



UNIVERSITY  
of HAWAII<sup>®</sup>  
SYSTEM

Jan S. Gouveia  
Vice President for Administration

DTS 22898A1

November 3, 2022

TO: RANDOLPH G. MOORE  
Chairperson, Board of Regents

VIA: DAVID LASSNER  
President

A handwritten signature in black ink that reads 'David Lassner'.

FROM: JAN GOUVEIA  
Vice President for Administration

A handwritten signature in black ink that reads 'Jan Gouveia'.

SUBJECT: APPROVAL OF THE 6-YEAR CAPITAL IMPROVEMENT PROJECTS  
PLAN FOR FISCAL YEARS (FY) 2024-2029 AND FY 2023-2025  
BIENNIUM CAPITAL IMPROVEMENT PROJECT BUDGET FOR THE  
UNIVERSITY OF HAWAII

**SPECIFIC ACTION REQUESTED:**

It is recommended that the Board of Regents of the University of Hawai'i (the "Board") approve the enclosed 6-Year Capital Improvement Projects Plan for FY 2024 – 2029 (the "6-Year CIP Plan") for the University of Hawai'i (the "University") and the biennium capital improvement project budget for the University of Hawai'i for FY 2023-2025 (the "FY 23-25 CIP Biennium Budget"), pursuant to Regents Policy 8.204.

The 6-Year CIP Plan addresses the capital improvement project plans and strategic vision for the next six years for:

- (1) University of Hawai'i at Mānoa
- (2) University of Hawai'i at Hilo
- (3) University of Hawai'i at West O'ahu
- (4) University of Hawai'i Community Colleges
- (5) University of Hawai'i System

The proposed FY 23-25 CIP Biennium Budget, which is presented in the context of the 6-Year CIP Plan, accounts for all major projects in the planning, design or construction

stages. As more fully detailed below, the Administration recommends that the Board approve the proposed FY 23-25 CIP Biennium Budget for the University.

Upon approval, the Administration will submit the CIP Biennium Budget proposal to the State Department of Budget & Finance for consideration to be included as part of the Governor's budget proposal to the Legislature for:

- (1) University of Hawai'i at Mānoa
- (2) University of Hawai'i at Hilo
- (3) University of Hawai'i at West O'ahu
- (4) University of Hawai'i Community Colleges
- (5) University of Hawai'i System

Approval by the Board of this 6-Year CIP Plan does not constitute approval of any specific projects identified or anticipated herein; the Administration is still required to obtain all necessary and appropriate Board approvals required by applicable law, rules, University policy or University procedure, which includes but is not limited to construction projects exceeding \$5 million, consultant services exceeding \$1 million, and exemption from the building moratorium.

**RECOMMENDED EFFECTIVE DATE:**

Upon board approval.

**EXECUTIVE SUMMARY:**

Since the 6-Year CIP Plan was first conceived and approved by the Board in November 2016, the Administration has presented an updated, rolling 6-Year CIP Plan to the Board each year that realigns the plan with evolving situations and priorities and the projects funded by the Legislature. However, as the time period for the original six year CIP Plan has now passed, the Administration is presenting a new 6-Year CIP Plan for FY 2024 – 2029 with an updated strategy and vision for the University.

The previous 2016 6-Year CIP Plan and subsequent yearly updates have largely remained the same, focused on a facilities modernization and space management strategy that delivers 21<sup>st</sup> century facilities for our students and is aligned with academic programming needs, consistent with the priorities set forth in the 2017 Systemwide Integrated Academic and Facilities Plan (IAFP), to maximize the efficiency of both the capital and operational dollar. The new 6-Year CIP Plan builds on these concepts by shifting slightly away from new buildings and growing the University's physical asset



inventory and more toward data-driven decisions based on space utilization and programmatic and campus needs to improve and modernize existing spaces. With a continued focus on applying fiscal, human, and physical resources across the campuses more effectively and efficiently while continuing to advance the higher education goals of the state, the new 6-Year CIP Plan continues to embody the principles of the IAFP, focusing on aligning current and future programmatic needs with our facilities needs. Projects should consider:

- Whether the space can be designed flexibly to support multiple programs and/or uses, particularly for costly and specialized facilities;
- Whether space can be shared across programs to be most efficiently utilized on a day-to-day basis;
- Projected enrollment trends;
- Existing utilization of spaces on campus;
- The magnitude of impact on high-demand programs and disciplines; and
- The advancement of strategic campus and systemwide initiatives.

These considerations support the highest and best use of each capital and operational dollar.

Renew, Improve and Modernize (“RIM”) Projects remain the foundation of our new 6-Year CIP Plan and CIP Biennium Budget, with an emphasis on those projects necessary to protect health and safety measures, protect and maintain existing infrastructure and system investments and support current and funded research activity, as well as those that increase efficiency and utilization of existing spaces and promote flexible, shared and/or adaptive design and furniture.

The 6-Year CIP Plan summarized below and proposed CIP Biennium Budget incorporate the principles set forth above as the University continues to strive for 21<sup>st</sup> century facilities to cultivate our future leaders and continue to play an important role in the State of Hawaii’s economic growth and diversification.

### **DEFERRED MAINTENANCE (DM) BACKLOG**

As of 2022, the systemwide DM backlog is \$863 million. While the University is committed to reducing its DM backlog over time, significant challenges must be overcome to decrease or even maintain the backlog given its size and rate of increase, which is compounded by a number of factors. These challenges, in addition to adequate funding, include:

- Sightlines data represents the cost associated with an equivalent or “like-for-like” repair or replacement, which is generally not feasible or practical given the age of most subsystems by the time they are addressed. However, modern, energy-efficient repairs and replacements are more costly than an equivalent

replacement, adding to the repair and replacement costs without an associated decrease in the DM backlog.

- Changing building code, safety, and other requirements, along with updated industry best practices can add further costs when repairing and replacing subsystems that do not translate to a decrease in the DM backlog but are necessary to complete the project.
- With an average facilities age of 44 years old (built in 1978) and an inventory in which 75% of all buildings are over 30 years old, capital renewal needs have increased dramatically, with an average of over \$100 million needed each year from FY23 through FY29 just to address new repairs or replacements with an equivalent subsystem or product.
- Sightlines adds a 5% adjustment each year to account for inflation.
- The backlog will not be reduced until projects are completed and the aging subsystem is no longer in the University's inventory. This can take several years given the amount of time required to release the funds to the University, procure the project, and design and construct the project.

As further explained in the 6-Year CIP Plan, \$379 million would be needed each year for 10 years to eliminate the backlog through the RIM program. In contrast, RIM program funding of \$100 million per year would see an increase in the backlog of approximately 60% by 2032.

Given these challenges, the University has shifted its focus from the funding and effort level needed to significantly reduce the DM backlog to maximizing the impact of each capital dollar by considering multiple factors including space utilization, energy efficiency, and program and campus current and future needs for all projects including repairs, maintenance, modernization, and new spaces.

## SYSTEMWIDE 6-YEAR CIP PLAN

As presented in the original 6-Year CIP Plan, the new 6-Year CIP Plan continues to categorize projects into the following areas:

### Project Categories

**Major Capital Improvement  
Projects (Major Projects)**

Whole or significant building renovations or new structures.  
Generally no net increase in square footage

---

**Renew, Improve, &  
Modernize Projects  
(RIM Projects)**

RIM Projects repair and/or improve campus buildings and infrastructure through modernization efforts. They prioritize classrooms, laboratories, and student spaces centered around improving the learning environment, as well as target those facilities with poorer conditions, through modernizing interior/exterior structures, building roofs, mechanical & electrical systems, pedestrian pathways and roadways.

---

**Minor Capital Improvement  
Projects (Minor Projects)  
and Capital Renewal and  
DM Projects (CRDM  
Projects)  
UHCC Only**

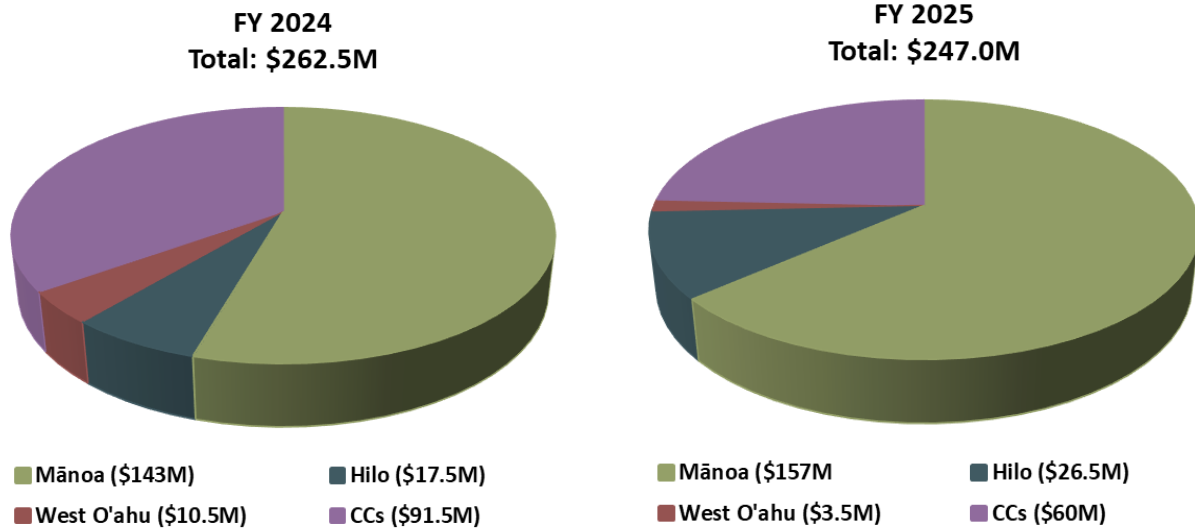
Minor and CRDM Projects are a subset of RIM Projects that are separately categorized for the Community Colleges only. They address smaller improvements that prioritize classrooms, laboratories, and student spaces targeted at modernizing the learning and research environment through flexible spaces and shared programming, as well as repairs, maintenance, replacements and upgrades

---

**Planning Projects**

Planning Projects are those initiatives that support or deliver long-term development plans for future capital investments in the physical plant that strategically align with the core mission and vision of the campus.

**Systemwide FY 2023-2025 Biennium CIP Budget Request by Campus**  
**Total: \$509.5M**



The proposed systemwide CIP Biennium Budget anticipates a request of \$262.5 million in FY 2024 and \$247.0 million in FY 2025. Fully funded, this budget is anticipated to address a total of \$200 million in capital renewal and DM.

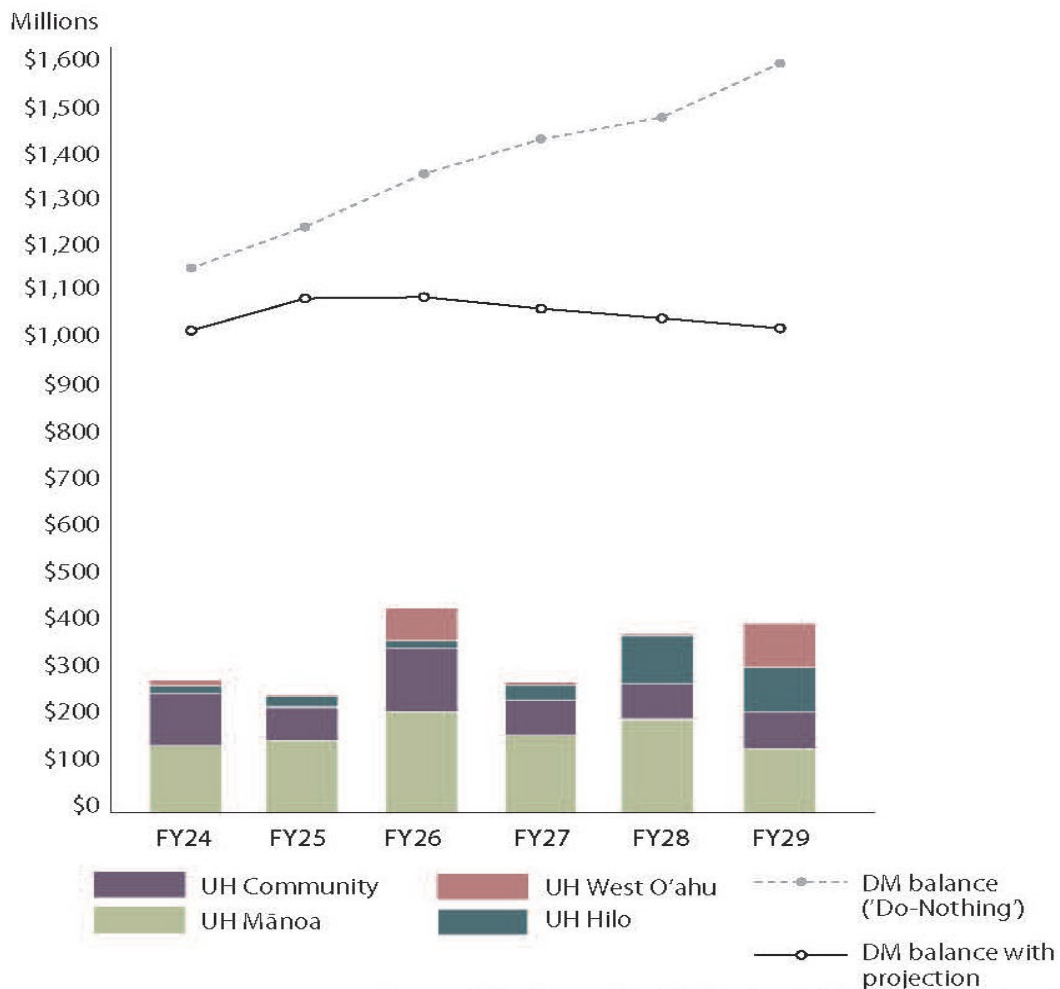
**Systemwide FY 2024-2029 6-Year CIP Plan (in 000's)**

**Total: \$1,849 Million**

\* FY 2023-2025 CIP Biennium Budget

\*

Campus	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
UH Mānoa	\$143,000	\$157,000	\$201,500	\$161,000	\$191,500	\$131,000	\$985,000
UH Hilo	\$17,500	\$26,500	\$16,000	\$34,000	\$78,500	\$70,000	\$242,500
UH West O'ahu	\$10,500	\$3,500	\$52,500	\$6,500	\$3,500	\$70,500	\$147,000
UH CC	\$91,500	\$60,000	\$107,000	\$69,000	\$72,000	\$75,000	\$474,500
<b>Total per year</b>	<b>\$262,500</b>	<b>\$247,000</b>	<b>\$377,000</b>	<b>\$270,500</b>	<b>\$345,500</b>	<b>\$346,500</b>	<b>1,849,000</b>
<b>DM balance with projection</b>	<b>\$1,020,820</b>	<b>\$1,093,238</b>	<b>\$1,094,590</b>	<b>\$1,064,178</b>	<b>\$1,036,334</b>	<b>\$1,027,621</b>	



**UH Mānoa FY 2024-2029 6-Year CIP Plan (in 000's)**

**Total: \$985M**

\* FY 2023-2025 CIP Biennium Budget

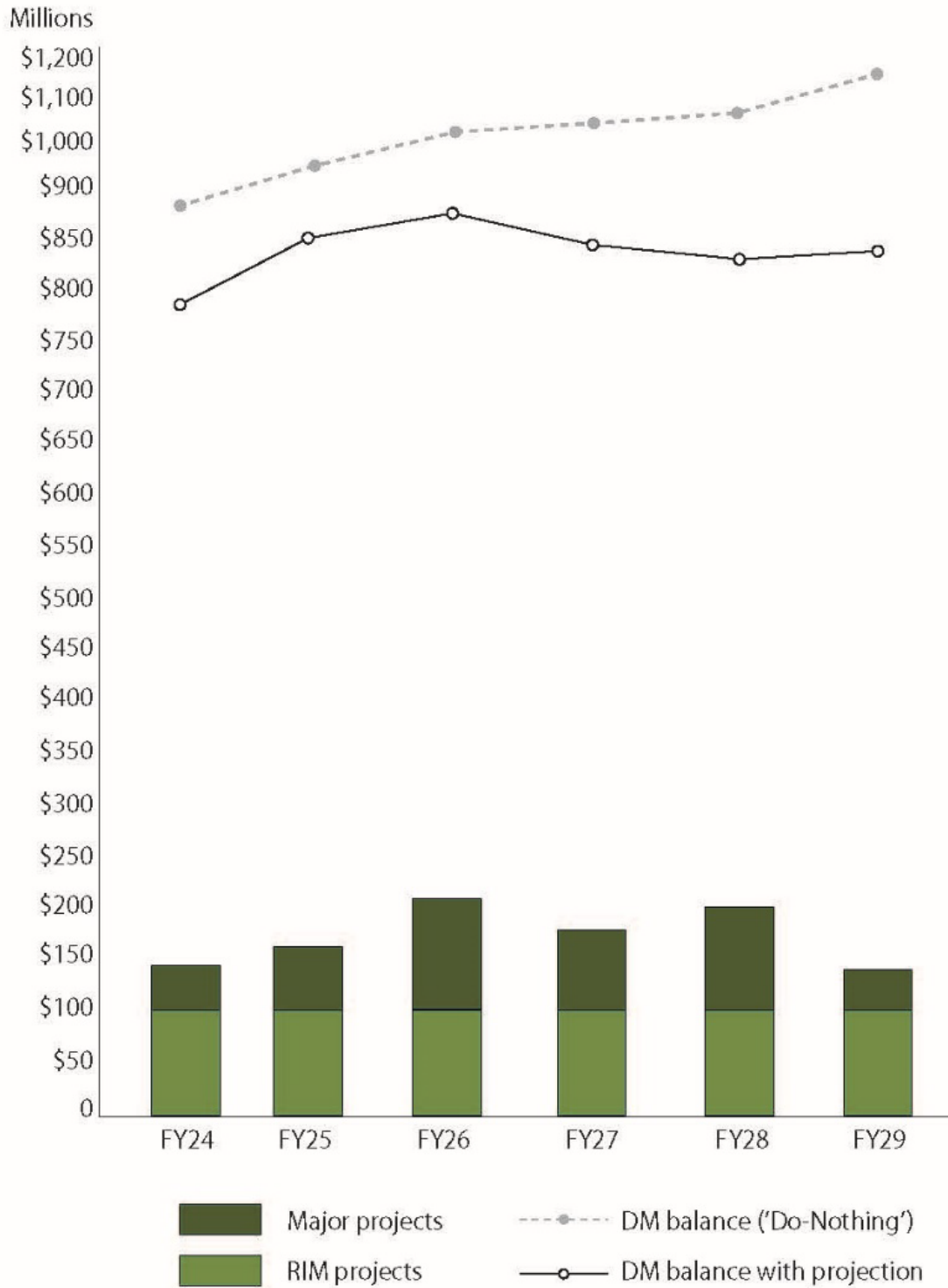
\*

Category/project	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
RIM projects	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$600,000
Assessment & Feasibility of Hamilton Library	\$6,500						\$6,500
Waikiki Aquarium seawall repair	\$3,000						\$3,000
Athletics Complex	\$12,000	\$18,000					\$30,000
Holmes Hall	\$1,500	\$6,000	\$1,500	\$6,000			\$15,000
PV Rooftop and Canopies and various energy efficiency projects	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$120,000
Mini Master Plan Phase 3 - Kuykendall Hall		\$5,000	\$10,000	\$35,000			\$50,000
Admin Office & Parking - Phase I and II		\$8,000	\$70,000		\$70,000		\$148,000
Portable demolition					\$1,500	\$11,000	\$12,500
<b>Total</b>	<b>\$143,000</b>	<b>\$157,000</b>	<b>\$201,500</b>	<b>\$161,000</b>	<b>\$191,500</b>	<b>\$131,000</b>	<b>\$985,000</b>
DM balance with projection	\$780,326	\$854,699	\$872,717	\$849,341	\$830,303	\$842,098	



**UH Mānoa FY 2024-2029 6-Year CIP Plan (cont.)**

**Total: \$985M**



UH Mānoa's CIP Biennium Budget and 6-Year CIP Plan present a diversified portfolio of major capital projects and various RIM Projects that strategically pace major construction with smaller upgrades on the campus. Utilizing the results of the in-depth space utilization study conducted in 2017 and drawing upon the guiding principles in the campus' Framework for the Future, published in 2019, and the Campus Design Guidelines adopted in 2022, UH Mānoa has refined its strategy and approach to capital planning.

In particular, UH Mānoa's CIP Biennium Budget and 6-Year CIP Plan focus on:

- Consolidation of core academic activities to the central part of campus (College of Education, Institute for Astronomy, UH Press, and Children's Center);
- Increased pedestrian circulation that replaces vehicular traffic in the central part of campus;
- A greater student presence on campus in the afternoons and evenings;
- Flexible, space-efficient buildings;
- Additional student housing near campus, which reduces daily car trips;
- Revisioning the UH Mānoa Lower Campus around athletics and the Reserve Officers' Training Corps (ROTC) program, and aligning with the development efforts of Kamehameha Schools in the adjacent Mō'ili'ili area;
- Monetized ancillary site in alignment with campus needs (University Village, Faculty Housing, market driven mixed-use development efforts);
- Prioritizing sustainability and resiliency by applying sustainable design principles and incorporating energy efficiency and generation in each project.

## **Major Projects – CIP Biennium Budget**

### **Assessment and Feasibility of Hamilton Library**

The CIP Biennium Budget requests \$6.5 million in FY24 for programming funds to repurpose space in Hamilton Library, the largest facility on the main campus. Constructed in three phases, the library houses the University's book collection, special collections, library offices, several classrooms, and a limited amount of student study space. Hamilton Library has over 411,000 interior square feet of space (for comparison purposes, this is over 5 times larger than Kuykendall Hall). Approximately 45% of this space (175,000 SF) is currently used for open stack book storage. Our initial research shows a trend amongst peer institutions who have converted library space from book storage to people space (study, event, collaboration, office). By creating high-density climate controlled book storage and moving books out of the open stacks, a significant amount of new space can be created in the heart of central campus without building a new building.

### Waikīkī Aquarium Sea Wall Repairs

The CIP Biennium Budget requests \$3 million in FY24 to complete repairs to the Waikīkī Aquarium Sea Wall. The walkway behind the Waikīkī Aquarium that provides community access along the Waikīkī Beach coastline is currently closed due to safety concerns. Portions of the wall fronting the ocean that support the walkway have fallen away into the ocean. The ocean tides will continue to erode the seawall until the repairs are made. This project includes the plans, design and construction to replace portions of the seawall to increase its structural stability so that the walkway may be reopened to the public.

