ADDENDUM NO. 01

February 2, 2023

Franklin Central High School Addition & Renovations
6215 S. Franklin Rd.
Indianapolis, IN, 46259

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated January 9, 2023, by VPS Architecture. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 1 – 1 through ADD 1 – 3, Specification Sections 00 31 00-Indiana Bid Form, Guideline Schedule, and attached VPS Architecture Addendum 1 dated January 31, 2023, consisting of 3 pages and Addendum Drawings PP1B, P-501, MP1A, MP2A, M601 and M703.

GENERAL NOTE

All Physical Color Selection Samples must be submitted for review within 45 Consecutive calendar days following Notice to Proceed.

A. **SPECIFICATION SECTION 00 31 00 BID FORM**

1. Reissued Specification Section is attached herein.

B. **SPECIFICATION SECTION 01 12 00 MULTIPLE CONTRACT SUMMARY**

1. Paragraph 3.03 Bid Categories

A. BID CATEGORY NO. 01 – GENERAL TRADES

Add the following clarifications:

21. Provide trench excavation and remaining backfill required for installation of underground mechanical chilled water piping as referenced on Civil and Mechanical Site Plan. Bid Category No. 10 to provide subgrade preparation and all work required for installation of underground mechanical chilled water piping and Gilsulate insulation as referenced on Civil and Mechanical Site Plan and applicable specification sections up 12 inches of compacted backfill.

J. BID CATEGORY NO. 10 – PLUMBING & HVAC

Add the following clarifications:

5. Provide subgrade preparation and all work required for installation of underground mechanical chilled water piping and Gilsulate insulation as referenced on Civil and Mechanical Site Plan and applicable specification sections up 12 inches of compacted backfill. Bid Category No. 1 to provide trench excavation and remaining backfill required for installation of underground mechanical chilled water piping as referenced on Civil and Mechanical Site Plan.
6. **Within 10 Calendar days following Notice to Proceed.** Provide complete submittal packages for Specification Sections:
   23 64 26.21 – Air Cooled, Rotary Screw Water Chillers
   23 73 13.13 – Indoor and Outdoor Basic Air Handling Units

K. BID CATEGORY NO. 11 – ELECTRICAL & TECHNOLOGY

Add the following clarifications:

9. **Within 10 Calendar days following Notice to Proceed.** Provide complete submittal packages for Power Distribution Panelboard and Switchboard.

C. **SPECIFICATION SECTION 01 23 00 – BID ALTERNATES**

Paragraph 1.04 SCHEDULE OF ALTERNATES

Add the following Alternates:

D. ALTERNATE NO. 3:

Base Bid: Warranty shall provide for 2-years parts and labor.

Alternate Bid: Warranty shall provide for 5-years parts and labor.

E. ALTERNATE NO. 4:

Base Bid: Furnish and install basis of design Trane Chiller (CH-1) as indicated in the bid documents.

Alternate 4a: Provide cost to furnish and install Daikin Chiller (CH-1) as indicated in the Bid Documents.

Alternate 4b: Provide cost to furnish and install Carrier Chiller (CH-1) as indicated in the Bid Documents.

D. ALTERNATE NO. 5:

Base Bid: No Work.

Alternate Bid: Provide lime stabilization of building pad.

D. SPECIFICATION SECTION 01 32 00 SCHEDULES AND REPORTS

1. Project Guideline Schedule is attached herein.

CONTRACTOR'S BID FOR PUBLIC WORKS FORM NO. 96

Format (Revised 2013)
(Amended for FTCSC)

Franklin Central High School Addition & Renovations

Franklin Township Community School Corporation
(Marion County, Indiana)

PART I

(To be completed for all bids. Please type or print)

Date (month, day, year):_____

BIDDER (Firm) _____

Address _____ P.O. Box _____

City/State/Zip _____

Telephone Number: _____ Email Address: _____

Person to contact regarding this Bid_____

Pursuant to notices given, the undersigned offers to furnish labor and/or materials necessary to complete the public works project of:

_____
Insert Category No. (s) and Name(s)

Of public works project, ***Franklin Central High School Addition & Renovations***, in accordance with Plans and Specifications prepared by ***VPS Architecture, 905 N. Capital Avenue, Suite 100, Indianapolis, IN 46204***, as follows:

BASE BID

For the sum of _____
(Sum in words)

_____DOLLARS ($_____)
(Sum in figures)

The undersigned acknowledges receipt of the following Addenda:
Receipt of Addenda No. (s) _____

PROPOSAL TIME

Bidder agrees that this Bid shall remain in force for a period of sixty (60) consecutive calendar days from the due date, and Bids may be accepted or rejected during this period. Bids not accepted within said sixty (60) consecutive calendar days shall be deemed rejected.

Attended pre-bid conference YES _____ NO_____

Has visited the jobsite YES _____ NO_____

The Bidder has reviewed the Guideline Schedule in Section 01 32 00 and the intent Of the schedule can be met. YES _____ NO_____

Bidder has included their Written Drug Testing Plan that covers all employees of the bidder who will perform work on the public work project and meets or exceeds the requirements set in IC 4-13-18-5 or IC 4-13-18-6. YES _____ NO_____

The Skillman Corporation's diversity initiative is to create a program to encourage, assist and measure the active participation of Minority- Owned, Women-Owned, Veteran – Owned and Disabled Individual-Owned Businesses. The Program is to ensure that MWVDBEs are provided full and equal opportunity to participate in all Skillman Corporation's Projects.

Bidder has included:
DBE: YES _____% NO _____
MBE: YES _____% NO _____
WBE: YES _____% NO _____
VBE: YES _____% NO _____

The undersigned further agrees to furnish a bond or certified check with this Bid for an amount specified in the Notice to Bidders. If Alternate Bids apply, submit a proposal for each in accordance with the Plans and Specifications.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit bases, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS
(if applicable)

I, the undersigned bidder, or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ALTERNATE BIDS

A blank entry or an entry of "No Bid", "N/A", or similar entry on any Alternate will cause the bid to be rejected as non-responsive only if that Alternate is selected. If no change in the bid amount is required, indicate "No Change".

****MARK "ADD" OR "DEDUCT" FOR EACH ALTERNATE****

Alternate Bid No. 1 – Existing Sidewalk Replacement

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 2a – Lighting Fixtures by Bid Category No. 11

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 2b – Lighting Fixtures by Bid Category No. 12

Change the Base Bid the sum of_____
(sum in words)

_____DOLLARS ($_____) ADD DEDUCT
(sum in figures)

Alternate Bid No. 3 – Five Year Chiller Parts and Labor Warranty

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS ($_____) ADD / DEDUCT
(sum in figures)

Alternate Bid No. 4a – Provide Daikin Chiller in lieu of Basis of Design.

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS ($_____) ADD / DEDUCT
(sum in figures)

Alternate Bid No. 4b – Provide Carrier Chiller in lieu of Basis of Design.

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS ($_____) ADD / DEDUCT
(sum in figures)

Alternate Bid No. 5 – Lime Stabilize Building Pad

Change the Base Bid the sum of _____
(sum in words)

_____ DOLLARS ($_____) ADD / DEDUCT
(sum in figures)

PART II

(For projects of $150,000 or more – IC 36-1-12-4)

These statements to be submitted under oath by each bidder with and as a part of his bid. (Attach additional pages for each section as needed.)

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you?_____If so, where and why?

_____

_____

_____

4. List references from private firms for which you have performed work.

_____

_____

_____

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed Work. (Examples could include a narrative of when you could begin, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)

2. Please list the names and addresses of all subcontractors (i.e. persons or firms outside your own firm who have performed part of the work) that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

3. If you intend to sublet any portion of the work, state the name and addresses of each subcontractor, equipment to be used by the subcontractor, and whether you will required a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

4. What equipment do you have available to use for the proposed Project? Any equipment used by subcontractors may also be required to be listed by the governmental unit.

5. Have you into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which corroborate the process listed.

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of Bidder's financial statement is mandatory. Any Bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the Contract must be specific enough in detail so that said governing body can make a proper determination of the Bidder's capability for completing the Project if awarded.

SECTION IV CONTRACTOR NON-COLLUSION AFFIDAVIT

The undersigned Bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this Bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporations has, have, or will receive directly or indirectly, any rebate, fee, gift, commission, or thing of value on account of such contract.

