CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
OFFICE OF ENGINEERING AND CONSTRUCTION

ADDENDUM NO. 2

September 18, 2024

FOR DRAWINGS, SPECIFICATIONS, PROPOSAL, CONTRACT, AND BOND

FOR
SANITARY CONTRACT NO. 982R – EASTERN AVENUE PUMPING STATION REHABILITATION

FOR THE MAYOR AND CITY COUNCIL OF BALTIMORE

TO BIDDERS: PLEASE ATTACH TO YOUR CONTRACT DOCUMENTS. THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS ON WHICH THE CONTRACT WILL BE BASED, AND IS ISSUED TO MODIFY, EXPLAIN AND/OR CORRECT THE ORIGINAL DRAWINGS AND SPECIFICATIONS. PLEASE ACKNOWLEDGE THIS ADDENDUM ON THE BID PROPOSAL PAGE WHERE INDICATED. IF THIS DOCUMENT HAS BEEN RECEIVED VIA EMAIL, A CONFIRMATION EMAIL REPLY MUST BE SENT BY BIDDER WITHIN 24 HOURS CONFIRMING RECEIPT OF THE ADDENDUM TO DPWCONTRACTADMIN@BALTIMORECITY.GOV . IF EMAIL ACKNOWLEDGMENT IS NOT RECEIVED BY DPW, YOUR BID MAY BE REJECTED.

APPROVED:

Timothy Wolfe

TIMOTHY W. WOLFE, P.E., BCEE
CHIEF
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ACTING DIRECTOR
DEPARTMENT OF PUBLIC WORKS

I – REVISIONS TO THE CONTRACT BOOK

No Contract Book revisions included in Addendum No. 2.

II – REVISIONS TO THE CONTRACT DRAWINGS

DRAWING H02-701 (SHEET 86 OF 148)

Replace the drawing with the revised Drawing H02-701 in Attachment 1 of this Addendum.

III – QUESTIONS FROM BIDDERS – RESPONSE IN BOLD

1. Bid Item 101 Mobilization states "Not to Exceed 5%". The activities listed under section 01 29 00 1.04.A cannot be covered under the "Not to Exceed 5%". This cap requires the contractor to finance the project and therefore increases the overall cost of the project to the City. The contractor requests that the City increase this to a minimum of 10% cap.

   Response: Bid as specified.

2. On the MBE/WBE form Part B, the language has been changed since the original bid. Underneath "Percentage of work to be performed by MBE or WBE:" it states "MUST BE A WHOLE NUMBER, NO DECIMAL PLACES". In order to achieve the high goal set by the City, several MBE's and WBE's will need to be utilized, which almost always results in fractions of percentages being shown on this form. Please clarify the intent of this statement. Is it acceptable for an individual MBE or WBE to perform a fractional percentage of the work (i.e. 3.92%), but the number shown here is simply shown as rounded to the nearest whole number (4%) without changing the dollar value of work performed?

   Response: This is the updated City MBE/WBE form. Yes, Contractors may round to the nearest whole number to not use fractions on this form.

3. Drawing I02-602 shows a 3-Hole local control station for the screen (HOA, FOR, E-Stop). Specification 46 21 16, page 14 appears to indicate a 7-Hole LCS for each screen, including HOA, FOR, E-Stop, Power LT, Run LT, Fail LT, Reset. Please advise if 3-Hole local control stations can be provided as this would be typical.

   Response: The referenced apparent discrepancy could not be located. Drawing I02-602 shows a total of seven (7) devices per each multi-rake bar screen local control station. Please bid as specified.

4. Section 40 90 00, page 13 requires a NEMA 4X and Class 1, Div. 2 rated HydroRanger controller. Please confirm that the HydroRanger controllers will be in a Class 1, Division 2 environment such that a NEMA 4X fiberglass enclosure is acceptable. If in Class 1,

Div 1 then a NEMA 7 cast aluminum enclosure would be needed.

Response: Please refer to Drawing I02-602, which specifies that the multi-rake bar screen level instrument controllers be factory-mounted within the multi-rake bar screen control panels. Please bid as specified.

5. Section 46 21 16-2.03.N.5.c requires a PLC to be provided as outlined in Div. 40. Section 40 94 43 defines the PLC for the pump station control panel, which is using a Modicon M580, BMEH582040 CPU. We would use a Modicon M340 PLC for the screen control panels, please confirm that Modicon M340 PLC platform will be acceptable for the screen control panels, one PLC per panel.

   Response: Please refer to Specification 40 94 43, Paragraph 2.06, which defines requirements for PLCs in packaged control panels from equipment manufacturers. Please bid as specified.

