DOCUMENT 00 90 00
ADDENDUM

ADDENDUM NO. [1] **Date: March 23, 2021**

RE: **SCHOOL DISTRICT OF HOLMEN**
SAND LAKE ELEMENTARY BOILER REPLACEMENT
3600 SAND LAKE ROAD
HOLMEN, WI 54636
HSR PROJECT NO. 21004

FROM: HSR Associates, Inc
100 Milwaukee Street
La Crosse, WI 54603
(608) 784-1830

To: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated March 2021. Acknowledge receipt of this Addendum in the space provided on the bid form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of [1] page, [0] specification sections, [] 8 ½ x 11 drawings, [] 24 x 36 drawings and [2] 30 x 42 drawings.

CHANGES TO BIDDING REQUIREMENTS AND CONDITIONS OF THE CONTRACT:

1. Pre-Bid meeting attendance sheet attached hereto.

CHANGES TO SPECIFICATIONS:

2. Section 23 25 00 WATER TREATMENT/CHEMICAL
    a. Glycol systems shall be filled to 35% Propylene Glycol in lieu of 30% listed in drawings and specifications.
    b. Clarification on Scope: Contractor shall do an initial test to determine existing hot water system glycol %. Contractor shall be responsible for adding glycol to all boiler room piping. If additional glycol is required for the rest of the building hot water system piping to bring it up to 35%, it will be negotiated with the owner at that time.

CHANGES TO DRAWINGS

3. Sheet M001 HVAC General Info Sheet 30 x 42 attached hereto
    a. Detail 2M001 BOILER PIPING SCHEMATIC. Boiler circulating pump shall reference BCP in lieu of HWP.
    b.
4. Sheet M100 Removal and Remodel Plans 30 x 42 attached hereto
    a. Added (2) Emergency Boiler Shutoff Switches to the 4M100 Piping Remodel Plan. These switches are specified under Section 23 52 33 CONDENSING BOILERS 3.01 Paragraph V “REMOTE SHUTDOWN”. Switches shall be supplied, installed, and wired by Electrical Contractor.
    b. Removed new chemical feeder that was noted on 4M100. Old chemical feeder shall still be removed under alternate bid, but no new chemical feeder is required.

END OF DOCUMENT 00 90 00

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"SIGN-IN" SHEET

PROJECT: Holmen SD Sand Lake Elementary
Boiler Replacement

HSR NO.: 21004 **DATE:** March 16, 2021

PLEASE PRINT ALL INFORMATION CLEARLY

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John Daily	Holmen SD		

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HVAC GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH NATIONAL, STATE, & CODES; AS WELL AS, THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
2. ON MECHANICAL "M1__" SERIES DRAWINGS, ITEMS THAT ARE DARK LINES SHALL BE NEW WORK & ITEMS THAT ARE LIGHT LINES SHALL BE EXISTING TO REMAIN.
3. ON MECHANICAL "M09_" SERIES DRAWINGS, ITEMS THAT ARE DARK DASHED LINES SHALL BE REMOVED & ITEMS THAT ARE LIGHT LINES SHALL BE EXISTING TO REMAIN.
4. ALL EQUIPMENT, DUCTWORK, & PIPING SHALL BE KEPT CLEAN FROM DIRT & DEBRIS. DO NOT ALLOW THE INSIDE OF DUCT & LINER TO GET DIRTY.
5. PIPING SIZE LISTED ON PLANS ARE I.D. DIMENSIONS.
6. ARROWS SHOWN ON THE HOT WATER PIPING INDICATE THE DIRECTION OF FLOW.
7. AIR VENTS SHALL BE INSTALLED AT ALL HIGH POINTS & DRAINS AT ALL LOW POINTS OF WATER PIPING SYSTEMS.
8. SHUT-OFF VALVES INSTALLED IN INSULATED PIPING SHALL BE PROVIDED WITH EXTENDED OPERATOR HANDLE TO OUTSIDE OF INSULATION.
9. CONTRACTOR SHALL FIELD VERIFY LAYOUT AND MANUFACTURER'S INSTALLATION REQUIREMENTS FOR ACTUAL EQUIPMENT PROVIDED.
10. CONTRACTOR SHALL COORDINATE LOCATIONS OF HVAC MAINS, BRANCHES PIPING, ETC WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
11. NO PIPING SHALL BE INSTALLED ABOVE ELECTRICAL EQUIPMENT, UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL EQUIPMENT LOCATIONS. COORDINATE WITH ELECTRICAL TRADE FOR EXACT LOCATIONS.
12. PROVIDE MOTOR COVERS FOR ALL BELT-DRIVEN MOTORS & MOTOR SHAFTS.
13. ELEVATION OF PIPING & DUCTWORK INDICATED ON THESE DRAWINGS ARE TO BE USED AS GUIDELINES TO ASSIST WITH INSTALLATIONS. MINOR CHANGES TO THESE ELEVATIONS MAY BE NECESSARY TO ELIMINATE UNFORESEEN INTERFERENCES.
14. WHERE WORK INTERFERES WITH OWNER'S USE OF PREMISES, SCHEDULE WORK THROUGH OWNER TO MINIMIZE INCONVENIENCE TO OWNER. OWNER MUST APPROVE SCHEDULE IN WRITING BEFORE CONTRACTOR BEGINS ANY SUCH WORK.
15. RECORD (AS-BUILT) DRAWING SHALL BE MAINTAINED ON THE JOB SITE AND SHALL BE SUBMITTED PRIOR TO JOB COMPLETION.

