Halifax
Regional Centre for Education

RFT# 4264
Boiler Replacement, Gym Heat Pumps, and Controls Upgrades
Harrietsfield Elementary School
Addendum #2

To: All Bidders

Date: May 28, 2025

From: Nancy Rideout, Purchasing Manager
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The bid documents shall be amended, and new drawings and clauses added, and shall become part of the contract documents as follows:

No further questions will be accepted for RFT# 4264.
The Closing Date of the RFT has been extended till June 2nd, 2025 – 2pm (ATL)

Response to Questions & Clarifications:

1.) **Question:** Is it permissible to run communication cable above the drop celling as FT-6, perpendicular to building lines, supported as per CSA and electrical code guidelines?

Response: Above the accessible ceiling FT6 cabling is acceptable, provided it is neatly supported from J-hooks on the wall. In occupied spaces (classrooms, mechanical rooms) the wiring is to be in conduit, or surface mount wire mould (to wall mount sensors), or flexible watertight conduit for equipment connections.

2.) **Question:** Spec references OWS/PC. The Harrietsfield Elementary school has an existing connection to HRCE's Delta enteliWEB OWS. This OWS resides on HRCE server located at Spectacle Lake Drive. Is it the intent to utilize the existing PC/OWS rather than provide a stand-alone system for this contract?

Response: The intent is not to provide a physical OWS, and to reuse the existing PC and OWS located on the HRCE server.

3.) **Question:** Is it the intent to have the Division 25 contactor to carry the control dampers? This is typically carried by the Division 22/23 contractor.

Response: The division 23 ventilation contractor should carry a bare-shaft opposed blade operable damper with characteristics requested in the design package. The division 25 controls contractor is to provide the control actuator and all appurtenances to control the device.

4.) **Question**: Who is responsible for Demo of the following equipment: Air Compressor, All Pneumatic devices, pneumatic lines, and pneumatic distribution systems

Response: The division 25 contractor is to disconnect and remove the air compressor and turnover to the owner. The pneumatic piping and devices are to be removed within the mechanical room and where it is accessible/encumbering the space within the ceiling, in areas where the pneumatic piping is concealed or otherwise inaccessible (i.e. routed along ceiling deck above ducting/piping, routed within walls) it may be abandoned in place.

5.) **Questions:** Please provide further details regarding the CO sensor located in the Mechanical Room

I. Who shall supply, install and wire the new CO sensor?

II. Please provide a wiring detail on how the CO sensor ties into the Fire Alarm Initiating Circuit.

III. Will this require involvement from the Fire Alarm System contractor?

IV. Is there a requirement to read the CO sensor through the BAS system?

Responses:

I. The CO sensor is to be supplied, installed and wired by the division 26 (electrical) contractor.

II. The connection to the FA circuit is to be completed by division 26.

III. Fire alarm interconnections are to be completed by division 26.

IV. There is no requirement to read the CO sensor on the BAS.

6.) **Questions:**

Is it the intent that the Occupancy Sensors are provided, installed and wired by the Div 25 contractor?

How many CO2 sensors are required in the Gymnasium?

Responses:

Yes, the division 25 contractor is to supply and install the sensors, a minimum of 2, to provide coverage to the space.

The intent is that the gymnasium will be fitted with a single combination wall temperature, humidity and CO2 sensor.

7.) **Question:** There is a note (on M401) regarding the "Field Control Wiring to Boilers" Which division (22/23 or 25) provides the "Field Control Wiring to Boilers"

Response: It is the intent that division 25 provides for the field wiring of the boilers as required by the division 23 contractor (and/or their equipment supplier), control field wiring of the boilers is generally to include (based on the Lochinvar basis): Shielded twisted pair between boilers 1 and 2, 0-10V control wiring between each boiler and its associated pump, supply of a well temperature sensor and wiring to the 'system sensor' contacts on the lead boiler.

8.) **Question:**

Can you provide a wiring detail on the "Field Wiring of Boilers" to include all low voltage connections, peripherals, safeties, pumps, ect.

Response:

The basis of design is a Lochinvar FXTL, the manufacturers IOM manual provides a low voltage diagram on page 55 of the manual which details the interconnections on the unit.

9.) Question:

Indicates that “All new Controls Wiring shall be installed in conduit” Can we assume that is for all controls wiring located in mechanical rooms, electrical rooms and above non-accessible ceilings, and that controls wiring outside of these areas, such as above drop ceilings, can be FT6.

Response:

Refer to the response in question 1.

10.)Question:

Notes indicate that Heat Pump to be supplied by Mechanical with “3rd Party Adapter” Is there an intent that the heat pump is to be tied into the BAS system?

Response:

The heat pump is to be controlled by the BAS, the third-party control adapter provides the heat pump with dry contacts to interface with the BAS (i.e Fan/Heat/Cool).

11.) Question:

Schematics show a “UCM” Is this UCM a controller that is factory supplied, install, wired?

Response:

The heat pump is to be provided with a 3rd party control adapter as described in response #10, this will allow for dry contact relay interacting with the BAS.

12.)Questions

Note indicates (on drawing M501) that Boiler is to come BMS compatible.

