

MECHANICAL UPPER LEVEL MER NEW WORK PLAN scale: 1/4" = 1'-0"

SCOPE OF WORK NOTES

<u>AC-4</u>

A. MECHANICAL:

- 1. CURRENTLY THERE IS A HIGH STATIC PRESSURE ACROSS THE EXISTING 40X26 RETURN AIR FILTERS (0.9"WC). PROVIDE A NEW FILTER RACK IN THE EXISTING RETURN AIR PLENUM. FILTER RACK SIZE SHALL BE APPROXIMATELY 72"W X 48"H X 2" THICK. BLANK-OFF UNUSED PORTIONS OF THE PLENUM WITH SHEET METAL TO AVOID FILTER RACK BYPASS OF AIR. PROVIDE NEW SIDE ACCESS DOORS TO ALLOW REMOVAL OF NEW FILTERS. PROVIDE NEW MERV 7 PLEATED FILTERS: FOUR (4) AT 36X24X2. RELOCATE EXISTING CONTROLS AND WIRING MOUNTED TO AIR PLENUM TO ACCOMMODATE THE NEW
- B. BMS:
- 1. VERIFY CALIBRATION OF SUPPLY AIR STATIC PRESSURE SENSOR.
- 2. PROVIDE SERVICE FOR THE VFD'S TO RELEASE THE SUPPLY FAN VFD TO ALLOW IT TO MODULATE UP TO 60 HZ, CURRENTLY LIMITED TO 55 HZ.
- 3. ENABLE ERVF-4 TO MODULATE ITS SPEED WHENEVER AC-4'S SUPPLY FAN IS OPERATING IN THE OCCUPIED MODE. COORDINATE WITH THE BALANCER TO OFFSET THE EXHAUST CFM AN ADJUSTABLE OFFSET VALUE FROM THE SUPPLY CFM TO PROVIDE POSITIVE BUILDING PRESSURE.
- 4. DELETED.
- 5. PROVIDE AN ADDITIONAL BMS ANALOG OUTPUT POINT AND PROGRAMMING TO ALLOW FOR INDEPENDENT CONTROL OF THE OUTSIDE AIR DAMPER.
- C. BALANCING:
- 1. PERFORM AIR AND WATER BALANCE ON AC-4/ERVF-4. PROVIDE NEW SHEAVE CHANGES TO ALLOW THE SUPPLY AND EXHAUST FANS TO DELIVER THEIR DESIGN CFM WITHOUT EXCEEDING THE MOTOR RATED RLA OF EACH MOTOR.

2. DELETED.

3. CALIBRATE THE OUTSIDE AIR DAMPER TO MAINTAIN THE VENTILATION MINIMUM OUTSIDE AIR QUANTITY PER THE ORIGINAL DESIGN DOCUMENTS.

<u>AC-5</u>

- 1. VERIFY CALIBRATION OF SUPPLY AIR STATIC PRESSURE SENSOR.
- 2. ENABLE ERVF-5 TO MODULATE ITS SPEED WHENEVER AC-5'S SUPPLY FAN IS OPERATING IN THE OCCUPIED MODE. COORDINATE WITH THE BALANCER TO OFFSET THE EXHAUST CFM AN ADJUSTABLE OFFSET VALUE FROM THE SUPPLY CFM.
- 3. COORDIANTE WITH THE BALANCER TO ESTABLISH TO CORRECT ERVF-5 SPEED NECESSARY TO KEEP THE BUILDING SLIGHTLY POSITIVE WITH RELATIONSHIP TO THE OUTSIDE.
- 4. PROVIDE AN ADDITIONAL BMS ANALOG OUTPUT POINT AND PROGRAMMING TO ALLOW FOR INDEPENDENT CONTROL OF THE OUTSIDE AIR DAMPER.