HVAC SYMBOLS

HVAC GENERAL SYMBOLS

- NEW CONNECTION TO EXISTING
- DEMOLISH TO POINT INDICATED
- 1 — REMODEL KEYNOTES
- CORRIDOR A100 — INDICATES ROOM NAME / INDICATES ROOM NUMBER
- M100 — SECTION CUT
- 1 — REVISION NUMBER
- REVISION CLOUD
- BOTTOM OF PIPE ELEVATION TAG
- ℄ ELEV: 9'-0" — CENTERLINE PIPE ELEVATION TAG
- BOP: 9'-0"

HVAC EXISTING DUCTWORK SYMBOLS

- SUPPLY DUCT ELBOW DOWN
- SUPPLY DUCT ELBOW UP
- RETURN DUCT ELBOW DOWN
- RETURN DUCT ELBOW UP
- EXHAUST DUCT ELBOW DOWN
- EXHAUST DUCT ELBOW UP
- ROUND SUPPLY ELBOW DOWN
- ROUND SUPPLY ELBOW UP
- ROUND RETURN ELBOW DOWN
- ROUND RETURN ELBOW UP
- ROUND EXHAUST ELBOW DOWN
- ROUND EXHAUST ELBOW UP
- SQUARE/RECTANGULAR DUCT BREAK
- ROUND DUCT BREAK

HVAC PIPING SYMBOLS

- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE
- GATE VALVE
- CONVECTOR
- EXPANSION TANK
- PRESSURE REDUCING VALVE
- GLOBE VALVE
- CHECK VALVE
- STEAM TRAP
- BALL VALVE
- BUTTERFLY VALVE
- BALANCING STATION
- PIPE ANCHOR
- PIPE GUIDE
- ELBOW DOWN
- ELBOW UP
- TOP CONNECTION
- BOTTOM CONNECTION
- REDUCER
- RELIEF VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- UNION
- AIR VENT
- INLINE PUMP
- PIPE BREAK
- PIPE CAP

HVAC EQUIPMENT ABBREVIATIONS

B-1	BOILER
BC-1	BLOWER COIL UNIT
BCP-1	BOILER CIRCULATING PUMP
C-1	CONVECTOR
ET-1	EXPANSION TANK
P-1	PUMP
PRV-1	PRESSURE REDUCING VALVE
SFU-1	SYSTEM FEEDER UNIT
UH-1	UNIT HEATER
VFD-1	VARIABLE FREQUENCY DRIVE
WFU-1	WATER FILTER UNIT

HVAC DUCTWORK SYSTEM ABBREVIATIONS

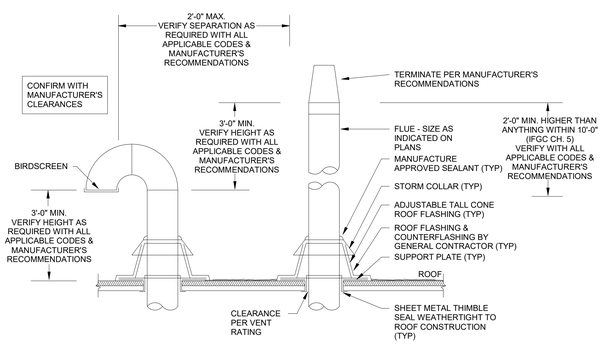
SYSTEM ABBREVIATION	SYSTEM TYPE
(X) SA	EXISTING SUPPLY AIR
(X) RA	EXISTING RETURN AIR
(X) EA	EXISTING EXHAUST AIR
(X) OA	EXISTING OUTSIDE AIR

