

**F5211-200328**

**ADVANCE CONTRACT AWARD NOTICE (ACAN)**

**Photoperiod lighting installation and control system upgrades in Broodstock Building at St Andrews Biological Station**

**Advance Contract Award Notice (ACAN)**

The Department of Fisheries and Oceans has a requirement for installation of photoperiod lighting and upgrades to the control system in the Broodstock Building.

The purpose of this Advance Contract Award Notice (ACAN) is to signal the government's intention to award a contract for these services to **Controls & Equipment Ltd., Moncton, NB**. Before awarding a contract, however, the government would like to provide other suppliers with the opportunity to demonstrate that they are capable of satisfying the requirements set out in this Notice, by submitting a statement of capabilities during the ACAN posting period.

If other potential suppliers submit a statement of capabilities during this ACAN posting period that meets the requirements set out in the ACAN, the government will proceed to a full tendering process on either GETS or through traditional means, in order to award the contract.

If no other supplier submits, on or before the closing date, a statement of capabilities meeting the requirements set out in the ACAN, a contract will be awarded to the pre-selected supplier.

**Statement of Requirement**

**Introduction**

This project is intended to install photoperiod lighting and upgrade the control system in the Broodstock Building to make the building suitable to conduct biological experiments on animal responses to future climate scenarios.

**Scope of Work**

**For control system upgrade:**

- 1) To supply and install a total of three (3) prefabricated CSA approved NEMA 4X control cabinet's equivalent to Vynckier model ANB 4032 in existing facility of Controls room for control and monitoring of 6 discreet zones as identified on site.
- 2) To provide each of fabricated cabinet with one eBmanager, associated input and out modules totaling 48 control points that will serve 2 zones per Control cabinet
- 3) To provide complete wire management system in each fabricated cabinet, DIN rail mounted finger ducting to conceal wire, terminal strips, NEMA4X access and entry points in cabinet.
- 4) To provide all associated power supplies for both low and line voltage powered end of line devices including 24 volt DC(Siemens sitop 6ep1332-2ba10) and 24 volt AC power ( Marcus mc 250b) supplies
- 5) To provide Networking to the existing Building Management control network, utilize the existing Delta BMCS control software and provide expansion, graphical interface, alarm management and notification similar

to existing facility infrastructure throughout the existing campus and Wetlab environment.

- 6) To provide complete installation and termination of controls cabinet infrastructure to field devices upon installation. This will include PVC conduit to serve each zone, terminated and Juncture points in NEMA4 enclosures. Conduit sizes will from 76 mm to 25 mm as we reduce total number of wiring to each field device.
- 7) Provide Engineered Drawing reflective of the scope of work. This will include "pre" and "post" construction drawings in both Autocad & PDF format, as built and maintenance manuals for the site staff and building operations staff.

Notes and detail of products and scope:

- Each controls cabinet will include:
  - One eBMGR controller.
  - Twelve eBM-440 modules to provide 48 universal inputs and 48 universal outputs. These modules are to have the HOA option
  - One eBX-08 and One eBX-04 backplane to accept the modules specified above.
  - All inputs and outputs to be pre-wired to DIN rail terminal strips
  - One 250VA Marcus MC250B 24VAC power supply or equivalent to power the above controllers
  - One Siemens SITOP 6EP1332-2BA10 24VDC 2.5a power supply pre-wired to a fused terminal at bottom of enclosure
  - Cabinets must include an open space for future expansion below the I/O terminal strip sized a minimum of 12"h x 24" wide
  - One 550VA Uninterruptable Power Supply (UPS) TrippLite Model AVR550SER 120V terminal rail for future expansion
- Network and infrastructure requirements:
  - The cabinets will be connected to the sites controls network which enters the building via a fiber converter in the Broodstock Electrical Room
  - A Delta network connection is to be provided in Rxxx on the West wall above the existing countertop and on the East wall centered between the door and the south end of the room.
  - A Delta network connection is to be provided in Rxxx (Control Room) on the west wall
- Conduit infrastructure
- Each controls cabinet is to be connected to the lab zone it serves by two runs of 3 inch PVC conduit by the following schedule:
  - Cabinet 1 serving zones 1 and 2 (North wall West and North wall Center))
  - Cabinet 2 serving zones 3 and 4 (North wall East and South wall East)
  - Cabinet 3 serving zones 5 and 6 (South wall Center and South wall West)
  - Each of the above 3 inch conduit runs is to terminate in a 16x16 NEMA4 PVC junction box along the outer wall centered in each zone