SECTION V OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT

Dated at _____this _____ day of _____, 20

_____
(Name of Organization)

By
_____

_____
(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF _____)
) SS:
COUNTY OF _____)

Before me, a Notary Public, personally appeared the above-named
_____

Swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to before me this _____ day of _____,
_____
(Title)

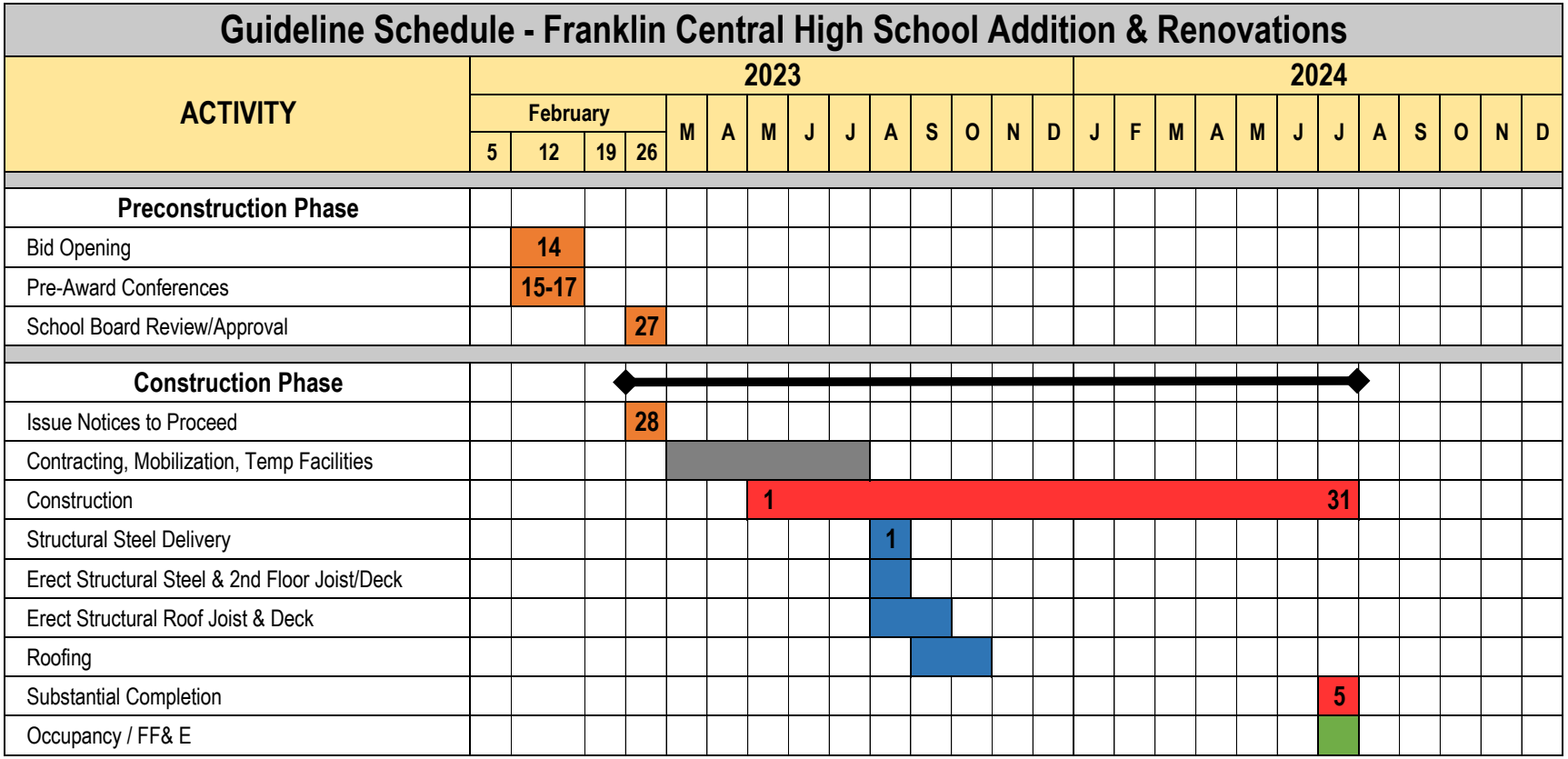
_____
Notary Public

My Commission Expires: _____

County of Residence: _____

END OF SECTION 00 31 00

Guideline Schedule - Franklin Central High School Addition & Renovations



VPS ARCHITECTURE

528 Main Street – Suite 400 Evansville Indiana 47708
P (812) 423-7729 F (812) 425-4561
www.vpsarch.com

Distribution: To all Planholders

ADDENDUM NO. 1 (ONE)

DATE: **January 31, 2023**
PROJECT: **Addition & Renovations to Franklin Central High School**
OWNER: **Franklin Township Community School Corporation**
PROJECT NO.: **2022043.00**

The original Specifications and Drawings dated January 2023 for the project referenced above, are amended as noted in this Addendum No. 1 (One). Receipt of this Addendum and any subsequent Addenda must be acknowledged on the Proposal Form. This section of the Addendum consists of 16 (Sixteen) items and 6 (Six) attachments.

ITEM **DESCRIPTION**

Specification Items:

1-1 Section 042000 Unit Masonry: The brick size shall be Norman.

1-2 Section 072100 Thermal Insulation: Hunter XCI CG polyiso is an approved product.

1-3 Section 095113 Acoustical Panel Ceilings: CertainTeed is an approved manufacturer.

1-4 Section 123200 Manufactured Wood Casework:

A. Advanced Cabinet Systems (ACS) is an approved manufacturer.
B. Midwest Cabinet Solutions is an approved manufacturer.
C. The vertical surfaces for plastic laminate shall be VGL in lieu of HGL.

1-5 Section 232513 Water Treatment for Closed Loop Hydronic Chillers: Paragraph 1.7.A shall be revised as follows, “HVAC Water-Treatment installation and services shall be performed by Chardon Laboratories, Mike Heirbrandt (765) 617-5193”.

1-6 Section 236426.21 Air-Cooled, Rotary-Screw Water Chillers: Paragraph 2.2.A.3 shall be revised as follows, “Daikin”.

1-7 Section 237313.13 Indoor and Outdoor Basic Air-Handling Units: Paragraph 2.3.A.2 shall be revised as follows, “Daikin”.

Drawing Items:

1-8 A702: Detail 24/A702, the countertop reference “G” shall be revised to an “A”, plastic laminate countertop and backsplash.

1-9 All references to Dens Glass Gold sheathing shall be revised to Securock ExoAir 430 or equal per Section 092900 Gypsum Board.

1-10 The 3” Cavitymate Ultra insulation is intended to also be the air barrier.

1-11 PP1B: Replace drawing in its entirety with attached revision.

1-12 P-501: Replace drawing in its entirety with attached revision.

1-13 MP1A: Replace drawing in its entirety with attached revision.

1-14 MP2A: Replace drawing in its entirety with attached revision.

1-15 M601: Replace drawing in its entirety with attached revision.

1-16 M703: Replace drawing in its entirety with attached revision.

PREPARED BY: _____
George S. Link, AIA

VPS ARCHITECTURE

Attachments:
PP1B
P-501
MP1A
MP2A
M601
M703

PLUMBING PLAN NOTES

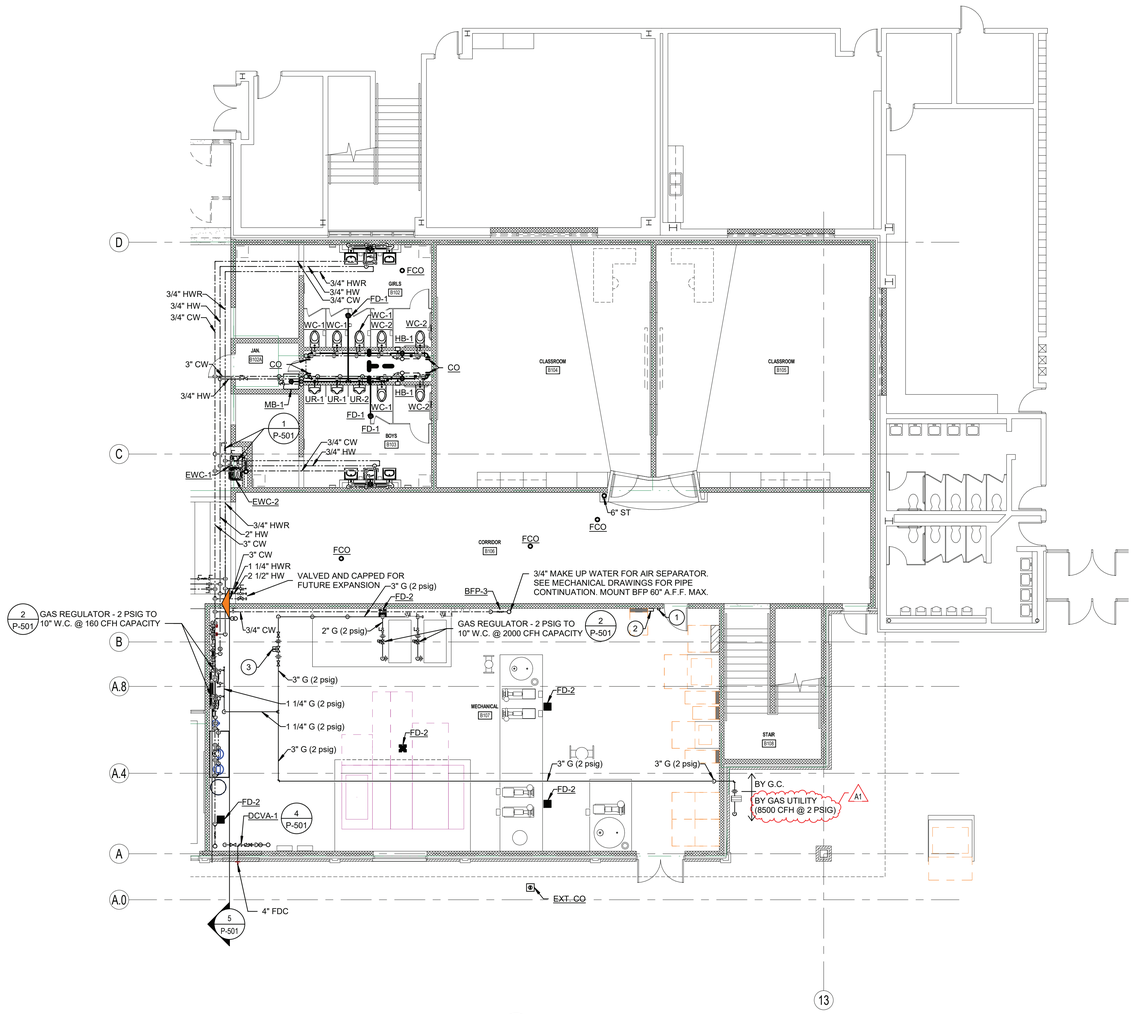
#	NOTE
1	EMERGENCY GAS SHUT-OFF PANIC BUTTON. (AGS; #AGS-EGOTW)
2	EMERGENCY GAS SHUT-OFF MASTER CONTROL PANEL. (AGS; #AGSCH4CO)
3	EMERGENCY GAS SHUT-OFF SOLENOID VALVE -3". (AGS; MERLIN1080)

