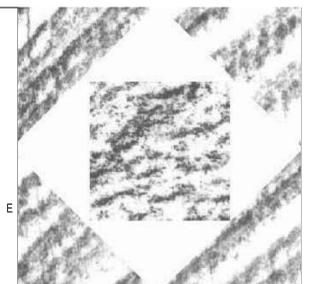


MECHANICAL LEGEND											
SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION	SYMBOL	ABR.	DESCRIPTION
GENERAL TERMINOLOGY			AIR SIDE			WET SIDE			WET SIDE CONT		
		SECTION LETTER DESIGNATION			EXISTING AIR DUCT TO BE REMOVED			PUMP			PITCH DOWN
		SECTION DRAWN ON THIS SHEET			EXISTING AIR DUCT TO REMAIN		PSD	PUMP SUCTION DIFFUSER			ELBOW UP
		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION			NEW AIR DUCT			UNION			ELBOW DOWN
		MECHANICAL EQUIPMENT DESIGNATION			SUPPLY DUCT UP			MANUAL ACTUATOR (BALL, BUTTERFLY, NEEDLE, ETC. VALVES)			TEE UP
		EQUIPMENT ITEM DESIGNATION			EXHAUST AIR INTAKE UP			MANUAL ACTUATOR (GATE, GLOBE, S&D, OS&Y, ETC. VALVES)			TEE DOWN
		REVISION DESIGNATOR AND NUMBER			RETURN OR OUTSIDE AIR DUCT DOWN			ELECTRIC MOTOR ACTUATOR			EXISTING PIPING TO BE REMOVED
		KEY NOTE DESIGNATOR AND NUMBER			SUPPLY DUCT DOWN			SOLENOID ACTUATOR			EXISTING PIPING TO REMAIN
	POC	POINT OF CONNECTION			EXHAUST DUCT DOWN			PIPE CAP OR PLUG			NEW PIPING
	POR	POINT OF REMOVAL			ROUND DUCT UP			CONCENTRIC REDUCER			PIPE CAP OR PLUG
	AFF	ABOVE FINISHED FLOOR			ROUND DUCT DOWN			ECCENTRIC REDUCER			FLEXIBLE CONNECTION
	AP	ACCESS PANEL			EXISTING EQUIPMENT TO BE REMOVED			FLANGED VALVE CONNECTION			CONDENSATE DRAIN
	EL.	CENTER LINE ELEVATION			EXISTING EQUIPMENT TO REMAIN			BUTTERFLY VALVE			NATURAL GAS PIPING
	INV. ELEV.	INVERT ELEVATION			NEW EQUIPMENT			GATE VALVE			CHEMICAL FEED LINE
	GC	GENERAL CONTRACTOR		SA	SUPPLY AIR			GLOBE VALVE - STRAIGHT PATTERN			MAKE-UP WATER LINE
	MC	MECHANICAL CONTRACTOR		RA	RETURN AIR			MOTORIZED 2-WAY CONTROL VALVE			CULINARY COLD WATER
	CC	CONTROL CONTRACTOR		EA	EXHAUST AIR			MOTORIZED 3-WAY CONTROL VALVE			CULINARY HOT WATER
	EC	ELECTRICAL CONTRACTOR		OA	OUTSIDE AIR			CHECK VALVE			EQUIPMENT DRAIN
	FPC	FIRE PROTECTION CONTROL		MA	MIXED AIR		PRV	PRESSURE REDUCING VALVE			HEATING WATER SUPPLY
	NIC	NOT IN CONTRACT		FA	FRESH AIR		PRV	PRESSURE REDUCING VALVE W/ CHECK			HEATING WATER RETURN
	NTS	NOT TO SCALE		RF	RELIEF AIR		CBV	CIRCUIT BALANCING VALVE			CHILLED WATER SUPPLY
	C	COMMON					BV	BALL VALVE			CHILLED WATER RETURN
	NC	NORMALLY CLOSED					PRV	PRESSURE RELIEF VALVE			
	NO	NORMALLY OPEN						NEEDLE VALVE			
	MS	MONITORING SENSOR						AUTOMATIC AIR VENT			
								MANUAL AIR VENT			
								STRAINER			
								STRAINER W/ PLUGGED BLOW OFF			
							VTI	VENTURI			
								PRESSURE GAUGE AND GAUGE COCK - WATER			
								THERMOMETER AND THERMOWELL			
								WATER TEMPERATURE SENSOR AND THERMOWELL			
								FLOW SWITCH			
							PS	PRESSURE SWITCH			
							TW	THERMOWELL			
								PRESSURE AND TEMPERATURE TAP			
								DIRECTION OF FLOW			

