2022B

Green Bond Report

2025 Update

Furthering the University of Michigan's Commitment to Carbon Neutrality

FINANCE
TREASURER'S OFFICE
UNIVERSITY OF MICHIGAN

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Letter from the CFO

Dear University of Michigan Community,

Reflecting on another remarkable year, sustainable development remains central to our achievements at the University of Michigan, thanks to our green bonds and a range of other efforts. The commitment to climate action is accelerating across the university, driven by diverse initiatives from both our campus and wider communities.

As detailed in this report, we've made meaningful progress on projects aligned with U-M's carbon neutrality goals. The Series 2022B bonds are crucial, funding projects that cut emissions from buildings and transportation, including innovative geo-exchange systems and a fleet of electric buses for campus mobility.

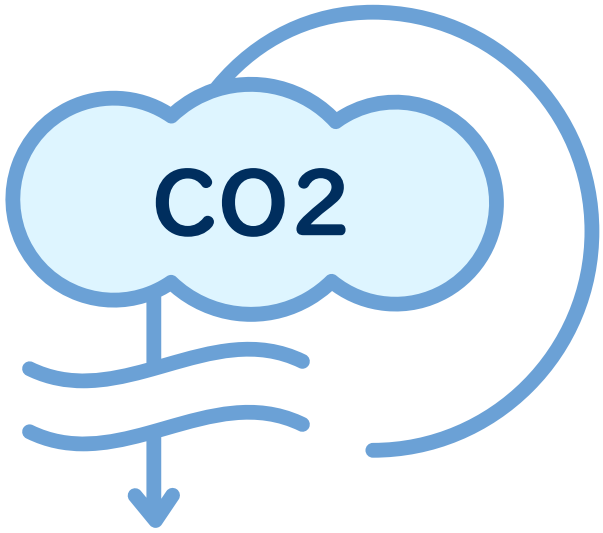
We know that climate action involves more than financial investments alone. Our holistic approaches involving campus and community engagement, innovative operating models, applied research, and sustainable investments that reflect our mission to serve the people of Michigan and the world as a leading institution.

A crucial organizational advancement propelling us forward is the establishment of the Sustainability and Climate Executive Leadership Council. This three-member leadership council will drive significant progress in critical areas, aligning with our Vision 2034 and Campus Plan 2050 goals. It will be led by Shana Weber, associate vice president for campus sustainability, Shalanda Baker, our recently hired vice provost for sustainability and climate action, and Tony Denton, senior vice president and chief environmental, social, and governance officer for Michigan Medicine. Their leadership marks a strengthened commitment to advancing our sustainability initiatives across the university.

Guided by our Vision 2034 and Campus Plan 2050, we are transforming our campus into an example of energy resilience and renewable innovations in practice. Our ambitious plan includes installing 25 megawatts of on-campus solar panels over the next three years, marking a big step toward energy sustainability. Furthermore, geo-exchange projects, such as those at the Central Campus Residential Development and Hayward Street Geothermal Facility, are pioneering sustainable energy solutions that have the potential to set a course for universities worldwide.

Geoffrey S. Chatas
Executive Vice President and Chief Financial Officer

Carbon Neutrality Commitments



U-M's carbon neutrality commitments cover the Ann Arbor, Dearborn, Flint, and Michigan Medicine campuses. U-M remains committed to eliminating direct emissions (scope 1), with a current target date of 2040.

Through a new Michigan-based power purchase agreement (PPA), U-M will reduce emissions associated with purchased electricity (scope 2) to net zero by early 2027. Since 2010, U-M has reduced its combined scope 1 and 2 emissions by 34 percent, while the university has added 14 percent total building area, including the Flint and Dearborn campuses.

Notable climate action efforts include:

- Installing geo-exchange systems for the Leinweber Computer Science and Information Building, the Central Campus Residential Development, and the new Ginsberg Center.
- Launching a three-year process to install 25 megawatts of solar power on the Ann Arbor, Dearborn, and Flint campuses.
- Enacting new maximum building emissions targets to cover new projects over $10 million.
- Identifying $15 million in energy conservation projects—covering approximately 100 buildings and 10 million square feet—to be funded via a shared revolving energy fund.
- Deploying eight electric buses and 56 electric vehicles and installing more than 148 EV charger ports as part of plans to decarbonize U-M's vehicle fleet.
- Conducting a Scope 3 analysis to inform the development of goals for indirect emissions.
- Fostering a university-wide culture of sustainability, with justice as a core principle.

U-M also holds a Gold rating from the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment, and Rating System (STARS). The STARS methodology covers academics, engagement, operations, and planning and administration. More than 900 participating institutions from 40 countries take part, including 137 that hold Gold ratings and 12 that hold Platinum ratings. All participating Big Ten institutions hold Gold or Silver ratings. In addition, the university has robust investing and construction goals to promote a sustainable future.