PLUMBING GENERAL NOTES

1. SEE DRAWING P-001 FOR ADDITIONAL NOTES.
2. MECHANICAL CONTRACTOR SHALL PROVIDE CONCRETE PADS FOR ALL FLOOR MOUNTED PLUMBING EQUIPMENT.
3. THE BUILDING WILL BE A FULLY SPRINKLERED. FIRE PROTECTION CONTRACTOR SHALL DESIGN THE COMPLETE SYSTEM ACCORDING TO THE CRITERIA OUTLINED ON THE DRAWINGS, IN THE SPECIFICATIONS, N.F.P.A. 13. THE ENTIRE BUILDING SHALL BE PROTECTED BY A WET PIPE SPRINKLER SYSTEM
4. FIRE PROTECTION CONTRACTOR SHALL PREPARE ALL DRAWINGS AND APPLICATIONS REQUIRED TO OBTAIN APPROVAL OF THE SYSTEM BY OWNERS INSURANCE UNDERWRITER, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION. ALL DRAWINGS TO BE SUBMITTED DURING CONSTRUCTION.
5. FIRE PROTECTION CONTRACTOR SHALL SUBMIT DRAWINGS WITH ALL SPRINKLER HEAD LOCATIONS. ALL SPRINKLER HEADS TO BE LAID OUT NEATLY WITHIN THE CEILING SYSTEMS AND BE COORDINATED WITH ALL BULKHEADS, CEILINGS AND STRUCTURE. REFERENCE ARCHITECTURAL DRAWINGS FOR CEILING PLANS.
6. ALL PIPING, SIZES, ZONES AND SPRINKLER MAINS SHOWN ON DRAWINGS ARE FOR BIDDING AND DESIGN INTENT ONLY. FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR PROPER COVERAGE AND CAPACITY OF THE SPRINKLER SYSTEM.
7. SPRINKLER PIPING SHALL NOT BE ROUTED THRU ANY TECHNOLOGY EQUIPMENT ROOMS (TR OR ER), USE SIDEWALL SPRINKLER HEADS WITH GUARDS TO SERVE THE ROOM.
8. REFER TO SPECIFICATION 231123 FOR NATURAL GAS PIPING SYSTEM.
9. MARK ALL LOCATIONS OF VALVES ON CEILING GRID WITH ENGRAVED PLASTIC LABELS.

PLUMBING FIXTURE ROUGH-IN LEGEND

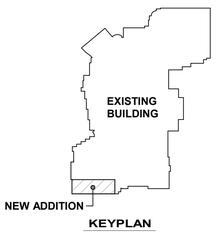
MARK	FIXTURE CONNECTION CW	HW	W	V
EWC-1	3/4"		1 1/2"	1 1/2"
EWC-2	1/2"		1 1/2"	1 1/2"
FD-1			2"	
FD-2			4"	
L-1	1/2"	1/2"	1 1/2"	1 1/2"
HB-1	3/4"			
IMB-1	1/2"			
NFWH-1	3/4"	0"		
RH-1	3/4"			
SI-1			1 1/2"	
OFD-1			4"	
RD-1			4"	
MB-1	3/4"	3/4"	3"	1 1/2"
SK-1	1/2"	1/2"	1 1/2"	1 1/2"
SK-2	1/2"	1/2"	1 1/2"	1 1/2"
SK-3	1/2"	1/2"	1 1/2"	1 1/2"
UR-1	3/4"		2"	1 1/2"
UR-2	3/4"		2"	1 1/2"
WC-1	1"		4"	2"
WC-2	1"		4"	2"



1 FIRST FLOOR PLUMBING PLAN - UNIT B
1/8" = 1'-0"

#	Revision	Date
A1	ADDENDUM #1	01.31.2023

creative engineering solutions
mechanical • electrical • plumbing
201 S Rural St., Suite 210
Indianapolis, IN 46201• 462-777-8182
www.creativeng.net



KEYPLAN

NORTH

VPS ARCHITECTURE
905 N. Capital Ave. - Suite 100 Indianapolis, Indiana 46204
P (317) 353-3281
www.VPSARCH.com

ADDITION & RENOVATIONS TO:

FRANKLIN CENTRAL HIGH SCHOOL

FRANKLIN TOWNSHIP COMMUNITY SCHOOL CORPORATION
INDIANAPOLIS, INDIANA

Drawing Title:

FIRST FLOOR PLUMBING PLAN - UNIT B

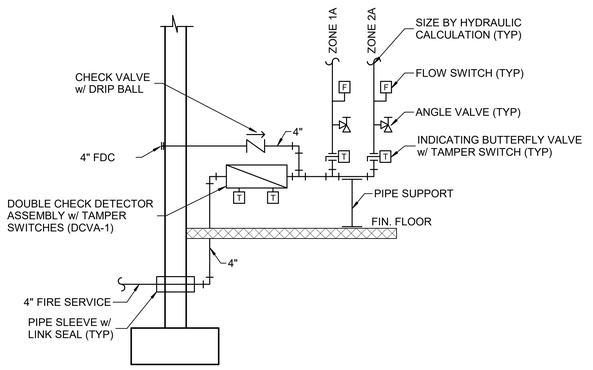
GABRIEL S. CURRIER REGISTERED NO. PE10808972 STATE OF INDIANA PROFESSIONAL ENGINEER