HVAC PIPING SYSTEM ABBREVIATIONS

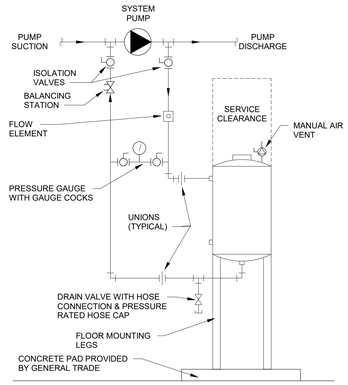
SYSTEM ABBREVIATION	SYSTEM TYPE
HWS	HOT WATER HEATING SUPPLY
HWR	HOT WATER HEATING RETURN
NGAS	NATURAL GAS
(E) HWS	EXISTING HOT WATER HEATING SUPPLY
(E) HWR	EXISTING HOT WATER HEATING RETURN
(E) CWS	EXISTING CHILLED WATER SUPPLY
(E) CWR	EXISTING CHILLED WATER RETURN
(X) NGAS	EXISTING NATURAL GAS

GENERAL ABBREVIATIONS

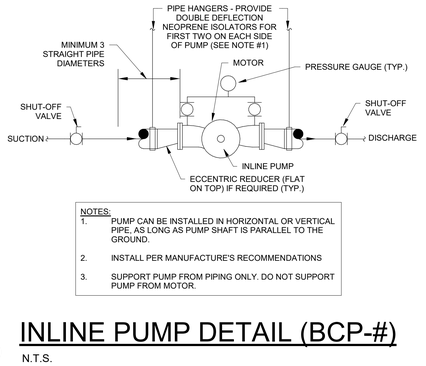
A	AMPERE	ID	INSIDE DIAMETER
AC	ALTERNATING CURRENT	IN.	INCH OR INCHES
AMPS	AMPERES	KW	KILOWATT
BOD	BOTTOM OF DUCT	LAT	LEAVING AIR TEMPERATURE
BOP	BOTTOM OF PIPE	LBS	POUNDS
BHP	BRAKE HORSEPOWER	LDB	LEAVING DRY BULB TEMPERATURE
BTU	BRITISH THERMAL UNIT	LWB	LEAVING WET BULB TEMPERATURE
BTUH	BRITISH THERMAL UNIT PER HOUR	LWT	LEAVING WATER TEMPERATURE
CAP.	CAPACITY	MAX	MAXIMUM
ΔP	CHANGE IN PRESSURE	MBH	THOUSAND BTUs PER HOUR
ΔT	CHANGE IN TEMPERATURE	MCA	MINIMUM CIRCUIT AMPS
°	DEGREE	MECH	MECHANICAL
DB	DRY BULB	MFR	MANUFACTURER
DDC	DIRECT DIGITAL CONTROLS	MOCP	MAXIMUM OVER CURRENT PROTECTION
DIA.	DIAMETER	MTD	MOUNTED
DISC.	DISCONNECT	NC	NORMALLY CLOSED
DN	DOWN	NIC	NOT IN CONTRACT
DP	DEWPOINT	NO	NORMALLY OPEN
DWG	DRAWING	NOM.	NOMINAL
EAT	ENTERING AIR TEMPERATURE	NPS	NOMINAL PIPE SIZE
EDB	ENTERING DRY BULB TEMPERATURE	NTS	NOT TO SCALE
EFF.	EFFICIENCY	OA	OUTSIDE AIR
EWB	ENTERING WET BULB TEMPERATURE	OAT	OUTSIDE AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE	OBD	OPPOSED BLADE DAMPER
ETR	EXISTING TO REMAIN	OC	ON CENTER
EWT	ENTERING WATER TEMPERATURE	OD	OUTSIDE DIAMETER
EX.	EXISTING	PD	PRESSURE DROP
°F	DEGREES FAHRENHEIT	PRS	PRESSURE REDUCING STATION
FLA	FULL LOAD AMPS	PRV	PRESSURE REDUCING VALVE
FPM	FEET PER MINUTE	PSI	POUNDS PER SQUARE INCH
FPS	FEET PER SECOND	PSIG	PSI GAUGE
FT	FEET	PVC	POLYVINYL CHLORIDE
GAL	GALLONS	ø	ROUND DIAMETER
GPH	GALLONS PER HOUR	RAT	RETURN AIR TEMPERATURE
GPM	GALLONS PER MINUTE	RPM	REVOLUTIONS PER MINUTE
HD	HEAD (FEET)	SAT	SUPPLY AIR TEMPERATURE
HP	HORSEPOWER	SF	SQUARE FEET
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	SP	STATIC PRESSURE
HW	HOT WATER	TEMP	TEMPERATURE
HZ	FREQUENCY	TYP.	TYPICAL
		V	VOLTS
		VEL	VELOCITY
		VFD	VARIABLE FREQUENCY DRIVE
		WB	WET BULB



