

Use and Finance Bi-Annual Reporting Form

Reporting Period: July 2017 through December 2017

University/College: University of Michigan - Ann Arbor

Number of Projects to Report: 19

Estimated Impact on Tuition and Fee Rates : 0¹

	Project Description	Project Timeline	Project Costs	Funding Sources
1	<p>George Granger Brown Memorial Laboratories First and Third Floor Laboratory Renovations</p> <p>The George Granger Brown Memorial Laboratories building was constructed in 1958 and houses several College of Engineering departments. This project will renovate approximately 7,400 gross square feet of wet laboratory space on the first and third floor to accommodate the needs of several research faculty members. Program and infrastructure improvements in existing laboratories and offices will include modifying the existing concrete wave tank as well as modifying mechanical and electrical infrastructure as needed for research activities in the Department of Civil and environmental Engineering and the Department of Electrical Engineering and Computer Science.</p>	<p>Start Date: Jul-17</p> <p>Completion: Dec-17</p>	<p>Property Acquisition \$</p> <p>Remodeling \$ 821,668</p> <p>Additions/New Construction \$</p> <p>Landscaping/Roads \$</p> <p>Equipment/Furnishings \$ 160,000</p> <p>Other (Professional Fees, Telecommunications, Other Orders) \$ 318,332</p> <p>Total: \$ 1,300,000</p>	<p>Tuition \$</p> <p>Millage \$</p> <p>Bond Proceeds \$</p> <p>Donations \$</p> <p>Federal \$</p> <p>Other (College of Engineering resources) \$ 1,300,000</p> <p>Total: \$ 1,300,000</p>
2	<p>Joseph A & Marguerite K Bursley Hall Elevator Replacement</p> <p>Constructed in 1968, Bursley Hall is a 340,000 gross square foot, seven level residence hall housing approximately 1,240 students. The building contains five traction elevators. Through the course of time, there have been numerous breakdowns in the elevator systems and some parts for the systems have become obsolete. This project will replace two traction elevators and related equipment, and upgrade the hoist ways and machine rooms to meet current codes and standards.</p>	<p>Start Date: Oct-17</p> <p>Completion: Jul-18</p>	<p>Property Acquisition \$</p> <p>Remodeling \$ 1,201,359</p> <p>Additions/New Construction \$</p> <p>Landscaping/Roads \$</p> <p>Equipment/Furnishings \$</p> <p>Other (Professional Fees, Telecommunications, Other Orders) \$ 198,641</p> <p>Total: \$ 1,400,000</p>	<p>Tuition \$</p> <p>Millage \$</p> <p>Bond Proceeds \$</p> <p>Donations \$</p> <p>Federal \$</p> <p>Other (Housing resources) \$ 1,400,000</p> <p>Total: \$ 1,400,000</p>
3	<p>Central Power Plant 13,200 Volt Switchgear Upgrade</p> <p>The Central Power Plant is a highly efficient natural gas co-generation facility providing heat and electrical power to most central and medical campus buildings. The co-generation system provides steam for heating buildings and to generate electricity. The electricity is generated from steam that otherwise would be wasted, resulting in an overall efficiency of 80 percent compared with purchased electricity from a regional power plant and on-site boilers for heat that would operate at a combined efficiency of approximately 50 percent. The existing 13,200 volt electrical switchgear equipment is on average 40 years old and at or beyond its predicted useful life. This project will replace the switchgear components with an integrated ring system utilizing the latest technology, increasing reliability and system safety and improving worker safety. A power preservation system will benefit critical hospital and research operations with the capability to maintain generated electric and steam supply during a disruption or loss of external utility provided electricity.</p>	<p>Start Date: Oct-17</p> <p>Completion: Mar-19</p>	<p>Property Acquisition \$</p> <p>Remodeling \$ 18,771,950</p> <p>Additions/New Construction \$</p> <p>Landscaping/Roads \$</p> <p>Equipment/Furnishings \$</p> <p>Other (Professional Fees, Telecommunications, Other Orders) \$ 4,228,050</p> <p>Total: \$ 23,000,000</p>	<p>Tuition \$</p> <p>Millage \$</p> <p>Bond Proceeds \$</p> <p>Donations \$</p> <p>Federal \$</p> <p>Other (Utility resources) \$ 23,000,000</p> <p>Total: \$ 23,000,000</p>

