINARY WATER WITHIN 12" OF FLOOR. SEE PHOTO A2/MD403.

State of Utah  
Department of Administrative Services

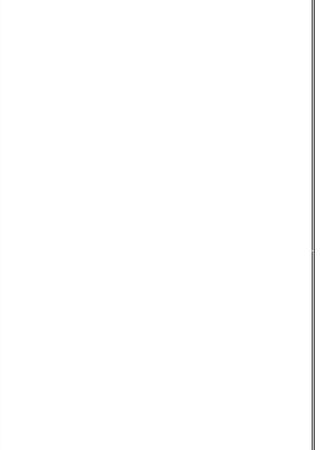
Division of Facilities  
Construction & Management  
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Fax: (801) 538 - 3267

Internet: <http://www.dfc.state.ut.us>



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EMAIL: [excellence@whw-engineering.com](mailto:excellence@whw-engineering.com)



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DFCM No. 06142470**  
American Fork, Utah

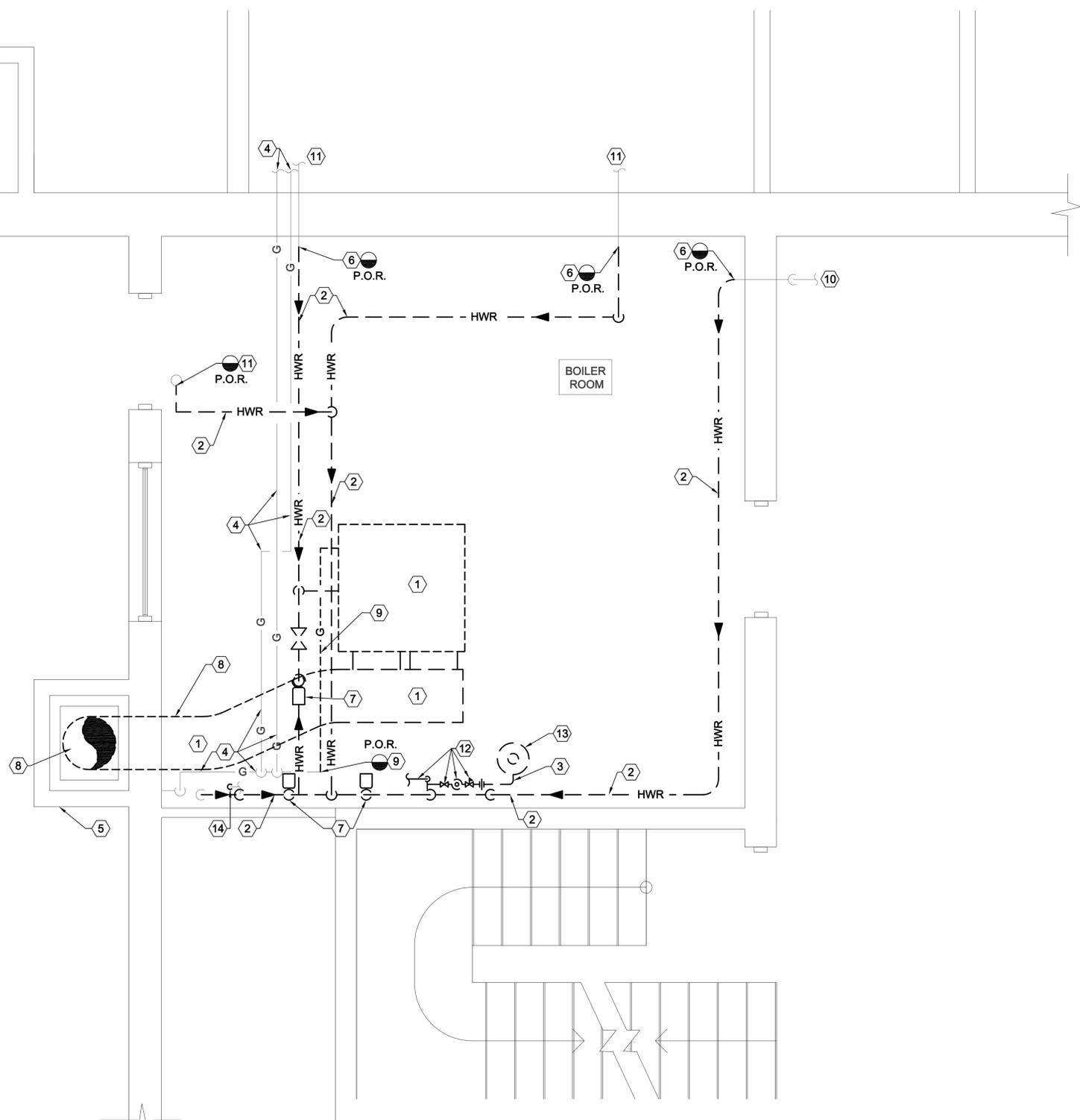
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SHEET TITLE  
**BOILER ROOM HWR PIPING  
DEMOLITION PLAN**

SHEET NO.  
**MD401**

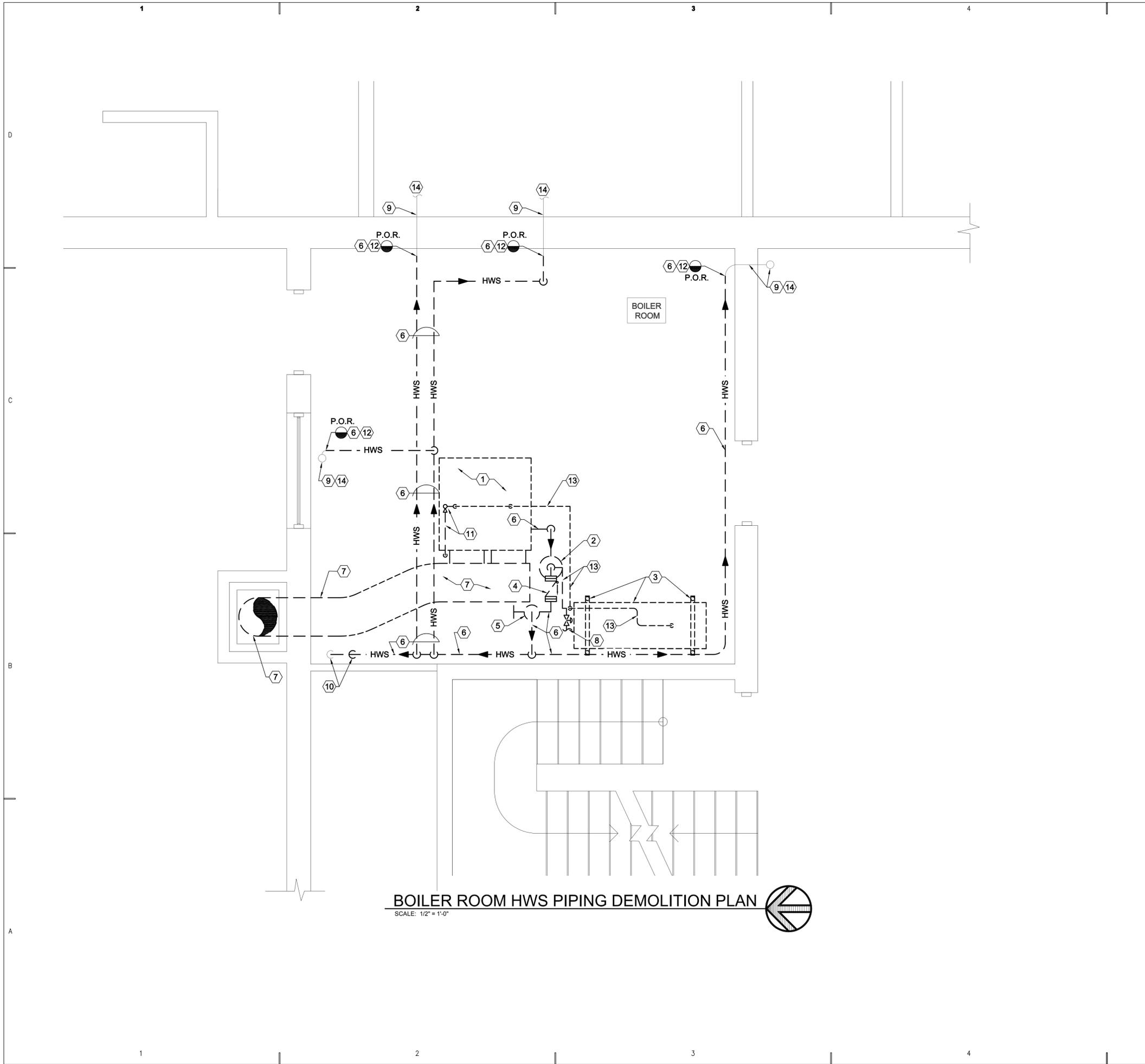


**BOILER ROOM HWR PIPING DEMOLITION PLAN**  
SCALE: 1/2" = 1'-0"

1 2 3 4

1 2 3 4

D  
C  
B  
A



SHEET NOTES

- ① REMOVE EXISTING BOILER AND ALL RELATED ACCESSORIES. SEE PHOTOS C1 AND C2/MD403.
- ② REMOVE EXISTING AIR SEPARATOR, HANGERS, ETC. SEE PHOTO B1/MD403.
- ③ REMOVE EXISTING HORIZONTAL COMPRESSION TANK AND ALL RELATED ACCESSORIES, HANGERS, SUPPORTS ETC. SEE PHOTO C4/MD403.
- ④ REMOVE EXISTING CHECK VALVE. SEE PHOTO B1/MD403.
- ⑤ REMOVE EXISTING GATE VALVE. SEE PHOTO C1/MD403.
- ⑥ REMOVE EXISTING HWS PIPING, VALVES, HEADER ETC. TO POINTS SHOWN.
- ⑦ REMOVE EXISTING BREECHING AND FLUE.
- ⑧ REMOVE EXISTING CHEMICAL FEED PIPING, VALVES ETC. SEE PHOTO B3/MD403.
- ⑨ EXISTING HWS PIPING SHALL REMAIN.
- ⑩ REMOVE DROPS TO WITHIN 3'-0" OF FLOOR. SEE PHOTO A2/MD403.
- ⑪ REMOVE EXISTING RELIEF VALVE AND PIPING. SEE PHOTO C1/MD403.
- ⑫ LEAVE ENOUGH ROOM TO CONNECT NEW PIPING TO EXISTING.
- ⑬ REMOVE EXISTING AIR RELIEF PIPING. SEE PHOTO B1/MD403.
- ⑭ EXISTING HWS THRU WALLS AND CEILING SERVING UNIT HEATER AND 2ND FLOOR CONVECTORS SHALL REMAIN.

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SHEET TITLE  
**BOILER ROOM HWS PIPING  
DEMOLITION PLAN**

SHEET NO.  
**MD402**

CONSULTANTS

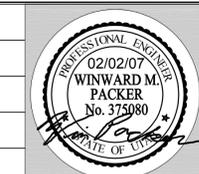


PROJECT NAME & ADDRESS

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DFCM No. 06142470  
American Fork, Utah

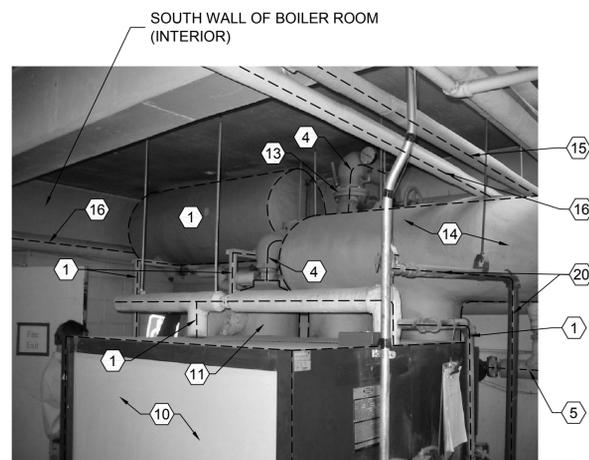
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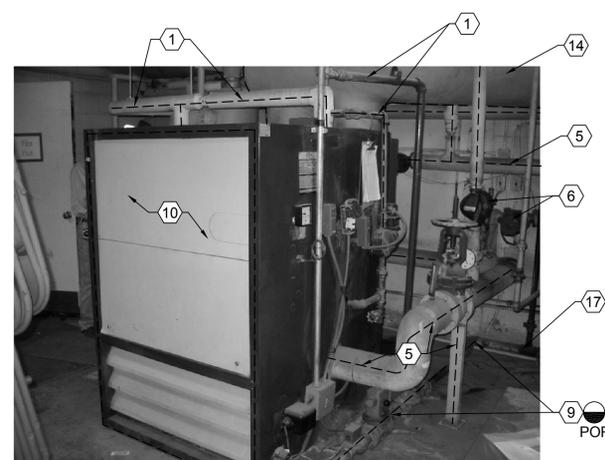


