

(\$ in thousands)

Project Title	Priority Ranking	Funding Source	Project Requests for State Funds		
			2020	2022	2024
Higher Education Asset Preservation and Replacement (HEAPR)	1	GO	\$ 200,000	\$ 0	\$ 0
Child Development Building Replacement	2	GO	\$ 29,200	\$ 0	\$ 0
A.B. Anderson Hall Capital Renewal	3	GO	\$ 4,400	\$ 0	\$ 0
Chemistry Undergraduate Teaching Laboratory	4	GO	\$ 65,600	\$ 0	\$ 0
Clinical Research Facility and Health Sciences Design	5	GO	\$ 18,000	\$ 0	\$ 0
Total Project Requests			\$ 317,200	\$ 0	\$ 0
General Obligation Bonds (GO) Total			\$ 317,200	\$ 0	\$ 0

Higher Education Asset Preservation and Replacement (HEAPR)**AT A GLANCE****2020 Request Amount:** \$200,000**Priority Ranking:** 1**Project Summary:** This request is for funds to renew existing campus facilities and infrastructure in accordance with Minnesota Statutes, section 135A.046.**Project Description**

The purpose and use of Higher Education Asset Preservation and Replacement (HEAPR) funds is defined in statute 135A.046 Asset Preservation and Replacement. Funds are intended to preserve and renew existing campus facilities by supporting five categories of projects: Accessibility, Health and Safety (e.g. hazardous material abatement, building code compliance), Building Systems (e.g. exterior envelope, mechanical, and electrical systems), Energy Efficiency, and Infrastructure. HEAPR funds are used throughout the University of Minnesota system. Funds are allocated to campuses and research stations based on facility need and overall quantity of space. The University regularly reports on the status of its HEAPR funding to Minnesota Management and Budget and the Legislature.

Project Rationale

HEAPR funds are essential in supporting the University of Minnesota's mission of teaching and learning, research and discovery, and outreach and public service. This mission will be compromised without continued, sustained reinvestment in buildings and infrastructure to extend and maximize useful life while ensuring the health, safety, and well-being of facility occupants and visitors.

Rigorous process ensures every HEAPR dollar supports the most urgent and impactful needs. Individual projects are identified and prioritized through the University's Facility Condition Assessment (FCA). The FCA is a comprehensive systemwide evaluation of the condition of campus facilities and infrastructure portfolio. FCA data is used to triage existing buildings into those that need long-term investments, those that need short-term investments, and those where no investment is required, in alignment with academic priorities.

HEAPR funds are used throughout the University of Minnesota system and are allocated to campuses and research stations based on facility need and overall space. Funds keep people safe and make the campuses accessible for all Minnesotans. Funds leverage the State's past investment in buildings and infrastructure by extending the functionality and useful life of those assets. HEAPR projects are green, since renewing an existing facility and maximizing useful life is always more sustainable than new construction. HEAPR dollars are flexible, allowing the University to respond quickly to emergencies and to respond to unique opportunities. Regulatory compliance items, e.g. elevators, storm water and building code compliance are funded with HEAPR allocations. HEAPR projects move faster, put people to work quicker, and provide different firms an opportunity to participate in design and construction at the University of Minnesota.

Project Timeline

As noted in previous HEAPR requests the timeline will vary by project. The University estimates that approximately 85% of the funds would be designed, bid or under construction within the first 12 months, and the remaining 15% encumbered or spent in less than 24 months.

Other Considerations

None.

Impact on Agency Operating Budgets

No anticipated impact on operating budget.

Description of Previous Appropriations

The University includes HEAPR in each capital request. The University received no appropriation in 2019, \$45 million in 2018, \$20.6 million in 2017, no appropriation in 2016, no appropriation in 2015, \$42.5 million in 2014, no appropriation in 2013 and \$50 million in 2012.

