



Request for Quote

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ONE CAPITOL HILL
PROVIDENCE RI 02908

CREATION DATE : 05-AUG-13
BID NUMBER: 7490364
TITLE: NEAR ROAD AIR MONITORING SHELTER

BID CLOSING DATE AND TIME: 29-AUG-2013 01:30:00

BUYER: Cadoret, David
PHONE #: N/A

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DOA CONTROLLER
ONE CAPITOL HILL, 4TH FLOOR
SMITH ST
PROVIDENCE, RI 02908
US

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DEM AIR LABORATORY
C/O HEALTH DEPT LABORATORIES
50 ORMS STREET
PROVIDENCE, RI 02904
US

Requisition Number: 1324094

Note to Bidders: THIS MONITORING EQUIPMENT MUST BE OPERATIONAL BY JANUARY 1, 2014.

Line	Description	Quantity	Unit	Unit Price	Total
1	NEAR - ROAD AIR MONITORING SHELTER PER SPECIFICATIONS QUESTIONS CONCERNING THIS SOLICITATION MAY BE E-MAILED TO THE DIVISION OF PURCHASES AT BIDINFO@PURCHASING.RI.GOV NO LATER THAN AUGUST 19, 2013 @5 PM (EASTERN). PLEASE REFERENCE THE RFQ NUMBER ON ALL CORRESPONDENCE. QUESTIONS SHOULD BE SUBMITTED IN A MICROSOFT WORD ATTACHMENT. ANSWERS TO QUESTIONS RECEIVED, IF ANY, WILL BE POSTED ON THE INTERNET AS AN ADDENDUM TO THIS SOLICITATION (WWW.PURCHASING.RI.GOV). IT IS THE RESPONSIBILITY OF ALL INTERESTED PARTIES TO DOWNLOAD THIS INFORMATION.	1.00	Each		

Delivery: _____

Terms of Payment: _____

It is the Vendor's responsibility to check and download any and all addenda from the RIVIP. This offer may not be considered unless a signed RIVIP generated Bidder Certification Cover Form is attached and the Unit Price column is completed. The signed Certification Cover Form must be attached to the front of the offer



State of Rhode Island
Department of Administration / Division of Purchases
One Capitol Hill, Providence, Rhode Island 02908-5855
Tel: (401) 574-8100 Fax: (401) 574-8387

BID 7490364-NEAR ROAD AIR MONITORING SHELTER
Bid specifications for a near-road Air-Monitoring site In Providence RI

In response to US EPA near-road air monitoring requirements, the State of Rhode Island is establishing an air quality monitoring site immediately adjacent to Interstate Rte. 95 in Providence. Nitrogen dioxide (NO₂)/oxides of nitrogen (NO_x), sulfur dioxide (SO₂) and fine particles (PM_{2.5}) will be monitored at that site. The state is seeking bids for the monitoring shelter, constructed and equipped with instrumentation as specified below. Bids must address the entire project, including the construction and installation of the shelter, installation of the instrumentation, establishing required connectivity and ensuring that all instruments, including specified communications equipment, is operating as designed.

The location and footprint of the site is shown on the attached diagram. The bidder should provide a drawing or series of drawings of the internal, external and roof layout of the proposed structure.

Specifications for the Monitoring Shelter:

1. Monitoring Shelter: One (1) Shelter

- Shelter Dimensions: 20'L x 8'W x 8'H (at a minimum), including a partitioned storage area with dimensions of 4- 5.5'Lx8'Wx8'H
- Container-style 16 gauge steel construction or equivalent material
- Rust -proof fasteners
- Fork truck/crane lifting points
- Corrosion resistant exterior paint (color to be picked by purchaser)
- Insulation in walls, ceiling and floor shall be R-25 Equivalent. Storage area may be un-insulated.
- Studless wall construction
- Seamless vinyl flooring (slip resistant)
- Fiberglass reinforced panel interior finish (white)
- Insulated metal access door (36"), with hydraulic door closer, weather stripping, door drip, door threshold and handle with lock.



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- Aluminum Modular Roof Railing System which meets OSHA specifications. This shall include roof area railing system with toe-plate, around an aluminum roof grating covering an 8-foot by 12-foot work area.
- Vertical ladder with a security guard mounted on side of shelter for roof access.
- Mounting bracket for telescoping aluminum meteorological tower.
- Three roof penetrations, one for a glass intake manifold and two for BAM down-tubes, as noted below.
- Waterproof signal-cable box, for communications cables.