SHEET TITLE  
**BOILER ROOM  
PHOTOGRAPHS PIPING  
DEMOLITION PLAN**

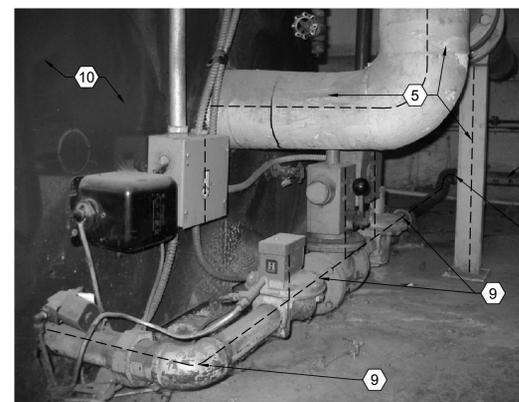
SHEET NO.  
**MD403**



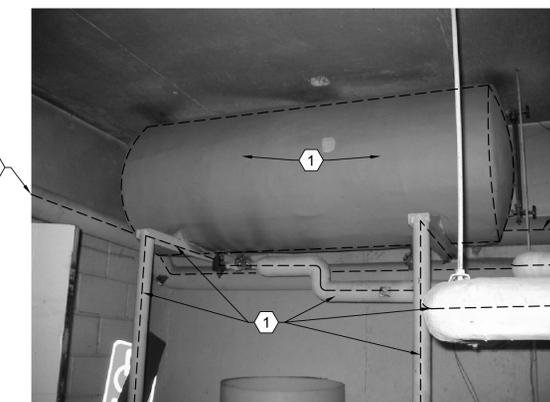
**C1** BOILER ROOM DEMOLITION  
LOOKING NORTH WEST  
SCALE: NONE



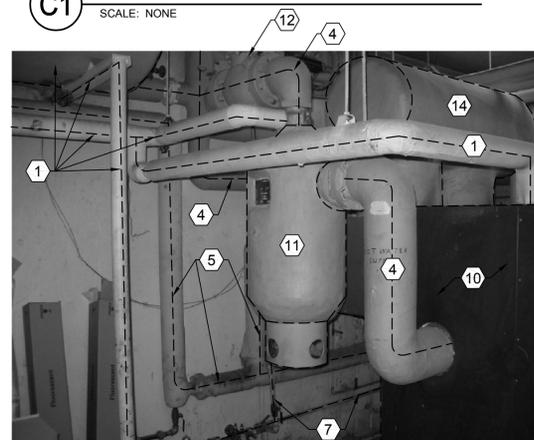
**C2** BOILER, HWS, HWR, AND  
GAS PIPING DEMOLITION  
SCALE: NONE



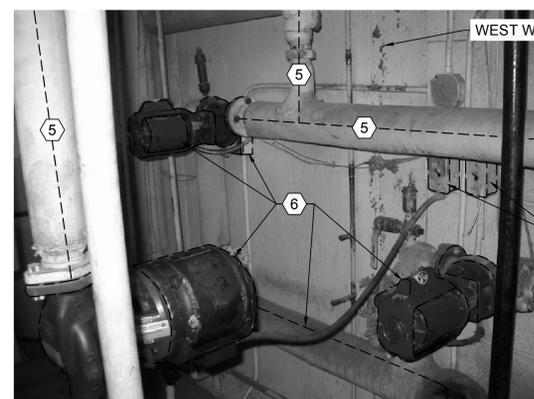
**C3** BOILER ROOM GAS  
PIPING DEMOLITION  
SCALE: NONE



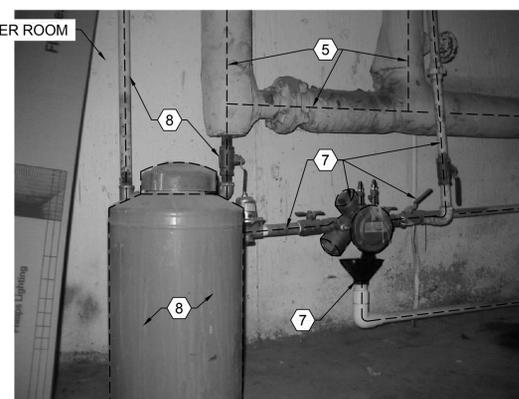
**C4** BOILER ROOM  
COMPRESSION AIR TANK DEMOLITION  
SCALE: NONE



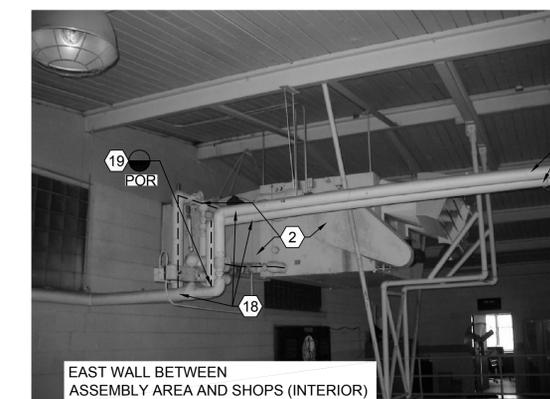
**B1** BOILER RM. HWS, HWR,  
AND AIR SEPARATOR DEMOLITION  
SCALE: NONE



**B2** BOILER RM. HWR  
PUMPS & PIPING DEMOLITION  
SCALE: NONE



**B3** BOILER RM. MAKE-UP WATER  
& CHEMICAL TANK DEMOLITION  
SCALE: NONE

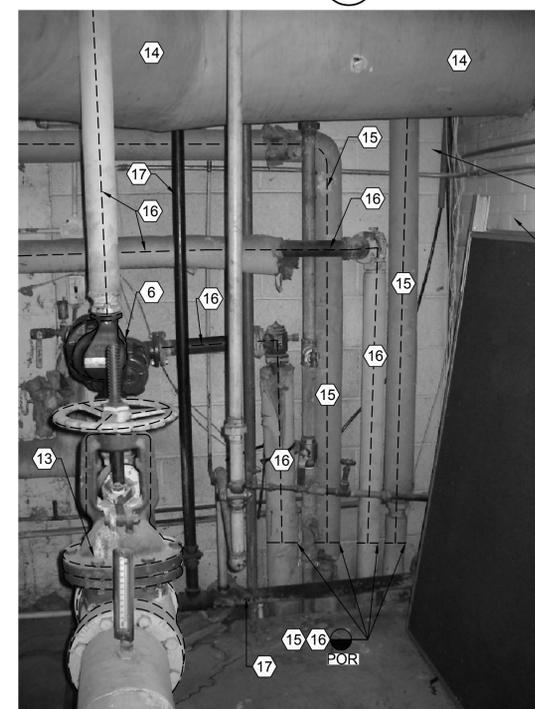


**B4** ASSEMBLY AREA  
AIR HANDLING UNIT PIPING DEMOLITION  
SCALE: NONE



**A1** ASSEMBLY AREA UNIT HEATER  
SCALE: NONE

ASSEMBLY AREA  
LOOKING WEST



**A2** BOILER ROOM PIPING DEMOLITION LOOKING NORTH  
SCALE: NONE

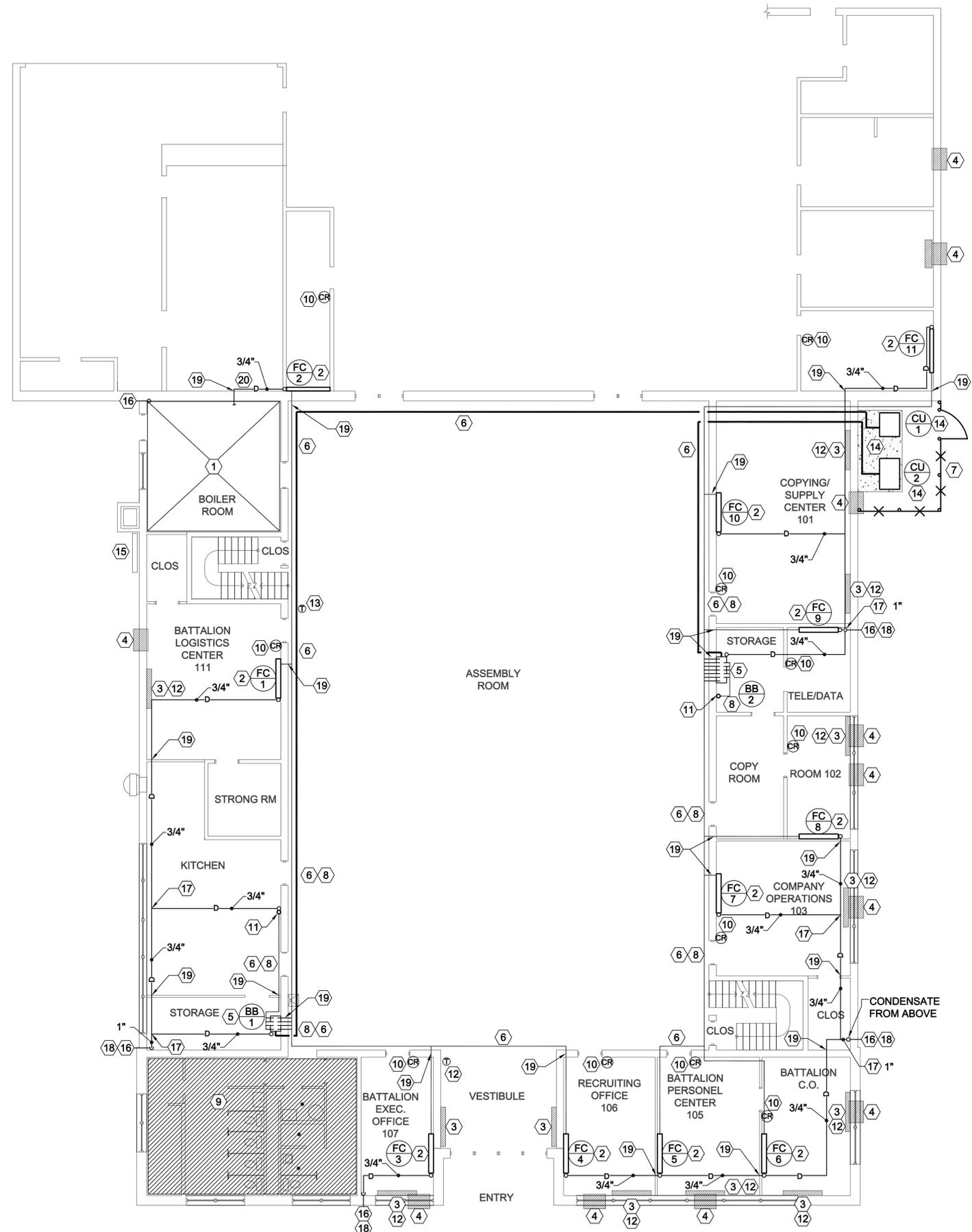
WEST WALL OF  
BOILER ROOM  
NORTH EAST  
WALL OF  
BOILER ROOM  
(EXTERIOR  
WALL)

SHEET NOTES CONT.:

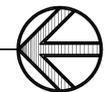
- 11 REMOVE EXISTING AIR SEPARATOR.
- 12 REMOVE EXISTING CHECK VALVE.
- 13 REMOVE EXISTING GATE VALVE.
- 14 REMOVE EXISTING BOILER BREACHING INCLUDING HANGERS, SUPPORTS ETC.
- 15 REMOVE HOT WATER SUPPLY TO WITHIN 3'-0" OF FLOOR. RE-USE EXISTING UNIONS IF POSSIBLE.
- 16 REMOVE HOT WATER RETURN PIPING WITHIN 3'-0" OF FLOOR. RE-USE EXISTING UNIONS IF POSSIBLE
- 17 EXISTING GAS PIPING SHALL REMAIN TO POINT SHOWN ON PHOTO C3 THIS SHEET. GAS PIPING RISER AND SUPPLY TO GAS FIRED UNIT HEATERS IN SHOP AREA SHALL REMAIN.
- 18 HOT WATER SUPPLY AND RETURN IN ASSEMBLY AREA SHALL REMAIN EXCEPT FOR NEW PIPING AT COIL CONNECTIONS TO AIR HANDLING UNIT AND NEW UNIT HEATER.
- 19 NEW PIPING, VALVES ETC. AT COIL CONNECTIONS. SEE COIL PIPING DETAILS SHEET C1/ME502 FOR UNIT HEATER AND B1/ME501 FOR AIR HANDLING UNIT.
- 20 REMOVE EXISTING RELIEF VALVE AND PIPING.

SHEET NOTES:

- 1 REMOVE EXISTING COMPRESSION TANK, AIR PIPING, VALVES, PIPE AND STEEL SUPPORTS ETC.
- 2 EXISTING ASSEMBLY HALL AIR HANDLING UNIT SHALL REMAIN. REMOVE COIL PIPING INCLUDING PUMP.
- 3 REMOVE EXISTING VERTICAL UNIT HEATER, COIL PIPING, CONNECTIONS, CONTROLS ETC.
- 4 REMOVE EXISTING HOT WATER SUPPLY PIPING, VALVES, FITTINGS, HANGERS, SUPPORTS, ETC.
- 5 REMOVE EXISTING HOT WATER RETURN PIPING, VALVES, FITTINGS, HANGERS, SUPPORTS, ETC.
- 6 REMOVE EXISTING HOT WATER CIRCULATING PUMPS, ELECTRICAL, CONTROLS, ETC.
- 7 REMOVE EXISTING MAKE-UP WATER PIPING, VALVES, BACKFLOW PREVENTOR DRAIN ETC.
- 8 REMOVE EXISTING CHEMICAL FEED TANK, PIPING, VALVES ETC.
- 9 REMOVE EXISTING GAS TRAIN PIPING, VALVES, SAFETY VALVES ETC. FROM BOILER TO POINT INDICATED.
- 10 REMOVE EXISTING BOILER, PIPING, ETC. TO POINTS SHOWN.