### Athletics Complex

The CIP Biennium Budget requests \$12 million in FY24 and \$18 million in FY25 for the planning, design, and construction of various repairs, upgrades, and improvements to support the Clarence T.C. Ching Complex and Field improvements, the relocation of the track and soccer fields to the existing football practice fields, and other Athletics programs and facilities in lower campus. Facilities that will be updated include the Les Murakami Stadium, Clarence T.C. Ching Complex and Field, Rainbow Wahine Softball Stadium, Stan Sheriff Center, and the Tennis Complex. Projects include, but are not limited to, artificial turf replacement; resurfacing; batting cage improvements; new and retrofitted scoreboards; amenity seats; and spalls repairs; lighting installation; press box work; and locker room and restroom repairs and upgrades.

### Holmes Hall

The CIP Biennium Budget requests \$1.5 million in FY24 and \$6 million in FY25 for Holmes Hall improvements, with an additional \$7.5 million anticipated in FY26 and FY27 in the 6-Year CIP Plan. Holmes Hall houses the Engineering College and was originally completed in 1972. Since its original construction, the building has not undergone any modernization to adapt classroom and lab space to changes in teaching programs and to meet the demands of increasing enrollment. This project is a targeted interior renovation of the building's lab spaces. The improvements will provide modernized teaching and research lab space, contributing to faculty research and student learning outcomes. The project will also improve building safety and accessibility, and improve the overall sustainability performance of the building. The building envelope will not be modified substantially other than as required to ensure building performance. The project will also include landscaping work around the building exterior to improve the overall beauty of the UH Mānoa campus.

### PV Rooftop and Canopies and Various Energy Efficiency Projects

The CIP Biennium Budget requests \$20 million in FY24 and \$20 million in FY25 for PV and energy efficiency projects. This lump sum funding, which is anticipated annually throughout the 6-Year CIP Plan, is critical for UH Mānoa and systemwide progress toward the University's net-zero energy goal. UH Mānoa is in the process of completing a

Strategic Energy Management Plan (SEMP) and Max PV Potential Study, and preliminary results and analysis have indicated that maximizing all available space on the main campus for PV could generate 56% of UH Mānoa's energy needs. As such, this lump sum funding request is for the completion of any PV and energy efficiency projects to further UH Mānoa's commitment to sustainability and resiliency, and decrease utility costs by completing energy savings projects.

#### Mini Master Plan Phase 3 – Kuykendall Hall

The CIP Biennium Budget requests \$5 million in FY25 for programming and design to renovate Kuykendall Hall, with anticipated requests totaling \$45 million in FY26 and FY27 of the 6-Year CIP Plan for construction. Kuykendall Hall is a 92,000 SF two-building structure consisting of a seven-story office tower and a four-story classroom building, constructed in 1964. Kuykendall Hall houses 28 classrooms, making it one of the top five buildings on campus in terms of classroom inventory. The building has deteriorated over time and is currently in relatively poor condition compared to other campus facilities. The currently proposed renovation project would retain the current function as an academic facility including faculty office and classroom environments, but reconfigure the interior spaces to reflect the recently adopted UH Manoa Design Guidelines. The new interior configurations will improve overall space utilization and occupancy and provide modern teaching, learning, and working environments for faculty, students, and staff. Building systems will be upgraded to improve performance and meet University sustainability goals.

#### Admin Office & Parking – Phase I and II

The CIP Biennium Budget requests \$8 million in design and programming for a Central Administration Facility with parking in FY24. The 6-Year CIP Plan additionally anticipates \$70 million in FY26, for a total of \$78 million. This project will create a new 55,000 SF facility that will consolidate the administrative offices scattered across the Mānoa campus. The project site is located at the intersection of East-West Road and Maile Way, where the current Campus Services building is located. The project will yield a net reduction of square footage on campus through the demolition of the existing Campus Services building and the associated removal of existing portable buildings as explained in the Portable Demolition Program below.

There are also plans for a new parking facility immediately adjacent to the administrative building with over 400 parking stalls, located on the site of the current surface parking lot. The multi-level parking structure is being planned in conjunction with the Hawaii State Department of Transportation to increase the University's parking inventory such that morning rush hour traffic into town is reduced. Vehicular access to the parking facility will be along Maile Way and East-West Road, which are the current means for accessing the

existing surface parking. A traffic study will be completed prior to the initiation of this project; no change is anticipated to overall impact.

**RIM Projects**

Consistent with the principles of the original and 2022 6-Year CIP Plan, a steady infusion of RIM funding remains the foundation of UH Mānoa’s CIP Biennium Budget request. \$100 million in RIM funding is requested in each year of the biennium and 6-Year CIP Plan. RIM funds are used to renovate, improve and modernize classrooms, laboratories, and offices into quality learning, teaching and working spaces. Instead of traditional classrooms lined with rows of single desks, movable and flexible furniture allows for various seating options that encourage small group discussions and hands-on learning configurations. The incorporation of technology is also critical to modern classroom spaces. In many of our current buildings, there is inconsistent access to wireless internet and technology via projectors, laptops or tablets. New spaces will have updated and better access to technology, which is critical to taking the University into the 21st century.

**UH Mānoa FY23-25 CIP Biennium Budget Request Summary**

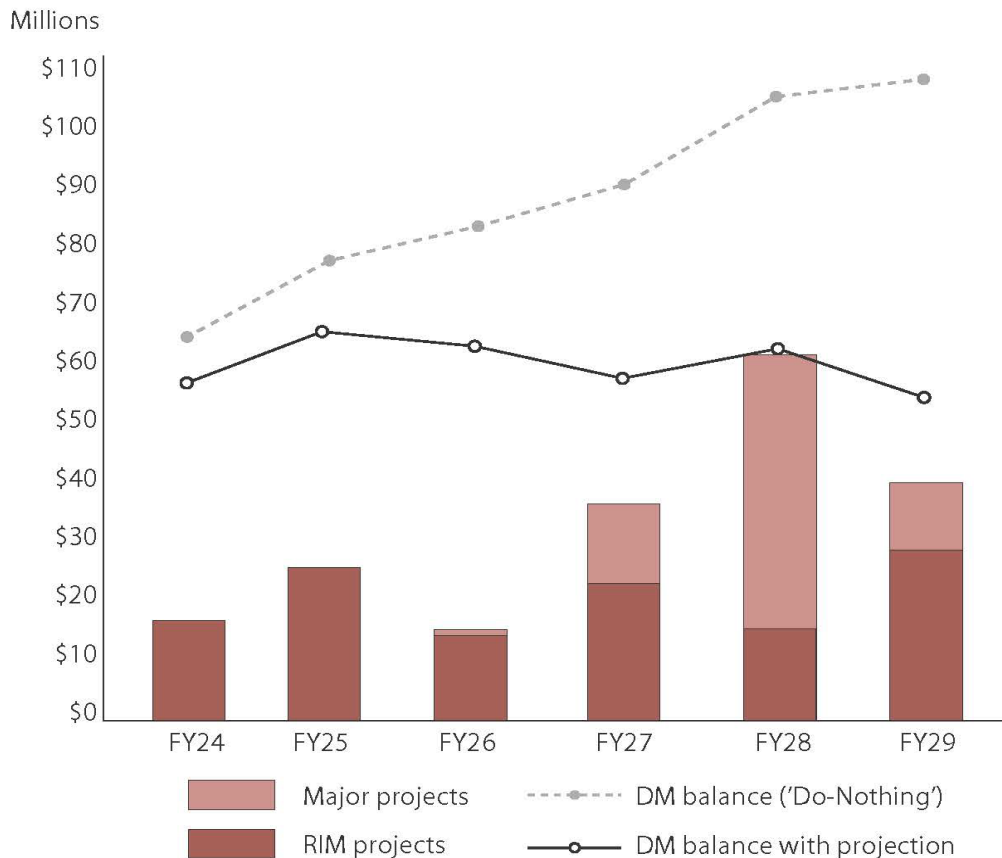
<b>Project Description</b>	<b>FY24 Budget Request</b>	<b>FY25 Budget Request</b>
RIM Projects	\$100M	\$100M
Assessment & Feasibility of Hamilton Library	\$6.5M	\$0
Waikīkī Aquarium Seawall Repair	\$3M	\$0
Athletics	\$12M	\$18M
Holmes Hall	\$1.5M	\$6M
PV Rooftop and Canopies and Various Energy Efficiency Projects	\$20M	\$20M
Mānoa Mini Master Plan, Phase 2	\$0	\$5M
Central Administration Facility with Parking	\$0	\$8M
<b>TOTAL</b>	<b>\$143.0M</b>	<b>\$157.0M</b>

**UH Hilo FY 2024-2029 6-Year CIP Plan (in 000's)**

**Total: \$242.5M**

\* FY 2023-2025 CIP Biennium Budget

Category	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
RIM projects	\$17,500	\$26,500	\$15,000	\$22,500	\$16,500	\$29,500	\$127,500
Puakō Marine Education & Research Center, Phase I			\$1,000	\$7,500			\$8,500
Puakō Marine Education & Research Center, Phase II				\$4,000	\$60,000		\$64,000
PV Farm					\$2,000	\$32,000	\$34,000
PV Parking canopy						\$8,500	\$8,500
<b>Total</b>	<b>\$17,500</b>	<b>\$26,500</b>	<b>\$16,000</b>	<b>\$34,000</b>	<b>\$78,500</b>	<b>\$70,000</b>	<b>\$242,500</b>
DM balance with projection	\$57,815	\$64,479	\$62,737	\$58,992	\$62,244	\$54,211	





UH Hilo's CIP Biennium Budget and 6-Year CIP Plan continue to align with the systemwide objective of modernizing facilities and campus environments to support modern practices in teaching, learning and research while implementing energy savings and efficiency initiatives and addressing the DM backlog. In particular, in UH Hilo's 2021-2031 Strategic Plan, Strategy 9 is to "renew, innovate, and modernize facilities."

While the results of the campus space utilization study are still being finalized, preliminary results suggest that there are spaces on the main campus that are underutilized. Prior to building new space, UH Hilo will study the options available to create additional instructional capacity through improving space utilization. As such, UH Hilo is committed to improving the quality of its existing spaces and continuing to address repair and maintenance needs through modernization upgrades to support its educational and research goals. In addition to the RIM program, which remains the foundation of its 6-Year CIP Plan, UH Hilo is committed to improving the sustainability and resiliency of its campus and contributing to the systemwide net-zero energy goal. As such, UH Hilo has two major PV projects planned in the latter half of its 6-year CIP plan. UH Hilo has also prioritized its research capacity by planning new facilities on the Kohala coastline to support coral reef research. The reefs off Puakō are among the best-developed and most diverse in all of Hawai'i, making the site one of the most important locations in the world for coral reef studies.

As of FY 2022, while UH Hilo has accumulated only \$8.1 million in DM backlog, it is facing an average of \$15 million in capital renewal each year through FY 2029. As such, its main focus is to prioritize health- and safety-related improvements and modernization and renewal based on building usage and condition consistent with the facilities-related strategic plan objectives.

For its CIP Biennium Budget Request, UH Hilo does not have any major projects planned and is requesting \$17.5 million in FY24 and \$26.5 million in FY25 to complete RIM projects.

**UH Hilo FY23-25 CIP Biennium Budget Request Summary**

<b>Category/Project</b>	<b>FY24 Budget Request</b>	<b>FY25 Budget Request</b>
RIM Projects	\$17.5M	\$26.5M
<b>TOTAL</b>	<b>\$17.5M</b>	<b>\$26.5M</b>

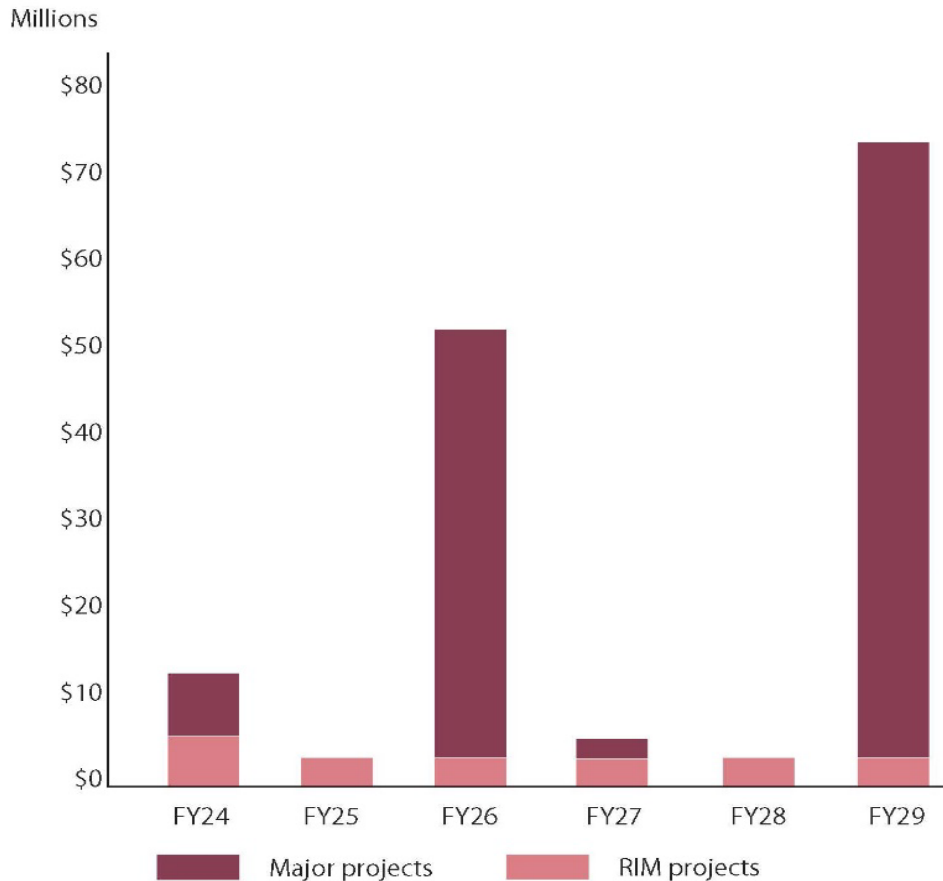
**UH West O'ahu FY 2024-2029 6-Year CIP Plan (in 000's)**

**Total: \$147 Million**

\* FY 2023-2025 CIP Biennium Budget

\*

Category	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
RIM projects	\$5,000	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$22,500
Road B entry plaza	\$5,500						\$5,500
Campus Center phase II			\$49,000				\$49,000
General education building I				\$3,000		\$64,000	\$67,000
General education building II						\$3,000	\$3,000
<b>Total</b>	<b>\$10,500</b>	<b>\$3,500</b>	<b>\$52,500</b>	<b>\$6,500</b>	<b>\$3,500</b>	<b>\$70,500</b>	<b>\$147,000</b>
DM balance projection	\$0	\$0	\$0	\$0	\$0	\$0	\$0



UH West Oahu's CIP Biennium Budget and 6-Year CIP Plan focus on growing the campus mindfully and developing quality spaces consistent with the UH West O'ahu Strategic Plan (2018-2028) ("Strategic Plan"). The Strategic Plan envisions a supportive and dynamic learning environment where both Native Hawaiian values and culture and the inclusion and celebration of all individuals and ethnicities are embodied and perpetuated by students, faculty, and staff, and reflected in the institution's practices and relationships. Currently, the ten-year-old campus has zero DM backlog due to its RIM program funding. UH West O'ahu intends to maintain the \$0 backlog throughout the next six years by steadily investing in preventative maintenance and repairs.

The CIP Biennium Budget requests \$5 million in FY24 and \$3.5 million in FY25 for RIM funding, with an additional \$3.5 million requested each year of UH West O'ahu's 6-Year CIP Plan. A steady infusion of RIM funds each year will allow UH West O'ahu to address unplanned building issues and preventative maintenance and repairs. These efforts will ensure the longevity and use of the structures and operating systems and keep UH West O'ahu's DM backlog at \$0.

#### Road B Entry Plaza

FY24 anticipates \$5.5M for the construction of the Road B Entry Plaza. In FY20, the campus received \$400,000 to design the Entry Plaza. This request is to fund the construction. This project will provide a much-needed safe and accessibility-compliant connection to and from campus for students, employees, and visitors that take advantage of rail transit or get dropped off at the Road B cul-de-sac. The Entry Plaza would serve as an inviting welcome mat at the terminus of Road B, the main street and key component of the envisioned college town.

#### UH West O'ahu FY23-25 CIP Biennium Budget Request Summary

<b>Category/Project</b>	<b>FY24 Budget Request</b>	<b>FY25 Budget Request</b>
RIM Projects	\$5.0M	\$3.5M
Road B Entry Plaza	\$5.5M	\$0M
<b>TOTAL</b>	<b>\$10.5M</b>	<b>\$3.5M</b>

**UH Community College System FY 2024-2029 6-Year CIP Plan (in 000's)**

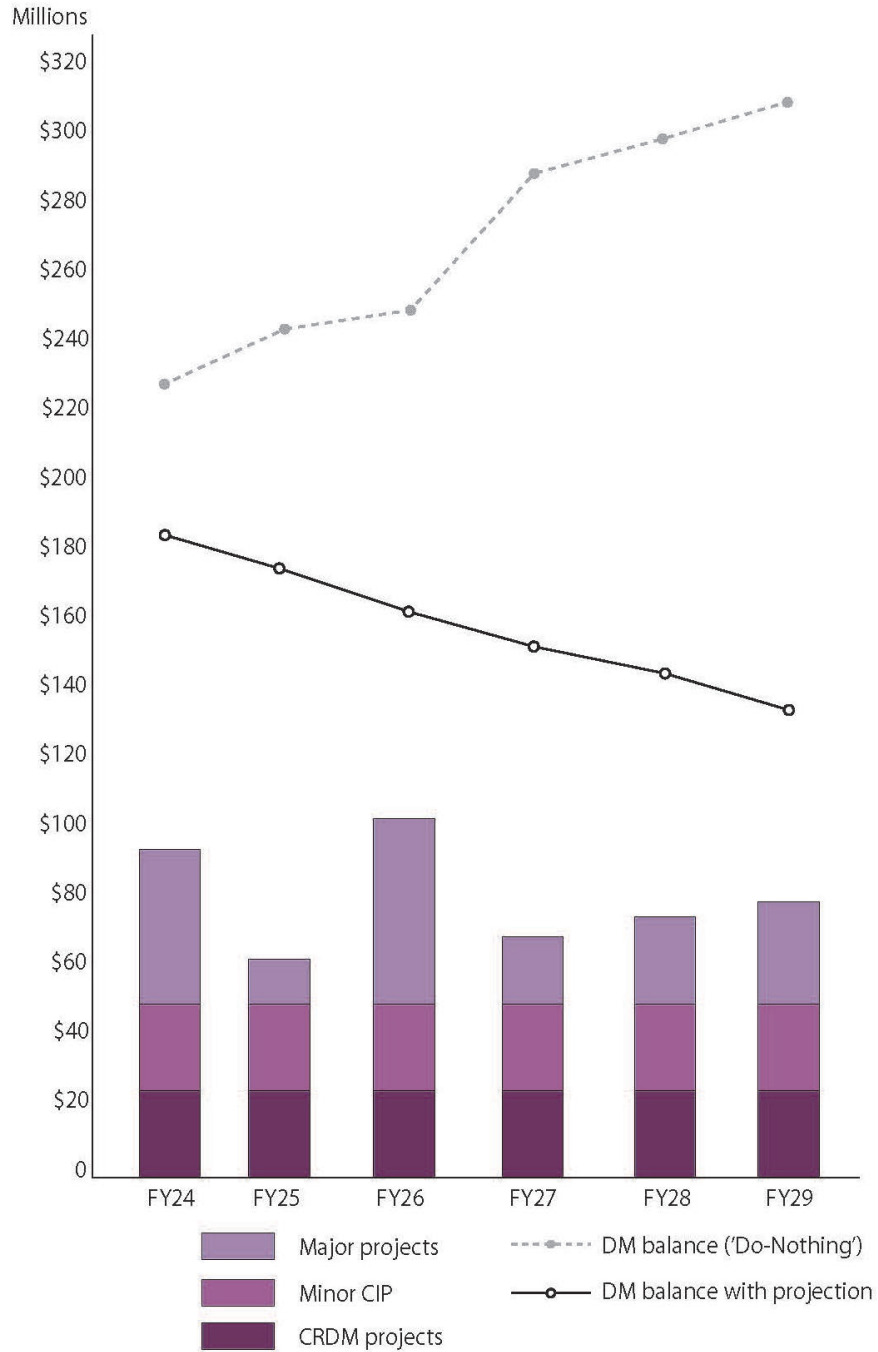
**Total: \$474.5 Million**

\* FY 2023-2025 CIP Biennium Budget

\*

Category	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
Capital Renewal and Deferred Maintenance	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$150,000
Minor Capital Improvement Projects	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$150,000
Kapi'olani CC - 'Ohelo AC System Replacement	\$15,000						\$15,000
Kapi'olani CC - Koki'o Renovation	\$2,000	\$10,000					\$12,000
Kapi'olani CC - Kauila Structural Repairs					\$2,000	\$10,000	\$12,000
Kaua'i CC - Fire Alarm and PA System Upgrade	\$8,500						\$8,500
Hawai'i CC - Renovate/Modernize Shops - UHH			\$12,000				\$12,000
Campus redevelopment	\$2,000			\$2,000	\$20,000		\$24,000
Technology Renovations, Phase 2	\$3,000		\$15,000				\$18,000
Maui College - Library Renovation			\$10,000				\$10,000
Maui College - Vocational Technology Renovation and Expansion			\$20,000				\$20,000
Maui College - Pāi'na Various Repairs				\$2,000		\$15,000	\$17,000
Windward CC - 'Imiloa HVAC / Fume Hood System Replacement and Water Infiltration Mitigation/Repairs	\$11,000						\$11,000
Windward CC - Alaka'i Building Renovation				\$15,000			\$15,000
<b>Total per year</b>	<b>\$91,500</b>	<b>\$60,000</b>	<b>\$107,000</b>	<b>\$69,000</b>	<b>\$72,000</b>	<b>\$75,000</b>	<b>\$474,500</b>
DM balance with projection	\$182,678	\$174,060	\$159,136	\$155,846	\$143,787	\$131,312	

***UH Community College System FY 2024-2029 6-Year CIP Plan (cont.)***  
**Total: \$474.5 Million**



The UH Community College's (UHCC) CIP Biennium Budget and 6-Year CIP Plan is focused on implementing a maintenance program that minimizes DM while enhancing student learning through the creation and implementation of design standards for classrooms and laboratories that reflect modern teaching approaches. The most current UHCC Strategic Directions, 2015-2021 (UHCC Strategic Directions) provides a facilities vision for modern teaching and learning environments at UHCC campuses. While the next strategic plan is still being developed and awaiting the publication of the 2023-2029 UH Strategic Plan for guidance on systemwide priorities, the UHCCs continue to rely on the principles in the 2015-2021 UHCC Strategic Directions.

