REQUEST FOR QUALIFICATIONS
ENGINEERING SERVICES
EDGEWOOD MIDDLE SCHOOL
CENTRAL PLANT REPLACEMENT

The Board of Education of Harford County Public Schools requests full mechanical, electrical, plumbing, and related design services for replacement and modernization of the central heating and cooling plants at Edgewood Middle School. Selection and ranking shall be based on understanding the project, qualifications and experience of the project team, relevant experience, client references and price proposal. The selected consultant will be contracted to confirm the preliminary project budget and provide subsequent project cost estimates through the design phases, to coordinate with the Facilities Management Department and school administrative personnel, review and develop minimum equipment standards, project phasing and sequencing as part of their full design services, verify existing conditions, develop the basis of design, prepare complete construction documents, support bidding and provide construction administration and close out services.

Interested teams should submit seven (7) copies of their technical proposal and (1) copy of their cost proposal as outlined in the attached proposal submission document. The qualifications and responses should be mailed, or hand delivered by 3:00 p.m. local time on Thursday, October 22, 2026, to Mr. Charles Grebe, Division of Planning & Construction of Harford County Public Schools, 2209 Conowingo Road, Bel Air, Maryland 21015. Hand delivered items must be delivered directly to Planning and Construction at the address above. Late submissions and facsimile transmissions **WILL BE CONSIDERED NON-RESPONSIVE AND WILL BE REJECTED**. A site visit will be conducted for interested teams on Wednesday, October 7, 2026, at 1:00 pm. The Board of Education of Harford County Public Schools reserves the right to accept or reject any and all qualifications and to waive any informalities as deemed appropriate.

Board of Education of Harford County
Dyann R. Mack Ed.D.
Superintendent of Schools

Proposal Submission:
This Request for Proposal (RFP) requires a two-part submission. Separate technical and price proposals are to be submitted in sealed envelopes on the date and time stipulated. Seven (7) originals of the technical proposal shall be submitted, or hand delivered in a sealed envelope, clearly marked. One (1) original cost proposal shall be submitted, or hand delivered in a sealed envelope, clearly marked.

Evaluation and Selection Process:
The evaluation criteria are set forth below and are intended to be the basis by which each proposal shall be evaluated. This is a two-step evaluation process. Technical proposals and price proposals shall be submitted separately and labeled accordingly.

The supervisor of facilities management of Harford County Public Schools (HCPS) along with the evaluation committee, will review and evaluate proposals submitted. The supervisor of facilities management will recommend the award of the contract as determined by the evaluation committee after taking into consideration all the evaluation criteria. The supervisor of facilities management will award a contract only to the offeror/s determined responsive and responsible, and representing the best value to HCPS based on a final evaluation of both the technical and price proposals.

HCPS reserves the right to reject any and all proposals and/or to waive any minor informalities.

HCPS reserves the right to terminate negotiation when, in its judgement, negotiations have reached an impasse. The successful offeror will be required to execute a contract with HCPS and the contract will include all the provisions of this RFP, including conditions, attachments and addenda issued.

Evaluation and Selection Process:

1. **Evaluation Committee:**
   HCPS will establish an evaluation committee who will first review each technical proposal for compliance with requirements, and then score each technical proposal in accordance with the criteria that follows.

2. **Evaluation Criteria:**
   The technical proposal is worth 70% and the price proposal is worth 30% of the evaluation criteria. The technical proposal should address, and will be evaluated upon four (4) categories, each assigned a weight value. These categories are described below in item #3.

3. **Technical Proposal (70%):**
   The technical proposal must be submitted in the format as outlined below. Next to the title is the weight factor assigned to each category.

   a. **Understanding the Project** **(10 Points)**
   The proposer shall state, in a concise manner, its interpretation and understanding of the project.

b. **Qualifications and Experience of the Project Team** **(20 Points)**
The proposer shall designate key staff members assigned to the project and shall provide a résumé for each member. Describe the roles of each team member including sub-consultants in narrative and organizational chart form. Include the day-to-day point of contact for the project.

c. **Relevant Experience** **(30 Points)**
The proposer shall provide a summary of Maryland Public School experience on chiller replacement projects similar in nature and complexity. Provide detailed information on three (3) to five (5) projects completed by your firm in the last five (5) years.

d. **Client References** **(10 Points)**
Provide contact name, title and phone number of the three (3) to five (5) similar projects completed within the last five (5) years.