**MAIN FLOOR PLAN**  
SCALE: 1/8" = 1'-0"



**SHEET NOTES**

- ① SEE LARGE SCALE SHEET ME401 FOR THIS AREA.
- ② CONFIRM WITH OWNER / USER THE EXACT LOCATION OF NEW WALL HUNG FAN COIL UNITS.
- ③ EXISTING HOT WATER CONVECTORS SHALL REMAIN.
- ④ EXISTING WINDOW MOUNT A/C UNITS SHALL REMAIN AT THIS TIME.
- ⑤ BRANCH SELECTOR BOX FOR LOAD SHARING FAN COIL UNITS. ROUTE PUMPED CONDENSATE DRAIN LINE TO OUTSIDE. SEE SHEET ME503 FOR FLOW SHEET.
- ⑥ SEE ME503 FOR REFRIGERANT PIPING SIZING REQUIREMENTS. FOLLOW MANUFACTURERS RECOMMENDED INSTALLATION INSTRUCTIONS. PROVIDE WITH PIPING COVER WHERE EXPOSED TO VIEW. COVER FURNISHED BY HEAT PUMP MANUFACTURER WITH FACTORY FINISH AND INSTALLED BY MECHANICAL CONTRACTOR. COLOR SELECTED BY OWNER.
- ⑦ PROVIDE 6'-0" HIGH CHAIN LINK FENCE WITH LOCKING GATE AND VINYL SLATS AROUND NEW CONDENSING UNITS.
- ⑧ GROUP OF REFRIGERANT PIPING.
- ⑨ THIS AREA NOT IN CONTRACT.
- ⑩ PROVIDE AND INSTALL NEW REMOTE CONTROLLER FOR FAN COIL UNIT AND CONVECTOR. COORDINATE EXACT LOCATION WITH EXISTING WALLS.
- ⑪ REFRIGERANT PIPING TO BALCONY FLOOR. SEE SHEET ME102 FOR CONTINUATION. PROVIDE COVERING OVER PIPING WHERE EXPOSED TO VIEW. PAINT SAME COLOR AS WALLS.
- ⑫ PROVIDE NEW THERMOSTAT AND NEW CONTROL VALVES FOR EXISTING CONVECTORS.
- ⑬ PROVIDE NEW THERMOSTAT AND CONTROLS AS NECESSARY FOR EXISTING AIR HANDLING UNIT. FIELD VERIFY AND SITE COORDINATE EXACT LOCATION.
- ⑭ PROVIDE NEW 11'-2"x 6'-1" CONCRETE PAD FOR NEW CONDENSING UNITS. EXTEND MIN. 4" FROM EDGE OF EQUIPMENT. MOUNT CONDENSING UNITS ON RUBBER ISOLATORS.
- ⑮ EXISTING GAS METER SHALL REMAIN.
- ⑯ ROUTE PUMPED CONDENSATE FROM EACH FAN COIL UNIT TO EXTERIOR. GROUP TOGETHER AND RUN TO EXTERIOR. EXIT EXTERIOR WALL CLOSE TO GROUND LEVEL TO MINIMIZE VISIBILITY FROM OUTSIDE AND WATER STAINS ON THE BUILDING.
- ⑰ COMBINE CONDENSATE LINES INTO A SINGLE 3/4" LINE. MINIMIZE EXPOSED PIPING WHERE POSSIBLE. CONFIRM ROUTING WITH BUILDING OWNER AND SITE CONDITIONS.
- ⑱ CORE DRILL THROUGH EXISTING WALL. SEAL BOTH SIDES AIR AND WATER TIGHT. PROVIDE ESCUTCHEON PLATE ON INTERIOR SIDE OF WALL PENETRATION.
- ⑳ ROUTE PUMPED CONDENSATE FROM FAN COIL TO FLOOR DRAIN IN BOILER ROOM.

**GENERAL NOTE:**

1. WHERE REFRIGERANT PIPING IS EXPOSED TO VIEW, PROVIDE MANUFACTURERS MOLDING TO CONCEAL.
2. ALL CONCEALED CONTROL WIRING SHALL BE ROUTED IN CONDUIT. WHERE EXPOSED TO VIEW, PROVIDE WIRE MOLDING.

**CONSULTANTS**



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SHEET TITLE  
**MAIN FLOOR PLAN**

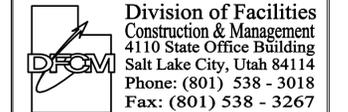
SHEET NO.  
**ME101**

SHEET NOTES

- 1 REFRIGERANT PIPING FROM BELOW ROUTE UP WALL TO CEILING SPACE. COVER PIPING WHERE EXPOSED TO VIEW. PAINT COVER THE SAME COLOR AS WALL. SEE SHEET ME101 FOR SOURCE.
- 2 CONFIRM WITH OWNER / USER THE EXACT LOCATION OF NEW WALL HUNG FAN COIL UNITS.
- 3 EXISTING HOT WATER CONVECTOR SHALL REMAIN. PROVIDE NEW CONTROL VALVE.
- 4 EXISTING WINDOW MOUNT A/C UNITS SHALL REMAIN AT THIS TIME.
- 5 EXISTING HEATING AND VENTILATING UNIT SHALL REMAIN. RE-PIPE COIL PER DETAIL B1/ME501.
- 6 SEE ME503 FOR REFRIGERANT PIPING SIZING REQUIREMENTS. FOLLOW MANUFACTURERS RECOMMENDED INSTALLATION INSTRUCTIONS.
- 7 GROUP OF REFRIGERANT PIPING.
- 8 PROVIDE NEW HOT WATER VERTICAL UNIT HEATER. RE-CONNECT TO EXISTING PIPING. SEE COIL PIPING DETAIL C1/ME502.
- 9 PROVIDE NEW THERMOSTAT AND CONTROLS FOR EXISTING UNIT HEATER. FIELD VERIFY AND SITE COORDINATE EXACT LOCATION.
- 10 PROVIDE AND INSTALL NEW REMOTE CONTROLLERS FOR INDOOR FAN COIL UNITS AND HOT WATER CONVECTORS. SITE COORDINATE EXACT LOCATION WITH EXISTING WALLS.
- 11 COMBINE CONDENSATE LINES INTO A SINGLE 1" LINE. MINIMIZE EXPOSED PIPING WHERE POSSIBLE. CONFIRM ROUTING WITH BUILDING OWNER AND SITE CONDITIONS.
- 12 ROUTE 3/4" PUMPED CONDENSATE TO LOWER LEVEL. MINIMIZE EXPOSED PIPING WHERE POSSIBLE. CONFIRM ROUTING WITH BUILDING OWNER AND SITE CONDITIONS. SEE SHEET ME101 FOR CONTINUATION.

**GENERAL NOTE:**

1. WHERE REFRIGERANT PIPING IS EXPOSED TO VIEW, PROVIDE MANUFACTURERS MOLDING TO CONCEAL.
2. ALL CONCEALED CONTROL WIRING SHALL BE ROUTED IN CONDUIT. WHERE EXPOSED TO VIEW, PROVIDE WIRE MOLDING.



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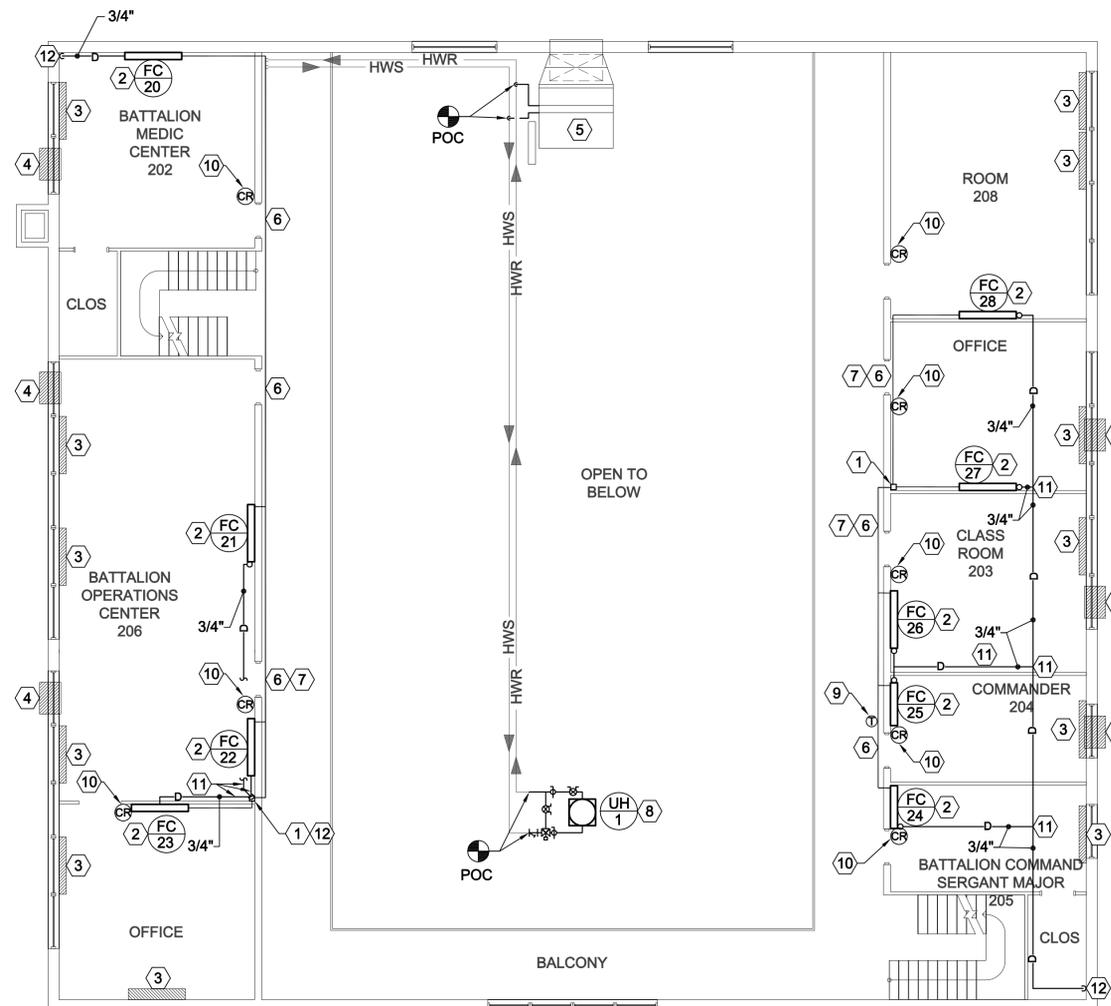
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SHEET TITLE  
**BALCONY FLOOR PLAN**

SHEET NO.  
**ME102**



**BALCONY FLOOR PLAN**

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



SHEET NOTES

- ① PROVIDE NEW BOILER B-1. SEE FLOW SHEET ME701.
- ② PROVIDE NEW CSD-1 GAS TRAIN FOR NEW BOILER, AND RE-CONNECT TO EXISTING GAS LINE. SEE DETAIL C4/ME502.
- ③ PROVIDE NEW 4" HOUSEKEEPING PAD FOR NEW BOILER. SEE DETAIL A2/ME501.
- ④ PROVIDE NEW BASE MOUNTED PUMPS. SEE DETAIL C3/ME501.
- ⑤ PROVIDE NEW 4" HOUSEKEEPING PAD FOR NEW PUMPS. SEE DETAIL A2/ME501.
- ⑥ TIE INTO EXISTING HOT WATER SUPPLY AND RETURN BRANCHES AT THESE APPROXIMATE LOCATIONS. PROVIDE ISOLATION VALVE AND REDUCER AS NECESSARY. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING BRANCH.
- ⑦ PROVIDE NEW 10"Ø POSITIVE PRESSURE FLUE STACK. ROUTE NEW STACK IN EXISTING CHIMNEY TO ROOF. PROVIDE NEW ROOF CAP.
- ⑧ POT FEEDER. SEE DETAIL A4/ME501. COORDINATE LOCATION WITH PUMP.
- ⑨ EXISTING HWS AND HWR TO ASSEMBLY HALL. SEE SHEET ME102 FOR CONTINUATION.
- ⑩ AIR ELIMINATOR. SEE SETAIL B4/ME501.
- ⑪ EXPANSION TANK. SEE DETAIL B3/ME501.
- ⑫ PROVIDE NEW 4" HOUSEKEEPING PAD FOR NEW EXPANSION TANK.
- ⑬ ROUTE ALL PIPING OVERHEAD A MINIMUM OF 7'-10"  $\epsilon$  OF PIPE TO FLOOR.
- ⑭ CONNECT NEW GAS LINE INTO EXISTING GAS LINE AT FLOOR LEVEL AND RISE NEW GAS PIPING UP AND OVER HEAD TO NEW BOILER.
- ⑮ DROP NEW GAS PIPING TO GAS TRAIN. SEE DETAIL C4/ME502.
- ⑯ PROVIDE METAL PLATE AROUND NEW FLUE STACK TO COVER OPENING CREATED BY THE REMOVAL OF THE LARGER STACK. BOLT TO WALL.
- ⑰ ACTUAL LOCATION OF BALL VALVES SHALL BE IN THE VERTICAL RISERS APPROXIMATELY 54" FROM FLOOR. BALL VALVES ARE SHOWN HERE FOR CLARITY.
- ⑱ EXISTING GAS PIPING SHALL REMAIN.
- ⑲ EXISTING HOT WATER UNIT HEATER SHALL REMAIN.