2. Shelter Interior:

- Workbench- 96"L, moisture, heat and scratch-resistant laminate.
- Two instrument racks, 24"W X 30"H X 7"H, with open sides, powder coated steel, with sliding shelves for each of the instruments (five total: CO, NO_x, calibrator, zero air, data logger), and two fixed shelves, one for the BAM, and one extra.
- Glass air-sampling manifold (Ace Glass 25 mm, or equivalent) with minimum of 6 ports. Manifold is mounted vertically, adjacent to back corner of one equipment rack. An exhaust manifold on floor will vent the air stream to outside of shelter. Air flow in the manifold will be maintained with a pump, to provide an air residence time of less than 3 seconds.
- Dedicated ceiling mounted outlets for instrument racks 120V 20A Single Twistlock for each rack.
- Two wall-mounted shelves, approx 13-inch by 17-inch at about 5 feet above the floor, for mounting particle counters. On the wall adjacent to the shelves will be bulkhead plates, to allow particle counter probes to project horizontally from the side of the shelter. The shelves will be on the wall opposite the door, one above the workbench, the other in the corner opposite the workbench.
- Electrical outlets on at least 3 of the walls, multiple outlets over the workbench, and outlets close to each of the shelves.
- The storage area will feature gas-cylinder mounts for at least two cylinders, adequate lighting and ventilation, and power outlets to supply a compressor for the zero-air supply and several pumps that would serve air sampling instruments such as the BAM, the NO_x analyzer and the particle counters. The ventilation system must be capable of maintaining temperatures in the summer that are safe for the pumps and gas cylinders.
- Passages from the storage area to the work area sufficient to allow for tubing from the pumps and gas cylinders to reach the appropriate instruments.



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3. Electrical system:

- Meets or exceeds NEC regulations
- 100A 1PH 120/240V Electrical System
- 100A 1PH 120/240V Load Center
- 100A 1PH 240V External Disconnect, Nema 3R
- Electrical Surge Protection for System
- Metal Electrical Raceway
- Four (4) 120V 20A duplex interior receptacles in the working area
- Two (2) 120V 20A duplex interior receptacles in the storage area
- Two (2) 48" double bulb fluorescent light fixtures w/switch in working area
- One (1) 48" double bulb fluorescent light fixtures w/switch in storage area
- Two (2) External 120V 20A GFCI Outlets for roof

4. HVAC System

- 1 Ton Cooling Capacity with heater unit
- 208/240V 1PH 20A Hardwired
- Programmable, auto-switching thermostat installed
- High Efficiency rotary compressor
- Automatic condensate disposal system
- Warranty-twelve (12) months from beginning date of service

5. Instrumentation:

One Thermo 48i trace-level CO analyzer with internal pump, zero-span valves, permeation dryer and internal scrubber or an equivalent analyzer. The instrument must be designed for trace-level measurement, with linear response in the zero to 10 ppm range. The instrument must operate on the principle of non-dispersive infrared absorption and gas-filter correlation. The minimum detectable concentration must be no more than 0.04 ppm, with linearity at 1% of full scale (+/- 0.1 ppm). The instrument's software must contain an auto-zeroing step that can be executed at a user-designated interval. In this step, the air sample should be drawn through a CO scrubber containing Carulite 300 or an equivalent material, with the instrument software using this step to



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re-set the instrument zero. The instrument must be configured, as delivered, to be interchangeable with existing CO analyzers in the Rhode Island air monitoring network. As such, they must be designed, as delivered, for communication within an Ethernet network, using the MODBUS protocol, and in addition, be capable of data transmission via daisy-chained serial ports.

One Thermo 42i trace-level NO_x analyzer, with molybdenum converter, permapure dryer and external pump, as supplied by Thermo; or equivalent analyzer. The instrument must be designed for trace-level measurement, with linear response in the zero to 100 ppb range. The instrument must operate on the principle of chemiluminescence, via the reaction of nitric oxide with ozone, and contain an internal ozone generator and a converter for the reduction of NO₂ to NO. Linearity should be sufficient for the instrument to give a response within 1 ppb of the "true" value, over the 0 to 100 ppb range. The minimum detection limit of the instrument should be no higher than 0.05 ppb. The instrument must contain an internal permeation drier for the air stream feeding the ozone generator. The instrument must include in the analytical cycle an auto-zeroing step, in which the ozone and sample air streams are mixed in a pre-reactor upstream of the reaction chamber, to minimize zero drift and reduce interferences from olefins. The instrument must be configured, as delivered, to be interchangeable with existing NO_x analyzers in the Rhode Island air monitoring network. As such, it must be designed, as delivered, for communication within an Ethernet network, using the MODBUS protocol, and in addition, be capable of data transmission via daisy-chained serial ports.

