

01/30/13

BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

I.3. Capital Planning and Budget Committee

Thursday, February 7, 2013
Room 1920, Van Hise Hall
1220 Linden Drive
Madison, Wisconsin

1:00 p.m. Meeting of the Capital Planning and Budget Committee – Room 1920

- a. Approval of the Minutes of the December 6, 2012 Meeting of the Capital Planning and Budget Committee
- b. UW Colleges: Report on City and County Financial Support
- c. UW-Madison: Authority to Construct a Parking Lot
[Resolution I.3.c.]
- d. UW System: Authority to Request the Release Funds for Campus Planning
[Resolution I.3.d.]
- e. UW System: Authority to Construct All Agency Maintenance and Repair Projects
[Resolution I.3.e.]
- f. UW Colleges: Waukesha County; Multiple Building Energy Conservation Project
[Resolution I.3.f.]
- g. Report of the Associate Vice President
 - Building Commission Actions
 - Capital Planning Cycle

Authority to Construct a Parking Lot,
UW-Madison

CAPITAL PLANNING AND BUDGET COMMITTEE

Resolution:

That, upon the recommendation of the UW-Madison Interim Chancellor and the President of the University of Wisconsin System, authority be granted to expand a parking lot into the land vacated by two demolished buildings for an estimated project cost of \$334,000 Program Revenue-Cash Transportation Funds.

THE UNIVERSITY OF WISCONSIN SYSTEM

Request for Board of Regents Action February 2013

1. Institution: The University of Wisconsin-Madison
2. Request: Authority to expand a parking lot into the land vacated by two demolished buildings for an estimated project cost of \$334,000 Program Revenue-Cash Transportation Funds.
3. Description and Scope of Project: This project will demolish and remove the following vacant houses on the UW-Madison campus:

925/927 West Johnson Street	2,200 GSF
931/933 West Johnson Street	8,056 GSF

Demolition work will include complete removal of all building systems, including mechanical, plumbing, and electrical in the structures before they are taken down. Demolition will include removal of the stone foundations and basement walls and then backfilling to grade. Asbestos abatement was already performed under a previous small project.

Once the buildings are demolished, existing parking Lot 61 located adjacent to the buildings will be reconstructed and expanded from 12 spaces to roughly 32 spaces. The preliminary plans and the site survey of the lot were completed under a previous project. Reconstruction work will include grading of the site; laying a gravel base course and asphalt pavement; and providing site lighting, landscaping, restoration, storm sewer, concrete driveways, and sidewalks.

The attached site plan identifies the properties.

4. Justification of the Request: The structures on West Johnson Street were built in 1909 as private student housing units. The University of Wisconsin acquired the properties in 1999 and then used the buildings as temporary residential units. Both buildings have been vacant since 2009. Demolition is requested because they are at risk for break-in and vandalism and pose a risk to public safety in their current condition.

The university wishes to develop the site for surface parking as a temporary use until all the land within the half block where the buildings are located is acquired for a future academic use as shown in the 2005 Campus Master Plan (see attached graphic). The temporary parking lot will be used by university faculty and staff permit-holders and will help replace parking stalls lost to construction in the east campus area.

5. Budget and Schedule:

Construction Cost		\$273,000
Haz. Mats.		0
Total Construction		<u>273,000</u>
Contingency	10 %	27,000
A/E Design Fees	8 %	22,000
DFD Fees	4 %	12,000
Equipment/Other		0
		<u>\$334,000</u>

SBC Approval	February 2013
A/E Selection	March 2013
Bid Opening	June 2013
Construction Start	July 2013
Substantial Completion	December 2013
Project Close Out	February 2014

6. Previous Action: None.

Two building demolition and Parking Lot 61 Expansion Site Location Map



2010 Aerial Photo

925/927 West Johnson Street and 931/933 West Johnson Street



2005 UW-Madison Campus Master Plan

Authority to Request the Release Funds
for Campus Planning, UW System

CAPITAL PLANNING AND BUDGET COMMITTEE

REVISED Resolution:

That, upon the recommendation of the President of the University of Wisconsin System, authority be granted to request the release of \$89,000 Building Trust for the purpose of hiring consultants to prepare a farms master plan for UW-River Falls and a space plan study for UW-Waukesha.

THE UNIVERSITY OF WISCONSIN SYSTEM

Request for Board of Regents Action February 2013

1. Institution: The University of Wisconsin System
2. Request: Authority to request the release of \$89,000 Building Trust for the purpose of hiring consultants to prepare a farms master plan for UW-River Falls and a space plan study for UW-Waukesha.
3. Project Description and Scope:

UW-River Falls Farms Master Plan

UW-River Falls was founded as a normal school in 1874. The College of Agriculture, Food and Environmental Sciences (CAFES) currently enrolls 1,381 students and is the fastest growing college at the university. The campus has operated a laboratory farm since agriculture programming began in 1912. The Campus Laboratory Farm includes 102 acres of land and 32 buildings primarily in support of the equine science and horticulture programs. The Mann Valley Farm, situated at the edge of the city, includes 582 acres of land and 39 buildings in support of the dairy enterprise, the three meat animal enterprises (beef, swine and sheep) and the cropping enterprise. Staff housing and classroom/demonstration facilities can be found at both farms.

