

MIDLANDS TECHNICAL COLLEGE

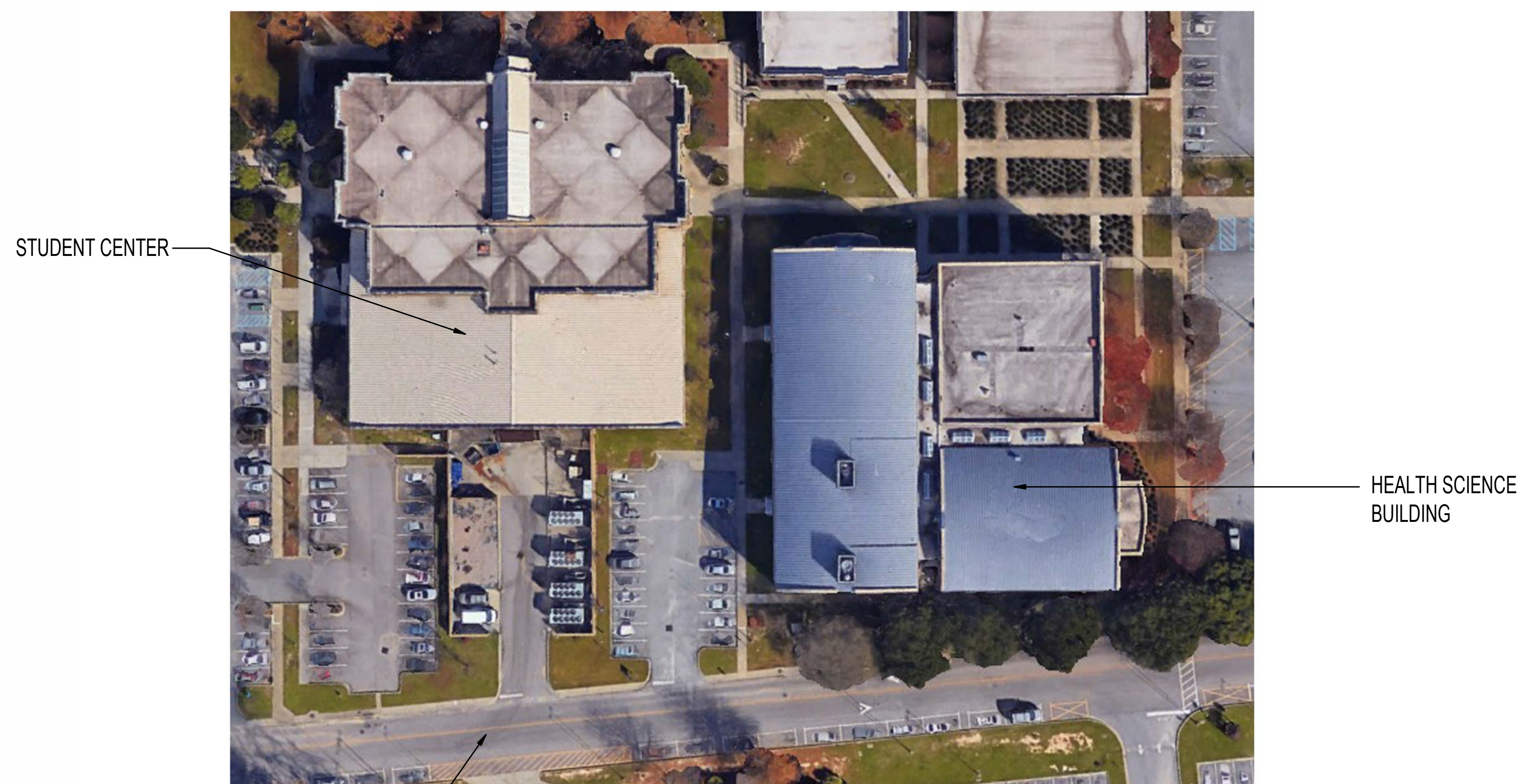
1070 SOUTH LAKE DRIVE
LEXINGTON, SC 29073

MTC - STUDENT CENTER CHILLER REPLACEMENT AIRPORT CAMPUS

H59-N192-LC

A/E Project Number: 23025.01

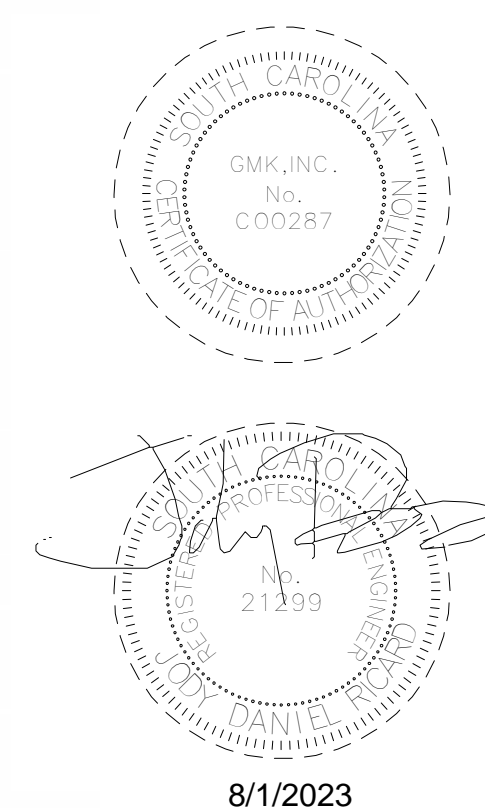
AUGUST 1, 2023
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DRAWING INDEX

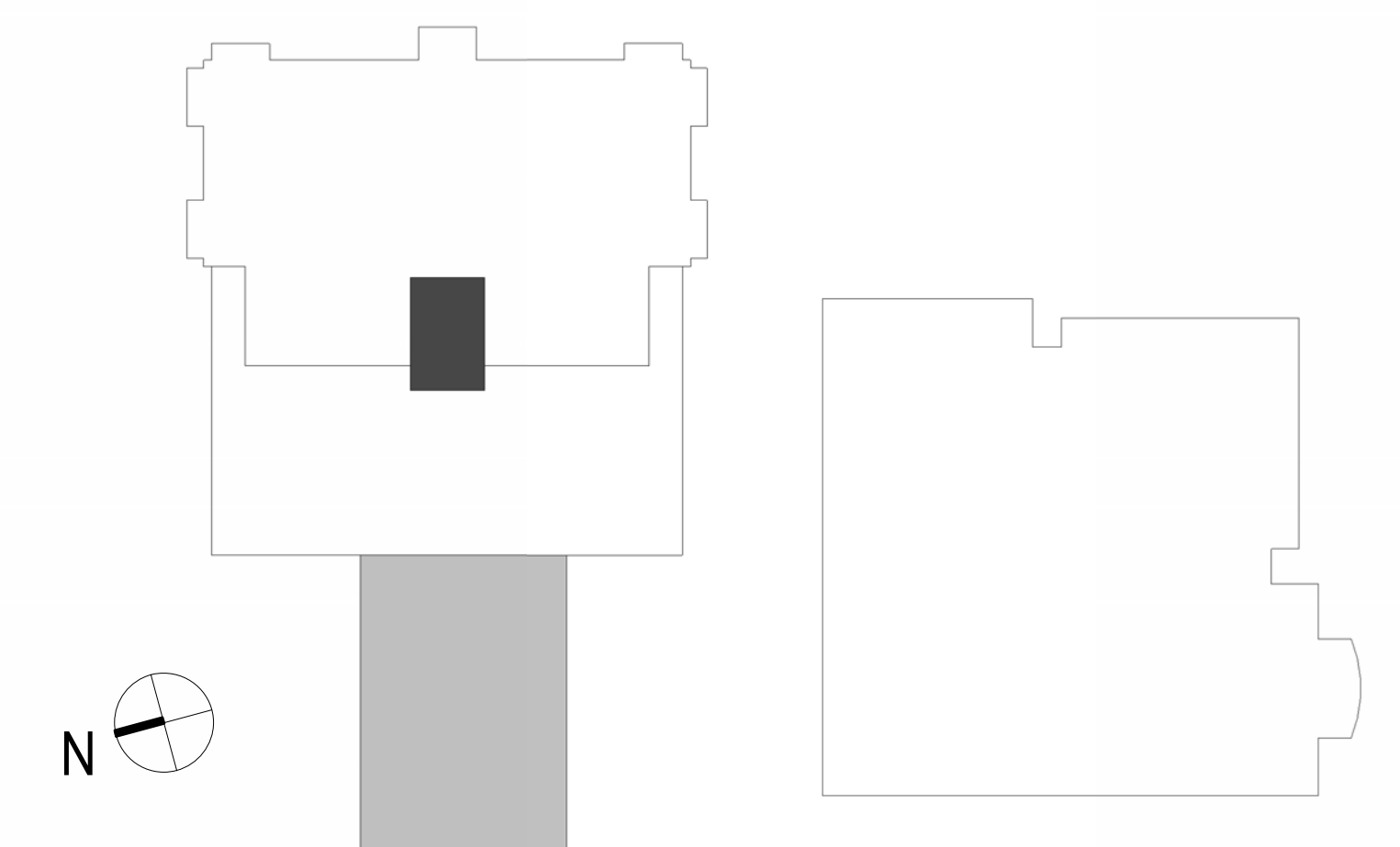
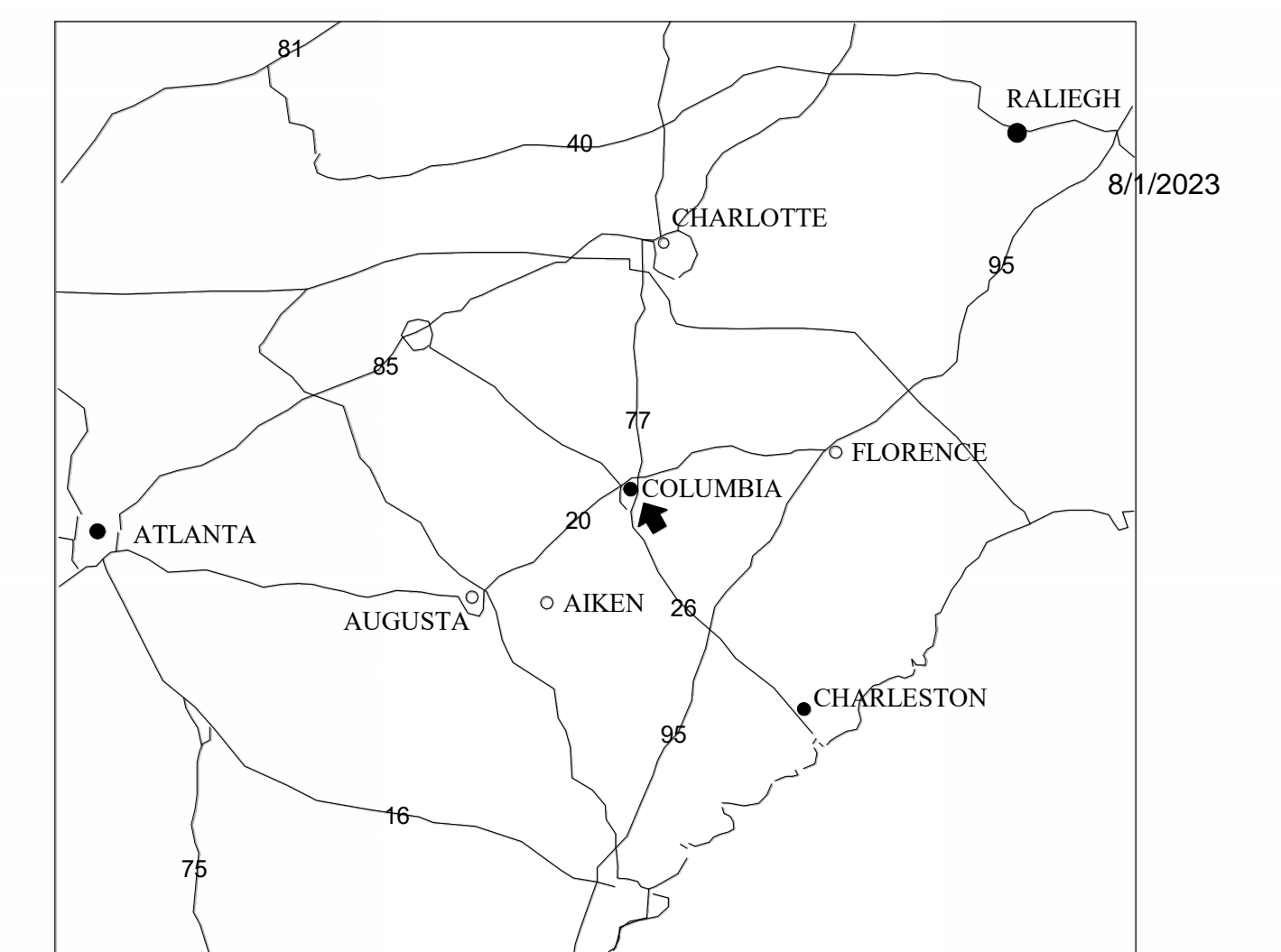
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KEY PLAN