**For photoperiod lighting installation:**

- 1) To supply 36 wet location Vapourtight LED programmable lighting fixtures to be controlled from the Delta BMCS and utilize existing Photoperiod structure as basis of

design.

- 2) To provide all low voltage control wiring from Control Cabinets as provided and available to each fixture as required concealed as per local codes including: all wiring terminated to local code for NEMA4 requirements. All wiring to be concealed in PVC conduit.  
All clamps, unistrut, fasteners and other hardware to be PVC or 316 stainless steel
- 3) To provide one (1) fixture per lab tank totaling six (6) tanks for each of six (6) zones. LED lighting system is to be used will provide the following:
  - Each zone is to have independent photoperiod control
  - The six photoperiod systems should be interfaced with the Delta Process Control System such that a lighting level command can be sent from Delta to the LED lighting system allowing the use of the same photoperiod software that is in use in the rest of the SABS labs.
  - Systems must allow adjustment of color temperature
  - Systems must allow adjustment of intensity
  - Systems must allow for mimicking natural photoperiod which progresses automatically through the seasons. It must also allow locking the photoperiod to one simulated date. It must also allow for specifying a time clock based on/off schedule
- 4) To provide commissioning plan with owners representative to coordinate and conduct training and turnover upon substantial completion
- 5) To provide all power wiring above 50 Volt AC and greater, all concealed in PVC and Liquid Tight armored cable.
- 6) Allow for 6 new breakers including 6 dedicated circuits for lighting control.
- 7) Provide Engineered Drawing reflective of the scope of work. This will include "pre" and "post" construction drawings in both Autocad & pdf format, as built and maintenance manuals for the site staff and building operations staff.

Notes and details of product and execution of scope:

- Install 36 new Kurtzon 1520, 15" x 2' Linear Vapor tight LED Luminaires.
- Luminaires to be arranged in six photoperiod zones as shown on accompanying CAD drawing, six fixtures per zone. Zones are 14 x 14 ft.
- Luminaires to be positioned exactly as shown in accompanying CAD plan. Positioning is critical for even illumination of the zone.
- Luminaires to be hung with 6" between ceiling and fixture giving 12" from ceiling to bottom of fixture
- Zones are as follows:
  - Zone 1 North-West
  - Zone 2 North-Center
  - Zone 3 North-East
  - Zone 4 South East
  - Zone 5 South-Center
  - Zone 6 South-West
- Provide with each fixture the following LED lighting components
  - One PMD75 watt Samsung Programmable Multichannel Driver
  - Eight LT-T562C 2 ft. T-Series Tunable Linear LED Engines
  - Frosted Shade
  - Controls Wiring and conduit

- Provide 0-10V controls wiring from controls cabinets in Control Room to the 36 installed fixtures
- All controls wiring to be concealed in PVC conduit.
- All conduit hangers to be PVC
- All hanger fasteners to be 316 stainless steel
- Zones 1&2 to be fed from Control Cabinet1 in Control Room
- Zones 3&4 to be fed from Control Cabinet 2 in Control Room
- Zones 5&6 to be fed from Control Cabinet 3 in Control Room
- Cabinet locations are shown on 'Photoperiod Lighting Plan' CAD drawing
- High voltage power wiring and conduit to each luminaire
- Six circuits required, one for each lighting zone
- There are sufficient breakers available in existing electrical panel for photoperiod lighting circuits
- Can use existing unistrut which currently supports conduit for receptacles
- All wiring to be concealed in PVC conduit
- Conduit should terminate in junction boxes above each luminaire with flexible drops to luminaire
- All conduit hangers to be PVC
- All hanger fasteners to be 316 stainless steel
- System Capabilities
- Each of the six lighting zones is to have independent control. The control for each zone is to reside on the controller in the cabinet which is designated for that zone. See CAD drawing 'Photoperiod Lighting Plan'.
- Separate 0-10V dimming required for each of the six zones
- Separate 0-10V CCT tuning required for each of the six zones
- CCT tuning to be of the 'native continuous' type allowing selection of any color temperature between 2700 and 6500K (this will allow for programming a natural daylight fluctuations around the 5600K range which would not be possible with fixed CCT LED's)
- Programming/User Interface
- Light intensity programming to utilize the same programs as the photoperiod lighting in the main SABS Wetlabs including:
  - Photoperiod Lighting Mode
  - Time Clock Lighting Mode