Sustainable Investing Goals

Key Objectives

- Secure funding required to transition to a carbon-neutral campus.
- Transition natural resource investments toward enabling a low-carbon economy.

Progress to Date

- Issued $300 million in green bonds to fund infrastructure investments that advance U-M climate action goals.
- Discontinued direct investments in companies that are the largest contributors to greenhouse gases; discontinued investments in funds whose primary focus is oil reserves, oil extraction, or thermal coal extraction.
- Avoided emissions from U-M investments in 2024 exceeded the total amount of greenhouse gases produced by the Ann Arbor campus.
- The endowment is on track to reduce portfolio emissions by more than half by 2030.
- Committed over $600 million to climate solution strategies over the past three years.
- Transitioned public equities portfolio to an ex-fossil fuels index that excludes companies named on the Carbon Underground 200, a list of top coal, oil, and gas companies.

Priorities

- Continue investing in campus infrastructure and investments that decrease carbon emissions.
- Pursue a net-zero endowment by 2050 and support a low-carbon economy.

"Sustainability is a commitment to balance—caring for people, protecting the planet, and fostering shared prosperity. It means taking responsibility for our own environmental footprint while supporting broader efforts, such as the University of Michigan's pursuit of carbon neutrality and other bold sustainability goals. I'm proud to contribute to a community that turns commitment into action."

Alexandra Haddad
Strategic Communications Manager at the Graham Sustainability Institute

Sustainable Construction Goals

Energy Performance Standards

The university's current goal of exceeding American Association of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) 90.1-2013 energy code requirements is 20 percent for all new construction projects and 15 percent for renovation projects with a construction budget of $10 million or greater. U-M requires numerous mandatory energy conservation measures, comprehensive evaluation of additional energy efficiency measures, comprehensive modeling of energy usage for proposed projects, and development of energy impact statements at each phase of design.

Carbon Emission Targets

In November 2022, the university formally incorporated in the design guidelines maximum carbon emissions targets across different building types for all new construction projects as well as major renovation projects with a construction budget of $10 million or greater. These targets further enhance our goals and support U-M's commitment to achieving net-zero emissions.

LEED Certification

All new buildings and additions with an estimated construction budget greater than $10 million are designed to achieve a minimum of Leadership in Energy and Environmental Design (LEED) Silver certification level.

"Sustainability means creating a future where environmental stewardship, social equity, and shared prosperity go hand in hand. We must be committed to bold climate action that not only reduces our footprint but also empowers communities, creates livable futures, and drives systemic change."