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Child Development Building Replacement**AT A GLANCE****2020 Request Amount:** \$29,200**Priority Ranking:** 2**Project Summary:** This project will predesign, design, renovate, construct, furnish and equip a reimagined 76,000 sf facility to allow the University of Minnesota's world leading Institute of Child Development to advance cutting edge interdisciplinary research in human development and early education.**Project Description**

The Institute of Child Development (ICD) building program, at the conclusion of predesign, is approximately 76,702 GSF of total space; 46,852 GSF new and 29,850 GSF renovated space. Approximately 16,000 GSF will be demolished in the existing 1968 addition.

The future program is planned to accommodate 123 staff (regular and temporary) and 20 faculty. 15 faculty are existing employees and 5 will be new hires. Each new faculty hires is assumed to include 3 additional graduate assistants.

The building program is conceived as a full renovation of the 1913 C. H. Johnston building and a four-story new addition with mechanical and electrical penthouse. The programmatic spaces to be included are Research (41,000 GSF), Seminar and Learning Space (6,800 GSF), Administrative and Outreach (10,500 GSF), Faculty and Graduate Student Space (6,800 GSF), Community Space (5,000 GSF) and Technology (1,400 GSF).

The final scheme encompasses four stories with one level partially above grade, forming an elevated plaza. The lower level will have the faculty and graduate student suites in addition to some support rooms. A side entrance will be provided by utilizing low retaining walls to mitigate the grade difference compared to the floor finish elevation. The first floor will have the main entrance to the building, monumental stair, conferencing facilities, multipurpose rooms, administrative suites, post doc and student services in addition to a large conference room. The second and third levels will be dedicated to research suites, testing and control rooms. Research areas will include laboratories, observational testing rooms, shielded electro physiology rooms and an MRI simulation room.

Placement of the new addition will preserve the view corridors towards the river and create a building with enough transparency to allow visual stimulation at the edge of the Knoll area.

Project Rationale

The Institute of Child Development (ICD), founded in 1925, is considered the premier department for the study of child and adolescent development in the United States. The Institute is the #1 ranked developmental psychology program in the country (U.S. News and World Report, 2018) and is recognized worldwide for its faculty and their discoveries. ICD houses undergraduate and graduate

programs in developmental psychology and early childhood education, as well as a certificate program in infant and early childhood mental health.

The Center for Early Education and Development (CEED) contributes to ICD's community outreach by providing professional development and training to early education professionals. CEED also provides program evaluation services to community organizations, so they can achieve the best outcomes for children in the communities in which they serve.

Within the next five years, one fourth of ICD's faculty will become emeritus faculty, including two University Regents Professors and one McKnight Presidential Chair. Recruiting the next generation of faculty who will lead the field in cutting edge research and training is essential to the continuation of the mission and priorities of ICD. This proposed state-of-the-art research facility is instrumental in recruiting and retaining top caliber faculty.

ICD is the Number One-Ranked Ph.D. program in developmental psychology in the country and attracts the best graduate student applicants to the Ph.D. program. However, these outstanding students are also heavily recruited by other top public and private universities whose research, training and office facilities greatly surpass ours. Top-notch students turn away from the University because of the gross inadequacies of the existing building.

In fiscal year 2017, the Institute of Child Development was responsible for 18%, or nearly \$7.5 million, of sponsored expenditures in the College of Education and Human Development. Over the past five fiscal years, ICD has contributed over \$40 million in sponsored expenditures. ICD leads all other academic programs within the College for sponsored expenditure earnings, while having less than 9% of the college's faculty.

An external Review of the ICD in 2009 found that "The most surprising aspect about ICD is the lab and office space situation. The incongruity between the sterling national reputation of this jewel in the University's crown and the insufficient and shabby space is astonishing. Even more remarkable is the fact that ICD faculty and students have been able to be so productive over the years given space limitations. This is now an acute problem, given the greater lab space demands of current developmental research."

Project Timeline

Design: July 2020 - September 2021

Construction: October 2021 - April 2023

Completion: April 2023

Other Considerations

Investment in this facility will advance the master plan guiding principles for stewardship of historic buildings and landscapes, providing a compatible and distinctive built environment designed to respond to the needs of current programs, and strengthening connections to adjacent communities.