GENERAL NOTES:

- G-1** MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING DRAWINGS BY OTHER DISCIPLINES AND SPECIFICATIONS.
- A** - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF EFFICIENCY, QUALITY OR GOVERNING CODE.
- B** - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.
- C** - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.
- D** - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.
- E** - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.
- G-2** ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO CHANGES FOR APPROVAL. CONTRACTOR SHALL NOT START ANY CHANGES UNTIL NOTIFIED IN WRITING. IF CHANGES ARE MADE PRIOR TO APPROVAL CONTRACTOR SHALL TAKE ALL RESPONSIBILITY FOR THE CHANGES MADE AND ALL COSTS RELATING TO FAILURE OR REPLACEMENT OF ALTERATIONS.
- G-3** CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.
- G-4** THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS. THE CONTRACTOR SHALL PROVIDE OR COORDINATE WITH THE GENERAL CONTRACTOR PROVISIONS FOR BLOCK-OUTS OR CORE DRILLS THROUGH STRUCTURE.
- G-5** THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.
- G-6** SHEET METAL DUCT SIZES SHOWN ON DRAWINGS ARE FREE AREA DIMENSIONS.
- G-7** PROVIDE TURNING VANES IN ALL ELBOWS OF RECTANGULAR DUCT.
- G-8** THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWING BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.
- G-9** C.F.M. LISTED IS ACTUAL AIR.
- G-10** SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.
- G-11** CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.
- G-13** ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2006 EDITION OF THE IMC AND IPC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.
- G-14** THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINING DOWN AND RE-FILLING OF ALL SYSTEMS NECESSARY TO COMPLETE THE WORK OUTLINED BY THIS PROJECT. THIS INCLUDES PROVIDING THE REQUIRED CHEMICAL TREATMENT WHEN RE-FILLING THE SYSTEM.
- G-15** ALL PIPING, MATERIALS, ETC. SHALL BE NEW AND DOMESTIC MADE UNLESS SPECIFICALLY AUTHORIZED IN WRITING PRIOR TO BID.