Shalanda Baker
Vice Provost for Sustainability
and Climate Action

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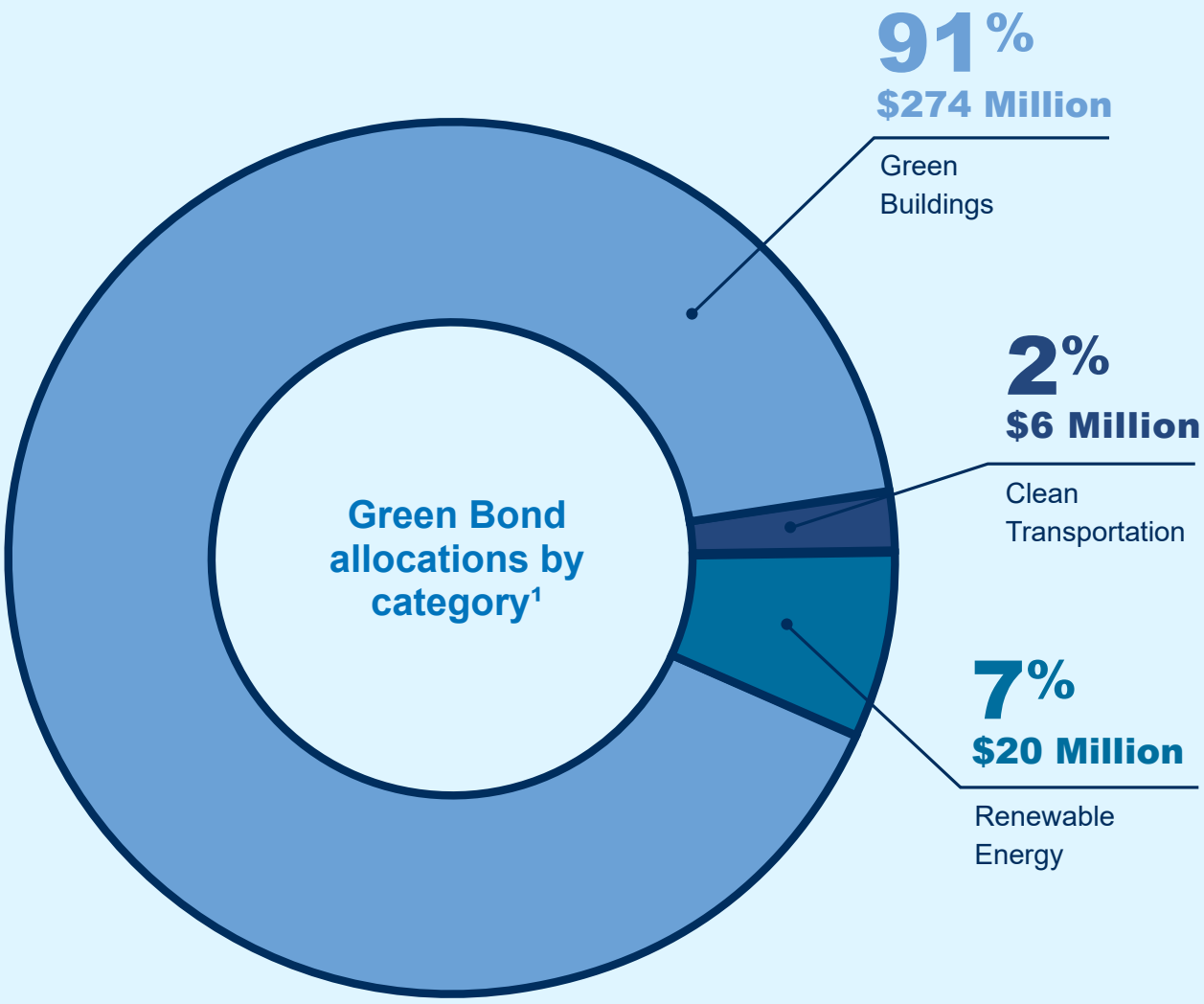
Series 2022B Green Bond spending

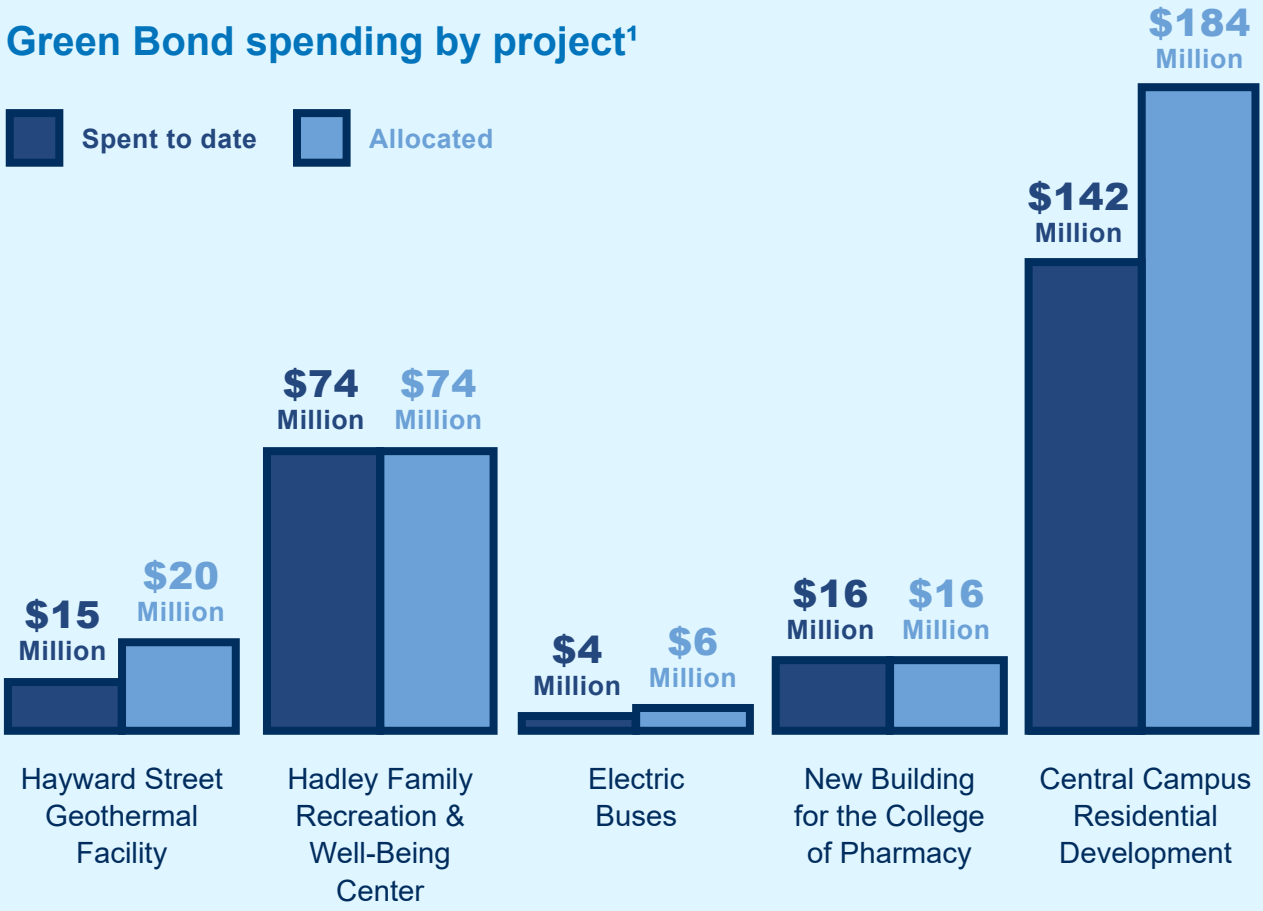
In March 2022, U-M successfully issued its 2022 series of bonds to finance planned future construction and renovation projects. As part of this issuance, the university issued its first green bond series (2022B) to directly support its ambitious sustainability goals. Of the $300 million in green bonds issued, U-M plans to allocate $274 million to support green buildings, $20 million to support renewable energy projects, and $6 million to support clean transportation.



