

# MICHIGAN STATE UNIVERSITY

June 24, 2022

## MEMORANDUM

**To:** Committee on Budget and Finance

**From:** Daniel Bollman  
Vice President for Strategic Infrastructure Planning and Facilities

**Subject:** **Authorization to Plan** *Daniel J. Bollman*  
Engineering and Digital Innovation Building

### RECOMMENDATION

The Trustee Committee on Budget and Finance recommends that the Board of Trustees authorize the Administration to plan for new teaching and learning and laboratory research spaces to accommodate current and planned growth in student enrollment in digital learning, and growth and development of research in advanced materials and manufacturing, ultrafast sciences, quantum computing, and semiconductors.

### RESOLUTION

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby authorizes the Administration to plan for the project entitled "Engineering and Digital Innovation Building"

### BACKGROUND

MSU has made people's lives better for 150 years by leveraging its investments and expertise. The MSU 2030 Strategic Plan continues this by investing in excellence in research including addressing the most complex societal problems and challenges of today and tomorrow, creation of intersectional research and excellence in teaching, and development of transdisciplinary solutions to ecological and human problems affected by social, economic, political, climate, and environmental changes.

The new building will support the emergence of a strong and transformative ecosystem focused on the convergence of digital and physical technologies. It will bring together a range of teaching, learning, and research activities across multiple colleges and disciplines to create an energized, innovative, and entrepreneurial community focused on digital futures. The academic partnership across six colleges: Engineering, Natural Science, Arts and Letters,



Office of the  
Vice President  
for Strategic  
Infrastructure  
Planning and  
Facilities

Daniel J. Bollman  
Vice President

Michigan State University  
IPF Building  
1147 Chestnut Road  
Room 101  
East Lansing, MI 48824

517-355-3366  
Fax: 517-353-6358

ipf.msu.edu

Business, Communications Arts and Sciences, and Social Science is intentional and will lead to interdisciplinarity in learning and research.

The building will (a) provide new capacity, (b) align modern building infrastructure and space functionality, and (c) support the consolidation of top-ranked researchers and students, thereby enabling new synergies and enhancing potential for discovery and increase the potential to attract significant federal funding in high-demand research areas. This building will be a physical and symbolic gateway to the digital future at MSU – a home for new ideas and transformational learning and research.

### **Description of Project:**

The building is envisioned to comprise two components. One dedicated to digital learning with active classrooms, teaching laboratories, student project studios, and e-sports. The other dedicated to laboratories supporting experimental and computational research, core facilities, clean rooms, and flexible modular research units; and vibrant community spaces to support informal gathering and collaboration.

The new building will (a) support an increase in enrollment of new undergraduate students in computational sciences and digital literacy disciplines, and in graduate related programs, (b) prepare MSU graduates with skills in computational sciences and digital literacy necessary for postgraduate success, and (c) become MSU's center for excellence in advanced manufacturing, materials science, ultrafast science, and quantum computing including heterogeneous micro-electronic technologies.

This investment will provide the foundation to respond to industry needs and student demand, support economic development in Michigan, leverage the opportunities provided by FRIB for heavy-ion radiation testing of integrated chip-based systems, and provide research infrastructure for growth in materials research and emerging initiatives such as semiconductor research.

The anticipated location is in the central academic district, in proximity to the Engineering Building, near the STEM Teaching and Learning Facility. Proximity to the functions that occur in these existing buildings in the central academic district is critical to the collaborative nature of the teaching, learning and research. Site evaluation will account for infrastructure requirements. Planning will set the stage for future demolition of infrastructure such as the Urban Planning and Landscape Architecture Building, the abandoned Water Reservoir, and adaptive reuse of release space for further thematic colocation in buildings including Engineering, thereby reducing capital renewal.

**Communication Plan:**

Input will continue to be solicited from the campus community during the planning phase.

**Preliminary Project Cost Information:**

The planning for this project will incur costs for consultants, designers, and cost estimating. Initial funding will be from Infrastructure Reserve. It is anticipated that funding for the project will be a combination of general fund, facilities and administrative costs, tuition income, philanthropy including sponsorship, and long-term debt financing

cc: Board of Trustees, S. Stanley, T. Woodruff, N. Beauchamp, M. Woo, M. Zeig, B. Quinn, V. Gore, E. Scorsone, L. Frace, T. Glasmacher, K. Tobin, B. Kranz, M. McCabe, J. Mumma, L. Gremel, J. Rayis, L. Adams, K. Oosterhoff, J. Andrews, L. Kempel, P. Duxbury, C. Long, S. Gupta, P. David, M. Finn

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