Project No: 2022043.00

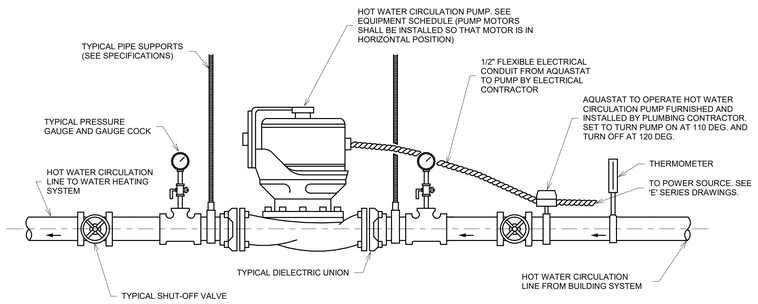
Project Date: JANUARY 09, 2023

Drawing No: PP1B

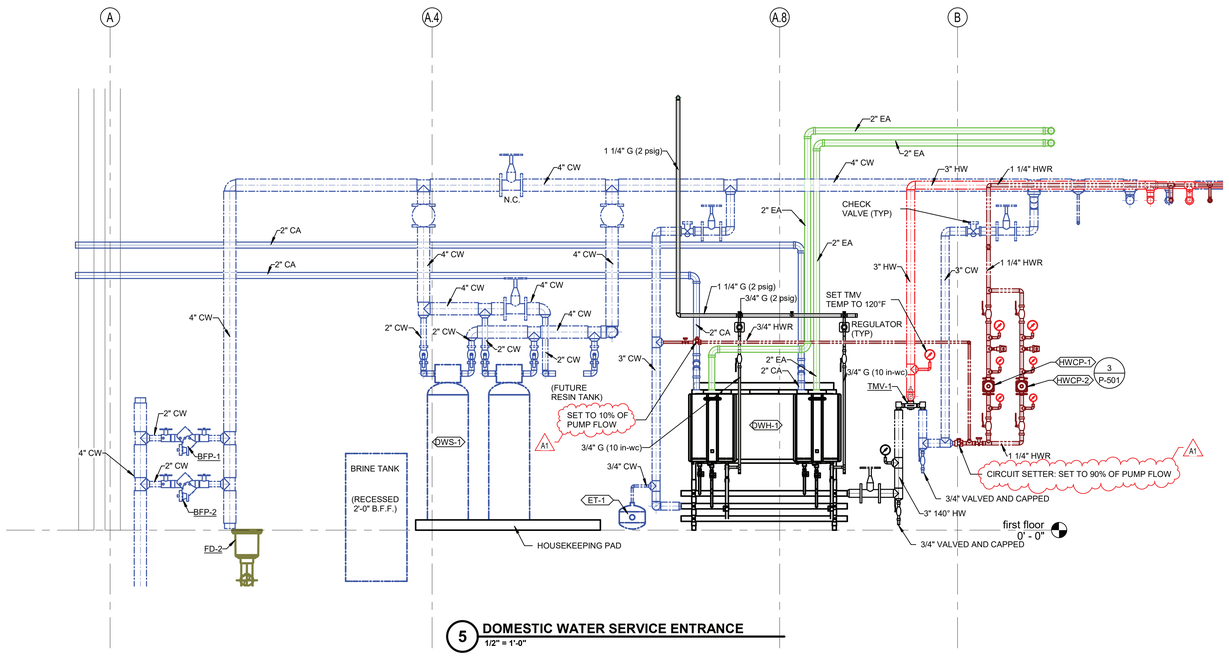
#	Revision	Date
A1	ADDENDUM #1	01.31.2023



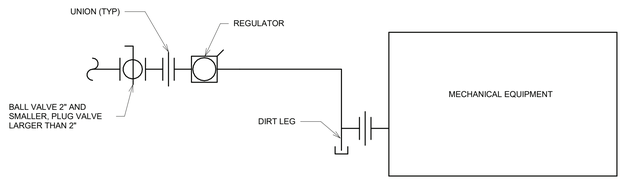
4 FIRE RISER DETAIL
NOT TO SCALE



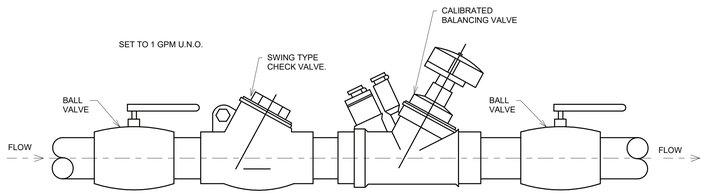
3 HOT WATER CIRCULATION PUMP DETAIL
NOT TO SCALE



5 DOMESTIC WATER SERVICE ENTRANCE
1/2" = 1'-0"



2 GAS CONNECTION TO MECHANICAL EQUIPMENT DETAIL
NOT TO SCALE



1 BALANCING STATION
NOT TO SCALE

creative engineering solutions
mechanical • electrical • plumbing
201 S Rural St., Suite 210
Indianapolis, IN 46201• 462-777-8182
www.creativeng.net

KEYPLAN

NORTH

VPS ARCHITECTURE
905 N. Capital Ave. - Suite 100 Indianapolis, Indiana 46204
P (317) 353-3281
www.VPSARCH.com

ADDITION & RENOVATIONS TO:

FRANKLIN CENTRAL HIGH SCHOOL

FRANKLIN TOWNSHIP COMMUNITY SCHOOL CORPORATION
INDIANAPOLIS, INDIANA

Drawing Title:

PLUMBING DETAILS

GABRIEL S. CURRIER REGISTERED NO. PE10808972 STATE OF INDIANA PROFESSIONAL ENGINEER

Project No: 2022043.00

Project Date: JANUARY 09, 2023

Drawing No: P-501

GENERAL PIPING NOTES

A. DARK LINES INDICATE NEW WORK.

B. LIGHT SOLID LINES INDICATE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PIPING, AND/OR MECHANICAL ACCESSORIES TO REMAIN AS-IS. CONTRACTOR TO FIELD VERIFY ACTUAL EXISTING CONDITIONS PRIOR TO BIDDING.

C. PROVIDE SHUTOFF VALVES AT EVERY BRANCH CONNECTION TO A MAIN.

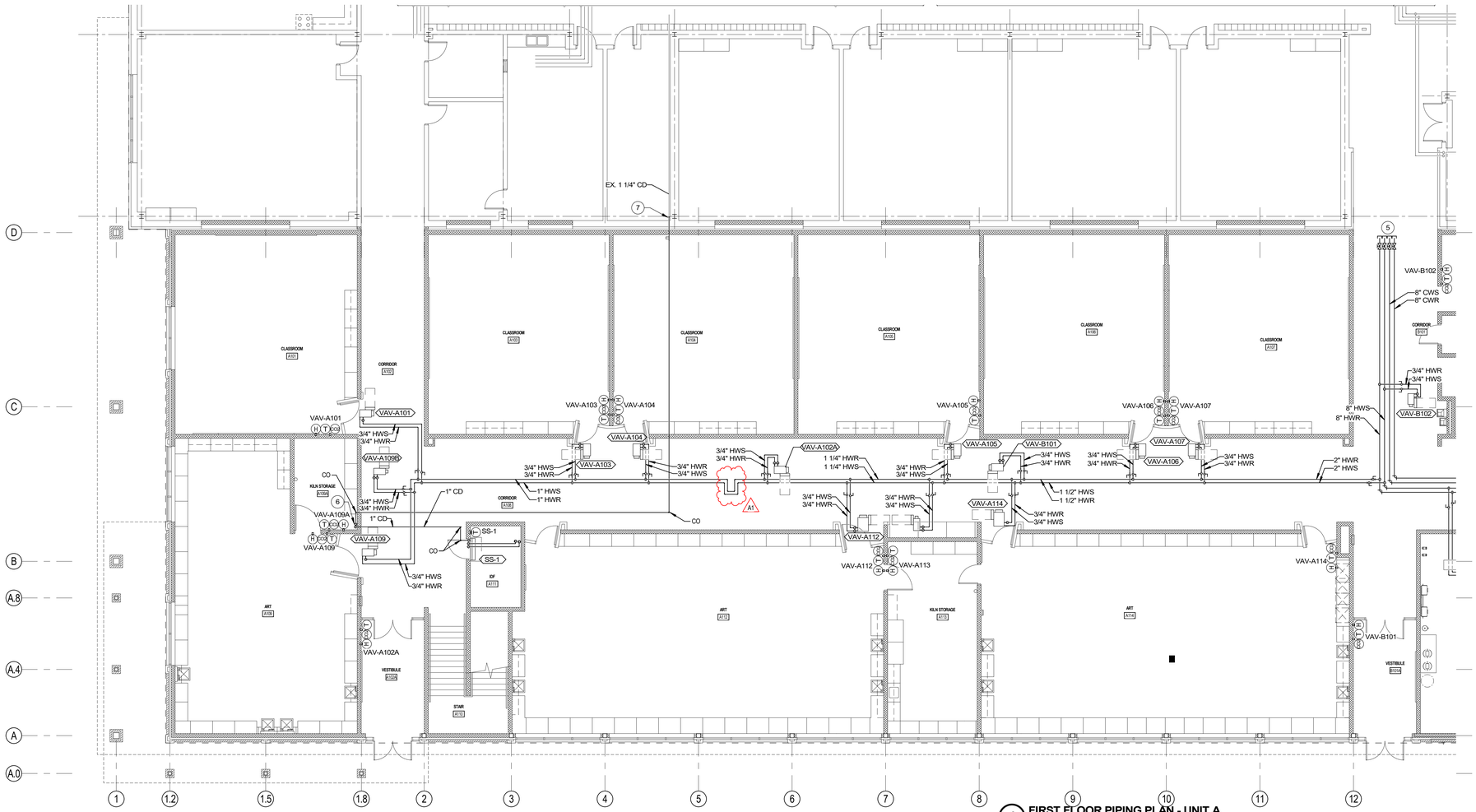
D. PROVIDE SHUTOFF VALVES ON HYDRONIC PIPING AT ALL MECHANICAL EQUIPMENT.

