State of Michigan

Fiscal Year 2024

Capital Outlay Project Request

University of Michigan-Dearborn

Computer and Information Science Building Renovation

October 28, 2022

Fiscal Year 2024
Capital Outlay Project Request

Institution Name: University of Michigan-Dearborn
Project Title: Computer and Information Science Building Renovation
Project Focus: Academic, Research and Administrative/Support
Type of Project: Renovation and Expansion
Approximate Square Footage: 35-40,000 gsf
Total Estimated Cost: $40 million
Estimated Start/Completion Dates: Fall 2023/Fall 2026

Project Purpose:

University of Michigan-Dearborn seeks $30 million in state support to renovate and expand the Computer and Information Science (CIS) Building. With the total cost of this project estimated at $40 million, the university and its campus-specific donors lack the financial capacity to solely fund this project.

The CIS building houses one of the fastest growing and most important disciplines to our region's and nation's prosperity and security. The department is home to four bachelor of science degree programs, including Cybersecurity and Information Assurance, Computer and Information Science, Data Science, and Software Engineering. The department also offers three undergraduate minors in Computer and Information Science, Artificial Intelligence, and Game Design. Further, the department offers five Master of Science degrees in Artificial Intelligence, Cybersecurity and Information Assurance, Data Science, and Software Engineering. The department also offers a Ph.D. degree in Computer and Information Science sanctioned by the University of Michigan Rackham School of Graduate Studies in Ann Arbor.

As one of the original buildings on campus (built in 1959), the CIS Building has never been renovated or modernized. Consequently, the teaching and research environment provided by the CIS Building is below any reasonable standard for a modern university and certainly below the standard for delivering modern computer and information science education that helps Michigan compete in the global economy. The building is home to the fastest-growing department in the College of Engineering and Computer Science (CECS) with a total enrollment in Fall 2022 exceeding 1,100 students with 685 students pursuing undergraduate degrees, 398 students pursuing master's degrees, and 17 students pursuing doctoral degrees. CIS is a field that is critical to our region's ability to be competitive and sustain economic prosperity over the coming decades. Not surprisingly, the Bureau of Labor Statistics has shown that these degrees lead to high-paying jobs.

UM-Dearborn is rich in opportunities for creative collaborative research, practice-based learning, and direct engagement with local communities and businesses. As an institution, we are always learning, and we strive to be responsive to the changing needs of our diverse students, the world in which they live and work, the communities we serve, new technologies, and an increasingly complex economy. The university helps the state of Michigan compete and has

been selected as one of 92 engineering colleges and schools across the world by the NAE to implement a program to inspire practical projects for their students through an educational supplement called the Grand Challenges Scholars Program (GCSP). This program provides students the educational experiences, inside and outside the classroom, necessary to develop the five competencies needed to address global challenges that will impact their generation.

Universities across the United States are experiencing unprecedented growth in computer science enrollment. This growth is fueled by demands from industry due to the pervasiveness of computing in society. At the same time, however, the number of computer science graduates has not kept pace with market demand for such professionals. According to a letter signed by executives of major computing organizations in the United States, the number of computing graduates from universities in the U.S. is about 80,000 while the market has demand for 700,000 professionals annually, almost a ten-fold difference! Further, according to the Bureau of Labor Statistics, "*Overall employment in computer and information technology occupations is projected to grow 15 percent from 2021 to 2031, much faster than the average for all occupations.*" This demand combined with universities like UM-Dearborn creates a great opportunity for the state of Michigan.

The UM-Dearborn department of Computer and Information Science has also experienced significant growth over the past ten years, with an enrollment increasing over 158 percent. Additionally, computer science continues to play an important role for education and research in other disciplines, such as the liberal arts, engineering, medicine, education, and business, because they rely more on computational systems and algorithms than ever before. In particular, the growth in Artificial Intelligence (AI) and Data Science is poised to impact nearly every aspect of society.

