All Agency Project Request

2013 - 2015 Biennium

Agency	Institution	Building No.	Building Name
University of Wisconsin	Madison	285-0A-9922	Utility - Site Waste Water

Project No. 16B1C **Project Title** Limnology Force Main/Lift Station Repl

Project Intent

This project provides investigation and research, pre-design, and design services to renovate or replace the sanitary sewer lift station in the lower level of the Limnology Building and replace the associated the 4-inch force main and the adjacent 4-inch domestic water service to the building. The lift station, force main, and domestic water service will be evaluated to identify deficiencies, develop design solution alternatives, and recommend appropriate corrective measures.

Project Description

Project work includes identifying deficiencies and regulatory requirements for the sanitary sewer and domestic water services to Limnology, developing design solution alternatives, recommending appropriate corrective measures, and developing a project budget and schedule. Modifications to the building structure and plumbing systems in the mechanical room are to be included in this project. Alternatives must include potential impacts on the other utility services lines serving Limnology and other buildings in the area. Design and construction administration services will be provided after the pre-design report and construction funding are approved.

Project Justification

The sanitary sewer lift station and force main were originally installed in 1961 and the force main was subsequently relocated in 1968 with the construction of Helen C. White Library. The lift station is currently located in the basement of the building. The lift station needs to be renovated or replaced because it is unreliable and the level of maintenance needed to keep it operational is excessive. The lift station contains one 50 gallon pneumatically actuated ejector pump with a capacity of 50 gpm which is simple to operate and, when in good condition, would be low maintenance and seldom clog. However, this is the original pump that is in very poor condition and, due to age, and requires constant maintenance. Many of its replacement parts are not commercially available and require custom fabrication. Continuous and reliable operation is critical for the building and to prevent any potential environmental damage that would be caused by a system failure.

The existing force main is reaching its design life and requires periodic repairs. The adjacent water main was constructed of sand cast pipe and parallels the force main. Sand cast pipe is notoriously brittle and this specific water main has collapsed in the past when it's been disturbed. The force main and water main are so close together that it is believed the water pipe could crumble as a result of replacing the force main. So it is intended to replace both pipes as part of this project.

The other limnology utility service lines are also located close to the forcemain and water service. These service lines may be impacted by the forcemain and water service replacement.

A/E Consultant Requirements

☑ A/E Selection Required?

Consultants should have specific expertise and experience in the evaluation and design of sanitary lift stations (interior and exterior), force mains, water mains, related electrical and mechanical control systems, and building structure and plumbing systems as part of a design team. Work includes site surveys, acquiring field data, and verifying as-built conditions to assure accurate development of design and bidding documents, and production of necessary design and bidding documents. Consultants should indicate specific projects from past experience (including size, cost, and completion date) in their letter of interest and when known, include proposed consulting partners and specialty consultants.

Commissioning

☑ Level 1

☐ Level 2

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The consultant will verify project scope and budget estimates, and recommend modifications as required to complete the specified project intent. The consultant will prepare a pre-design document to establish an appropriate project scope, budget, and schedule prior to the university seeking authority to construct from the Board of Regents and State Building Commission.

Project Budget

Construction Cost:		$
Haz Mats:		$
Construction Total:		$
Contingency:	15%	$
A/E Design Fees:	8%	$
DFD Mgmt Fees:	4%	$
Other:		$
		$856,000

Funding Source(s)

	Total
GFSB - Utilities Repair & Renovation [Z080]	$0
PRSB - []	$0
Agency/Institution Cash [AGF0]	$53,700
Gifts	$0
Grants	$0
Building Trust Funds [BTF]	$0
Other Funding Source	$0
	$53,700

Project Schedule

SBC Approval:	10/2016
A/E Selection:	03/2016
Bid Opening:	02/2017
Construction Start:	05/2017
Substantial Completion:	09/2017
Project Close Out:	12/2017

Project Contact

Contact Name: Matt Collins

Email: <mcollins@fpm.wisc.edu>

Telephone: (608) 263-3031 x

Project Scope Consideration Checklist

	y	N
1. Will the building or area impacted by the project be occupied during construction? If yes, explain how the occupants will be accommodated during construction. *All project work will be coordinated through campus physical plant staff to minimize disruptions to daily operations and activities.*	☑	☐
2. Is the project an extension of another authorized project? If so, provide the project #...	☐	☑
3. Are hazardous materials involved? If yes, what materials are involved and how will they be handled? *Hazardous materials abatement is not anticipated on this project.*	☐	☑
4. Will the project impact the utility systems in the building and cause disruptions? If yes, to what extent? *All project work will be coordinated through campus physical plant staff to minimize disruptions to daily operations and activities.*	☑	☐
5. Will the project impact the heating plant, primary electrical system, or utility capacities supplying the building? If yes, to what extent?	☐	☑
6. Are other projects or work occurring within this project's work area? If yes, provide the project # and/or description of the other work in the project scope.	☐	☑

7. Have you identified the WEPA designation of the project...Type I, Type II, or Type III? ☑ ☐

   Type III.

8. Is the facility listed on a historic register (federal or state), or is the facility listed by the Wisconsin Historical Society as a building of potential historic significance? If yes, describe here. ☐ ☑

9. Are there any other issues affecting the cost or status of this project? ☐ ☑

10. Will the construction work be limited to a particular season or window of opportunity? If yes, explain the limitations and provide proposed solution. ☑ ☐

    Project work is seasonal. Preferred project work schedule should be limited to late spring, summer, and!or early fall months if possible.

11. Will the project improve, decrease, or increase the function and costs of facilities operational and maintenance budget and the work load? If yes, to what extent? ☑ ☐

    Completion of this project will decrease operational maintenance costs.

12. Are there known code or health and safety concerns? If yes, identify and indicate if the correction or compliance measure was included in the budget estimate, or indicate plans for correcting the issue(s). ☐ ☑

13. Are there potential energy or water usages reduction grants, rebates, or incentives for which the project may qualify (i.e. Focus on Energy <http://www.focusonenergy.com> or the local utility provider)? If yes, describe here. ☐ ☑

14. If this is an energy project, indicate and describe the simple payback on state funding sources in years and the expected energy reduction here. ☐ ☑