B. BALANCING:

1. CURRENTLY, THE TWO SUPPLY FANS ARE NOT OPERATING AT THE SAME RPM. REPLACE THE MOTOR SHEAVES' AND DRIVE BELTS ON EACH FAN. ADJUST SHEAVES ON BOTH FANS TO DELIVER DESIGN CFM WITHOUT EXCEEDING RLA OF THE MOTORS. VERIFY NEW RPM'S ON BOTH SUPPLY AIR FANS ARE BALANCED.

- 2. PERFORM AIR AND WATER BALANCE ON AC-5/ERVF-5. PROVIDE NEW SHEAVE CHANGES TO ALLOW THE SUPPLY AND EXHAUST FANS TO DELIVER THEIR DESIGN CFM.
- 3. CALIBRATE THE OUTSIDE AIR DAMPER TO MAINTAIN THE VENTILATION MINIMUM OUTSIDE AIR QUANTITY PER THE ORIGINAL DESIGN DOCUMENTS.



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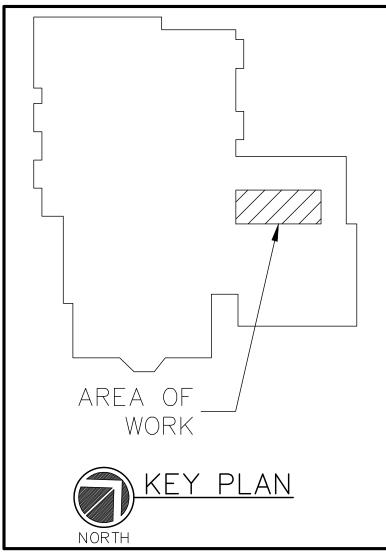
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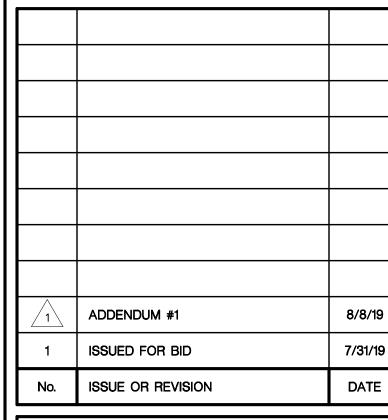
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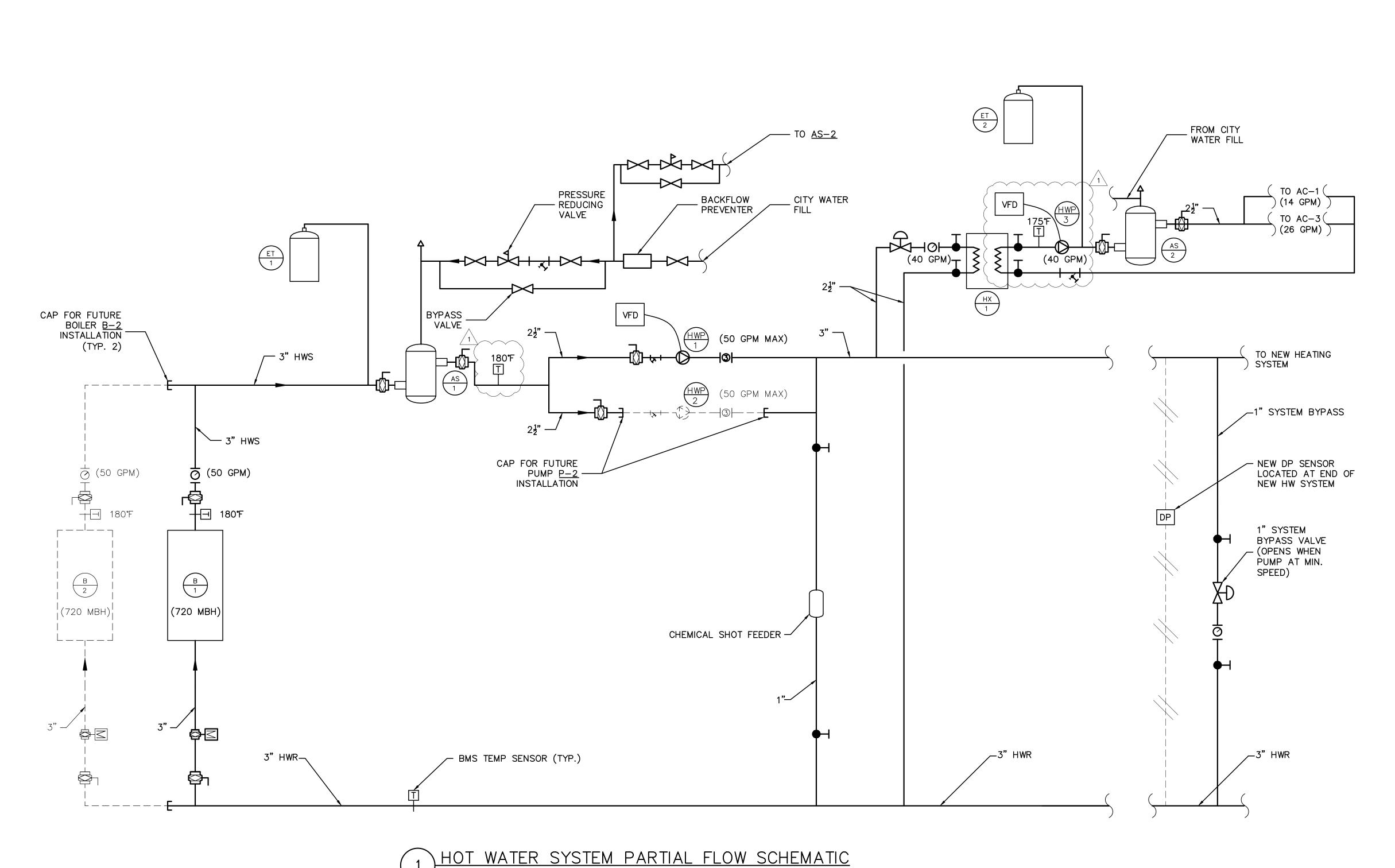