MECHANICAL SYSTEMS SEISMIC AND WIND REQUIREMENTS PER IBC-2018/ASCE 7-16				
A.	PER THE 2018 INTERNATIONAL BUILDING CODE, MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND COMPONENTS, INCLUDING THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED FOR SEISMIC FORCES IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7-16.			
B.	EXTERIOR EQUIPMENT (INCLUDING ROOF CURBS, RAILS, SUPPORTS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH CHAPTER 28 TO 29 OF ASCE 7-16.			
C.	WHERE DESIGN FOR SEISMIC AND WIND LOADS IS REQUIRED, THE MORE DEMANDING FORCE MUST BE USED.			
D.	REFERENCE THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY, WIND SPEEDS, ETC.			
E.	USE THE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH COMPONENT.			
F.	FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL REGISTERED IN THE STATE THE JOB IS LOCATED. SUBMITTALS MUST INCLUDE STAMPED AND SIGNED DRAWINGS AND CALCULATIONS.			
G.	WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE APPROVED SEISMIC SUBMITTAL.			
H.	SEISMIC RESTRAINTS FOR DUCTWORK, PIPING, CONDUIT, CABLE TRAYS AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.			
MECHANICAL COMPONENT IMPORTANCE FACTOR (Ip) DESIGNATION				
Ip=1.0		Ip=1.5		
ALL HVAC COMPONENTS				
SEISMIC DESIGN CATEGORIES D,E,F				
COMPONENT IMPORTANCE FACTOR (Ip)				
Ip=1.0		Ip=1.5		
COMPONENT IDENTIFICATION	SEISMIC RESTRAINT REQUIREMENT	NOTES	SEISMIC RESTRAINT REQUIREMENT	NOTES
ROOF MOUNTED	RESTRAIN ALL	1	RESTRAIN ALL	-
FLOOR MOUNTED	RESTRAIN ALL	1,2	RESTRAIN ALL	-
WALL MOUNTED	RESTRAIN ALL	1,2	RESTRAIN ALL	-
COMPONENT SUPPORTS	RESTRAIN ALL	1	RESTRAIN ALL	-
SUSPENDED EQUIPMENT	INLINE WITH DUCT	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.	3	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.
	NOT INLINE WITH DUCT/PIPE	RESTRAIN ALL	1	RESTRAIN ALL
SUSPENDED DUCTILE PIPING (STEEL, ALUMINUM, COPPER, ETC.)		>3"	4	>1"
SUSPENDED NON DUCTILE PIPING (CAST IRON, PLASTIC, CERAMIC)		RESTRAIN ALL	4	RESTRAIN ALL
SUSPENDED PIPE ON TRAPEZE	RESTRAIN IF ANY PIPE ON TRAPEZE > 3" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT	4	RESTRAIN IF ANY PIPE ON TRAPEZE > 1" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT	4
DUCTWORK	6 SQ.FT. AND LARGER AND > 17 LBS/FT	4,5	6 SQ.FT. AND LARGER AND > 17 LBS/FT	4,5
MULTIPLE DUCTS ON TRAPEZE	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	4,5	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	3,4
COMPONENT CERTIFICATION	NOT REQUIRED	-	REQUIRED	6
NOTES:				
1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF THE COMPONENT IS POSITIVELY ATTACHED TO THE STRUCTURE AND FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.				
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED WITH THE CENTER OF MASS LOCATED AT 4 FT. OR LESS ABOVE A FLOOR, IS POSITIVELY ATTACHED TO THE STRUCTURE AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.				
3. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE CONNECTIONS ONLY.				
4. RESTRAINT IS NOT REQUIRED IF THE PIPING / DUCTWORK IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUN IS 12 IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE, WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12 IN. OR LESS, WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.				
5. ALL DUCTWORK, REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.				
6. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.				

VIBRATION ISOLATION SCHEDULE								
EQUIPMENT	HP	MOUNTING	ON GRADE			ABOVE GRADE		
			BASE TYPE	ASHRAE TYPE	ISOLATOR DEFLECTION	BASE TYPE	ASHRAE TYPE	ISOLATOR DEFLECTION
AIR COOLED CHILLERS		GRADE	A	4	1.0" (25)			
PUMPS	<40 HP		A	4	0.75" (19)			

HVAC LEGEND					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	HOT WATER SUPPLY		UNION		BUTTERFLY VALVE
	HOT WATER RETURN		STRAINER		GATE VALVE
	CHILLED WATER SUPPLY		STRAINER WITH BLOW OFF		ANGLE VALVE
	CHILLED WATER RETURN		THERMOMETER		GLOBE VALVE
	SUCTION DIFFUSER WITH STRAINER		CIRCUIT SETTER		CONTROL VALVE, THREE WAY
	PUMP SYMBOL		PRESSURE INDICATOR		CONTROL VALVE, TWO WAY
	CONCENTRIC REDUCER		TRIPLE DUTY VALVE		PRESSURE REDUCING VALVE
	ECCENTRIC REDUCER FLAT ON BOTTOM		BALANCING VALVE		AUTOMATIC FLOW CONTROL VALVE
	ECCENTRIC REDUCER FLAT ON TOP		AUTOMATIC AIR VALVE		CHECK VALVE
	ELBOW TURNED DOWN		MANJAL AIR VALVE WITH DICHARGE TUBE		NEEDLE VALVE
	ELBOW TURNED UP		TEE		END CAP
	TEE OUTLET UP		PLUG VALVE		BLIND FLANGED
	EXISTING PIPING TO REMAIN		BALL VALVE		FLOW METER STATION
	PIPING TO BE DEMOLISHED		TEE OUTLET DOWN		
	EXISTING PIPING BELOW GRADE		CONNECT TO EXISTING		

AIR COOLED CHILLER SCHEDULE															
EQUIPMENT TAG	TONS	REFRIGERANT	EER	IPLV	WATER				ELECTRICAL				MODEL	NOTES	
					WPD (FT)	EWI	LWT	GPM	MCA (A)	MOCAP (A)	VOLTAGE	Phase			MFG
C-1	96.0	R410A	9.675	17.06	6.38	55	43	191	225	250	460	3	Johnson Controls, Inc.	YLAAG100SE	1,2,3,4
C-4	96.0	R410A	9.675	17.06	6.38	55	43	191	225	250	460	3	Johnson Controls, Inc.	YLAAG100SE	1,2,3,4
NOTES:															
1. UNIT SHORT CIRCUIT WITHSTAND - MIN. 65 kA				4. LOUVERED PANELS (FULL UNIT)											
2. SINGLE POINT CONNECTION															
3. LOW AMBIENT CONTROL															

PUMP SCHEDULE											
EQUIPMENT TAG	GPM	PUMP HEAD (FT)	Pump Efficiency	MOTOR			Voltage	Phase	MANUFACTURER	MODEL	REMARKS
				HP	RPM	TYPE					
P-1	191	40	80.20%	3.0	1800	TEFC	460 V	3	Bell & Gossett	2.5 AC	2
P-4	191	40	80.20%	3.0	1800	TEFC	460 V	3	Bell & Gossett	2.5 AC	2
P-7	185	53	71.30%	5.0	1800	TEFC	460 V	3	Bell & Gossett	2.5 BB	1
P-8	185	53	71.30%	5.0	1800	TEFC	460 V	3	Bell & Gossett	2.5 BB	1
NOTES:											
1. VARIABLE FREQUENCY DRIVE.											
2. STARTER											

ABBREVIATIONS			
ACC#	Air Cooled Chiller - No.	MIN	Minimum
AC	Air Conditioning	MOD	Motor Operated Damper
AAV	Automatic Air Vent	MPT	Male Pipe Thread
ABV	Above	N/A	Not Applicable
AD	Access Door	NC	Normally Closed
ADP	Apparatus Dew Point	NIC	Not in Contract
AFF	Above Finished Floor	NO	Normally Open
BFP	Backflow Preventer	NPSH	Net Positive Suction Head
BHP	Brake Horsepower	NPT	National Pipe Thread
BMS	Building Management System	NTS	Not To Scale
BOP	Ballon of Pipe	PD	Pressure Drop
CHWR	Chilled Water Return	PI	Pressure Indicator
CHWS	Chilled Water Supply	POC	Point of Connection
CO	Clean Out	PRV	Pressure Reducing Valve
COL	Column Line	PS	Pressure Switch
DB	Dry Bulb Temperature	PSI	Pounds Per Square Inch
DP	Dew Point	PSIA	Pounds Per Square Inch Absolute
EAT	Entering Air Temperature	PSIG	Pounds Per Square Inch Gauge
EDB	Entering Air Dry Bulb	REG	Register
ELEC	Electric or Electrical	RH	Relative Humidity
ELEV	Elevation	SEER	Seasonal Energy Efficiency Ratio
EWB	Entering Air Wet Bulb	SHT	Sheet
EWT	Entering Water Temperature	SP	Static Pressure
FL	Floor	SPEC	Specifications
FL	Flat On Bottom	SPL	Supply
FOT	Flat On Top	SS	Stainless Steel
FPT	Female Pipe Thread	STD	Standard
FT	Feet	T	Thermostat
FT HD	Feet of Head	T#	Tank - No.
FZ	Freezeostat (low limit thermostat)	TDH	Total Dynamic Head
GAL	Gallons	TEMP	Temperature
GPD	Gallons Per Day	TOC	Top of Concrete
GPH	Gallons Per Hour	TOD	Top of Duct
GPM	Gallons Per Minute	TOP	Top of Pipe
HD	Head	TOST	Top of Steel
HP	Horsepower	TSTAT	Thermostat
HVAC	"Heating, Ventilating & Air Conditioning"	TYP	Typical
ID	Inside Diameter	VB	Vacuum Breaker
IE	Invert Elevation	VENT	Vent
LAT	Leaving Air Temperature	VFD	Variable Frequency Drive
LWB	Leaving Water Temperature	WB	Wet Bulb Temperature
LWT	Leaving Water Temperature	XFMR	Transformer
MAV	Manual Air Vent		
MAX	Maximum		
MBH	Thousand BTU/HR (thousands)		