6 FLUE VENT AND FLASHING DETAIL
N.T.S.



4 CHEMICAL POT FEEDER
N.T.S.



NOTES:
1. PUMP CAN BE INSTALLED IN HORIZONTAL OR VERTICAL PIPE, AS LONG AS PUMP SHAFT IS PARALLEL TO THE GROUND.
2. INSTALL PER MANUFACTURE'S RECOMMENDATIONS
3. SUPPORT PUMP FROM PIPING ONLY. DO NOT SUPPORT PUMP FROM MOTOR.

3 INLINE PUMP DETAIL (BCP-#)
N.T.S.

HVAC PIPE SIZING CHART

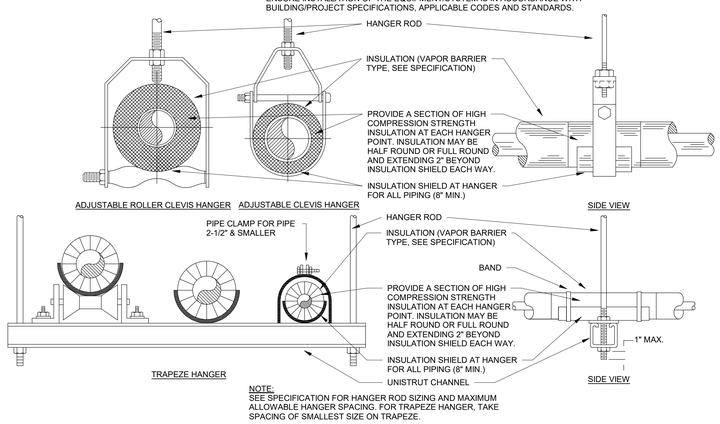
REQUIRED PIPE SIZE	COPPER PIPE GPM	IRON PIPE GPM
1/2"	0 - 1.1	
3/4"	1.2 - 3.0	
1"	3.1 - 6.6	
1-1/4"	6.7 - 11.3	6.8 - 14.0
1-1/2"	11.4 - 18.0	14.1 - 21.0
2"	18.1 - 38.0	21.1 - 41.0
2-1/2"	38.1 - 69.0	41.1 - 66.0
3"	69.1 - 109.0	66.1 - 119.0
4"		119.1 - 242.0
5"		242.1 - 440.0
6"		440.1 - 710.0

REMOVED ITEMS NOTE:

ALL REMOVED ITEMS THAT THE OWNER WANTS SHALL BE REMOVED AND TURNED OVER TO THE OWNER AT DESIGNATED STORAGE SPACE ON SITE. ALL REMAINING ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