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MECHANICAL UPPER LEVEL M.E.R. NEW WORK PLAN

SEAL	SCALE AS NOTED	PROJECT NO.
	DRAWN BY	DRAWING NO.
	AC	
	CHECKED BY	
	JK	⊥M4.3
	DATE	
	7/16/19	



HOT WATER SYSTEM PARTIAL FLOW SCHEMATIC
SCALE: NONE

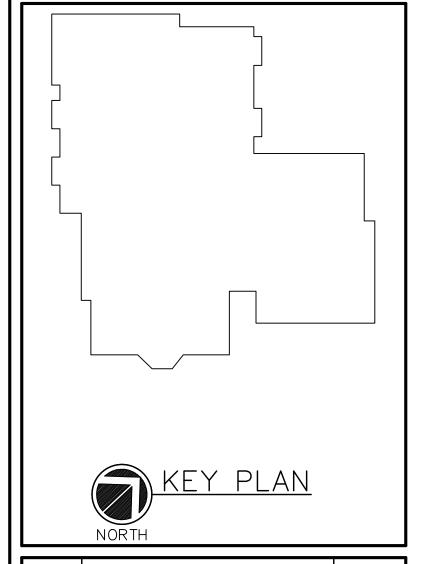


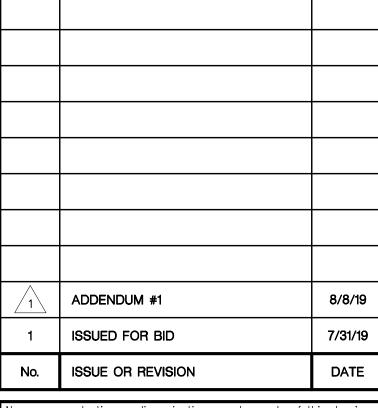
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MECHANICAL SCHEMATICS