The Strategic Directions seek to create an environment that is clean, safe, and well-maintained; is equipped to meet the modern standards of faculty and industry; and also enables high-speed digital technology. This will be accomplished by creating a sustainable environment on campus; through the implementation and execution of a building and grounds maintenance program that minimizes any DM; and through the creation and implementation of design standards for classrooms and laboratories that reflect modern teaching approaches. UHCC is also committed to ensuring that equipment is current and meeting industry standards, and developing and maintaining a high-speed digital environment on all campuses.

#### CRDM and Minor CIP

The UHCC FY 2024 and FY 2025 CIP Biennium Budget continues to focus on a facilities program that minimizes DM while enhancing student learning through the creation and implementation of design standards for classrooms and laboratories that reflect modern teaching approaches. The UHCC CIP Biennium Budget seeks \$50 million in both FY24 and FY25 for CRDM and Minor CIP projects, and anticipates continuing to request \$50 million in each of the remaining years of the 6-Year CIP Plan.

#### Hawai'i CC Campus Development

The updated 6-Year CIP Plan anticipates \$2 million in FY24 for the redevelopment of the Manono campus for Hawai'i Community College in Hilo. The UHCC is currently working with a planning consultant to redevelop the Manono campus for Hawai'i Community College in Hilo. Previous funding for minor CIP projects has been used to fund the initial planning and design phases of this project. The upcoming funding request would continue current efforts to create a redevelopment plan, followed by \$2 million in FY27 and \$20 million in FY28 for design and construction funding in the later years of the 6-Year CIP Plan.

This project will include ground and site improvements, infrastructure, on-site and off-site improvements, equipment and appurtenances, new facilities, parking, and all project-related costs. The current facilities at the Manono campus are sorely inadequate given



that many of the structures were designed and constructed 60 to 80 years ago. A major upgrade in the physical plant is needed to provide students with adequate facilities to pursue post-secondary educational opportunities that will ultimately support local economic development initiatives. Continued use of the substandard facilities at the Manono Campus will have negative impacts on the effectiveness and quality of Hawai'i Community College educational programs and provide increasing challenges in meeting student recruitment and retention goals.

#### Honolulu CC Technology Renovations, Phase 2

The UHCCs were appropriated \$15 million in FY22 for the first phase of the project. Phase II of this project will focus on renovations to Building 8805 to modernize the facility while repurposing it from a science building to a student-centered space that includes student support services, classrooms, computer labs, a maker space, and student life activities. The enhanced student-focused space will be flexible to support both more traditional lecture classes as well as laboratories for hands-on experiments and activities. Modern technological infrastructure will be installed to enable distance learning capabilities and modern teaching and learning methods. The CIP Biennium budget requests \$3 million for design in FY24. \$15 million is anticipated for construction in the middle years of the 6-Year CIP Plan (FY26).

#### Kapi'olani CC 'Ohelo AC System Replacement

The CIP Biennium Budget requests \$15 million in FY24 to renovate the 'Ohelo building at Kapi'olani CC, which houses the Culinary Arts department, Ka 'Ikena Laua'e Dining Room, and Tamarind Dining Room. This project includes the replacement of the existing HVAC system throughout the building, a new fire sprinkler system, replacement of the hood suppression system and boiler, and renovation of classroom spaces used for public dining. These improvements will minimize health and safety concerns, improve building comfort and positively impact teaching and learning outcomes for the Culinary Arts program.

#### Kapi'olani CC Koki'o Renovation

The CIP Biennium Budget requests \$2 million in FY24 and \$10 million in FY25 to renovate the Koki'o building, which is the only science building on campus and houses the Science, Technology, Engineering & Math (STEM) program. While the STEM program is popular for its academic rigor and faculty, the current facility cannot support modern technology and teaching/learning methodologies. This project includes the renovation and modernization of the building's laboratories and classrooms, replacement of the existing HVAC and fume hood exhaust systems, reroofing, electrical work, exterior repairs, and related work.

Kaua'i CC Fire Alarm and PA System Upgrade Upgrade

The CIP Biennium Budget requests \$8.5 million in FY24 to enhance safety on campus by replacing the existing fire alarm system with an upgraded campuswide looped fire alarm system covering all buildings. The existing fire alarm system was constructed in 2004 and frequently experiences issues due to the age of available parts and water and dust infiltration over time.

Windward CC 'Imiloa HVAC/Fume Hood System Replacement and Water Infiltration Repairs

The CIP Biennium Budget requests \$11 million for Hale 'Imiloa improvements. The building is approximately 25 years old and houses classrooms and laboratories for the Windward CC Natural Sciences department. This project would completely replace the current HVAC system. The current HVAC system has had significant issues with maintaining consistent temperatures and humidity. Additionally, inconsistent airflow issues create spaces with either very high or very low negative pressure, causing safety issues when heavy doors slam shut or doors fail to close. Fume hood issues also cause inadequately ventilated spaces. This project would remedy these issues and improve the conditions of laboratory and classroom spaces, positively affecting learning outcomes and health and safety.

**UH Community Colleges FY23-25 CIP Biennium Budget Request Summary**

<b>Category/Project</b>	<b>FY24 Budget Request</b>	<b>FY25 Budget Request</b>
Capital Renewal & DM	\$25.0M	\$25.0M
Minor Capital Improvement Projects	\$25.0M	\$25.0M
Hawai'i CC Campus Redevelopment	\$2M	\$0
Honolulu CC Technology Renovations, Phase 2	\$3M	\$0
Kapi'olani CC 'Ohelo AC System Replacement	\$15M	\$0
Kapi'olani CC Koki'o Renovation	\$2M	\$10M
Kaua'i CC Fire Alarm and PA System Upgrade	\$8.5M	\$0
Windward CC 'Imiloa HVAC/Fume Hood System Replacement and Water Infiltration Repairs	\$11M	\$0
<b>TOTAL</b>	<b>\$91.5M</b>	<b>\$60.0M</b>

**ACTION RECOMMENDED:**

In accordance with Regents Policy 8.204, it is recommended that the Board approve the FY 2024 – 2029 6-Year Capital Improvement Projects Plan enclosed and the proposed FY 2023 – 2025 Biennium Capital Improvement Program Budget for the University:

<b>Campus</b>	<b>Project Description</b>	<b>MOF</b>	<b>FY24 Budget Request</b>	<b>FY25 Budget Request</b>
M	RIM Projects	C	\$100M	\$100M
M	Assessment & Feasibility of Hamilton Library	C	\$6.5M	\$0
M	Waikīkī Aquarium Seawall Repair	C	\$3M	\$0
M	Athletics	C	\$12M	\$18M
M	Holmes Hall	C	\$1.5M	\$6M
M	PV Rooftop and Canopies and Various Energy Efficiency Projects	C	\$20M	\$20M
M	Mānoa Mini Master Plan, Phase 2	C	\$0	\$5M
M	Central Administration Facility with Parking	C	\$0	\$8M
H	RIM Projects	C	\$17.5M	\$26.5M
WO	RIM Projects	C	\$5.0M	\$3.5M
WO	Road B Entry Plaza	C	\$5.5M	\$0M
CC	Capital Renewal & DM	C	\$25.0M	\$25.0M
CC	Minor Capital Improvement Projects	C	\$25.0M	\$25.0M
CC	Hawai'i CC Campus Redevelopment	C	\$2M	\$0
CC	Honolulu CC Technology Renovations, Phase 2	C	\$3M	\$0
CC	Kapi'olani CC 'Ohelo AC System Replacement	C	\$15M	\$0
CC	Kapi'olani CC Koki'o Renovation	C	\$2M	\$10M
CC	Kaua'i CC Fire Alarm and PA System Upgrade	C	\$8.5M	\$0
CC	Windward CC 'Imiloa HVAC/Fume Hood System Replacement and Water Infiltration Repairs	C	\$11M	\$0
	<b>TOTAL</b>		<b>\$262.5M</b>	<b>\$247.0M</b>

With approval, the University will submit the CIP Biennium Budget proposal to the State Department of Budget & Finance for consideration to be included as part of the Governor's budget proposal to the Legislature. Approval by the Board of this CIP Biennium Budget does not constitute approval of any specific projects identified or anticipated herein. The Administration is still required to obtain all necessary and

appropriate Board approvals required by applicable law, rules, University policy or University procedure, which includes but is not limited to construction projects exceeding \$5 million, consultant exceeding \$1 million, and exemptions from the new building moratorium.





University of Hawai'i

---

# 6-YEAR CAPITAL IMPROVEMENT PROJECTS PLAN

Fiscal Years 2024-2029

---

November 17<sup>th</sup> 2022

PREPARED BY  
**THINK**<sup>MK</sup>

All content is proprietary. Do not reproduce without permission.

UNIVERSITY OF HAWAII

6 YEAR CAPITAL  
IMPROVEMENT PROJECTS  
PLAN

**Version 1.0 November 2022**

**Prepared By**  
**University of Hawai'i & MKThink**

**Direct Contact**

UH Office of the Vice President for Administration  
2444 Dole St.  
Bachman Hall  
Honolulu, HI 96822

[vpadmin@hawaii.edu](mailto:vpadmin@hawaii.edu)  
(808) 956 6405





# Table of Contents

<b>i. EXECUTIVE SUMMARY</b>	<b>6</b>
<b>1. SYSTEMWIDE</b>	<b>8</b>
1.1 Systemwide Overview	8
1.2 6-Year Accomplishments	10
1.3 Systemwide 6-Year Plan	24
1.4 Deferred Maintenance	28
<b>2. UNIVERSITY OF HAWAI'I AT MĀNOA</b>	<b>34</b>
2.1 UH Mānoa Overview	34
2.2 UH Mānoa Main Campus	34
2.3 UH Mānoa Research	34
2.4 UH Mānoa Off Campus	34
2.5 Framework for the Future	36
2.6 UH Mānoa Campus Design Guidelines	38
2.7 UH Mānoa 6-Year Vision	40
2.8 UH Mānoa Major Projects	42
2.9 Strategic Energy Management Plan/Energy Initiatives	52
<b>3. UNIVERSITY OF HAWAI'I AT HILO</b>	<b>54</b>
3.1 UH Hilo Overview	54
3.2 UH Hilo Main Campus	54
3.3 UH Hilo Off Campus	54

---

3.4 UH Hilo Strategic Plan	55
3.5 UH Hilo 6-Year Vision	55
3.6 UH Hilo Major Projects	58
<hr/>	
<b>4. UNIVERSITY OF HAWAI'I AT WEST O'AHU</b>	<b>60</b>
4.1 UH West O'ahu Overview	60
4.2 UH West O'ahu Main Campus	60
4.3 UH West O'ahu Off Campus	60
4.4 UH West O'ahu Strategic Plan	61
4.5 UH West O'ahu 6-Year Vision	61
4.6 UH West O'ahu Major Projects	64
<hr/>	
<b>5. UNIVERSITY OF HAWAI'I AT COMMUNITY COLLEGES</b>	<b>66</b>
5.1 Hawai'i Community Colleges Overview	66
5.2 Hawai'i Community Colleges Strategic Plan	69
5.3 Hawai'i Community Colleges 6-Year Vision	69
5.4 Hawai'i Community Colleges Projects by Campus	72
<hr/>	
<hr/>	
<hr/>	

---

---

# Executive Summary

Since the 6-Year CIP Plan was first conceived and approved by the Board of Regents of the University of Hawai'i (the Board) in November 2016, the Administration has presented an updated, rolling 6-Year CIP Plan to the Board each year that realigns the plan with evolving situations and priorities and the projects funded by the Legislature. However, as the time period for the original six year CIP Plan has now passed, the Administration is presenting a new 6-Year CIP Plan for FY 2024 – 2029 with an updated strategy and vision for the University.

The previous 2016 6-Year CIP Plan and subsequent yearly updates have largely remained the same, focused on a facilities modernization and space management strategy that delivers 21st century facilities for our students and is aligned with academic programming needs, consistent with the priorities set forth in the 2017 Systemwide Integrated Academic and Facilities Plan (IAFP), to maximize the efficiency of both the capital and operational dollar. The new 6-Year CIP Plan set forth herein builds on these concepts by shifting slightly away from new buildings and growing the University's physical asset inventory and more toward data-driven decisions based on space utilization and programmatic and campus needs to improve and modernize existing spaces. With a continued focus on applying fiscal, human, and physical resources across the campuses more effectively and efficiently while continuing to advance the higher education goals of the state, the new 6-Year CIP Plan continues to embody the principles of the IAFP, focusing on aligning current and future programmatic needs with our facilities needs. Projects should consider whether the space can be designed flexibly to support multiple programs and/or uses, particularly for costly and specialized facilities; whether space can be shared across programs to be most efficiently utilized on a day-to-day basis; projected enrollment trends existing utilization of spaces on campus; the magnitude of impact on high-demand programs and disciplines; and advancement of strategic campus and systemwide initiatives. These considerations support the highest and best use of each capital and operational dollar.

Renew, Improve and Modernize ("RIM") Projects remain the foundation of our new 6-Year CIP Plan, with an emphasis on those projects necessary to protect health and safety measures, protect and maintain existing infrastructure and system investments and support current and funded research activity, as well as those that increase efficiency and utilization of existing spaces and promote flexible, shared and/or adaptive design and furniture.

As of 2022, the systemwide deferred maintenance backlog is \$863 million. While the University is committed to reducing its deferred maintenance backlog over time, significant challenges must be overcome to decrease or even maintain the backlog given its size and rate of increase, which is compounded by a number of factors. These challenges, in addition to adequate funding, include:

- Sightlines data represents the cost associated with an equivalent or "like-for-like" repair or replacement, which is generally not feasible or practical given the age of most subsystems by the time they are addressed. However, modern, energy-efficient repairs and replacements are more costly than an equivalent replacement, adding to the repair and replacement costs without an associated decrease in the deferred maintenance backlog.
- Changing building code, safety, and other requirements, along with updated industry best practices can add further costs when repairing and replacing subsystems that do not translate to a decrease in the deferred maintenance backlog but are necessary to complete the project.
- With an average facilities age of 44 years old (built in 1978) and an inventory in which 75% of all buildings are over 30 years old, capital renewal needs have increased dramatically, with an average of over \$100 million needed each year from FY23 through FY29 just to address new repairs or replacements with an equivalent subsystem or product.

- 
- Sightlines adds a 5% adjustment each year to account for yearly inflation.
  - The backlog will not be reduced until projects are completed and the aging subsystem is no longer in the University's inventory. This can take several years given the amount of time required to release the funds to the University, procure the project, and design and construct the project.

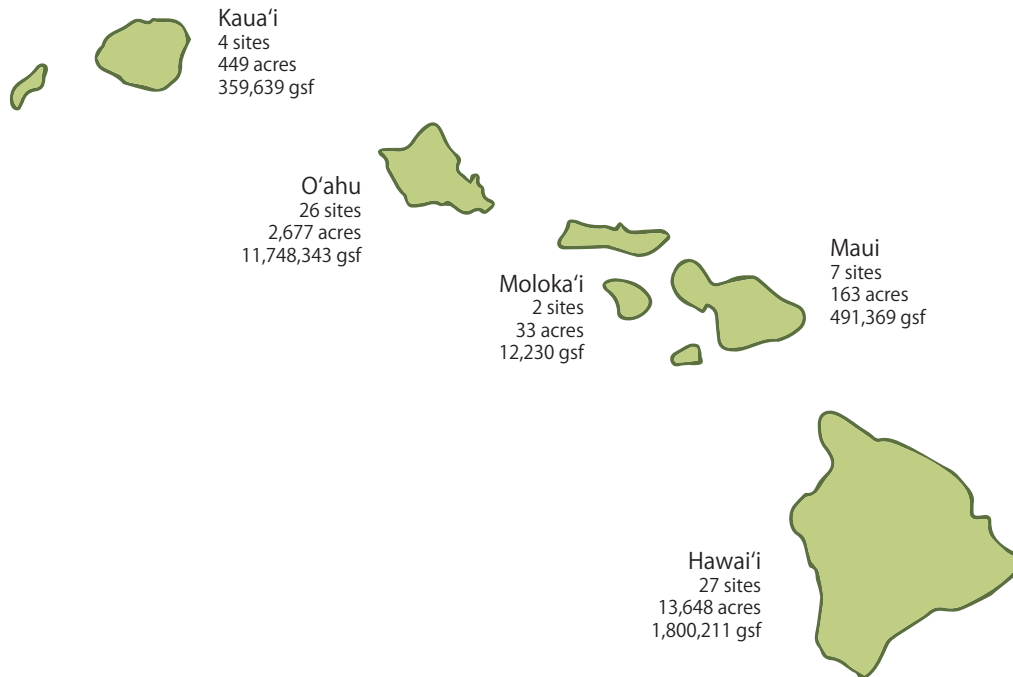
As further explained in this document, \$379 million would be needed each year for 10 years to eliminate the backlog through the RIM program. In contrast, RIM program funding of \$100 million per year would see an increase in the backlog of approximately 60% by 2032.

Given these challenges, the University has shifted its focus from the funding and effort level needed to significantly reduce the deferred maintenance backlog to maximizing the impact of each capital dollar. Multiple factors are considered including space utilization, energy efficiency, and current and future campus and programmatic needs, regardless of the type of project, including repairs, maintenance, modernization, and new spaces.

The 6-Year CIP Plan contained herein incorporates the principles set forth above as the University continues to strive for 21st century facilities to cultivate our future leaders and continue to play an important role in the State of Hawai'i's economic growth and diversification.

# 1 Systemwide

## 1.1 SYSTEMWIDE OVERVIEW



University of Hawai'i presence across the Hawaiian Island chain.

Source: Sightlines, Office of the VP for Administration, and Office of Strategic Development and Partnership.

As the only public institution of higher education in the State of Hawai'i, the University of Hawai'i (University or UH) strives to be a premier provider of knowledge and inspiration by offering dynamic and engaging learning experiences. Through the practice of respecting diversity, honoring our indigenous culture, and pushing the boundaries of scholarship, the University plays a critical role in cultivating all aspects of our future leaders for our islands and beyond and is committed to improving the social, economic and environmental well-being of current and future generations.

To fulfill this charge, the University system offers multiple points of access through distance learning as well as traditional instruction. As the state's leading engine for economic growth and diversification, stimulating the local economy with jobs, research and skilled workers, it supports nearly 50,000 students each semester and awards over 10,000 degrees and certificates annually. As a system, the University has a physical presence in all counties and on five islands in the State of Hawai'i. It is home to three baccalaureate/PhD-granting universities, seven community colleges, nine educational centers and one system office.

The University is also the state's premier research institution and is home to world-renowned programs in astronomy, earth and ocean sciences, energy, health sciences and tropical agriculture. Bolstered by over \$500 million in extramural funding in FY 2022, the University remains at the forefront of leading competitive research in science and technology to improve the quality of life throughout the state, around the Pacific Rim and beyond.

Since its founding in 1907, the University of Hawai'i System has experienced steady development over the past century. Currently, the University is responsible for maintaining over 16,800 acres of land and over 14,000,000 gross square feet of physical assets with a total replacement cost of nearly \$9 billion. With limited funding resources and a slowly declining enrollment over the last ten years, as well as a majority of facilities that are approaching the end of their useful life, it is clear that the University must rethink and stay flexible in its approach to building and maintaining its facilities. Given the important role that the University plays in the State of Hawai'i's economic growth and diversification, it is critical for the University to find a solution to managing aging facilities with limited funding to continue furthering the University's mission of providing students with quality education through thoughtful, 21st century spaces that enhance learning and research.





## 1.2 6-YEAR ACCOMPLISHMENTS

During the past six years the UH System campuses have completed a broad range of CIP and RIM projects outlined in the 2016 6-Year CIP Plan. 43 line-item projects were funded with general obligation bonds systemwide, with a total capital appropriation of approximately \$325 million. Additionally, approximately \$598 million was appropriated for RIM, CRDM, Minor CIP projects, reducing the deferred maintenance backlog and modernizing facilities across all of the UH campuses.

This section highlights some of the transformative projects that have been completed at UH Mānoa, UH Hilo, UH West O'ahu, and the Community Colleges over the past six years.

### UH MĀNOA

Over the last six years, UH Mānoa has made significant progress toward accomplishing the goals and major priorities identified in its original 2016 6-Year CIP Plan. The foundation of the plan relied upon steady funding for Renew, Improve, and Modernize projects each year to elevate the quality of University spaces to 21st century facilities for learning, teaching, and research, while addressing health and safety issues, maintenance and needed repairs. Over the last six years, UH Mānoa has received a total of over \$360 million for RIM projects, ranging from \$40 to \$80 million each year, and has substantially completed approximately 100 projects ranging from lighting upgrades and HVAC repairs and replacements to classroom and whole building renovations and PV projects.

UH Mānoa also completed Phase 1 and is in the process of completing Phase 2 of the Mānoa Mini Master Plan. In August 2015, the University of Hawai'i Board of Regents approved the Mānoa Mini Master Plan that decreases the overall square footage on the campus:

- Phase 1: Demolish Henke Hall and Snyder Hall & construct Life Sciences Building
- Phase 2: Construct Snyder Hall replacement building
- Phase 3: Demolish and replace Kuykendall

Securing funding to demolish Henke Hall and Snyder Hall and construct the Life Sciences Building and Snyder Hall replacement building represented a key milestone in accomplishing the goals of the 2016 6-Year CIP Plan.

The Life Sciences Building, a \$65 million, three story, 45,000 square foot, LEED certified facility, opened its doors to students, faculty and staff in July 2020. As the first Design-Build project managed by UH, the project signified a major shift in construction project design and management. It is the interdisciplinary home to the College of Life Sciences, Pacific Biosciences Research Center, and the Biological Electron Microscope Facility and includes six instructional laboratories and classrooms, 15 research laboratories, a student collaboration area, five meeting rooms, over 50 graduate student workstations and nearly 30 faculty offices.