Like UM-Dearborn, other universities across the country have reported an accelerating student interest in CIS, and much of that interest is fueled by the vast potential associated with studying AI. UM-Dearborn's competitiveness, and jointly the state's, would be significantly enhanced if the number of AI faculty is significantly increased to compliment current strengths in software engineering, big data analytics, and cybersecurity. Upgrading our CIS building will help UM-Dearborn meet the increasing demand for these types of degrees by providing desperately needed state-of-the-art facilities for teaching and research, which helps to recruit the world's top talent in this field.

Although the University has addressed this enrollment growth by increasing the size of its CIS faculty, the CIS building has been a major challenge for the department. The CIS Building does not meet the current pedagogical needs and dramatically hinders the future evolution and development of the department. Our faculty is extraordinarily talented, five members of our Department of College of Engineering and Computer Sciences faculty were awarded NSF CAREER Awards, rivaling some of the top programs on a per capita basis. In FY22, the university also received 15 NSF Awards. In order to retain and grow this talented human capital, we will need better resources to contribute in making Michigan a leader in this growing field.

Many of UM-Dearborn graduates have gone on to important leadership positions in CIS corporations. For example, Judith Tolland, VP for Meta (formerly Facebook), Brett Bilbrey, Senior Manager, Technology Advancement, Apple, Mark Sunday, CIO, Oracle Corporation and many others.

The CIS Building currently suffers numerous problems, including an aging plumbing system, old windows with poor thermal efficiency, limited electrical wiring that is unsuitable for high-end computing systems, outdated AC and heating systems causing temperature issues for our computer labs, inadequate fire alarm system causing potential safety issues, and inherent ADA compliance/accessibility problems.

The present CIS Building does not meet the education and research needs to deliver modern computer science education. For example, we require large labs for research areas like data analytics for autonomous vehicles and intelligent software engineering. We also need hands-on computer labs to offer training workshops on the latest computing technologies to trainees from industry and outreach to K-12 students in the region. We need active learning classrooms to deliver effective education. Our laboratories should be able to house modern equipment for cybersecurity, game design, and artificial intelligence, to name a few.

Our community also needs space to host interdisciplinary research for data science, cybersecurity, edge computing, and AI and large gathering spaces where students can work together on solving complex engineering and computing problems. Accordingly, the renovation of the CIS Building has become the top capital priority and an urgent need at our university.

Despite our aging building, UM-Dearborn has been a major provider of computer scientists for southeast Michigan, with over 90 percent of the university's graduates remaining in southeast Michigan. Further, about 85 percent percent of the graduates of the Computer and Information Science department have a job upon graduation or shortly after; thus, supporting the region's economy with STEM expertise and providing a solid return on the state's investment into the building. University of Michigan-Dearborn seeks support for a state-of-the-art facility to accommodate its ongoing enrollment and programmatic growth, which would enable increased opportunities for 21st century instruction while facilitating entrepreneurial, multidisciplinary problem solving, complementing the more development-oriented laboratories of our industry partners and implementing K-12 outreach programs.

Scope of the Project:

The 24,314 GSF Computer Information Science (CIS) building is one of the original four buildings of the University of Michigan-Dearborn campus. Built in 1959, this building is overdue for modernization and code updates. CIS Building requires an updated design and infrastructure to adequately serve as the primary teaching/research laboratory facility for the disciplines taught by the Computer and Information Science Department. This project includes a ~10,000-12,000 GSF addition to support current pedagogies and the increasing enrollment in this discipline. The estimated cost of this renovation project is $40 million.

The College of Engineering and Computer Science plays a significant role in the regional economy by providing skilled graduates in the computer and information science related disciplines. As one of UM-Dearborn's four original buildings, the CIS Building evolved to meet the needs of industry and has become the home of the Computer and Information Science Department, which offers the following degrees:

Bachelor of Science (BS)

- BS in Cybersecurity and Information Assurance,
- BS in Computer and Information Science with concentrations in Computer Science, Game Design, and Information Systems,
- BS in Data Science, and
- BS in Software Engineering.

Master of Science (MS)

- MS in Artificial Intelligence,
- MS in Cybersecurity and Information Assurance,
- MS in Computer and Information Science,
- MS in Data Science, and
- MS in Software Engineering.

Doctor of Philosophy (PhD)

- PhD (Computer and Information Science).