[1]Amounts rounded

This report covers the period through March 2025. As of March 31, 2025, $252,121,582.24 in green bond proceeds have been expended, with $47,878,417.76 remaining funding to be spent.

Green Bond spending by project[1]



[1]*Amounts rounded*

"Sustainability is both a noun and a verb at the University of Michigan. The university's steadfast commitment to sustainability in the classroom, across the community, and in our built environment is truly inspiring, and it's an exciting time to be a student here."

Andrew van Baal
Accelerated master's program in the environment major, fourth-year undergraduate and first-year master of science in sustainable systems major, Co-President of the Student Sustainability Coalition, and member of the Student Sustainability Advisory Board

How does the green bond issuance support U-M's climate action goals?

The campus improvement projects financed by the Series 2022B Bonds are addressing climate transition risks by mitigating greenhouse gas emissions from buildings and the transportation sector.

U-M is supporting the climate transition by constructing green buildings, installing renewable energy infrastructure, and prioritizing clean transportation that directly advances decarbonization goals. The Series 2022B Bonds also finance activities that align with a just transition, characterized by the equitable inclusion and accommodation of all individuals, with a special focus on disadvantaged groups that may be directly or indirectly affected by the structural changes necessary for the transition to a low-carbon economy. The Series 2022B Bonds support the just transition by prioritizing projects that will minimize the environmental impacts of the university's operations and, in turn, minimize negative impacts on human health.

By financing a variety of projects with educational, health, and environmental benefits, the Series 2022B Bonds also support the following United Nations Sustainable Development Goals:

