

All Agency Project Request

2009 - 2011 Biennium

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

<u>Project No.</u>	10K2J	<u>Project Title</u>	HC White-Sci Hall Tunnel Repl
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Project Intent

This project replaces a partially collapsed brick utility tunnel and the associated central utilities from the basement of Helen C. White Library south to Radio Hall and Science Hall. A domestic water pipe will also be replaced, and the primary and signal ductbanks will be constructed to relocate power and signal communication wiring from the brick utility tunnel before being demolished. The new compressed air (CA), high pressure steam (HPS), low pressure steam (LPS), and pumped condensate return (PCR) lines will be installed in a new concrete utility tunnel.

Project Description

MECHANICAL UTILITIES: Project work includes replacing the brick utility tunnel and the associated steam, condensate, and compressed air piping. A new concrete utility tunnel (130LF) will be constructed from the basement of Helen C. White Library south under Observatory Drive to the east side of Radio Hall. New 6-inch HPS, 10-inch LPS, 4-inch PCR and 1.5-inch CA piping will be installed. Three (3) new sections of concrete box conduit will be installed, replacing piping in the same location from Radio Hall to Science Hall. The first section of concrete box conduit (80 LF) will include 4-inch HPS, 6-inch LPS, 3-inch PCR and 1-inch CA piping. The second section of concrete box conduit (30 LF) will include 2-inch LPS, 1-inch PCR and 1-inch CA piping. The third section of concrete box conduit (20 LF) will include 6-inch LPS, 4-inch PCR and 1-inch CA piping.

ELECTRICAL/TELECOMMUNICATION UTILITIES: Project work includes relocating primary power wiring from the brick utility tunnel to a new ductbank located adjacent to the new utility tunnel. The signal communication wiring will be relocated from the brick utility tunnel to a series of new ductbanks. A quantity of four (4) 4-inch signal conduits will be installed from Helen C. White Library to the west end of Science Hall at the mid-section of the building, plus a quantity of four (4) 4-inch signal conduits will be installed from this location to the utility tunnel at the south end of Radio Hall. A quantity of two (2) 4-inch signal conduits will be installed from the center of Radio Hall east to Science Hall.

PLUMBING UTILITIES AND SITEWORK: Project work includes relocating/replacing an 8-inch sand cast domestic water line from, and adjacent to, the brick utility tunnel to a new location adjacent to the new utility tunnel. In order to keep Observatory Drive open for traffic, a temporary bridge will be constructed to facilitate construction of the new utility tunnel. Temporary steam, condensate, compressed air, and domestic water may be required at times throughout the duration of construction. All areas disturbed by the project will be fully restored, including roadways and associated gutters, sidewalks, landscaping features, and site structures.

Project Justification

The brick utility tunnel in this area is more than 100 years old and has deteriorated and become a safety concern. A portion of the brick utility tunnel collapsed due to nearby construction, and due to the parking lot above the tunnel, the structural integrity of the tunnel has been compromised. The 8-inch sand cast domestic water line installed in 1890 has been repaired several times. The East Campus Utility Improvements (10A3Y) installed H-piles and lagging on both sides of the tunnel under Observatory Drive. These piles were left in place to support a temporary bridge.

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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 underground central utilities 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:	\$2,734,000
Haz Mats:	\$50,000
Construction Total:	\$2,784,000
Contingency: 15%	\$417,600
A/E Design Fees: 8%	\$222,700
DFD Mgmt Fees: 4%	\$128,100
Equipment/Other:	\$50,000
	\$3,602,400

Funding Source

GFSB - Utilities Repair & Renovation [Z080]	\$2,701,800
PRSB - Utilities Repair & Renovation [T570]	\$900,600
Agency/Institution Cash <input type="checkbox"/>	\$0
Gifts	\$0
Grants	\$0
Building Trust Funds [BTF]	\$0
Other Funding Source	\$0
	\$3,602,400

Project Schedule

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

Project Contact

- Contact Name: Dan Dudley
- Email: <ddudley@fpm.wisc.edu>
- Telephone No.: (608) 263-2359 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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All project work will be coordinated through campus physical plant staff to minimize disruptions to daily operations and activities.

5. Will the project impact on the utility capacities supplying the building? If yes, to what extent?

Brief interruptions are anticipated and will be scheduled.

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.