This will be the first master plan prepared for the lab farms. The consultant team will assess existing infrastructure and facilities and make recommendations that support the strategic plan of the university farms for the next decade.

UW-Waukesha Space Planning Study

UW Colleges is seeking to conduct a space utilization study for UW-Waukesha, the largest of 13 campuses within UW Colleges. This large-scale space planning effort will clarify levels of facility use and demand for specific types of space, recommend efficiencies and identify unmet demand, crystallize strategies for addressing gaps, and recommend space allocation policies and capital solutions.

4. Justification of the Request: These efforts are a recognized best practice necessary for the proper maintenance and upgrade of agency facilities to fulfill the UW System mission.

UW-River Falls Farms Master Plan

Master plans are intended to support academic planning and serve as the physical means for implementing strategic plans. The master plan will assess the condition and suitability of current facilities, identify appropriate physical solutions in conjunction with operational improvements, evaluate costs of solutions, identify funding sources for implementation, and assign roles and

responsibilities for achieving the master plan recommendations. The UW-River Falls lab farms are used for academic purposes and do not generate program revenue.

UW-Waukesha Space Planning Study

The UW-Waukesha Space Planning Study will clarify space needs for the institution. It is particularly necessary at this time due to significant enrollment growth, projections for growth in Waukesha County, need for facility renewal, and negative impacts to operating revenues due to perceived space limitations. This study, which quantifies need and demonstrates the use of best practices by the university, will also provide the defensible foundation for future UW-Waukesha capital project requests.

5. Budget:

Institution	BTF-Contingency
UW-River Falls	\$65,000
UW Colleges: UW-Waukesha	24,000
Total	\$89,000

6. Previous Action: None.

Authority to Construct All Agency
Maintenance and Repair Projects,
UW System

CAPITAL PLANNING AND BUDGET COMMITTEE

Resolution:

That, upon the recommendation of the President of the University of Wisconsin System, authority be granted to construct various maintenance and repair projects at an estimated total cost of \$15,010,600 (\$6,972,200 General Fund Supported Borrowing; \$3,207,900 Program Revenue Supported Borrowing; \$544,000 Gifts and Grants; and \$4,286,500 Program Revenue Cash).

THE UNIVERSITY OF WISCONSIN SYSTEM

Request for Board of Regents Action February 2013

1. **Institution:** The University of Wisconsin System
2. **Request:** Authority to construct various maintenance and repair projects at an estimated total cost of \$14,466,600 (\$6,972,200 General Fund Supported Borrowing; \$3,207,900 Program Revenue Supported Borrowing; \$4,286,500 Program Revenue Cash).

FACILITIES MAINTENANCE & REPAIR

INST	PROJ. NO.	PROJECT TITLE	GFSB	PRSB	CASH	GIFT/GRANT	Z450	TOTAL
PKS	12G4A	Univ Apts Ext Envelope Maint & Repr	\$ -	\$ 1,630,000	\$ -	\$ -	\$ -	\$ 1,630,000
STO	12D3Z	Sports & Fitness Ctr Bleachers/Track Infield Repl	\$ 457,300	\$ 80,700	\$ -	\$ -	\$ -	\$ 538,000
FM&R SUBTOTALS			\$ 457,300	\$ 1,710,700	\$ -	\$ -	\$ -	\$ 2,168,000

HEALTH, SAFETY, & ENVIRONMENTAL PROTECTION

INST	PROJ. NO.	PROJECT TITLE	GFSB	PRSB	CASH	GIFT/GRANT	Z450	TOTAL
MIL	12B1R	NWQ Fire Alarm/Telcomm Renv (Increase)	\$ 491,400	\$ -	\$ 58,900	\$ -	\$ -	\$ 550,300
HS&E SUBTOTALS			\$ 491,400	\$ -	\$ 58,900	\$ -	\$ -	\$ 550,300

PROGRAMMATIC REMODELING & RENOVATION

INST	PROJ. NO.	PROJECT TITLE	GFSB	PRSB	CASH	GIFT/GRANT	Z450	TOTAL
MSN	13A1P	Kronshage Hall Maint & Repr	\$ -	\$ -	\$ 2,150,000	\$ -	\$ -	\$ 2,150,000
MSN	13A1S	Slichter Hall Ground Floor Rmdl	\$ -	\$ -	\$ 522,000	\$ -	\$ -	\$ 522,000
PR&R SUBTOTALS			\$ -	\$ -	\$ 2,672,000	\$ -	\$ -	\$ 2,672,000