4. **Price Proposal (30%):**

a. The committee will open and score **only** the price proposals submitted by firms achieving a minimum of 70% of available technical proposal points, or forty-nine (49) points.

b. The committee will award the full thirty (30) points available to the lowest price proposal. Higher-priced proposals will receive a lower score, prorated from the lowest proposal's thirty (30) point basis.

5. **Final Ranking and Selection:**

a. The score for price proposal will be added to the score for the technical proposal for a total score of up to one hundred (100) points. The firm achieving the highest cumulative score is considered the highest rated firm.

b. The committee may enter into cost and scope negotiations, only with the highest rated firm. If the committee and firm cannot agree upon the scope and cost, the committee will negotiate with the next highest rated firm. This process will continue until a fair and reasonably priced contract can be awarded.

c. The committee will recommend to the supervisor of facilities management an award to the responsible proposer whose proposal is determined to be most advantageous to HCPS, considering both the technical and price factors outlined above.

Central Plant Replacement Project Executive Summary
Edgewood Middle School

Project Need

Edgewood Middle School's central heating and cooling equipment is aging and no longer provides dependable service. Chiller No. 2 has failed, Chiller No. 1 has struggled to maintain the building cooling load, and a temporary chiller is currently installed onsite to serve the school. The existing boiler plant and associated pumps are also scheduled for replacement. This project will provide reliable, maintainable, and energy-efficient systems while reducing the risk of continued equipment failures and prolonged disruption to school operations.

Major Project Components

- Replace Chillers No. 1 and No. 2 with outdoor air-cooled chillers. The new outdoor equipment will use a glycol primary loop and an indoor plate heat exchanger so the outdoor piping does not need to be drained during winter.
- Remove the existing cooling tower serving Chillers No. 1 and No. 2, including obsolete condenser-water equipment, the surrounding brick screening wall, and fencing. Replace all heating-water and chilled-water pumps included in the project.
- Evaluate the separate Chiller No. 3 system. The base design will retain Chiller No. 3 and replace its cooling tower; replacement of Chiller No. 3 with an air-cooled chiller will be developed as an add alternate.
- Replace the six existing natural-gas boilers. HCPS prefers cast-iron sectional boilers for building heating. Domestic hot water will be separated from the boiler plant and produced by commercial gas-fired tank-type water heater(s). Pool heating will remain a standalone system.
- Develop an add alternate for a packaged rooftop pool dehumidification and air-conditioning system that maintains appropriate pool-area conditions and provides swimming-pool heat. The designer may reference the prior 50 percent design package but must update and take responsibility for a complete current design.
- Evaluate and upgrade the electrical distribution, natural-gas service, building automation controls, piping, structural supports, and related architectural and site work required for the new equipment.

Design and Construction Approach

The selected mechanical, electrical, and plumbing design consultant will verify existing conditions and system loads, evaluate equipment locations and utility capacity, prepare construction drawings and specifications, develop cost estimates, assist with bidding, and provide construction-phase support. The design will include a phasing plan that maintains heating and cooling service, coordinates continued use and eventual removal of the temporary chiller, and minimizes disruption to school operations.

Expected Result

The completed project will replace critical end-of-life infrastructure, improve system reliability and maintainability, separate building heating, domestic-water heating, and pool-heating functions, and provide HCPS with flexible bid alternates that can be selected based on available funding.

Scope of Design Services for Central Plant Replacement

Edgewood Middle School

2311 Willoughby Beach Road, Edgewood, Maryland 21040

Project Overview

The Board of Education of Harford County Public Schools requests full mechanical, electrical, plumbing, and related design services for replacement and modernization of the central heating and cooling plants at Edgewood Middle School. The selected consultant shall verify existing conditions, develop the basis of design, prepare complete construction documents, support bidding, and provide construction administration and closeout services.