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4	<p>Central Power Plant Basement Drain Line Replacement</p> <p>The Central Power Plant (CPP) is a highly efficient natural gas co-generation facility providing steam heat and electrical power to most Central Campus and Medical Center buildings. This project will replace and upgrade the plant's wastewater collection piping system which collects boiler water discharge along with other water drains from the CPP required for safe, efficient and continuous boiler operation. The piping system is located within and underneath the plant and will require complex phasing to assure continuous operation of the CPP during construction. A new in-floor trench will provide full access to the piping system and act as secondary containment to prevent future soil exposure and potential building foundation settling.</p>	Start Date: Jul-17 Completion: Mar-19	Property Acquisition \$ Remodeling \$ 1,825,934 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ Other (Professional Fees, Other Orders) \$ 264,066 Total: \$ 2,090,000	Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Utility resources) \$ 2,090,000 Total: \$ 2,090,000
5	<p>Central Power Plant Chimney Stack Refurbishment</p> <p>The Central Power Plant (CPP) provides steam for the heating and cooling of buildings on Central Campus and the Medical Campus, and also uses the steam produced to generate electricity. In June 2016, the Board of Regents approved a project to invest \$1,200,000 to repair the north and south chimney stacks. This project will allow a continuation of that effort and address remaining issues that could only be identified by completing the work from the first project. The 185-foot south chimney stack, constructed in 1914, is original to the building. The plant's 238-foot north chimney stack was constructed as part of the 1924 addition to the plant. The next phase of this restoration work should extend the stacks' useful lives for another 30 years and allow continued high reliability of CPP operations.</p>	Start Date: Jul-17 Completion: Dec-18	Property Acquisition \$ Remodeling \$ 1,344,495 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ Other (Professional Fees, Other Orders) \$ 155,505 Total: \$ 1,500,000	Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Utility resources) \$ 1,500,000 Total: \$ 1,500,000
6	<p>Central Power Plant Expansion</p> <p>The Central Power Plant (CPP) is a highly efficient natural gas co-generation facility providing steam heat and electrical power to most central and medical campus buildings. The electricity is generated from steam that otherwise would be wasted, resulting in an overall efficiency of 80 percent that is much higher than most power plants. We propose the construction of a 12,000-gross-square-foot building addition to house a new 15-megawatt combustion turbine that will reduce the university's greenhouse gas emissions by an estimated 100,000 tons per year, or halfway toward our university goal of reducing total emissions for the Ann Arbor campus by 25 percent. The project will require a State of Michigan Department of Environmental Quality air emission permit and will incorporate all appropriate pollution control technologies.</p>	Start Date: Oct-17 Completion: Jun-20	Property Acquisition \$ Remodeling \$ 68,574,409 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ Other (Professional Fees, Telecommunications, Other Orders) \$ 11,425,591 Total: \$ 80,000,000	Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Utility resources) \$ 80,000,000 Total: \$ 80,000,000

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7	DTE Substation Site Utilities proposes a project to complete site preparation for the DTE Apex Substation south of NC53 parking lot. This project will include site clearing, site grading, storm water management, and asphalt pavement.	Start Date: Nov-17 Completion: Mar-19	Property Acquisition \$ Remodeling \$ Additions/New Construction \$ Landscaping/Roads \$ 1,246,214 Equipment/Furnishings \$ Other (Professional Fees, Telecommunications, Other Orders) \$ 453,786 Total: \$ 1,700,000	Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Utility resources) \$ 1,700,000 Total: \$ 1,700,000
8	Forest Avenue Switching Station Upgrades The Forest Avenue Switching Station is an integral component of the Central Campus electric distribution system that provides power to many campus buildings. This project will replace switchgear that has exceeded its useful life with new equipment that incorporates the latest technology and safety features, increasing reliability and improving the safety of workers performing routine maintenance.	Start Date: Oct-17 Completion: Sep-18	Property Acquisition \$ Remodeling \$ 2,466,868 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ Other (Professional Fees, Telecommunications, Other Orders) \$ 733,132 Total: \$ 3,200,000	Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Utility resources) \$ 3,200,000 Total: \$ 3,200,000
9	Literature, Science, and the Arts Building First Floor Renovation and Addition The College of Literature, Science, and the Arts (LSA) proposes to renovate approximately 24,000 gross square feet of the first floor of the building and construct an addition of approximately 21,000 gross square feet that will provide space for its internship program and for an Opportunity Hub for students to explore the connection between their liberal arts education and their goals and aspirations. The LSA internship program will include all relevant student services, such as access to internships, funding, employers, and alumni to allow LSA students to engage in opportunities throughout their undergraduate experience. The space is designed to encourage interaction and be open, welcoming, vibrant, and student-focused.	Start Date: Nov-17 Completion: Sep-19	Property Acquisition \$ Remodeling \$ 29,951,803 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ Other (Professional Fees, Telecommunications, Moving) \$ 5,048,197 Total: \$ 35,000,000	Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (College of Literature, Science and the Arts resources) \$ 35,000,000 Total: \$ 35,000,000
10	Medical Center North Entrance Parking Structure Lighting and Emergency Power Upgrades The Medical Center North Entrance Parking Structure lighting fixtures are original to the structure's construction, inefficient, and have become difficult and costly to maintain. This project will replace the lighting fixtures and related lighting controls equipment with energy-efficient LED fixtures and integrated controls. In addition, an emergency generator will be installed to provide power and lighting in the event of a power failure.	Start Date: Sep-17 Completion: Jun-18	Property Acquisition \$ Remodeling \$ 1,069,627 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ Other (Professional Fees, Telecommunications, Other Orders) \$ 230,373 Total: \$ 1,300,000	Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Logistics, Transportation & Parking resources) \$ 1,300,000 Total: \$ 1,300,000