MECHANICAL GENERAL NOTES	
1.	DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF DOORS, WINDOWS, CEILING DIFFUSERS, ETC.
2.	USE ECCENTRIC REDUCERS ON AUTOMATIC VALVES WHERE REQUIRED.
3.	EXTEND ALL DRAIN LINES TO NEAREST FLOOR DRAIN OR AS INDICATED. ROUTE TO AVOID INTERFERENCE WITH PASSAGEWAYS. CONDENSATE DRAINS SHALL BE TRAPPED. SLOPE DRAIN LINES 1/8" PER FOOT.
4.	ALL PIPING SHALL PITCH DOWN IN DIRECTION OF FLOW OR AS INDICATED ON DRAWINGS. 1" PER 40 FEET WITH MANUAL AIR VENTS AT ALL HIGH POINTS. AND 3/4" DRAIN VALVES AT ALL LOW POINTS. ALL PIPING AND DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH FLOORS, ROOFS AND PARTITIONS EXCEPT WHERE PROHIBITED BY FIRE CODES.
5.	EXTEND DRAIN LINES FROM RELIEF VALVES TO 2" ABOVE NEAREST FLOOR DRAIN OR AS INDICATED.
6.	ALL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS AND FURTHER SUPPORTS ON HANGERS SHALL BE ADJACENT TO ELBOWS, TO PREVENT WEIGHT OF PIPING BEING PLACED ON THE EQUIPMENT. SUPPORT DETAILS SHALL BE SUBMITTED TO THE MECHANICAL ENGINEER.
7.	ALL PIPING AND DUCTWORK LOCATIONS SHALL BE COORDINATED WITH THE WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID INTERFERENCE.
8.	CORRECT SETTINGS ON ALL BALANCING FITTINGS SHALL BE PERMANENTLY MARKED.
9.	RUNOUTS SHALL PITCH DOWN IN DIRECTION OF FLOW A MINIMUM OF 1" IN 30 FEET.
10.	ALL PIPING, DUCTS, VENTS, ETC. EXTENDING THRU EXTERIOR WALLS AND ROOFS SHALL BE FLASHED AND COUNTERFLASHED. COORDINATE ORIENTATION OF SUPPLY AND RETURN PIPING BEFORE FABRICATION.
11.	PROVIDE DIELECTRIC FITTINGS AT ALL LOCATIONS WHERE DISSIMILAR METALS ARE JOINED IN PIPING AND DUCT SYSTEMS.
12.	
13.	

PRE-DEMOLITION NOTES:	
CONTRACTOR SHALL MEASURE AND DOCUMENT FLOW AND PRESSURE AT EACH AIR HANDLER AND ROOFTOP IN THE HEALTH SCIENCE BUILDING (HSB) AND STUDENT CENTER (SC). THE CHILLED WATER SYSTEM HAS THE FOLLOWING EQUIPMENT CONNECTED TO THE CHILLED WATER LOOP. THE CHILLED WATER VALUES BELOW ARE DESIGN FLOWS TAKEN FROM THE ORIGINAL DRAWINGS:	
1.	HSB - AHU-1 - 130 GPM
2.	HSB - AHU-2 - 30 GPM
3.	HSB - AHU-3 - 114 GPM
4.	HSB - AHU-4 - 90 GPM
5.	SC - AHU-1 - 124 GPM
6.	SC - AHU-2 - 105 GPM
7.	SC - AHU-3 - 141 GPM
DOCUMENT MEASURED FLOW COMPARED TO DESIGN FLOW AND SUBMIT REPORT TO ENGINEER FOR REVIEW PRIOR TO DEMOLITION ANY OF THE CHILLED WATER SYSTEM.	

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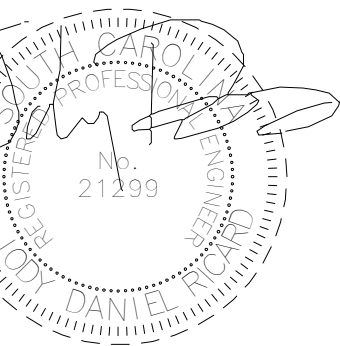
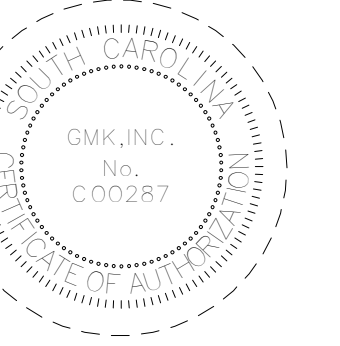
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project name
MTC - STUDENT CENTER CHILLER REPLACEMENT - AIRPORT CAMPUS

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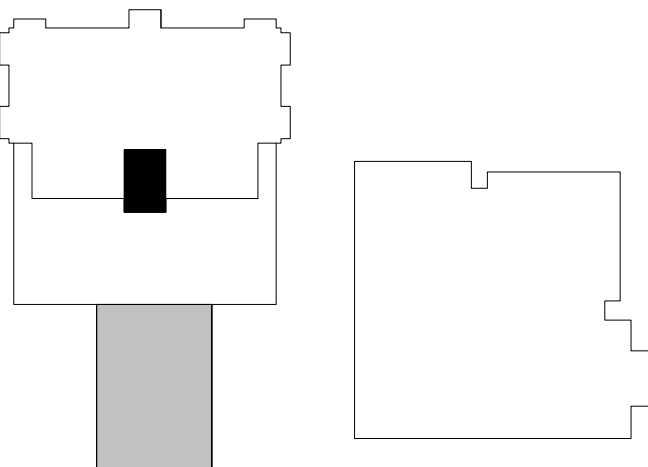
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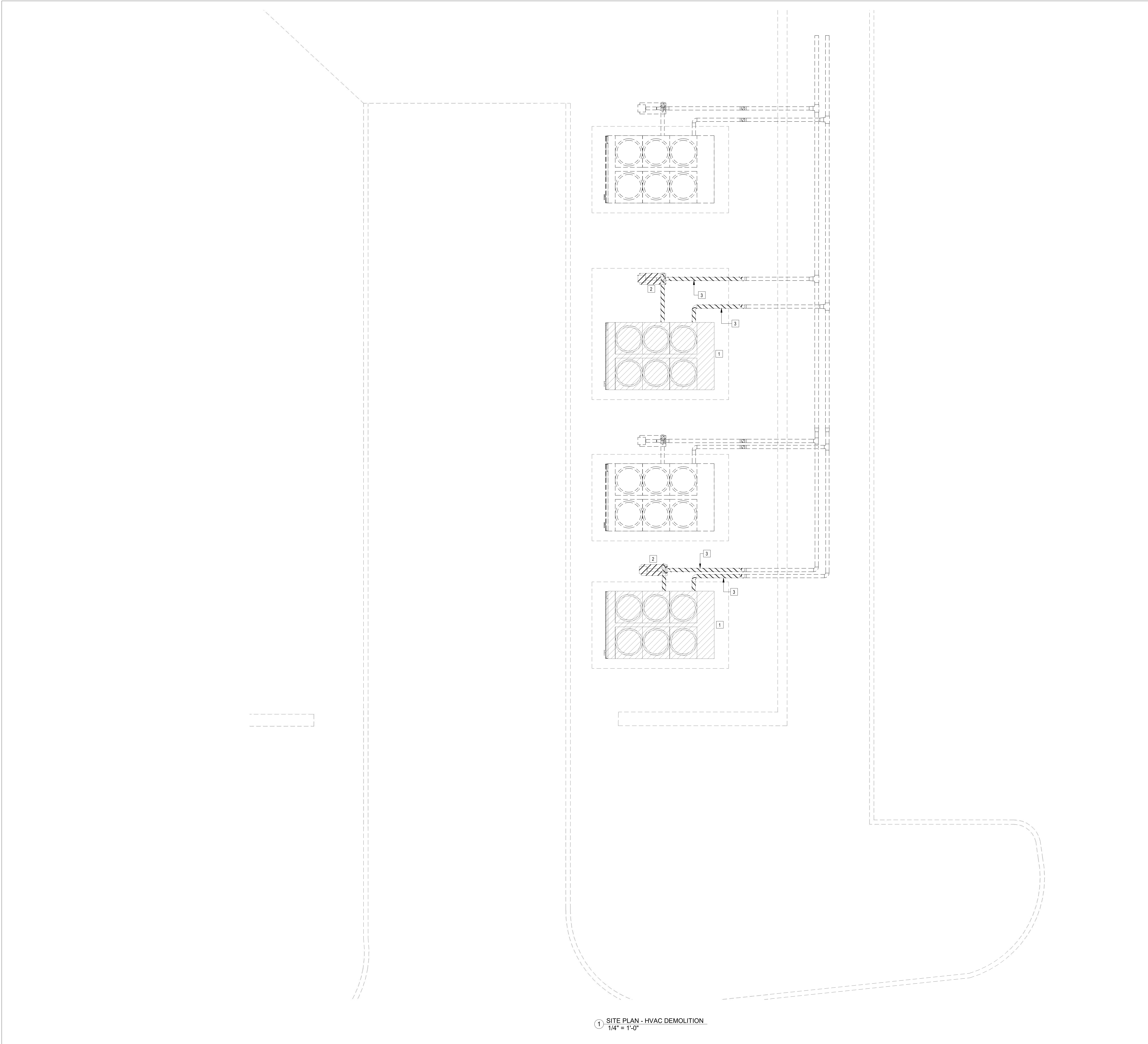
Key Plan

sheet title
HVAC LEGENDS, NOTES, ABBREVIATIONS, AND SCHEDULES

sheet number

M0.1

drawn by Author
checked by Checker



KEYED NOTES:

- 1 REMOVE AIR COOLED CHILLER, PIPING, AND CONTROLS AS HATCHED.
- 2 REMOVE CHILLED WATER PUMP AS INDICATED.
- 3 REMOVE PIPING AS INDICATED.