UTILITIES REPAIR & RENOVATION

INST	PROJ. NO.	PROJECT TITLE	GFSB	PRSB	CASH	GIFT/GRANT	Z450	TOTAL
EAU	13A2W	Upper Campus Steam Dist Renv	\$ 787,600	\$ -	\$ 570,400	\$ -	\$ -	\$ 1,358,000
MSN	10I3D	Campus Storm Water Detention Ponds (Eagle Heights/L)	\$ 752,500	\$ -	\$ 278,300	\$ -	\$ -	\$ 1,030,800
MSN	12A1E	Lot 76 Lift Station Renv	\$ 989,900	\$ -	\$ 366,100	\$ -	\$ -	\$ 1,356,000
SUP	12I2S	Steam Dist Sys Repr/Repl (Flood Restoration, Ph. II)	\$ 3,493,500	\$ 1,497,200	\$ -	\$ -	\$ -	\$ 4,990,700
WTW	10K1U	Reconfigure Parking Lot Circulation	\$ -	\$ -	\$ 340,800	\$ -	\$ -	\$ 340,800
UR&R SUBTOTALS			\$ 6,023,500	\$ 1,497,200	\$ 1,555,600	\$ -	\$ -	\$ 9,076,300

	GFSB	PRSB	CASH	GIFT/GRANT	Z450	TOTAL
FEBRUARY 2013 TOTALS	\$ 6,972,200	\$ 3,207,900	\$ 4,286,500	\$ -	\$ -	\$ 14,466,600

3. **Description and Scope of Project:** This request provides maintenance, repair, renovation, and upgrades through the All Agency Projects Program.

Facilities Maintenance and Repair Requests

PKS - University Apartments Exterior Envelope Maintenance and Repair (\$1,630,000):

This project repairs or replaces various components (decorative paneling, doors, roofing, siding, windows) of the exterior envelope that have failed or are near the end of their useful life. Project work includes replacing 97 exterior doors; 200 exterior windows (2'0" x 4'0"); 50,100 SF of asphalt shingle roofing; 19,000 SF of wood siding at gables and stairwells with new metal wall panel; 1,900 LF of gutters and 2,000 LF of downspouts across all

seven student residence buildings and one common building. Approximately 20,570 SF of aggregate/exterior insulation finishing system (EIFS) panels will be removed and disposed. The plywood backing behind the EIFS panels will be re-sided with new metal wall panels to match the metal siding used throughout the complex. All soffits and fascia will be repaired or replaced. All masonry surfaces will be repaired, tuck pointed, and recaulked as required. All roof vents will be replaced with new maintenance free units. All balconies, railings, and stairwells will be repainted. All through-wall unit air conditioner sleeves will be replaced. The campus will supply the sleeves and the contractor will install as per manufacturer specifications, reinsulate, recaulk, and replace exterior and interior trim pieces to match new fascia, gutters and downspouts, siding, and soffits.

The University Apartments (72,107 GSF) were built in 1986 as the first on-campus housing. The buildings are wood framed with asphalt shingle, brick, wood, and aggregate panel exterior finishes, and were constructed by a developer to quality standards significantly inferior to typical state projects. The aggregate panels were later skim coated with EIFS when the panels began to fail. Due to poor initial construction quality and the age of the complex, the facility requires significant exterior envelope maintenance to extend its useful life and marketability. The complex consists of seven residential buildings with 53 total living units. Each unit consists of four bedrooms, two baths, and a shared living room/kitchen area. Each unit houses approximately seven residents.

STO - Sports and Fitness Center Bleachers/Track Infield Replacement (\$538,000): This project repairs and renovates the motorized telescopic bleachers and self-storing end railing system and replaces the indoor synthetic track infield surface. Bleacher work includes repairing and renovating the motorized telescopic bleacher system, including drive mechanisms, self-storing end railings, structural components, finished bleacher boards, electrical service and controls, and all bleacher markings. Both bleacher banks are 94 LF long and 15 rows high, each with a total seating capacity of 1,740 people. The renovated or replacement bleacher system will improve accessibility within the capacity of the existing equipment and provide a safe environment for patrons and the maintenance staff by addressing the top rows' end railing system and gap between the press boxes on the south bank. Total seating capacity will be moderately reduced to improve accessibility by widening aisles and providing accessible seating areas. Track infield work includes replacing the Mondo track infield flooring (26,522 SF) with a new dual durometer, poured urethane surface and replacing 400 SF of track flooring at the starting blocks and pole vault lane. All flooring inserts and the pole vault plant box will be adjusted or replaced as necessary to accommodate the new flooring surface. All standards, cabling, and netting for six tennis and six volleyball courts will be replaced. All court markings and striping will be installed to meet NCAA standards.