One multi-gas calibrator, Environics 6100, with three mass flow controllers, ranges 0-10 LPM zero air, 0-100 cc/min span gas and 0-20 cc/min span gas, with four span gas inlet ports and ozone generator, no photometer; or equivalent calibrator.

One Met One Beta Attenuation Monitor (BAM) model 1020, with FEM status, and PM_{2.5} VSSC and PMIO head; or equivalent BAM

One model 737R-12 zero air generator, with suitable air compressor; or equivalent zero air generator. Zero air generator must be rated for 30 LPM at 35 psig, with scrubbers for H₂O, SO₂, CO and hydrocarbons, NO_x, H₂S and O₃.



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One Agilaire 8832 Data Logger with minimum of two serial ports, 4 MB flash memory and 32 MB RAM, Ethernet port, and firmware for ambient air monitoring. The data logger must be configured for communication with the gas monitors using the modbus protocol, over an Ethernet. The data logger must also collect manifold air pressure data, for verification that the manifold pump is working, and room temperature data. Communication with the BAM may use a serial port connection if the Ethernet connection is not viable. The calibrator must feed status signals to the data logger when a calibration is under way, to flag the data from the analyzers. The calibrator will control the timing of calibrations. The data logger must capture parameters such as flow, pressure and temperature from the gas analyzers, along with the analytical data. The data logger must be integrated into the Air Pollution Lab Agilaire AirVision data management system, and any additional items such as a router or switch must be included in the project

These instruments must be installed and integrated in the shelter, with electronic and plumbing connections provided as needed. The gas analyzers will connect to the manifold with ¼ inch Teflon tubing. The tubing from the span gas cylinders can be 1/8 inch stainless steel or Teflon, the zero air can be 1/4 inch stainless steel or Teflon. The Air Pollution Lab will supply the cylinder of span gas and the regulator, and specify the calibration gas mixtures and schedules. The BAM will be mounted on the top shelf of the instrument rack that is farther away from the glass inlet manifold, not higher than 50 inches above the floor. Its down tube must be securely supported above the roof line.



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6. Shelter installation and prep

Bid shall include labor, equipment, supervision and materials required for delivery (including offload) of shelter and equipment and installation of the shelter to meet the above specifications and to ensure the shelter meets all codes, e.g. proper anchoring of shelter. Successful bidder must supply all drawings and other specifications necessary for building permit applications.

7. Equipment set-up and training

All equipment listed in bid, including items #4 and #5, shall be installed and set up (calibrated and checked for proper operation). Successful bidder shall provide training in the operation of equipment to purchaser's staff on-site.

8. Delivery Timeline

Delivery and set-up is required by 10 weeks after the bid is awarded.

9. Drawings/Cut Sheets

Drawings of the internal, external and roof layout of the proposed structure must be submitted with the bid to ensure that the proposed monitoring site meets specifications.

Contract Terms and Conditions

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Terms and Conditions

BID STANDARD TERMS AND CONDITIONS

TERMS AND CONDITIONS FOR THIS BID

SURETY REQUIREMENTS

BIDDER IS REQUIRED TO PROVIDE A BID SURETY IN THE FORM OF A BID BOND, OR A CERTIFIED CHECK PAYABLE TO THE STATE OF RHODE ISLAND, IN THE AMOUNT OF A SUM NOT LESS THAN FIVE PERCENT (5%) OF THE BID PRICE. BID SURETY MUST BE ATTACHED TO THE BID FORM. THE SUCCESSFUL BIDDER WILL ALSO BE REQUIRED TO FURNISH PERFORMANCE AND LABOR AND PAYMENT BONDS AT TIME OF TENTATIVE CONTRACT AWARD.