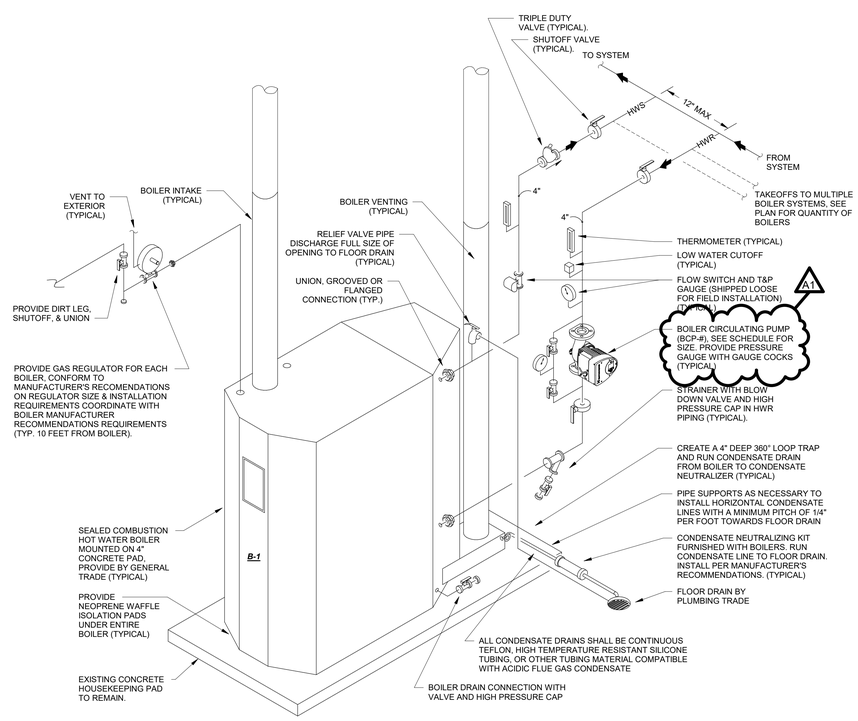
MECHANICAL SHEET INDEX

NOTE:
THIS INFORMATION MAY NOT CONTAIN ALL DETAILS REQUIRED FOR CONSTRUCTION. APPROPRIATE MODIFICATION MAY BE REQUIRED TO ENSURE SUITABILITY OF THESE DRAWINGS FOR THE SPECIFIC APPLICATION. IT IS THE USER'S RESPONSIBILITY TO ENSURE INSTALLATION OF THE EQUIPMENT/SYSTEM IS IN ACCORDANCE WITH BUILDING/PROJECT SPECIFICATIONS, APPLICABLE CODES AND STANDARDS.

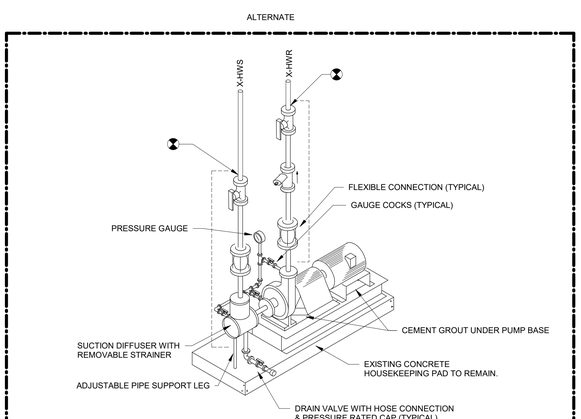


NOTE:
SEE SPECIFICATION FOR HANGER ROD SIZING AND MAXIMUM ALLOWABLE HANGER SPACING. FOR TRAPEZE HANGER, TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

5 TYPICAL PIPE HANGER DETAIL
N.T.S.



2 BOILER PIPING SCHEMATIC
N.T.S.



1 BASE MOUNTED PUMP DETAIL
N.T.S.

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Consultant:

Project Title: **HOLMEN SCHOOL DISTRICT SAND LAKE ELEMENTARY SCHOOL BOILER REPLACEMENT**

Project Location: **3600 SAND LAKE ROAD, HOLMEN, WI 54636**

Sheet Title: **HVAC GENERAL INFO SHEET**

HSR Project Number: **21004**

Project Date: **MARCH 2021**

Drawn By: **LESCHER**

Key Plan:

Revisions:

No.	Description	Date
A1	Addendum #1	03/23/21

Graphic Scale: **VARIES**

Last Update: **3/23/2021 12:53:09 PM**

M001

GAS FIRED BOILER SCHEDULE

UNIT NO.	LOCATION ROOM	LOCATION NUMBER	MANUFACTURER	MODEL NO.	GAS FIRED HEAT EXCHANGER TYPE	GAS BURNER INPUT @ HIGH FIRE	GAS BURNER OUTPUT @ HIGH FIRE	GAS BURNER INPUT @ MIN. FIRE	GAS BURNER OUTPUT @ MIN. FIRE	GAS BURNER MIN. TURNDOWN	GAS BURNER FUEL TYPE	GAS BURNER PRESSURE AVAILABLE	WATERSIDE FLOW	WATERSIDE ENTERING WATER TEMP.	WATERSIDE LEAVING WATER TEMP.	WATERSIDE PRESS. DROP	WATERSIDE GLYCOL TYPE	WATERSIDE GLYCOL (%)	EFFICIENCY AHRI THERMAL EFFICIENCY	MAX. ALLOWABLE WORKING PRESS.	MAX. ALLOWABLE WORKING TEMP.	UNIT OPERATING WEIGHT	ELECTRICAL MCA	ELECTRICAL MOP	ELECTRICAL VOLTAGE	ELECTRICAL PHASE	REFERENCE DETAIL NO.	REMARKS
B-1			LAARS	MGH2500-HTD	CONDENSING, SEALED COMBUSTION	2,500,000 Btu/h	2,187,500 Btu/h	125,000 Btu/h	109,375 Btu/h	5:1	NAT. GAS	2.00 psi	190.0 GPM	180 °F	160 °F	34.0 ftH2O	PROPYLENE	30	95%	160.0 psig	200 °F	2064 lbf	12 A	20 A	208 V	3	2M001	1. 50 PSI PRESSURE RELIEF VALVE. 2. CONDENSATE TO CONNECT TO NEUTRALIZING KIT AS SHOWN ON PLAN AND DETAIL.
B-2			LAARS	MGH2500-HTD	CONDENSING, SEALED COMBUSTION	2,500,000 Btu/h	2,187,500 Btu/h	125,000 Btu/h	109,375 Btu/h	5:1	NAT. GAS	2.00 psi	190.0 GPM	180 °F	160 °F	34.0 ftH2O	PROPYLENE	30	95%	160.0 psig	200 °F	2064 lbf	12 A	20 A	208 V	3	2M001	1. 50 PSI PRESSURE RELIEF VALVE. 2. CONDENSATE TO CONNECT TO NEUTRALIZING KIT AS SHOWN ON PLAN AND DETAIL.