Edgewood Middle School was originally constructed in 1965 as a two-story building of approximately 101,500 square feet. A classroom addition of approximately 64,970 square feet was constructed in 1978, and an elevator addition of approximately 60 square feet was constructed in 1990. The reported total building area is approximately 166,530 square feet and shall be verified by the consultant.

Project Objectives

- Replace aging central plant equipment with reliable, efficient, and maintainable systems.
- Replace Chillers No. 1 and No. 2 with outdoor air-cooled chillers and eliminate their existing cooling tower system.
- Evaluate Chiller No. 3 for continued service and develop its replacement as a bid alternate.
- Replace the cooling tower serving Chiller No. 3 if that chiller remains in service.
- Replace the six existing natural-gas boilers and all heating-water and chilled-water pumps included in the project, while separating building heating, domestic-water heating, and pool heating into appropriate systems.
- Provide new commercial gas-fired tank-type domestic-water heater(s) in place of using a central boiler for domestic hot-water production.
- Maintain pool heating as a standalone system and develop a pool-area rooftop dehumidification and pool-heating system as an add alternate.
- Upgrade associated electrical distribution, controls, piping, and plant accessories as required.
- Maintain school operations and minimize disruption during construction.

Existing Plant Summary

Equipment	Identification	Existing System	Proposed Treatment
Chiller 1	McQuay WPV240-DAAAM Serial STNU041100074	Water-cooled; R-134a; 460V, 3-phase; has struggled to carry the building load	Replace with outdoor air-cooled chiller
Chiller 2	Dunham-Bush PCX230H Serial HPW2010E77X1795	Water-cooled; R-22; 480V, 3-phase; currently failed	Replace with outdoor air-cooled chiller
Tower for Chillers 1 and 2	BAC Model 15227-2 Serial U050292501	Serves the main chilled-water plant	Remove with associated condenser-water equipment, brick wall, and fencing
Chiller 3	Carrier 30MPW0456LB02115 Serial 2318Q25072	Separate water-cooled system; R-410A; 460V, 3-phase	Retain in base design; replacement as add alternate
Tower for Chiller 3	BAC VTO-52-HMCR Serial 96100183	Separate condenser-water system	Replace if Chiller 3 remains; remove if alternate is accepted

Boiler Plant	Six Lochinvar PBN2000 boilers Year built 2004	Natural gas; one unit serves domestic hot water and one serves pool heating	Replace with separate building-heating, domestic-water, and pool-heating solutions

The building contains two separate mechanical rooms and two independent chilled-water systems. Chillers No. 1 and No. 2 serve the main chilled-water system. Chiller No. 3 serves a separate chilled-water system and shall not be represented as part of a common three-chiller plant.

Chiller No. 2 is currently failed, and Chiller No. 1 has struggled to maintain the building cooling load. A temporary chiller is installed onsite and is presently being used to serve the building. The consultant shall verify the temporary installation and incorporate its continued operation, required connections, phasing, and eventual removal into the construction documents so cooling service is maintained until the permanent replacement system is operational.

Required Investigation and Basis of Design

The consultant shall field-verify the existing equipment, piping, controls, electrical distribution, operating conditions, access limitations, and available site area. Existing drawings and equipment information provided by HCPS shall be treated as reference information and verified before use in the design.

Perform heating- and cooling-load calculations and evaluate actual system flow, head, temperature, staging, and redundancy requirements. Replacement equipment shall be selected from verified loads and operating requirements rather than solely from existing equipment nameplate capacities.

Mechanical Design Requirements

Chillers 1 and 2 Main Plant

Remove Chillers No. 1 and No. 2 and replace them with new outdoor air-cooled chillers. The consultant shall determine the appropriate quantity, capacity, efficiency, staging, and redundancy and shall identify a suitable outdoor location. The location study shall consider airflow, recirculation, noise, service and replacement access, security, utilities, structural support, electrical distribution, piping routes, and impacts on school operations and the site.

Remove the existing cooling tower serving Chillers No. 1 and No. 2 and all condenser-water equipment that is no longer required. Remove the brick screening wall and fencing surrounding the tower. Include restoration of disturbed paving, grading, landscaping, building construction, and utilities.