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11	<p>North Campus Recreation Building Renovation</p> <p>The project includes renovation of the entire approximately 67,000-gross-square-foot building, including renovated racquetball and squash courts, sauna, staff offices, and meeting rooms; expanded weight training and cardio spaces; a group exercise room; Americans with Disabilities Act-accessible locker rooms; a gender-inclusive locker room and restroom; and a resurfaced running track that removes the banked turns. The project scope will also address heating, ventilation, and air conditioning systems; replace the electrical substation and boilers; update the fire detection and alarm system; install fire suppression; replace lighting and pool equipment; reconfigure the main building entrance to improve functionality and visibility; and construct a small canopy addition.</p>	<p>Start Date: Jun-17 Completion: Dec-18</p>	<p>Property Acquisition \$ Remodeling \$ 14,421,441 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ 505,000 Other (Professional Fees, Telecommunications, Other Orders) \$ 2,473,559</p> <p>Total: \$ 17,400,000</p>	<p>Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Student Life Student Fee for Facility Renewal) \$ 17,400,000</p> <p>Total: \$ 17,400,000</p>
12	<p>Parking Lot NC53 Expansion</p> <p>This project will reconstruct and expand parking lot NC53 at the North Campus Research Complex to accommodate increased demand and replace spaces lost at NC74 due to the Ford Motor Company Robotics Building project. The project includes site clearing and grading, storm water management, site lighting and paving. We anticipate a gain of approximately 173 parking spaces.</p>	<p>Start Date: Nov-17 Completion: Mar-19</p>	<p>Property Acquisition \$ Remodeling \$ Additions/New Construction \$ Landscaping/Roads \$ 1,594,642 Equipment/Furnishings \$ Other (Professional Fees, Other Orders) \$ 405,358</p> <p>Total: \$ 2,000,000</p>	<p>Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Logistics, Transportation & Parking resources) \$ 2,000,000</p> <p>Total: \$ 2,000,000</p>
13	<p>Parking Lot NC92 Reconstruction and Ring Road Modifications</p> <p>This project will reconstruct and expand parking lot NC92 at the North Campus Research Complex (NCRC) to accommodate increased demand, and expand the road on the west side of NCRC to 13 foot wide lanes from the existing 10 foot wide lanes, including improved and new pedestrian sidewalks and bike circulation improvements, and add an east-west circulation road for bus routing. The road project will accommodate the anticipated increase in traffic due to the pathology renovation and relocation project, improve bus transportation in the area, and improve accessible sidewalk routes. The project includes site clearing and grading, paving, new concrete sidewalks, storm water management, site lighting, and an additional bus stop. We anticipate a gain of approximately 80 parking spaces due to this project.</p>	<p>Start Date: Jun-17 Completion: Jun-18</p>	<p>Property Acquisition \$ Remodeling \$ Additions/New Construction \$ Landscaping/Roads \$ 3,922,231 Equipment/Furnishings \$ Other (Professional Fees, Other Orders) \$ 977,769</p> <p>Total: \$ 4,900,000</p>	<p>Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Logistics, Transportation & Parking resources and Medical School resources) \$ 4,900,000</p> <p>Total: \$ 4,900,000</p>