The development framework of the 2009 Master plan identifies this facility for "Potential Demolition." This designation indicates buildings that are candidates for removal and calls for analysis of physical, environmental and adaptive re-use capability as well as campus-wide benefits prior to making

decisions about removing campus buildings. Review and analysis by University staff and design professionals determined that the original 1913 facility is well suited to reinvestment and reuse.

The original 1913 facility is identified for renewal in the University's strategic facility renewal plan. The renewal category directs University staff to maintain the building for emergency and life safety conditions while redirecting limited renewal funds to other priorities, in anticipation of a future full building renewal project.

The mission of the Institute of Child Development is to contribute to knowledge about human development through research and related scholarly activities; promote the welfare and optimal development of children and youth from all cultural backgrounds in the context of family, school, and community settings; and contribute to the advancement of human development as an interdisciplinary, basic, and applied science.

Impact on Agency Operating Budgets

Facility and operating expenses are anticipated to increase by approximately \$144,000 annually, or \$1.87 per SF, over the existing conditions in the Institute of Child Development.

Description of Previous Appropriations

No previous appropriations.

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A.B. Anderson Hall Capital Renewal**AT A GLANCE****2020 Request Amount:** \$4,400**Priority Ranking:** 3**Project Summary:** This project will renovate and restore mechanical systems, life safety equipment, fire protection and architectural finishes throughout A. B. Anderson Hall on the Duluth campus.**Project Description**

A. B. Anderson Hall (ABAH) was completed in 1970 as a classroom and office building. It currently houses faculty from the departments of Communication, Philosophy, History, and Art. The bottom floor is composed of fine arts studios, kilns, and art workspaces, while floors 2-4 are occupied by academic offices as well as ten classrooms.

The 37,000 sf facility will be renovated to include a modern mechanical system, life safety systems, and architectural finishes. A fire protection system will ensure a high level of life safety standards is met. Architectural work that is ancillary to mechanical system renovation includes new ACT ceilings, new door panels, patching/painting of wall, and ADA compliant handrail extensions. Electrical work involves power to new equipment and new lighting at offices and classrooms.

Project Rationale

A. B. Anderson Hall serves nearly 500 majors across its various departments and also carries a large Liberal Education mission for the Duluth campus. In any given week during the fall and spring terms, a minimum of 4,500 students access ABAH classrooms. It also houses nearly 40 faculty offices. Because of the role ABAH plays on campus, it contributes greatly to the work of the College of Liberal Arts and the School of Fine Arts. Neither college would be able to deliver their complete curriculum without this facility. Due to the fact that ABAH is central to so many different programs and classes, major consideration will have to take into account the displacement of activities while ABAH is closed for renovation.

A. B. Anderson Hall is a structurally solid building, but does not meet the standard of space for the University. To aid in meeting curricular and learning goals, the spaces will be aesthetically updated, including better lighting and updated finishes at the ceiling, floor, and walls. The project will also address critical life safety concerns for the building as well as the classrooms. The building will be outfitted with an automatic fire protection sprinkler system and some minor accessibility features to better serve the student and staff population.

Beyond these needs, the primary objective for the A. B. Anderson Hall renovation is a full mechanical system replacement. An updated HVAC system will allow the building to be utilized in the late summer and fall as a teaching, learning, and research space. It will provide classroom and office occupants a greater degree of thermal comfort and adequate ventilation.

Project Timeline

Design: July 2020 - February 2021

Bidding: March 2021 - April 2021

Construction: May 2021 - December 2021

Other Considerations

No other considerations.

Impact on Agency Operating Budgets

The current average operating cost is \$8.53 per sf at the Duluth campus. An annual increase of \$2.50 to \$3.00 per sf in A. B. Anderson Hall is anticipated upon project completion.

Description of Previous Appropriations

No previous appropriations.

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Chemistry Undergraduate Teaching Laboratory**AT A GLANCE****2020 Request Amount:** \$65,600**Priority Ranking:** 4**Project Summary:** This project will demolish obsolete facilities and predesign, design, renovate and build an addition to Fraser Hall to advance process-oriented and active learning for undergraduate chemistry on the Twin Cities campus.**Project Description**

The program for the Chemistry Undergraduate Teaching Laboratory in Fraser Hall comprises approximately 101,600 GSF of new and renovated space. The building is conceived as a five-story addition with a mechanical and electrical penthouse. The programmatic spaces to be included are 18 chemistry teaching laboratories with associated collaboration space, lab prep and support space, tutoring space, 9 offices for faculty, TA's, and students and updates 2 existing large general purpose lecture halls.