The CIS department also partners with the department of Industrial and Manufacturing Systems Engineering in delivering the MS degree in Information Systems and Technology.

Program Focus of Occupants:

A new CIS Building will enable opportunities for more Michigan students to gain a competitive, 21st-century education in a fast-growing field. UM-Dearborn does this by developing cutting-edge learning approaches, such as practice-based learning (PBL) in lab/studio settings and spaces for informal student collaboration. Teaching laboratories would be designed to facilitate entrepreneurial, multidisciplinary and complex problem solving and to complement the more software development-oriented laboratories of industry partners.

The facility would exemplify a model of higher education that recognizes the centrality of integrative learning among computing disciplines and across complementary programs in the College of Arts, Sciences, and Letters (CASL), College of Business (COB) and College of Education, Health, and Human Services (CEHHS). Designed to encourage multidisciplinary collaboration in the context of 21st-century engineering, a renovated CIS Building will offer academic pathways to exceptional careers in Michigan for decades to come.

This renewed facility will require infrastructure improvements to accommodate additional labs

and enhance new initiatives that support both the global needs of computing and the regional economy.

General Improvements:

- State-of-the-art fire suppression and safety systems.
- ADA compliant/barrier-free access to all teaching and research space.
- Compartmentalized power controls for safety.
- Sustainable, energy-efficient construction.
- Teaching laboratories that accommodate current pedagogies.
- Wi-Fi suitable for laboratory and classroom instruction.
- Access to power outlets in all formal and informal learning spaces.
- Telepresence conference room (increasingly expected by industry and government sponsors and invaluable for student-team collaboration).
- Support spaces and adequate storage spaces.
- Desirable gathering and student collaboration spaces.
- Showcase for a CIS education.
- Welcoming aesthetics.
- Improved facade and landscaping.

Additional Laboratories:

- Edge computing Lab.
- Digital Forensics Lab.
- Software Engineering Lab.
- Operating System and Networking Lab.

Information Technology

- Fiber
    - Relocate fiber that is currently terminated in the basement to a network closet on the first floor.
- Wired network
    - Provide a network closet on the second floor.
    - Upgrade network from Cat 5 to Cat 6 or Cat 6A (10G to the jack).
- Wireless
    - Improve wireless signal penetration. The existing building is cinder block which makes signal penetration difficult.
    - Existing APs are in the hallways. Provide improved AP spread throughout the building.
- Data center room
    - Evaluate the most energy-efficient/cost-effective approach for housing servers/clusters for the CIS building. Assess alternatives to a specialized data center in the CIS building such as open space in adjacent buildings.

Space Design Philosophy

- Collaborative, flexible labs to accommodate Project-Based Learning, Senior design projects, student-team projects and course projects.
- Shared laboratories used across computing disciplines to maximize space utilization efficiency.
- Flexible Multi-Use Labs: Accommodate both teaching and translational research with immediate implications for industry.
- Formal and informal spaces used for small- and medium-sized project work and information sharing among students, faculty and industry partners.

How does the project impact Michigan's talent enhancement, job creation and economic growth initiatives on a local, regional and/or statewide basis?

The upgrading of the CIS Building will help UM-Dearborn increase the number of college graduates by attracting more students into STEM fields through aligning enhanced facilities with strategic recruitment strategies. Aggressive university goals to increase enrollment are expected to double the number of CECS graduates by 2030. A 94 percent growth in enrollment in CECS since 2010 supports the validity of the projections.

The renovated CIS building will be instrumental in enhancing first- and second-year retention rates in the department. The newly developed labs, classrooms, and collaborative spaces will provide the ideal environment to integrate project-based and active learning pedagogies in gateway courses across all programs in the department. The upgrading of the CIS building will also pave the way to enabling an entrepreneurial and innovation hub for students in the department and college. All capstone projects in the department (two-semester long senior year team projects) are currently conducted in collaboration with local communities (e.g., Dearborn Police) and industries to solve real-world complex engineering problems. We envision spaces in the renovated building to provide opportunities where students, faculty, and community/industry partners get together to nurture and produce and ensure that the next innovative, out-of-the-box software products and tools are created in Michigan.