Grand total: 2

CIRCULATING PUMP SCHEDULE

UNIT NO.	LOCATION ROOM	LOCATION NUMBER	MANUFACTURER	MODEL NO.	SYSTEM	PUMP TYPE	PUMP FLOW	PUMP MIN. FLOW	PUMP HEAD	MOTOR QUANTITY	MOTOR POWER	MOTOR RPM	UNIT WEIGHT	ELECTRICAL VOLTAGE	ELECTRICAL PHASE	INTERLOCK UNIT NO.	REMARKS
BCP-1			Bell & Gossett	ECOCIRC XL 45-375	BOILER	INLINE	190.0 GPM	0.0 GPM	38 ftH2O	1	3 hp	3421	50 lbf	460 V	3	B-1	1. PROVIDED WITH BOILER. 2. SELECTION INCLUDES 30% PROPYLENE GLYCOL.
BCP-2			Bell & Gossett	ECOCIRC XL 45-375	BOILER	INLINE	190.0 GPM	0.0 GPM	38 ftH2O	1	3 hp	3421	50 lbf	460 V	3	B-2	1. PROVIDED WITH BOILER. 2. SELECTION INCLUDES 30% PROPYLENE GLYCOL.
P-B3			Bell & Gossett	3 EB	HOT WATER	BASE MOUNTED	290.0 GPM	0.0 GPM	110 ftH2O	1	15 hp	1800	752 lbf	460 V	3	-	1. SELECTION BASED UPON 30% PROPYLENE GLYCOL.
P-B4			Bell & Gossett	3 EB	HOT WATER	BASE MOUNTED	290.0 GPM	0.0 GPM	110 ftH2O	1	15 hp	1800	752 lbf	460 V	3	-	1. SELECTION BASED UPON 30% PROPYLENE GLYCOL.