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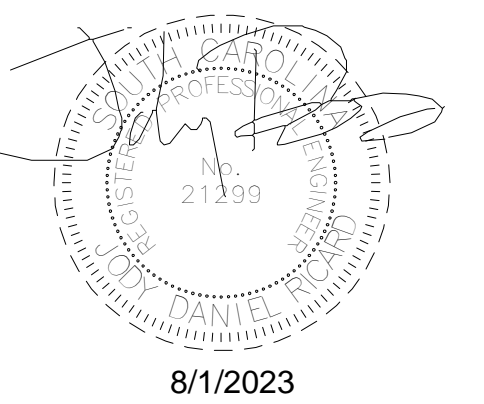
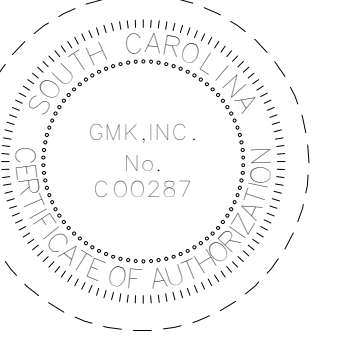
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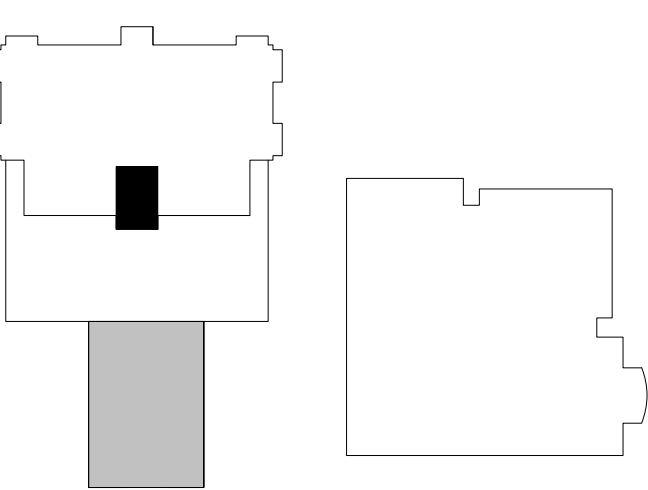
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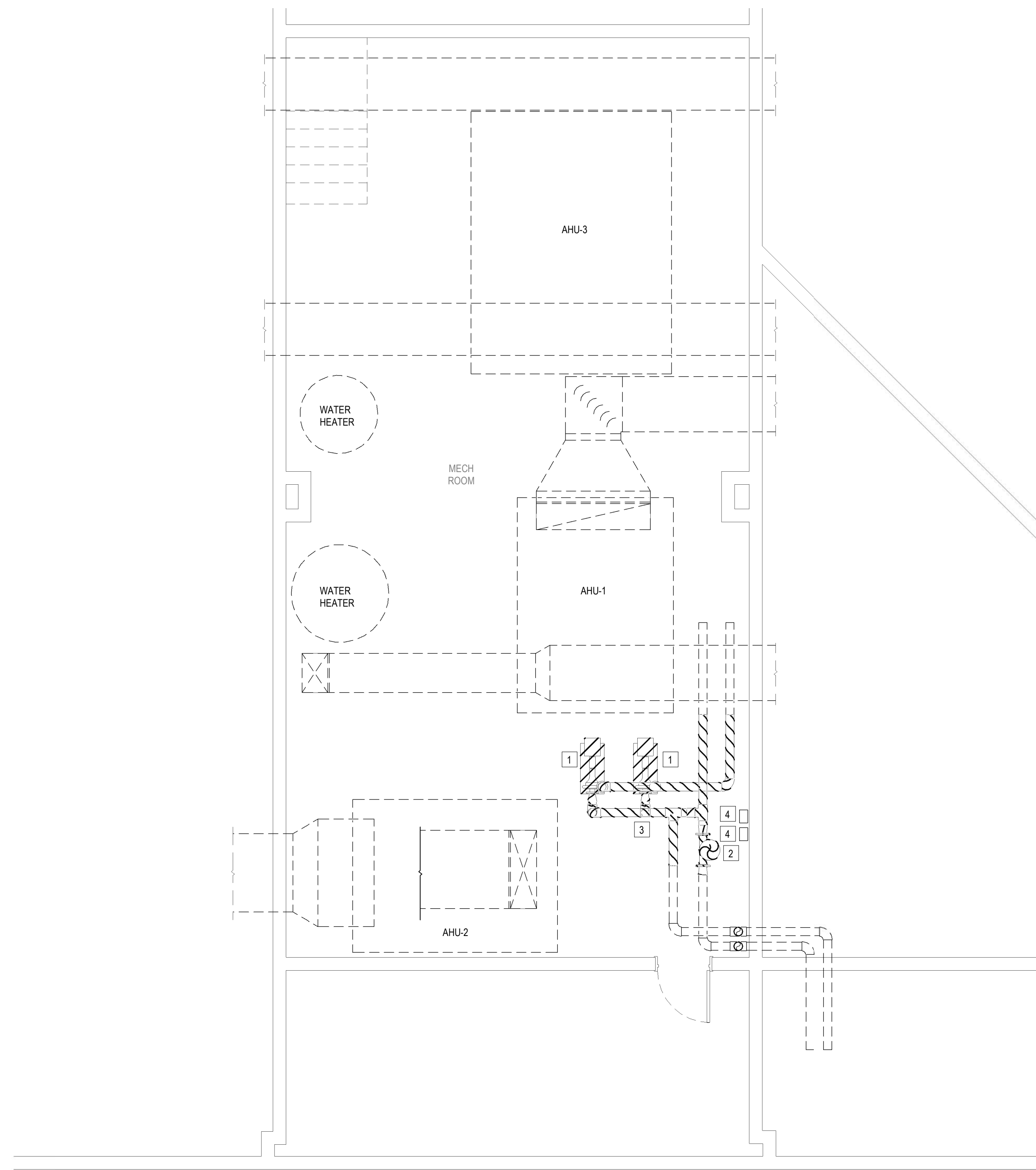
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SITE PLAN - HVAC DEMOLITION

sheet number

M1.0

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1 SITE PLAN - HVAC DEMOLITION
 1/4" = 1'-0"



1 PARTIAL SECOND FLOOR PLAN - HVAC DEMOLITION
1/4" = 1'-0"

KEYED NOTES:

- 1 REMOVE EXISTING CHILLED WATER PUMP AND ASSOCIATED CONTROLS AS HATCHED.
- 2 REMOVE AIR SEPARATOR, EXPANSION TANK, AND CHEMICAL POT FEEDER.
- 3 REMOVE PIPING AS INDICATED.
- 4 REMOVE PUMP STARTER AS INDICATED.



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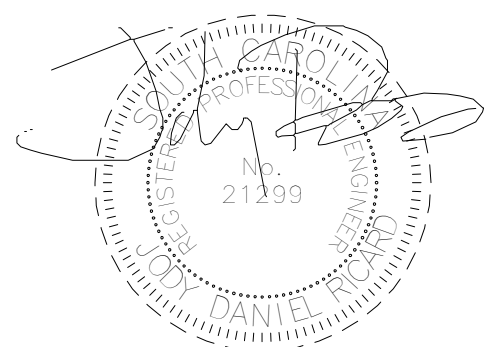
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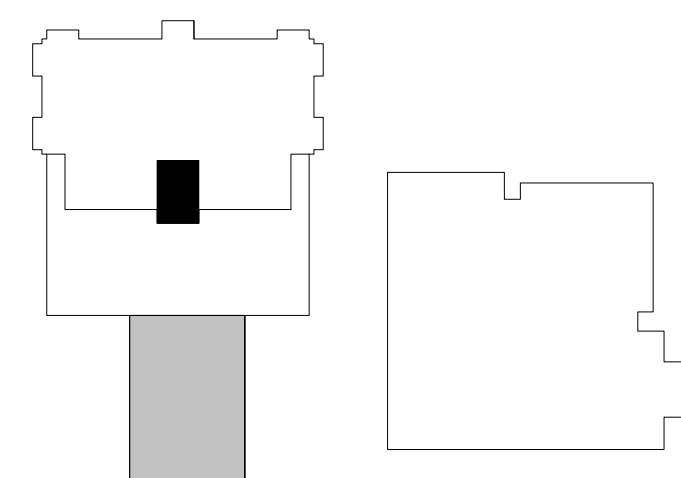
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Key Plan

sheet title
PARTIAL SECOND FLOOR PLAN -
HVAC DEMOLITION

sheet number

M1.2

drawn by JDR
checked by JWB

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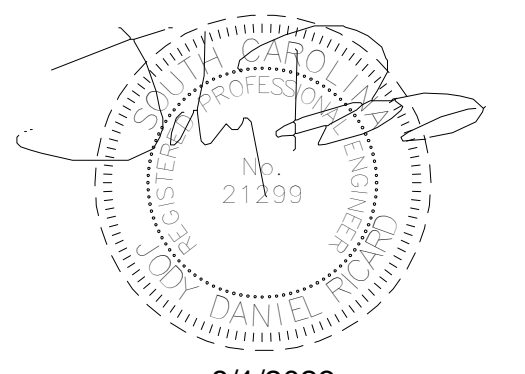
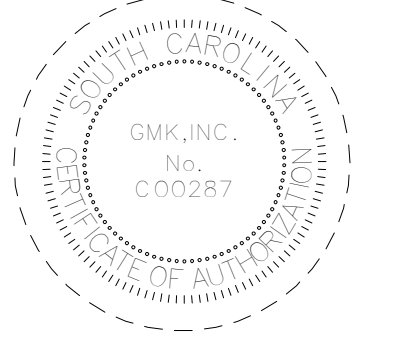
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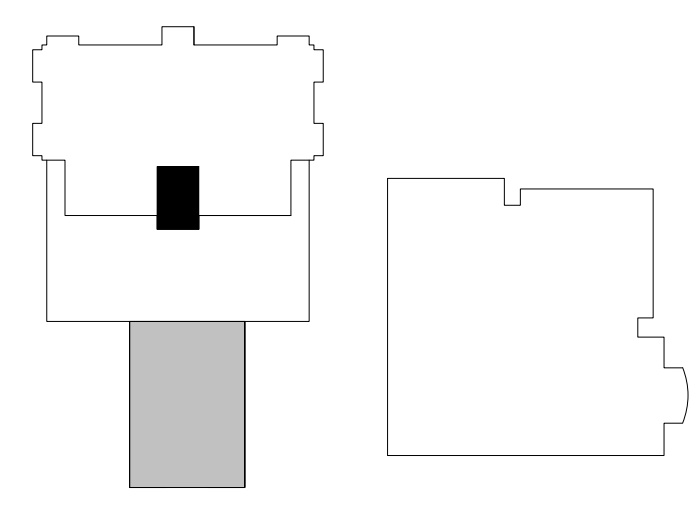
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key plan