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14	<p>Glenn E. Schembechler Hall Football Performance Center</p> <p>A renovation of approximately 24,000 gross square feet and construction of additions totaling approximately 8,000 gross square feet is planned that will create state-of-the-art spaces for training, recovery, and nutrition, as well as team meeting rooms, administrative space, and support staff locker areas for the intercollegiate football program.</p>	<p>Start Date: Apr-18 Completion: Mar-19</p>	<p>Property Acquisition \$ Remodeling \$ 12,024,694 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ 898,000 Other \$ 1,877,306 Total: \$ 14,800,000</p>	<p>Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Athletic Department resources and gifts) \$ 14,800,000 Total: \$ 14,800,000</p>
15	<p>School of Social Work Building East Wing Renovations</p> <p>The School of Social Work Building was constructed in 1997. This project will renovate approximately 36,500 gross square feet of space to create faculty and staff offices, learning labs, student organization spaces, and lounges and kitchenettes for building occupants. The project will also update mechanical and electrical systems, replace lighting, and include the architectural, electrical, and mechanical work necessary to accomplish these improvements.</p>	<p>Start Date: Nov-17 Completion: Dec-18</p>	<p>Property Acquisition \$ Remodeling \$ 2,575,643 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ 1,190,000 Other (Professional Fees, Telecommunications, Moving) \$ 634,357 Total: \$ 4,400,000</p>	<p>Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (School of Social Work resources) \$ 4,400,000 Total: \$ 4,400,000</p>
16	<p>Thomas Henry Simpson Memorial Institute for Medical Research Infrastructure Improvements</p> <p>The Thomas Henry Simpson Memorial Institute for Medical Research was constructed in 1927 and houses the Internal Medicine and the Center for the History of Medicine departments of the Medical School. The existing windows are original to the building and the majority of the cooling for the building is supplied by window-mounted air conditioning units. This project will replace the windows with energy-efficient and historically compatible windows, update the air handling system, and replace the ceilings and lights in three rooms where upgrades are necessary.</p>	<p>Start Date: Jun-17 Completion: Dec-17</p>	<p>Property Acquisition \$ Remodeling \$ 1,015,558 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ Other (Professional Fees, Other Orders) \$ 184,442 Total: \$ 1,200,000</p>	<p>Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Medical School resources) \$ 1,200,000 Total: \$ 1,200,000</p>
17	<p>William Monroe Trotter Multicultural Center</p> <p>The proposed William Monroe Trotter Multicultural Center is a result of extensive outreach and input from a variety of constituents. Engagement included four town halls, eight focus group sessions, benchmarking to other university multicultural centers, and a survey of students. The new building is proposed to be approximately 20,000 gross square feet to accommodate replacement spaces from the current facility along with a multipurpose room that will be able to accommodate approximately 300 people in both banquet-style seating for conferences and events and an active learning configuration that will accommodate more than 100 students.</p>	<p>Start Date: Jul-17 Completion: Mar-19</p>	<p>Property Acquisition \$ Remodeling \$ Additions/New Construction \$ 9,863,863 Landscaping/Roads \$ Equipment/Furnishings \$ Other \$ 1,136,137 Total: \$ 11,000,000</p>	<p>Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (Investment proceeds) \$ 11,000,000 Total: \$ 11,000,000</p>

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18	<p>West Hall Renovations for the Department of Naval Architecture and Marine Engineering</p> <p>The College of Engineering proposes a renovation of approximately 3,500 gross square feet of the Marine Hydrodynamics Laboratory that will create an office, conference room, computer room, and a display case area to celebrate the history of the tow tank, the first of its kind to be built at an American university.</p>	<p>Start Date: Jul-17 Completion: Dec-17</p>	<p>Property Acquisition \$ Remodeling \$ 1,843,529 Additions/New Construction \$ Landscaping/Roads \$ Equipment/Furnishings \$ 54,000 Other (Professional Fees, Telecommunications, Moving) \$ 332,471 Total: \$ 2,230,000</p>	<p>Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (College of Engineering resources and gifts) \$ 2,230,000 Total: \$ 2,230,000</p>
19	<p>George Granger Brown Memorial Laboratories Mechanical Engineering Addition</p> <p>Revised due to the addition of related projects.</p> <p>The approximately 220,000 gross square foot George Granger Brown Memorial Laboratories (G. G. Brown) was constructed in 1958 and houses the Department of Mechanical Engineering, which has evolved to include emerging research areas such as bio-systems, energy systems, and nano-systems. The College of Engineering proposes an approximately 62,500 gross square foot addition to G. G. Brown. The addition will house research laboratories and faculty and graduate student offices to support these emerging research endeavors, as well as spaces that will enhance the ability to realize ultra-high-resolution measurements at molecular and atomic scales.</p>	<p>Start Date: Apr-12 Completion: Feb-16</p>	<p>Property Acquisition \$ Remodeling \$ Additions/New Construction \$ 37,227,322 Landscaping/Roads \$ Equipment/Furnishings \$ 761,357 Other (Professional Fees, Telecommunications, Moving) \$ 8,989,184 Total: \$ 46,977,863</p>	<p>Tuition \$ Millage \$ Bond Proceeds \$ Donations \$ Federal \$ Other (College of Engineering resources, gifts, investment proceeds and a construction grant from the National Institute of Standards and Technology) \$ 46,977,863 Total: \$ 46,977,863</p>

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