E. PROVIDE GATE VALVES ON ALL HYDRONIC PIPING 2-1/2" AND ABOVE.

F. MARK ALL LOCATIONS OF VALVES WITH ENGRAVED PLASTIC TAGS ON CEILING GRID BELOW VALVE.

MECHANICAL PIPING PLAN NOTES

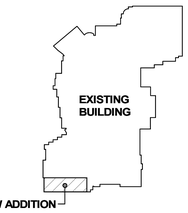
#	NOTE
1	SEE ENLARGED MECHANICAL ROOM DETAIL SHEET M401 FOR CONTINUATION OF PIPING.
2	2-1/2" CWS/CWR, 2" HWS/HWR PIPE UP IN CHASE TO SECOND FLOOR.
3	2-1/2" CWS/CWR, 2" HWS/HWR PIPE DOWN IN CHASE TO FIRST FLOOR.
4	2-1/2" CWS/CWR, 2" HWS/HWR PIPE UP THROUGH ROOF TO AHU-2.
5	VALVE AND CAP 8" CWS/CWR, 8" HWS/HWR PIPE FOR FUTURE CONNECTION.
6	ROUTE CONDENSATE TO FLOOR DRAIN. PROVIDE FUNNEL TO PREVENT SPLASHING.
7	DEMO EXISTING CONDENSATE PIPE FROM EXTERIOR OF BUILDING UP TO HORIZONTAL RUN. CONNECT NEW 1-1/4" CONDENSATE TO EXISTING 1-1/4" CONDENSATE. ROUTE NEW CONDENSATE TO CONDENSATE PUMP MOUNTED ABOVE CEILING IN ROOM A104 AND ROUTE TO FLOOR DRAIN AS SHOWN. CONDENSATE PUMP SIMILAR TO LITTLE GIANT CONDENSATE PUMP VCMA-15 SERIES PUMP.
8	DEMO EXISTING CONDENSATE PIPE FROM EXTERIOR OF BUILDING TO RISE TO SECOND FLOOR. CONNECT NEW 1-1/4" CONDENSATE TO EXISTING 1-1/4" CONDENSATE AND ROUTE TO MOP SINK WHERE SHOWN.
9	ROUTE REFRIGERANT LINES UP THROUGH STUD WALL TO ROOF PIPE PORTAL.



1 FIRST FLOOR PIPING PLAN - UNIT A
1/8" = 1'-0"

#	Revision	Date
A1	ADDENDUM #1	01.31.2023

creative engineering solutions
mechanical • electrical • plumbing
201 S Rural St., Suite 210
Indianapolis, IN 46201 • 462-777-8182
www.creativeng.net



KEYPLAN

NORTH

VPS ARCHITECTURE
905 N. Capital Ave. - Suite 100 Indianapolis, Indiana 46204
P (317) 353-3281
www.VPSARCH.com

ADDITION & RENOVATIONS TO:

FRANKLIN CENTRAL HIGH SCHOOL

FRANKLIN TOWNSHIP COMMUNITY SCHOOL CORPORATION
INDIANAPOLIS, INDIANA

Drawing Title:

FIRST FLOOR PIPING PLAN - UNIT A

GABRIEL S. CURRIER REGISTERED NO. PE10808972 STATE OF INDIANA PROFESSIONAL ENGINEER

Project No: 2022043.00

Project Date: JANUARY 09, 2023

Drawing No: MP1A

GENERAL PIPING NOTES

A. DARK LINES INDICATE NEW WORK.

B. LIGHT SOLID LINES INDICATE EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PIPING, AND/OR MECHANICAL ACCESSORIES TO REMAIN AS-IS. CONTRACTOR TO FIELD VERIFY ACTUAL EXISTING CONDITIONS PRIOR TO BIDDING.

C. PROVIDE SHUTOFF VALVES AT EVERY BRANCH CONNECTION TO A MAIN.

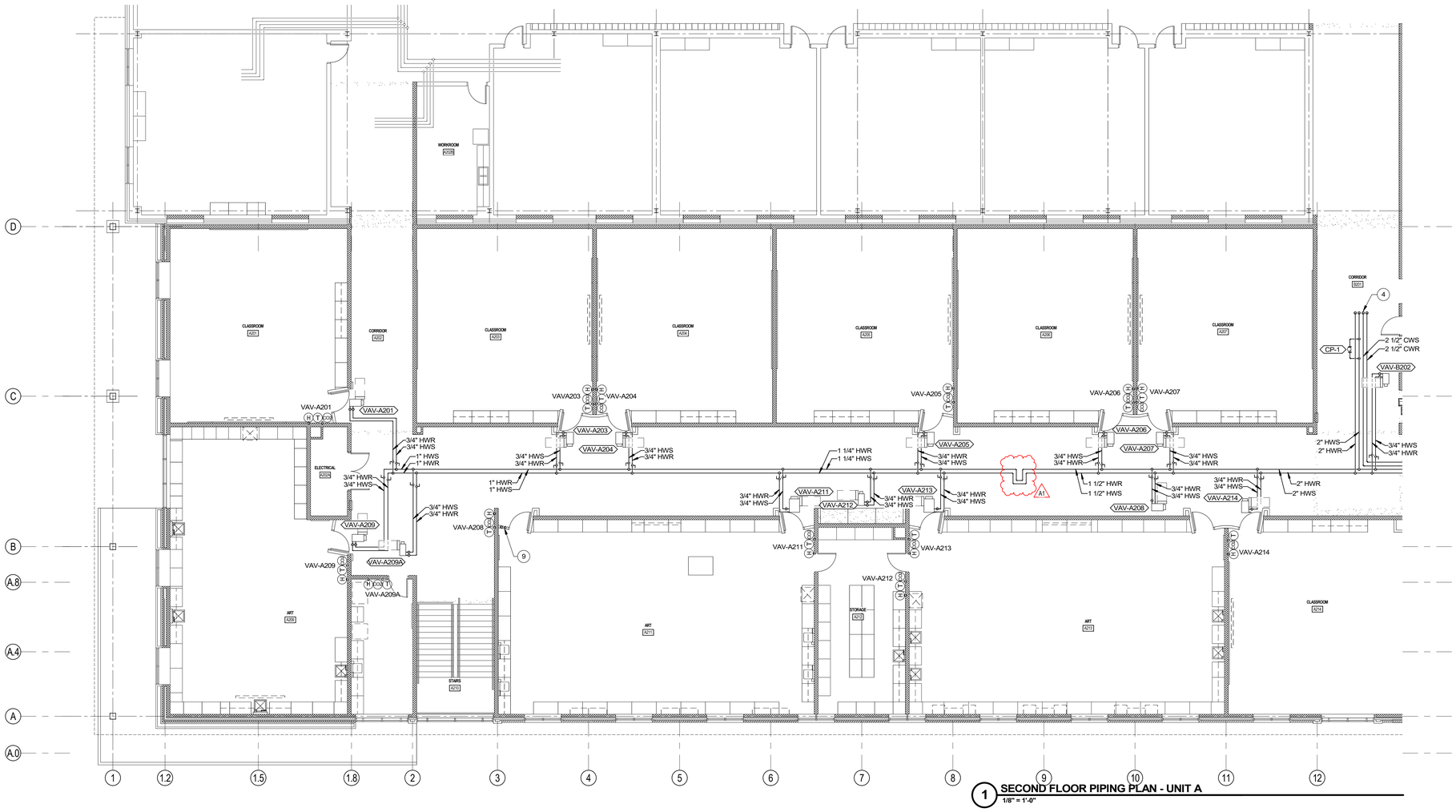
D. PROVIDE SHUTOFF VALVES ON HYDRONIC PIPING AT ALL MECHANICAL EQUIPMENT.

E. PROVIDE GATE VALVES ON ALL HYDRONIC PIPING 2-1/2" AND ABOVE.

F. MARK ALL LOCATIONS OF VALVES WITH ENGRAVED PLASTIC TAGS ON CEILING GRID BELOW VALVE.

MECHANICAL PIPING PLAN NOTES

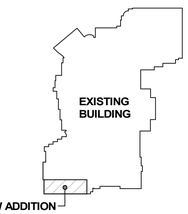
#	NOTE
1	SEE ENLARGED MECHANICAL ROOM DETAIL SHEET M401 FOR CONTINUATION OF PIPING.
2	2-1/2" CWS/CWR, 2" HWS/HWR PIPE UP IN CHASE TO SECOND FLOOR.
3	2-1/2" CWS/CWR, 2" HWS/HWR PIPE DOWN IN CHASE TO FIRST FLOOR.
4	2-1/2" CWS/CWR, 2" HWS/HWR PIPE UP THROUGH ROOF TO AHU-2.
5	VALVE AND CAP 8" CWS/CWR, 8" HWS/HWR PIPE FOR FUTURE CONNECTION.
6	ROUTE CONDENSATE TO FLOOR DRAIN. PROVIDE FUNNEL TO PREVENT SPLASHING.
7	DEMO EXISTING CONDENSATE PIPE FROM EXTERIOR OF BUILDING UP TO HORIZONTAL RUN. CONNECT NEW 1-1/4" CONDENSATE TO EXISTING 1-1/4" CONDENSATE. ROUTE NEW CONDENSATE TO CONDENSATE PUMP MOUNTED ABOVE CEILING IN ROOM A104 AND ROUTE TO FLOOR DRAIN AS SHOWN. CONDENSATE PUMP SIMILAR TO LITTLE GIANT CONDENSATE PUMP VCMA-15 SERIES PUMP.
8	DEMO EXISTING CONDENSATE PIPE FROM EXTERIOR OF BUILDING TO RISE TO SECOND FLOOR. CONNECT NEW 1-1/4" CONDENSATE TO EXISTING 1-1/4" CONDENSATE AND ROUTE TO MOP SINK WHERE SHOWN.
9	ROUTE REFRIGERANT LINES UP THROUGH STUD WALL TO ROOF PIPE PORTAL.