Key Plan

sheet title
SITE PLAN - HVAC RENOVATION

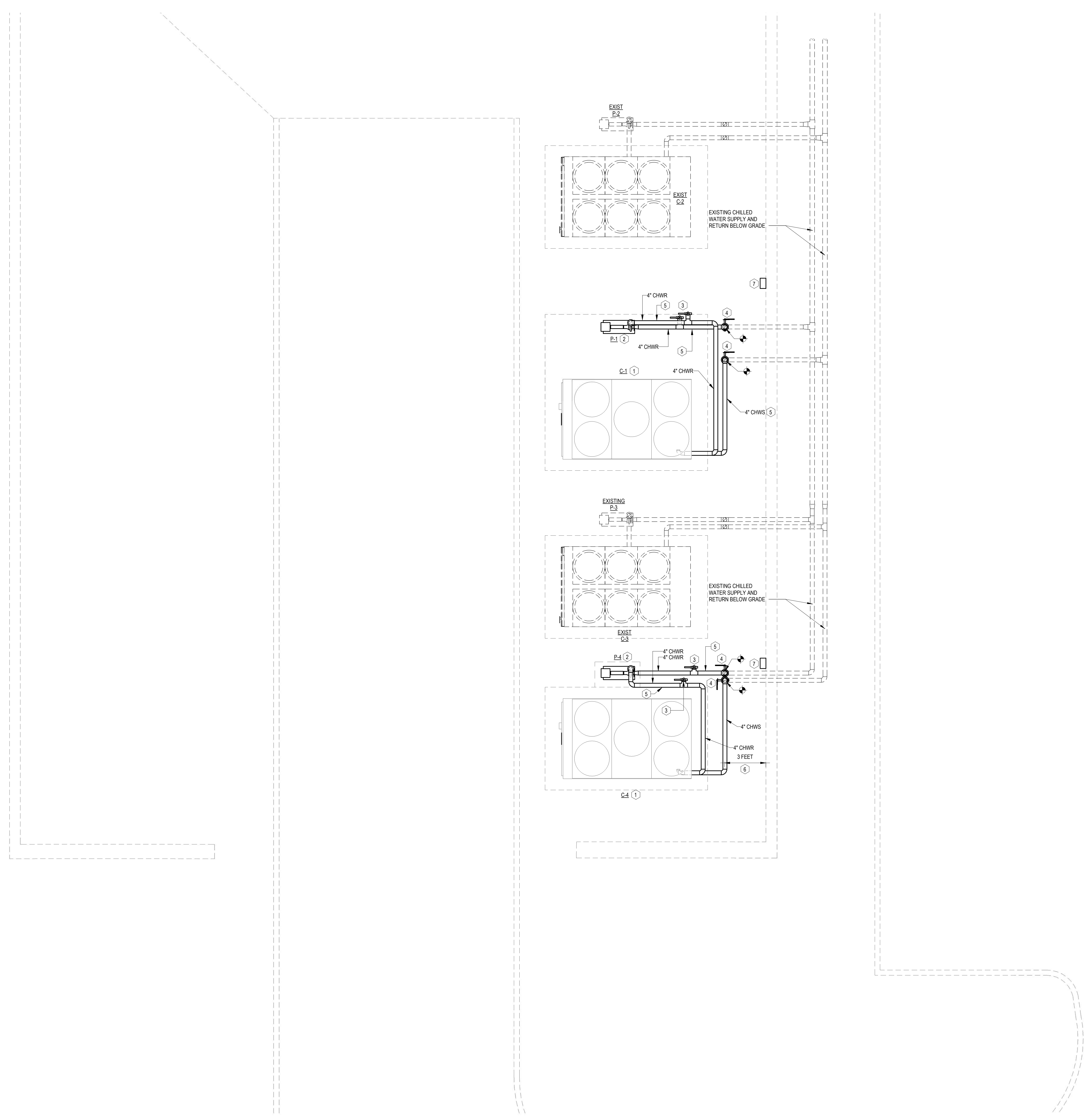
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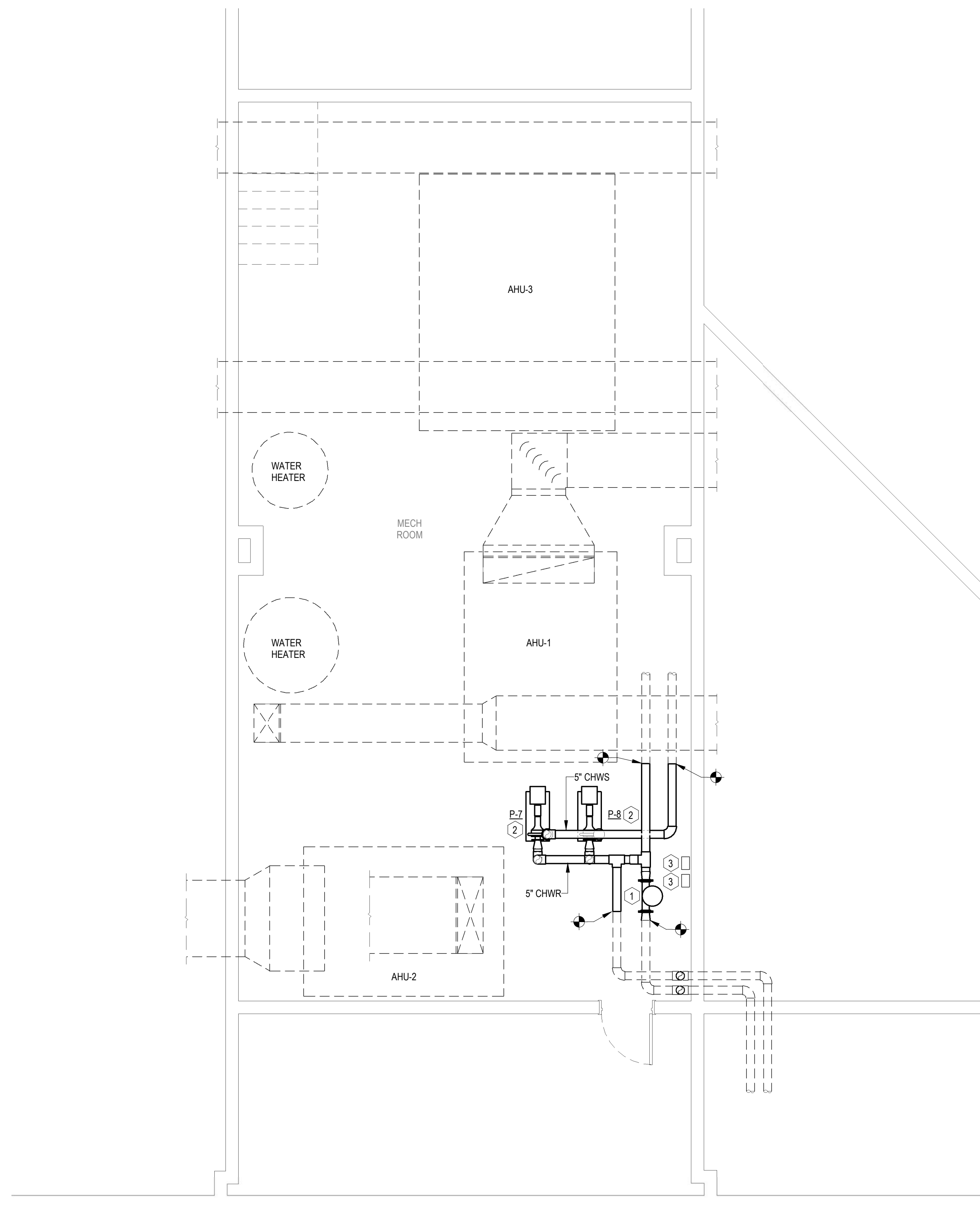
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KEYED NOTES:

- 1 INSTALL NEW CHILLER ON EXISTING HOUSEKEEPING PAD. ANCHOR TO PAD IN ACCORDANCE WITH SEISMIC REQUIREMENTS.
- 2 INSTALL PUMP ON EXISTING HOUSEKEEPING PAD.
- 3 FUTURE CHILLER CONNECTIONS.
- 4 PROVIDE NEW BUTTERFLY VALVES. VALVE INSTALLATION SHALL BE COORDINATED WITH THE OWNER AND INSTALLED PRIOR TO DEMOLISHING CHILLERS AND ASSOCIATED PUMPS TO ISOLATE THE CHILLER FROM THE CHILLED WATER LOOP.
- 5 HEAT TRACE ALL CHILLED WATER PIPING LOCATED OUTSIDE. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 6 MAINTAIN A MINIMUM OF 3'-0" CLEARANCE BETWEEN PIPING AND WALL.
- 7 PROVIDE NEW STARTER/DISCONNECT FOR CHILLED WATER PUMP. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



① SITE PLAN - HVAC RENOVATION
1/4" = 1'-0"



1 PARTIAL SECOND FLOOR PLAN - HVAC RENOVATION
1/4" = 1'-0"

KEYED NOTES:

- 1 PROVIDE NEW AIR/SEDIMENT SEPARATOR AND SUSPEND FROM STRUCTURE. SEE DETAIL AND SCHEDULE FOR ADDITIONAL INFORMATION.
- 2 INSTALL PUMP ON EXISTING HOUSEKEEPING PAD.
- 3 PROVIDE NEW VFD FOR CHILLED WATER PUMPS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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owner
MIDLANDS TECHNICAL COLLEGE - AIRPORT CAMPUS

project name
MTC - STUDENT CENTER CHILLER REPLACEMENT - AIRPORT CAMPUS

project number
H59-N192-LC

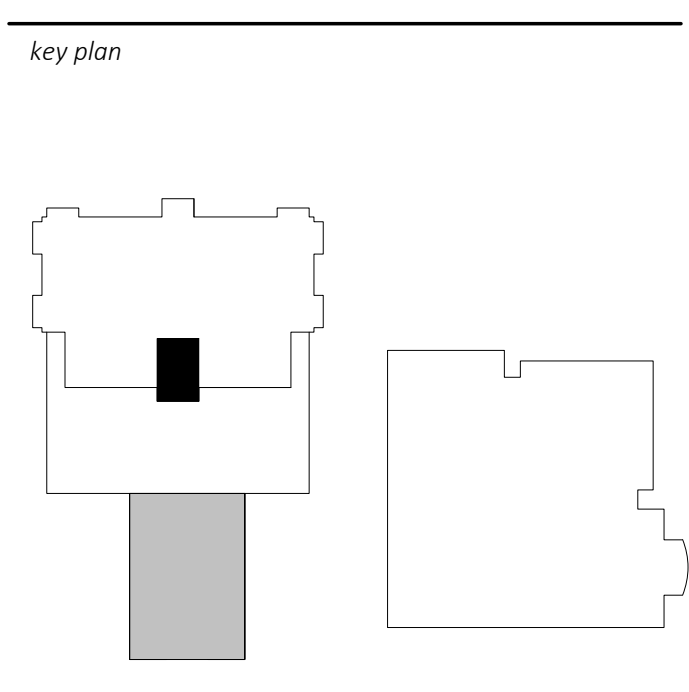
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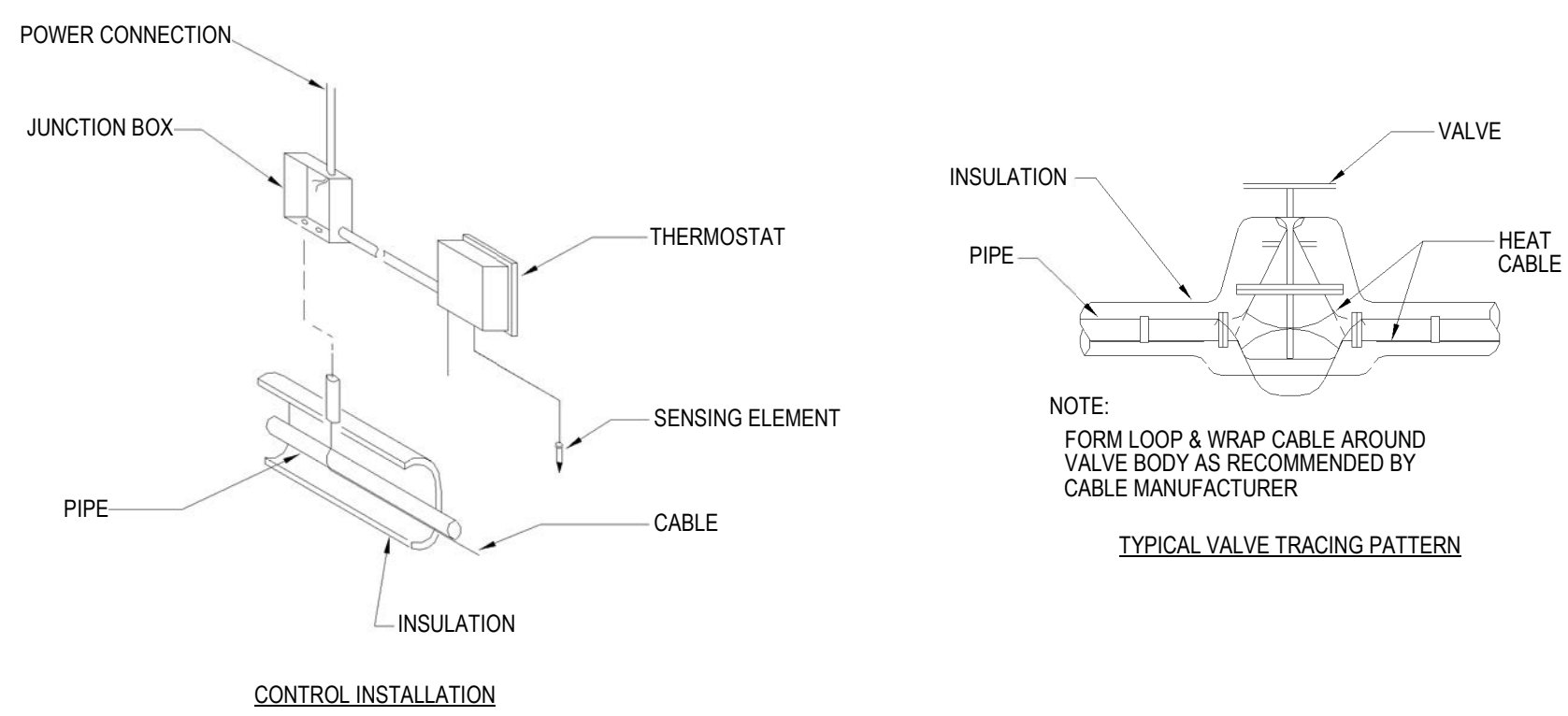