State of Utah  
Department of Administrative Services

Division of Facilities  
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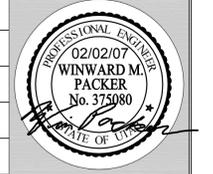
**WHW ENGINEERING INC.**  
PROFESSIONAL MECHANICAL ENGINEERING  
1354 East 3300 South Suite 200  
SALT LAKE CITY, UTAH 84106  
(801) 965-4021, FAX 468-3536  
EMAIL: [excellence@whw-engineering.com](mailto:excellence@whw-engineering.com)

PROJECT NAME & ADDRESS

**AMERICAN FORK ARMORY,  
REPLACEMENT OF WINDOW AIR  
CONDITIONER UNITS  
AND BOILER**  
DFCM No. 06142470  
American Fork, Utah

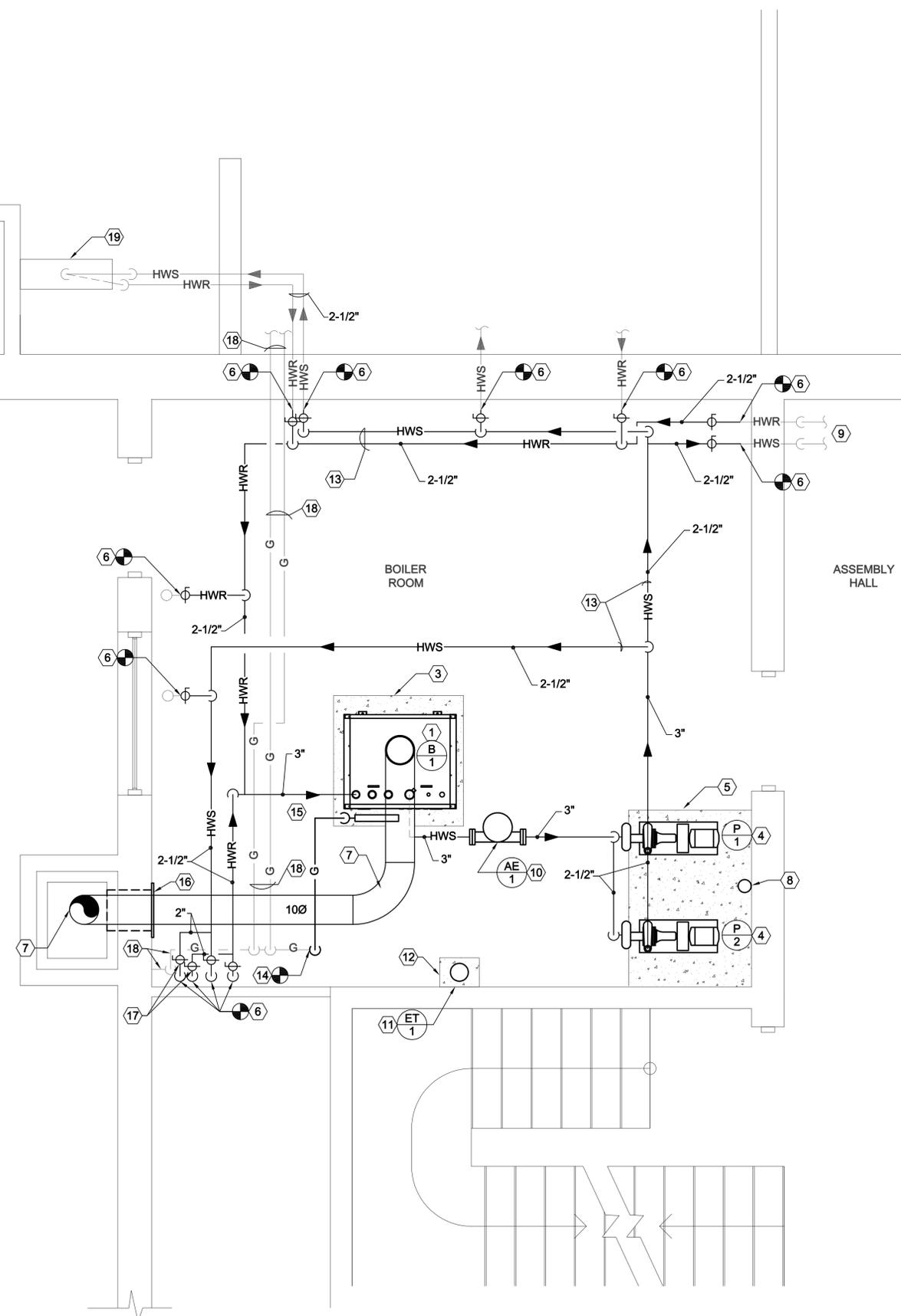
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PROJECT MANAGER:  
SLW  
DRAWN BY:  
LGD  
CHECKED BY:  
WP  
DATE:  
2/02/07  
WHW JOB NO.:  
06022



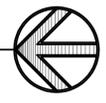
SHEET TITLE  
**BOILER ROOM LARGE SCALE PLAN**

SHEET NO.  
**ME401**



**BOILER ROOM LARGE SCALE PLAN**

SCALE: 1/2" = 1'-0"



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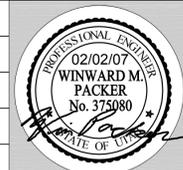


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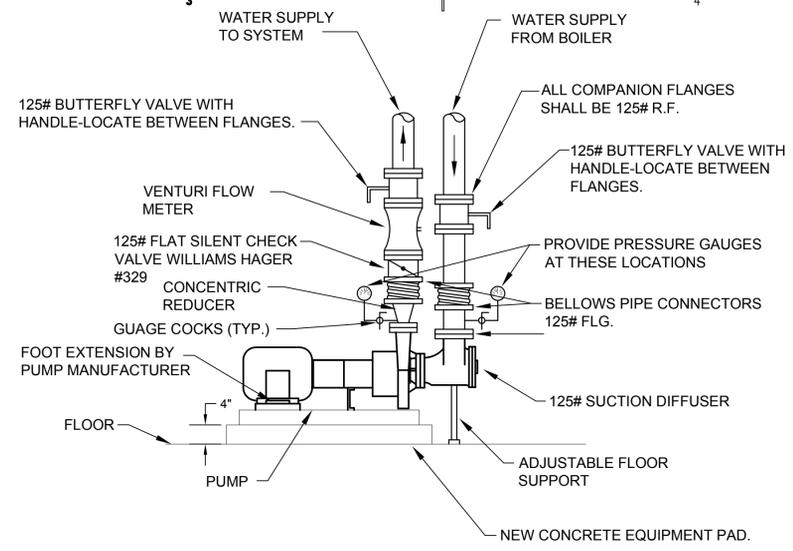
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SHEET TITLE	



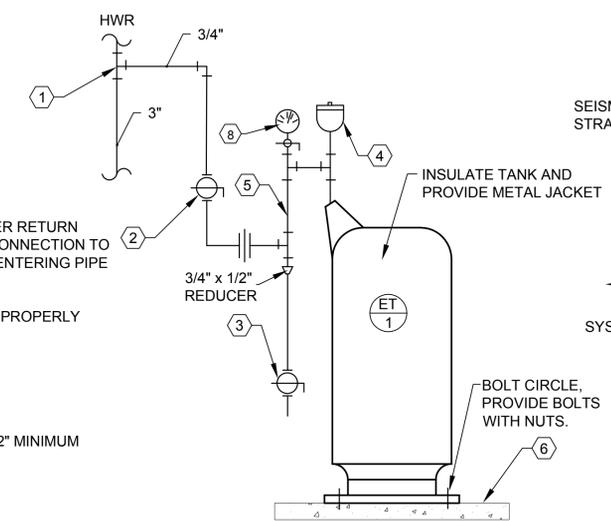
MECHANICAL DETAILS

SHEET NO.  
**ME501**

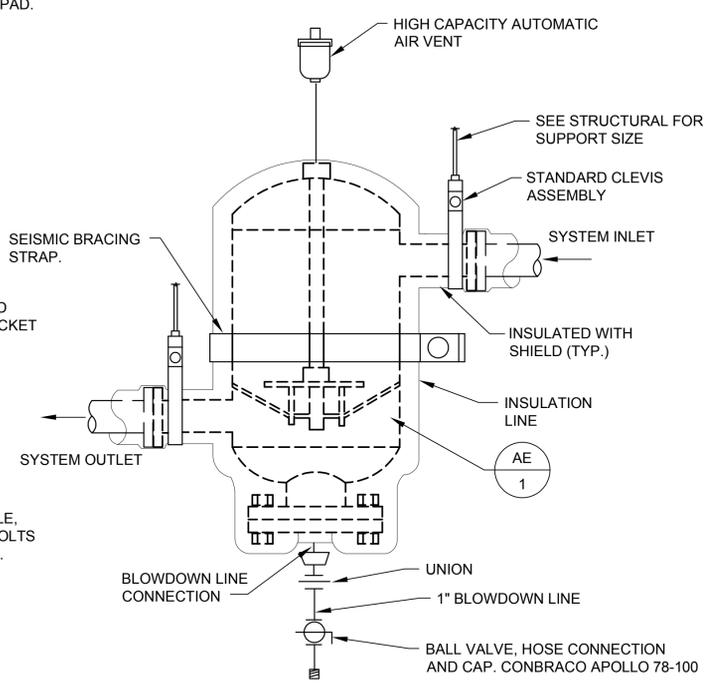


**C3 BASE MTD. PUMP PIPING DETAIL**  
SCALE: NONE

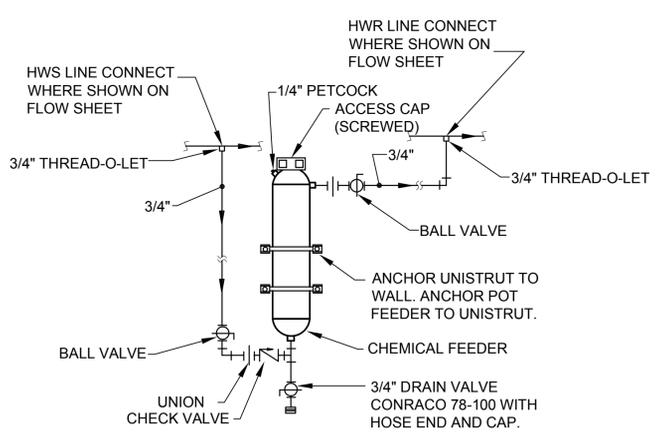
- DETAIL NOTES:**
- CONNECT TO SIDE OF HOT WATER RETURN MAIN. AVOID TOP OR BOTTOM CONNECTION TO PREVENT AIR OR DEBRIS FROM ENTERING PIPE TO TANK.
  - SHUT OFF VALVE. REQUIRED TO PROPERLY PRECHARGE TANK.
  - DRAIN VALVE.
  - AUTOMATIC AIR VENT.
  - ANTI-THERMO-SYPHON LOOP. 12" MINIMUM DROP.
  - NEW HOUSEKEEPING PAD.
  - SEE FLOW SHEET ME701.
  - PRESSURE GUAGE -O- 60 PSIG WITH GUAGE COCK.



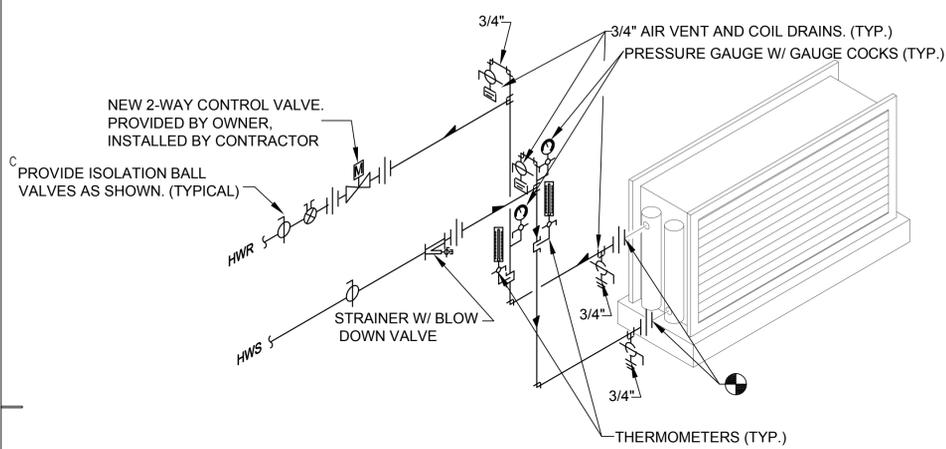
**B3 EXPANSION TANK DETAIL**  
SCALE: NONE



**B4 AIR ELIMINATOR TANK DETAIL**  
SCALE: NONE

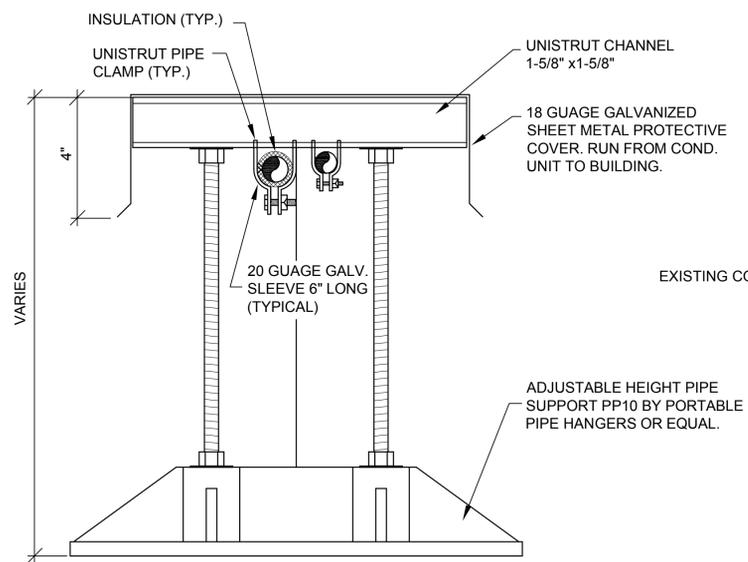


**A4 CHEMICAL TREATMENT SCHEME**  
SCALE: NONE

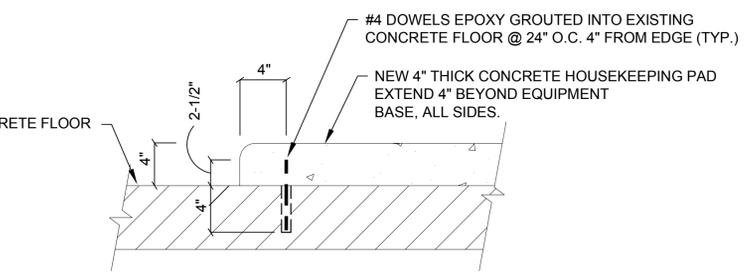


**B1 HOT WATER COIL PIPING DETAIL**  
SCALE: NONE

**NOTE:**  
RUN STEEL COVER CONTINUOUS FROM CONDENSING UNIT TO RISERS OR PENETRATIONS AT BUILDING WALL OR ROOF. PAINT COVER THE SAME COLOR AS BLDG.