ALTERNATE

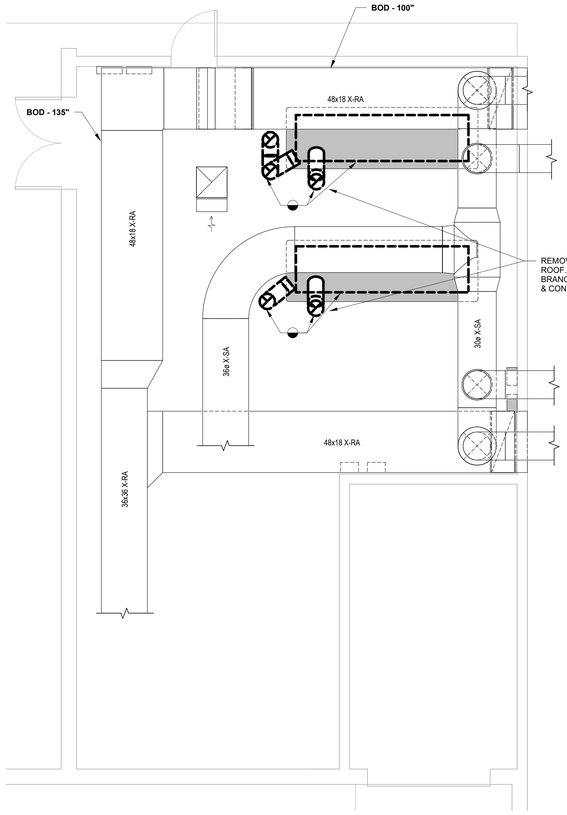
SYSTEM FEEDER UNIT SCHEDULE

UNIT NO.	LOCATION ROOM	LOCATION NUMBER	MANUFACTURER	MODEL NO.	SYSTEM	PUMP FLOW	PUMP DISCHARGE PRESSURE	TANK VOLUME	UNIT WEIGHT	ELECTRICAL (PLUG AND CORD) FLA	ELECTRICAL (PLUG AND CORD) VOLTAGE	ELECTRICAL (PLUG AND CORD) PHASE	REFERENCE DETAIL NO.	REMARKS
SFU-1			AXIOM	SF100	HOT WATER	1.0 GPM	18.0 psig	55.0 gal	460 lbf	1 A	120 V	1	4M001	PROVIDE RIA10-1-SAA LOW LEVEL ALARM

Grand total: 1

ELECTRICAL NOTES

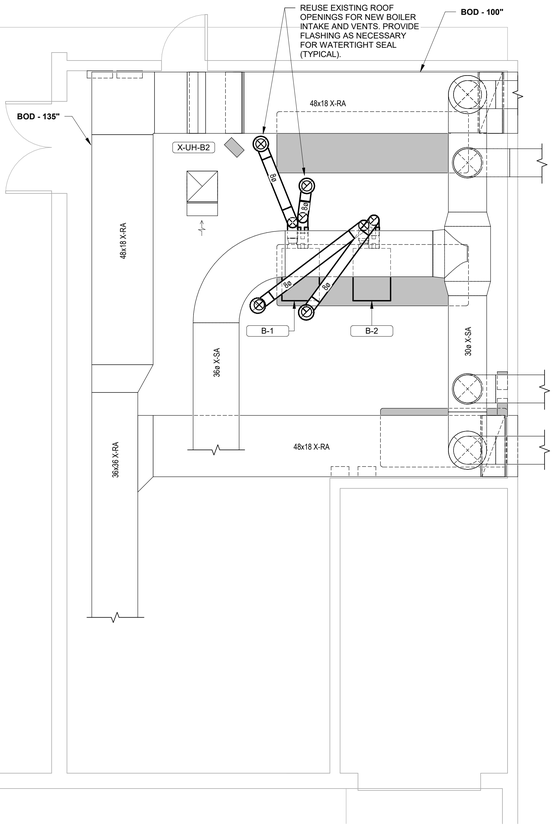
1. CONFIRM TO STATE AND LOCAL CODES AND REGULATIONS.
2. DISCONNECT WIRING FROM EXISTING BOILERS & BOILER DRAFT INDUCERS AS NOTED BELOW & ON PLAN.
3. REMOVE AND/OR RELOCATE EXISTING CONDUITS, J-BOXES, WIRING, SWITCHES, ETC. SERVING EXISTING BOILERS, ETC. AS REQUIRED.
4. PROVIDE AND INSTALL SAFETY SWITCH DISCONNECT FOR TWO (2) NEW BOILERS.
5. INSTALL NEW 208 VOLT, 3 PHASE, 20 AMP BRANCH CIRCUITS TO FEED NEW TWO (2) BOILERS FROM PANEL PPK.
6. RELOCATE EXISTING CONDUIT, WIRING, J-BOXES, ETC. AS REQUIRED TO COMPLETE THE INSTALLATION.
7. UNDER ALTERNATE BID: DISCONNECT WIRING TO HOT WATER PUMPS (XP-B3 & XP-B4) TO BE REMOVED AS SHOWN ON 3M100 & PROVIDE NEW CONNECTION TO NEW HOT WATER PUMPS AS NOTED ON 4M100. EXISTING PUMP VFD'S TO BE REUSED. EXTEND CONDUIT AND WIRING AS NECESSARY.
8. EXTEND CONDUIT AND WIRING TO BOILER CIRC. PUMPS (BCP-1 & BCP-2) & PROVIDE SAFETY SWITCH DISCONNECT FOR TWO (2) NEW BOILER PUMPS. REMOVE EXISTING STARTERS.
9. PROVIDE 20A-1P DUPLEX RECEPTACLE FROM WITH 20 AMP CIRCUIT FROM PANEL PPK TO SERVE SFU-1.