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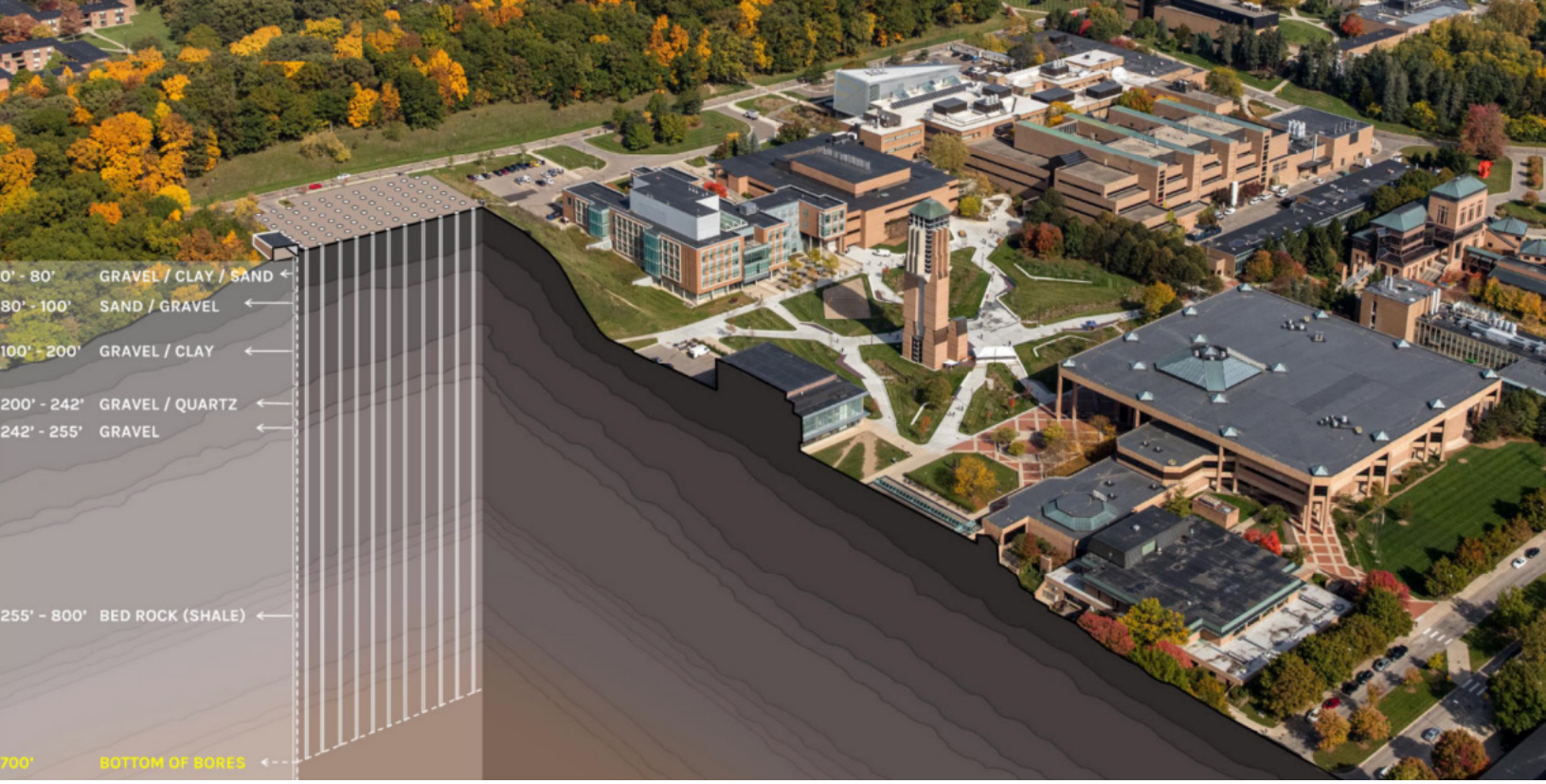
RENEWABLE ENERGY

Hayward Street Geothermal Facility

$20.0 Million
Total project budget

$19.7 Million
Amount of green bonds allocated to project

$15.4 Million
Amount of green bonds spent to date



The Hayward Street Geothermal Facility supports the university's recommendation to utilize district geothermal systems for heating and cooling buildings to reduce carbon emissions and eventually achieve carbon neutrality.

This project will build a geothermal plant on Hayward Street adjacent to the Leinweber Computer Science and Information Building to supply its heating and cooling. Geothermal systems are renewable because of the earth's constant temperature underground. The Leinweber Building is ideal for this demonstration project because there is sufficient land available for the system and we can learn the dynamics of a geothermal system in our climate. The project will include 100 borings spaced 20 feet apart with underground piping to a depth of 700 feet in an area approximately two-thirds the size of a football field. As we study comprehensive district geothermal systems for North Campus, we envision this relatively small system could be interconnected as future systems are built.

The geothermal system and the Leinweber Building will be all-electric and the first large-scale university building, on North Campus, that will not rely on natural gas for heating. Currently, the university is sourcing 200 million kilowatt hours per year from renewable energy. We anticipate the remaining purchased electricity on the Ann Arbor Campus will be from renewable energy sources prior to the completion of the Leinweber Building resulting in a carbon-neutral operation. The system will be located underground allowing the existing parking lot to be replaced in the same location. This project has achieved substantial completion in October 2024 and is pursuing LEED Gold certification.

GREEN BUILDING

Hadley Family Recreation & Well-Being Center

$165 Million
Total project budget

$74.3 Million
Amount of green bonds allocated to project

$74.3 Million
Amount of green bonds spent to date

The Hadley Family Recreation & Well-Being Center will contain 200,000 gross square feet and will include modern gymnasiums, a track for jogging and walking, spaces for weight and cardiovascular training, group exercise rooms, aquatics, climbing areas, courts for squash and racquetball, locker rooms, support, and administration spaces.

The project will allow greater access and opportunity for students and employees to improve their health and well-being. The building's design and systems include several energy-efficient features that will target an estimated 20 percent energy savings compared with an energy code-compliant building, as defined in ASHRAE 90.1-2013. In addition, approximately 100 photovoltaic panels will provide on-site renewable energy. This project is pursuing LEED Platinum certification.

