

All Agency Project Request

2009 - 2011 Biennium

<u>Agency</u>	<u>Institution</u>	<u>Building No.</u>	<u>Building Name</u>
University of Wisconsin	Milwaukee	285-0B-9920	Utility - Site Mechanical

<u>Project No.</u>	10J1Z	<u>Project Title</u>	UWMIL Multi-Bldg Steam Lateral Repl
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Project Intent

This project replaces eight (8) sections and approximately 1,342 LF of underground steam conduits serving various campus facilities, most of which were constructed within concrete box conduits. New concrete box conduits (where required) will be constructed to enclose the replacement steam and condensate piping sections, reusing the steam piping where possible.

Project Description

Project work includes site excavation; removing the top of the box conduit and repairing/replacing all deteriorated supports, guides, and anchors; replacing and insulating the condensate return piping; and replacing all deteriorated steam piping insulation. Two (2) walls and floor of the concrete box conduit will be reused. A new reinforced concrete top will be installed and all sides of the box conduit will be waterproofed. Rigid insulation board will be installed to protect the waterproofing. All asbestos containing insulation material will be abated as necessary. Sections of steam piping will be replaced as necessary and as determined by their condition. Temporary isolation valves or blanks will be installed in each section to allow construction activities to occur without extended steam shutdowns to other buildings served by the distribution system.

The project includes site restoration for all areas disturbed by project work, including turf, irrigation systems, nursery stock trees, pedestrian walkways, driveways, parking lots, and retaining walls. The pressure reducing valve (PRV) station serving Chapman Hall will be relocated from the steam tunnel to Chapman Hall.

The following piping segments will be replaced:

- 188 LF Bolton Tunnel to Steam Pit 11
- 207 LF Steam Pit 14 to Library Stage 1
- 217 LF Steam Pit 11 to UWM Union Garage
- 59 LF Steam Pit 11 to UWM Union Stage 1
- 162 LF Steam Tunnel to Chapman Hall
- 339 LF Steam Tunnel to EMS Building
- 38 LF Steam Tunnel to Enderis Hall
- 132 LF Steam Tunnel to Engelmann Hall

1,342 LF

Project Justification

This steam and condensate return distribution piping was originally installed from the early 1960s to the early 1970s. The concrete box conduits have become more prone to leaking, causing several local flooding issues. The age of the concrete box conduits along with the water infiltration has led to the corrosion and deterioration of the steel piping supports. The insulation has deteriorated and been washed off in several sections of the steam piping. Condensate return piping leaks have been increasing, leading to sections that have been valved off due to piping failures.

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A/E Consultant Requirements

A/E Selection Required?

Consultants should have specific expertise and experience in the design and coordination of in the design and coordination of underground concrete box steam conduit installations 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

Project Budget

Construction Cost:		\$1,557,100
Haz Mats:		\$80,000
Construction Total:		\$1,637,100
Contingency:	15%	\$245,600
A/E Design Fees:	8%	\$131,000
DFD Mgmt Fees:	4%	\$75,300
Equipment/Other:		\$0
		\$2,089,000

Funding Source

GFSB - Utilities Repair & Renovation [Z080]	\$1,608,500
PRSB - []	\$0
Agency/Institution Cash [AGF0]	\$480,500
Gifts	\$0
Grants	\$0
Building Trust Funds [BTF]	\$0
Other Funding Source	\$0
	\$2,089,000

Project Schedule

- SBC Approval: 12/2010
- A/E Selection: 01/2011
- Bid Opening: 02/2012
- Construction Start: 04/2012
- Substantial Completion: 09/2012
- Project Close Out: 12/2012

Project Contact

- Contact Name: Andrew C. Nelson
- Email: <acnelson@uwm.edu>
- Telephone No.: (414) 229-4013 x

Project Scope Consideration Checklist

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| | <u>Y</u> | <u>N</u> |
| 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. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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 #... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Are hazardous materials involved? If yes, what materials are involved and how will they be handled? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Required hazardous materials abatement (mechanical piping insulation and fittings) has been included in the estimated project schedule and project budget. Comprehensive building survey inventory data is not available on Wisconsin's Asbestos & Lead Management System (WALMS) < http://walms.doa.state.wi.us/ >. | | |
| 4. Will the project impact the utility systems in the building and cause disruptions? If yes, to what extent? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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Short utility shutdowns will be coordinated by physical plant staff with the users to minimize disruptions.

5. Will the project impact on the utility capacities supplying the building? If yes, to what extent?
6. Will the project impact the heating plant or the primary electrical system supplying the campus or institution? If yes, to what extent?
7. Have you identified the WEPA designation of the project...Type I, Type II, or Type III?
Type III.
8. Is the project affected by historic status?
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.