Glycol Primary Loop and Heat Exchanger

Design an outdoor glycol primary loop serving the new air-cooled chillers so that the outdoor system can remain filled during winter conditions. Locate a plate-and-frame heat exchanger inside the main mechanical room to separate the glycol loop from the building chilled-water loop. The consultant shall determine the appropriate glycol type and concentration and account for heat-exchanger approach temperature, pressure drop, service access, isolation, cleaning, and future maintenance.

Provide primary pumps for circulation between the air-cooled chillers and the plate heat exchanger and secondary pumps for the building chilled-water system. Establish minimum chiller flow, pump staging, variable-speed operation, differential-pressure control, and the required control sequence.

Chiller 3 Separate Plant

Evaluate Chiller No. 3 for condition, capacity, efficiency, compatibility with the proposed project, and anticipated remaining useful life. The base design shall retain Chiller No. 3 and replace its existing BAC cooling tower and associated components required for a complete operating condenser-water system.

Prepare an add alternate to replace Chiller No. 3 with an air-cooled chiller and remove the existing cooling tower and abandoned condenser-water equipment. Structure the alternate as the net change from the base design so the project does not include both a new cooling tower and an air-cooled replacement chiller.

Boiler and Hydronic Systems

The existing boiler plant consists of six Lochinvar Model PBN2000 natural-gas-fired hot-water boilers manufactured in 2004. Each boiler is rated for 2,000,000 BTU/h maximum input, 1,720,000 BTU/h output, and 1,000,000 BTU/h minimum input. One boiler is presently dedicated to domestic hot-water production and one boiler is dedicated to swimming-pool heating. Remove the six existing boilers and associated equipment and design appropriately separated replacement systems as described below.

For building space heating, perform heating-load calculations and design a replacement plant using cast-iron sectional boilers, HCPS's preferred boiler construction. Determine the appropriate quantity, capacity, efficiency, temperature regime, venting, combustion-air, and staging arrangement. If field conditions, code requirements, or verified system performance indicate that cast-iron sectional boilers are not suitable, clearly document the concern and obtain HCPS approval before developing a different boiler basis of design. The design shall provide practical redundancy and safe service access and shall coordinate all piping, electrical, controls, structural, and architectural work.

Evaluate the complete existing natural-gas service, including utility supply conditions, meter and regulator capacity, available pressure, connected loads, piping sizes and routing, pressure losses, and required capacity for the proposed space-heating boilers, domestic-water heaters, pool-heating equipment, and other gas-fired equipment. Coordinate with the serving gas utility as necessary and include all service, meter, regulator, and building gas-piping modifications required for the complete project, including the pool-system alternate.

Replace all heating-water and chilled-water pumps associated with both mechanical rooms and both chilled-water systems. Verify required flow and head and provide high-efficiency motors, variable-frequency drives, isolation and check valves, strainers, instrumentation, and related accessories as appropriate. Evaluate expansion tanks, air separators, chemical feeders, water treatment, and other hydronic specialties for replacement or modification.

Domestic Hot Water

Remove the existing central-boiler connection and equipment used to produce domestic hot water. Design new commercial gas-fired tank-type domestic-water heater(s), including recirculation, mixing, venting, combustion air, controls, and associated plumbing as required. Perform a domestic hot-water demand analysis and select the number, tank capacity, input, and recovery rating of the heater(s) to meet the school's current demand with appropriate temperature control, serviceability, and redundancy. Evaluate existing domestic-water piping and recirculation equipment within the project area and include modifications required for a complete operating system.

Pool Heating Base Design

Maintain swimming-pool heating as a standalone system independent of the building space-heating plant. Remove the existing boiler currently dedicated to pool heating and design dedicated replacement pool-heating equipment. Verify pool volume, operating temperature, heat loss, warm-up requirements, pool-water chemistry, existing circulation and filtration interfaces, piping materials, heat exchanger requirements, controls, venting, combustion air, and applicable health and safety requirements. Coordinate the pool-heating system with pool operations and provide all pumps, heat exchangers, valves, safeties, controls, electrical work, and gas-piping modifications required for a complete system.