**A1 EXTERIOR REFRIGERANT PIPE SUPPORT**  
SCALE: NONE



**A2 EQUIPMENT HOUSEKEEPING PAD**  
SCALE: NONE

CONSULTANTS

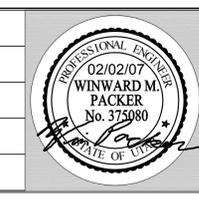


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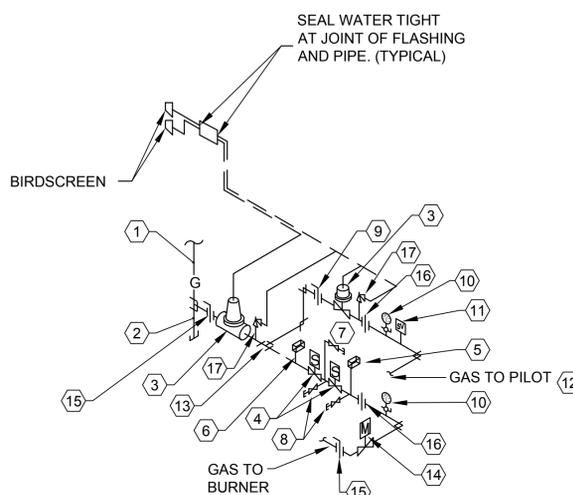


MECHANICAL DETAILS

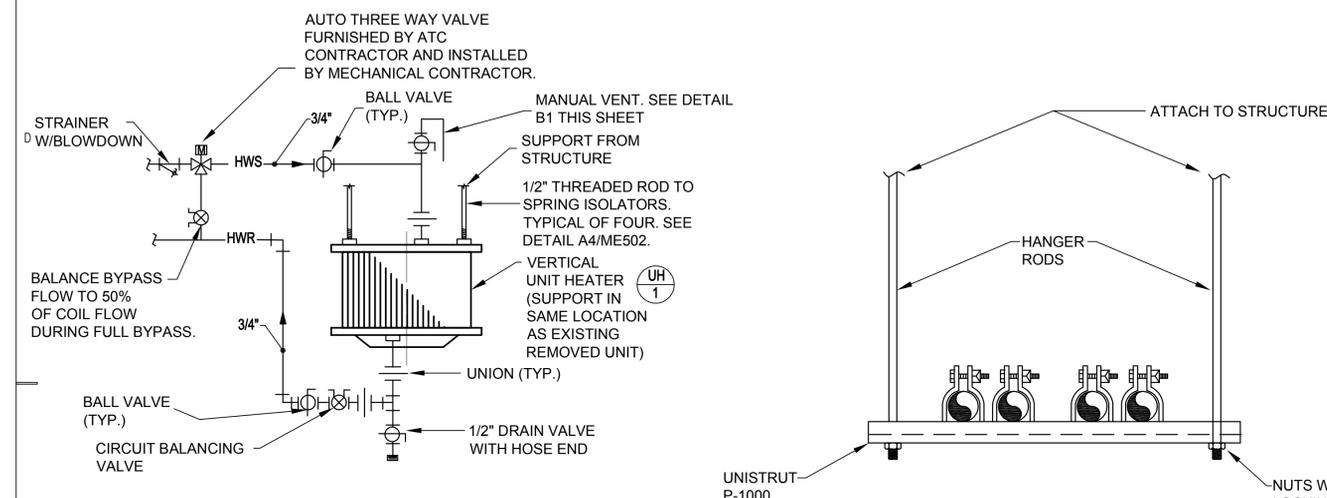
SHEET NO.

**ME502**

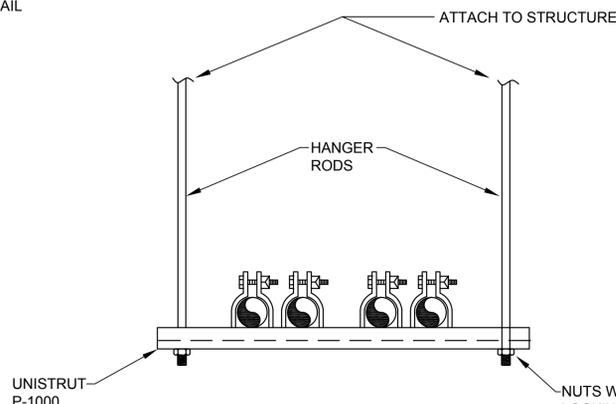
LEGEND	
NO.	ITEM
1	GAS INLET
2	DIRT LEG FULL SIZE
3	GAS PRESSURE REGULATOR
4	MOTORIZED SAFETY VALVE
5	HIGH PRESSURE SWITCH
6	LOW PRESSURE SWITCH
7	VENT VALVE AND VENT
8	TEST COCK
9	SHUT-OFF COCK
10	PRESSURE GAUGE
11	SOLENOID VALVE
12	GAS TO PILOT
13	GAS TAKE-OFF TO PILOT
14	MOTORIZED MODULATING VALVE
15	SHUT-OFF VALVE
16	UNION
17	RELIEF VALVE-VENT TO ATMOSPHERE



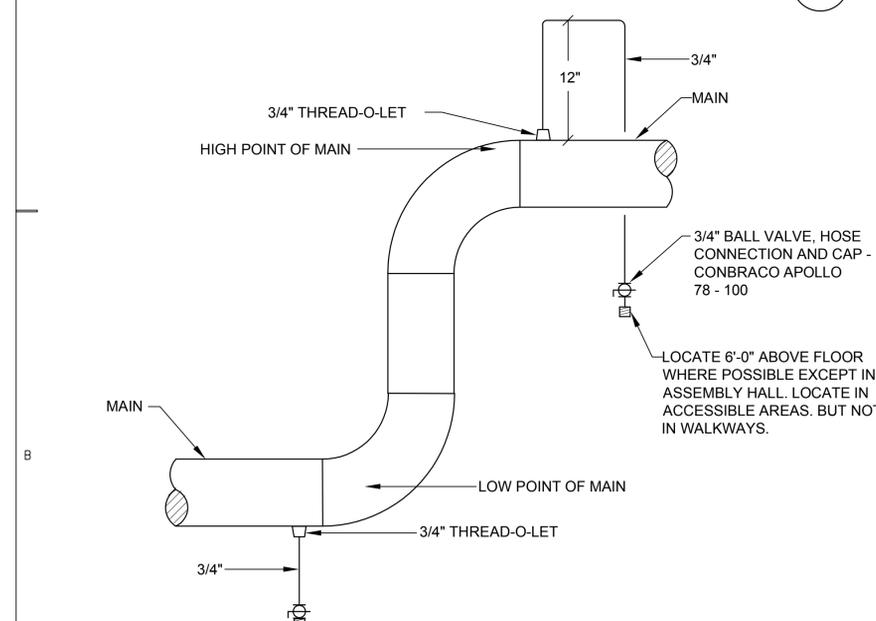
**C4 CSD-1 AUTO-IGNITION GAS TRAIN DETAIL**  
SCALE: NONE



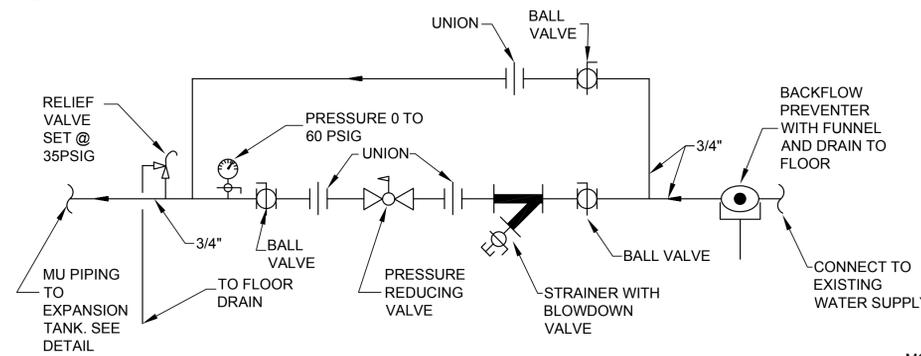
**C1 VERTICAL UNIT HEATER DETAIL**  
SCALE: NONE



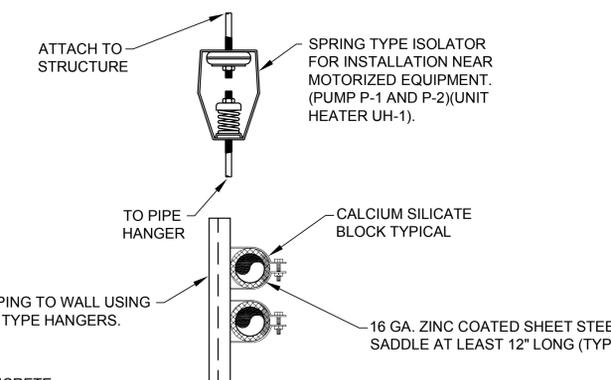
**C2 TRAPEZE PIPE HANGER DETAIL**  
SCALE: NONE



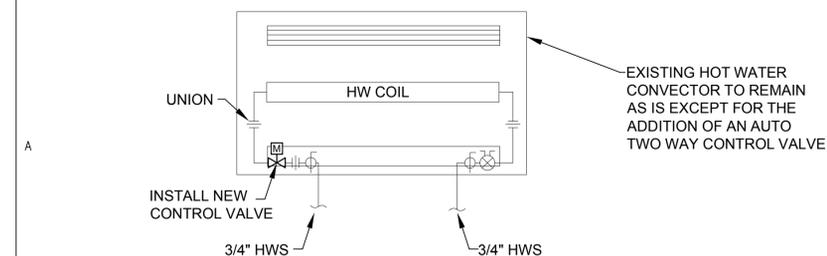
**B1 MANUAL AIR VENT AND DRAIN DETAIL**  
SCALE: NONE



**B3 HOT WATER  
MAKE-UP WATER PRV STATION DETAIL**  
SCALE: NONE



**A4 PIPE HANGER DETAIL**  
SCALE: NONE



**A1 HOT WATER CONVECTOR DETAIL**  
SCALE: NONE

BOILER SCHEDULE										
SYMBOL	MBH INPUT	MBH OUTPUT	WATER TEMP		GPM	DELTA P FT	FAN MOTOR	SHIPPING WEIGHT LBS	MAKE AND MODEL #	SCHEDULE NOTES
			IN	OUT						
$\frac{B}{1}$	900	765	190	170	77	0.75	1/3	2110	BRYAN HECLM-90	1,2,3,4

1. BOILER RATINGS ARE FOR SEA LEVEL.
2. SEE SPECIFICATION FOR OTHER APPROVED MANUFACTURERS.
3. VERIFY FLUE SIZING AND MATERIAL WITH EACH BOILER MANUFACTURER AND INSTALL ACCORDINGLY.
4. PROVIDE 120V CONTROL CIRCUIT, AND 120V BURNER FAN MOTOR CIRCUIT.

AIR COOLED CONDENSING UNIT SCHEDULE										
SYMBOL	AREA SERVED	COOLING CAPACITY	HEATING CAPACITY	SOUND LEVEL	WEIGHT (LBS)	FLA	MCA	MOCP	MNUF. & MODEL #	SCHEDULE NOTES
$\frac{CU}{1}$	NORTH SIDE	96,000	108,000	57 dBA	600	4.6 KW	34	50	MITSUBSHI ELECTRIC PURY-P96	1,2,3,4,5
$\frac{CU}{2}$	SOUTH SIDE	144,000	160,000	61 dBA	675	9.7 KW	55	75	MITSUBSHI ELECTRIC PURY-P144	1,2,3,4,5

1. REFRIGERANT R-410A
2. VARIABLE SPEED HERMETIC SCROLL
3. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
4. ELECTRIC SERVICE: 208/3Ø/60HZ
5. OPERATING TEMPERATURE RANGES:  
COOLING UP TO OUTDOOR TEMP OF 109° F DB  
HEATING OUTDOOR TEMP DOWN TO -4° F WB  
SIMULTANEOUS OUTDOOR OPERATION BETWEEN 23° F DB TO 69° F DB.