## **Minimum Essential Requirements**

1. The contractor must directly employ factory trained and certified technicians on the Delta BMCS and enteliWEB software, performing all associated work with programming, graphical interface, and commissioning of the new system expansion to the existing Delta BMCS and enteliWEB infrastructure.

2. Prior to award the following must be provided:

.1 Documentation indicating that the bidder/tenderer has successfully completed a recognized current (within the last 3 yrs.) EXTERNAL SAFETY AUDIT. This audit must be performed by an independent company/person approved to conduct safety audits;

.2 Certification letter of good standing from Worker's Compensation Board;

.3 Signed statement by Owner of company that the company will maintain Worker's Compensation Board coverage for the life of the Service Contract, including any sub-contractors;

.4 Updated staff list complete with licenses shall be kept on site including personnel changes;

.5 Proof of Insurance in the amount of \$2M according to [G2001C](#) with Additional Named Insured: Canada, as represented by Fisheries and Oceans Canada;

.6 A list of any sub-contractors to be used in the performance of the work.

### **Trade Agreements and Other Obligations**

The requirement is subject to the Canadian Free Trade Agreement (CFTA).

### **Government Contracts Regulations (GCRs) Exception and Limited Tendering Reasons**

The following exception to the Government Contracts Regulations is invoked for this procurement under subsection 6(d) – Where only one supplier can do the work.

- Controls & Equipment Ltd. is the exclusive Delta Controls Partner for New Brunswick and is exclusively authorized to supply, install and service Delta Controls products in this province.

### **Security Requirements**

There are no Security requirements for this contract.

### **Ownership of Intellectual Property (IP)**

There is no Intellectual Property being created under this contract.

### **Period of the Proposed Contract**

The period of the proposed contract is from award to March 31, 2021.

### **Cost Estimate**

The estimated cost of the proposed contract is \$260,003.00 plus tax.

### **Suppliers' Right to Submit a Statement of Capabilities**

Suppliers who consider themselves fully qualified and available to provide the services and/or goods described herein, may submit a statement of capabilities in writing to the contact person identified in this notice on or before the closing date of this notice. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

### **Closing Date for Submission of a Statement of Capabilities**

Statement of Capabilities must be received no later than **2:00 PM Atlantic Daylight Saving Time, October 5, 2020**. Submissions received after this date and time will not be accepted.

## **Inquiries and Submission of Statement of Capabilities**

Inquiries are to be submitted to:

Email: [DFOtenders-soumissionsMPO@dfo-mpo.gc.ca](mailto:DFOtenders-soumissionsMPO@dfo-mpo.gc.ca), with F5211-200328 in the subject line.

Submissions of Capability are to be submitted to:

Email: [DFOtenders-soumissionsMPO@dfo-mpo.gc.ca](mailto:DFOtenders-soumissionsMPO@dfo-mpo.gc.ca)

Or in writing to:

Cathi Harris  
Senior Contracting Officer  
301 Bishop Drive  
Fredericton, NB E3C 2M6

Please note that the Department prefers to receive submissions electronically. Email submissions should be less than 10MB; if the file(s) are larger please split them into more than one email. The Department is not responsible for misdirected or delayed submissions.

Submissions to contain the file number: F5211-200328 in the subject line.