UH Mānoa received \$41 million in FY20 to renovate the Sinclair Library into a Student Success Center. Given Sinclair Library's proximity to Campus Center and the Warrior Recreation Center, coupled with the need to provide a quality campus experience and student support services to successfully retain students, the renovation of Sinclair Library presents a unique opportunity to create flexible space for studying, student success, collaboration and group learning in a modern environment. Currently, the 117,797 gross square foot facility is primarily used as a study space with limited occurrence of traditional library activities. This project will allow UH Mānoa to consolidate its book collection into one location at Hamilton Library to utilize resources more efficiently while transforming Sinclair Library into a student-focused space consistent with a modern library environment. The project is currently in design and construction is expected to start in Summer 2023.





Life Sciences building. Image courtesy of STO Building Group.



Rendering of the Student Success Center at Sinclair Library. Image courtesy of Group 70 International Inc.

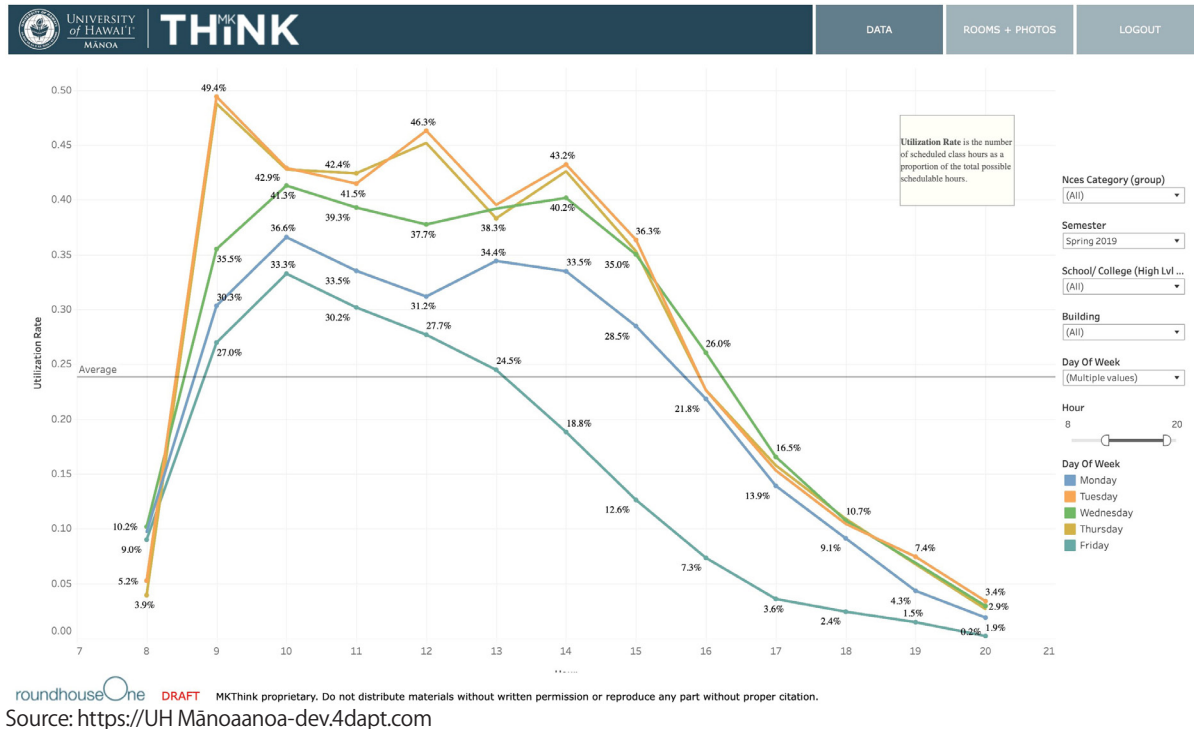
Following the announcement in December 2020 that the Aloha Stadium would no longer be safe to host Rainbow Warrior football games for the 2021 season, construction of an expanded Clarence T.C. Ching Complex began in April 2021. Less than six months later, on September 4, 2021, UH Mānoa hosted its first home football game of the 2021 season in the expanded Ching Complex. The \$9 million expansion increased the seating capacity from 3,500 to 9,000 seats and included a new field turf, press boxes, scoreboard, hospitality structure, game clock, and utility infrastructure, among other improvements.





## Utilization Study

UH Mānoa also prioritized the completion of a space utilization study to further inform strategic investments on campus. As the results of the study indicated that UH Mānoa should focus on better utilizing its existing space, rather than building new space, UH Mānoa has remained flexible throughout the six years and adapted its plans and priorities accordingly. As such, UH Mānoa has shifted its focus to elevating the quality and utilization of existing square footage so that facilities with large amounts of accumulated DM can be demolished and removed from the space inventory.



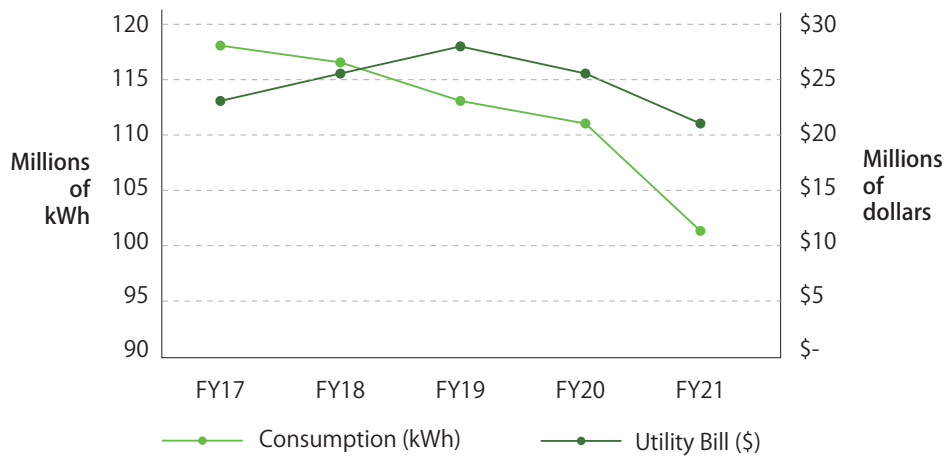
## Energy Efficiency And Renewable Energy Generation

As of FY21, UH Mānoa produces approximately 2.3 million kWh per year from thirteen rooftop and parking canopy PV systems that provide approximately 2% of UH Mānoa's energy consumption. In December 2022, following the electrical interconnection of the second phase of PV canopies constructed over the parking structure that were completed in August 22, UH Mānoa will be producing an additional 2.4 million kWh per year.

Additionally, from FY16 to FY21, UH Mānoa increased its cumulative annual energy savings due to energy efficiency projects by nearly 60%, resulting in an additional 3.3 million kWh of energy savings annually, or approximately \$700,000 in annual financial savings based on the cost of electricity in 2021. A selection of the projects that have been completed are shown below.

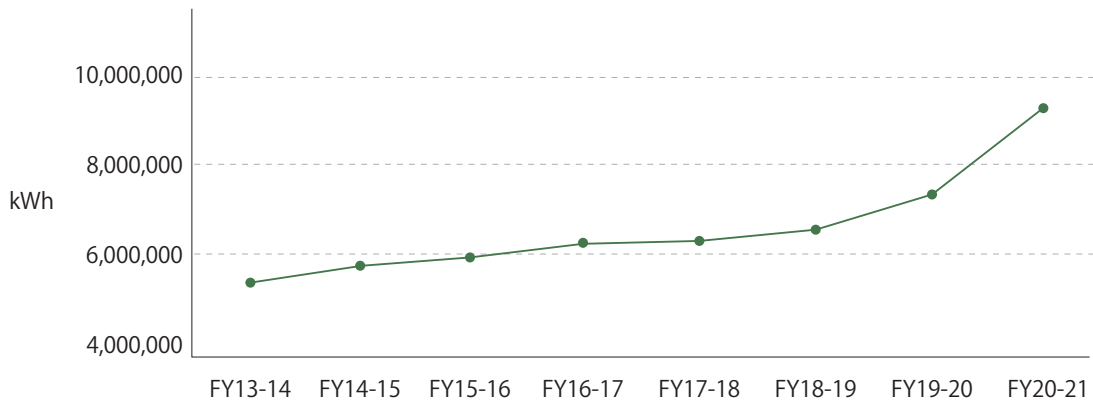
While the financial savings of renewable energy and energy efficiency projects are not as apparent from our annual utility costs, as electricity rates continue to increase each year, it is more important than ever to achieve energy efficiency and increase renewable energy sources.

## UH Mānoa - Historical Energy Consumption and Utility Bills



Year	Average Annual Utility Rate
FY17	\$0.20
FY18	\$0.22
FY19	\$0.25
FY20	\$0.24
FY21	\$0.21

## UH Mānoa cumulative annual energy savings from efficiency projects



Source: <https://www.hawaii.edu/sustainability/efficiency-projects/>

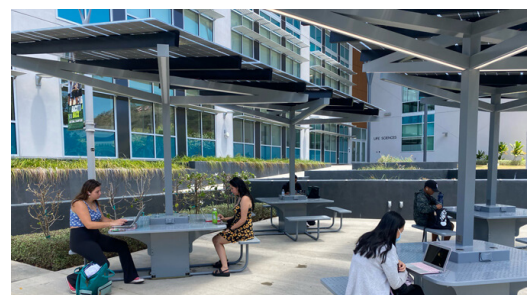
### Photovoltaic Parking Canopy

- Location: Lower Campus Parking Structure
- Completion year: 2022
- Energy generated: 4-million kWh/yr
- Anticipated energy reduction: \$11million - \$18million over a 20-yr period



### Photovoltaic Umbrellas Study Space

- Location: Life Sciences Building
- Completion year: 2022
- Project description: five photovoltaic powered umbrella, table, and bench systems were installed in the building's courtyard. Each is equipped with waterproof ac outlets, wireless charging stations and lighting.



### Hamilton Library HVAC Control Upgrades

- Location: Hamilton Library
- Completion year: 2020
- Energy savings estimated at 367,346 kWh/yr

### Quad Loop Chiller Replacement

- Location: The Quad
- Completion year: 2020
- Energy savings estimated at 360,428 kWh/yr

### Gym 1 & 2 LED Lighting Upgrades

- Location: Gym 1 & 2
- Completion year: 2019
- Energy savings estimated at 46,399 kWh/yr

### Campus Center LED Lighting Upgrades

- Location: Campus Center
- Completion year: 2019
- Energy savings estimated at 116,367 kWh/yr

### 4 Ultra Low Temperature freezer replacement pilot project

- Location: Molecular biology and life science laboratories across campus
- Completion year: 2017
- Energy savings estimated at 23,981 kWh/yr

### Shidler Business Administration Building LED Lighting Upgrades

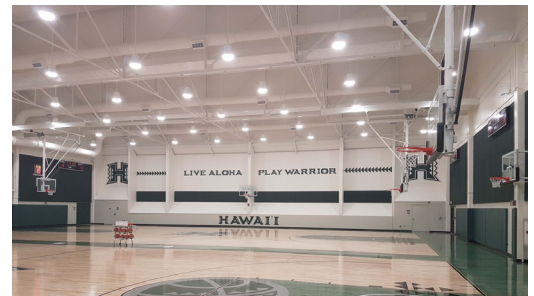
- Location: Business Administration Building
- Completion year: 2017
- Energy savings estimated at 143,954 kWh/yr

### Stan Sheriff Center HVAC Upgrades

- Location: Stan Sheriff Center
- Completion year: 2017
- Energy savings estimated at 263,325 kWh/yr

### FROG 1 & 2 Efficiency Projects

- Location: FROG
- Completion year: 2016
- Energy savings estimated at 16,207 kWh/yr





## UH HILO

Over the last six years, UH Hilo has accomplished the primary priorities and goals highlighted in its original 2016 6-Year CIP Plan. The plan did not contain any major projects and focused on implementing a renew, improve and modernize (RIM) program that would continually prioritize health and safety-related improvements and building and space modernization and renewal based on building usage and condition. The goal of these projects was to foster a vibrant and sustainable environment for studying, working, and living. In the last six years, UH Hilo has received a total of over \$30 million in funding for these RIM projects. This funding has allowed UH Hilo to successfully address its DM backlog over this time period, which is currently only \$8 million, while continuing to repair, upgrade and modernize campus facilities.

Notable projects to renew, improve and modernize the campus constructed over the last six years include the Vulcans Athletics Sports Complex, which consists of a new artificial turf soccer field, renovated softball field, six renovated tennis courts, two pickleball courts, a practice court and a 1,200 square foot multi-purpose building that houses restrooms, concessions, a storage facility and a team room. This building marks the first new athletics facility built at UH Hilo in 40 years, and was completed in July 2022 for \$6.15 million.

UH Hilo has transformed three classrooms in the Edith Kanaka'ole Hall, a classroom building on campus, into spacious, flexible, interactive learning spaces supported by technology including smart 3D screens and sound bar systems. Improvements include new vinyl flooring and roller shades, repainting, new movable and flexible furniture, new technology, additional electrical outlets for students' devices, mobile and wall-mounted glass boards, and porcelain white boards.



Vulcans Athletics Sports Complex

Recently, UH Hilo completed the installation of air conditioning for 152 apartment units at the Hale 'Alahonua dormitory along with a PV system and battery storage for \$6.8 million. One of the larger dormitories on campus, Hale 'Alahonua is the first and only dormitory to offer air-conditioned units. To further UH Hilo's commitment to sustainability, a rooftop and ground mount PV system consisting of over 900 PV panels with battery storage was installed which offsets 50-60% of the building's electricity costs. This project, which was funded in FY18 and FY19, was recently completed in Spring 2022.



Classroom at Edith Kanaka'ole Hall

In January 2020, UH Hilo also opened Hale Kihō'iho'i, the new home of the Daniel K. Inouye College of Pharmacy (DKICP). The \$31 million, 45,000-square-foot, two-story building features classrooms that accommodate applied learning, high-fidelity simulations, and distance audio-visual communications. There are also multiple lab spaces, lecture halls, a simulated pharmacy facility, offices, a student community center, and study areas. The modern building design incorporates Hawaiian culture and themes—from the undulating roof line that represents the goddess Pele and her land-shaping lava flows, to the interior floor-to-ceiling murals that depict the blending of traditional and contemporary healing practices.





Hale 'Alahonua with the photo voltaic system



College of Pharmacy



## UH WEST O'AHU

Over the last six years, UH West O'ahu has continued to address capital renewal on a regular basis through \$8 million in RIM program and line item funding and has successfully maintained a zero DM backlog. While the primary focus of its 2016 6-Year CIP Plan was to grow the campus by constructing additional new buildings and infrastructure, UH West O'ahu has remained flexible and modified its 6-Year CIP Plan based on space utilization and enrollment data analysis. As space utilization data and analysis indicate that additional space is not yet necessary to support its current enrollment and program needs, particularly given that UH West O'ahu was able to grow its campus from five buildings to seven buildings in the last six years using prior-appropriated funding, new building and infrastructure projects were deferred until the upcoming 2022 6-Year CIP Plan.

In the last six years, two new buildings have been constructed on the UH West O'ahu campus:

- The \$32-million Administration and Allied Health facility was constructed in just two years, opening in December 2018 to provide teaching space and office space for administrative staff that were previously located off-campus. The two-story, LEED Gold, 43,000-square-foot facility provides offices, 10 classrooms, three labs and two support labs. The building features a gable roof style that draws upon the architecture of sugar mills that once dotted Oahu, while the exterior masonry incorporates angular patterns that recall those on kapa, or traditional Hawaiian bark cloth. (see photo attached)
- The \$37-million Academy for Creative Media facility was constructed in just two years, opening in February 2021 to provide teaching space and office space for administrative staff that were previously located off-campus. The two-story, 33,000-square-foot facility includes a multi-purpose lobby, classrooms, production suites, a 3,000-square-foot sound stage, and a 100-seat theater. A large LED screen in the lobby and another large exterior LED screen outdoors extend the critical culture of film screening, inviting the broader campus and community audience to interact in the creative media space, both day and night. The building has received several design awards for its creativity, high quality of work overall and positive impact on the community.



Administration and Allied Health building



Academy for Creative Media

## UH COMMUNITY COLLEGES

Over the last six years, the UHCC system has made significant progress toward achieving and accomplishing the goals and major priorities highlighted in its 2016 6-Year CIP Plan. The primary focus of its 2016 6-Year CIP Plan was to implement a building and grounds maintenance program that minimizes DM while enhancing student learning with 21st-century facilities. Priorities included creating and implementing design standards for classrooms and laboratories that reflect modern teaching approaches, ensuring equipment is current and meeting industry standards, and developing and maintaining a high-speed digital environment on all campuses. Over the last six years, the UHCCs have received a steady infusion of funding each year for DM and modernization projects, resulting in over \$200 million in appropriations in the last six years. A few notable projects that have been completed or are ongoing include:

- Leeward CC classroom and exterior breezeway renovation to transform antiquated tiered classrooms into multi-use spaces
- Maui College Pilina Kitchen Renovation to create a Food Innovation Center from the old cafeteria kitchen
- Repave the majority of the Kapi'olani CC Campus

---

A major priority early on in the 2016 6-Year CIP Plan was the Kapi'olani CC Culinary Institute of the Pacific, Phase 2. This design-build project located across the street from the main Kapi'olani CC campus includes the build-out of a new 8,000-square-foot restaurant, 3,000-square-foot innovation center, and 3,500-square-foot auditorium, as well as site work, utilities, and parking to further expand the advanced culinary arts program and facilities. This program supports a Bachelor of Applied Science in Culinary Management and an advanced professional certificate to provide advanced training in Asian, Pacific and Hawaiian cuisine. Utilizing \$20 million in funding appropriated in FY18 and FY19, as well as \$10 million in private donations secured through the UH Foundation, construction on the project started in November 2020 and is currently 40% completed.

The Leeward CC Fascias project was recently funded in FY23 for \$6.5 million for new building fascias on the Leeward CC campus and is currently in procurement. Previously, all of the original buildings on campus possessed coral-based fascias which had cracked and needed repairs. While the campus originally intended to repair the fascias, they were deemed irreparable and were removed to eliminate health and safety risks. At the time, new fascias were not installed due to budget constraints. This project will finally install new building fascias and greatly enhance the appearance of the campus.

While the new Honolulu CC Science Building was not funded in the last six years, after further study, the project has been converted from a new building project to a renovation of existing facilities. Converting the project to a renovation will allow for the best use of limited capital dollars while creating modern, technology-connected spaces that facilitate appropriate and relevant workforce training. It will also address the campus' DM and improve the quality of student spaces without adding additional square footage to the campus' inventory. The new project, which will be completed in phases and address the renovation of multiple buildings on the Honolulu CC campus, has received \$15 million in funding in FY22 for the first phase and is currently in design. It will allow the campus to focus its resources on technology-based programs, which are already established pathways into bachelor degree programs; advance technical degrees in cybersecurity, networks and STEM; and enhance student services.

Although the Hawai'i CC Campus Development has not yet been fully funded, this continues to remain a priority for the Community Colleges. The funding request continues to be a part of the Community Colleges' new 6-Year CIP Plan.

In addition to the funding noted above, the Community Colleges also received approximately \$100 million for other projects not part of the original 6-Year CIP Plan. This includes funding for legislative initiatives and funding for additional projects that have become priorities over the last 6 years as the campuses adapt to unexpected and changing needs and priorities. These projects include \$3 million for the Windward CC Agripharmatech Bioprocessing Facility which is currently in design, \$4 million for the Maui College Vocational Tech Center, and \$12 million for the Leeward CC Product Development Center in Wahiawa, which is currently under construction.

The UHCCs have also completed several renewable energy generation projects in furtherance of their commitment to the university's net-zero goal. In the last three years, both Maui College and Leeward CC have become net zero, generating as much energy as they consume, and Honolulu CC is anticipated to be 97% net zero by the end of 2022. Kapi'olani CC and Windward CC are 74% and 70% net zero, respectively, and all of the UHCC campuses and education centers have PV installed.





Kapi'olani CC Culinary Institute of the Pacific Phase 1 complete



Rendering of the Kapi'olani CC Culinary Institute of the Pacific Restaurant Phase 2. Image courtesy of Ushijima Architects.





Leeward CC breezeway renovation.



Leeward CC Product Development Center. Image courtesy of Ushijima Architects.

## 1.3 SYSTEMWIDE 6-YEAR PLAN

For the next six years, the focus of CIP and RIM/CDRM projects will be to improve facility utilization and address deferred maintenance (DM). All campuses will have completed initial space utilization and occupancy assessments, and the findings suggest that there are opportunities to repurpose current low-utilization space to meet space needs rather than building new space.

In 2017, the UH System adopted the Integrated Academic and Facilities Plan (IAFP). The purpose of this plan is to set overall facility priorities and to outline positioning statements for the four academic units with a goal of providing the necessary structure to apply fiscal, human, and physical resources across the campuses more effectively and efficiently while continuing to advance the higher education goals of the state:

- UH supports and rewards collaboration across all programs and activities. New silos are discouraged and current silos are eliminated or reduced. The University prioritizes and integrates systemwide articulation and transferability in all academic planning.
- Duplication of academic programs takes place only with intention and sound justification. All programs are planned in a fiscally sound and sustainable manner and placed in appropriate locations. Considerations include type of program and mission, regional and statewide demand and availability of physical space, facilities, and land.
- UH will increase and diversify enrollment. Centralized enrollment management support can enhance campus efforts with clear lines of responsibility, authority, and accountability.
- To advance its academic mission and ensure modern, well-maintained facilities, UH must strengthen the diversity of its financial base beyond the continuing critical cornerstones of state funding and tuition revenue. Opportunities include leveraging land assets, generating more revenue from intellectual property, and increased philanthropy.
- UH is committed to shared use of facilities, particularly costly and specialized facilities. New capital projects must maximize long-term flexibility and include shared classrooms and resources to make the best use of institutional space. Campus space belongs to the university, not to a department, school, or person. Specialized and costly facilities and capabilities can be shared externally to address community needs while generating revenue to support operating costs.
- UH land is an asset of the UH System, not each campus. UH will develop a systemwide plan for real estate assets that respects each campus mission while maximizing opportunities including through the use of Public Private Partnership strategies where appropriate.
- UH is committed to prioritizing its investment of fiscal resources to support academic programs and facilities that reflect the principles and priorities set forth in the IAFP.