Pool Area RTU and Pool Heating Add Alternate

Develop an add alternate for a new packaged rooftop pool dehumidification and air-conditioning unit that maintains appropriate natatorium temperature, humidity, ventilation, air distribution, and building-pressure conditions and also provides heat for the swimming pool. The alternate shall include all mechanical, plumbing, electrical, controls, structural, roofing, architectural, fire-protection, access, and testing and balancing work required for a complete installation. Clearly identify the work that replaces or modifies the standalone pool-heating base design so the two approaches are not duplicated.

HCPS will provide the 2020 Edgewood Middle School Pool HVAC Replacement 50% construction-document package as reference information. That package included a PoolPak PPK-140 rooftop unit concept, associated ductwork and piping, pool-water heat recovery, heating-water connections, controls, electrical work, and structural roof support. The consultant may use the prior work as a starting point but shall take full professional responsibility for a new, current design. Field-verify existing conditions and update all load calculations, equipment selections, sequences, layouts, utility requirements, structural analysis, code criteria, energy requirements, product availability, construction phasing, specifications, and cost estimates. The final design shall reflect current HCPS requirements and shall not rely on the 2020 documents without independent verification.

Electrical Design Requirements

Evaluate the existing electrical systems serving both mechanical rooms and all equipment affected by the project. The main chilled-water plant includes existing 480-volt distribution equipment with dedicated breakers for Chillers No. 1 and No. 2. Verify equipment ratings, condition, age, available capacity, feeder sizes, breaker ratings and settings, available fault current, interrupting ratings, parts availability, and suitability for reuse.

Determine whether the existing switchboards, breakers, feeders, disconnects, starters, panels, and related components may be reused or require repair, modification, expansion, or replacement. Provide load calculations, short-circuit calculations, protective-device coordination, arc-flash analysis and labeling, voltage-drop calculations, grounding and bonding review, and other studies necessary to support the design.

Provide complete electrical service to the new outdoor chillers, pumps, boilers, domestic-water heaters, pool-heating equipment, cooling tower equipment, variable-frequency drives, controls, heat tracing, and related project loads. Coordinate feeder routing, trenching, penetrations, disconnects, overcurrent protection, equipment grounding, labeling, and restoration. Account for the Chiller No. 3 alternate and the pool-area RTU alternate, including verification of capacity for the prior 460-volt, three-phase rooftop-unit concept.

Building Automation and Controls

Provide complete automatic temperature controls for all new and modified equipment and integrate the systems with the existing Johnson Controls Metasys building automation system. The consultant shall develop sequences for equipment enable, staging, lead-lag rotation, pump control, differential-pressure reset, domestic-water temperature control, pool-water temperature control, natatorium temperature and humidity control, alarms, safeties, trending, and operator adjustment, as applicable to the base design and alternates. Coordinate removal of obsolete controls and update graphics, points, schedules, and documentation.

Coordination Phasing and Site Work

Coordinate all mechanical, electrical, plumbing, architectural, structural, civil, controls, fire-protection, and code-related work required for a complete installation. Investigate equipment access and removal routes, including openings that may be required to remove existing equipment or install replacements.

Develop a construction-phasing plan that maintains required heating and cooling service and minimizes impact on school operations. Identify permitted shutdowns, temporary services, seasonal constraints, equipment lead times, and work that must occur during school breaks or unoccupied periods. Coordinate the project schedule with HCPS before finalizing the construction documents.

Design and Construction Phase Services

- Conduct site investigations and coordination meetings with HCPS.
- Prepare a basis-of-design narrative and review major equipment and system recommendations with HCPS before completing the design.
- Prepare coordinated drawings and specifications suitable for permitting, bidding, and construction.
- Provide construction-cost estimates at agreed design milestones and identify base-bid and alternate costs separately.
- Prepare and submit permit documents and respond to authority comments.
- Attend the pre-bid meeting, respond to bidder questions, and prepare addenda as required.
- Attend the pre-construction meeting and provide submittal review, RFI responses, periodic site observations, and construction administration.
- Conduct substantial- and final-completion inspections and prepare punch lists.
- Review testing and balancing, startup, commissioning, training, operation and maintenance manuals, warranties, and record documents.
- Identify the project team, schedule, assumptions, exclusions, and fee, with base-project services, the Chiller No. 3 alternate, and the pool-area RTU and pool-heating alternate clearly separated.