1 SECOND FLOOR PIPING PLAN - UNIT A
1/8" = 1'-0"

#	Revision	Date
A1	ADDENDUM #1	01.31.2023

creative engineering solutions
mechanical • electrical • plumbing
201 S Rural St., Suite 210
Indianapolis, IN 46201 • 462-777-8182
www.creativeng.net



KEYPLAN

NORTH

VPS ARCHITECTURE
905 N. Capital Ave. - Suite 100 Indianapolis, Indiana 46204
P (317) 353-3281
www.VPSARCH.com

ADDITION & RENOVATIONS TO:

FRANKLIN CENTRAL HIGH SCHOOL

FRANKLIN TOWNSHIP COMMUNITY SCHOOL CORPORATION
INDIANAPOLIS, INDIANA

Drawing Title:

SECOND FLOOR PIPING PLAN - UNIT A

GABRIEL S. CURRIER REGISTERED NO. PE10808972 STATE OF INDIANA PROFESSIONAL ENGINEER

Project No: 2022043.00

Project Date: JANUARY 09, 2023

Drawing No: MP2A

#	Revision	Date
A1	ADDENDUM #1	01.31.2023

AHU SCHEDULE

MARK	MANUFACTURER	MODEL	LOCATION	AREA SERVED	WEIGHT (LBS)	DIMENSIONS L	W	H	SUPPLY FAN DATA AIRFLOW (CFM)	ESP (IN-WG)	TSP (IN-WG)	RPM	MOTOR QTY	MOTOR HP EACH	MOTOR BHP EACH	SUPPLY FAN ELECTRICAL DATA VOLTS (V)	PH	FREQ (HZ)	FLA (A)	MCA (A)	MOCP (A)	RETURN FAN DATA AIRFLOW (CFM)	ESP (IN-WG)	TSP (IN-WG)	RPM	MOTOR QTY	MOTOR HP EACH	MOTOR BHP EACH	RETURN FAN ELECTRICAL DATA VOLTS (V)	PH	FREQ (HZ)	FLA (A)	MCA (A)	MOCP (A)
AHU-1	TRANE	CSAA035	MECHANICAL ROOM	1ST FLOOR	5,937	193.9"	100"	70.8"	16,575	2.25	3.9	1,200	2	7.5	7.2	460	3	60	11.4	14.3	25	-	-	-	-	-	-	-	-	-	-	-	-	45
AHU-2	TRANE	CSAA040	ROOF	2ND FLOOR	12,643	344"	112.5"	73.4"	19,250	2.25	4.2	1,800	2	15.0	10.8	460	3	60	-	-	-	19,250	1.00	2.06	1,474	2	7.5	5.5	460	3	60	11	14	25

AIR HANDLING UNIT SCHEDULE NOTES

1. PROVIDE WITH OUTDOOR CONSTRUCTION AND 22" ROOF CURB.
2. SINGLE POINT POWER CONNECTION WITH FACTORY MOUNTED VFD & DISCONNECT.
3. 5kA SCCR RATING.
4. TCC TO PROVIDE VFD FOR EACH FAN. EC TO INSTALL.
5. PROVIDE WITH 6" BASE RAIL.
6. SHIP WITH MODULES SEPARATED. A1

AHU SCHEDULE (CONTINUED)

MARK	PREHEAT COIL DATA AIRFLOW (CFM)	CAPACITY (BTUH)	FLOW (GPM)	EDB (°F)	LDB (°F)	EWT (°F)	LWT (°F)	WPD (FT-WG)	FACE VEL. (FPM)	APD (IN-WG)	ROWS	FINS PER IN	FLUID TYPE	COOLING COIL DATA TOTAL CAP. (BTUH)	SENSIBLE CAP. (BTUH)	FLOW (GPM)	EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)	EWT (°F)	LWT (°F)	WPD (FT-WG)	FACE VEL. (FPM)	APD (IN-WG)	ROWS	FINS PER IN	FLUID TYPE	MIN OA (CFM)	NOTES
AHU-1	9,600	721,270	72.22	0.0	69.3	150	120	3.26	275	0.05	2	6.0	WATER	849,590	545,920	153	84.8	70.4	55.0	54.7	42	54	10	494	0.70	8	7.0	30% PG	9,450	3-6
AHU-2	19,250	797,880	53.28	0.0	68.1	150	120	4.2	270	0.05	2	6.0	WATER	990,520	634,020	179	84.8	70.4	55.0	54.4	42	54	11	499	0.68	8	7.0	30% PG	10,975	1-3

A1

PUMP SCHEDULE - 23 21 23

MARK	MANUFACTURER	MODEL	IMPELLER SIZE (IN)	SYSTEM SERVED	WEIGHT (LBS)	TYPE	FLUID DATA FLUID TYPE	FLOW (GPM)	HEAD (FT-WG)	TEMP (°F)	EFF (%)	MOTOR DATA HP	BHP	ELECTRICAL DATA SPEED (RPM)	VOLTS (V)	PH	FREQ (HZ)	NOTES
PCWP-1	BELL & GOSSETT	e1510-5EB	11.00	CHILLER	730	BASE MOUNTED END SUCTION	30% PG	700	42.0	42	86.4	15.0	9.0	1,200	480	3	60	1
SCWP-1	BELL & GOSSETT	e1510-4EB	11.00	BUILDING	693	BASE MOUNTED END SUCTION	30% PG	765	80.0	42	79.7	25.0	20.0	1,800	480	3	60	1
SCWP-2	BELL & GOSSETT	e1510-4EB	11.00	BUILDING	693	BASE MOUNTED END SUCTION	30% PG	765	80.0	42	79.7	25.0	20.0	1,800	480	3	60	1
HWP-1	BELL & GOSSETT	e1510-3GB	10.75	BUILDING	670	BASE MOUNTED END SUCTION	WATER	335	87.0	140	70.4	15.0	9.2	1,800	480	3	60	1
HWP-2	BELL & GOSSETT	e1510-3GB	10.75	BUILDING	670	BASE MOUNTED END SUCTION	WATER	335	87.0	140	70.4	15.0	9.2	1,800	480	3	60	1
BP-1	BELL & GOSSETT	e90-2AB	6.63	BOILER	100	IN-LINE CENTRIFUGAL PUMP	WATER	180	20.0	120	58.2	2.0	1.8	1,800	230	1	60	2
BP-2	BELL & GOSSETT	e90-2AB	6.63	BOILER	100	IN-LINE CENTRIFUGAL PUMP	WATER	180	20.0	120	58.2	2.0	1.8	1,800	230	1	60	2
CP-1	BELL & GOSSETT	e90-2AAC	5.25	AHU-2	68	IN-LINE CIRCULATOR PUMP	WATER	76	20.0	140	75.8	0.8	0.5	1,800	120	1	60	3

PUMP SCHEDULE NOTES:

1. VFD PROVIDED BY TCC.
2. STARTER BY EC. CONTROLLED BY BOILER.
3. CONSTANT SPEED CONTROLLED BY TCC.

BOILER SCHEDULE - 23 52 16

MARK	MANUFACTURER	MODEL	TYPE	HEATING DATA INPUT (BTUH)	OUTPUT (BTUH)	EFF (%)	STAGES	GAS PRESSURE DATA MINIMUM (PSI)	MAXIMUM (PSI)	WATER DATA FLOW (GPM)	WPD (FT-WG)	EWT (°F)	LWT (°F)	FLUID TYPE	ELECTRICAL DATA VOLTS (V)	PH	FREQ (HZ)	FLA (A)	MOCP (A)	NOTES
B-1	KN	KN-20	CONDENSING	1,999,000	1,799,000	95.9	-	1/10	1/2	180	2.9	120	140	WATER	230	1	60	20	25	1-3
B-2	KN	KN-20	CONDENSING	1,999,000	1,799,000	95.9	-	1/10	1/2	180	2.9	120	140	WATER	230	1	60	20	25	1-3

BOILER SCHEDULE NOTES:

1. SEE BOILER PIPING INSTALLATION DETAIL 2 ON M501.
2. SEE M-700 SERIES SHEETS FOR TEMPERATURE CONTROLS INFORMATION.
3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND COORDINATE ALL TRADES. MANUFACTURER-DEFINED SERVICE CLEARANCES SHALL BE MAINTAINED.