Many University of Hawai'i System facilities are in need of substantial modernization to meet the needs of 21st-century students and faculty. Preliminary findings from the campus utilization and occupancy studies have indicated that there is underutilized instructional and administrative space. Additionally, every square foot of space incurs ongoing costs for operations, maintenance and major improvements over time. Upcoming CIP and RIM/CDRM projects will be planned recognizing that the University must not simply rely on increased capital funding to address the need for improved University facilities, but must also maximize the utilization of existing space inventory in an efficient and prioritized manner.

Energy efficiency, sustainability, and resilience are also important criteria for campus improvements. The 6-Year CIP Plan includes requirements to improve the sustainability of our facilities as well as specific projects dedicated to renewable energy production and energy conservation.

---

The 6-Year CIP Plan is categorized into the following areas:

## **Project Categories**

### **Major capital improvement projects (Major projects)**

Typically whole building renovations or new structures. Generally no net increase of square footage.

### **Renew, improve, and modernize projects (RIM projects)**

RIM Projects repair and/or improve campus buildings and infrastructure through modernization efforts. They prioritize classrooms, laboratories, and student spaces centered around improving the learning environment, as well as target those facilities with poorer conditions, through modernizing interior/exterior structures, building roofs, mechanical & electrical systems, pedestrian pathways and roadways.

### **Capital Renewal and Deferred Maintenance (DM) Projects (CRDM) – UHCC Only**

Minor Projects are a subset of RIM Projects that are separately categorized for the Community Colleges only. Capital Renewal and DM (CRDM) projects are what was previously referred to as Repair and Maintenance projects or R&M. These projects are usually funded by lump sum appropriation from the State Legislature to either the UH system or the UH Community College system offices.

### **Minor Capital Improvement Projects (Minor Projects) – UHCC Only**

Minor Projects are a subset of RIM Projects that are separately categorized for the Community Colleges only. They address smaller improvements that prioritize classrooms, laboratories, and student spaces targeted at modernizing the learning and research environment through flexible spaces and shared programming.

### **Planning Projects**

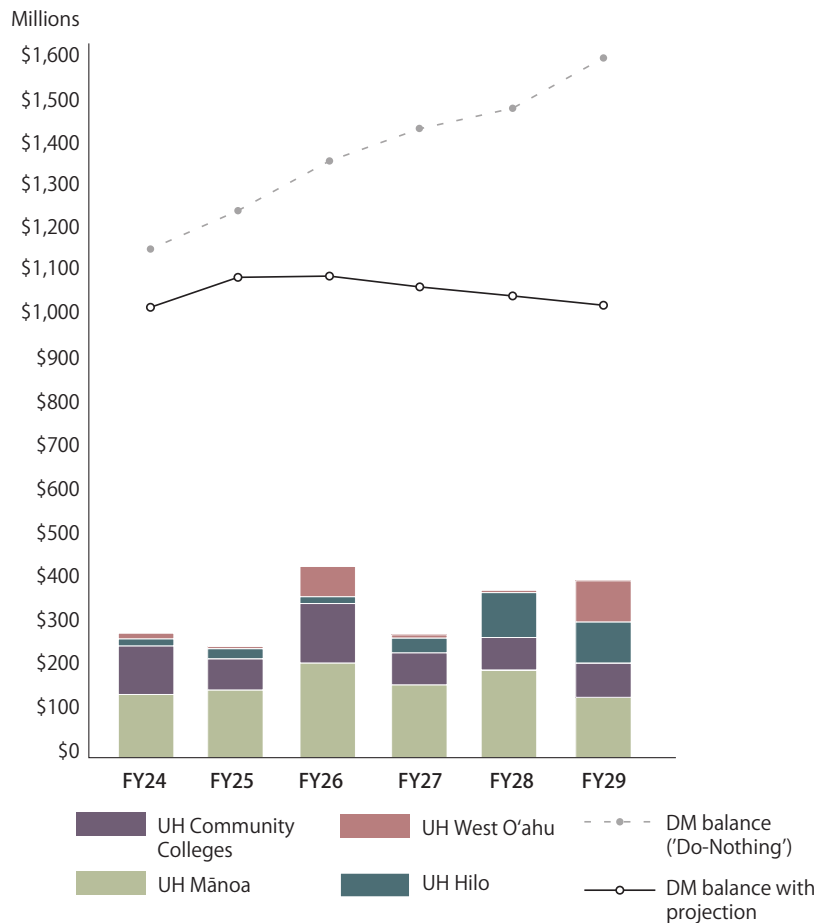
Planning Projects are those initiatives that support or deliver long-term development plans for future capital investments in the physical plant that strategically align with the core mission and vision of the campus.

While a breakdown of the CIP plan by campus will be detailed further in this report, as illustrated in the tables and graphs below, the systemwide 6-Year CIP Plan in the aggregate anticipates over \$200 million a year on average for a total of \$1.849 billion.

## 6-year Capital improvement projects plan (FY2024-2029)

**Systemwide 6-Year Capital Improvement Projects Plan (in 000's)**  
**Total: \$1.849 billion**

Campus	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
UH Mānoa	\$143,000	\$157,000	\$201,500	\$161,000	\$191,500	\$131,000	\$985,000
UH Hilo	\$17,500	\$26,500	\$16,000	\$34,000	\$78,500	\$70,000	\$242,500
UH West O'ahu	\$10,500	\$3,500	\$52,500	\$6,500	\$3,500	\$70,500	\$147,000
UH CC	\$91,500	\$60,000	\$107,000	\$69,000	\$72,000	\$75,000	\$474,500
<b>Total per year</b>	<b>\$262,500</b>	<b>\$247,000</b>	<b>\$377,000</b>	<b>\$270,500</b>	<b>\$345,500</b>	<b>\$346,500</b>	<b>1,849,000</b>
<b>DM balance with projection</b>	<b>\$1,020,820</b>	<b>\$1,093,238</b>	<b>\$1,094,590</b>	<b>\$1,064,178</b>	<b>\$1,036,334</b>	<b>\$1,027,621</b>	

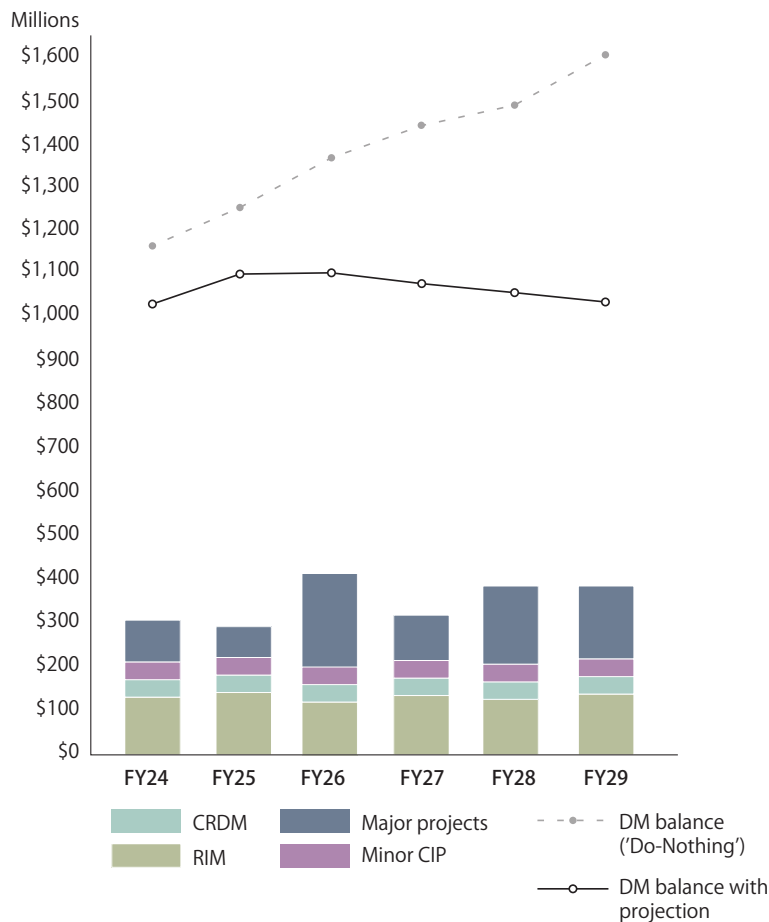


Source: UH Office of the VP for Administration, Sightlines 2022



**Systemwide 6-Year Capital Improvement Projects Plan By Category (in 000's)**  
**Total: \$1.849 billion**

Category/project	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
RIM	\$122,500	\$130,000	\$118,500	\$126,000	\$120,000	\$133,000	\$750,000
CRDM	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$150,000
Minor CIP	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$150,000
Major projects	\$90,000	\$67,000	\$208,500	\$94,500	\$175,500	\$163,500	\$799,000
<b>Total per year</b>	<b>\$262,500</b>	<b>\$247,000</b>	<b>\$377,000</b>	<b>\$270,500</b>	<b>\$345,500</b>	<b>\$346,500</b>	<b>\$1,849,000</b>
DM balance with projection	\$1,020,820	\$1,093,238	\$1,094,590	\$1,064,178	\$1,036,334	\$1,027,621	



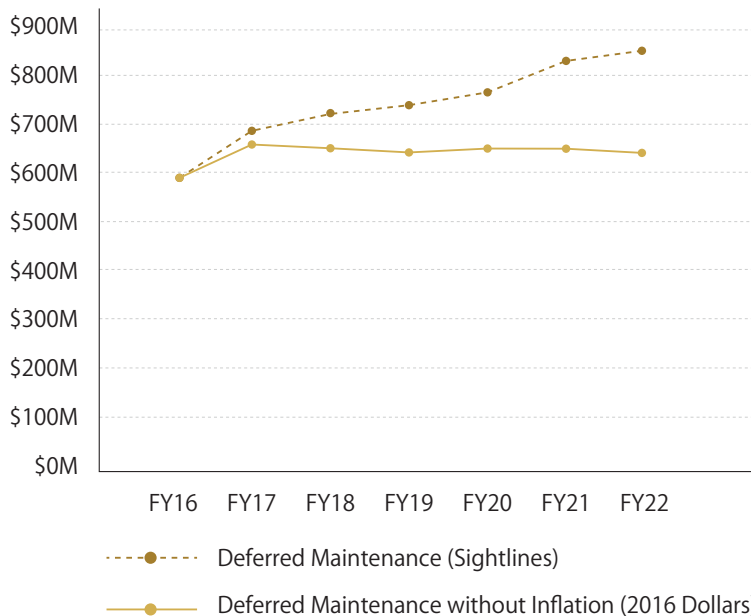
Source: UH Office of the VP for Administration, Sightlines 2022

## 1.4 DEFERRED MAINTENANCE (DM)

To manage its physical asset inventory, the University maintains a comprehensive inventory of its physical plant in AiM, which is linked to an analytic utilization database maintained by MKThink, and utilizes Sightlines. Sightlines, a division of The Gordian Group, maintains a third-party database of facilities-related metrics for over 52,000 higher education facilities representing approximately 300 campuses across North America. The Sightlines model utilizes predictive modeling of subsystems to determine the end of their useful life. Each year, the University's facilities managers review the University's building subsystems in the Sightlines database and provide updates on whether maintenance remains deferred for that subsystem (and is thus considered part of the "deferred maintenance backlog") and any upcoming maintenance and repair needs coming due in future years (the annual "capital renewal"). These updates are based on any projects that have been completed in the last year and their observations of the conditions of the various subsystems. After these subsystems are scheduled for renewal or replacement based on the model and the University's inputted data, the model identifies associated costs. If the scheduled renewal year has passed and the subsystem has not been addressed through repairs, maintenance or replacement, the renewal costs are moved into the deferred maintenance backlog.

Over the years, the University has accumulated a significant deferred maintenance backlog totaling over \$860 million in FY22. While the University is committed to reducing its deferred maintenance backlog over time, significant challenges must be overcome to decrease or even maintain the backlog given its size and rate of increase, which is compounded by a number of factors.

**Year and backlog in millions**

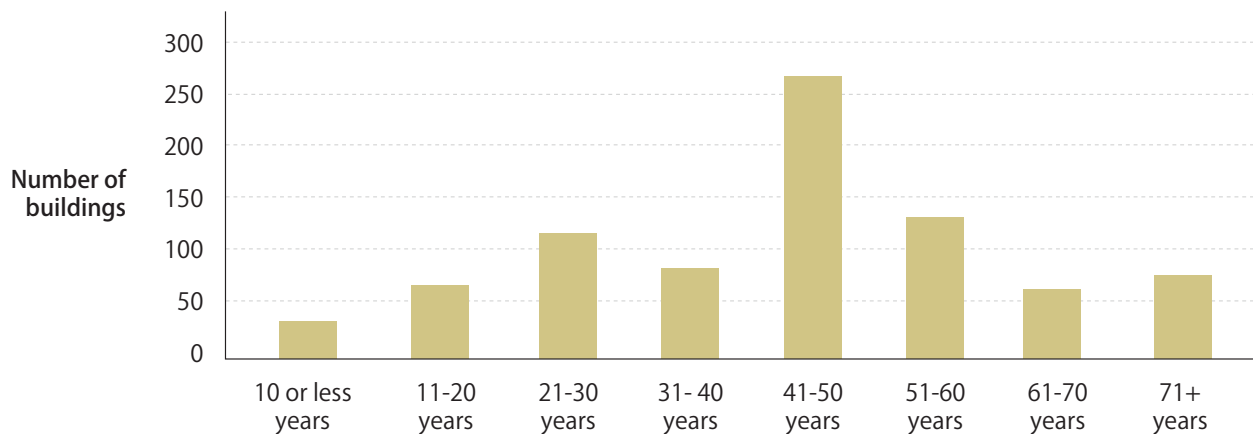


Source: UH Office of the VP for Administration, Sightlines 2022

All Sightlines data represents the cost associated with an equivalent or “like-for-like” repair or replacement, which is generally not feasible or practical given the age of most subsystems by the time they are addressed. In order to move the campus forward and take advantage of advancements in technology and modern inventions, the University strives to update subsystems in need of repairs or replacement with subsystems that are modern and energy efficient. However, these repairs and replacements are more costly than an equivalent replacement, adding to the repair and replacement costs without an associated decrease in the DM backlog. Additionally, changing building code, safety, and other requirements and updated industry best practices can add further costs that do not translate to a decrease in the DM backlog, but are necessary to complete the project.

This effect is exacerbated by the University’s large backlog and capital renewal needs. With an average facilities age of 44 years old (built in 1978) and an inventory in which 75% of all buildings are over 30 years old, capital renewal needs have increased dramatically. Currently, an average of over \$100 million is needed each year from FY23 through FY29 just to address new repairs or replacements with an equivalent subsystem or product. In addition, Sightlines adds a 5% adjustment each year to account for inflation, which further contributes to the steady increase in the DM backlog and capital renewal costs.

### Age of Buildings Systemwide

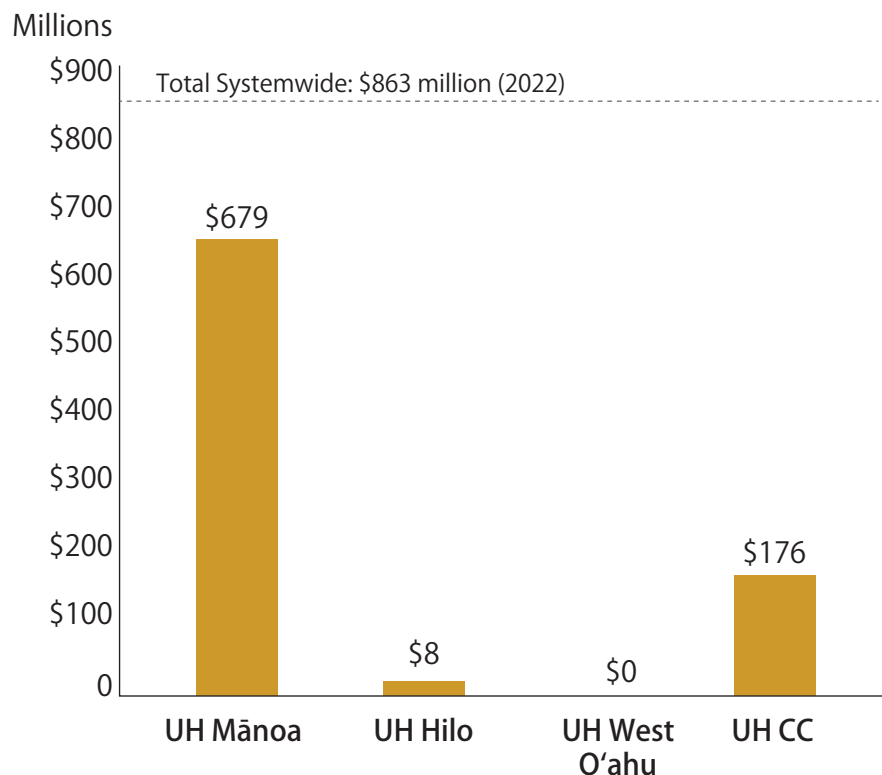


Source: UH Office of the VP for Administration, Sightlines 2022

While obtaining significant levels of funding to address the deferred maintenance backlog is a challenge in itself, project funding is only the beginning of the effort to reduce the backlog. Once funding is received, the backlog will not be reduced until projects are completed and the aging subsystem is no longer in the University's inventory. This can take several years given the amount of time required to release the funds to the University, procure the project, and design and construct the project. Moreover, significant human resources are needed to procure, design, construct and manage these projects.

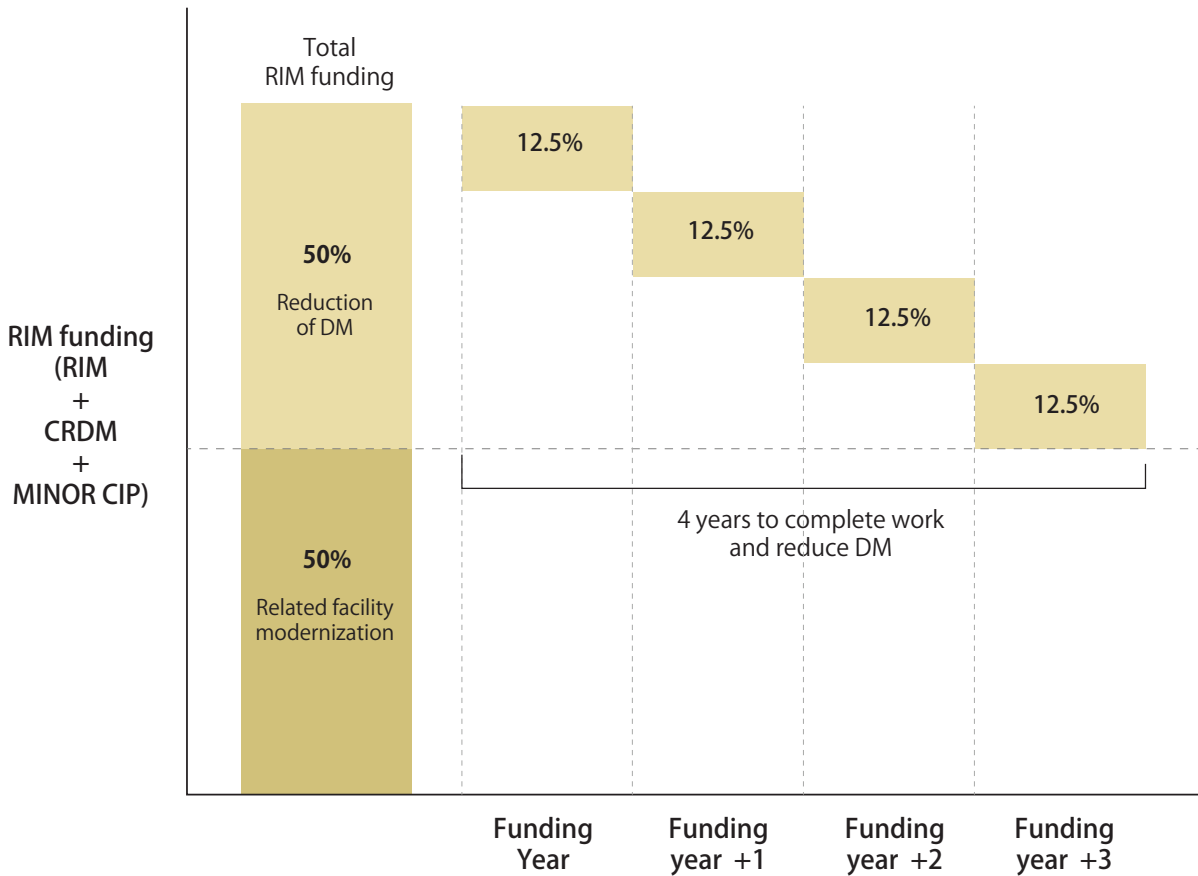
Given these challenges, the University has shifted its focus from the funding and effort level needed to significantly reduce the deferred maintenance backlog to maximizing the impact of each capital dollar. To this end, multiple factors are considered including space utilization, energy efficiency, and current and future campus and programmatic needs, regardless of the type of project, including repairs, maintenance, modernization, and new spaces. The illustrations that follow attempt to explain some of the challenges the University faces while attempting to address its deferred maintenance backlog and capital renewal needs each year.

## University of Hawai'i DM Backlog



Source: UH Office of the VP for Administration, Sightlines 2022

## How does RIM funding reduce the DM Backlog?



50% of RIM funding directly reduces the DM backlog. The remaining 50% covers associated project costs and modernization related to the maintenance scope of work.