The building creates community for the undergraduate chemistry students and faculty throughout. The first level supports commons, study and TA spaces and faculty offices to make visible the life of the building to passers-by and to students. The new entry across from Walter Library creates a transparent volume of student-centered spaces overlooking the river. It is fronted by a landscape courtyard that activates Pleasant and reinforces the Cass Gilbert Masterplan. Instructional laboratory spaces are mainly housed within the addition, with organic chemistry labs on the lowest level of the addition as well as the top two floors. The general chemistry labs are grouped together on the second level, with three of the labs located within the original law library reading room.

Project Rationale

The Chemistry department serves students from every college on the Twin Cities campus. Greater than 10% of the entire UMN undergraduate population enroll in lab courses that will be taught in the proposed facility each semester and more than 90% of students who take chemistry courses are pursuing degrees outside of chemistry. With fall semester enrollment in undergraduate chemistry lab courses projected to rise more than 14% from 2018 to 2020, the Fraser Hall renovation project is critical to serving future undergraduate admissions growth.

Currently, chemistry laboratory courses are taught in Smith and Kolthoff Halls. These facilities are not optimized for modern chemistry laboratory teaching, which involves students working in teams using active, collaborative, and/or process-oriented and project-based learning methods in an environment that meets the University's standards for safety and energy efficiency.

The undergraduate chemistry teaching pedagogy has evolved to an interactive, guided-inquiry, group teaching methodology which requires collaborative space that is not present in the chemistry

laboratories being used today; many of which, while partially renovated in the 1980's, are nearly 100 years old. The current chemistry instructional labs include only class lab and class lab service space. The proposed teaching labs are designed to incorporate collaborative space components into this module.

Project Timeline

Design: July 2020 - October 2021

Construction: November 2021 - June 2023

Other Considerations

Fraser Hall is identified as a future renewal building in the University's strategic facility renewal plan. This category directs University staff to maintain the building for emergency and life safety conditions while redirecting limited renewal funds to other priorities, in anticipation of a future full building renewal project.

The project supports the education mission of the University of Minnesota through modern teaching labs to support improvements to undergraduate education that reflects current evidence based instructional methods and learning spaces to allow collaboration between students and faculty in a less formal environment.

The strategic plan for the Department of Chemistry includes accommodating sufficient capacity for current and future projections of student demand for laboratory instruction in the core physical sciences. Modern chemistry teaching laboratories will enable the Chemistry department to undertake substantial improvements in undergraduate education that reflect current evidence based instructional methods, while creating improved spaces for student teacher interaction.

Undergraduate chemistry serves a very large population of students in STEM and STEM related fields such as the health sciences. MN Department of Employment and Economic Development projects significant continued growth in employment across all of these sectors and sub-disciplines. As examples, these professions include physicians, veterinarians, nurses, dentist, pharmacists, chemists, chemical engineers, materials scientists, biologists, biochemists, pharmacologists, environmental health and safety officers, laboratory technicians in industry, health care, and state regulatory agencies, patent attorneys, science policy experts, and high school chemistry teachers.

Impact on Agency Operating Budgets

Annual facility and utility expenses are projected to increased by approximately \$990,000.

Description of Previous Appropriations

No previous appropriations.

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Clinical Research Facility and Health Sciences Design**AT A GLANCE****2020 Request Amount:** \$18,000**Priority Ranking:** 5**Project Summary:** This project will fund design, land acquisition, site preparation, and preconstruction services for the Clinical Research Facility, and predesign plus design for interrelated Health Sciences strategic reinvestment projects.**Project Description**

This project will complete design and construction documents, acquire land and begin site preparation for a clinical research facility. Funding will also complete predesign and design for interrelated Health Sciences strategic reinvestment projects that support health sciences education, research and clinical training across multiple buildings on the Twin Cities campus.