AIR COOLED CHILLER SCHEDULE - 23 64 26

MARK	MANUFACTURER	MODEL	UNIT DIMENSIONS L	W	H	WEIGHT (LBS)	CAPACITY NOMINAL (TONS)	EFFECTIVE (TONS)	PERFORMANCE DATA EER	IPLV	COP	EVAPORATOR DATA FLOW (GPM)	MIN. FLOW (GPM)	CURRENT PROJ. FLOW (GPM)	EWT (°F)	LWT (°F)	AMBIENT (°F)	WPD (FT-WG)	FOULING FACTOR	FLUID TYPE	COMPRESSOR DATA TYPE	QTY	# OF CIRCUITS	VFD	REFRIGERANT DATA TYPE	CHARGE (LB)	CONDENSER FAN DATA QTY	FAN RLA EACH	SOUND DATA POWER (DBA)	PRESSURE (DBA)	ELECTRICAL DATA VOLTS (V)	PH	FREQ (HZ)	UNIT POWER (KW)	MCA (A)	MOCP (A)	NOTES
CH-1	TRANE	ACR	510.4"	87.813"	98.375"	17,676	375	330	9.9	-	-	700	200	390	54.0	42.0	95	32.4	0.0001	30% PG	SCREW	4	2	YES	HFC-134a	448	18	-	99	74	460	3	60	401.0	704	800	1-10

A1

AIR COOLED CHILLER SCHEDULE NOTES:

1. MANUFACTURER-PROVIDED FUSED DISCONNECT.
2. SINGLE POINT POWER.
3. HIGH-FAULT 65 KA SCCR.
4. STARTER TYPE: INTEGRAL VFD. PROVIDE 120V/1PH 15A HEATER FOR FREEZE PROTECTION OF BUNDLE.
5. HAIL GUARDS.
6. SEE CHILLER INSTALLATION DETAIL 6 ON SHEET M502.
7. SEE M-700 SERIES DRAWINGS FOR TEMPERATURE CONTROLS INFORMATION.
8. MUFFLER AND EACH COMPRESSOR FAN TO BE LOW NOISE AS STANDARD. PROVIDE WITH INVISISOUND SUPERIOR SOUND MATERIAL TO SUCTION AND DISCHARGE LINES.
9. FOR INITIAL ADDITON PHASE, CHILLER SHALL RUN AT 400 GPM WHILE STILL MAINTAINING A DELT T ± 4°F FROM DESIGN. NOMINAL SIZE AND DESIGN GPM IS SIZED FOR A FUTURE PLANS AND SHALL REMAIN AS SCHEDULED. A1
10. MANUFACTURER PROVIDED AND INSTALLED PHASE MONITOR.

EXHAUST FAN SCHEDULE - 23 34 23

MARK	MANUFACTURER	MODEL	SERVICES	WEIGHT (LBS)	FAN DATA FAN TYPE	DRIVE TYPE	AIRFLOW (CFM)	ESP (IN-WG)	RPM	HP	BHP	SOUND CRITERIA SONES	DBA	ELECTRICAL DATA VOLTS (V)	PH	FREQ (HZ)	UNIT CONTROL	NOTES
EF-1	GREENHECK	G-130-VG	RESTROOMS	69	DOWNBLAST CENTIFUGAL	DIRECT	1700	1.20	1718	0.75	0.57	14.1	65	120	1	60	BAS	1-4
EF-2	GREENHECK	G-120-VG	KILNS	65	DOWNBLAST CENTIFUGAL	DIRECT	1100	1.00	1477	0.50	0.3	12	63	120	1	60	SWITCH / BAS	1-4
EF-3	GREENHECK	G-098-VG	KILNS	57	DOWNBLAST CENTIFUGAL	DIRECT	500	1.00	1719	0.25	0.18	10.5	60	120	1	60	SWITCH / BAS	1-4

EXHAUST FAN SCHEDULE NOTES:

1. DISCONNECT BY MANUFACTURER.
2. SEE M-700 SERIES SHEETS FOR TEMPERATURE CONTROL INFORMATION.
3. FAN SPEED CONTROLLER FOR BALANCING.
4. PROVIDE WITH 12" ROOF CURB.

VAV BOX WITH HOT WATER REHEAT SCHEDULE - 23 36 00

MARK	MANUFACTURER	MODEL	INLET DIAMETER	AIRFLOW DATA COOLING MAX (CFM)	HEATING MAX (CFM)	OCCUPIED MINIMUM (CFM)	STATIC INLET (IN-WG)	NOISE DATA MAX DISCH.	MAX RAD.	REHEAT COIL DATA CAPACITY (BTUH)	EAT (°F)	LAT (°F)	APD (IN-WG)	FLOW (GPM)	EWT (°F)	LWT (°F)	WPD (FT-WG)	ROWS	VALVE TYPE	NOTES
VAV-A101	PRICE	SDV	10"	1,000	580	300	1.0	-	-	25,500	55	95	0.5	2.09	150	125	1.0	2	3-WAY	1-3
VAV-A102A	PRICE	SDV	10"	950	475	285	1.0	-	-	20,900	55	95	0.4	1.4	150	120	0.5	2	2-WAY	1-3
VAV-A103	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-A104	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-A105	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-A106	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-A107	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-A108	PRICE	SDV	14"	1,755	878	526	1.0	-	-	38,500	55	95	0.7	3.52	150	128	3.3	2	2-WAY	1-3
VAV-A109	PRICE	SDV	12"	1,300	750	390	1.0	-	-	32,900	55	95	0.4	2.46	150	123	1.7	2	3-WAY	1-3
VAV-A112	PRICE	SDV	16"	1,920	960	576	1.0	-	-	42,100	55	95	0.5	2.63	150	117	0.9	2	2-WAY	1-3
VAV-A113	PRICE	SDV	6"	350	175	100	1.0	43	32	8,300	55	98	0.2	0.55	150	119	0.06	2	2-WAY	1-3
VAV-A114	PRICE	SDV	16"	1,920	960	576	1.0	-	-	42,100	55	95	0.5	2.63	150	117	0.9	2	2-WAY	1-3
VAV-B101	PRICE	SDV	10"	1,050	525	315	1.0	-	-	23,100	55	95	0.5	1.7	150	122	0.7	2	2-WAY	1-3
VAV-B103	PRICE	SDV	6"	500	250	150	1.0	28	23	11,000	55	95	0.4	0.81	150	122	0.1	2	2-WAY	1-3
VAV-B104	PRICE	SDV	10"	900	450	270	1.0	-	-	19,800	55	95	0.4	1.27	150	118	0.4	2	2-WAY	1-3
VAV-B105	PRICE	SDV	10"	900	450	270	1.0	-	-	19,800	55	95	0.4	1.27	150	118	0.4	2	2-WAY	1-3
VAV-B107	PRICE	SDV	12"	1,200	600	360	1.0	-	-	26,300	55	95	0.6	2.26	150	126	1.2	2	2-WAY	1-3
VAV-A201	PRICE	SDV	10"	1,000	580	300	1.0	-	-	25,500	55	95	0.5	2.09	150	125	1.0	2	3-WAY	1-3
VAV-A203	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-A204	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-A205	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-A206	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-A207	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-A208	PRICE	SDV	14"	1,400	700	420	1.0	-	-	30,700	55	95	0.5	2.14	150	121	1.4	2	2-WAY	1-3
VAV-A209A	PRICE	SDV	6"	550	275	165	1.0	21	-	12,100	55	95	0.3	0.73	150	116	0.3	2	2-WAY	1-3
VAV-A209	PRICE	SDV	12"	1,300	750	390	1.0	-	-	32,900	55	95	0.4	2.46	150	123	1.7	2	3-WAY	1-3
VAV-A211	PRICE	SDV	14"	1,680	840	500	1.0	-	-	36,900	55	95	0.6	3.15	150	126	2.7	2	2-WAY	1-3
VAV-A212	PRICE	SDV	6"	350	175	100	1.0	43	32	8,300	55	98	0.2	0.55	150	119	0.06	2	2-WAY	1-3
VAV-A213	PRICE	SDV	14"	1,680	840	500	1.0	-	-	36,900	55	95	0.6	3.15	150	126	2.7	2	2-WAY	1-3
VAV-A214	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-B203	PRICE	SDV	6"	500	250	150	1.0	28	23	11,000	55	95	0.4	0.81	150	122	0.1	2	2-WAY	1-3
VAV-B204	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-B205	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-B206	PRICE	SDV	6"	440	220	132	1.0	26	21	9,700	55	95	0.3	0.64	150	119	0.1	2	2-WAY	1-3
VAV-B207	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3
VAV-B208	PRICE	SDV	10"	960	480	288	1.0	-	-	21,100	55	95	0.4	1.42	150	120	0.5	2	2-WAY	1-3

VAV BOX WITH HOT WATER REHEAT SCHEDULE NOTES:

1. COORDINATE LOCATION OF BOX A BOVE CEILING WITH LIGHT FIXTURES, FIRE PROTECTION, HEATING AND COOLING SYSTEM PIPING, PLUMBING SYSTEMS, AND WIRE TRAYS.
2. SEE M-700 SERIES DRAWINGS FOR TEMPERATURE CONTROLS INFORMATION.
3. INSULATED BOTTOM ACCESS DOOR UPSTREAM OF COIL WITH SNAP LATCH FASTENERS.

creative engineering solutions
mechanical • electrical • plumbing
201 S Rural St., Suite 210
Indianapolis, IN 46201 • 462-777-8182
www.creativeng.net