More than 90 percent of UM-Dearborn students remain in southeast Michigan after graduation, which provides strategic impact not only for the university but also for the State of Michigan. Engineering graduates also report an average starting salary of $63,000. Changes to the CIS Building come amid an increased national emphasis on Student Project Centers, STEM careers, women and minorities in engineering and K-12 engineering education. These factors offer compelling arguments that UM-Dearborn has the necessary growth potential that can assist with the state's enrollment goals.

UM-Dearborn will continue to measure its success, in part, by the ongoing achievements of CIS students. Today's students compete in a global workplace where their ability to collaborate across diverse boundaries is essential. UM-Dearborn's inclusive campus environment includes 29 percent students of color. The rich diversity ensures that CIS students will function effectively in an inclusive workplace.

Nearly half of UM-Dearborn's undergraduate students are the first members of their family to attend college, while 44 percent of students are eligible for PELL grants. A Center for Education and the Workforce study has shown annual earnings by bachelor's degree holders versus those with a high school diploma varies between $10,000 and $45,000 more, every year, over the course of one's working life. Studies have shown that every percentage increase in the number of residents with four-year degrees has the potential to generate $3 billion for the regional economy. Starting salaries of CECS graduates have been reported to average $63,000.

The value and relevance of the programs to students and industry is reflected in a 12 percent CECS enrollment growth over the past year. The CIS, in its current configuration, will soon impact the college's ongoing enrollment growth plans, as very soon some programs will be forced to limit enrollment. While CIS programs have evolved to meet the changing needs of students and industry, the facility is in need of replacement to reflect and accommodate these programmatic changes.

CIS Fast Facts:

- 225 graduates in 2021/2022 – 894 graduates over the last five years.
- $3.46 million in CIS research expenditures in the past 5 years.
- Undergraduate Game Design education ranked 35th in the Nation by Princeton Review among 150 universities.
- Over 90% percent of CIS graduates remain in the region after graduation with a median starting salary was $73,500.
- Renovating the CIS Building will alleviate 10.6% percent, $4.2 million, of the university's total deferred maintenance backlog.
- The College of Engineering and Computer Science was ranked with the fifth best ABET-accredited undergraduate engineering program in Michigan. Our computer science undergraduate degree was also named a top program.

How does the project enhance the core academic, development of critical skill degrees, and/or research mission of the institution?

This project is central to our core vision and mission. As part of our vision, UM-Dearborn defines itself as providing the academic excellence of the University of Michigan, as a regional, practiced-based university serving southeast Michigan. With this important project, we are focused on increasing the number of engineering college graduates, as well as preparing students for Michigan's 21st century economy.

UM-Dearborn began with a strong focus on engineering and business. The CECS and COB were created as a result of a partnership between University of Michigan and Ford Motor Co. Today, CECS offers 27 bachelor's, master's and doctoral degree programs to more than 3,500 students – a 94 percent growth in enrollment since 2010.

For nearly 20 consecutive years, CECS was rated among the top ABET-accredited undergraduate engineering programs in the country. The mission of CECS is to provide

excellent undergraduate and graduate engineering programs in an environment where engineering fundamentals are integrated with engineering practice, applied research, continuing professional education, and sensitivity to the evolving needs of industry. The proposed facility improvements will support the university mission as well as the future of southeast Michigan.

Is the requested project focused on a single, stand-alone facility? If no, please explain.

Yes, this is a single, stand alone facility.

How does the project support investment in or adaptive re-purposing of existing facilities and infrastructure?

At the current assessment stage of this project, the university believes that renovation of the existing space with an addition to the existing building is the preferred approach for this project.

Factors such as historic value, exceptional structure, or architectural excellence that could support a case for adaptive re-purposing at a greater cost than replacement are not present. The existing CIS building offers no significant historic value; it is a standard 1959 classroom and laboratory building. The university does not have another use for this building. It is adjacent to the other buildings in the engineering complex and occupies space that is ideal for a renovated and expanded computer information science building.