SEAL	SCALE	PROJECT NO.
	AS NOTED	
	DRAWN BY	DRAWING NO.
	AC	
	CHECKED BY	
	JK	J M5.1
	DATE	
	7/16/19	

	SYMBOLS		FIVTUDES	PLUMBING CONNECTIONS					
	TAG	PLAN	ELEVATION	FIXTURES	WASTE	VENT	COLD WATER	HOT WATER	
	FD			FLOOR DRAIN	2"	_	_	_	ZUR BOT LIGH TRA PRIM (-D
	EW		LJ.	HAND OPERATED EMERGENCY EYEWASH, WALL MOUNTED	_	_	1/2"	1/2"	BRA CHR THE

JMBING	FIXIURE	SCHEDULE	

DECODIDATION

JRN MODEL Z461, MODULAR NON—ADJUSTABLE FLOOR DRAIN WITH CLAMPING FRAME. DURA—COATED CAST IRON LOW—PROFILE BODY WITH 2" DITOM OUTLET, COMBINATION NICKEL BRONZE MEMBRANE CLAMP AND FRAME WITH SEEPAGE SLOTS, AND SQUARE HEEL-PROOF, SLOTTED GHT-DUTY SECURED STRAINER.

RAP PRIMERS, TP: PROVIDE TRAP PRIMER ASSEMBLY BASED ON PRECISION PLUMBING PRODUCTS (PPP INC.) MINI-PRIME ELECTRONIC TRAP RIMING MANIFOLD, MODEL MPB-500-115V. TRAP PRIMER ASSEMBLY INCLUDES NEMA 1 12x12x4 RECESSED MOUNTING BOX, DISTRIBUTION UNIT -DU), CIRCUIT BREAKER, TEST SWITCH, TIMER SOLENOID VALVE, AND ACCESS DOOR (D-814SS). PROVIDE ONE (1) TP ASSEMBLY TO SERVE OOR DRAINS.

, RADLEY MODEL S19-220B, WALL-MOUNT EYEWASH WITH STAINLESS STEEL BOWL. HEAVY-GAUGE SAND CAST ALUMINUM WALL BRACKET HROME-PLATED BRASS 1" BALL VALVE, HAND OPERATED BY SAFETY YELLOW PVC HANDLE. PROVIDE NAVIGATOR S19-2000 EFX8 EMERGENCY HERMOSTATIC MIXING VALVE.

115/1/60

DUPLEX SUMP-PUMP SCHEDULE DESIGNATION SP-1/2 _OCATION BOILER ROOM SYSTEM SERVED HOT WATER MODEL SE-50 QUANTITY SUBMERSIBLE 50 TOTAL DYNAMIC HEAD (FT 3,450 MOTOR: BHP/HP -/0.5

- PUMP BASED ON STANCOR.
- REFER TO SPECIFICATION FOR PUMP CONSTRUCTION.

VOLTAGE/Ø/Hz

PROVIDE DUPLEX PUMP CONTROL PANEL STANCOR MODEL CB1002 OR EQUAL

SUMP-PUMP BASIN SCHEDULE

DESIGNATION	SPB-1
LOCATION	BOILER ROOM
SYSTEM SERVED	HOT WATER
MODEL	GB-24-100
BASIN DIAMETER (ID)	24"
BASIN DEPTH	48"
DISCHARGE SIZE	2"
INLET SIZE	2"
NOTES:	-

- 1. BASIN BASED ON AK INDUSTRIES.
- 2. PROVIDE STEEL COVER. 3. PROVIDE BASIN WITH ANTI-FLOATATION
- FLANGE.