INSURANCE REQUIREMENTS

AN INSURANCE CERTIFICATE IN COMPLIANCE WITH PROVISIONS OF ITEM 31 (INSURANCE) OF THE GENERAL CONDITIONS OF PURCHASE IS REQUIRED FOR COMPREHENSIVE GENERAL LIABILITY, AUTOMOBILE LIABILITY, AND WORKERS' COMPENSATION AND MUST BE SUBMITTED BY THE SUCCESSFUL BIDDER(S) TO THE DIVISION OF PURCHASES PRIOR TO AWARD. THE INSURANCE CERTIFICATE MUST NAME THE STATE OF RHODE ISLAND AS CERTIFICATE HOLDER AND AS AN ADDITIONAL INSURED. FAILURE TO COMPLY WITH THESE PROVISIONS MAY RESULT IN REJECTION OF THE OFFEROR'S BID. ANNUAL RENEWAL CERTIFICATES MUST BE SUBMITTED TO THE AGENCY IDENTIFIED ON THE PURCHASE ORDER. FAILURE TO DO SO MAY BE GROUNDS FOR CANCELLATION OF CONTRACT.

NOTE: IF THIS BID COVERS CONSTRUCTION, SCHOOL BUSING, HAZARDOUS WASTE, OR VESSEL OPERATION, APPLICABLE COVERAGES FROM THE FOLLOWING LIST MUST ALSO BE SUBMITTED TO THE DIVISION OF PURCHASES PRIOR TO AWARD: * PROFESSIONAL LIABILITY INSURANCE (AKA ERRORS & OMISSIONS) - \$1 MILLION OR 5% OF ESTIMATED PROJECT COST, WHICHEVER IS GREATER. * BUILDER'S RISK INSURANCE - COVERAGE EQUAL TO FACE AMOUNT OF CONTRACT FOR CONSTRUCTION. * SCHOOL BUSING - AUTO LIABILITY COVERAGE IN THE AMOUNT OF \$5 MILLION. * ENVIRONMENTAL IMPAIRMENT (AKA POLLUTION CONTROL) - \$1 MILLION OR 5% OF FACE AMOUNT OF CONTRACT, WHICHEVER IS GREATER. * VESSEL OPERATION - (MARINE OR AIRCRAFT) - PROTECTION & INDEMNITY COVERAGE REQUIRED IN THE AMOUNT OF \$1 MILLION.

FISCAL YEAR - AWARD EXTENDING PAST FISCAL YR END

AWARDS EXTENDING BEYOND JUNE 30TH ARE SUBJECT TO AVAILABILITY OF FUNDS. CONTINUATION OF THE CONTRACT BEYOND THE INITIAL FISCAL YEAR WILL BE AT THE DISCRETION OF THE STATE. TERMINATION MAY BE EFFECTED BY THE STATE BASED UPON DETERMINING FACTORS SUCH AS UNSATISFACTORY PERFORMANCE OR THE DETERMINATION BY THE STATE TO DISCONTINUE THE GOODS/SERVICES, OR TO REVISE THE SCOPE AND NEED FOR THE TYPE OF GOODS/SERVICES; ALSO MANAGEMENT OWNER DETERMINATIONS THAT MAY PRECLUDE THE NEED FOR GOODS/SERVICES.

RIVIP INFO - BID SUBMISSION REQUIREMENTS

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the offer. When delivering offers in person to One Capitol Hill, vendors are advised to allow at least one hour additional time for clearance through security checkpoints.

VENDOR SPECIFICATIONS

ALL VENDORS MUST INCLUDE SPECIFICATIONS WITH BID PROPOSAL (EVEN THOSE BIDDING BRAND SPECIFIED). FAILURE TO SUBMIT SPECIFICATIONS WITH BID PROPOSAL MAY RESULT IN DISQUALIFICATION OF BID. ITEMS IN CATALOGS MUST BE CLEARLY MARKED AND PAGES TABBED.

AWARD

THE STATE, AT ITS SOLE DISCRETION, SHALL RESERVE THE RIGHT TO MAKE ONE OR MULTIPLE AWARDS FOR THIS REQUIREMENT AND/OR TO REJECT ANY OR ALL BIDS.

CHARGES PERMITTED

NO CHARGES OTHER THAN PARTS AND LABOR ON THE JOB - NO TRAVEL, NO MILEAGE, NO MISCELLANEOUS CHARGES, NO PORTAL TO PORTAL.

DELIVERY PER AGENCY

DELIVERY OF GOODS OR SERVICES AS REQUESTED BY AGENCY.