SOUTH KINGSTOWN SCHOOL DEPARTMENT
REQUEST FOR PROPOSALS (RFP)

#2454 Broad Rock Middle School Boiler Replacement

The South Kingstown School Department is requesting proposals for expertise, labor, equipment, and installation for the replacement of a decommissioned boiler.

Interested parties may obtain a Request for Proposals (RFP) package at the South Kingstown Administration Building, 307 Curtis Corner Road, Wakefield, Rhode Island 02879, Monday through Friday, from 8:00 a.m. to 4:00 p.m. or by visiting our website at https://www.skschools.net/departments/finance_business/purchasing_department_

Or

Bidnetdirect.com

This is a request for proposals, not a request for bid; responses will be evaluated based on the relative merits of the vendor's qualifications; there will be a public opening of proposals received by the Purchasing Office of the South Kingstown School Department pursuant to this request. Interested vendors should provide their proposal **on or before May 2nd, 2024 by the close of business.** The district reserves the right, at its sole discretion, to consider proposals received after this date.

Proposals must be received in a sealed envelope with the vendors' company name and " RFP #2454 BRMS Boiler Replacement" clearly marked on the outside of the envelope. Please initial or sign all pages of proposal documentation. Proposals can be sent or delivered to:

Ryan Kilpatrick
Chief Financial Officer
South Kingstown School Department
307 Curtis Corner Road

All received bids will be opened publicly on May 3rd, 2024 at 10am at the South Kingstown School Departments CFO's office located at 307 Curtis Corner Road.

For any technical questions regarding this RFP or to request a site visit please contact Brian Mahoney, Director of Facilities, in writing at: bmahoney@sksd-ri.net

Bidder: _____ (please initial/sign each page)

PROJECT SPECIFICATIONS

LOCATION:

- Broad Rock Middle School – 351 Broad Rock Road Wakefield, RI 02879
- Mechanical room is located in the center of the building, accessed from the mid-rear door "teacher entrance" or the main lobby "mechanical room"
- Normal school year operates 730AM-220PM until June 20th
- Summer there is no students in this building and the schedule is flexible but standard hours are 630AM-3PM
- Majority of project to be completed in summer of 2024

SCOPE:

This is a single award contract. The bidder must provide a breakdown of all costs associated with replacement of the BRMS boiler and burner assembly. The majority of the work must be completed between June 20, 2024 and September 1, 2024. While on site bidder will follow all local, state, and federal laws. Bidder will report directly to SK Facilities Director any issues or delays that occur immediately as it relates to the project.

The purpose of this project is to replace the leaking #2 boiler at the Broad Rock Middle School with a new high-efficiency vertical steel firetube boiler. The new boiler will operate in concert with the existing #1 boiler to produce the desired system water temperature for space heating. The new boiler will provide high efficiencies along with the reliable performance of a commercial boiler with steel construction.

The heating system in this building is not designed as a condensing system; therefore, condensing boilers are not acceptable for this application. Boilers designed with copper fin assemblies or fiber knit burners are not acceptable for this project. Cast iron boilers are not acceptable for this project.

To supply an alternate to the specified equipment, documentation of the proposed alternate must be furnished a minimum of 10 days prior to the bid opening. Documentation is to include at a minimum product literature and specifications along with the reason(s) the alternate equipment is superior to the specified equipment. If approved, an addendum will be furnished to all bidders regarding the alternate equipment.

Bidder: _____ (please initial/sign each page)

BOILER/BURNER SPECIFICATION

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes packaged, factory-fabricated and assembled, gas-fired, vertical firetube boilers, trim, and accessories for generating hot water for pressure as noted on plans.

1. Vertical firetube boiler
2. Natural gas burner

1.2 SUBMITTALS

A. Product Data: Include performance data, operating characteristics, furnished specialties, and accessories.

B. Shop Drawings: For boilers, boiler trim, and accessories; Include plans, elevations, sections, details, and attachments to other work.

1. Wiring Diagrams: Power, signal, and control wiring.
2. Fuel Train Schematic

1.3 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For boilers, components, and accessories to include in emergency, operation and maintenance manuals.

B. Warranties: As specified in this section.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

B. ASME Compliance: Fabricate and label boilers to comply with ASME Section IV Boiler and Pressure Vessel Code.

C. ASHRAE/IESA 90.1 Compliance: Boilers shall have minimum efficiency according to: “Gas and Oil Fired Boilers – Minimum Efficiency Requirements.”

D. UL Compliance: Control devices and control sequences according to requirements of UL.

E. CSD-1 Compliance: Boilers/burners equipped to meet current state code.

F. For quality purposes the boiler must be manufactured by a company having at least ten (10) years documented boiler manufacturing experience in accordance to ASME Section IV Boiler and Pressure Vessel Code.

1.5 COORDINATION

A. Furnish and coordinate size and location of concrete bases.

1.6 WARRANTY

A. Special Warranty: Manufacturer’s standard form in which manufacturer warrants the Boiler Pressure Vessel for five (5) years pro-rated after date of shipment with the first two (2) years non pro-rated. This warranty is to cover tube leaks and other possible damages to boiler tubes, tube sheets, furnace, and main shell due to thermal shock expansion stresses (“shock”). In addition to the above pressure vessel warranty the burner, trim, and controls are warranted for a period of one (1) year after installation.