This project does support our investment in existing facilities and infrastructure by continuing to develop a state-of-technology engineering complex for our students. The proposed building is adjacent to both the newly renovated Engineering Laboratory Building and the Institute for Advanced Vehicle Systems, built in 2006. This strategic location bolsters the strength of the total engineering complex, offering a more integrated experience for our students.

Does the project address or mitigate any life/safety deficiencies relative to existing facilities? If yes, please explain.

The 2019 Facilities Condition Assessment (FCA) of the CIS building lists the building condition as poor with a Facilities Condition Needs Index (FCNI = 10-Yr Infrastructure Needs/Total Replacement Cost) of 0.48. This building carries a $4.2 million deferred maintenance backlog and a 10-year renewal cost of $5.3 million. The full deferred maintenance backlog will be addressed and eliminated with this renovation.

Items in the current deferred maintenance and capital renewal backlog include:

Accessibility

- The elevator control systems lack accessible features.
- Most of the interior doors are equipped with knob hardware.
- The second floor restrooms are not fully ADA compliant.
- The stairs are deficient in handrail and guardrail design relative to current standards.

Health

- The 9 inch vinyl tile and 12 inch vinyl tile mastic reportedly contain asbestos.
- HVAC and plumbing systems may also contain asbestos.

Fire and Life Safety

- Roof has low parapet walls and no fall protection.
- The antiquated fire detection and signaling system includes fire/smoke detection devices, manual pull stations, and horn signalers.
- This system is monitored and controlled by an original electromechanical panel in the basement.
- There is no fire suppression system.

HVAC

- Distribution system, control system instrumentation, and field panels are out of date and require replacement.
- Air handler and return fan are degraded and past their useful life
- Rooftop unit is due for replacement

Electrical

- The electrical distribution network consists of copper conductors sheathed in plastic and routed through metal conduits. It is original, outdated, and past due for replacement.
- There is no emergency power supply and distribution system for the building.

Plumbing

- Piping is past its lifespan and due for replacement.
- Filter pumps and hot water pumps are past their useful service life.

Elevator

- The elevator is at end of life and due for replacement or refurbishment.

The proposed CIS renovation and expansion project will correct all of these deficiencies. Standardizing controls for building operations and computer science-based teaching and research facilities within a failing infrastructure is labor intensive and provides exposure to potential threats and injuries. As a new facility, the design will comply with requirements of the current codes. Operationally, a new building will provide the infrastructure and technology critical to current educational pedagogies in computer information science.

How does the institution measure utilization of its existing facilities, and how does it compare relative to established benchmarks? How does the project help to improve the utilization of existing space and infrastructure, or support the need for additional space and infrastructure?

The university has conducted two space-utilization studies that have identified classroom scheduling practices to meet benchmarks of 75 percent classroom utilization and 65-70 percent station-occupancy rates. In addition, the university has adopted guidelines that standardize the space allocated to faculty and staff and is currently reassessing space guidelines in light of recent remote and hybrid work practices. These guidelines will be integrated into the CIS renovation, limiting space allocated to offices and increasing the space available for learning and research. This renovation will improve the utilization of existing space and infrastructure, updating labs, classrooms, and offices that were built in 1959.

The CIS building lies at the heart of our campus and is central to the future of the college, serving as an important component of the engineering complex. A recent study assessed programming and space utilization in all CECS buildings. This information informs our design of the CIS building, assuring that our work in fully aligned with the strategy of the university as well as the growth in the College of Engineering and Computer Science and within the department of Computer and Information Science. New classrooms will be designed to accommodate practice-based learning and active classroom environments. Laboratories will be designed as multi-purpose, adaptive-use spaces, assuring optimized use and flexibility for future needs.

In 2022, CECS enrolled more than 3,500 students, a 3 percent growth over the previous year, representing a 14 percent increase since 2016. With the sustained enrollment growth that the college continues to experience, CECS is not able to adequately accommodate students in the CIS building in its current state. A new building, with the increased capacity detailed above, will allow the university and CECS to not only continue enrollment growth but also provide the necessary technology the college and its students need to thrive.

How does the institution intend to integrate sustainable design principles to enhance the efficiency and operations of the facility?