Key Plan

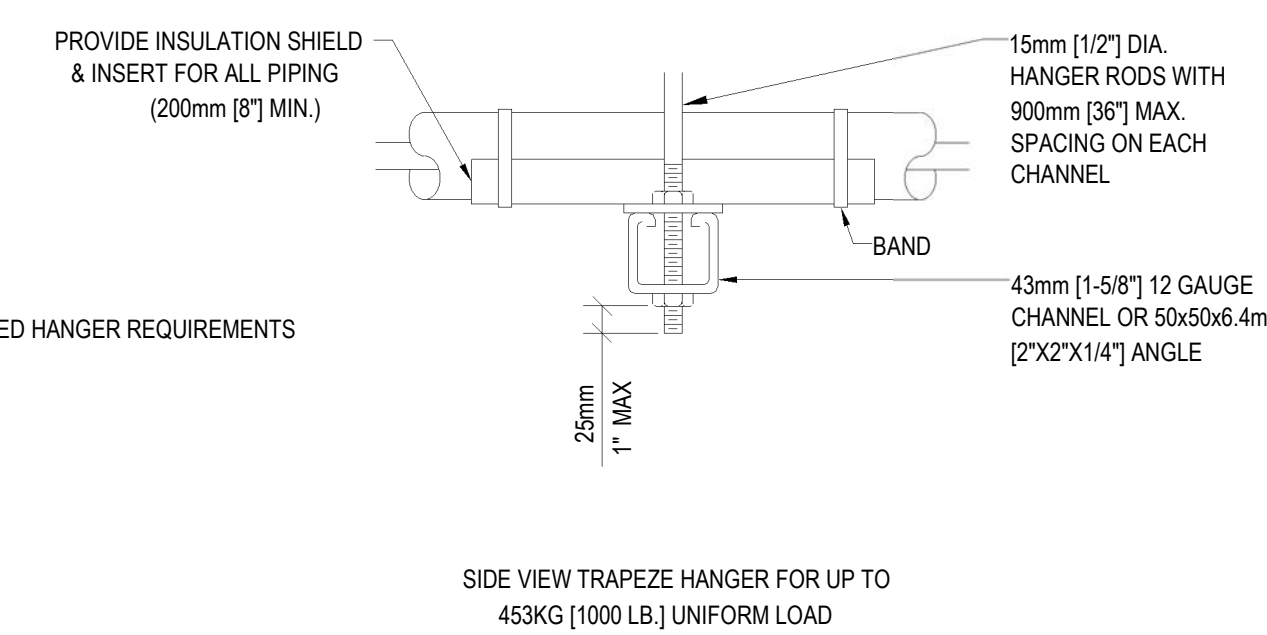
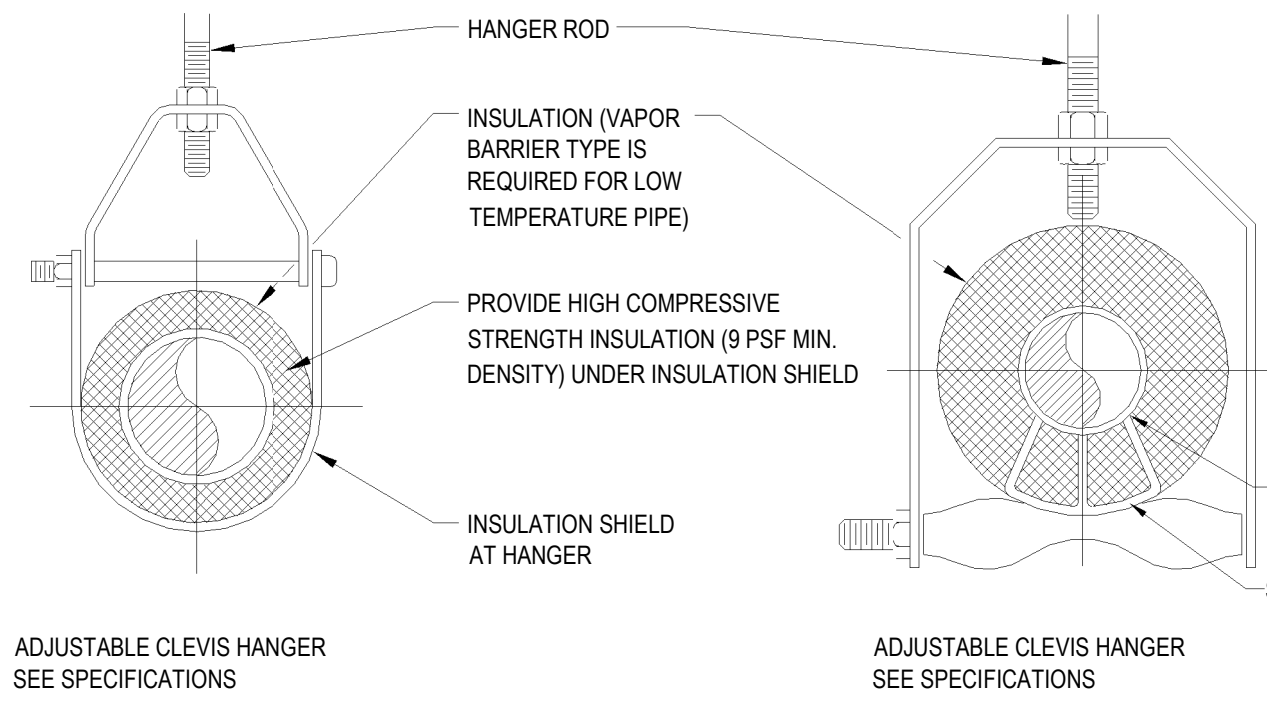
sheet title
PARTIAL SECOND FLOOR PLAN - HVAC RENOVATION

sheet number
M2.2

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1 HEAT TRACING DETAIL
NTS

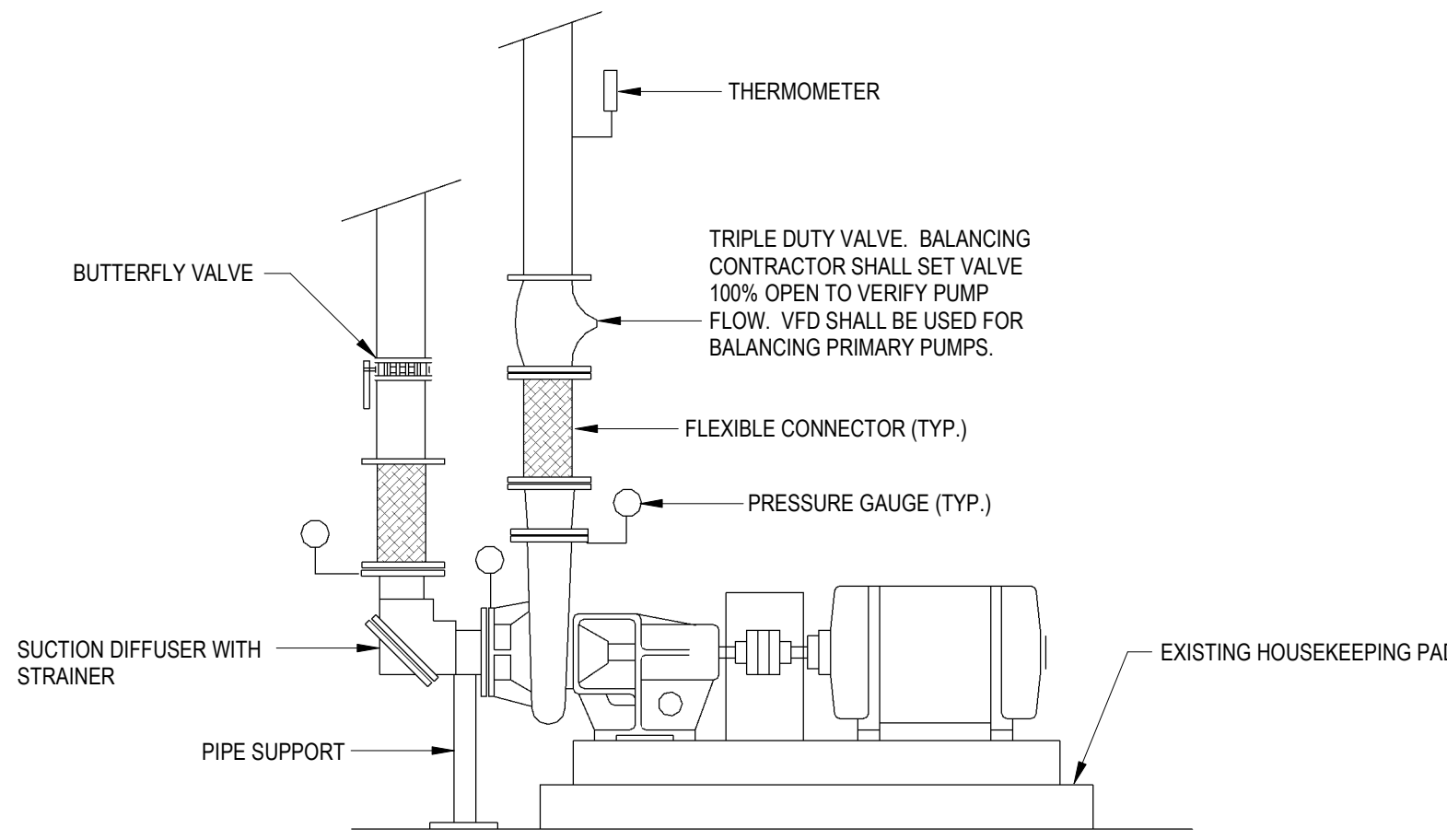


NOTE: SEE SPECIFER FOR DETAILED HANGER REQUIREMENTS

MAXIMUM PIPE/TUBING SUPPORT SPACING																			
NOM. SIZE	mm [IN]	THRU 20 [THRU 3/4]	25 [1]	32 [1 1/4]	40 [1 1/2]	50 [2]	65 [2 1/2]	75 [3]	100 [4]	125 [5]	150 [6]	200 [8]	250 [10]	300 [12]	350 [14]	400 [16]	450 [18]	500 [20]	600 [24]
PIPE	mm [FT]	2100 [7]	2100 [7]	2100 [7]	2700 [9]	3000 [10]	3400 [11]	3700 [12]	4100 [14]	4900 [16]	5200 [17]	5800 [19]	6700 [22]	7000 [23]	7600 [25]	8200 [27]	8500 [28]	9100 [30]	9600 [32]
TUBING	mm [FT]	1500 [5]	1800 [6]	2100 [7]	2400 [8]	2700 [9]	3000 [10]	3700 [12]	4000 [13]	4100 [14]	4900 [16]	-	-	-	-	-	-	-	-