I. Is the boiler coming with Hardwired BMS connections? If so, please provide list of desired input and outputs

II. Is this boiler coming with a BACnet interface? If so, please provide a list of desired virtual integration points.

Responses:

See below:

I. The boiler is equipped with a 0-10V bacnet interface, or a Modbus connection.

II. The boiler is to be supplied with a BACnet interface, the basis of design manufacturer (Lochinvar) has an integration manual for this, the list of points which is to be virtually hosted is a below:

Virtual BACnet points (for each boiler)	
No.	Name
1	Boiler Pump Speed
2	Cascade Current Power
3	Outlet Setpoint Temperature (Tank Setpoint AV)
4	Outlet Temperature
5	Inlet Temperature
6	Flue Temperature
7	Firing Rate
8	Boiler Status Code (provide list on graphic)
9	Boiler Blocking Code (provide list on graphic)
10	Boiler Lockout Code (provide list on graphic)
11	Boiler Enable
12	Spare/TBD
13	Spare/TBD
14	Spare/TBD

13.) See points list below for control points pertaining to division 25 works:

HARDWIRED CONTROL POINTS LIST (NOT INCLUDING ZONE CONTROLS)							
NO.	DESCRIPTION	POINT TYPE					FIELD DEVICE
		DI	DO	AI	AO	OTH.	
BOILER REPLACEMENT SCOPE (BASE):							
N/A	B1-B2 CONNECTION					X	SHIELDED TWISTED PAIR
N/A	BOILER HDR TO B1 TEMP			X			WELL-TYPE TEMP SENSOR
N/A	B1 TO P1 CONNECTION				X		0-10V CONNECTION
N/A	B2 TO P2 CONNECTION				X		0-10V CONNECTION
1	B-1 BMS CONNECTION					X	RS-485
2	B-2 BMS CONNECTION					X	RS-485
3	BOILER HEADER TEMPERATURE			X			WELL-TYPE TEMP SENSOR
4	SYSTEM 3-WAY VALVE				X		CONTROL VALVE (CV=40)
5	P3A PUMP ENABLE/DISABLE		X				RELAY OUTPUT
6	P3A PUMP STATUS			X			CURRENT TRANSFORMER
7	P3A PUMP SPEED				X		0-10V CONNECTION
8	P3A PUMP FAULT	X					DRY CONTACT
9	P3B PUMP ENABLE/DISABLE		X				RELAY OUTPUT
10	P3B PUMP STATUS			X			CURRENT TRANSFORMER
11	P3B PUMP SPEED				X		0-10V CONNECTION
12	P3B PUMP FAULT	X					DRY CONTACT
13	BUILDING HWS TEMP			X			WELL-TYPE TEMP SENSOR
14	BUILDING HWR TEMP			X			WELL-TYPE TEMP SENSOR
15	P4 PUMP ENABLE/DISABLE		X				RELAY OUTPUT
16	P4 PUMP STATUS			X			CURRENT TRANSFORMER
17	P5 PUMP ENABLE/DISABLE		X				RELAY OUTPUT
18	P5 PUMP STATUS			X			CURRENT TRANSFORMER
19	HX-1 HWS TEMP			X			WELL-TYPE TEMP SENSOR
20	HX-1 HWR TEMP			X			WELL-TYPE TEMP SENSOR

21	HX-1 HGS TEMP			X			WELL-TYPE TEMP SENSOR
22	HX-1 HGR TEMP			X			WELL-TYPE TEMP SENSOR
23	HX-1 CONTROL VALVE				X		CONTROL VALVE (CV=20)
24	HX-2 HWR TEMP			X			WELL-TYPE TEMP SENSOR
25	HX-2 DCW TEMP			X			STRAP TEMPERATURE SENSOR
26	HX-2 DHW TEMP			X			STRAP TEMPERATURE SENSOR
27	DHWT-1 OUTLET TEMP			X			STRAP TEMPERATURE SENSOR
28	P6 PUMP ENABLE/DISABLE		X				RELAY OUTPUT
29	P6 PUMP STATUS			X			CURRENT TRANSFORMER
30	P7 PUMP ENABLE/DISABLE		X				RELAY OUTPUT
31	P7 PUMP STATUS			X			CURRENT TRANSFORMER
32	GF-1 LEVEL ALARM STATUS	X					DRY CONTACT
GYM HVAC SCOPE (OPTIONAL PRICING)							
33	HEAT PUMP FAN START/STOP		X				RELAY OUTPUT
34	HEAT PUMP COOLING		X				RELAY OUTPUT
35	HEAT PUMP HEATING		X				RELAY OUTPUT
36	ERV LOW SPEED FAN		X				RELAY OUTPUT
37	ERV HIGH SPEED FAN		X				RELAY OUTPUT
38	ERV OA DAMPER		X				DAMPER ACTUATOR
39	ERV EA DAMPER		X				DAMPER ACTUATOR
40	ERV STATUS			X			CURRENT TRANSFORMER
41	ZONE TEMPERATURE			X			COMBO SENSOR - WALL TYPE, TEMP, %RH, CO2
42	ZONE HUMIDITY			X			
43	ZONE CO2			X			
44	ZONE OCC 1	X					CEILING OCC. SENSOR
45	ZONE OCC 2	X					CEILING OCC. SENSOR

14.) Delete the redundant boiler outlet temperature sensor on the outlet of B1 as shown on M401.

15.) Main 3-way control valve is to be sized with a CV=40 (nom. Pipe size is DN50). The mechanical contractor is to provide adaptor fittings and reducers as required to connect the valve.

16.) The 3-way control valve serving the HC-1/ HX-1 is to be sized with a CV=20 (nom. Pipe size is DN32). The mechanical contractor is to provide adaptor fittings and reducers as required to connect the valve.

17.) The system differential pressure sensor is to be installed on the ground floor heating branch lines to the ceiling CUH near room 110A as shown on drawing M104. The mechanical contractor is to allow for tees, and bushings on the supply and return branch lines as required to accommodate the division 25 sensor installation, the branch line size is DN20 (3/4")

RFT# 4264 - End of Addendum #2

PLEASE SIGN BELOW AND RETURN WITH BID DOCUMENTS:

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Signature Company Name