The bleacher systems are original to the facility, which were installed in 1964, drag and bind during operation, damaging the flooring surface and bleacher components. The bleachers require frequent repairs to maintain operation and replacement parts are becoming more difficult to obtain. On several occasions, the bleachers were rendered inoperable for events because the maintenance could not be completed on time. The top five rows of the south bleacher bank do not have self-storing end rails due to the press boxes that overhang

the bleacher storage area. This requires manual installation and removal of the end rails that present an unsafe condition for athletics and maintenance staff. The top row of the south bank also has a 4-foot gap in between the press boxes with no permanent railing or safety structure installed to prevent patrons or staff from falling through.

The track infield was installed in 1989. The indoor track surface, which was also installed in 1989, was already replaced in 2004. The track infield flooring surface is severely worn, especially where the basketball courts overlap the tennis courts. The seams between the flooring sheets are no longer tight, causing problems with routine cleaning and maintenance activities and contributing to the delamination of the flooring surface. Several patches and attempts to readhere the flooring sections have already been completed, but due to the severe deterioration of the flooring materials and seams, these repairs are no longer cost-effective solutions.

Health, Safety, and Environmental Protection

MIL - Northwest Quadrant Fire Alarm/Telecommunications System Renovations (\$550,300 increase for a total project cost of \$2,006,000): This request increases the project budget to match current design consultant estimates. The recent cost estimates significantly exceed the authorized budget and this project increase is required to bid the project and to complete the originally approved project scope and intent. Through the design process, it was determined the telecommunications portion of the project was underfunded and would require additional infrastructure, equipment, and enclosures not anticipated in the original approval. Also, the main data center cooling equipment was determined to be inadequate, in poor condition, and requires replacement. In addition, the fire command center was determined to be inadequate in size and location. An expanded and relocated fire command center is required to meet current building code and to allow the facility occupancy to change from the previous hospital classification to the new university classification.

Programmatic Remodeling and Renovation

MSN - Kronshage Hall Remodeling and Renovation (\$2,150,000): This project renovates Kronshage Hall Refectory, Showerman House, and Conover House to address customer satisfaction, energy efficiency, and occupant safety. Architectural work includes abating and replacing resident room flooring, replacing corridor and den carpeting, and replacing doors and door hardware in Conover House and Showerman House. All walls, door frames, stairs, and resident rooms built-in furniture units will be refinished. New finished ceilings will be installed in all resident level corridors located in Conover House and Showerman House. The Kronshage Refectory main level will be renovated into a new office suite. The first floor egress routes will be assessed and security upgrades and improvements will be included in the design solution. The lower level will be assessed for potential renovations and use reallocation.

Mechanical system work includes replacing the steam heating system with a new hot water heating system, including additional and improved and individual resident room temperature controls. A new central air conditioning system will be installed to serve the Kronshage Refectory, Conover House den, and Showerman house den. New cooling coils

will be installed in the Conner House and Showerman House makeup air units. Electrical system work includes replacing the fire alarm system in Kronshage Refectory and resident room lighting fixtures with new three level fixtures. Lighting levels will be increased in the Rose Taylor Room and provide new multiple level lighting controls. Fire suppression system retrofit work includes installing a wet pipe, automatic fire sprinkler system throughout the complex. Fire sprinkler heads will be located to provide total facility coverage per NFPA 13 Fire Sprinkler Code requirements. Floors will be core drilled to accommodate piping, a new fire pump will be installed if required, and the domestic water service replaced and increased in size, if necessary.

It is anticipated that by resolving various customer satisfaction, energy efficiency, and safety/security concerns, the recent decline in customer requests to live in Kronshage Hall will be reversed. The Kronshage Refectory houses the Residence Life Office program and support spaces, but has poor visibility and presence within the facility. This project will remodel these areas to resolve those issues.

The resident rooms and common area environments are in disrepair, unattractive, and uncomfortable. The resilient flooring contains asbestos and has significantly deteriorated. The built-in furniture has never been refinished and is considerably worn. The lighting levels and controls are inadequate. The doors and door hardware are also worn and beyond their useful lives. Corridors are cluttered with conduit, raceway, and piping retrofits. Stair treads are broken and risers are rusted. All ceiling, flooring, and wall finishes are dingy and worn.

The steam heat system is original to the building, requires extensive operational maintenance, and has limited resident room temperature control. Residents frequently use operable windows to help regulate the heat. Replacing the heating system should improve energy efficiency and improve customer satisfaction. Providing additional space that is air conditioned is continually requested by residents. Expanding the air conditioned space through this project will meet customer demand and improve humidity control throughout the complex. The fire alarm system in the Kronshage Refectory is the oldest of all fire alarms systems at University Housing and these buildings do not have fire suppression systems. This project will address those issues providing for a safer environment for our residents.