UM-Dearborn is committed to environmental stewardship in its approach to building projects. All new construction projects, as well as major renovations, are required to meet the American Association of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standard 90.1-2007. Projects with a construction budget of $10 million or more have a goal of exceeding these requirements by 30 percent. In addition, all projects with a construction budget that exceeds $5 million are subject to an environmental review process to help guide the design from a sustainable practices standpoint. U-M has adopted the criteria of the Leadership in Energy and Environmental Design (LEED) silver certification as mandatory for all new building and additions (new construction) with a construction budget greater than $10 million and supports design protocols that are consistent with our drive towards carbon neutrality.

Are match resources currently available for the project? If yes, what is the source of the match resources? If no, identify the intended source and the estimated timeline for securing said resources.

The university's $10 million cost share for the project will be obtained through future debt financing once the project is authorized for construction.

If authorized for construction, the state typically provides a maximum of 75% of the total cost for the university projects and 50% of the total cost for community college projects. Does the institution intend to commit additional resources that would reduce the state share from the amounts indicated? If so, by what amount?

The university does not intend to provide additional resources to reduce the state's share of construction costs. The university has limited financial resources and limited debt capacity that needs to be used towards critical maintenance projects throughout our campus. The university will provide funding towards costs that are necessary and related to the CIS renovation project such as temporary office relocation during the construction process.

Will the completed project increase operating costs to the institution? If yes, please provide an estimated cost (annually, and over a five-year period) and indicate whether the institution has identified available funds to support the additional cost.

The completed project is not expected to increase annual operating costs to the institution. Any increased costs will be offset by energy and utility savings after the project is completed.

What impact, if any, will the project have on tuition costs?

The project will require debt financing resulting in additional debt service that increases our operating expenditures. Any increase in operating expenditures adds budgetary pressure to achieve a balanced budget. Therefore, there may be an indirect impact on tuition costs. The university strives to keep tuition affordable for our students, however, the university must increase tuition to keep up with the inflation in the costs to operate the institution. Currently, we are seeing significant inflation across all expense categories. Investment in our Computer Information Science facilities will help attract more students to our information science programs and help grow research in these disciplines. Enrollment increases in these programs would help offset the debt service and help limit tuition increases. Further, realization of this project will remove several million of long-term deferred maintenance costs, reducing the deferred maintenance liability.

If this project is not authorized, what are the impacts to the institution and its students?

The university has limited financial resources and limited debt capacity. Historically, fundraising has not supported significant capital investments. Therefore, if the project is not authorized, the university would defer this project for the foreseeable future. The university has significant deferred maintenance and our limited resources need to be devoted to addressing our most critical needs.

Without investment in our CIS building, the university and the state of Michigan may miss on the opportunity to improve on the instructional and research environments for our information science disciplines. The university would lack the necessary physical resources needed to attract and retain talented faculty in these disciplines who, in turn, teach and attract STEM students for the state of Michigan. Our teaching and research mission that best supports immersive and project-centered learning would also be inhibited.

What alternatives to this project were considered? Why is the requested project preferable to those alternatives?

We considered renovations to our library and university center as well. The CIS Building project is highly preferable due to its relative age, being one of the original buildings to our campus, and its expected effect on a growing STEM field for both faculty teaching and research. We have supported this building through minor modifications and infrastructure support to keep it operating in the best possible manner, but as the structure continues to age, these efforts become increasingly less cost-effective.

OFFICE OF THE MAYOR
CITY OF DEARBORN

ABDULLAH H. HAMMOUD
MAYOR

October 20, 2022

Senator Ken Horn
P.O. Box 30036
Lansing, MI 48909-7536

Representative Matt Maddock
P.O. Box 30014
Lansing, MI 48909

Dear Senator Horn and Representative Maddock,

It is with great enthusiasm that the city of Dearborn extends its support of the University of Michigan-Dearborn's Fiscal Year 2024 Capital Outlay Request to renovate its Computer and Information Sciences (CIS) Building.

The city of Dearborn and the university have had a collaborative working partnership for more than 60 years. Their presence in our city has made us an attractive education destination in metro Detroit. More than 20,000 students attend UM-Dearborn and neighboring Henry Ford College.