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 RENOVATION
 PHASE 2

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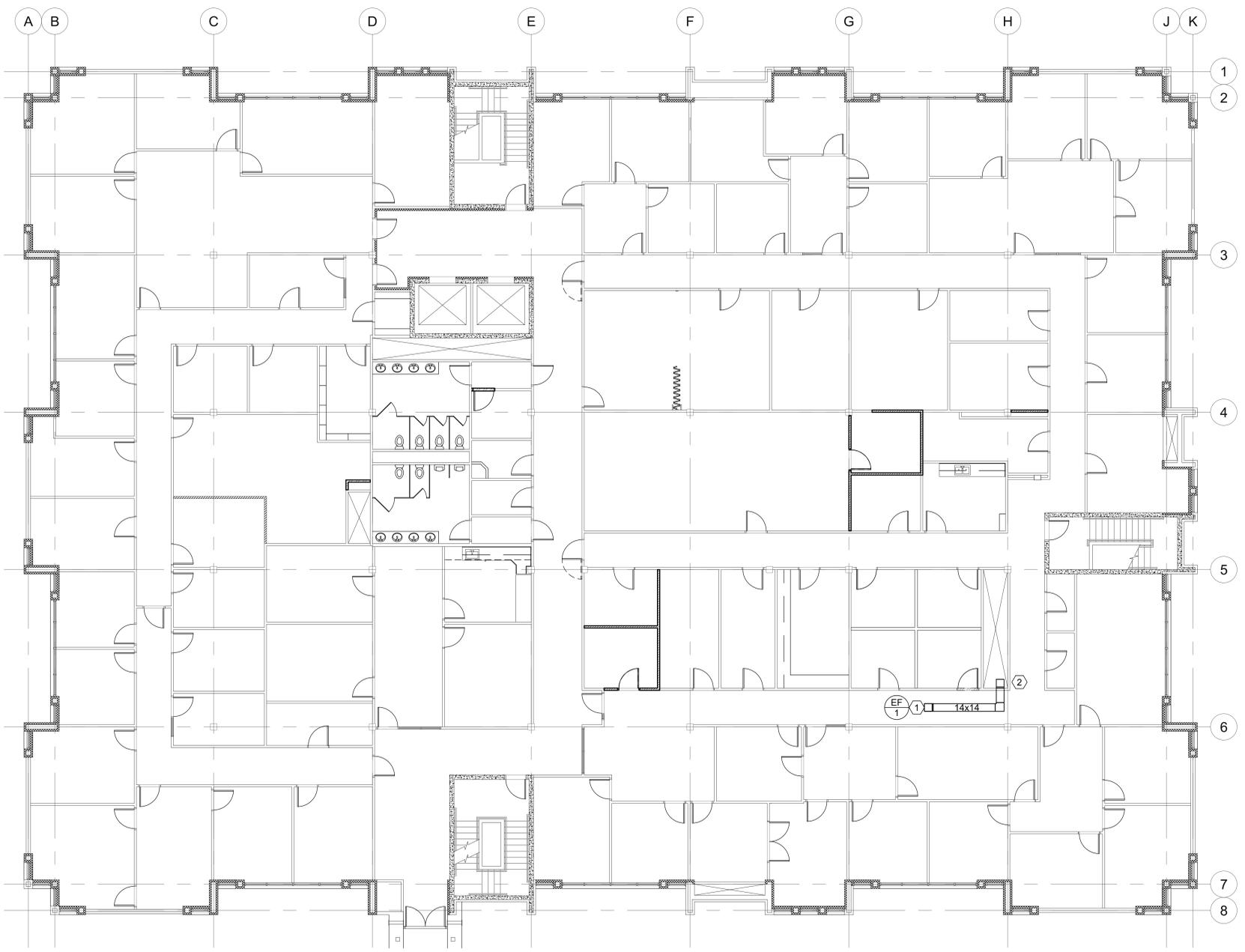
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 HFSA PROJECT NO: 0758.01
 CAD DWG FILE NO:
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 CHECKED BY: SW
 DESIGNED BY: WP
 DWG TYPE: MECHANICAL

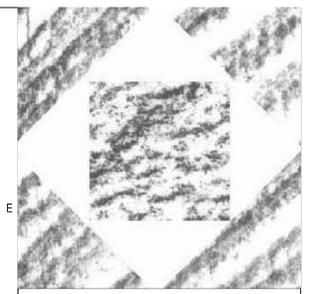
ARCHITECTURAL PHASE:
CONSTRUCTION DOCUMENTS
 SHEET TITLE

**MECHANICAL GENERAL
 NOTES AND LEGEND**

- SHEET NOTES:**
- ① NEW 14x14 REFRIGERANT EXHAUST DUCT UP TO NEW EF-1 ON ROOF. SEE DETAIL C3/ME502. FIELD VERIFY EXACT ROUTING AND LOCATION PRIOR TO FABRICATION. COORDINATE WITH G.C. TO CUT AND PATCH ROOF FOR NEW FAN.
 - ② NEW 14x14 REFRIGERANT EXHAUST DUCT ROUTED DOWN TO MECHANICAL ROOM. TYPICAL 1ST AND 2ND FLOOR. FIELD VERIFY. COORDINATE WITH G.C. TO PROVIDE SHAFT ACCESS AT ALL LEVELS AS NECESSARY TO INSTALL NEW EXHAUST DUCT.