MSN - Slichter Hall Ground Floor Remodeling (\$522,000): This project remodels the ground floor, entryway, lobby, offices, and restrooms (~4,500 SF) for the University Housing Division administrative office suite to improve accessibility and functionality. Project work includes creating a new entryway, lobby, and reception area from the courtyard to provide access to the administrative office suite. The men's and women's restrooms will be renovated to provide full accessibility and select office areas will be renovated to improve accessibility. Partition walls, doorways, and building services (mechanical/ventilation, electrical/lighting/telecommunications, plumbing, and controls) will be reconfigured and relocated as necessary to accomplish the renovation. All room finishes for project areas will be repaired or replaced.

The University Housing Division administrative offices are the primary location for residence services. The Assignment, Cashiers, Conference, Human Resource, Marketing, Business Services and Director Offices are all co-located in this building for efficiency and convenience. This administrative office suite fosters the residents' first impressions. In their current condition, first impressions have generally been negative and detract from the quality of facilities and services available and provided. In the near future, all residence hall tours will originate from this location. Modifications have been limited to refinishing in the office suite and entryway since the original 1947 construction. Restrooms are not accessible and require upgrades and expansion. The exterior entry has poor visibility due to its location and the courtyard landscaping configuration and overgrown condition.

Utilities Repair and Renovation Requests

EAU - Steam Utility System Renovation and Replacement (\$1,358,000): This project constructs upper campus steam and condensate distribution improvements to significantly enhance system reliability, redundancy, and operating flexibility to meet campus needs. Improvements include completing a steam and condensate distribution loop on the upper campus, providing a new steam and condensate service to Hilltop Center, and replacing steam pit 4 west of Horan Hall.

Steam distribution loop work includes constructing 420 LF of new underground waterproofed concrete box conduit between steam pit MC-2 and steam pit CVTC with new 8-inch steam and 4-inch condensate piping systems, piping insulation, and supports. Steam pit MC-2 is located in green space just south of University Drive and north of the Maintenance and Stores building. Steam pit CVTC is located in the technical college parking lot just south of University Drive and north of the Chippewa Valley Technical College building. All box conduit and piping connections within existing pits will include new isolation valves, expansion joints, steam traps, and drains as determined through the design process. Due to space restrictions, a modest expansion of pit MC-2 is included to accommodate the installation of pit accessories. New pit ladders with extendable safety posts will be installed and all pits will be waterproofed at the box conduit connections.

New Hilltop Center steam service work includes constructing 130 LF of new underground waterproofed concrete box conduit between existing steam pit 3B and the Hilltop Center with new 4-inch steam and 2-inch condensate piping systems, piping insulation, and supports. A section will be offset near the midpoint to avoid a grease pit and piping near the southwest corner of the Hilltop Center. Steam pit 3B is located in green space west of Murray Hall adjacent to parking stalls along Garfield Avenue. All box conduit and piping connections to pit 3B will include new isolation valves, steam traps, and drains as determined through the design process. A new sub-grade box conduit penetration into the south wall of the Hilltop Center will be constructed. A new steam pressure reducing station with safety relief valve and vent piping will be installed in Room 14A. Approximately 100 LF of new 3-inch (25 psig) steam, new 6-inch (10 psig) steam, and new 2-inch pumped condensate piping/insulation systems will be routed from Room 14A to connections located within Corridor 15 and Room 19. New pit ladders with extendable safety posts will be installed and all pits and building walls will be waterproofed at the box conduit connections.

The pressure reducing station within the Hilltop Center will be connected to the Andover building automation system for reporting and a new alarm system will be installed for the pressure reducing station. The pumped condensate piping in Rooms 7 and 19 will be reconfigured to redirect pumped condensate to the new service piping exiting the south wall of building. A new pump receiver set will be installed to collect and discharge drip condensate, if necessary, including associated electrical power and alarm wiring.

Steam pit 4 replacement work includes demolishing steam pit 4 located on the upper campus southwest of Horan Hall, and replacing it with a new larger concrete pit structure, including a new access shaft, ventilated entrance, access ladder with extendable safety posts, and anchoring and support steelwork. The new pit subgrade walls and connections to existing box conduit sections will be waterproofed. High performance butterfly valves will be installed within the existing steam and condensate piping that exits the pit in three directions. New isolation valves will be installed for future steam/condensate services to the proposed upper campus residence hall that is planned for construction in 2014. New drain and drip trap stations will be installed to prevent the accumulation of condensate during shutdowns. New electrical service will be installed for lighting and maintenance activities. The steam and condensate piping systems will be reinsulated and removable blankets will be installed on new valves.

Installing a new box conduit and steam/condensate piping system between pit MC-2 and pit CVTC will complete a main distribution loop on the upper campus and provide a dual path for steam/condensate service from the central heating plant to most upper and lower campus buildings. The majority of the upper campus steam/condensate distribution system was constructed in the 1960s and is at or past its service life. Considering the age of the steam distribution system, it is prudent to have two main routes for steam/condensate for operating flexibility. The completed steam/condensate loop will provide the ability to isolate a leak or shutdown a main section for maintenance while minimizing disruption to building heating systems and limiting the overall impact.