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	ADDENDUM No. 2	09/13/2024	

CONTROLS ABBREVIATIONS

"X"-"Y"

"X"		"Y"	
C	COMPRESSOR	A	AMPERAGE
E	ENTHALPY	DPR	DAMPER
EA	EXHAUST AIR	DPS	DIFFERENTIAL PRESSURE SENSOR
EF	EXHAUST FAN	E	ENTHALPY
ERV	ENERGY RECOVERY VENTILATOR	KW	KILOWATT
F	FILTER	KWH	KILOWATT-HOUR
FRZ	FREEZE STAT	MOD	MODULATION (%)
LA	LEAVING AIR	RH	RELATIVE HUMIDITY (%)
MA	MIXED AIR	SP	STATIC PRESSURE
OA	OUTDOOR AIR	SS	START/STOP
RA	RETURN AIR	SW	SWITCH ON/OFF
SA	SUPPLY AIR	T	TEMPERATURE
SF	SUPPLY FAN	TS	TEMPERATURE SENSOR
TA	TEMPERED AIR	V	VOLTAGE
VRF	VARIABLE REFRIGERANT FLOW INDOOR UNIT		
VRF-HR	VARIABLE REFRIGERANT FLOW ENERGY RECOVERY MODULE		
VRF-O	VARIABLE REFRIGERANT FLOW OUTDOOR UNIT		
ZN	ZONE		

CONTROLS DESIGNATIONS

"Y" — VISUAL DISPLAY DEVICE MOUNTED ON SIDE OF DUCT OR UNIT

"X"-"Y" — POINT(S) INTEGRATED OR HARD WIRED TO BAS

"X" R — INDICATED GRAPHICAL DISPLAY POINT (MUST APPEAR ON SYSTEM GRAPHIC)

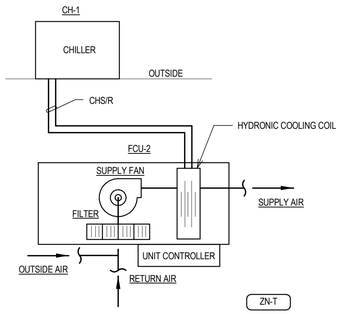
R (REQUESTED) = SETPOINT FOR A THERMOSTAT, DAMPER, VALVE, ETC.

A (ACTUAL) = POSITIVE POSITION FEEDBACK, TEMPERATURE SENSOR INPUT, ETC.

O (ORIGINAL) = VALUE ESTABLISHED DURING INITIAL SYSTEM COMMISSIONING.

GENERAL CONTROL NOTES AND REQUIREMENTS:

1. THESE CONTROL DRAWINGS INDICATE SYSTEMS TO BE CONTROLLED BY STANDALONE MEANS AS WELL AS INTENDED SEQUENCES OF OPERATION.
2. THE CONTROL SYSTEM SHALL BE FULLY INSTALLED, CALIBRATED AND ADJUSTED TO PROVIDE ACCURATE AND STABLE SYSTEM OPERATION. CONTROLLED PARAMETERS SHALL BE MAINTAINED WITHIN ACCEPTABLE RANGES AND PID TUNING SHALL BE PERFORMED TO PROVIDE STABLE OPERATION WITHIN 5 MINUTES OF A PARAMETER CHANGE. THE ENGINEER AND COMMISSIONING AUTHORITY WILL EVALUATE THE SYSTEM TO VERIFY THAT PROPER INSTALLATION AND SYSTEM SETUP/TUNING HAS BEEN PERFORMED ONLY AFTER WRITTEN DOCUMENTATION FROM THE CONTROLS CONTRACTOR, INCLUDING GRAPHICAL TRENDING DATA, HAS BEEN SUBMITTED INDICATING THAT THE CONTROL INSTALLATION AND SETUP IS COMPLETE.
3. CONTROL SUBMITTALS SHALL INCLUDE SYSTEM SCHEMATICS, WIRING DIAGRAMS AND CONTROL LOGIC TO BE USED TO ACHIEVE INTENDED SEQUENCES OF OPERATION - SIMPLY REPRODUCING SEQUENCES AS PROVIDED IN THESE DRAWINGS OR SUBMITTING CONTROL SEQUENCES DIRECTLY FROM EQUIPMENT SUBMITTALS WILL NOT BE ACCEPTABLE.
4. POINTS LISTS SHALL BE DEVELOPED BY THE BAS SUPPLIER, BASED ON THE SCHEMATICS AND SEQUENCES PROVIDED HERE, AND SUBMITTED TO THE ENGINEER FOR REVIEW.
5. POWER FOR CONTROL SYSTEMS AND EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH DIVISION 26 REQUIREMENTS. ALL POWER FOR CONTROL SYSTEMS SHALL BE INDEPENDENT OF EQUIPMENT LOW VOLTAGE DC SERVICE.
6. VALVE AND DAMPER ACTUATORS ARE NOTED WITH "NO" AND "NC" FOR NORMALLY OPEN AND NORMALLY CLOSED, INDICATING SPRING RETURN ORIENTATION.
7. WHERE ADJUSTABLE TEMPERATURE SETPOINTS ARE NOT IDENTIFIED, A +/- 2°F DEADBAND (ADJ.) SHALL BE PROVIDED.
8. ALL SETPOINTS, RESET SCHEDULES AND DEADBANDS IDENTIFIED HEREIN SHALL BE ADJUSTABLE BY THE BUILDING OPERATOR.