PART 2 – PRODUCTS

2.1 VERTICAL FIRETUBE BOILER

A. Basis of Design Product: Subject to compliance with requirements, provide products as listed:

1. Aldrich Company – Model AVW-150 as manufactured in Wyoming, IL.

B. The boiler must be manufactured by a company having at least ten (10) years documented boiler manufacturing experience in accordance to ASME Section IV Boiler and Pressure Vessel Code.

C. Description: Factory packaged and firetested firetube boiler complete with gas burner, gas train, and controls mounted and wired, skid mounted requiring only supply, return, fuel, drain, electrical and vent connections.

D. Fabricate base and attachment to pressure vessel with reinforcement strong enough to resist boiler movement during a seismic event when boiler base is anchored to building structure.

E. Design: Vertical firetube design with straight steel tubes with a minimum wall thickness of .105". The boiler combustion chamber shall be water jacketed including a water surrounded furnace. Refractory sides or tube sheet protection is not allowed as these reduce the heat transfer. Boiler shall be sealed to permit positive combustion chamber pressure with turbulators installed in the firetubes. Boiler to have a minimum efficiency of 85%.

F. Include the following:

1. Handholes or inspection tappings for water-side inspection.
2. Lifting lug on top of boiler.
3. Minimum 1" drain valve.
4. Tapings or flanges for supply and return connections

G. Boiler Casing: The external surfaces shall be covered with a minimum of 1" mineral fiber insulation encased within an 18 gauge steel jacket.

2.2 WATER BOILER TRIM

A. Boiler to include the following factory mounted/wired:

1. Theraltimeter gauge
2. ASME relief valve
3. Operating control
4. High limit control (Manual Reset)
5. Appropriate firing rate control to work in conjunction with the specified type of operation: Full Modulation
6. M&M #751-MT Probe type low water cut-off (Manual Reset)
8. Stack Damper: Flue stack damper (Manual type)

2.3 FORCED DRAFT BURNER

A. Basis of Design Product: Subject to compliance with requirements, provide products as listed:

1. Webster Combustion – Model JB1G-07-LMV37-M-.15-UL/CSD-1 as manufactured in Winfield, KS.

B. Code Compliance: UL, CSD-1

C. Operation: Firing sequence is to be full modulation with open damper purge.

D. The burner control is to be Model LMV37 as manufactured by Siemens. The burner is to be equipped with parallel positioning controls for independent control of fuel and air.

E. The burner is to include an integral control cabinet, factory mounted and wired, and must include an indicating light package of Power On, Call for Heat, Ignition, Main Fuel, Alarm, and Low Water.

F. The burner is to be equipped with a Siemens RWF50 controller to control water temperature and provide thermal shock protection.

G. Quick Connect Wiring of Burner and Gas Train: Burner to include factory wired burner quick connect wiring. This provides quick and easy removal of the burner and gas train for applications when the burner may need to be shipped loose or removed for rigging purposes. The quick connect system greatly reduces the time required for the installing contractor to remount and make wiring connections.

H. Blower: Forward-curved centrifugal fan integral to burner, directly driven by motor.

I. Gas Train: Control devices shall comply with requirements in ASME CSD-1 and UL. Gas train to include pilot shut-off valve, regulator, pilot solenoid valve, intermittent electric spark pilot ignition with 100 percent main valve and pilot safety shutoff with electronic ultraviolet supervision of burner flame (flame rod not acceptable).

G. Main Gas Train: Factory piped and wired (may be removed for shipment as a complete assembly for protection), main gas regulator, motorized main gas safety shut off valve, secondary solenoid gas safety shut off valve, isolation valve(s) with test cock(s), high and low gas pressure switches.

2.4 SOURCE QUALITY CONTROL

A. Test and inspect factory-assembled boilers, before shipping according to ASME Boiler and Pressure Vessel Code.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Before boiler installation, examine roughing-in for concrete equipment bases, anchor bolt sizes and locations, and piping and electrical connections to verify actual locations, sizes, and other conditions affecting boiler performance, maintenance, and operations.

1. Boiler locations on drawings are approximate. Determine exact locations before roughing-in for piping and electrical connections and consult mechanical engineering Project Manager for approval prior to proceeding.

B. Examine mechanical spaces for suitable conditions where boilers will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 BOILER INSTALLATION

A. Equipment Mounting: Install boilers on cast-in-place concrete equipment bases.

1. Coordinate sizes and locations of concrete bases with actual equipment provided.

2. Construct bases to withstand, without damage to equipment, seismic force as required by code.

3. Construct concrete bases 4” high and extend base not less than 6” in all directions beyond the maximum dimensions of boiler unless otherwise indicated.

B. Install gas-fired boilers according to NFPA-54.

C. Install electrical devices furnished with boiler but not specified to be factory mounted.
D. Refer to drawings for additional requirements.