The city of Dearborn is a diverse, inclusive and growing community. We are home to Fortune 500 Companies, two vibrant downtown areas, safe neighborhoods and world-renowned attractions. I urge the state to continue to invest our hometown's university.

The demand for computer science professionals continues to rise. Technology, artificial intelligence and cyber security are critical skill sets needed in our region, state and nation. An investment into the CIS Building is an investment into the economy of southeast Michigan, as over 90% of UM-Dearborn graduates remain in the state after graduation.

As an alum of UM-Dearborn and mayor of the state's seventh largest city, I encourage you to support this project for our educational partner. This project will have a long-lasting impact on the region and strong return on investment for the residents of the state of Michigan.

Sincerely,

Abdullah H. Hammoud
Mayor

October 22nd 2022

Senator Ken Horn

Chair, Joint Capital Outlay Subcommittee

PO Box 30036

Lansing, MI 48909

Dear **Senator Horn**

As a longtime engineering and technology executive, a leader of women in technology programs, and a University of Michigan Dearborn alumnus, I would like to take this opportunity to voice my support for the University of Michigan – Dearborn Capital Outlay request.

Not only does University of Michigan – Dearborn rank fourth in Ford Motor Company's recruitment partners, but the university has served to host and support numerous technology events for girls and women interested in a career in engineering and technology. The metro Detroit area is thriving with high tech employment opportunities, yet there is a shortage of such talent.

Continuing support the University of Michigan Dearborn's ability to create a talent pipeline for the thriving businesses in the area is critical for mutual success. Funding of the ELB is critical in providing students with the best capabilities to learn the new and complex skills required in the market. I would like to re-iterate my strong support for the capital outlay initiative for the ELB building to assure the regions success in providing the best talent for Michigan based companies.

Warm regards,

May Russell

May Russell

CHIEF DIGITAL AND INFOMRATION OFFICER FORTUNE BRANDS

FORMER FORD MOTOR COMPANY EXECUTIVE DIRECTOR

CHIEF MISSION OFFICER MICHIGAN COUNCIL WOMEN IN TECHNOLOGY

DEARBORN
AREA CHAMBER OF COMMERCE
CONNECTIONS • VALUE • PROGRESS
DEARBORN | DEARBORN HEIGHTS

AWARD OF DISTINCTION
2021 MACP

October 20, 2022

Senator Ken Horn
P.O. Box 30036
Lansing, MI 48909-7536

Representative Matt Maddock
P.O. Box 30014
Lansing, MI 48909

Dear Senator Horn and Representative Maddock,

As the President of the Dearborn Area Chamber of Commerce–- which represents over 500 area businesses and organizations–I would like to share my support for the University of Michigan-Dearbon's capital outlay request to renovate its Computer and Information Science Building.

An investment by UM-Dearborn and the State of Michigan into a start of the art Computer and Information Science facility will help train and grow the talent pipeline for our area businesses and attract new businesses with high-paying jobs to the region. This forward-looking investment will help the State of Michigan become a competitor for the cutting-edge technology jobs of tomorrow.

Thank you for your consideration of this request which would play a vital role in growing Michigan's economy and creating opportunity for our residents.

Sincerely,

Jackie Lovejoy
President
Dearborn Area Chamber of Commerce

Jackie Lovejoy, President & CEO

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THE SENATE
STATE OF MICHIGAN

October 24, 2022

Senator Ken Horn
Chairman, Joint Capital Outlay
PO Box 30036
Lansing, MI 48909

Representative Matt Maddock
Chairman, Joint Capital Outlay
PO Box 30014
Lansing, MI 48909

Dear Chairmen Horn & Maddock,

As the State Senator representing Dearborn, I would like to share my enthusiastic support for the FY 24 capital outlay request from the University of Michigan-Dearborn for the renovation of its Computer and Information Science [CIS] Building. With this project, UM-Dearborn will transform the CIS Building – which is home to the university's fastest-growing department within the College of Engineering and Computer Science-- into a state-of-the-art facility equipped to prepare its students to innovate tomorrow's cutting-edge technology.