THIRD FLOOR MECHANICAL PLAN
 SCALE: 1/8" = 1'-0"



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**THIRD FLOOR
 MECHANICAL PLAN**

ME101
 SHEET 3 OF 8

AIR HANDLING UNIT SCHEDULE

SYMBOL	LOCATION	COOLING CFM	O.A. CFM	HEATING CFM	PLUG FAN SIZE	W (INCHES)	L (INCHES)	H (INCHES)	SUPPLY ESP (IN. WG)	RETURN ESP (IN. WG)	ELECTRICAL					CW COOLING COIL CAPACITY						HOT WATER HEATING COIL						MANUF. & MODEL #	SCHEDULE NOTES						
											SUPPLY FAN HP	RETURN FAN HP	VOLT	PHASE	CYCLE	MAX AIR PD. IN WG.	TONS COOL	GPM	MAX WATER PD.	EWT	LWT	EADB	EAWB	LADB	MAX AIR PD.	MBH	EAT			LAT	GPM	MAX WATER PD.	WATER INLET TEMP	WATER OUTLET TEMP	AIR TEMP RISE
(AHU 1)	MECHANICAL ROOM	46,000	9,200	46,000	49"	138	411	126	3	1.5	75	25	460	3	60		115	276		42	55	80	67	55		1925	45	90	96.3		180	140	45	HAAKON	1,2,3
(AHU 2)	MECHANICAL ROOM	27,500	5,500	27,500	40"	111	362	100	3	1.5	40	15	460	3	60		68.8	165		42	55	80	67	55		1238	45	90	61.9		180	140	45	HAAKON	1,2,3

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
2. VFD FOR SUPPLY AND RETURN FANS SHALL BE PROVIDED BY DIVISION 16.
3. PROVIDE WITH MARINE LIGHTS. COORDINATE WITH DIVISION 16 TO PROVIDE A SEPERATE 120/1/60 CIRCUIT.

BOILER SCHEDULE

SYMBOL	MBH INPUT	HEATING SURFACE	VOLUME GAL	MBH OUTPUT	WATER TEMP		GPM	DELTA P FT	OPERATION WEIGHT LBS	MAKE AND MODEL #	SCHEDULE NOTES
					IN	OUT					
(B 1)	3,500	419 SQ. FT.	146	2,800	165	180	367	6	8367	BRYAN RV 350	1,2,3,4,5

1. BOILER RATING IS 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.
5. BOILER SHALL BE KNOCKDOWN TYPE.

AIR ELIMINATOR SCHEDULE

SYMBOL	CAPACITY GPM	MAX PRESSURE DROP FT.	INLET / OUTLET SIZE	WEIGHT LBS	MAKE & MODEL	SCHEDULE NOTES
(AE 1)	375	1	6"	200	SPIROVENT VSR 600 SENIOR	1,2

1. FOR OTHER APPROVED MANUFACTURERS SEE SPECIFICATIONS.
2. DESIGN FOR 150 PSIG AND 270° F.

LOUVER SCHEDULE

SYMBOL	TYPE	SERVICE	FREE AREA	NOMINAL SIZE	THROAT SIZE	CEILING TYPE	SCHEDULE NOTES
(L-1)	EXTERIOR LOUVER	COMBUSTION AIR	6.28 SF FREE AREA	24"x84"	24"x84"	NA	1,2,3

REGISTER. LOUVER AND DIFFUSER SCHEDULE NOTES:

1. KYNAR FINISH WITH COLOR BY ARCHITECT.
2. LOUVER SHALL BE RUSKIN ELF 811 OR EQUAL IN SPECS.
3. PROVIDE WITH BIRD SCREEN.