CONDENSER

VALVE

LINES

- EX. FREE

(TYP. 2)

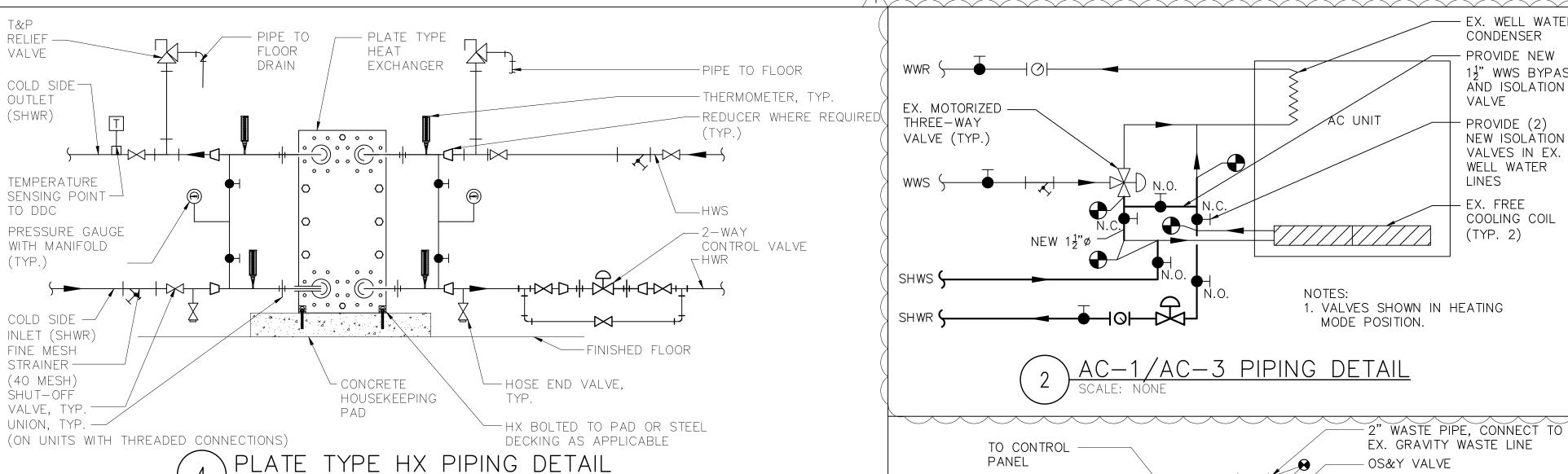
- PROVIDE NEW

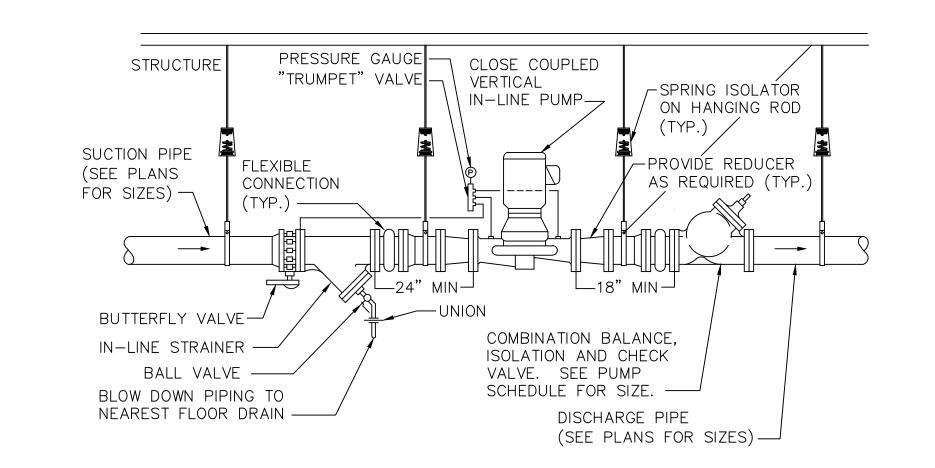
PROVIDE (2)