"Sustainability is core to our vision, mission and strategy to provide care that changes lives and advances health. Through our various time and investment efforts to improve energy efficiency, reduce pollution, greenhouse gases and exposure to harmful chemicals, we support healthy, thriving and resilient communities."

T. Anthony Denton, JD, MHA
Senior Vice President, Chief Environmental, Social and Governance Officer, U-M Health

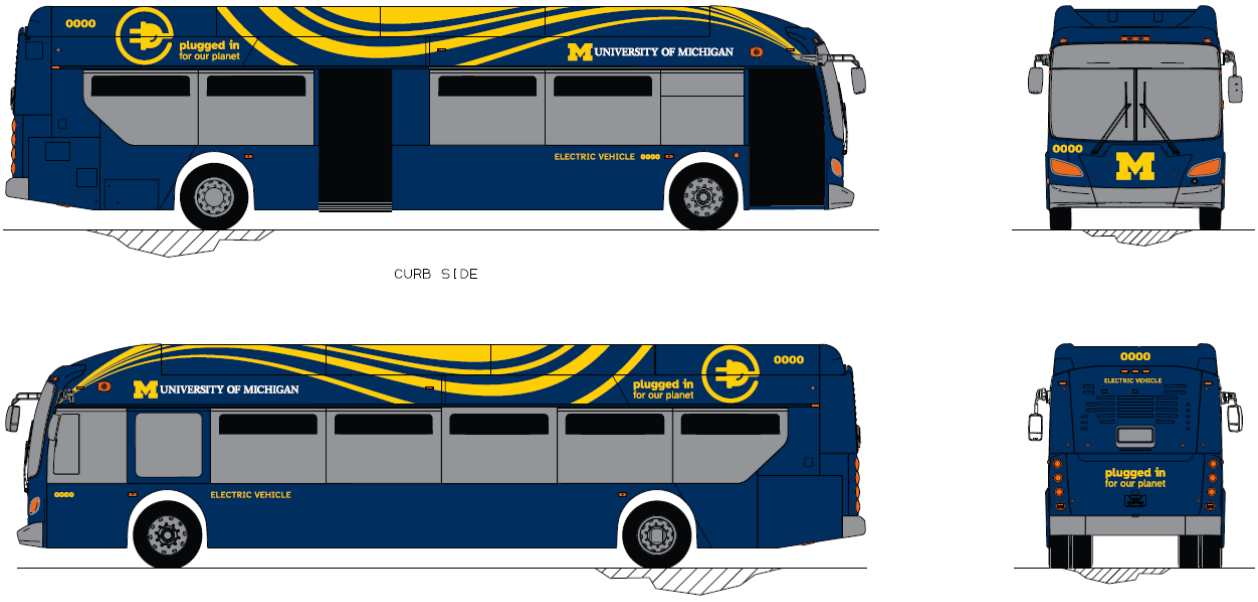
CLEAN TRANSPORTATION

Electric Buses

$15.2 Million
Total project budget

$6.0 Million
Amount of green bonds allocated to project

$4.1 Million
Amount of green bonds spent to date



In accordance with U-M's carbon neutrality goals, the university's Logistics, Transportation and Parking (LTP) division is moving towards a more sustainable bus fleet.

So far, LTP has purchased eight battery-electric buses. Four additional battery-electric buses have been ordered and will arrive in the summer of 2025. Supplemental funding from green bonds will assist the university with its transition to a more sustainable fleet.

"To me, sustainability is the sum of all of our daily efforts to make the world a more livable, healthy place for future generations. Sustainability is going about our daily lives in a way that promotes the equitable use of the environment which celebrates and shares our natural space as a population. When it comes to infrastructure, sustainability is a way to reduce energy consumption while promoting healthy living and working spaces through sourcing, design, and technology innovations. Sustainable infrastructure is extremely important in the vision of a sustainable future, and can push the individuals who use it every day to be more mindful of their actions."

Elliot Weed
Second-year undergraduate business administration major, Planet Blue student leader, and previous member of the Michigan Sustainability Community

GREEN BUILDING

New Building for the College of Pharmacy

$141 Million
Total project budget

$16.0 Million
Amount of green bonds allocated to project

$16.0 Million
Amount of green bonds spent to date

The College of Pharmacy Building was constructed in 1960, with a major addition built in 1992.