NORTH

1 MECHANICAL DUCTWORK REMOVAL PLAN

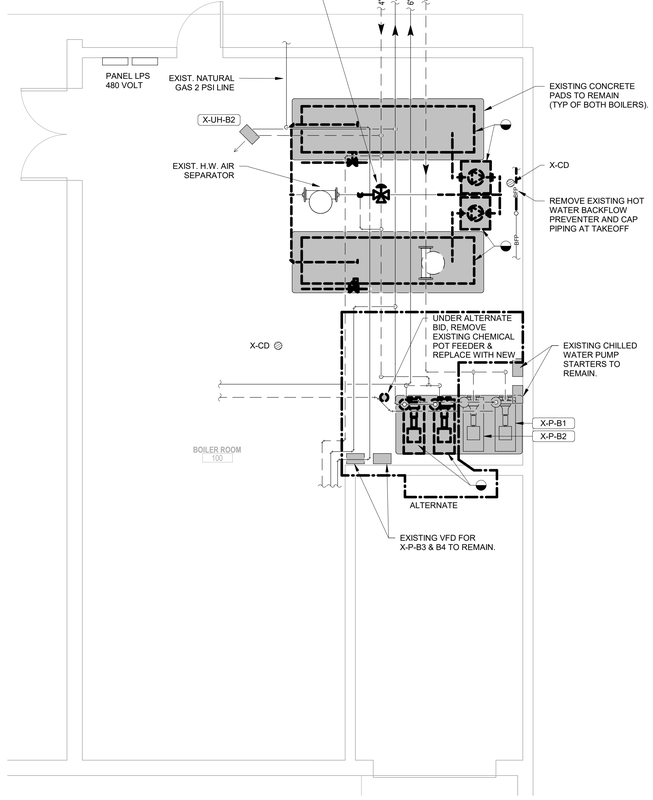
1/4" = 1'-0"



NORTH

2 MECHANICAL DUCTWORK REMODEL PLAN

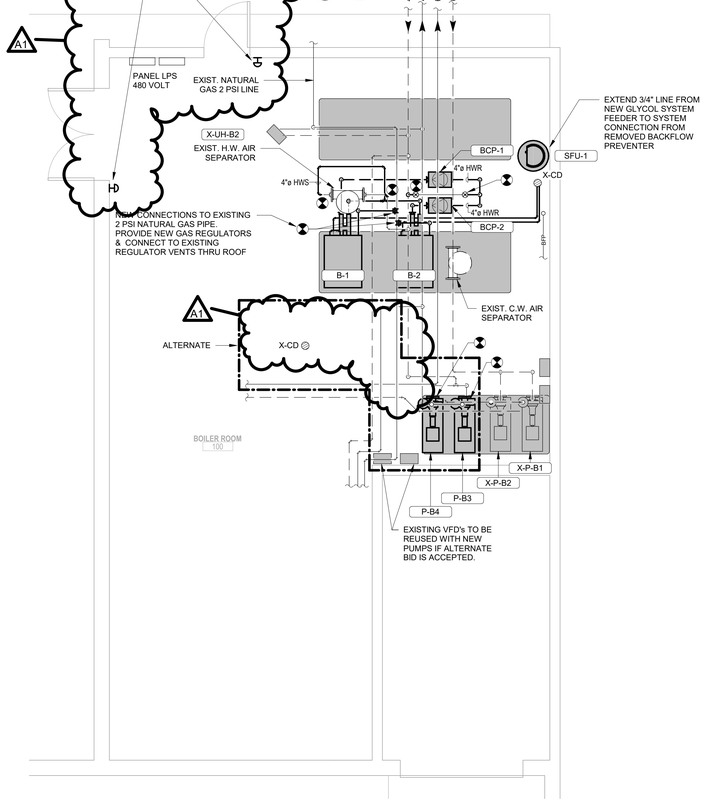
1/4" = 1'-0"



NORTH

3 MECHANICAL PIPING REMOVAL PLAN

1/4" = 1'-0"



NORTH

4 MECHANICAL PIPING REMODEL PLAN

1/4" = 1'-0"

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

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100 MILWAUKEE STREET
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Consultant:

Project Title: HOLMEN SCHOOL DISTRICT
SAND LAKE ELEMENTARY SCHOOL BOILER REPLACEMENT

Project Location: 3600 SAND LAKE ROAD, HOLMEN, WI 54636

Sheet Title: REMOVAL & REMODEL PLANS

HSR Project Number: 21004

Project Date: MARCH 2021

Drawn By: LESCHER

Key Plan:

Revisions:

No.	Description	Date
A1	Addendum #1	03/23/21

Graphic Scale: VARIES

Last Update: 3/23/2021 12:53:10 PM

M100