Specification Changes 20201029

Project:	Selkirk Coast Guard Base – HVAC Refurbishment		
Date:	2020-10-29	**Solicitation No.:**	F5211-200203

1. **MECHANICAL – DRAWING UPDATES**
   Reference Drawing: M04

   Replace mechanical drawing "19-0139-002_M04_Rev.1" with "19-0139-002_M04_Rev.2".

2. **MECHANICAL – TECHNICAL SPECIFICATION UPDATES**

   Add the following sections attached to the technical specifications:

   - Section 22 11 16 – Domestic Water Piping
   - Section 22 30 05 – Domestic Water Heaters
   - Section 23 05 19.01 – Thermometers and Pressure Gauges – Piping Systems
   - Section 23 11 23 – Facility Natural Gas Piping
   - Section 23 21 13 – Hydronic Systems

3. **MECHANICAL – HYDRONIC BALANCING VALVES**
   Reference Drawing: 19-0139-002_M04_Rev.2
   Reference Specification: Section 23 21 13 – Hydronic Systems

   Add calibrated balance valves for the following equipment: P-1, P-2, Hydronic Wall Fin Radiators and Hydronic Unit Heaters (UH-1 and UH-2). Refer to 19-0139-002_M04_Rev.2 attached. Refer to Section 23 21 13 – Hydronic Systems for balance valve specification.

4. **MECHANICAL – BOILER LOOP PIPING AND VALVE MODIFICATIONS**
Reference Drawing: *19-0139-002_M04_Rev.2*

Refer to 19-0139-002_M04_Rev.2 attached for boiler loop piping modifications.

5. **MECHANICAL – BOILER B-2**
Reference Drawing: *19-0139-002_M04_Rev.2*

Add note to indicate that boiler B-2 is 100% backup for redundancy. Refer to 19-0139-002_M04_Rev.2 attached.

6. **MECHANICAL – HOT WATER SUPPLY PIPING**
Reference Drawing: *19-0139-002_M04_Rev.2*

Replace existing hot water supply piping connected to P-1 and P-2 as required to install new valves and hydronic accessories indicated. Insulate all piping that is replaced. Refer to 19-0139-002_M04_Rev.2 attached.

7. **MECHANICAL – AIR SEPARATOR**
Reference Drawing: *19-0139-002_M04_Rev.2*
Reference Specification: *Section 23 21 14 – Hydronic Piping Specialties*

Demolish the existing air separator and replace with new. Refer to 19-0139-002_M04_Rev.2 attached. Add the following to Section 23 21 14 – Hydronic Piping Specialties:

2.3 **AIR SEPARATOR/AIR VENT**

.1 50 mm (2”) threaded inlet and outlet connections, Diameter: 160 mm (6.3”), Height: 483 mm (19”), Dry Weight: 10.4 kg (23 lbs), steel shell, brass skim valve, brass vent head, non-ferrous float, Viton seal and O ring and copper coalescing medium.

.2 Coalescing type air eliminator for hot water systems. Rated for 1034 kPa (150 psi) working pressure, and stamped and registered in accordance with ASME Section VIII, Division 1 for unfired pressure vessels. The elements must consist of a copper core tube with continuous wound copper wire medium. Separate venting chamber to prevent system contaminants from harming the float actuated brass venting system. Units shall include a valved side tap to flush floating dirt or liquids and for quick bleeding of large amounts of air during system fill or refill.

.3 Acceptable Product: Spirotherm model VSR 200 or approved equal.

8. **MECHANICAL – CHEMICAL POT FEEDER**
Reference Specification: Section 23 21 14 – Hydronic Piping Specialties

Add the following to Section 23 21 14 – Hydronic Piping Specialties:

2.4 **CHEMICAL POT FEEDER**

.1 7.6 L (2 gal) pressure vessel volume. 19 mm (3/4") NPT connections. System shall include carbon steel chemical bypass feeder, and 600 mL polyethylene graduated funnel with integral 20 mesh strainer. 1.83 MPa (265 psi) maximum pressure.

.2 Acceptable Product: Axiom Model CBF-2 or approved equal.

9. **MECHANICAL – EXPANSION TANK (ET-1)**
Reference Specification: Section 23 21 14 – Hydronic Piping Specialties

Add the following to Section 23 21 14 – Hydronic Piping Specialties:

2.5 **EXPANSION TANK (ET-1)**

.1 Performance: Refer to schedule on drawing M06.

.2 Diaphragm expansion tank, pre-charged at 83 kPa (12 psi), 13 mm (1/2") system connection, 862 kPa (125 psi) maximum working pressure, 115°C (240°F) maximum working temperature, carbon teel shell, heavy duty butyl rubber diaphragm, forged steel system connection. Meets ASME Section VIII, Division 1 standards. Vertical tank orientation.

.3 Acceptable Product: Refer to schedule on drawing M06.

10. **MECHANICAL – NEW THERMOMETER**
Reference Drawing: 19-0139-002_M04_Rev.2
Reference Specification: Section 23 05 19.01 – Thermometers and Pressure Gauges – Piping Systems

Supply and install new thermometer on hot water return piping. Refer to 19-0139-002_M04_Rev.2 attached for thermometer location. Refer to Section 23 05 19.01 for thermometer specification.

11. **MECHANICAL – MOTORIZED DAMPER SCHEDULE**
Reference Drawing: M06

Delete MD-7 from the equipment schedule. Revise the schedule title to read "NEW MOTORIZED DAMPER SCHEDULE".

12. **MECHANICAL – FORCE FLOW HEATER SCHEDULE**
Reference Drawing: *M06*

Revise the schedule title to read “NEW FORCE FLOW HEATER SCHEDULE”.

13. **MECHANICAL – EXHAUST FAN SCHEDULE**
Reference Drawing: *M06*

For the Battery Storage Exhaust Fan EF-3, revise the make/model to read “LOREN COOK/60TCNB – EXPLOSION PROOF”.