EXPANSION TANK SCHEDULE

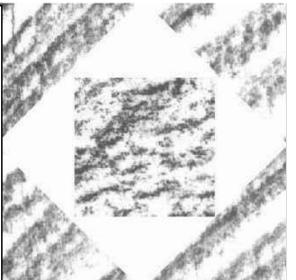
SYMBOL	ACCEPT TANK VOLUME GAL.	LENGTH	DIAMETER	OPERATION WEIGHT LBS	MAKE AND MODEL	SCHEDULE NOTES
(ET 1)	158 GALLONS	60	30	510 SHIPPING 1814 100% FULL	B&G B60 SERIES B-600	1

1. FOR OTHER APPROVED MANUFACTURERS SEE SPECIFICATIONS.

PUMP SCHEDULE

SYMBOL	TYPE	MAKE / MODEL	GPM	FT. HEAD	SUCTION SIZE INCHES	DISCHARGE SIZE INCHES	MOTOR			WEIGHT LBS	SERVICE	SCHEDULE NOTES
							V - Ø - Hz	HP	RPM			
(P 3)	BASE MOUNTED	B&G 80 4x4x11	367	85	4	3	460/3/60	15	1750	555	HEATING HOT WATER	1,2,3
(P 4)	BASE MOUNTED	B&G 80 4x4x11	367	85	4	3	460/3/60	15	1750	555	HEATING HOT WATER	1,2,3
(P 6)	INLINE CIRCULATOR	B&G 80 3x3x7B	97	15	3	3	120/1/60	0.75	1150	155	HOT WATER COIL CIRCULATOR AHU-1	1,2
(P 7)	INLINE CIRCULATOR	B&G 80 2.5x2.5x7	62	15	2.5	2.5	120/1/60	0.75	1150	175	HOT WATER COIL CIRCULATOR AHU-2	1,2
(P 8)	INLINE CIRCULATOR	B&G 80 3x3x7B	276	25	4	4	460/3/60	3	1750	180	CHILLED WATER COIL CIRCULATOR AHU-1	1,2
(P 9)	INLINE CIRCULATOR	B&G 80 2.5x2.5x7	165	25	3	3	460/3/60	2	1750	200	CHILLED WATER COIL CIRCULATOR AHU-2	1,2

1. ALL PUMPS SHALL BE SIZED IN THE FLAT PART OF THE CURVE. SEE DETAIL.
2. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
3. VFD TO BE SUPPLIED BY DIVISION 16. PUMPS P-3 AND P-4.



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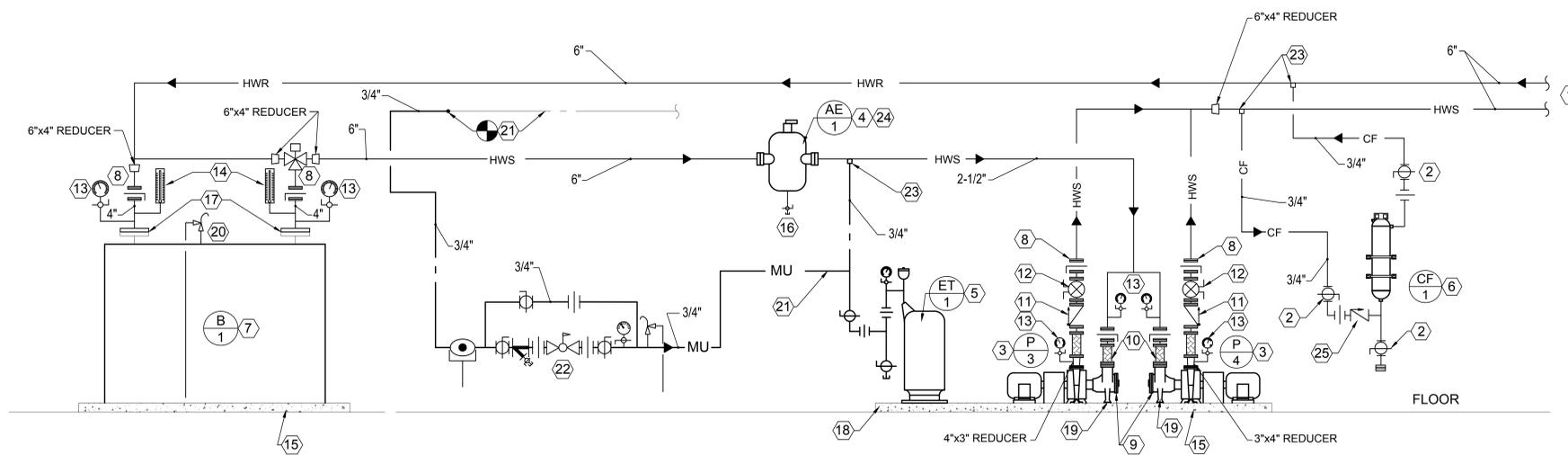
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 ARCHITECTURAL PHASE:
CONSTRUCTION DOCUMENTS