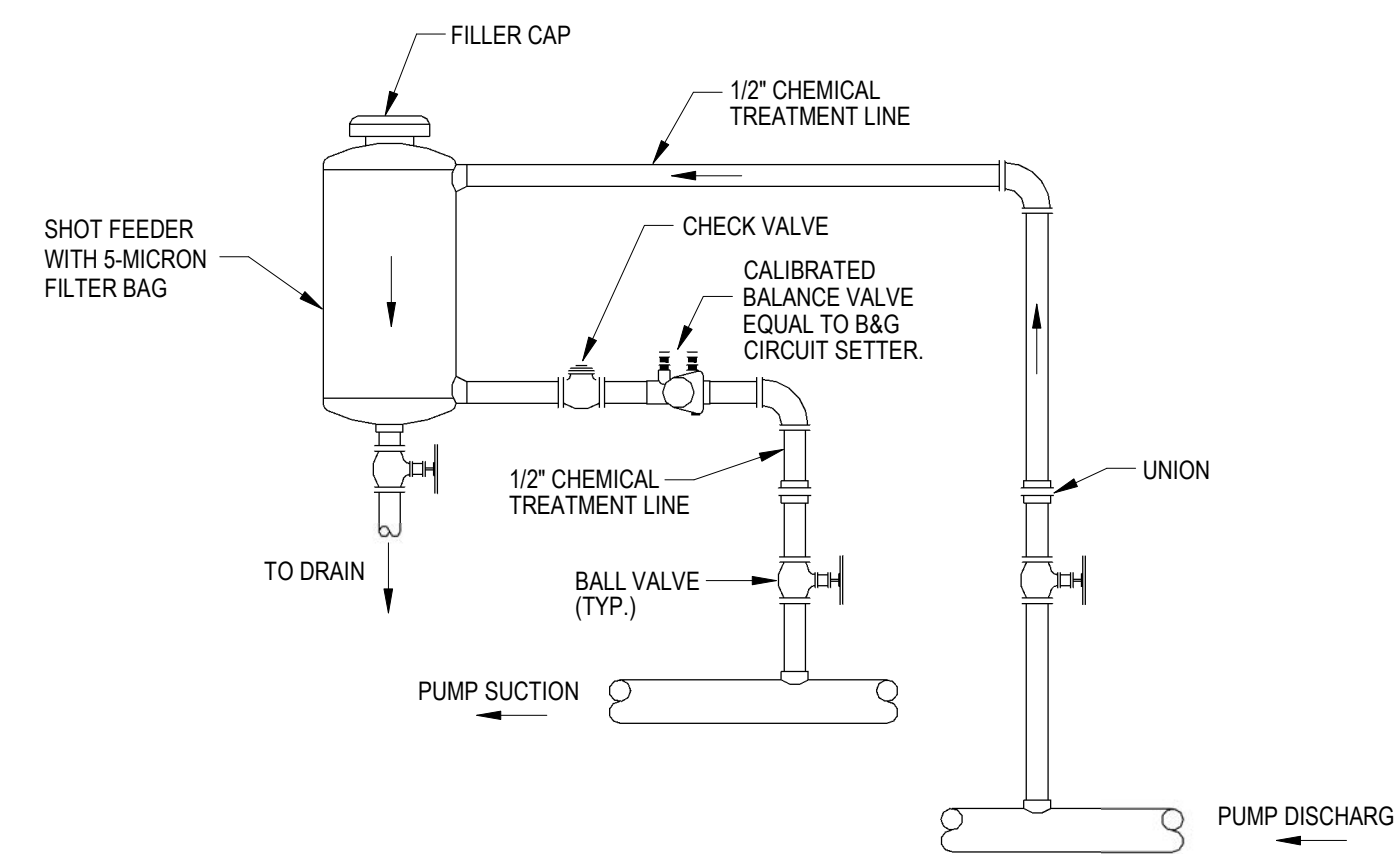
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