3.3 START-UP SERVICE

A. The mechanical contractor is required to engage a factory authorized service representative to perform start-up services and also provide owner's maintenance personnel training on the adjustment, operation and recommended maintenance of the boilers.

Pipe, Fittings, Valves

- All steel pipe is to be Schedule 40.
- Where screw connections are required for water/system piping, all fittings are to be cast iron.
- Where screw connections are required for gas piping, all fittings are to be malleable.
- Copper pipe is to be Type L.
- ProPress system may be utilized for copper or steel connections.
- Valves are to be ball type 600# WOG.
- Gas venting is to be steel pipe only.

Electric

- All control wiring is to be #16 THHN stranded wire.
- All power wiring is to be #12 THHN stranded wire.
- Disconnects are to be provided where necessary.
- Door switches are to be provided at each entry to the boiler room.

INSTALLATION SPECIFICATION

The existing boiler is to be removed from the premises and disposed of properly. The new Aldrich boiler is to be rigged into the same location as the existing #2 boiler.

BREECHING: The main breeching will be reconfigured to accept the breeching connection of the new boiler. The new boiler is taller than the existing and the breeching connection will therefore be higher on the main breeching. The existing opening in the breeching will be capped off and sealed. A new vertical section of breeching will be installed above the existing openings. This new section will provide the "tee" for the new boiler breeching.

The new breeching section from the new boiler to the main breeching is to be 14 gauge welded steel with flanged connections at the boiler to facilitate future service. The breeching is to be equipped with sweep type fittings. There is to be no barometric regulator in the boiler breeching. Where the new boiler breeching connects to the main breeching, the joint will be properly sealed to be gas tight.

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GAS SUPPLY: The existing gas supply drop will be utilized “as-is” and reconfigured to connect to the new burner gas train. Where screw connections are utilized, all fittings are to be malleable iron only.

SYSTEM CONNECTIONS: The existing system supply and return connections will be reconfigured to connect to the inlet and outlet of the new boiler. Connections are to be full size 2” NPT. If screw connections are utilized on system piping, cast iron fittings are required. All piping must be properly hung and supported independently of the boiler. Existing system shutoff valves are to be utilized “as-is”. Existing flow balancing valves are to remain in place to be utilized “as-is”.

POWER SUPPLY: The existing power supply will be utilized “as-is” to supply 120V 1Ø to the new boiler. The existing Heat-Timer controller will be connected to the burner limit and modulation circuits to control limit and modulation functions.

INSULATION/COVERING: All newly installed piping and breeching will be insulated. The system piping will be insulated with 2” thick fiberglass insulation with a white paper finish. The breeching will be insulated with 2” mineral wool with a foil finish and stainless steel banding.

START-UP: When the installation is complete, the unit will be started and tested by a factory authorized service representative. All limit and interlock controls are to be checked independently for proper operation. Integration of the existing system controls with the new boiler/burner is to be ensured for proper operation. The new boiler/burner is to be set up for maximum efficiency firing natural gas. Combustion efficiency tests and start-up reports are to be furnished.

TRAINING: In conjunction with startup, the factory authorized service representative is to provide a complete training session on the adjustment, operation, and recommended maintenance of the boilers.

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SUMMARY

The goal of this project is to have installation of a new boiler/burner, which the South Kingstown School Department will gain the benefits of a high-efficiency, reliable, safe, low maintenance steel firetube boiler.

INFORMATION REQUIRED WITH RFP:

The following information must be provided to complete this proposal:

- Proof of Worker's Compensation, Comprehensive General Liability, and all applicable licenses or certifications
- (2) References: Include other schools or municipal accounts, if possible.
- Vendor W-9
- Signed RFP 2454 Document

DEFAULT:

In case of default by the vendor South Kingstown Public Schools may procure services from other sources and hold the vendor responsible for any excess cost occasioned thereby. Default is defined as being nonresponsive when called for services.

ACCEPTANCE AND REJECTION:

The South Kingstown School Department reserves the right to reject any and all proposals, to waive any technical defect or informality in the proposals received, and to accept any of the proposals deemed most favorable to the interest of the school system.

TIME FOR CONSIDERATION:

The offer shall be valid for **30** days from the date of quote opening.

AWARD OF CONTRACT:

Interested vendors should provide their proposal **on or before May 2nd, 2024 by the close of business.** Qualified proposals will be evaluated based on the relative merits of the vendor's qualifications and factors such as: lowest and best quote most advantageous to South Kingstown Public Schools, quality of services offered, the general reputation and performance capabilities of the vendor, the substantial conformity with the specifications and other conditions set forth in the proposal, and such other factors deemed pertinent by South Kingstown Public Schools. South Kingstown Public Schools reserves the right to accept any item or group of items on multi-item quote.

In addition, on TERM CONTRACTS, South Kingstown Public Schools reserves the right to make partial, progressive or multiple awards: where it is advantageous to award separately by items; or where more than one supplier is needed to provide the contemplated requirements as to quantity, quality, delivery, service, geographical areas; other factors deemed by South Kingstown Public Schools to be pertinent.

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