The steam and condensate services to Hilltop Center, constructed during the 1960s, cross under Garfield Avenue within a concrete box conduit from pit 6 through the north basement wall of Hilltop Center. The steam branch configuration within pit 6 exerts high forces near the connection and has been repaired once due to failure. Hilltop Center houses dining facilities that are used throughout the year and the loss of steam would result in the inability to make hot water as well as creating environmental control and comfort issues. The new steam/condensate services will address reliability concerns and provide an alternate means to maintain steam service to Hilltop Center.

Steam pit 4 was also constructed in the mid-1960s and is at the end of its useful life. This pit is too small and shallow to serve as an anchor point and hub for the steam and condensate distribution mains. Due to its inadequate size and configuration, operational maintenance activities are challenging. The anchor steel has failed due to repeated thermal cycles and the resulting forces imposed on the anchors. Temporary bracing steel has been added to prevent distribution piping failure, but it is not a long-term solution.

MSN - Campus Storm Water Detention Ponds (\$1,030,800 increase for a total project cost of \$3,318,800): This request increases the project budget and scope to address unforeseen conditions encountered during the design process. The recent bid results for Phase I construction and cost estimates for Phase II construction significantly exceed the authorized budget and this increase is required to complete the originally approved project scope and intent. The overall project is more costly than originally anticipated due to the need to mitigate contaminated soils in the area.

MSN - Lot 76 Lift Station Renovation (\$1,356,000): This project renovates and upgrades the Lot 76 parking ramp lift station to ensure uninterrupted sanitary sewer services to UW Hospital, Eagle Heights, and west campus facilities. The lift station will be converted to a dry-pit submersible pump station and the project will focus on improvements to the lift station's electrical and mechanical systems.

Project work includes replacing pumps, valves, piping, fittings, access hatch doors, ventilation systems, electric and control panels, float switches, and the main electrical service. New controls and communication cabinets will be installed above grade. New equipment installations will include a flow meter, a programmable logic controller, and an open channel grinder. Improvements will be made for worker safety and access. A new fiber optic connection to the campus automation system will be installed. The above grade vents and hatches will receive architectural treatments and new landscaping installed. The renovation also includes removal and re-routing of extraneous electrical services within the station and sealing of all penetrations in the underground concrete walls.

This lift station has not been significantly renovated since its construction in 1966, and most of its major components are beyond their designed service life. The lift station is unreliable and the required level of maintenance and repairs to this station to keep it operational is excessive. The condition of the lift station does not provide a safe work environment for operations and maintenance. Continuous and reliable operation is critical due to the medical buildings served by this lift station and the potential environmental damage that could be caused by a system failure.

The electrical control system is outdated and significant portions of it are inoperable. The electrical system cannot power all three pumps at the same time and requires that maintenance personnel physically plug and unplug the pumps on a rotating basis. Due to the age of the station and its components, current DNR codes for ventilation are not being met. Upgraded ventilation is needed to ensure an acceptable environment for equipment and personnel. The high humidity levels in the current station are not conducive to good long-term operation of electrical components within the station. The pumps have become clogged several times by disposable medical wipes, which could have been prevented by having a comminutor and by-pass bar screen in place. Valves in the station are either difficult to operate or are inoperable.

Rust and corrosion are prevalent on piping, pumps, and electrical cabinets. Stairways and hatchway doors are worn and rusted and should be replaced for worker safety. Storm and ground water regularly leak into the structure through conduit penetrations. These leaks

have allowed the entire structure to become flooded during large rain events. The leaking water runs onto and over the electrical control boxes. This situation could cause electrical system failures and/or potentially unsafe working conditions for maintenance personnel. If storm water floods the station, a mixture of storm water and sewage could overflow into the neighboring streets, ponds, and lake.

SUP - Steam Distribution System Repair/Replacement (\$4,990,700): This project repairs or replaces ~2,680 LF of underground conduit containing high-pressure steam and pumped condensate piping. This project corrects damage caused by a recent flood, implements steam/condensate distribution system flood mitigation strategies, and replaces distribution components at or nearing the end of their service lives.

Project work includes excavation and exposure of the concrete box conduit system, per section removal and preservation of conduit lids, and removal of high-pressure steam and condensate piping insulation. A complete inspection will be performed on all conduit sections included in the project and spot testing of the concrete structures, the high-pressure steam and condensate piping, and the piping supports will be completed as deemed necessary. Based on the inspection and testing results, the concrete conduit box, steam and condensate piping, and piping supports are to be fully replaced, partially replaced, or re-used as dictated by their condition and as directed by the Division of Facilities Development. Following the inspection, testing, and the repair or replacement work, the steam and condensate piping will be re-insulated, concrete lids will be re-poured or re-installed as necessary, and conduit boxes will be waterproofed. The project areas will be backfilled and the site restored to pre-project conditions, including landscaping, pavements, and turf.