WELL WATER

COOLING COIL

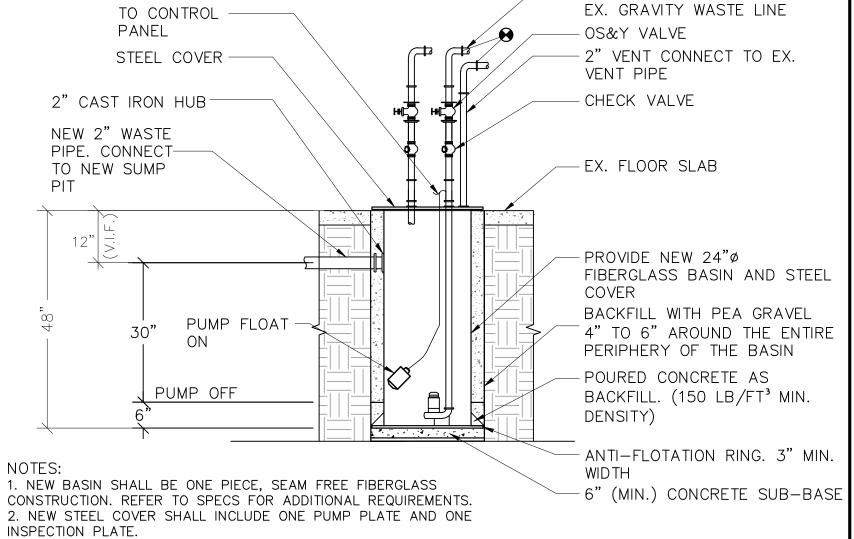
4. REFER TO SPECIFICATION FOR BASIN CONSTRUCTION.





SCALE: NONE

VERTICAL IN-LINE PUMP PIPING DIAGRAM CONSTANT SPEED, STRUCTURE SUPPORTED



SUMP PIT DETAIL

3. CONTRACTOR SHALL VERIFY IN FIELD ALL DIMENSIONS AND

4. SUPPORT ALL PIPING AND ACCESSORIES SEPARATELY FROM

BASIN. BASIN SHALL NOT BE USED TO SUPPORT PIPING OR

INLET SIZES AND LOCATIONS/ELEVATIONS.



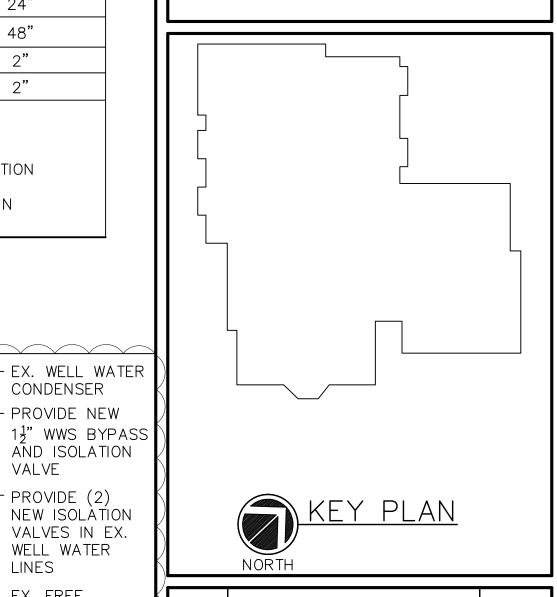
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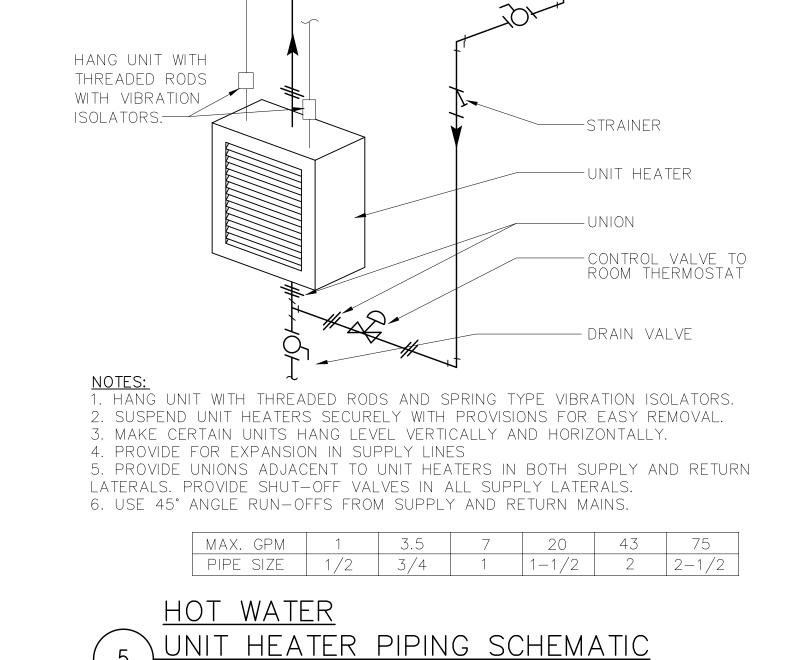
ADDENDUM #1 8/8/19 ISSUED FOR BID 7/31/19 ISSUE OR REVISION DATE No use, reproduction or dissemination may be made of this drawing