The building's narrow structural bays and shallow floor-to-floor heights do not allow for the reconfiguration needed for modern research and teaching laboratory spaces or modern classrooms. In addition, the building is not large enough to meet the college's space needs. As a result, the college's teaching, research, and office spaces are distributed across seven campus locations. The construction of a new teaching and research facility (the New Building for the College of Pharmacy) will address its need to modernize and increase its physical space for academic, research, and student support functions.
A new 142,000 gross square foot building located on the corner of Glen Avenue and East Huron Street will house active learning-style classrooms, laboratories, associated support spaces, faculty and administrative offices, and student-focused areas. The project is designed to achieve LEED Gold certification.

"Sustainability, to me, is the commitment to innovate bravely and act collectively for the well-being of people and planet. It's about blending modern advancements with community wisdom and practical know-how to create solutions that build resilience and serve everyone."

Shana Weber
Associate Vice President for Campus Sustainability

GREEN BUILDING

Central Campus Residential Development

$631 Million
Total project budget

$184 Million
Amount of green bonds allocated to project

$142.4 Million
Amount of green bonds spent to date

U-M will construct a new Central Campus housing and dining facility that will include 2,300 beds and 900 dining seats.

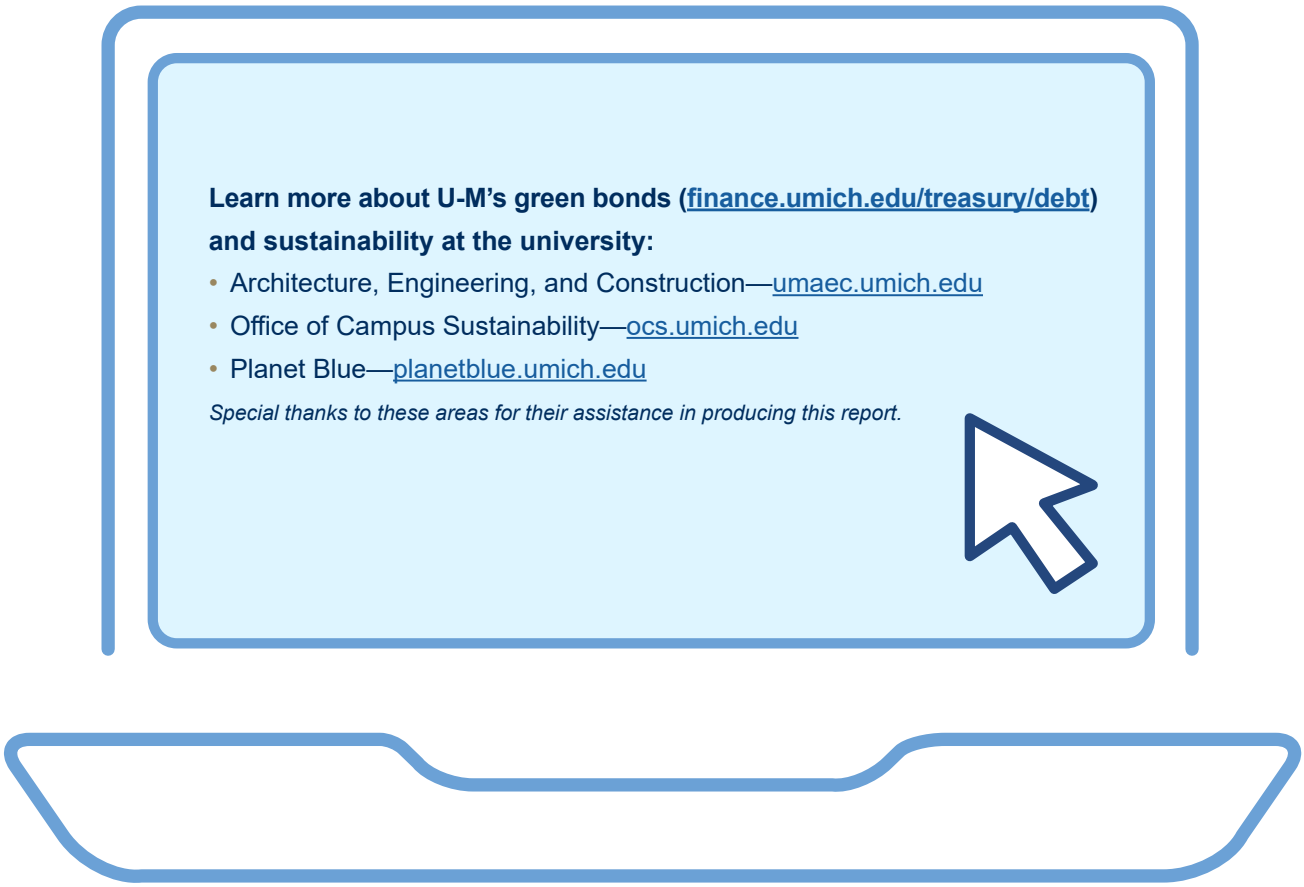
This new facility, on the current Elbel Field site, between Hoover Avenue and Hill Street, will enable the university to respond to the increasing demand among students for affordable, on-campus housing on, or near, Central Campus and better meet the needs of our growing student body. It will also help ensure continued excellence in the overall undergraduate experience.