The underground insulated steel conduit system from Pit 6 to Holden Fine Arts and the underground concrete box conduit systems from Pits 1 to 1A, Pits 1A to 2A, and Pits 2A to 3A will be demolished and replaced with a new concrete box conduit system including new piping, insulation, support steel, and water-proofing. Steam Pits 1A and 2A (including associated piping, valves, expansion joints, traps, insulation, anchor steel, electrical wiring and controls) will be demolished and replaced with two new waterproofed pits in new locations outside the 100-year flood plain. Pit 1 and the concrete steam tunnel system between Pit 1 and the Halbert heating plant (approx. 32 LF), will be excavated to expose pit and tunnel walls, externally cleaned, and waterproofed. The pit and tunnel section will be backfilled and landscaping will be restored to pre-project conditions.

Torrential rains on June 19th and June 20th of 2012 flooded a significant portion of the campus, completely submersing most of the steam and condensate distribution system. The piping insulation was saturated or dislodged by water currents as the conduit systems quickly filled with water during the event. Some debris and silt was carried by floodwaters into the box conduit systems and remained after the waters receded. Most of the affected sections, dating to the 1960s and 1970s, contain aged insulation systems that are not well suited for heavy water exposure. As the piping insulation thermal resistance properties have been permanently compromised by the unique flood event, piping insulation replacement is the only option for returning the system to its former energy efficiency level. If left in its

current state, boiler capacity will be taxed due to excessive heat transmission losses in the steam and condensate distribution system. Replacement piping insulation material will be selected to better resist water absorption and be well suited to withstand flowing water forces if a flood event were to re-occur.

Concurrent with the piping insulation replacement work, the condition of the concrete box conduit, steam/condensate piping, and piping supports will be inspected, tested, and repaired per the project description to ensure that the systems have significant useful life remaining after the restoration project is completed. Deterioration due to age may dictate the design solutions (repair or replacement). Since the box conduit and piping systems will be fully exposed during re-insulation work, it is both time and cost efficient to complete any additional repairs concurrently with the re-insulation work. The steam pits were also constructed in the 1960s and 1970s and repairs are required due to moisture and salt exposure. The salt-laden moisture originates from winter applications of de-icing agents on adjacent sidewalks and roadways. Due to repeated exposure, certain sections of the concrete reinforcement steel have rusted and caused concrete spalling.

The Federal Emergency Management Agency (FEMA) and Wisconsin Emergency Management (WEM) will be reviewing claim applications for this work. Preliminary discussions with both organizations have indicated that a substantial portion of the costs associated to flood restoration work may be covered and reimbursed after construction is completed.

WTW - Andersen Library Parking Lot Reconfiguration (\$340,800): This project reconfigures the Andersen Library parking lot, drives, and walks to resolve pedestrian and vehicular traffic conflicts and relocates the Andersen Library dumpster and associated enclosure. The new Andersen Library parking lot will provide adequate stalls for the Center for Students with Disabilities operations, accessible parking, service vehicles, and delivery vehicles. This project will also address the required storm water management needs affected by the redevelopment.

Project work includes reconstructing the parking lot and associated and adjacent drives and pedestrian walkways; replacing, relocating, and installing new lighting for the parking lot and adjacent pedestrian walkways; relocating the dumpster and associated enclosure away from the library's public laboratories and offices; landscaping, storm water retention, and site restoration as required for the entire project area. The new parking lot design will provide a safe environment and facilitate traffic flow for both pedestrians and vehicles, and reduce the points of conflict between traffic types. It is anticipated the new parking lot and drive configuration will incorporate a one-way vehicular traffic pattern and potentially a connection to Parking Lot 12. The new dumpster location will reduce the backing distance required for sanitation trucks at both the Andersen Library (570 LF) and McGraw Hall (630 LF) and not conflict with the parking stalls location(s). Delivery and service vehicles areas and stalls will also be located to not conflict with the accessible parking stalls.

The service lot was constructed in 1984 as a single lane lot with one access point and 19 parking stalls (two van accessible stalls, seven accessible stalls, and ten service vehicle

stalls). This lot serves both the Andersen Library and McGraw Hall for deliveries and municipal sanitation services. Since the Center for Students with Disabilities (CSD) operation relocated to Andersen Library in 2008, it has become evident that the Andersen Library service lot does not have adequate accessible parking stalls available. A minimum of three CSD employees qualify for the accessible parking stall permits, which does not leave adequate accessible parking available for students or the campus visitors. CSD van drivers are often unable to find parking in the lot, which impacts their schedule and student employment hours. The lot is poorly configured, does not provide adequate space for accessible parking, requires a lengthy backing distance for municipal sanitation vehicles, and converges multiple pedestrian walkways at the single vehicular point of access, creating a hazard for both pedestrians and vehicles. Delivery trucks frequently block stalls for extended periods of time, rendering a significant portion of the lot as unusable and trapping vehicles parked in the accessible stalls. The dumpster is located too close to the library's public laboratories and offices, resulting in odor problems for these interior spaces.