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MECHANICAL/PLUMBING SCHEDULES AND DETAILS

> AS NOTED RAWN BY DRAWING NO.



-HOT WATER RETURN

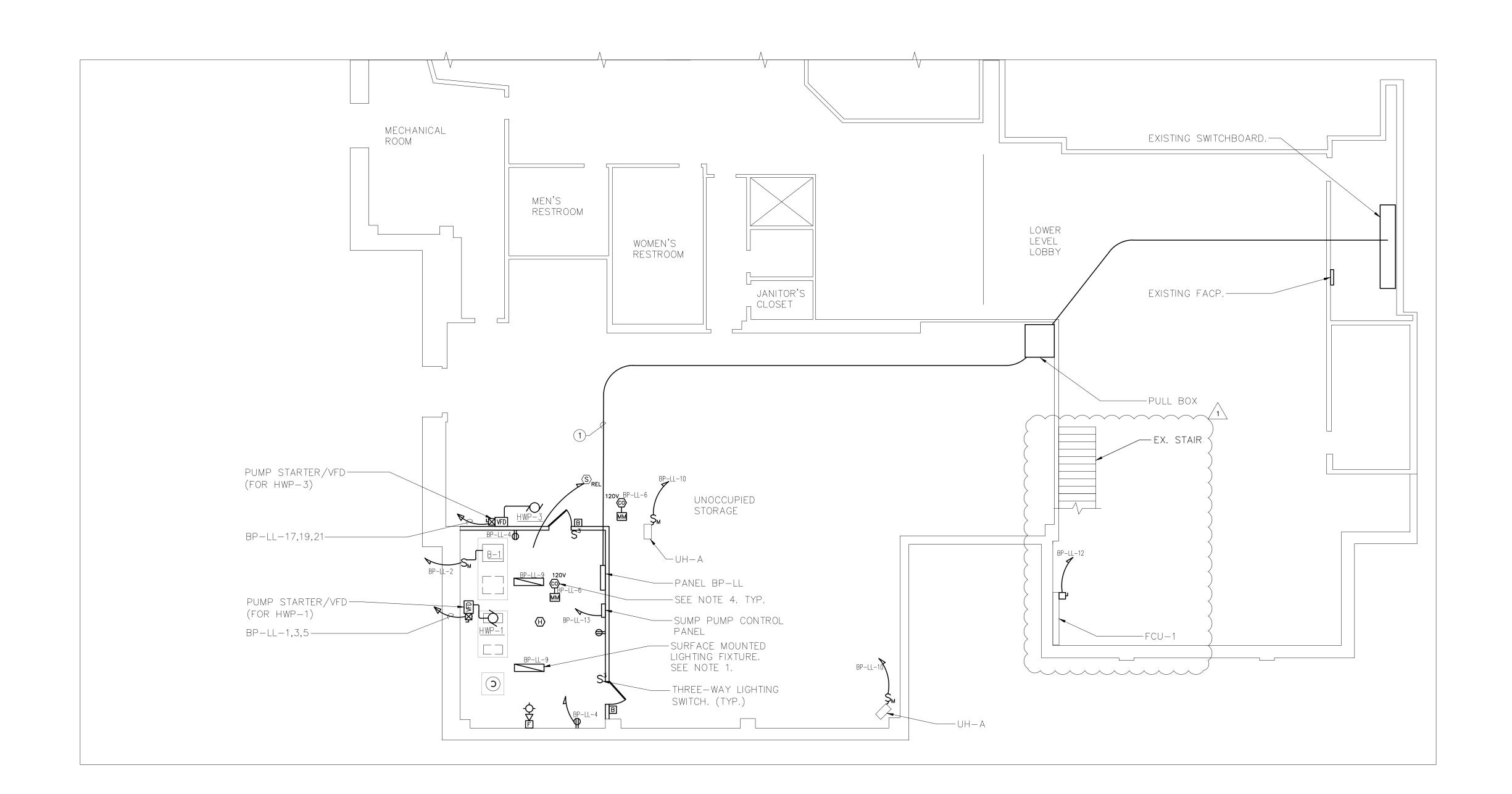
HOT WATER SUPPLY

CALIBRATED —

GATE VALVE-

BALANCE VALVE

MANUAL AIR VENT-





WIRING/CONDUIT LEGEND:

1) 4-#2/0 & 1-#6 GND IN 2"C.

NOTES:

- 1. PROVIDE (2) NEW LIGHTING FIXTURES TYPE ECLIPSE LIGHTING 574-OPL-LED/80W-3K-EBU-BK OR APPROVED EQUAL.
- 2. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION
- 3. EQUIPMENT DENOTED WITH "EX." ARE EXISTING TO REMAIN.