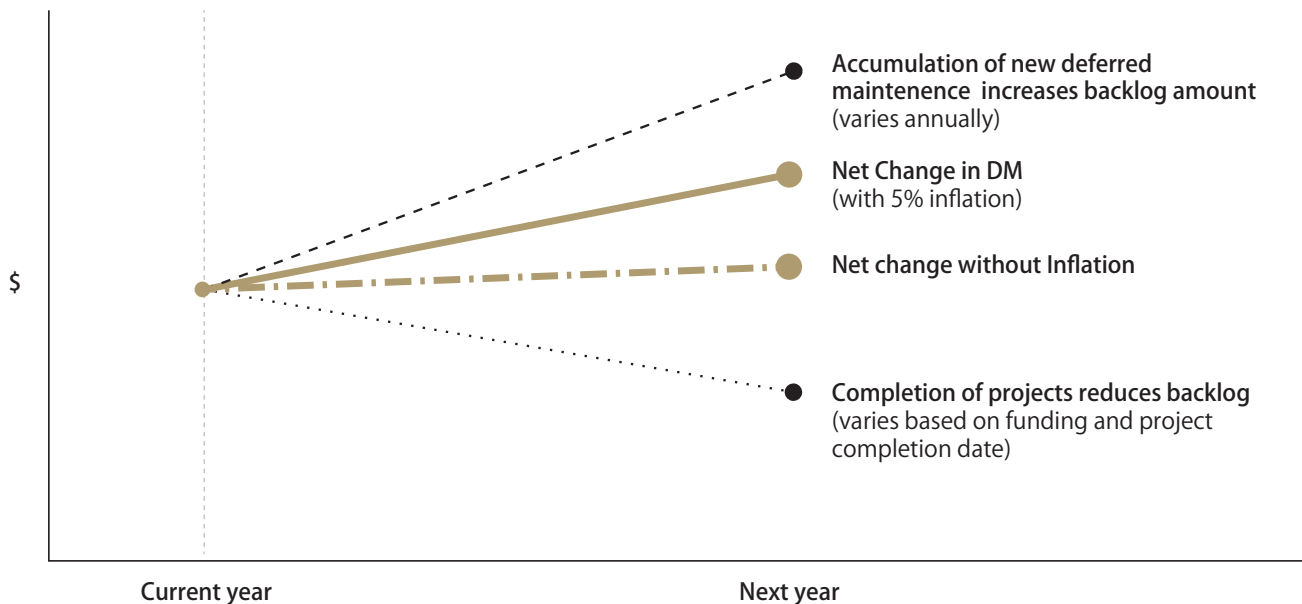
Once funding is received, it takes four (or more) years to complete the funded projects. Assuming projects are completed in four years, the result is a reduction in the DM backlog equal to 12.5% of the funded amount for each of the four years.

## What factors affect the DM Backlog each year?

There are many factors that affect the DM backlog. Unless the current year investment (completed projects that reduce the backlog) is greater than the total amount of (1) accumulation of new DM ("capital renewal") and (2) annual inflation, the DM backlog will increase for any given year.

In summary:

Next Year's DM Backlog = (Current DM Backlog) + (Current Year Capital Renewal) - (DM Backlog Reduced by Completed Projects) + (Inflation Factor (5%))



Each year the DM backlog is reduced when projects are completed (dotted line). At the same time, however, new maintenance becomes due, and, if not addressed that year, becomes deferred, thereby increasing the backlog (dashed line). The resulting deferred maintenance is represented by the gold dashed line.

The net impact of the increases and decreases to the backlog, in addition to inflation, results in a net increase each year (solid line).

**To illustrate the relationship between funding and the DM backlog, we considered three scenarios:**

1. What level of annual funding is required to reduce the DM backlog to zero in ten years?
2. What happens to the DM backlog if we fund RIM projects at \$100 million per year for the next ten years?
3. What level of annual funding is required to maintain our current DM backlog of \$863 million over the next ten years?



Source: UH Office of the VP for Administration

1. Providing RIM funding of \$379 million per year for each of the next ten years will reduce the current DM backlog to \$0. Note that 50% of funds directly impact DM backlog reduction, and new DM and inflation are accruing each year. For simplicity, this scenario does not take into account the lag between funding year and the time of project completion/deferred maintenance reduction.

2. Continued RIM funding of \$100 million per year for each of the next ten years will increase the current DM backlog by 60% to nearly \$1.4 billion by year 10. Note that 50% of funds directly impact DM backlog reduction, and new DM and inflation are accruing each year. For simplicity, this scenario does not take into account the lag between funding year and the time of project completion/deferred maintenance reduction.

3. RIM funding of \$206 million per year for each of the next ten years will maintain the current DM backlog level of \$863 million. Note that 50% of funds directly impact DM backlog reduction, and new DM and inflation are accruing each year. For simplicity, this scenario does not take into account the lag between funding year and the time of project completion/deferred maintenance reduction.

---

# 2 University of Hawai‘i at Mānoa

## 2.1 UH MĀNOA OVERVIEW

Established in 1907, the Mānoa campus is the oldest and largest University of Hawai‘i campus with over 9.4 million gross square feet of facilities spread across Kaua‘i, O‘ahu, Moloka‘i, Maui, and Hawai‘i Island. In Fall 2022, the University of Hawai‘i at Mānoa (UH Mānoa) has enrolled 19,067 students (14,162 undergraduate and 4,876 graduate), 70% of whom are Hawai‘i residents.

## 2.2 UH MĀNOA MAIN CAMPUS

The Mānoa campus is located in Mānoa Valley on O‘ahu and covers approximately 320 acres. With 15 colleges and schools, UH Mānoa supports 100 undergraduate programs, 89 graduate programs, and 57 professional and doctorate programs. Campus facilities include housing for 3,785 students in 12 dormitories, four NCAA Division I stadiums which include the Stan Sheriff Center, Les Murakami Stadium, Women’s Softball Stadium, and Clarence T.C. Ching Complex, competition aquatic and tennis complexes, a 66,000 square foot recreation center, and the Kennedy and Orvis theaters.

## 2.3 UH MĀNOA RESEARCH

UH Mānoa is one of 146 universities (including 107 public universities) in the United States categorized as Highest Research Universities, or Research 1 (R1) universities. In FY 2022, UH Mānoa supported more than \$360 million of research contracts and grants.

The main campus has nearly 700,00 net square feet of research laboratory space. UH Mānoa’s 9.9-acre satellite campus in Kaka‘ako supports the John A. Burns School of Medicine (JABSOM) and the Cancer Research Center of Hawai‘i (CRCH). Both of these facilities run a Level 3 Bio-Safety Laboratory and are certified to perform Tier 1 research. JABSOM consists of over 300,000 gross square feet, and CRCH consists of over 200,000 gross square feet. JABSOM is also the proud custodian of the Hyperbaric Treatment Center at Kuakini Medical Center in Honolulu, which is among the nation’s most active dive accident treatment facilities for recreational divers.

## 2.4 UH MĀNOA OFF CAMPUS

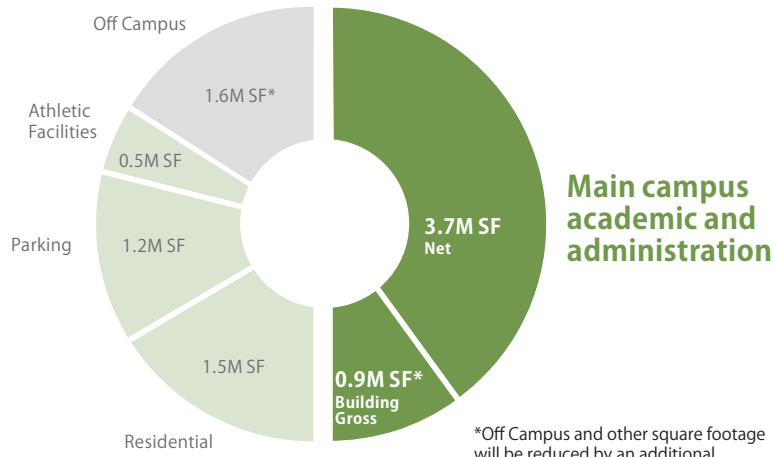
UH Mānoa also has many off-campus facilities. As a land, sea and space grant institute, it is responsible for effectuating the provisions of the Morrill Acts of 1862 and 1890. Primarily advanced through the College of Tropical Agriculture and Human Resources, UH Mānoa is responsible for 25 research stations and extension offices located across O‘ahu, Kaua‘i, Moloka‘i, Maui and Hawai‘i Island.

Additionally, there are instructional and research programs under the Hawai‘i Institute for Marine Biology located on Coconut Island (Moku o Lo‘e) in Kāne‘ohe Bay and the Institute for Astronomy on Mauna Kea on Hawai‘i Island and Haleakalā on Maui. There are also ships and submarines at various base facilities under the School of Ocean, Earth, and Science Technology docked at Piers 34 and 35 in Honolulu Harbor and at the Makai Research Pier on the Windward side of O‘ahu.

Finally, there are auxiliary enterprise programs run at the Lyon Arboretum, which consists of nearly 200 acres that are home to over 6,000 taxa of tropical and sub-tropical plants in Mānoa Valley, and the Waikiki Aquarium, the second-oldest public aquarium in the nation.



**Total UH Manoa GSF  
9.4M SF**



---

## 2.5 FRAMEWORK FOR THE FUTURE

In 2017, UH Mānoa conducted an in-depth space utilization study to better understand how effectively campus space served the University's goals and objectives. The study's findings identified several areas of opportunity: Classroom capacity could be increased through scheduling, office space was often overallocated and underutilized, aging facilities and portable buildings were contributing disproportionately to DM, outdoor space was not being used to serve student needs, and space assignment was inconsistent across departments. As a result, UH Mānoa began focusing on facility optimization, improved space utilization, reduction of DM, and right-sized renovations to modernize the existing campus.

In 2019, UH Mānoa published its Campus Framework for the Future, an alternative to the traditional campus master plan that aligns campus priorities with the University's Strategic Plan. A key feature of the Framework are the Guiding Principles:

### **Promote world-class instruction & scholarship**

Contribute to the advancement of human knowledge and help our communities to solve the complex and interconnected challenges facing their futures.

### **Develop the whole student**

Provide spaces that are physically, mentally and emotionally safe on a daily basis and in times of need. Retention and enrollment growth are reflective of how well we take care of our students.

### **Steward our natural environment**

Optimize existing resources and assets by using what we have as efficiently as possible, and utilize sustainable design principles to minimize environmental footprint when we do need to build new.

### **Foster inclusivity & connectivity**

Provide access for campus community members to housing, transit by all types of mobility, and digital technologies.

### **Leverage unique attributes of place**

Honor indigenous ancestral knowledge systems. Care for and learn from Native Hawaiians and their knowledge systems, which provide lessons on how to care for each other and our natural world in our specific regions of Mānoa and larger Hawai'i

### **Ensure financial viability**

Demonstrate fiscal responsibility and a robust financial plan to make smart decisions which maximize our ability to do more with less. Ensure that capital is deployed efficiently to achieve the mission of the university.

### **Cultivate collaboration**

Promote interaction, cross-disciplinary learning and meaningful work so that folks can work together to create the best futures for Mānoa, Hawai'i, and the world.

The Framework outlines the direction for an overall reduction in square footage for core academic facilities and uses by roughly 500,000 square feet; transforming circulation and mobility; strengthening the gathering spaces on campus; establishing the campus as a learning lab by addressing long-term needs for the research facilities; activating landscape spaces and the campus character; creating spaces that support the UH Mānoa community; and building resilience through climatological foresight.

## Core Values



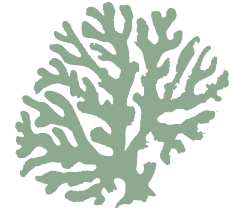
**KULEANA**  
Right, privilege,  
concern,  
responsibility...



**HĀNAI**  
Feeding, fostering,  
raising as a child, and  
providing for...



**HO'OMALU**  
To bring under the  
care and protection  
of, to protect...



**MĀLAMA**  
Tend to, take care of,  
and maintain...

The Core Values reflect the UH Mānoa community's deeply held beliefs and aspirations to become a Hawaiian place of learning, and directly inform the Guiding Principles.

The Framework provides an organizing vision for the overall campus and guides subsequent development in a manner that addresses and corrects deficiencies from prior unplanned growth and development to adequately respond to changes in academic priorities, Capital Improvement Projects, enrollment, environmental issues, funding, changes in the campus from construction of new buildings, and other major factors influencing the campus development.

The framework plan charts an overall structure for future campus building and development, new open spaces, infrastructure, and mobility networks, while allowing for flexibility to enable UH Mānoa to respond to changing conditions and circumstances. In summary, the UH Mānoa Framework for the Future will guide the UH Mānoa campus and LRDP towards:

- A reduction in square footage for core academic facilities and uses;
- Consolidation of core academic activities to the central part of campus (College of Education, Institute for Astronomy, UH Press, and Children's Center);
- Increased pedestrian circulation that replaces vehicular traffic in the central part of campus;
- A greater student presence on campus in the afternoons and evenings;
- Flexible, space-efficient buildings;
- Additional student housing near campus, which reduces daily car trips;
- Revisioning the UH Mānoa Lower Campus around athletics and the Reserve Officers' Training Corps (ROTC) program, and aligning with the development efforts of Kamehameha Schools in the adjacent Mō'ilī'ili area; and
- Monetized ancillary site in alignment with campus needs (University Village, Faculty Housing, market driven mixed-use development efforts).

The UH Mānoa Framework for the Future may be viewed in its entirety at: [https:// www.manoaframeworkfuture.info](https://www.manoaframeworkfuture.info)

## 2.6 UH MĀNOA CAMPUS DESIGN GUIDELINES

In order to promote implementation of the Campus Framework, UH Mānoa adopted a set of Campus Design Guidelines in 2022. The Design Guidelines provide specific direction to faculty, staff, consultants, and contractors on basic requirements for different space types on campus. As of the date of publication of this document, there are guidelines for Campus Planning, Gathering Spaces, Classrooms and Class Labs, Research Labs, Office and Administrative Spaces, Furniture, and Color. Additional guideline documents under development include Signage & Way-Finding, Energy, Mechanical, Electrical and Plumbing, Campus Arboretum & Landscape, Campus Infrastructure, Parking & Private Transportation, Public Transportation, Public Safety, Residential Life, and Neighborhood Adjacencies. These guidelines are included in requests for proposals for facilities projects, and help ensure that future projects align with the overall goals for the campus.



Gathering typologies design guidelines: open outdoor seating at Warrior Recreation Center—open, public





Provide movable table set for small gathering

Repave with visually natural pavement materials such as gravel and decomposed granite

Campus planning design guidelines: visualization at the Student Center plaza

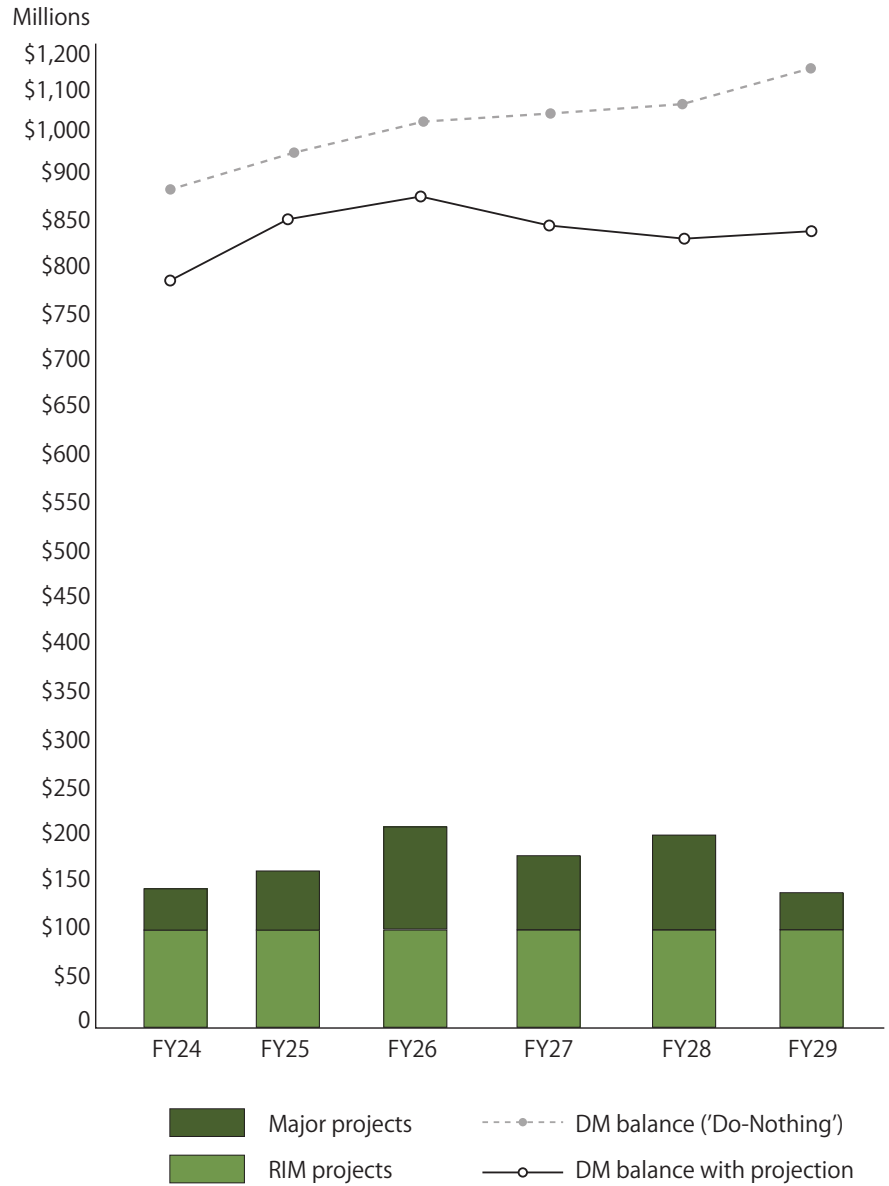
## 2.7 UH MĀNOA 6-YEAR VISION

The next six years will see the completion of the UH Mānoa mini-master plan and implementation of projects aligned with the Framework goals.

### UH Mānoa 6-Year Capital Improvement Projects Plan (in 000's) Total: \$985 million

Category/project	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
RIM projects	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$600,000
Assessment & Feasibility of Hamilton Library	\$6,500						\$6,500
Waikīkī Aquarium seawall repair	\$3,000						\$3,000
Athletics Complex	\$12,000	\$18,000					\$30,000
Holmes Hall	\$1,500	\$6,000	\$1,500	\$6,000			\$15,000
PV Rooftop and Canopies and various energy efficiency projects	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$120,000
Mini Master Plan Phase 3 - Kuykendall Hall		\$5,000	\$10,000	\$35,000			\$50,000
Admin Office & Parking - Phase I and II		\$8,000	\$70,000		\$70,000		\$148,000
Portable demolition					\$1,500	\$11,000	\$12,500
<b>Total</b>	<b>\$143,000</b>	<b>\$157,000</b>	<b>\$201,500</b>	<b>\$161,000</b>	<b>\$191,500</b>	<b>\$131,000</b>	<b>\$985,000</b>
DM balance with projection	\$780,326	\$854,699	\$872,717	\$849,341	\$830,303	\$842,098	

### UH Mānoa 6-Year Capital Improvement Projects Plan Total: \$985 million



Source: UH Office of the VP for Administration, Sightlines 2022

## 2.8 UH MĀNOA MAJOR PROJECTS

Over the six year period, UH Mānoa anticipates nine major projects and two individually recognized initiatives that are critical to meeting the mission and objectives of the campus. Each of these are further described below:

### 2.8.1 HAMILTON LIBRARY

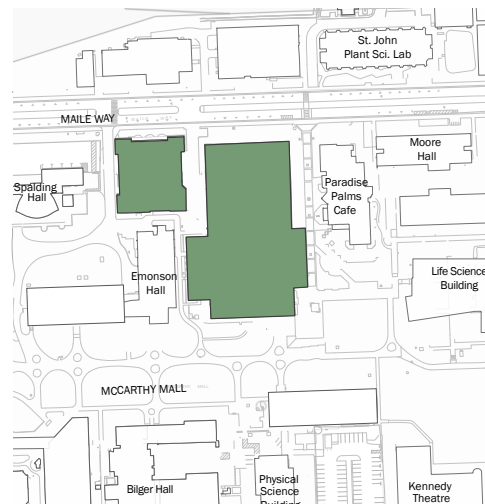
Hamilton Library is the largest facility on the main campus. Constructed in three phases (1956, 1976, and 2001), the library houses the University's book collection, special collections, library offices, several classrooms, and a limited amount of student study space. Hamilton Library supports the land-,sea-, and space-grant status, as well as various campus programs and researchers from across the globe.

Hamilton Library has over 411,000 interior square feet of space (for comparison purposes, this is over 5 times larger than Kuykendall Hall). Approximately 45% of this space (175,000 s.f.) is currently used for open stack book storage. Our initial research shows a trend amongst peer institutions who have converted library space from book storage to people space (study, event, collaboration, office). By creating high-density climate controlled book storage and moving books out of the open stacks, a significant amount of new space can be created in the heart of central campus without building a new building.



#### LOCATION

Hamilton Library



#### PROJECT TYPE

Major (Planning only)

#### SPACE TYPE

Academic

#### FACILITY TYPE

Building

#### BUDGET

FY 24 \$6.5M

Total \$6.5M

#### ANTICIPATED FUNDING SCHEDULE



FY24



## 2.8.2 WAIKĪKĪ AQUARIUM SEA WALL

The walkway behind the Waikīkī Aquarium that provides community access along the Waikīkī Beach coastline is currently closed due to safety concerns. Portions of the wall fronting the ocean that support the walkway have fallen away into the ocean. The ocean tides will continue to erode the seawall until the repairs are made. This project includes the plans, design and construction to replace portions of the seawall to increase its structural stability so that the walkway may be reopened to the public.

### LOCATION

Waikīkī Aquarium

### PROJECT TYPE

Major

### SPACE TYPE

Infrastructure

### FACILITY TYPE

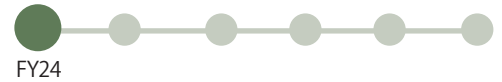
Building

### BUDGET

FY24 \$3M

Total \$3M

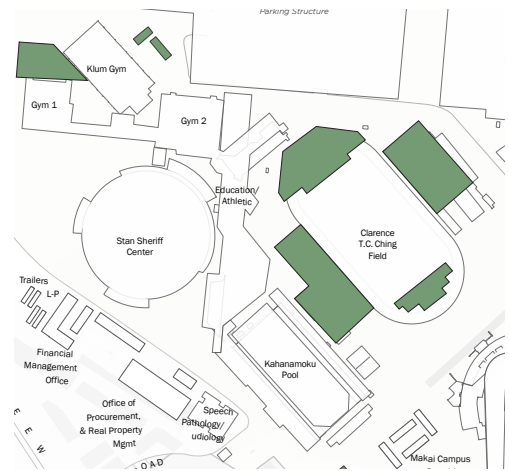
### ANTICIPATED FUNDING SCHEDULE



### 2.8.3 ATHLETICS COMPLEX

This lump-sum request includes the planning, design, and construction of various repairs, upgrades, and improvements to support the Clarence T.C. Ching Complex and Field improvements, the relocation of the track and soccer fields to the existing football practice fields, and other Athletics programs and facilities in lower campus. Facilities that will be updated include the Les Murakami Stadium, Clarence T.C. Ching Complex and Field, Rainbow Wahine Softball Stadium, Stan Sheriff Center, and the Tennis Complex. Projects include, but are not limited to, artificial turf replacement; resurfacing; batting cage improvements; new and retrofitted scoreboards; amenity seats; and spalls repairs; lighting installation; press box work; and locker room and restroom repairs and upgrades.