The new Clinical Research Facility will connect a broad array of clinical research units and activities from across the University, providing a consolidated home for the Clinical Translational Science Institute and providing new patient-centered clinics that facilitate patient participation in clinical research. The project will also create replacement clinical laboratories for the Department of Laboratory Medicine and Pathology to support education, research, clinical training and patient care. This project is the second in a series envisioned by the 2015 Blue Ribbon Task Force, following the Health Sciences Education Center, scheduled to open in 2020.

The predesign and design for interrelated health sciences strategic reinvestments will outline renovation and construction requirements for multiple buildings in order to optimize the placement of functions and people in strategic long-term locations, consolidate the School of Public Health, and culminate in the removal of the obsolete Mayo Building.

Project Rationale

The University is home to Minnesota's only public medical school in addition to health science schools for dentistry, public health, pharmacy, nursing and veterinary medicine. The University offers 62 accredited professional degrees, educates 6,400 students, and plays a key role in educating Minnesota's health care workforce. More than 60% of the state's health professionals are educated at the University. The health of Minnesota families and the economic vitality of the state depend on access to well-trained health providers, innovative health discoveries, quality health care and accessible public health programs. The University has significant responsibilities to ensure this is possible.

Today, health care requires an interdisciplinary approach to care delivery along a full continuum of primary to specialized care. This mandates full integration of health education/training, research, and clinical care. In order to meet future workforce needs, inter-professional and team-based practices will

be more integrated into all levels of academic curriculum, from undergraduate to post graduate stages, as well as in clinical care and clinical research trials.

The University of Minnesota has the foundational elements to continue to be a national leader in areas of clinical and outcomes-based research. The clinical research enterprise is strong, but lacks a singular space where various teams, projects, partners and individuals can converge.

The mission of a new Clinical Research Facility is to advance clinical and outcomes focused research with cross-collaborative teams and projects. The new facility will serve as a visible symbol of the importance of clinical research at the University, become a unifying place of identity for the community of health sciences translational researchers, and serve as a connector for the broad array of interdisciplinary clinical research activities.

Relocation of programs to the new Clinical Research Facility provides the catalyst for a series of strategic moves, and the opportunity to reinvest in key facilities within the Health Sciences core, characterized by 40+ year old facilities and years of accumulated deferred renewal. An estimated 350,000 gsf will be renovated, and almost 800,000 gsf will be removed when the obsolete Mayo building is vacated, erasing a renewal backlog of more than \$250 million.

Projected facility outcomes from this program include facility operations and maintenance savings up to \$2 million per year, reduced space footprint of 400,000 gsf, elimination of facility condition backlog up to \$350 million, and improved space utilization.

Project Timeline

Design: July 2020 - March 2022

Other Considerations

The University's System-wide Strategic Priorities document calls for investing in programs that "accelerate improvements in the standard of care to improve health through innovation, patient-centered care, prevention of disease, and high-quality interprofessional training across Minnesota."

The University of Minnesota is developing a major strategic capital investment program for the Health Sciences on the Twin Cities campus based on this vision. This program is intended as a partnership with the State of Minnesota and envisions investments to remove the obsolete and non-competitive Mayo Building as well as the capital investments to support clinical research across the health sciences necessary to improve human health and elevate the Medical School nationally. The program also includes investments to relocate the School of Public Health out of the Mayo Building, consolidate dispersed programs, create operational efficiencies, and improve faculty and student interaction.

The University of Minnesota Medical School and its partners contributed more than \$2.5 billion to the state's economy in 2010, according to a 2015 report by Minnesota Gov. Mark Dayton's blue ribbon commission on the Medical School. Its doctors and students care for more than 1 million people annually — spanning every county in Minnesota.

Impact on Agency Operating Budgets

Impact on operating budgets to be determined within predesign and design process.

Description of Previous Appropriations

State legislation enacted in 2015 related to the refunding of the Series 2006 Stadium Debt required the Board of Regents to allocate sufficient funds from the savings realized from the refunding transaction to provide \$10,000,000 for the predesign and design of the Health Sciences Education Center (HSEC) and for the predesign of the Clinical Research Facility (CRF).

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