

**AGENCY REQUEST FOR
A/E SELECTION
FEBRUARY 2021**

AGENCY: Department of Administration

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LOCATION: Capitol Heat & Power Plant
Madison, Wisconsin

PROJECT REQUEST:

Request A/E design services for pre-design through construction administration for a Building Envelope Rehabilitation Project at the Capitol Heat & Power Plant for an estimated total cost of \$1,344,000 PRSB.

The A/E design team for this project shall have specific expertise and experience in the design, coordination, and construction of a comprehensive building envelope rehabilitation in power plants and/or large office buildings. The successful A/E design team should indicate specific projects from experience (including size, cost, and completion date) in their letter of interest and when known, include proposed consulting partners and specialty consultants.

PROJECT NUMBER: 21A1N

PROJECT DESCRIPTION:

This project provides a building envelope rehabilitation at the Capitol Heat & Power Plant (CHPP) and Maintenance Shop which includes the comprehensive cleaning of the original structure; concrete repairs; brick masonry repairs; abandoned chimney removal; localized structure repairs; sealant rehabilitation; and painting or coating rehabilitation. Scope also includes the removal and replacement of approximately 51 original widow units. The replacement windows should address security, thermal concerns, provide a consistent frame type, glass selection and screens, as well as be consistent with the historical nature and age of the Plant. The proposed window replacements should provide thermally broken frames with insulated glass to meet or exceed U-.36 (fixed units) or U-.43 (operable) energy performance. Project work should be done from May through September so that building tenants or CHPP operations will not be negatively impacted.

JUSTIFICATION:

The 48,116 GSF Capitol Heat & Power Plant is a central utility plant that supplies steam for heating and/or chilled water for air conditioning for eleven state buildings located in downtown Madison. In addition, it provides steam to the City of Madison's Monona Terrace Convention Center, and to Dane County's City/County Jail, Public Safety Building and County Courthouse. The power plant also generates electricity for the Capitol building with emergency power provided by a diesel-powered generator.

Construction of the CHPP was completed in 1909. It consists of the original multi-level plant structure, a one-story maintenance shop and various additions. The Plant was

converted from coal to natural gas in 2011 and the total rebuild of the Plant was completed in 2015. This project replaced the existing coal fired boilers and steam generated chilled water system with natural gas boilers and electric chillers. A new metering system and energy optimization program was initiated shortly after that. Now that major equipment upgrades been completed, the facility's building envelope issues will be addressed in this project.

The windows at the CHPP are original construction and consist of a mixture of awning, double hung and fixed units. The windows are of wood construction with divided lights, security screens and safety glass and are painted with lead paint which is peeling. Overall, the units are in poor condition with failing operable components, hardware, and finishes. A comprehensive replacement sensitive to the Plant's historical significance is needed and should address security and thermal concerns.

In general, the existing masonry walls at the CHPP are in good to excellent condition. However, there are some localized areas needing veneer brick replacement, anchor removals and re-pointing or repairs. Examples include an outward bowing of the southeast facing façade (Main Street) above the roof line where the separation of the full width of the masonry wall measures approximately 1 ½ to 2 inches at its worse. Also, there is an abandoned, deteriorated masonry chimney at the Maintenance Shop that should be removed. A comprehensive cleaning should be done to remove existing contaminants from the Plant's coal burning past. This will provide an opportunity to identify any additional re-pointing needs at the facility. Additionally, a complete sealant replacement of the original structure needs be done to address failing joints (terra cotta, brick, and openings). Since the project will assess/review all exterior building surfaces, an opportunity is provided to rehabilitate and restore all painted finishes on metal doors/frames, steel lintels, etc.

This project will resolve existing building envelope issues by providing new energy efficient glass and thermally broken sashes or assemblies for windows at the Capitol Heat & Power Plant. In addition, the project will restore the structural integrity of the Plant by addressing specific areas requiring remediation, provides building wide sealant replacement and comprehensive cleaning of the exterior of the facility. This work is needed to prevent water infiltration, increase ventilation, enable proper building pressurization, and will improve CHPP operations.

Existing site plans, photographs and supplemental information will be provided to the successful A/E team.

PROJECT BUDGET & SCHEDULE

Construction	
Design	
DFD Mgt.	
Contingency	
Equipment	
TOTAL	\$ 1,344,000

A/E Selection	Feb-2021
Design Report	Jun-2021
SBC Approval	Aug-2021
Bid Opening	Jan-2022
Start Construction	Apr-2022
Substantial Completion	Oct-2022
Final Completion	Nov-2022