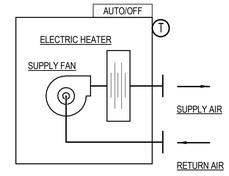
1 FAN COIL UNIT
SCALE: NTS

A. GENERAL:

THE HYDRONIC FAN COIL UNIT PROVIDES COOLING TO THE LOCKER ROOMS. THE UNIT IS CONTROLLED VIA A LOCAL CONTROLLER AND A WALL MOUNTED THERMOSTAT.

B. SPLIT SYSTEM FAN COIL UNIT OPERATION:

THE FAN COIL UNIT (FCU-1) INTERNAL CONTROLS SHALL RUN THE SUPPLY FAN CONTINUOUSLY AS NEEDED TO MEET THE ZONE TEMPERATURE SETPOINT AS SELECTED ON THE ZONE THERMOSTAT.



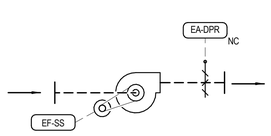
2 ELECTRIC UNIT HEATER
SCALE: NTS

A. GENERAL
THE ELECTRIC UNIT HEATER (EUH) SHALL BE PROVIDED WITH A CONSTANT VOLUME FAN, ELECTRIC HEATER, AUTO-OFF SELECTOR SWITCH, AND THERMOSTAT.

B. UNIT HEATER OPERATION
THE EUH SHALL BE ENABLED THROUGH THE AUTO/OFF SWITCH. WHEN THE SWITCH IS SET TO AUTO, THE EUH SHALL CYCLE THROUGH INTERNAL CONTROLS TO MAINTAIN TEMPERATURE SETPOINT OF 65 °F (ADJ. +/- 2°F DEADBAND) AT THE THERMOSTAT. WHEN THE SWITCH IS SET TO OFF, THE EUH SHALL BE DE-ENERGIZED.
THE STANDALONE ELECTRIC UNIT HEATER SHALL NOT BE MONITORED.

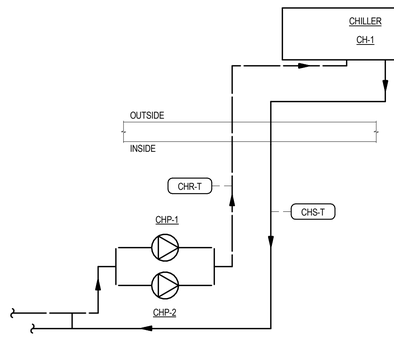
3 HYDRONIC UNIT HEATER
SCALE: NTS

A. GENERAL
THE UH SHALL BE ENABLED THROUGH THE AUTO/OFF SWITCH. WHEN THE SWITCH IS SET TO AUTO, THE UH SHALL CYCLE THROUGH THERMOSTATIC CONTROLS TO MAINTAIN TEMPERATURE SETPOINT OF 65°F (ADJ. +/- 2°F DEADBAND) AT THE THERMOSTAT. WHEN THE SWITCH IS SET TO OFF, THE UH SHALL BE DE-ENERGIZED.



4 EXHAUST FAN (EF-1, 2, 3, 4, 5, 6)
SCALE: NTS

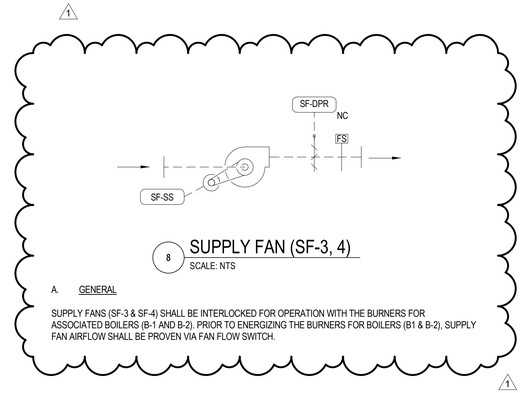
A. GENERAL
THE CONSTANT VOLUME EXHAUST FAN SHALL BE ENERGIZED AT THE EQUIPMENT DISCONNECT TO OPERATE 24-HOURS PER DAY.