4. Justification of the Request: UW System Administration and the Division of Facilities Development (DFD) continue to work with each institution to develop a comprehensive campus physical development plan, including infrastructure maintenance planning. After a thorough review and consideration of approximately 450 All Agency Project proposals and over 4,500 infrastructure planning issues submitted, and the UW All Agency Projects Program funding targets set by DFD, this request represents high priority University of Wisconsin System infrastructure maintenance, repair, renovation, and upgrade needs. This request focuses on existing facilities and utilities, targets the known maintenance needs, and addresses outstanding health and safety issues. Where possible, similar work throughout a single facility or across multiple facilities has been combined into a single request to provide more efficient project management and project execution.

5. Budget:

General Fund Supported Borrowing	\$ 6,972,200
Program Revenue Supported Borrowing	3,207,900
Program Revenue Cash	<u>4,286,500</u>
Total Requested Budget	\$ 14,466,600

6. Previous Action: None.

November 4, 2010 Resolution 9841	The Board of Regents previously approved MSN - Campus Storm Water Detention Ponds at an estimated total cost of \$2,288,000 (\$1,491,000 General Fund Supported Borrowing; \$497,000 Program Revenue Cash; and \$300,000 Gifts and Grants).
April 13, 2012 Resolution 10064	The Board of Regents previously approved MIL - Northwest Quadrant Fire Alarm/Telecommunications System Renovations at an estimated total cost of \$1,455,700 (\$1,300,500 General Fund Supported Borrowing and \$155,200 Program Revenue Cash).

CAPITAL PLANNING AND BUDGET COMMITTEE

Resolution:

That, upon the recommendation of the Chancellor of UW Colleges and the President of the University of Wisconsin System, authority be granted to construct the Multiple Building Energy Conservation Project at UW-Waukesha County at a total project cost of \$3,692,660 (\$1,942,660 Program Revenue Supported Borrowing–Energy Conservation Funds and \$1,750,000 Waukesha County funds).

THE UNIVERSITY OF WISCONSIN SYSTEM

Request for Board of Regents Action February 2013

1. Institution: The University of Wisconsin Colleges: UW-Waukesha County
2. Request: Authority to construct the Multiple Building Energy Conservation Project at UW-Waukesha County at a total project cost of \$3,692,660 (\$1,942,660 Program Revenue Supported Borrowing–Energy Conservation Funds and \$1,750,000 Waukesha County funds).
3. Description and Scope of the Project: This project will implement seven energy conservation measures based on a recently completed comprehensive investment grade energy audit of the four campus buildings. Lighting upgrades will include replacement of 32 watt T-8 fluorescent lamps with 25 watt T-8 lamps, replacement of high pressure sodium exterior lighting with more energy-efficient induction lighting, and installation of occupancy sensors. Computer shut-down software will be installed on the campus network to reduce electrical consumption when computers are not in use. Building exterior door seals will be replaced and building envelopes will be sealed with a foam caulking compound. Standard efficiency motors will be replaced with premium efficiency motors, and variable speed drives will be installed where appropriate. Premium toilet flush valves and low-flow faucet aerators will be installed to reduce water consumption. The campus Emergency Management System (EMS) will be upgraded to provide improved control strategies, sequences of operation, and software upgrades to optimize HVAC equipment control. The campus chilled water system will be upgraded through the replacement of the existing 175-ton chiller with a new high efficiency variable speed chiller, replacement of the cooling tower, replacement of the condenser pumps, and replacement of the chilled water pumps with new pumps with variable speed drives.
4. Justification of the Request: The Department of Administration and the University of Wisconsin System embrace high-performance green building standards and energy conservation for state facilities and operations. 2005 Act 141 requires each agency to develop energy cost reduction plans. Plans must include all system and equipment upgrades that will pay for themselves in energy cost reductions over their useful life. The energy savings performance contracting program provides a process for UW System to effect energy cost reductions in existing buildings and utility systems.

This project will assist UW-Waukesha County in complying with these energy reduction goals. The implementation of the energy conservation measures identified in this request will result in an anticipated annual energy cost savings of approximately \$125,085 with a simple payback of 16.0 years. This simple payback value includes the Waukesha County buy-down of \$1,750,000. This is below the state energy fund simple payback requirement of 16.07 years or a 20-year payback with repayment at a 5.25% bond rate and a 3% inflation rate.

5. Budget:

Construction:	\$3,541,758
A/E Design Fees:	NA
DFD Management Fees:	73,853
Contingency:	77,049
Other Fees:	0
Total Project Cost:	\$3,692,660

6. Previous Action: None.