SHEET TITLE
**MECHANICAL
 SCHEDULES**

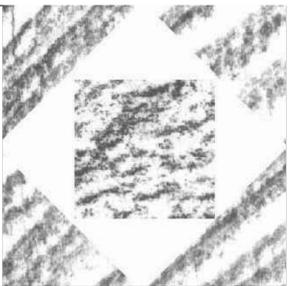
ME601
 SHEET 6 OF 7



NEW HOT WATER FLOW SHEET
NO SCALE

SHEET NOTES:

- ① 6"Ø HWS AND HWR TO BUILDING.
- ② BALL VALVE.
- ③ NEW BASE MOUNTED END SUCTION HOT WATER PUMPS P-3 AND P-4.
- ④ NEW AIR ELIMINATOR. SEE DETAIL B1/ME501.
- ⑤ NEW FLOOR MOUNTED EXPANSION TANK. SEE DETAIL B3/ME501.
- ⑥ CHEMICAL POT FEEDER. INSTALL PER DETAIL A3/ME501.
- ⑦ PROVIDE NEW HOT WATER GASED FIRED BOILER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- ⑧ FLANGED BUTTERFLY VALVE.
- ⑨ 4"x4" PUMP SUCTION DIFFUSER WITH FLOOR SUPPORT.
- ⑩ 4" FLANGED FLEX PUMP CONNECTORS. TYPICAL OF 4.
- ⑪ 4" FLANGED WAFER TYPE CHECK VALVE. TYPICAL OF 2.
- ⑫ 4" FLANGED BALANCING VALVE. TYPICAL OF 2.
- ⑬ PRESSURE GAUGE WITH SNUBBER AND SHUT OFF VALVE 0 TO 150 PSIG.
- ⑭ THERMOMETERS 0° TO 250° F.
- ⑮ PROVIDE NEW 4" HIGH CONCRETE PAD. SEE DETAIL D5/ME501.
- ⑯ 1/2" DRAIN FROM AIR ELIMINATOR. COMPLETE WITH COMBRACO SHUT OFF WITH HOSE CONNECTION AND CAP.
- ⑰ CONNECT PIPING TO BOILER PER MANUFACTURER'S RECOMMENDATIONS.
- ⑱ MOUNT EXPANSION TANK ON EXISTING CONCRETE PAD.
- ⑲ FLOOR SUPPORTS.
- ⑳ PROVIDE BOILER SAFETY RELIEF VALVE. ROUTE DISCHARGE PIPING TO FLOOR SO IT ONLY CONTAINS ONE 90° ELBOW.
- ㉑ PROVIDE 3/4" MAKE UP WATER LINE, TIE INTO EXISTING WATER PIPING AS SHOWN.
- ㉒ EXISTING RELOCATED PRV STATION AND BACK FLOW PREVENTER FOR MAKE-UP WATER TO HOT WATER SYSTEM. SEE DETAIL.
- ㉓ 3/4" THRED-O-LET.
- ㉔ AIR ELIMINATOR SHALL BE EQUAL TO SPIROVENT VSR 600 WITH AUTOMATIC AIR VENT.
- ㉕ CHECK VALVE.



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MECHANICAL FLOW SHEET

ME701
SHEET 7 OF 7