#### LOCATION Lower Campus



#### PROJECT TYPE

Major

#### SPACE TYPE

Athletics

#### FACILITY TYPE

Athletics

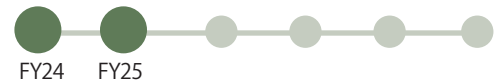
#### BUDGET

FY24 \$12M

FY25 \$18M

Total \$30M

#### ANTICIPATED FUNDING SCHEDULE





## 2.8.4 HOLMES HALL

Holmes Hall, built in 1972, is a 227,500 SF four-story building that is the home of the College of Engineering. In 2017, the College of Engineering completed a Needs Assessment that outlined a set of guiding principles including:

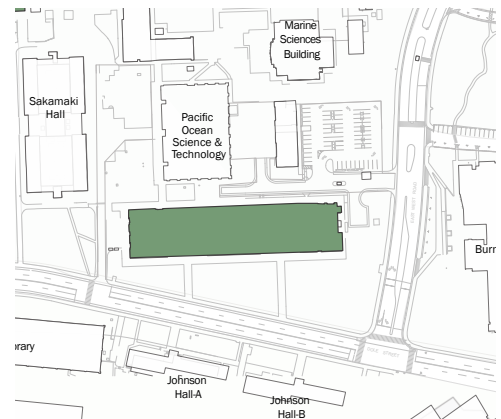
- Reaching an enrollment target of 2,500 total students by 2027 through maximizing enrollment of local students and expanding enrollment of international and mainland students
- Being at the forefront of next generation research and pedagogy, Ensuring that all engineering students participate in research
- Providing facilities that support enrollment, program, and research goals, and Offering instructional labs, research labs, and project space commensurate with top research standards.

66% of the assignable square footage in Holmes Hall is lab or shop space. The remainder consists of offices, classrooms, and other support space.

The Holmes Hall Renovation Project is a targeted interior renovation of the building's lab spaces. The improvements will provide modernized teaching and research lab space, contributing to faculty research and student learning outcomes. The project will also improve building safety and accessibility, and improve the overall sustainability performance of the building. The building envelope will not be modified substantially other than as required to ensure building performance. The project will also include landscaping work around the building exterior to improve the overall beauty of the UH Mānoa campus.

### LOCATION

Dole Street



### PROJECT TYPE

Minor

### SPACE TYPE

Academic

### FACILITY TYPE

Building

### BUDGET

FY24 \$1.5M	FY27 \$6M
FY25 \$6M	<b>Total \$15M</b>
FY26 \$1.5M	

### ANTICIPATED FUNDING SCHEDULE



### 2.8.5 PV ROOFTOP AND CANOPIES AND VARIOUS ENERGY EFFICIENCY PROJECTS

This annual lump sum request is for the design and construction of energy efficiency initiatives and PV projects. In support of 304A-199, Hawai'i Revised Statutes, which requires that UH establish a collective goal of becoming net-zero with respect to energy use (producing as much energy as the system consumes across all campuses by the year 2035), UH Mānoa is in the process of completing a Strategic Energy Management Plan (SEMP) and Max PV Study (see Section 2.9 on the SEMP/Energy Initiatives for more information). Based on the preliminary results and draft models, maximizing the campus' PV capacity is critical to achieving net-zero. Additionally, as UH Mānoa contributes 75% of the university's total energy consumption, energy efficiency initiatives that reduce UH Mānoa's overall consumption are a second key component to achieving net zero.

PV Preferred Scenario	
Number of individual PV systems	178
Total PV capacity (MW)	38 megawatts
Total annual energy production (kWh)	67,096,403 kWh
% Net-Zero energy	56%

**LOCATION**  
Campus-wide

**PROJECT TYPE**  
Major

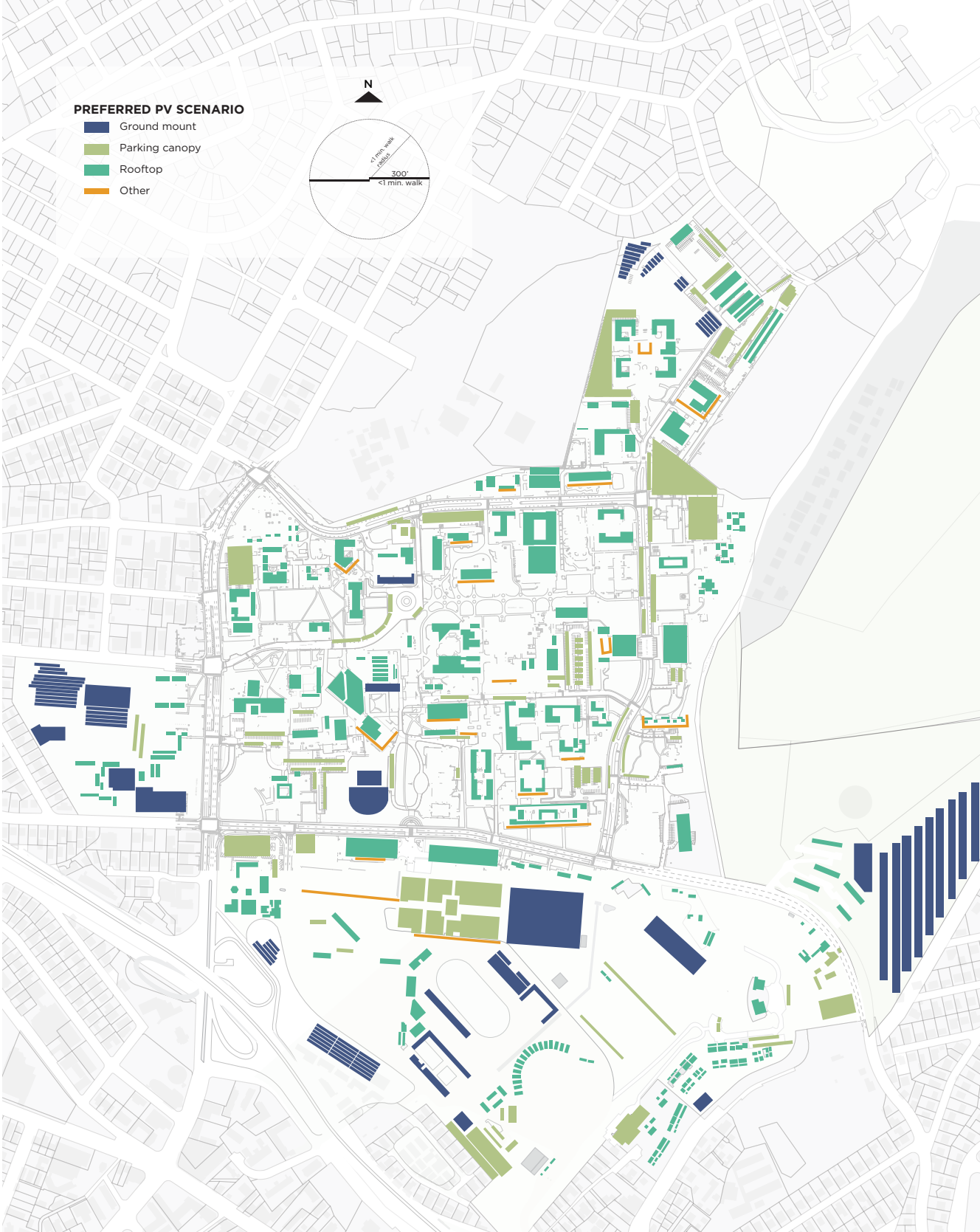
**SPACE TYPE**  
Infrastructure

**FACILITY TYPE**  
Utilities

**BUDGET**  
 FY24 \$20M    FY28 \$20M  
 FY25 \$20M    FY29 \$20M  
 FY26 \$20M    **Total \$120M**  
 FY27 \$20M

**ANTICIPATED FUNDING SCHEDULE**





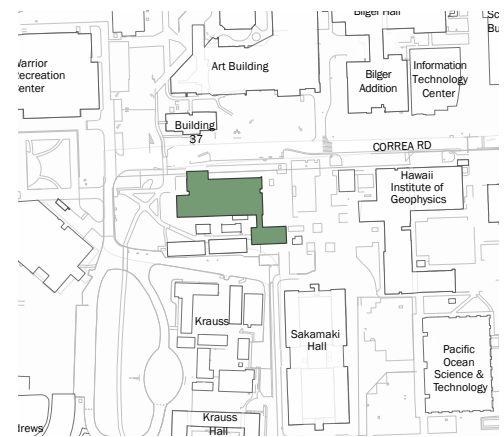


## 2.8.6 KUYKENDALL HALL

Kuykendall Hall is a 92,000 SF two building structure consisting of a seven-story office tower and a four-story classroom building, constructed in 1964. Kuykendall Hall houses 28 classrooms, making it one of the top five buildings on campus in terms of classroom inventory. The building has deteriorated over time and is currently in relatively poor condition compared to other campus facilities. The currently proposed renovation project would retain the current function as an academic facility including faculty office and classroom environments, but reconfigure the interior spaces to reflect the recently adopted UH Mānoa Design Guidelines. The new interior configurations will improve overall space utilization and occupancy and provide modern teaching, learning, and working environments for faculty, students, and staff. Building systems will be upgraded to improve performance and meet University sustainability goals.

### LOCATION

Kuykendall Hall



### PROJECT TYPE

Major

### SPACE TYPE

Academic

### FACILITY TYPE

Building

### BUDGET

FY25 \$5M

FY26 \$10M

FY27 \$35M

Total \$50M

### ANTICIPATED FUNDING SCHEDULE



## 2.8.7 ADMINISTRATIVE OFFICE AND PARKING - PHASE I AND II

Currently, administrative offices are distributed throughout the entire UH Mānoa campus. This Central Administration Facility will consolidate most of these administrative offices into one building.

Currently, the project site is occupied by the existing Campus Services building which houses the UH Mānoa Department of Public Safety, Commuter Services, University Housing, and Food Services. The Central Administration Facility will increase the project site square footage to approximately 55,000 square feet and will not exceed six floors in height. Overall, this project will yield an overall net reduction in square footage on the UH Mānoa campus as several existing portable buildings will be demolished through the Portable Demolition Program in efforts to consolidate uses and make more efficient use of campus space.

UH Mānoa is fostering a multi-modal approach to address future parking and mobility on the campus. As a part of this initiative, UH Mānoa is proposing to construct the Central Traffic Center that is intended to be a multi-level parking structure. Currently, the project site for the Central Traffic Center is a surface parking lot identified as Zone 4. The Central Traffic Center will help reduce the reliance on street parking and offset surface parking that is proposed to be removed from Correa Road, Varney Circle, and several other surface lots dispersed throughout the UH Mānoa campus.

Construction is anticipated to occur in two phases:

- Phase 1: Six stories located at the Maile/East-West Road intersection (approximately 1,000 parking stalls)
- Phase 2: Six stories located adjacent to the Phase 1 development (approximately 500 parking stalls)

### LOCATION

Adjacent to the proposed Central Traffic Center site, at the intersection of East-West Road and Maile Way.



### PROJECT TYPE

Major

### SPACE TYPE

Administrative + Parking

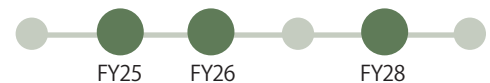
### FACILITY TYPE

Building

### BUDGET

FY25 \$8M  
 FY26 \$70M  
 FY28 \$70M  
 Total \$148M

### ANTICIPATED FUNDING SCHEDULE



## 2.8.8 PORTABLE DEMOLITION PROGRAM

As part of the consolidation effort identified in the UH Mānoa Framework for the Future Plan, the LRDP anticipates the consolidation of programs to the Central Campus and, with the construction of the new facilities described above, the outdated and inefficient portable buildings on the UH Mānoa campus are anticipated to be demolished. Faculty, staff and students in the portables within the six zones identified and described below will be relocated to other facilities on the UH Mānoa campus. Following the completion of the anticipated demolition program, the campus will realize a reduction of approximately 157,300 SF of building space, increasing the open space availability on campus.

Portable demolition SF reduction	
Lincoln Hall Annex	14,500 SF
Zone 1	21,700 SF
Zone 2	52,400 SF
Zone 3	32,000 SF
Zone 4	22,800 SF
Zone 5	13,900 SF
<b>Total SF reduction</b>	<b>157,300 SF</b>

### LOCATION

Campus-wide

### PROJECT TYPE

Major

### SPACE TYPE

Infrastructure

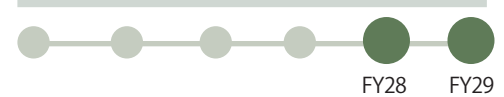
### FACILITY TYPE

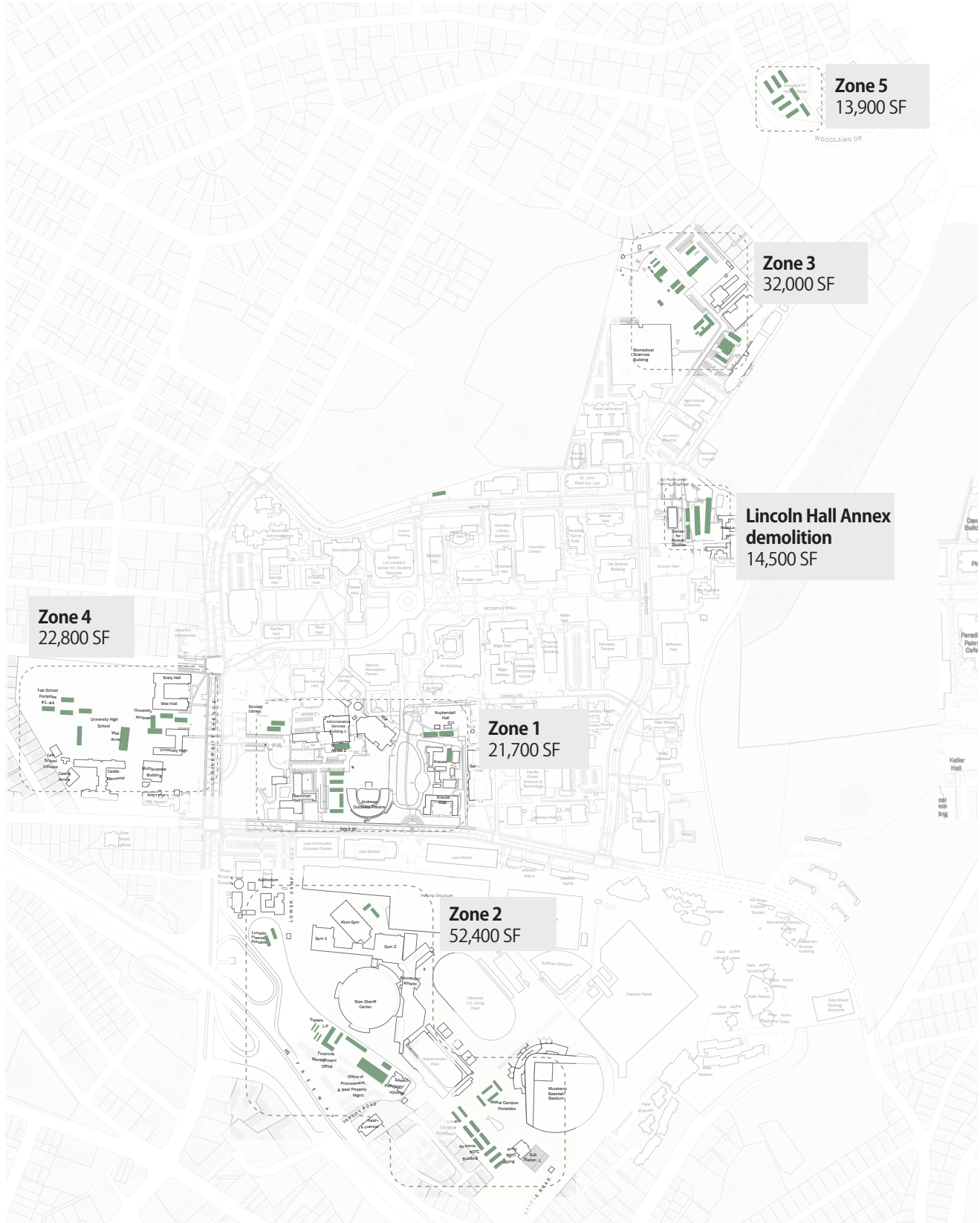
Building

### BUDGET

FY28 \$1.5M  
 FY29 \$11M  
 Total \$12.5M

### ANTICIPATED FUNDING SCHEDULE





## 2.9 STRATEGIC ENERGY MANAGEMENT PLAN/ENERGY INITIATIVES

With an energy consumption of approximately 200-million kWh per year and a goal to become net-zero by 2035, the university is committed to energy efficiency and generation initiatives. As UH Mānoa (including off site locations) accounts for approximately 75% or 145-million kWh of the university's total annual energy consumption, and with an energy bill that exceeds \$30 million annually, it is critical for UH Mānoa to lead the university in being environmentally and fiscally responsible by generating clean, renewable energy and realizing cost savings from energy efficiency projects. Additionally, as utility prices continue to escalate, it is increasingly valuable for UH Mānoa to expand its renewable energy portfolio to reduce the overall impact of increasing prices on its utility bills.

Currently, to help achieve the university's net-zero goals, UH Mānoa has contracted with consultants to (1) develop a Strategic Energy Management Plan (SEMP), (2) complete a Max Photovoltaic (PV) Potential Study, and (3) complete an energy savings performance contracting pilot project.

### STRATEGIC ENERGY MANAGEMENT PLAN (SEMP)

The SEMP is a long-term project investment plan/framework that will inform future decisions regarding the campus' energy use and production by establishing goals and measurable metrics, developing an agile framework for decision-making and actions, and incorporating the ability to update assumptions to seize emerging opportunities and influence ongoing projects. It includes modeled scenarios for a low-cost, sustainable, and resilient UH Mānoa. Phase 1, which included the study of current energy conditions and identifying campus goals and projections was completed in December 2021. Phase 2 is currently underway to develop scenarios to determine what will have the greatest impact on emissions, cost and resiliency. Phase 3 will create a project plan through 2035 and is expected to be completed in Summer 2023. Thus far, current scenarios show that maximizing the campus' PV potential is critical to achieving UH Mānoa's financial, sustainability, and resiliency goals.

### MAX PV POTENTIAL STUDY

To determine the UH Mānoa main campus' maximum potential to generate energy by utilizing all possible currently available space for photovoltaic panels, UH Mānoa is in the process of completing a Max PV Potential Study. A first draft of the future PV campus model was completed in August 2021 and shows that the maximum PV potential of the UH Mānoa main campus is 38 MW, or 56% net-zero energy for the UH Mānoa campus. The administration is currently reviewing these assumptions to further refine the model. The location breakdown is as follows:

- 32% rooftop PV
- 32% ground-mount PV
- 26% parking canopy PV
- 10% other types of PV (building-integrated, atrium and walkway)

Currently, UH Mānoa is working with its consultant to create a 20-year plan for PV project prioritization. The total cost to complete the installation of all 38MW is approximately \$360 million, with a net savings over 20 years of approximately \$370 million.

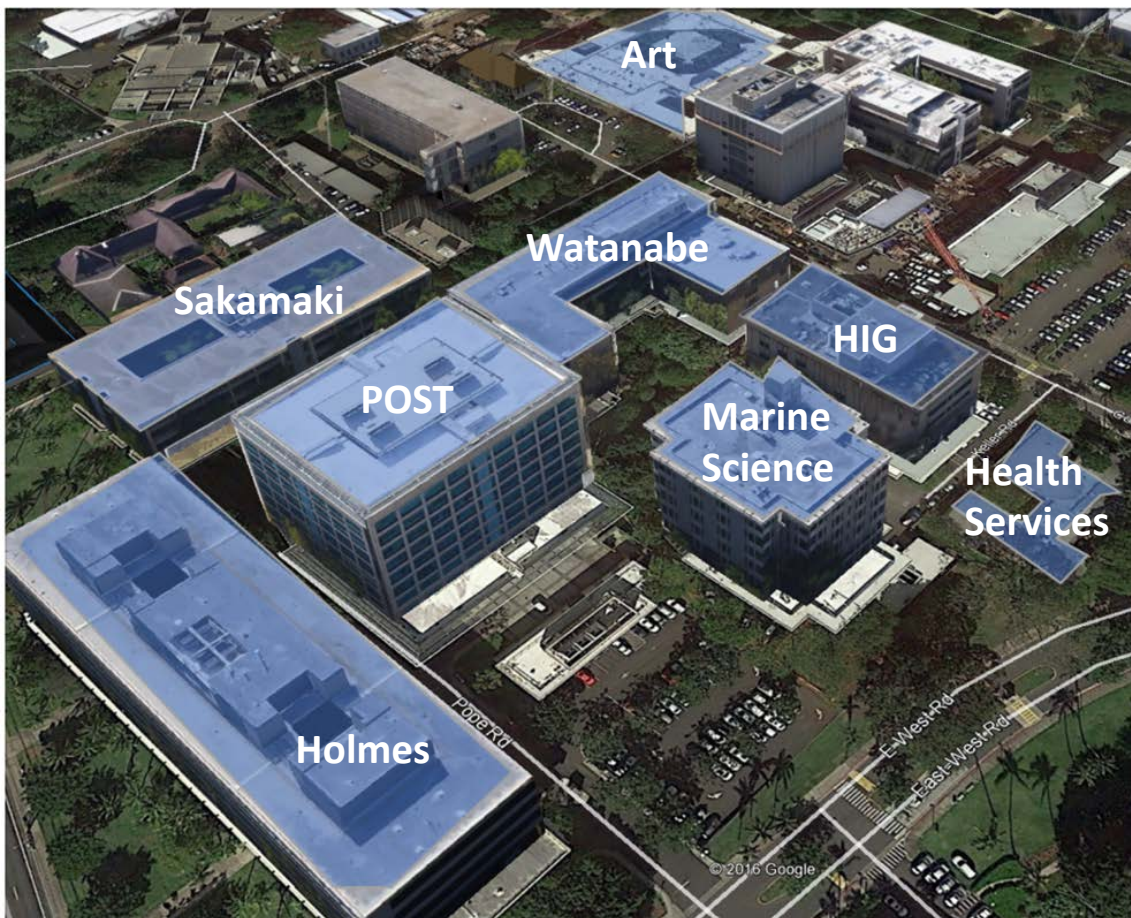
### ENERGY SAVINGS PERFORMANCE CONTRACT

Energy saving performance contracting (ESPC) is a process being explored by the Mānoa campus for a pilot project for eight buildings on campus. When the campus initially explored this option in 2016, it became clear that for the ESPC to be successful and to acquire meaningful results, the campus needed to establish a baseline for energy usage. As energy usage by building was not previously captured, electric meters were designed and installed on campus to collect building usage data. Following this, staff waited until campus traffic returned to "normal" post-pandemic to establish a good baseline. UH Mānoa is currently collecting baseline data from the Fall 2022 semester and in the investment grade audit (IGA) phase to develop the project list and determine construction costs and estimated energy savings. It focuses



on Holmes Hall, the Pacific Ocean Sciences and Technology (POST) building, Art, Marine Sciences, the Hawaii Institute for Geophysics, Sakamaki, Watanabe, and Health Services. Together, these eight buildings comprise 18% of the main campus' energy usage. Currently, construction is expected to be completed in FY 2026.