PUMP SCHEDULE												
SYMBOL	TYPE	GPM	FT. HEAD	SUCTION SIZE	DISCHARGE SIZE	MOTOR			SIZE	SERVICE	COMMENTS	SCHEDULE NOTES
						V - Ø - HZ	HP	RPM				
$\frac{P}{1}$	BASE MTD.	77	40	2	1.5	220/3/60	2	1750	1-1/2 AL	HEATING WATER	BELL & GOSSETT 1510	1,2,3,4
$\frac{P}{2}$	BASE MTD.	77	40	2	1.5	220/3/60	2	1750	1-1/2 AL	HEATING WATER	BELL & GOSSETT 1510	1,2,3,4

1. PROVIDE REMOVABLE INSULATION KIT AROUND AND SUCTION
2. ALL PUMPS SHALL BE SIZED IN THE MIDDLE OF THE CURVE.
3. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
4. VFD BY DIVISION 16.

AIR ELIMINATOR SCHEDULE						
SYMBOL	CAPACITY GPM	MAX PRESSURE DROP FT.	INLET / OUTLET SIZE	SHIPPING WEIGHT LBS.	MAKE & MODEL	SCHEDULE NOTES
$\frac{AE}{1}$	76.5	0.3	3.0	95	BELL & GOSSETT RL-3	1

1. FOR OTHER APPROVED MANUFACTURERS SEE SPECIFICATIONS.

EXPANSION TANK SCHEDULE						
SYMBOL	ACCEPTANCE VOLUME/ TANK VOLUME (GAL.)	HEIGHT	DIAMETER	APPROXIMATE FLOOD WEIGHT LBS	COMMENTS	SCHEDULE NOTES
$\frac{ET}{1}$	22.6/55.7	69"	16"	632	BELL & GOSSETT D-100V	1,2

1. FOR OTHER APPROVED MANUFACTURERS SEE SPECIFICATIONS.
2. PROVIDE WITH ACCESSORIES PER DETAIL B3/ME501.

BRANCH SELECTOR BOX							
SYMBOL	MCA	MOCP	MAKE/MODEL	V/φ/HZ	BRANCHES	WEIGHT	NOTE
$\frac{BB}{1}$	1.04A	15A	MITSUBISHI CMB-P1010NU-G	208/1/60	10	95 lbs.	1,2
$\frac{BB}{2}$	1.34A	15A	MITSUBISHI CMB-P1013NU-G	208/1/60	13	130 lbs.	1,2

1. PROVIDE CONDENSATE PAN AND PUMP.
2. INSTALL INSIDE BLDG, WHERE SHOWN ON DWGS.

SPLIT SYSTEM INDOOR UNIT SCHEDULE								
SYMBOL	ROOMS SERVED	CFM COOLING	MCA	MOCP	VOLTAGE-PHASE-HZ	FAN F.L.A.	MANUF. & MODEL #	SCHEDULE NOTES
1ST LEVEL								
$\frac{FC}{1}$	BATTALION LOGISTICS CENTER 111	530	.55	15	230/1/60	45 W	MITSUBISHI PKFY-P18	1,2
$\frac{FC}{2}$	GARAGE OFFICE 1	220	.19	15	230/1/60	17 W	MITSUBISHI PKFY-P08	1,2
$\frac{FC}{3}$	BATTALION EXEC. OFFICE 107	265	.19	15	230/1/60	17 W	MITSUBISHI PKFY-P08	1,2
$\frac{FC}{4}$	RECRUITING OFFICE 106	335	.43	15	230/1/60	30 W	MITSUBISHI PKFY-P12	1,2
$\frac{FC}{5}$	BATTALION PERSONEL CENTER 105	370	.43	15	230/1/60	30 W	MITSUBISHI PKFY-P12	1,2
$\frac{FC}{6}$	BATTALION C.O.	345	.43	15	230/1/60	30 W	MITSUBISHI PKFY-P12	1,2
$\frac{FC}{7}$	COMPANY OPERATIONS 103	510	.5	15	230/1/60	30 W	MITSUBISHI PKFY-P15	1,2
$\frac{FC}{8}$	RM 102	225	.19	15	230/1/60	17 W	MITSUBISHI PKFY-P08	1,2
$\frac{FC}{9}$	SERVER	200	.19	15	230/1/60	17 W	MITSUBISHI PKFY-P08	1,2
$\frac{FC}{10}$	COPYING/ SUPPLY CENTER 101	850	.73	15	230/1/60	30 W	MITSUBISHI PKFY-P30	1,2
$\frac{FC}{11}$	GARAGE OFFICE 2	280	.19	15	230/1/60	17 W	MITSUBISHI PKFY-P08	1,2
2ND LEVEL								
$\frac{FC}{20}$	BATTALION MEDIC CENTER 202	460	.5	15	230/1/60	30 W	MITSUBISHI PKFY-P15	1,2
$\frac{FC}{21}$	BATTALION OPERATIONS CENTER 206 A	515	.55	15	230/1/60	45 W	MITSUBISHI PKFY-P18	1,2
$\frac{FC}{22}$	BATTALION OPERATIONS CENTER 206 B	515	.55	15	230/1/60	45 W	MITSUBISHI PKFY-P18	1,2
$\frac{FC}{23}$	OFFICE	475	.5	15	230/1/60	30 W	MITSUBISHI PKFY-P15	1,2
$\frac{FC}{24}$	BATTALION COMMAND SERGANT MAJOR 205	275	.19	15	230/1/60	17 W	MITSUBISHI PKFY-P08	1,2
$\frac{FC}{25}$	COMMANDER 204	275	.19	15	230/1/60	17 W	MITSUBISHI PKFY-P08	1,2
$\frac{FC}{26}$	CLASS ROOM 203	465	.5	15	230/1/60	30 W	MITSUBISHI PKFY-P15	1,2
$\frac{FC}{27}$	OFFICE	435	.5	15	230/1/60	30 W	MITSUBISHI PKFY-P15	1,2
$\frac{FC}{28}$	ROOM 208	700	.55	15	230/1/60	45 W	MITSUBISHI PKFY-P24	1,2

1. R410A REFRIGERANT
2. PROVIDE CONDENSATE PUMP. ROUTE CONDENSATE LINE TO EXTERIOR OF BUILDING.

VERTICAL HOT WATER UNIT HEATER SCHEDULE								
SYMBOL	BTU OUTPUT	GPM	CFM	PRESS. DROP PSI	MOTOR HP/ SERVICE	SHIPPING WEIGHT	MAKE AND MODEL #	SCHEDULE NOTES
$\frac{UH}{1}$	212,600	22.2	5460	2.1	1/2	112	MODINE V-279	1,2,3,4

1. SIZE BASED ON 190°F EWT, 60°F EAT, 20°F WATER DROP.
2. PIPE PER DETAIL C1/ME502.
3. PROVIDE SPRING ISOLATORS WITH VERTICAL LIMIT STOPS.
4. SEE SPECIFICATION FOR APPROVED MANUFACTURERS.
5. PROVIDE WITH TRUNCONE OUTLET DIFFUSER OR EQUAL.



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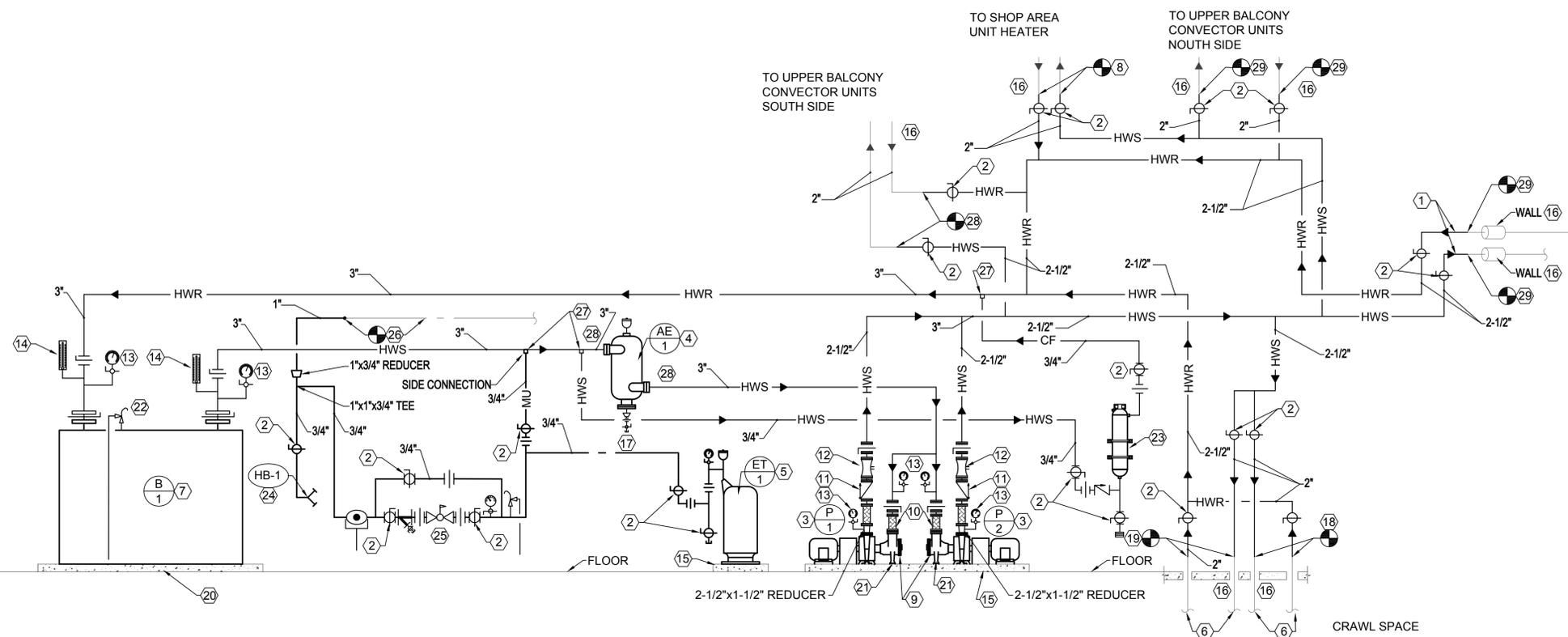
PROJECT MANAGER: SLW	
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SHEET TITLE  
**NEW HEATING HOT  
WATER FLOW SHEET**

SHEET NO.  
**ME701**

SHEET NOTES:

- 1 NEW 2-1/2" HWS AND HWR TO HEATING AND VENTILATION UNIT AND UNIT HEATER ASSEMBLY ROOM.
- 2 PROVIDE LINE SIZE BALL VALVE.
- 3 NEW BASE MOUNTED END SUCTION HOT WATER PUMPS. SEE DETAIL C3/ME501.
- 4 NEW AIR ELIMINATOR. SEE DETAIL B4/ME501.
- 5 NEW FLOOR MOUNTED EXPANSION TANK. SEE DETAIL B3/ME501.
- 6 NEW 2" HWS AND HWR TO CRAWL SPACE TO SERVICE CONVECTOR UNITS, LOCATED ON MAIN FLOOR.
- 7 NEW HOT WATER STEEL BENT TUBE BOILER.
- 8 CONNECT TO EXISTING PIPING SERVING THE STATE SERVICE SHOP AREA. FIELD VERIFY EXACT SIZE AND TRANSITION AS NECESSARY. PROVIDE ISOLATION BALL VALVES AT POINT OF CONNECTION TO EXISTING. SEE ME401.
- 9 NEW 2-1/2"x2" PUMP SUCTION DIFFUSER WITH FLOOR SUPPORT.
- 10 NEW FLEX PUMP CONNECTORS. TYPICAL OF 4.
- 11 NEW 2-1/2" WAFER TYPE CHECK VALVE. TYPICAL OF 2.
- 12 NEW 3" VENTURI FLOW METER. TYPICAL OF 2.
- 13 NEW PRESSURE GAUGE WITH SNUBBER AND SHUT OFF VALVE 0 TO 100 PSIG.
- 14 NEW THERMOMETERS 0° TO 250° F.
- 15 NEW 4" HIGH CONCRETE PAD. SEE DETAIL A2/ME501.
- 16 EXISTING FLOOR AND WALL OPENINGS AND PIPING SHALL REMAIN FOR NEW PIPING CONNECTION WITHIN BOILER ROOM. MODIFY EXISTING PIPING IF REQUIRED FOR THE NEW PIPING CONNECTION.
- 17 1" DRAIN FROM AIR ELIMINATOR. COMPLETE WITH CONBRACO SHUT-OFF AND HOSE CONNECTION OR EQUAL.
- 18 2" HWS AND HWR TO EXISTING FLOOR OPENING. CONNECT TO EXISTING PIPING SERVING SOUTH SIDE ZONE CONVECTORS. FIELD VERIFY EXACT SIZE AND TRANSITION AS NECESSARY. PROVIDE ISOLATION BALL VALVES AT POINT OF CONNECTION TO EXISTING PIPING. SEE DETAIL A2/MD403.
- 19 2" HWS AND HWR TO EXISTING FLOOR OPENING. CONNECT TO EXISTING PIPING SERVING NORTH SIDE ZONE CONVECTORS. FIELD VERIFY EXACT SIZE AND TRANSITION AS NECESSARY. PROVIDE ISOLATION BALL VALVES AT POINT OF CONNECTION TO EXISTING PIPING. SEE DEMOLITION DRAWING A2/MD403.
- 20 NEW 4" CONCRETE HOUSE KEEPING PAD FOR NEW BOILER. SEE DETAIL A2/ME501.
- 21 ADJUSTABLE FLOOR SUPPORTS.
- 22 PROVIDE BOILER SAFETY RELIEF VALVE AND DISCHARGE PIPING SO IT ONLY CONTAINS ONE 90° ELL. SIZE PIPING FULL LINE SIZE.
- 23 NEW CHEMICAL POT FEEDER. ANCHOR TO WALL AND TIE INTO HWS AND HWR PIPING AS SHOWN. SEE DETAIL A4/ME501.
- 24 PROVIDE 1/2" HOSE BIBB WITH SCREW-ON VACUUM BREAKER IN MECHANICAL ROOM.
- 25 PRV STATION FOR MAKE-UP WATER TO HOT WATER SYSTEM. SEE DETAIL B3/ME502.
- 26 NEW CONNECTION TO EXISTING CW LINE. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING LINE AND CONNECTION POINT.
- 27 3/4" THRED-O-LET.
- 28 2" HWS AND HWR TO CEILING OPENING. CONNECT TO EXISTING PIPING SERVING THE SOUTH SIDE UPPER BALCONY CONVECTOR UNITS. PROVIDE ISOLATION BALL VALVES AT POINT OF CONNECTION TO EXISTING PIPING.
- 29 2" HWS AND HWR TO CEILING OPENING. CONNECT TO EXISTING PIPING SERVING THE NORTH SIDE UPPER BALCONY CONVECTOR UNITS. PROVIDE ISOLATION BALL VALVES AT POINT OF CONNECTION TO EXISTING PIPING.