4 PIPE HANGER DETAIL
NTS

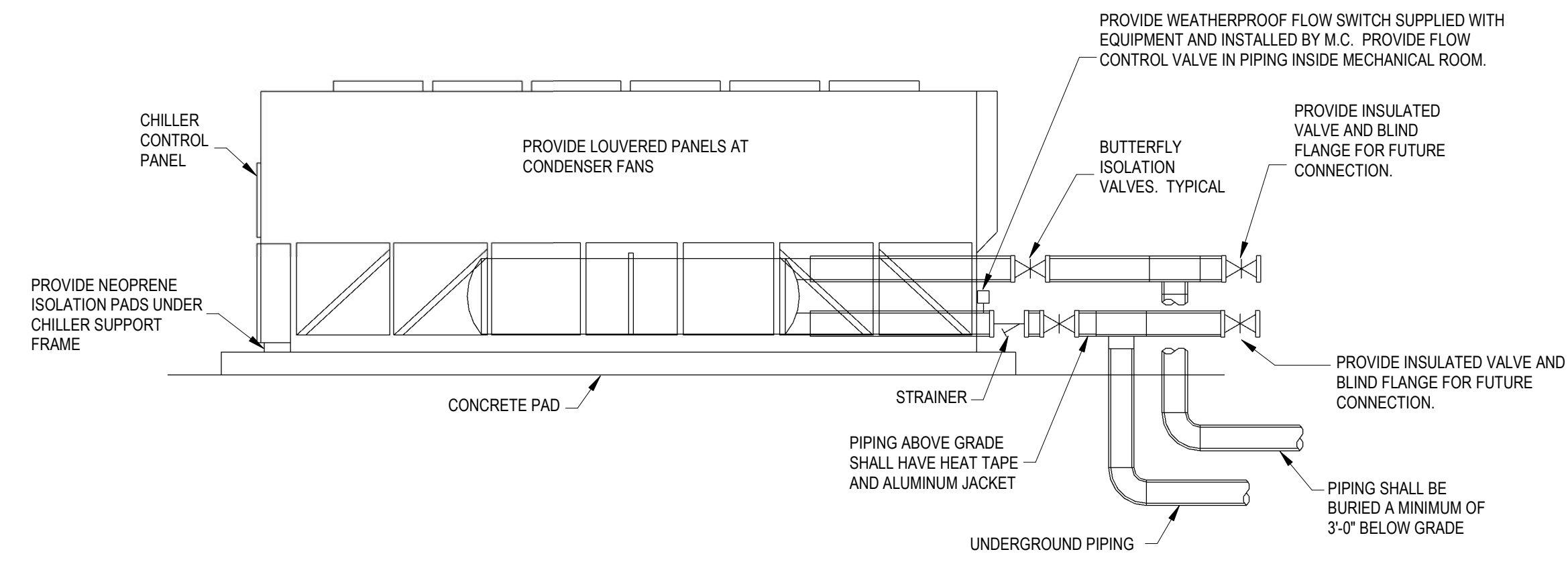


NOTES
1. SEE SCHEDULE FOR ADDITIONAL INFORMATION

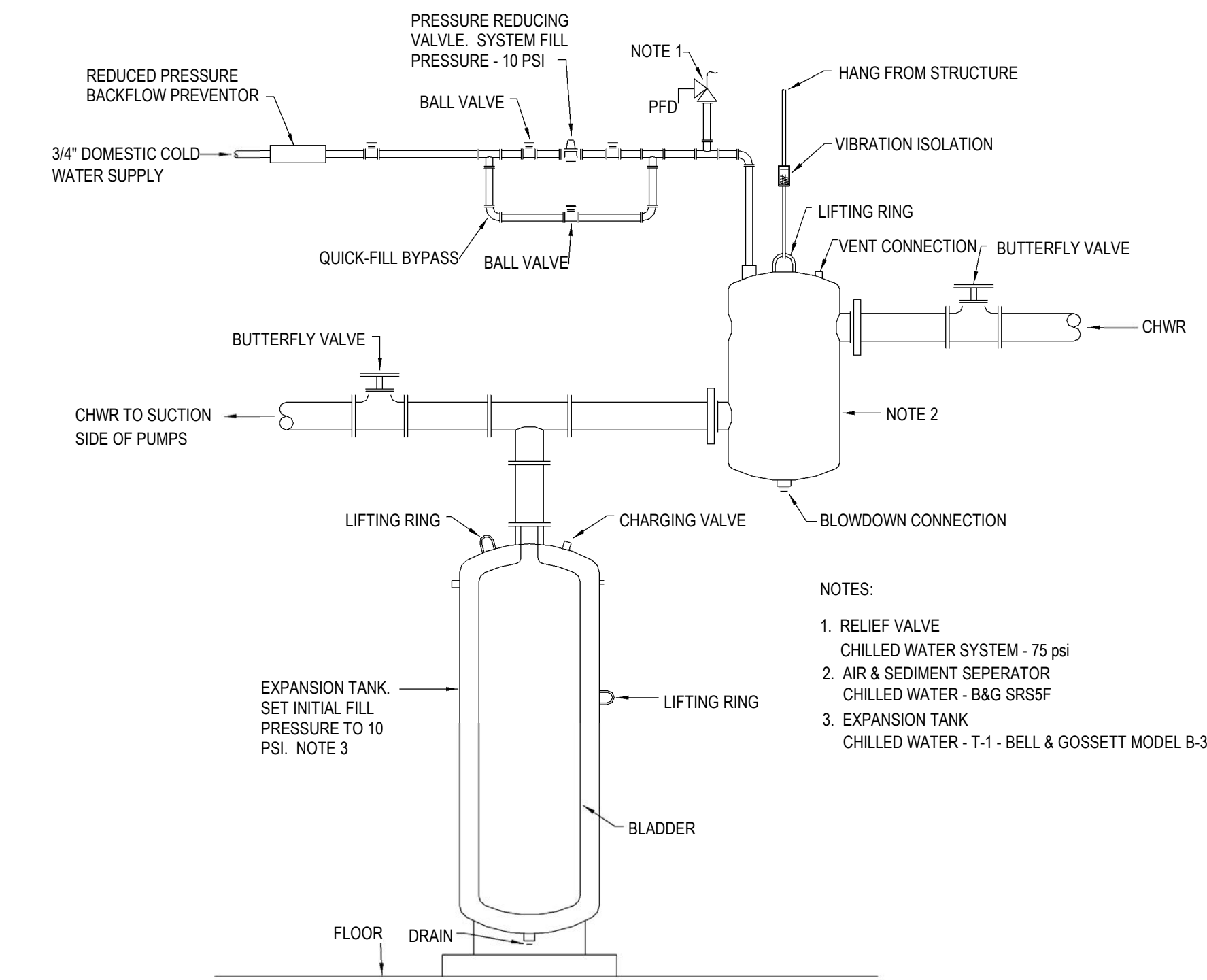
2 BASE MOUNTED PUMP DETAIL
NTS



5 CHEMICAL TREATMENT SHOT FEEDER DETAIL
NTS

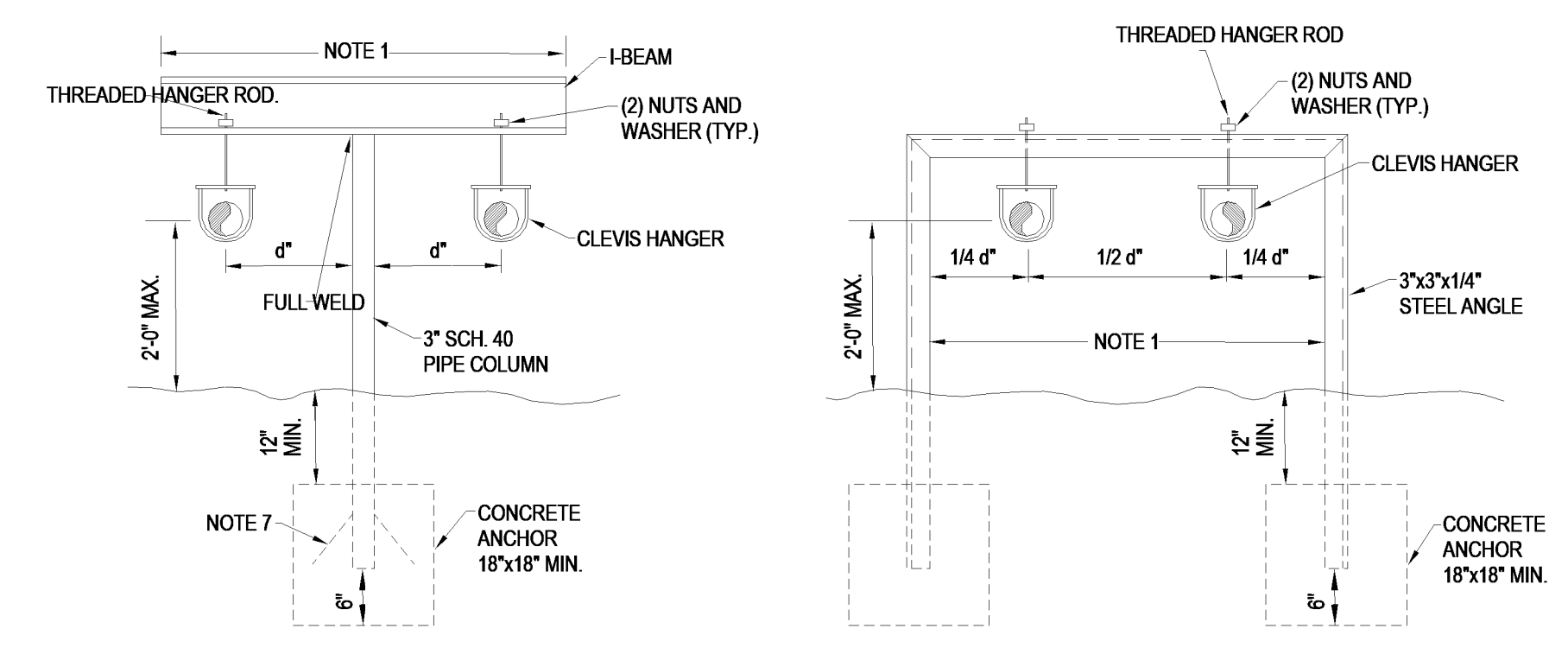


3 AIR COOLED CHILLER DETAIL
NTS



NOTES:
1. RELIEF VALVE CHILLED WATER SYSTEM - 75 psi
2. AIR & SEDIMENT SEPARATOR CHILLED WATER - BAG SRSSF
3. EXPANSION TANK CHILLED WATER - T-1 - BELL & GOSSETT MODEL B-38LA

6 AIR SEPARATOR AND EXPANSION TANK DETAIL
NTS



NOTES:
1. WIDTH SHALL BE AS SMALL AS POSSIBLE AND NO GREATER THAN 3 FEET
2. ALL SUPPORTS SHALL BE CLEANED, PRIMED AND PAINTED WITH 2 COATS OF INDUSTRIAL
3. HANGERS, FASTENERS, THREADED ROD AND ACCESSORIES SHALL BE HOT DIPPED GALVANIZED, ALUMINUM OR STAINLESS
4. ALTERNATIVE INSTALLATIONS MAY BE APPROVED IF SUBMITTED IN WRITING WITH FULL DESCRIPTION AND SKETCHES TO
5. DIMENSIONS FOR PIPING LESS THAN 10" F.
6. AFTER FINISH PAINT, ALL METAL (EXCEPT FOR HOT DIPPED GALVANIZED, STAINLESS STEEL OR ALUMINUM) SHALL BE COATED WITH RUST INHIBITIVE PRIMER IN ACCORDANCE WITH MANUFACTURERS
7. REQUIREMENTS QUALITY SPACED

7 PIPING SUPPORT DETAIL
NTS

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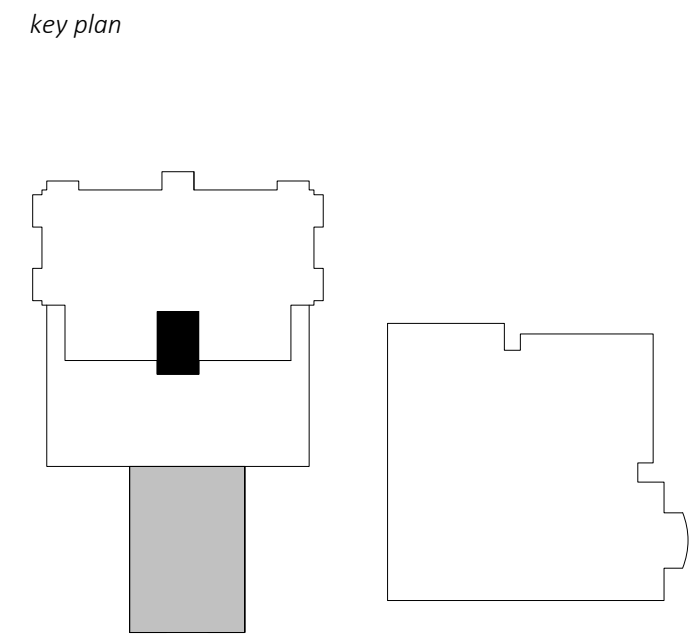
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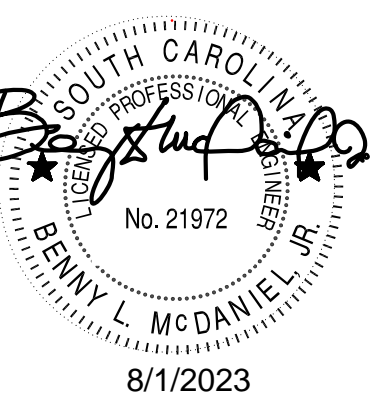
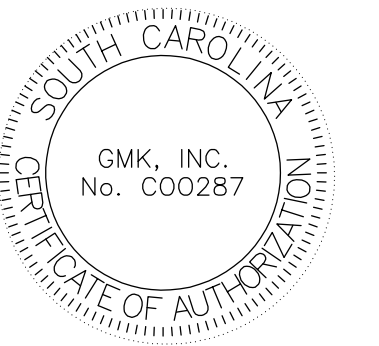
Key Plan

sheet title
HVAC DETAILS

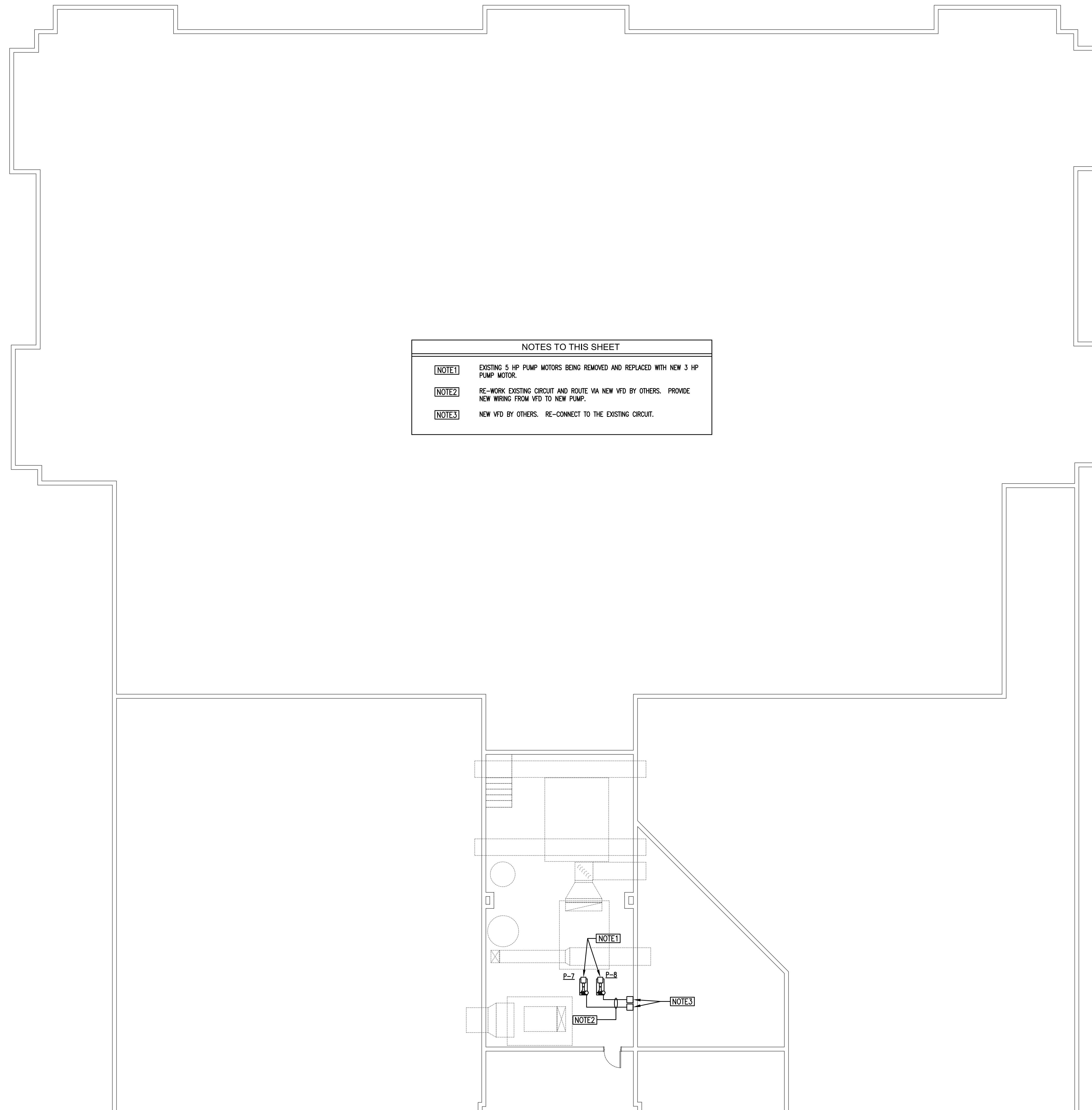
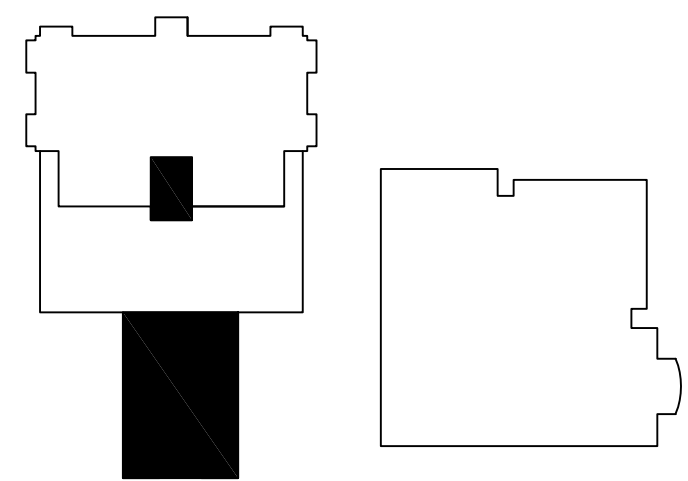
sheet number

M6.1

drawn by Author
checked by Checker



number	item	date



NOTES TO THIS SHEET	
NOTE1	EXISTING 5 HP PUMP MOTORS BEING REMOVED AND REPLACED WITH NEW 3 HP PUMP MOTOR.
NOTE2	RE-WORK EXISTING CIRCUIT AND ROUTE VIA NEW VFD BY OTHERS. PROVIDE NEW WIRING FROM VFD TO NEW PUMP.
NOTE3	NEW VFD BY OTHERS. RE-CONNECT TO THE EXISTING CIRCUIT.

1 ELECTRICAL PLAN - 2ND FLOOR RENOVATION PLAN
SCALE: 1/8" = 1'-0"