- 4. CARBON MONOXIDE SHALL BE 120V HARDWIRED. CARBON MONOXIDE ALARM SHALL BE SUPERVISED BY THE FACP VIA MONITOR MODULE. PROVIDE ALL PROGRAMMING AS REQUIRED. COORDINATE FINAL LOCATIONS IN FIELD.
- 5. REFER TO DWG E5.1 FOR CIRCUIT OF NEW LIGHTING FIXTURES IN BOILER ROOM.
- 6. COORDINATE EQUIPMENT INSTALLATION WITH THE FIELD CONDITIONS.

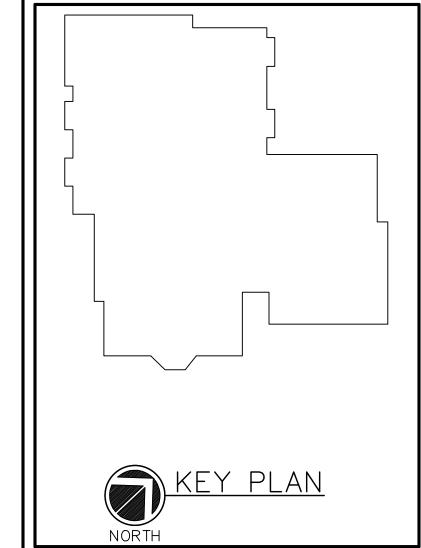


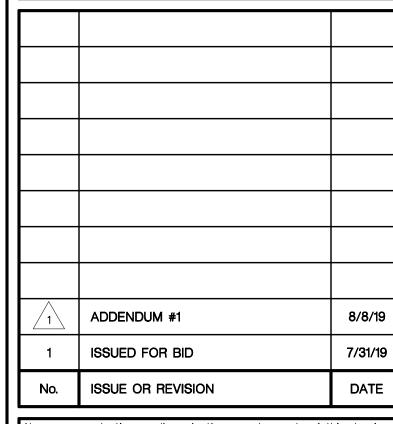
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PROJECT TI

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DRAWING TIT

ELECTRICAL LOWER LEVEL PARTIAL NEW WORK PLAN

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	DRAWN BY CL	DRAWING NO.
	CHECKED BY JF	F31
	DATE 7/16/19	