5 CHILLER AND CHILLED WATER PUMPS
SCALE: NTS

A. GENERAL:

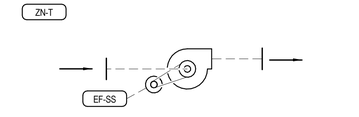
UPON PROOF OF FLOW AT THE FACTORY PROVIDED FLOW SWITCH, THE AIR-COOLED CHILLER SHALL OPERATE ON INTERNAL CONTROLS TO SUPPLY CHILLED WATER AT TEMPERATURE OF 42 DEG F (ADJ.).
THE CHILLED WATER PUMPS SHALL OPERATE IN A LEAD-STANDBY CONFIGURATION. UPON A FAILURE OF THE LEAD PUMP THE STANDBY PUMP SHALL BE ENABLED. PUMP ENABLE SIGNAL SHALL BE PROVIDED BY THE CHILLER.



8 SUPPLY FAN (SF-3, 4)
SCALE: NTS

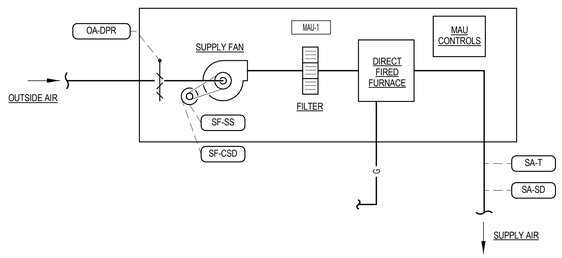
A. GENERAL

SUPPLY FANS (SF-3 & SF-4) SHALL BE INTERLOCKED FOR OPERATION WITH THE BURNERS FOR ASSOCIATED BOILERS (B-1 AND B-2). PRIOR TO ENERGIZING THE BURNERS FOR BOILERS (B1 & B-2), SUPPLY FAN AIRFLOW SHALL BE PROVEN VIA FAN FLOW SWITCH.



6 HIGH TEMP EXHAUST FAN (EF-7 & 8)
SCALE: NTS

A. GENERAL
1. WHEN THE SPACE TEMPERATURE EXCEEDS SETPOINT (80°F ADJ.) THE EXHAUST FAN SHALL ENERGIZE.
2. WHEN SPACE TEMPERATURE DROPS 5°F (ADJ.) BELOW SETPOINT, EXHAUST FAN SHALL DE-ENERGIZE.



7 MAKE-UP AIR UNIT
SCALE: NTS

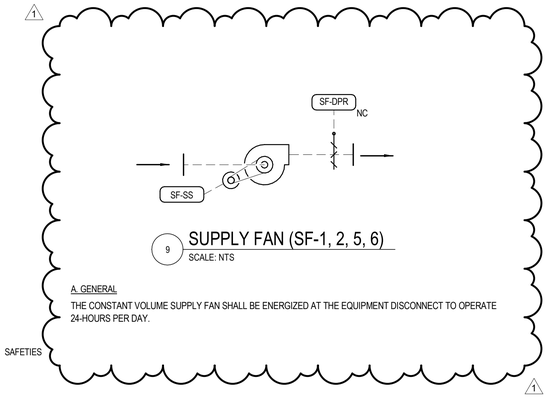
A. GENERAL

THE MAKE-UP AIR UNIT (MAU-1) SERVES THE PUMP ROOM WITH TEMPERED AIR. THE MAU IS A GAS-FIRED SELF CONTAINED UNIT WITH MODULATING GAS FIRED DIRECT FURNANCE. SAFETIES FOR THE GAS FIRED OPERATIONS ARE INCLUDED WITH THE MAU.

B. SAFETIES

UPON SENSING SMOKE AT THE SMOKE DETECTOR ON THE DISCHARGE AIR SIDE OF THE MAU, THE SUPPLY FAN SHALL STOP, THE GAS FIRED BURNER SHALL BE DEENERGIZED AND THE OA DAMPER SHALL CLOSE. AND AN ALARM SHALL BE TRIGGERED AT THE FIRE ALARM CONTROL PANEL.

REFER TO SAMPLE GRAPHIC HVAC UNIT REQUIREMENTS ON DRAWING H02-701



9 SUPPLY FAN (SF-1, 2, 5, 6)
SCALE: NTS

A. GENERAL
THE CONSTANT VOLUME SUPPLY FAN SHALL BE ENERGIZED AT THE EQUIPMENT DISCONNECT TO OPERATE 24-HOURS PER DAY.

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STATE OF MARYLAND · PATRICK F. HARRIS · 30351 · REGISTERED PROFESSIONAL ENGINEER

CITY OF BALTIMORE
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SANITARY CONTRACT NO. 982R
EASTERN AVENUE PUMP STATION REHABILITATION

HVAC CONTROLS I

"PROFESSIONAL CERTIFICATION. I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 35170 , EXPIRATION DATE 6/6/2026 ."

SCALE: AS NOTED DATE: JUNE 2024

DRAWING NO.: H02-701 SHEET 86 OF 148