The facility will continue to advance the university's efforts to achieve carbon neutrality by utilizing geothermal exchange systems for heating and cooling the new dining hall, incorporating all-electric equipment for cooking, and designing the entire facility to earn LEED Platinum certification.

Learn more about U-M's green bonds (finance.umich.edu/treasury/debt) and sustainability at the university:

- Architecture, Engineering, and Construction—umaec.umich.edu
- Office of Campus Sustainability—ocs.umich.edu
- Planet Blue—planetblue.umich.edu

Special thanks to these areas for their assistance in producing this report.



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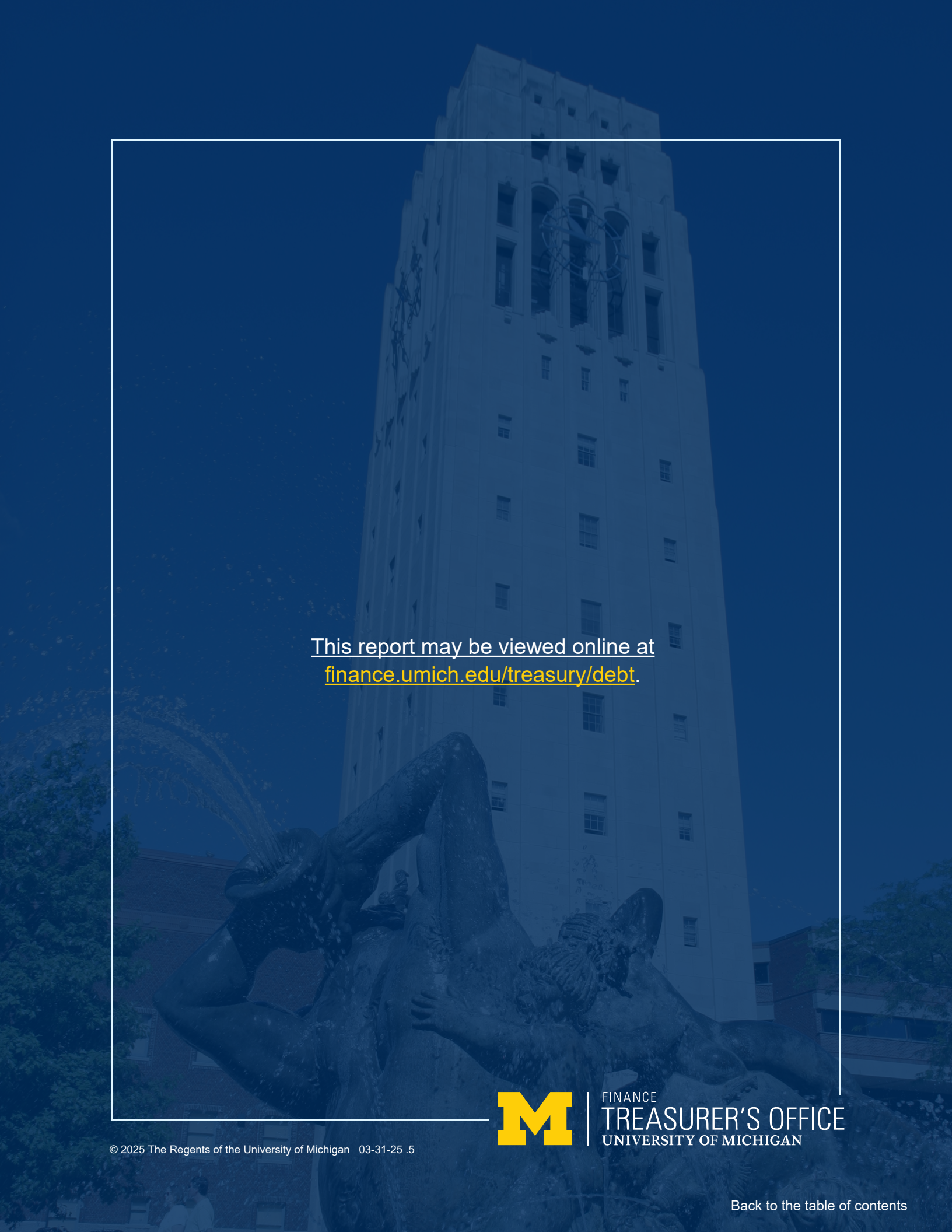

This report may be viewed online at finance.umich.edu/treasury/debt.

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