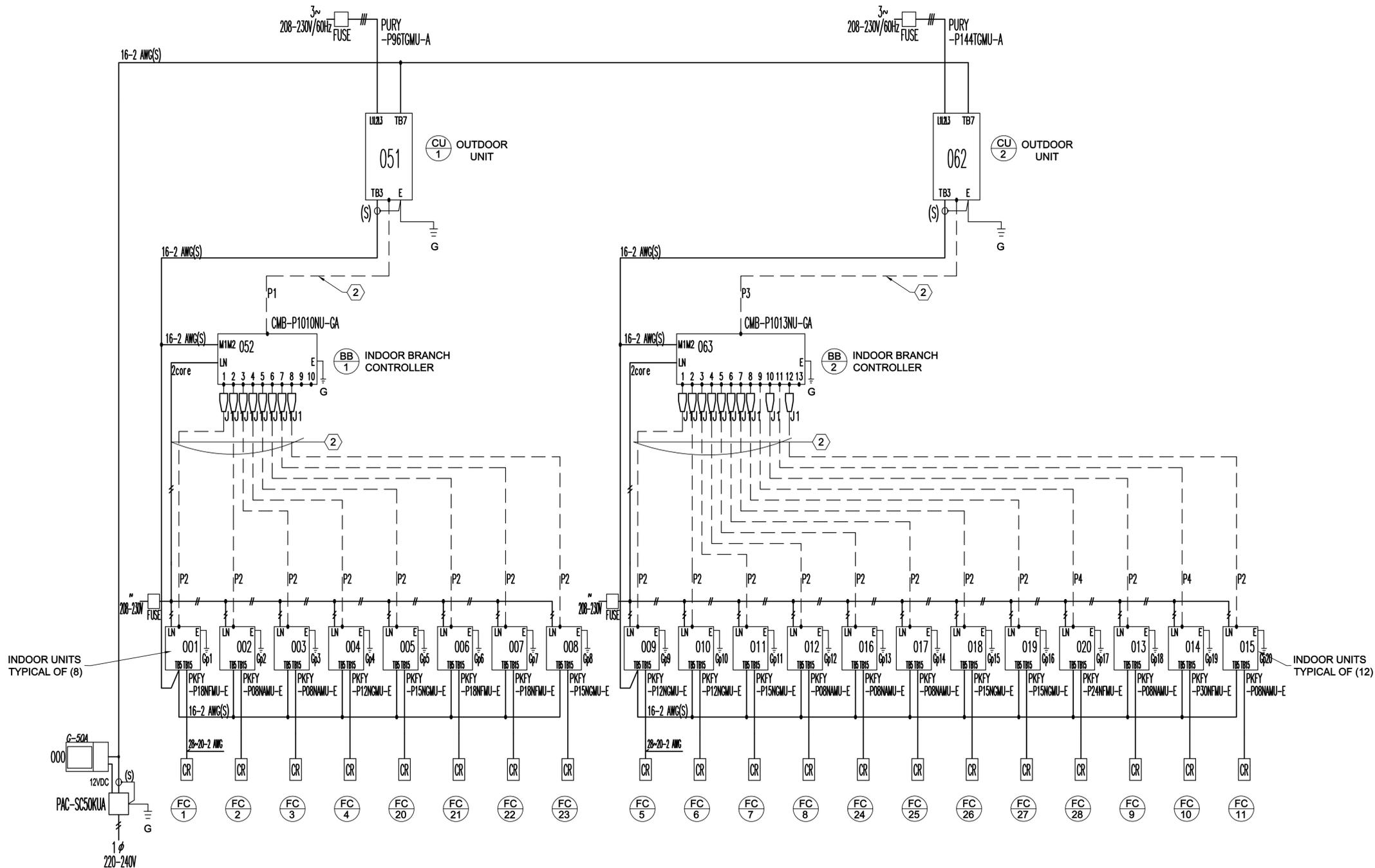
**NEW HOT WATER FLOW SHEET**  
NO SCALE

REFRIG. PIPE SIZE		
SYMBOL	LIQUID SIZE	GAS SIZE
P-1	3/4"	7/8"
P-2	1/4"	1/2"
P-3	7/8"	1-1/8"
P-4	3/8"	5/8"

SCHEMATIC LEGEND	
SYMBOL	DESCRIPTION
	POWER WIRING
	CONTROL WIRING
	REMOTE CONTROLLERS
	FAN COIL
	REFRIG. PIPE
	REDUCER
	GROUND

- SHEET NOTES:**
- ALL POWER WIRING SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
  - ALL REFRIGERANT PIPING SHOWN REPRESENTS TWO PIPES, LIQUID AND GAS.
  - 16 AWG: 16 AWG OR MORE.
  - 20 AWG: 24 AWG & 20 AWG.

- GENERAL NOTES:**
- COORDINATE WITH 15738, 15900, AND DIVISION 16.
  - SCHEMATIC DRAWING BASED ON CITY MULTI MITSUBISHI ELECTRIC SYSTEM.
  - CONTRACTOR RESPONSIBLE FOR COMPLYING WITH MANUFACTURERS RECOMMENDATIONS FOR REFRIGERANT CHANGE REQUIREMENTS.



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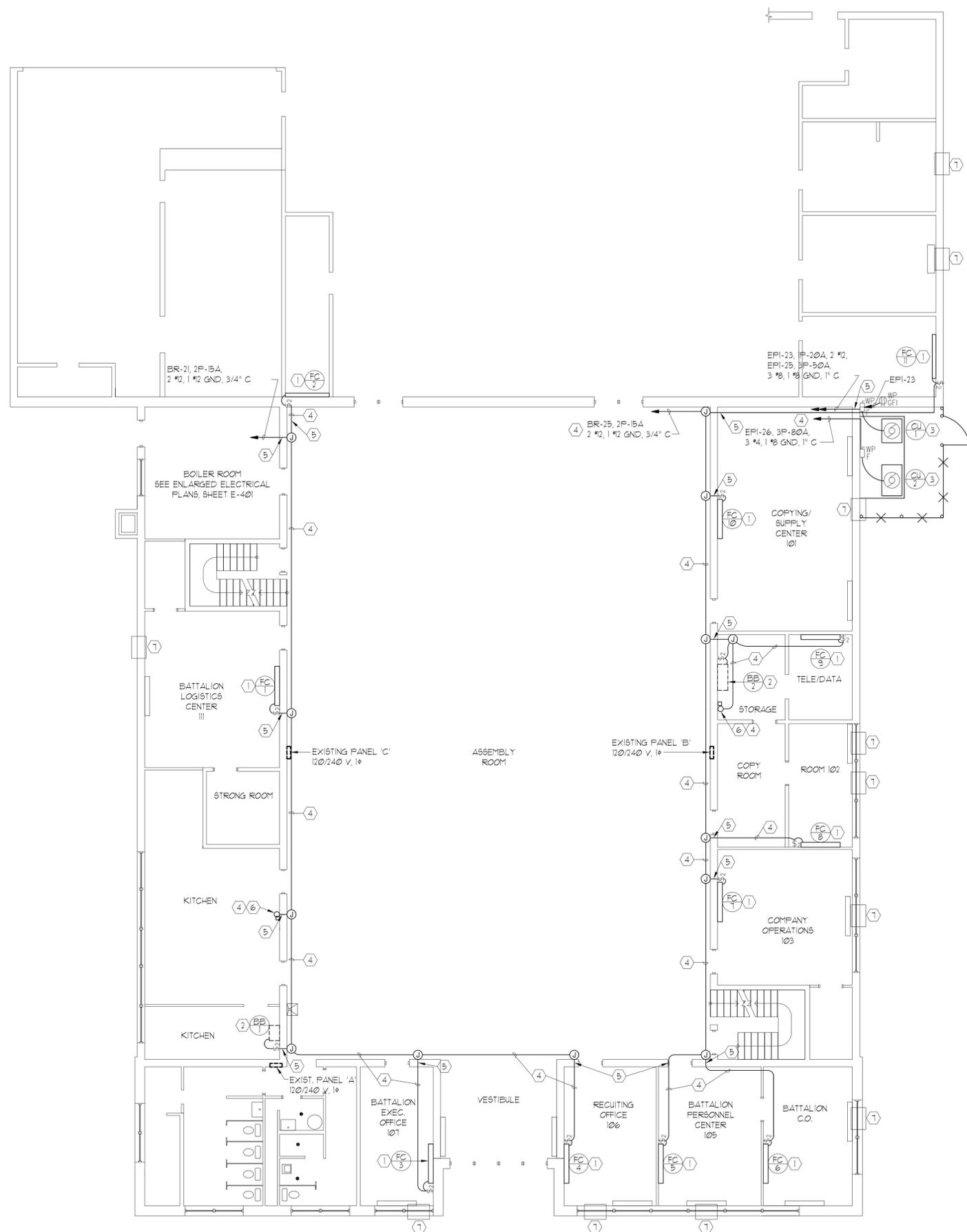
MARK	DATE	REVISION

PROJECT MANAGER: SLW  
 DRAWN BY: LGD  
 CHECKED BY: WP  
 DATE: 2/02/07  
 WHW JOB NO.: 06022



**HEAT PUMP SPLIT SYSTEM SCHEMATIC**

SHEET NO. **ME702**



**GENERAL ELECTRICAL NOTES:**

1. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
  2. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, JUNCTION BOXES, ETC., ASSOCIATED WITH EQUIPMENT TO BE REMOVED WHETHER SPECIFICALLY SHOWN OR NOT.
  3. CONTRACTOR MAY USE EXISTING BRANCH CIRCUIT WIRING AND RACEWAYS WHERE CONVENIENT TO CONNECT TO NEW ELECTRICAL EQUIPMENT ONLY IF THE EXISTING WIRING AND RACEWAYS ARE IN GOOD CONDITION AND MEET DIVISION 16 SPECIFICATION REQUIREMENTS FOR NEW WIRING AND RACEWAYS.
  4. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS OR FEEDERS TO EXISTING EQUIPMENT TO REMAIN, FURNISH AND INSTALL NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
  5. ALL MATERIALS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER FOR STORAGE OR BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
  6. COORDINATE MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL PLANS AND MECHANICAL CONTRACTOR.
7. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDING. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.

**KEYED NOTES:**

1. CONNECT TO NEW INDOOR FAN COIL UNIT AND CONDENSATE PUMP. COORDINATE SWITCH LOCATION WITH MECHANICAL CONTRACTOR TO ALLOW REMOVAL OF UNIT ACCESS COVERS.
2. CONNECT TO NEW BRANCH SELECTOR BOX AND CONDENSATE PUMP.
3. CONNECT TO NEW OUTDOOR CONDENSING UNIT. COORDINATE SAFETY SWITCH LOCATIONS WITH MECHANICAL CONTRACTOR TO PROVIDE NEC REQUIRED WORKING SPACE.
4. INSTALL NEW BRANCH CIRCUIT CONDUITS TO FOLLOW ROUTE OF REFRIGERATION PIPING. SEE MECHANICAL PLANS. CONCEAL CONDUIT WITHIN PIPING COVER WHERE EXPOSED CONDUIT OCCURS. COORDINATE WITH MECHANICAL CONTRACTOR PROVIDE PROPERLY SIZED PIPE COVER PAINT EXPOSED CONDUIT TO MATCH SURROUNDING SURFACES WHERE NOT INSTALLED UNDER PIPE COVER.
5. DRILL EXISTING INTERIOR MASONRY WALL FOR NEW CONDUIT PENETRATION AND SEAL WITH NON-SHRINK GROUT OR FIRE CAULKING AS REQUIRED FOR WALL TYPE. PROVIDE ESCUTCHEON PLATE ON BOTH SIDES OF WALL (TO MATCH PIPING ESCUTCHEON PLATES) OR PAINT WALL AS REQUIRED TO PROVIDE UNIFORM FINISH.
6. INSTALL CONDUIT UP TO BALCONY FLOOR. SEE SHEET E-102 FOR CONTINUATION.
7. EXISTING WINDOW MOUNT AC UNITS TO REMAIN AT THIS TIME.

