



MICHIGAN STATE UNIVERSITY
BOARD OF TRUSTEES
Executive Action Summary

Committee Name Budget and Finance

Date June 28, 2024

Agenda Item: Authorization to Proceed - FRIB – Chip Testing Facility

Information

Review

Action

Resolution:

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby authorizes the Administration to proceed with the project entitled “FRIB – Chip Testing Facility.”

Recommendation:

The Trustee Committee on Budget and Finance recommends that the Board of Trustees authorize the Administration to proceed with an addition to the Facility for Rare Isotope Beams to accommodate the Chip Testing Facility, a project with a budget of \$17 million.

Prior Action by BOT: The Board authorized planning for this project on April 12, 2024.

Responsible Officers: Thomas D. Jeitschko, Interim Provost and Executive Vice President for Academic Affairs
Barbara J. Kranz, Assistant Provost, Institutional Space Planning and Management

Summary: The building addition of approximately 5,500 sq. ft. will be west of the current highbay housing the K500 and K1200 cyclotrons. The addition will triple the current capacity of the FRIB Chip Testing Facility by providing two additional user vaults. The addition is anticipated to be completed in summer 2025.

Background Information:

The National Academies issued a report that the nation urgently needs additional chip testing facilities based on heavy-ion accelerators. All integrated circuits in flying and self-driving vehicles need to be tested against damage from cosmic rays. FRIB is one of three chip testing facilities in the nation and the

current facility is fully booked by user teams. The federal government awarded \$14 million to MSU to establish the FRIB Chip Testing Facility with one testing endstation, which allows MSU to charge fees for facility use to recover the cost to operate the FRIB Chip Testing Facility. The proposed addition will add two more testing endstations and the additional capacity will allow user teams to test 24/7, eliminating current gaps in testing time needed for user team set-up and take-down. The new operational model will allow one team to test, one team to set-up, and one team to take down their set-ups simultaneously. Additionally, the building addition will provide student opportunities through SPARTE, the Space Electronics Center started by FRIB and the College of Engineering, to educate students in chip design and testing. SPARTE and the FRIB Chip Testing Facility will position Michigan State University as a national leader in chip design and testing.

Source of Funds:

The planning and design for the project was funded by FRIB. Full funding for the project will include debt financing with repayment from FRIB Chip Testing Facility user fees.

Resource Impact:

Operational costs of the facility will be funded by the FRIB Chip Testing Facility's user fees.