KEYPLAN

NORTH

VPS ARCHITECTURE
905 N. Capital Ave. - Suite 100 Indianapolis, Indiana 46204
P (317) 353-3281
www.VPSARCH.com

ADDITION & RENOVATIONS TO:

FRANKLIN CENTRAL HIGH SCHOOL

FRANKLIN TOWNSHIP COMMUNITY SCHOOL CORPORATION
INDIANAPOLIS, INDIANA

Drawing Title:

MECHANICAL SCHEDULES

GABRIEL S. CURRIER REGISTERED NO. PE10808972 STATE OF INDIANA PROFESSIONAL ENGINEER

Project No: 2022043.00

Project Date: JANUARY 09, 2023

Drawing No: M601

#	Revision	Date
A1	ADDENDUM #1	01.31.2023

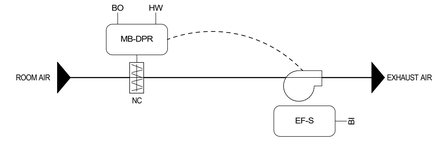
EXTERIOR LIGHTING AND CONTROLS

THE BMS SHALL BE INTEGRATED TO THE EXTERIOR LIGHTING CONTROLS AND SHALL PROVIDE A DRY CONTACT, WIRING TO THE LIGHTING PANEL AND LOGIC TO CONTROL THE EXTERIOR LIGHTING AS FOLLOWS (SEE SPECIFICATION SECTION 230900 FOR ADDITIONAL INFORMATION):

1) ENERGIZE AT DUSK
2) DE-ENERGIZE AT DAWN.

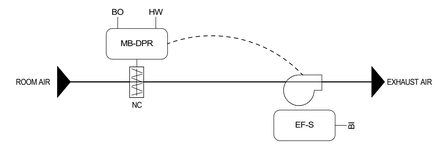
A1

4 EXTERIOR LIGHTING AND CONTROLS
NOT TO SCALE



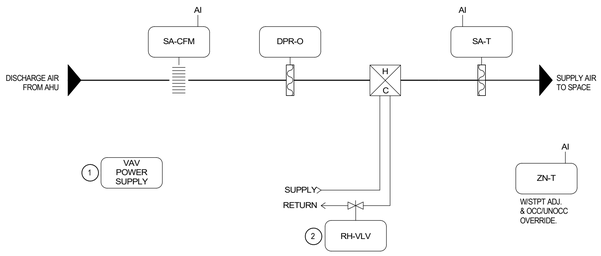
KILN EXHAUST FAN CONTROL: THE MOTORIZED BACKDRAFT DAMPER (MB-DPR) SHALL BE DRIVEN OPEN AND PROVEN VIA END-SWITCH CONTACTS TO PREVENT OPERATION OF THE EXHAUST FAN MOTOR WHEN CLOSED. DAMPER ACTUATOR WITH INTEGRAL END-SWITCH FURNISHED AND INSTALLED BY TCC. ENERGIZE FAN WHEN ANY KILN IS MANUALLY ENERGIZED. IF THE EXHAUST FAN STATUS (EF-S) DOES NOT MATCH THE COMMANDED VALUE AFTER STROKE TIME PLUS 15 SECONDS (ADJ), AN ALARM SHALL BE GENERATED. SEE ELECTRICAL DRAWINGS FOR MOTOR STARTER LOCATION INFORMATION. WHEN THE LAST KILN IS DE-ENERGIZED MANUALLY BY THE OCCUPANTS, FAN SHALL RUN FOR 1.5 HOURS (ADJUSTABLE) AFTER ALL KILNS ARE OFF. THE SPACE TEMPERATURE SENSOR SHALL TRIGGER FAN OPERATION TO ON IF THE SPACE TEMPERATURE RISES ABOVE 85 DEGREES AND SHALL REMAIN ON UNTIL SPACE TEMPERATURE FALLS BELOW 80 DEGREES.

3 KILN EXHAUST FAN
NOT TO SCALE



EXHAUST FAN CONTROL: THE MOTORIZED BACKDRAFT DAMPER (MB-DPR) SHALL BE DRIVEN OPEN AND PROVEN VIA END-SWITCH CONTACTS TO PREVENT OPERATION OF THE EXHAUST FAN MOTOR WHEN CLOSED. DAMPER ACTUATOR WITH INTEGRAL END-SWITCH FURNISHED AND INSTALLED BY TCC. THE EXHAUST FAN SHALL BE STARTED ACCORDING TO THE OWNER-DEFINED SCHEDULE. IF THE EXHAUST FAN STATUS (EF-S) DOES NOT MATCH THE COMMANDED VALUE AFTER STROKE TIME PLUS 15 SECONDS (ADJ), AN ALARM SHALL BE GENERATED. SEE ELECTRICAL DRAWINGS FOR MOTOR STARTER LOCATION INFORMATION.

2 EXHAUST FAN
NOT TO SCALE



NOTES FOR VAV BOXES

1. 24 VOLT POWER TO VAV BOXES BY TEMPERATURE CONTROL CONTRACTOR.
2. FURNISHED BY TCC. INSTALLED BY THE DIV. 23 CONTRACTOR.

TEMPERATURE CONTROL CONTRACTOR SCOPE OF WORK
FURNISH AND INSTALL DIGITAL CONTROLS FOR NEW VAV BOXES BEING INSTALLED.

ADDITIONAL TEMPERATURE CONTROL WORK IS DETAILED ON THE MECHANICAL HVAC PLAN NOTES OF EACH DRAWING.

THE EXISTING BUILDING MANAGEMENT SYSTEM UTILIZED BY THE TEMPERATURE CONTROLS CONTRACTOR SHALL BE UPDATED TO THE CURRENT REVISION LEVEL AS REQUIRED TO INCLUDE ANY CHANGES AS PROVIDED AS PART OF THIS PROJECT INCLUDING BUT NOT LIMITED TO ANY SYSTEM SUPERVISORY PANELS, SOFTWARE AND GRAPHICS.

VAV BOX WITH REHEAT SEQUENCE OF OPERATION

DISCHARGE AIR TEMPERATURE SENSOR: TCC SHALL PROVIDE A SUPPLY AIR TEMPERATURE SENSOR (SA-T) FOR MONITORING PURPOSES.

OCCUPIED MODE: WHEN THE ZONE TEMPERATURE (ZN-T) IS BETWEEN THE HEATING AND COOLING SETPOINTS, THE PRIMARY AIR DAMPER (DPR-O) WILL BE AT THE MINIMUM CFM (SA-CFM) AND THE REHEAT VALVE (RH-VLV) SHALL BE FULLY CLOSED. ON A RISE IN ZONE TEMPERATURE ABOVE THE COOLING SETPOINT, THE PRIMARY AIR DAMPER SHALL INCREASE THE CFM AND THE REHEAT VALVE SHALL REMAIN FULLY CLOSED. ON A DROP IN TEMPERATURE BELOW THE HEATING SETPOINT, THE REHEAT VALVE SHALL MODULATE OPEN AND THE PRIMARY AIR DAMPER SHALL MAINTAIN MINIMUM CFM. SPACE SENSORS SHALL HAVE SETPOINT ADJUSTMENT AND UNOCCUPIED CYCLE OVERRIDE (SOFTWARE SELECTABLE AS DETERMINED BY THE OWNER).

UNOCCUPIED (NIGHT SETBACK) MODE: WHEN IN THE UNOCCUPIED MODE, THE VAV BOX SEQUENCE SHALL BE THE SAME AS THE ABOVE OCCUPIED SEQUENCE. UNOCCUPIED HEATING SETPOINT SHALL BE 55F AND THE COOLING SETPOINT SHALL BE 85F. WHEN ANY TWO VAV BOXES REACH EITHER THEIR HEATING OR COOLING SETPOINT, THE AIR HANDLING UNIT SHALL START AND RUN TO MAINTAIN THE UNOCCUPIED SETPOINT. PROVIDE DIFFERENTIAL TO PREVENT SHORT CYCLING OF AHU.

1 VAV BOX WITH REHEAT
NOT TO SCALE

creative engineering solutions
mechanical • electrical • plumbing
201 S Rural St., Suite 210
Indianapolis, IN 46201 • 462-777-8182
www.creativeng.net

KEYPLAN

NORTH

VPS ARCHITECTURE
905 N. Capital Ave. - Suite 100 Indianapolis, Indiana 46204
P (317) 353-3281
www.VPSARCH.com

ADDITION & RENOVATIONS TO:

FRANKLIN CENTRAL HIGH SCHOOL

FRANKLIN TOWNSHIP COMMUNITY SCHOOL CORPORATION
INDIANAPOLIS, INDIANA

Drawing Title:

TEMPERATURE CONTROLS SCHEMATICS

GABRIEL S. CURLIER REGISTERED NO. PE10808972 STATE OF INDIANA PROFESSIONAL ENGINEER

Project No: 2022043.00

Project Date: JANUARY 09, 2023

Drawing No: M703