**MAIN FLOOR ELECTRICAL PLAN**  
SCALE: 1/8" = 1'-0"



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**PROJECT NAME & ADDRESS**

**AMERICAN FORK ARMORY,  
REPLACEMENT OF WINDOW AIR  
CONDITIONER UNITS  
AND BOILER**  
**DFCM No. 06142470**  
American Fork, Utah

MARK	DATE	REVISION

PROJECT MANAGER:  
**SLW**  
DRAWN BY:  
**W.B.G.**  
CHECKED BY:  
**R.G.K.**  
DATE:  
**2/02/07**  
WHW JOB NO.:  
**06022**

SHEET TITLE  
**MAIN FLOOR ELECTRICAL PLAN**

SHEET NO.  
**EE101**

EQUIPMENT SCHEDULE												
SYMBOL	DESCRIPTION	CIRCUIT NO.	VOLTS	PHASE	ELECT LOAD	BREAKER	STARTER			AUX. CONT.	LOCATION	NOTES
							FURNISH	INSTALL	SIZE			
FC 1	INDOOR FAN COIL UNIT	BR-21	230	1	0.44 AMP	2P-15A	M	M	M	-	BATTALION LOGISTICS CENTER 111	1
FC 2	INDOOR FAN COIL UNIT	BR-21	230	1	0.15 AMP	2P-15A	M	M	M	-	GARAGE OFFICE 1	1
FC 3	INDOOR FAN COIL UNIT	BR-21	230	1	0.15 AMP	2P-15A	M	M	M	-	BATTALION EXEC. OFFICE 107	1
FC 4	INDOOR FAN COIL UNIT	BR-21	230	1	0.34 AMP	2P-15A	M	M	M	-	RECRUITING OFFICE 106	1
FC 5	INDOOR FAN COIL UNIT	BR-25	230	1	0.34 AMP	2P-15A	M	M	M	-	BATTALION PERSONNEL CENTER 105	1
FC 6	INDOOR FAN COIL UNIT	BR-25	230	1	0.34 AMP	2P-15A	M	M	M	-	BATTALION C. O.	1
FC 7	INDOOR FAN COIL UNIT	BR-25	230	1	0.34 AMP	2P-15A	M	M	M	-	COMPANY OPERATIONS 103	1
FC 8	INDOOR FAN COIL UNIT	BR-25	230	1	0.15 AMP	2P-15A	M	M	M	-	ROOM 102	1
FC 9	INDOOR FAN COIL UNIT	BR-25	230	1	0.15 AMP	2P-15A	M	M	M	-	TELE/DATA ROOM	1
FC 10	INDOOR FAN COIL UNIT	BR-25	230	1	0.58 AMP	2P-15A	M	M	M	-	COPIING/SUPPLY CENTER 101	1
FC 11	INDOOR FAN COIL UNIT	BR-25	230	1	0.15 AMP	2P-15A	M	M	M	-	GARAGE OFFICE 2	1
FC 20	INDOOR FAN COIL UNIT	BR-21	230	1	0.34 AMP	2P-15A	M	M	M	-	BATTALION MEDIC CENTER 202	1
FC 21	INDOOR FAN COIL UNIT	BR-21	230	1	0.44 AMP	2P-15A	M	M	M	-	BATTALION OPERATIONS CENTER 206	1
FC 22	INDOOR FAN COIL UNIT	BR-21	230	1	0.44 AMP	2P-15A	M	M	M	-	BATTALION OPERATIONS CENTER 206	1
FC 23	INDOOR FAN COIL UNIT	BR-21	230	1	0.34 AMP	2P-15A	M	M	M	-	OFFICE	1
FC 24	INDOOR FAN COIL UNIT	BR-25	230	1	0.15 AMP	2P-15A	M	M	M	-	BATTALION COMMAND SARGENT MAJOR	1
FC 25	INDOOR FAN COIL UNIT	BR-25	230	1	0.15 AMP	2P-15A	M	M	M	-	COMMANDER 204	1
FC 26	INDOOR FAN COIL UNIT	BR-25	230	1	0.34 AMP	2P-15A	M	M	M	-	CLASSROOM 203	1
FC 27	INDOOR FAN COIL UNIT	BR-25	230	1	0.34 AMP	2P-15A	M	M	M	-	OFFICE	1
FC 28	INDOOR FAN COIL UNIT	BR-25	230	1	0.44 AMP	2P-15A	M	M	M	-	ROOM 208	1
BB 1	BRANCH SELECTOR BOX	BR-21	230	1	0.60 AMP	2P-15A	M	M	M	-	KITCHEN STORAGE	1
BB 2	BRANCH SELECTOR BOX	BR-25	230	1	0.77 AMP	2P-15A	M	M	M	-	CDPY STORAGE	1
CU 1	AIR COOLED CONDENSING UNIT	EP1-25	230	3	24.1 AMP	3P-50A	M	M	M	-	OUTSIDE	
CU 2	AIR COOLED CONDENSING UNIT	EP1-26	230	3	39.6 AMP	3P-80A	M	M	M	-	OUTSIDE	
B 1	BOILER - FAN	BR-14	120	1	1/3 HP	1P-15A	M	M	M	-	BOILER ROOM	
P 1	HOT WATER PUMP	EP2-25	230	3	2 HP	3P-15A	E	E	VFD	2 NO 2 NC	BOILER ROOM	
P 2	HOT WATER PUMP	EP2-26	230	3	2 HP	3P-15A	E	E	VFD	2 NO 2 NC	BOILER ROOM	
UH 1	HOT WATER UNIT HEATER	BR-4	120	1	1/2 HP	1P-20A	E	E	STH	-	ASSEMBLY ROOM	

NOTES:  
 1. CONNECT TO CONDENSATE PUMP FURNISHED WITH INDOOR FAN COIL UNITS AND BC CONTROLLERS. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR.

STARTER LEGEND  
 E - ELECTRICAL CONTRACTOR  
 M - MECHANICAL CONTRACTOR

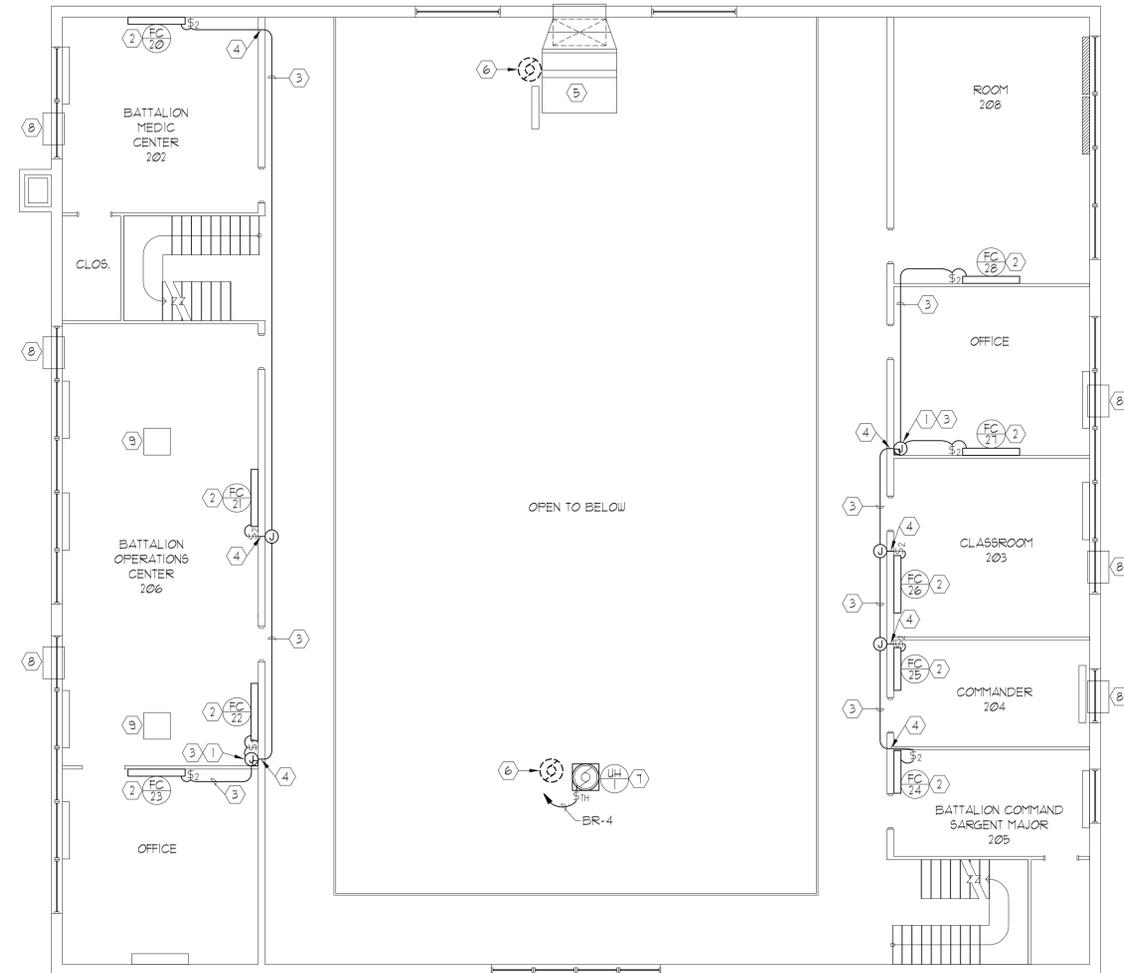
SYMBOL LIST	
SYMBOL	DESCRIPTION
⊕	NEW JUNCTION BOX
⊕	NEW DUPLEX RECEPTACLE
⊕ GFI	RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER
⊕	EXISTING DUPLEX RECEPTACLE
⊕	NEW SPECIAL PURPOSE RECEPTACLE
\$	NEW SINGLE POLE SWITCH
\$2	NEW DOUBLE POLE SWITCH
\$TH	NEW MANUAL MOTOR STARTING SWITCH WITH THERMAL OVERLOAD PROTECTION
⊕	EXISTING METER
⊕	EXISTING POWER PANELBOARD
⊕	NEW POWER PANELBOARD
A-135	NEW BRANCH CIRCUIT HOMERUN INDICATING PANEL AND CIRCUIT NUMBERS
---	NEW BRANCH CIRCUIT
---	EXISTING BRANCH CIRCUIT
⊕	NEW MOTOR
⊕ F	NEW SAFETY SWITCH, 'F' INDICATES FUSED
⊕	NEW MAGNETIC MOTOR STARTER OR CONTROL PANEL
⊕	EXISTING MOTOR
⊕	EXISTING MAGNETIC MOTOR STARTER OR CONTROL PANEL
⊕	EXISTING SAFETY SWITCH
⊕	EQUIPMENT SCHEDULE SYMBOL
⊕	KEYED NOTE SYMBOL
⊕	INDICATES ITEM IN WEATHERPROOF (NEMA 3R MINIMUM) ENCLOSURE

**KEYED NOTES:**

1. JUNCTION BOX WITH CONDUIT DOWN TO MAIN FLOOR. SEE SHEET E-101 FOR CONTINUATION.
2. CONNECT TO NEW INDOOR FAN COIL UNIT AND CONDENSATE PUMP. COORDINATE SWITCH LOCATION WITH MECHANICAL CONTRACTOR TO ALLOW REMOVAL OF UNIT ACCESS COVERS.
3. INSTALL NEW BRANCH CIRCUIT CONDUITS TO FOLLOW ROUTE OF REFRIGERATION PIPING, SEE MECHANICAL PLANS. CONCEAL CONDUIT WITHIN PIPING COVER WHERE EXPOSED CONDUIT OCCURS. COORDINATE WITH MECHANICAL CONTRACTOR PROVIDE PROPERLY SIZED PIPE COVER. PAINT EXPOSED CONDUIT TO MATCH SURROUNDING SURFACES WHERE NOT INSTALLED UNDER PIPE COVER.
4. DRILL EXISTING MASONRY WALL FOR NEW CONDUIT PENETRATION AND SEAL WITH NON-SHRINK GROUT OR FIRE CAULKING AS REQUIRED FOR WALL TYPE. PROVIDE ESCUTCHEON PLATE ON BOTH SIDES OF WALL (TO MATCH PIPING ESCUTCHEON PLATES) OR PAINT WALL AS REQUIRED TO PROVIDE UNIFORM FINISH.
5. EXISTING HEATING AND VENTILATING UNIT TO REMAIN INCLUDING ELECTRICAL CIRCUIT.
6. EXISTING 120 VOLT, FRACTIONAL HORSEPOWER, CIRCULATION PUMP TO BE REMOVED. REMOVE EXISTING ELECTRICAL SERVICE COMPLETE INCLUDING ALL ABANDONED CONDUIT, WIRING, BOXES, DISCONNECTS, ETC.
7. NEW UNIT HEATER TO REPLACE EXISTING UNIT HEATER AT THE SAME LOCATION. REMOVE EXISTING BRANCH CIRCUIT WIRING AND PROVIDE NEW BRANCH CIRCUIT IN EXISTING CONDUIT AS INDICATED.
8. EXISTING WINDOW MOUNT AC UNITS TO REMAIN AT THIS TIME.
9. EXISTING ROOF MOUNTED EVAPORATIVE COOLERS TO REMAIN AT THIS TIME.

**GENERAL ELECTRICAL NOTES:**

1. SEE GENERAL ELECTRICAL NOTES, SHEET E-101.



**BALCONY ELECTRICAL PLAN**  
 SCALE: 1/8" = 1'-0"



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**AMERICAN FORK ARMORY, REPLACEMENT OF WINDOW AIR CONDITIONER UNITS AND BOILER**  
**DFCM No. 06142470**  
 American Fork, Utah

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SHEET TITLE  
**BALCONY ELECTRICAL PLAN AND SCHEDULES**

SHEET NO.  
**EE102**