Computer and Information Science is one of the most rapidly growing professions worldwide. According to the U.S. Bureau of Labor Statistics, employment in the sector is expected to grow 15% from 2021 to 2031 to create roughly 682,000 new jobs. This renovation will equip Michigan's talent for high-paying jobs in a growing sector and help attract companies focused on computer science, cyber security, and artificial intelligence to the region.

Thank you for your consideration of this request which is vital to preparing our workforce for the jobs of tomorrow and attracting employers to our great state.

Sincerely,

Sylvia A. Santana
State Senator
Michigan's 3rd District

Jacob Crossman
Vice President of Autonomy
May Mobility, Inc
650 Avis Dr #100
Ann Arbor, MI 48108

The Honorable Senator Ken Horn
Chair, Joint Capital Outlay Subcommittee
P.O.Box 30036
Lansing, MI 48909-30036

Dear Senator:

I am writing in support of The University of Michigan-Dearborn's request to renovate their aging CIS building. I, as a 2000 graduate, benefited greatly from the facilities and exceptional education provided at the UMD and the CIS department in particular. Additionally, at May Mobility, we have had the benefit of hiring several UMD graduates including excellent engineers and two Directors.

As a leader of the autonomy team in a dynamic, high-tech Michigan company, I look specifically for the type of graduates that the UMD CIS department provides. These graduates are are well trained not only in the technical and theoretic aspects of software, but also in the important practical elements of teamwork and communication that are critical for maximizing their potential in a highly challenging job setting. Furthermore, the UMD provides opportunities to to many people who otherwise do not have the opportunity to obtain a University of Michigan education - people who, like myself in my school years, do not have the means to go the larger campus, or, through the need to work while going to school, require the class flexibility that the UMD provides.

As excellent as the UMD CIS department is, computers and technology change rapidly. It is critical for the UMD CIS department to upgrade and expand its facilities to account for the rapidly expanding space and technology needs demanded by our increasingly high-tech world. As a key technical leaders and decision maker at May Mobility, I strongly support the renovation of the UMD CIS building.

Sincerely,

Jacob Crossman
Vice President of Autonomy
May Mobility, Inc.

Lear Corporation
E-Systems
21557 Telegraph Road
Southfield, MI 48033

Dr. André Weimerskirch
VP Platform SW, Cybersecurity and Functional Safety
Phone (248) 447-4512

Letter of Support

Senator Ken Horn
Chair, Joint Capital Outlay Subcommittee
P.O. Box 30036
Lansing, MI 48909-30036

October 14, 2022

Dear Senator Horn,

I am a member of the CIS Professional Advisory Board and would like to take this opportunity to express my support for the University of Michigan-Dearborn's Capital Outlay request to renovate the Computer and Information Science (CIS) Building. The building was completed in 1959, when UM-Dearborn was founded, and it is currently the oldest unrenovated academic building on campus, housing one of the most innovative and fast paced disciplines at UM-Dearborn.

All automotive stakeholders in Michigan have a huge need for young talent, especially around computer science, software, data, and cybersecurity, to support the current growth areas of electric vehicles (EV) as well as connected and automated vehicles (CAV). UM-Dearborn's CIS department takes an essential role in educating and training new talent to enable future growth of American automotive stakeholders, of which most have their engineering centers in Michigan. The CIS graduates are known to come with the necessary skills for the automotive industry that most other colleges cannot provide, and many of the UM-Dearborn students stay in Michigan after graduation. The CIS department has been growing impressively over the last years and enables industry stakeholders in Michigan to grow cutting edge solutions as well.

I am deeply concerned that UM-Dearborn's current CIS Building is so outdated that it cannot provide the means to support proper education and that it discourages top faculty and students to join the CIS department. This would lead to stagnation or even a decrease of student enrollment and graduation rates, and therefore harm Michigan industry stakeholders. This in turn will either move jobs to other states or countries, or it will lead to Michigan companies losing ground in the competitive market. For those reasons, I strongly support UM-Dearborn's Capital Outlay request to renovate the CIS Building.

Please note that this letter of support is in my capacity as a CIS Professional Advisory Board member. Please feel free to contact me if you have any questions.

Sincerely,

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