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**Washroom Buildings Recapitalization  
Buildings 32, 34 & 38  
Newman Sound Campground  
Terra Nova National Park, NL  
Proj. No.: R.079272.001**

Section 23 82 33.03 – Fan Forced Ceiling Heater

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**PART 1        GENERAL**

**1.1            SUMMARY**

- .1        Section Includes:
  - .1        Fan Forced Ceiling heaters, controls and installation.

**1.2            RELATED SECTIONS**

- .1        Section 26 05 00 – Common Work Results - Electrical.

**1.3            REFERENCES**

- .1        Canadian Standards Association (CSA)
  - .1        CSA C22.2 No.46, Electric Air-Heaters.
- .2        Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1        Material Safety Data Sheets (MSDS).

**1.4            SUBMITTALS**

- .1        Product Data:
  - .1        Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 33 00 - Submittal Procedures. Include product characteristics, performance criteria, and limitations.
    - .1        Submit two copies of Workplace Hazardous Materials Information System (WHMIS) Material Safety Data Sheets (MSDS) in accordance with Section 01 33 00 - Submittal Procedures.
  - .2        Submit product data sheets for fan forced ceiling heaters. Include:
    - .1        Product characteristics.
    - .2        Performance criteria.
    - .3        Mounting methods.
    - .4        Physical size.
    - .5        kW rating, voltage, phase.
    - .6        Cabinet material thicknesses.
    - .7        Limitations.
    - .8        Colour and finish.
- .2        Quality assurance submittals: submit following in accordance with Section 01 33 00 - Submittal Procedures.

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- .1 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .2 Instructions: submit manufacturer's installation instructions.
- .3 Closeout Submittals:
  - .1 Submit operation and maintenance data for fan forced ceiling heaters in accordance with Section 01 78 00 - Closeout Submittals

**1.5 QUALITY ASSURANCE**

- .1 Health and Safety:
  - .1 Do construction occupational health and safety in accordance with Section 01 35 28 - Health and Safety Requirements.

**1.6 DELIVERY, STORAGE, AND HANDLING**

- .1 Packing, shipping, handling and unloading:
  - .1 Deliver, store and handle in accordance with manufacturer's written instructions and Section 01 61 00 - Common Product Requirements.
- .2 Waste Management and Disposal:
  - .1 Construction/Demolition Waste Management and Disposal: separate waste materials for reuse and recycling in accordance with Division 01.

**PART 2 PRODUCTS**

**2.1 MANUFACTURERS**

- .1 Acceptable Product:
  - .1 Ouellet
  - .2 Dimplex
  - .3 Chromalox
  - .4 Stelpro.

**2.2 FAN FORCED CEILING HEATERS**

- .1 White in color.
- .2 Rated 240 Volt.
- .3 Epoxy/polyester powder paint.
- .4 18 gauge steel front cover.
- .5 High limit temperature control with automatic reset.

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- .6 Factory-lubricated motor.
- .7 Fan delay purges heater of residual heat.
- .8 Durable tubular heating element with fins.
- .9 Complete with built-in thermostat.

**2.3 CONTROLS**

- .1 Built-in thermostat.

**PART 3      EXECUTION**

**3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

**3.2 INSTALLATION**

- .1 Install heaters as indicated.
- .2 Make power and control connections.

**3.3 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

**3.4 COMMISSIONING TESTS**

- .1 Perform tests in accordance with Section 26 05 00- Common Work Results - Electrical and Division 01.

**END OF SECTION**