The ESPC is alternative financing provided by energy savings performance companies that underwrite energy efficiency projects. Assuming equivalent usage, these projects are intended to reduce the energy consumption on campus, and address related deferred maintenance items that can be rolled into one project. The ESPC process pilot is anticipated to result in a 30% reduction in energy usage by installing approximately \$XX million in energy-saving infrastructure improvements in these buildings over the first two years (18% of  $120M * \$0.32$ ). This is accomplished by partnering with an energy service company (ESCO) that will conduct an audit of the facilities, develop an implementation proposal to identify potential energy conservation measures, negotiate and finance the ESPC, and implement the energy conservation measures. In return, the ESCO will receive either fixed or variable-fixed payments over approximately 15 - 20 years from UH Mānoa, ideally from savings realized by the projects. By replacing current infrastructure with energy saving infrastructure, UH Mānoa intends to simultaneously address energy efficiency, modernization and its deferred maintenance backlog.



ESPC Pilot scope

# 3 University of Hawai'i at Hilo

## 3.1 UH HILO OVERVIEW

Established in 1947, the University of Hawai'i at Hilo (UH Hilo) is the second-oldest 4-year institution in the state that offers baccalaureate and selected graduate programs. The UH Hilo campus served a peak enrollment of 4,000 students over the last decade. Currently, 2,977 students are enrolled. Of these students, 2,593 are undergraduates and 384 are graduates. 51% of all UH Hilo students are residents of Hawai'i Island and 72% of all UH Hilo students are State of Hawai'i residents. UH Hilo offers an exceptional campus and island setting in which to live and study. The UH Hilo community enjoys a richly diverse student population, with a unique blend of local, mainland and international students. The surrounding community, rooted in an agriculture history, is one of the most ethnically diverse in the country.

## 3.2 UH HILO MAIN CAMPUS

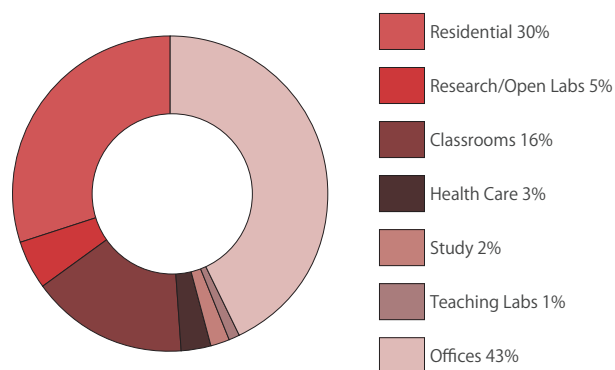
The UH Hilo main campus, located in the city of Hilo on Hawai'i Island, is comprised of 310 acres, which includes the build-out of University Park and University Village.

The campus is host to thirty-eight undergraduate degrees, six graduate degrees and four doctoral degrees, including a doctoral program in Hawaiian and Indigenous Culture and Language Revitalization and a professional doctoral program in Pharmacy Science. Facilities include housing for 900 students in five residence halls, an athletics complex to support NCAA Division II athletics, a 21,600 square foot student life and recreation center, the 38,200 square foot 'Imiloa Astronomy Center, and a performing arts center. The campus includes over 44,000 nsf of classroom space, over 7,000 nsf of research and teaching lab space, and over 6,500 nsf of study space

## 3.3 UH HILO OFF CAMPUS

UH Hilo has a number of off-campus facilities comprising 130 acres, including the Pana'ewa Agricultural farm and the Pacific Aquaculture and Coastal Resources Center. In addition, 290 acres of land in the Komohana mauka area is available for future development. UH Hilo is also responsible for the management of 12,000 acres on Mauna Kea through the Office of Mauna Kea Management.

**UH Hilo Main & Off Campus space breakdown**



Total: 308.9k net assignable square feet

### 3.4 UH HILO STRATEGIC PLAN

UH Hilo’s strategic facilities initiatives align with the UH System’s 21st Century Facilities Strategic Direction to reduce the University’s DM backlog and modernize facilities and campus environments to support modern practices in teaching, learning and research. In particular, UH Hilo’s 2021-2031 Strategic Plan, Strategy 9 is to “renew, innovate, and modernize facilities.”<sup>1</sup>

### 3.5 UH HILO 6-YEAR VISION

Currently, UH Hilo plans to continue upgrading existing spaces on the main campus through the Renew, Improve, Modernize program over the next six years. While the results of the campus space utilization study are still being finalized, preliminary results suggest that there are spaces on the main campus that are underutilized. Prior to building new space, UH Hilo will study the options available to create additional instructional capacity through improving space utilization. As such, UH Hilo is committed to improving the quality of its existing spaces and continuing to address repair and maintenance needs through modernization upgrades to support its educational and research goals. In addition to the RIM program, UH Hilo is committed to improving the sustainability and resiliency of its campus and contributing to the systemwide net-zero energy goal. As such, UH Hilo has two major PV projects planned in the latter half of its 6-year CIP plan. UH Hilo has also prioritized its research capacity by planning new facilities on the Kohala coastline to support coral reef research. The reefs off Puakō are among the best-developed and most diverse in all of Hawai‘i, making the site one of the most important locations in the world for coral reef studies.

As of FY 2022, while UH Hilo has accumulated only \$8.1 million in DM backlog, it is facing an average of \$15 million in capital renewal each year through FY 2029. As such, its main focus is to prioritize health and safety related improvements and prioritize building and space modernization and renewal based on building usage and condition consistent with the facilities-related strategic plan objectives. The following table and chart represent the 6-year CIP plan for UH Hilo.



<sup>1</sup> UH Hilo Strategic Plan 2021-2031, [https://hilo.hawaii.edu/strategicplan/documents/strategicplan/2021-31/Strategic-Plan\\_2021-2031\\_ADA.pdf](https://hilo.hawaii.edu/strategicplan/documents/strategicplan/2021-31/Strategic-Plan_2021-2031_ADA.pdf)



## UH Hilo 6-Year Capital Improvement Projects Plan (in 000's)

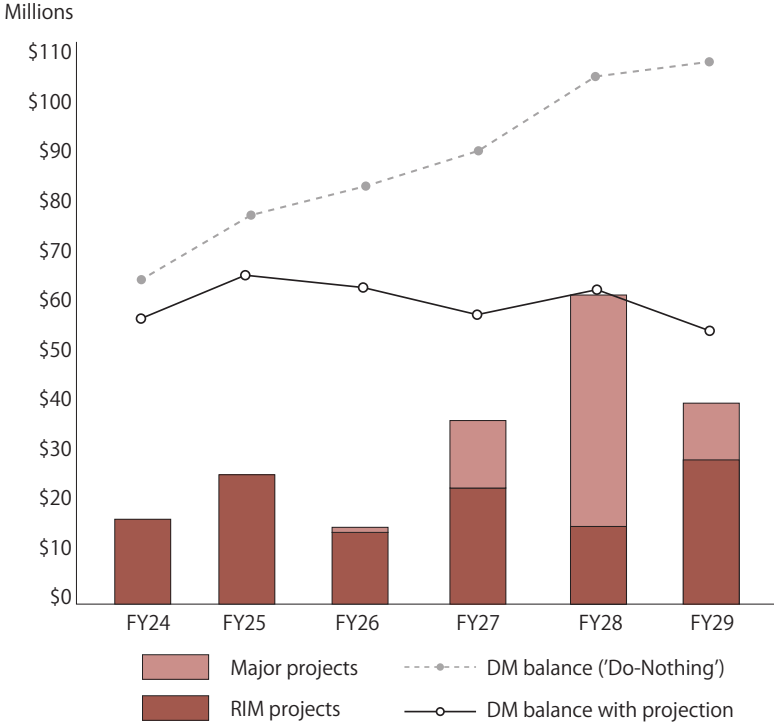
Total: \$242.5 million

Category	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
RIM projects	\$17,500	\$26,500	\$15,000	\$22,500	\$16,500	\$29,500	\$127,500
Puakō Marine Education & Research Center, Phase I			\$1,000	\$7,500			\$8,500
Puakō Marine Education & Research Center, Phase II				\$4,000	\$60,000		\$64,000
PV Farm					\$2,000	\$32,000	\$34,000
PV Parking canopy						\$8,500	\$8,500
<b>Total</b>	<b>\$17,500</b>	<b>\$26,500</b>	<b>\$16,000</b>	<b>\$34,000</b>	<b>\$78,500</b>	<b>\$70,000</b>	<b>\$242,500</b>
DM balance with projection	\$57,815	\$64,479	\$62,737	\$58,992	\$62,244	\$54,211	



# UH Hilo 6-Year Capital Improvement Projects Plan

Total: \$242.5 million



Source: UH Office of the VP for Administration, Sightlines 2022





## 3.6 UH HILO MAJOR PROJECTS

UH Hilo's major projects over the next six years include:

### 3.6.1 PUAKŌ MARINE EDUCATION & RESEARCH CENTER PHASE I AND II

This project is for a coastal marine facility that would provide research and study opportunities for understanding and conservation of Hawai'i's marine ecosystem, allow for multi-day research and teaching, and provide storage for boats, diving, and research equipment currently in storage at UH Hilo. The facility would support UH Hilo, UH Mānoa faculty and students, as well as numerous individuals across the state and nation that visit to conduct research and train students. It would complement UH Hilo's large undergraduate Marine Science program and, given the unique Kona-Kohala coastal resources and the need for additional higher education opportunities in West Hawai'i, is an ideal location for marine and environmental education and training. Presently, there is no educational facility of this type on Hawai'i Island and marine training is supported at UH Hilo or rented facilities. Access to the Puakō coral reefs is currently severely limited due to the lack of laboratories and housing nearby. Travel from UH Hilo is unfeasible due to the danger of decompression sickness (bends) produced by the altitude change while crossing the island of Hawai'i.

Phase 1 would include a pavilion for outdoor training, a boat building, which would contain boat storage, an indoor classroom and project staging, and essential infrastructure.

Phase 2 would include a dormitory, an academic center with offices, classrooms and laboratories, and faculty and caretaker housing.

#### LOCATION

Puakō, South Kohala District

#### PHASE I

##### PROJECT TYPE

Major

##### SPACE TYPE

Academic

##### FACILITY TYPE

Building

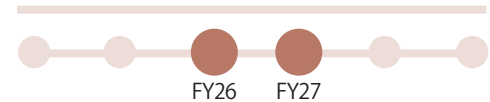
##### BUDGET

FY26 \$1M

FY27 \$7.5M

Total \$8.5M

##### ANTICIPATED FUNDING SCHEDULE



#### PHASE II

##### PROJECT TYPE

Major

##### SPACE TYPE

Academic

##### FACILITY TYPE

Building

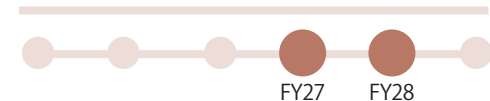
##### BUDGET

FY27 \$4M

FY28 \$60M

Total \$64M

##### ANTICIPATED FUNDING SCHEDULE



### 3.6.2 PHOTO VOLTAIC FARM

UH Hilo's 6-Year CIP Plan anticipates \$2 million in FY28 and \$20 million in FY29 for a PV Farm with approximately 6 MW of PV panels to produce enough electricity to meet the electricity needs of the main campus. The PV Farm would also include energy storage capabilities to provide electricity during the evening hours and a solar intensity forecasting program to regulate energy generation output during the daytime.

#### LOCATION

UH Hilo Mauka Lands (corner of Nowe-  
lo and Komohana St.

#### PROJECT TYPE

Major

#### SPACE TYPE

Infrastructure

#### FACILITY TYPE

Utilities

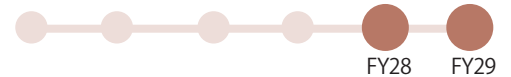
#### BUDGET

FY28 \$2M

FY29 \$32M

Total \$34M

#### ANTICIPATED FUNDING SCHEDULE



### 3.6.3 PHOTO VOLTAIC PARKING CANOPY

This project includes the design and construction of approximately 1,000 photovoltaic panels that would produce approximately 350 kW and provide shade over the UH Hilo parking lot along West Kawili Street. This parking lot is used by those on the UH Hilo main campus. It also includes the construction of a battery storage facility on the main campus.

#### LOCATION

UH Hilo Main Campus

#### PROJECT TYPE

Major

#### SPACE TYPE

Infrastructure

#### FACILITY TYPE

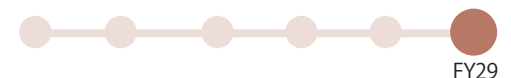
Utilities

#### BUDGET

FY29 \$8.5M

Total \$8.5M

#### ANTICIPATED FUNDING SCHEDULE



# 4 University of Hawai'i at West O'ahu

## 4.1 UH WEST O'AHU OVERVIEW

The University of Hawai'i – West O'ahu (UH West O'ahu) is in its fourth year at its permanent campus in east Kapolei. It is the youngest of the UH System's three baccalaureate campuses, primarily serving the growing population of Central, Leeward and West O'ahu. UH West O'ahu offers a distinct, student-centered baccalaureate education that integrates the liberal arts with professional and applied fields, offering six bachelor degree programs in 33 areas of study and seven certificate programs. In 2013, 2,400 students were enrolled via on-campus and distance learning offerings. Currently, 2,940 students are enrolled.

## 4.2 UH WEST O'AHU MAIN CAMPUS

The campus is currently comprised of seven buildings: Campus Center, Classroom Building, Laboratory Building, Library and Resource Center, Maintenance Building, Administration/Health Science Building and Academy of Creative Media. Currently, the campus does not include any NCAA athletic programs/facilities or housing facilities. Free parking is provided via surface parking lots, which has been expanded to 723 spaces.

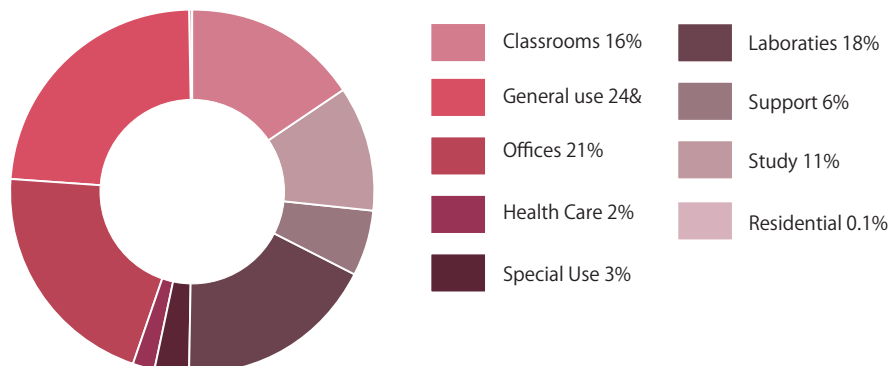
## 4.3 UH WEST O'AHU OFF CAMPUS

UH West O'ahu properties are comprised of mauka and makai lands, with the H-1 Freeway providing convenient access to both areas. The makai area of 500 acres encompasses 310 acres for the campus and its anticipated growth, with the remaining 180 acres of non-campus lands identified for future development by a private entity. These non-campus lands are in close proximity to two Honolulu Rail Transit stations, providing opportunities to create integrated and economically vibrant transit-oriented development neighborhoods, including a university village that connects with and supports the campus community.

The mauka area encompasses 991 acres of agricultural-zoned lands. UH System, along with UH West O'ahu, continues to evaluate various leasing and revenue-generating options for these lands, including farming and renewable energy. A 12.5MW solar energy and storage facility is scheduled to be completed in early 2023.

### UH West O'ahu Main & Off Campus space breakdown

Total: 121.8K Net assignable sf



## 4.4 UH WEST O’AHU STRATEGIC PLAN

The University of Hawai‘i – West O’ahu Strategic Plan (2018-2028) provides a vision for UH West O’ahu as a premier, comprehensive, indigenous-serving institution dedicated to educating students to be engaged global citizens and leaders in society. UH West O’ahu envisions a supportive and dynamic learning environment where both Native Hawaiian values and culture and the inclusion and celebration of all individuals and ethnicities are embodied and perpetuated by students, faculty, and staff and reflected in the institution’s practices and relationships.

There are several noteworthy projects related to the Strategic Action Plan:

- Develop a Hawaiian sense of place through increased visual arts and signage of Native Hawaiian history and culture on campus.
- Create a vibrant campus life, including a master-planned university village that provides a true college town that embodies learning, living, and work opportunities.
- Expand campus life opportunities to include student residential housing options.
- Create a Center of Excellence, to provide an innovative and cost-effective framework to facilitate student-faculty collaboration, teaching and learning research opportunities, and a connection between academic and professional communities.

Additionally, the University of Hawai‘i West O’ahu Long Range Development Plan (LRDP) Update (August 2006) provides a policy framework for ongoing and future development decisions, including site design, infrastructure, transportation, and circulation. UH West O’ahu is in the process of conducting a comprehensive review and update of the current LRDP.

The University of Hawai‘i West O’ahu Non-Campus Lands Urban Design Plan (UDP) (2011) provides site development and design guidance for the UH West O’ahu-owned lands beyond the campus. The UHWO will be also be reviewing and updating the UDP. Other land use policy documents also influence and guide the physical development of UH West O’ahu. These include, the ‘Ewa Development Plan (July 2013), ‘Ewa Roadway Connectivity Study (2009), and East Kapolei Neighborhood Transit-Oriented Development Plan – Public Review Draft (April 2010).

## 4.5 UH WEST O’AHU 6-YEAR VISION

Currently, UH West O’ahu has zero DM backlog. After 10 years in its current location, the campus continues to focus on growing mindfully and developing quality spaces on its new campus consistent with the facilities-related strategic plan objectives outlined above.

The following chart represents the 6-year CIP Plan for UH West O’ahu broken down by type of request.

## UH West O'ahu 6-Year Capital Improvement Projects Plan (in 000's)

Total: \$147 million

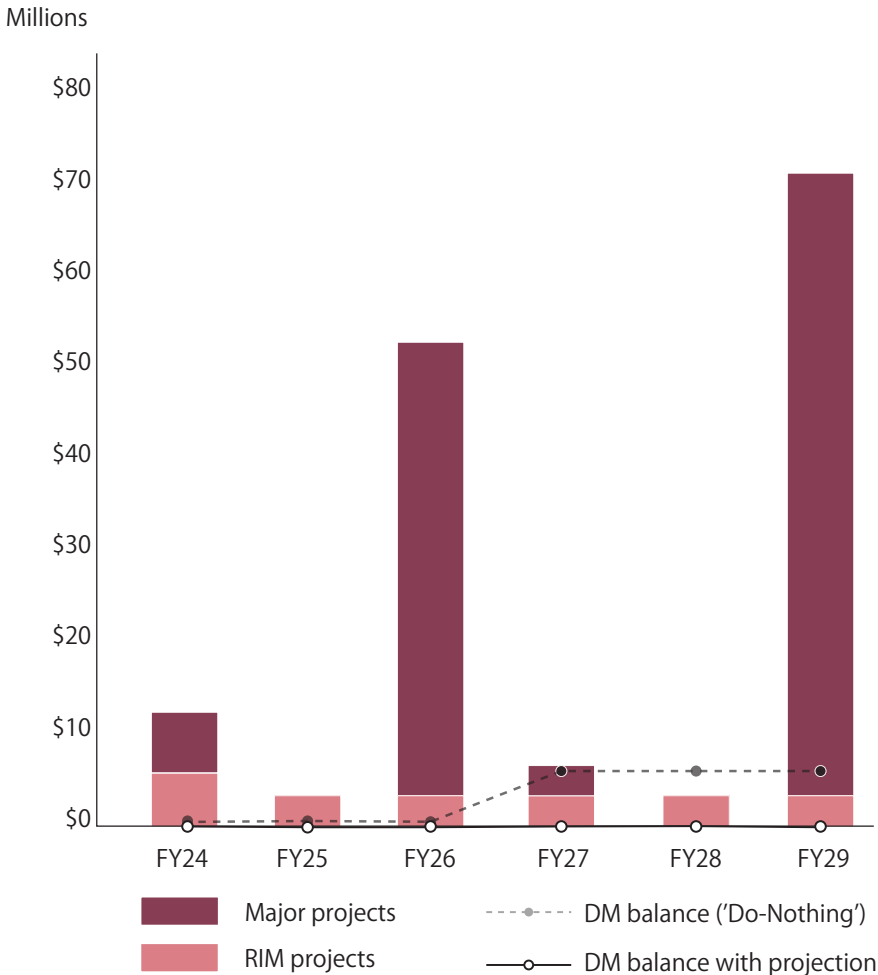
Category	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
RIM projects	\$5,000	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$22,500
Road B entry plaza	\$5,500						\$5,500
Campus Center phase II			\$49,000				\$49,000
General education building I				\$3,000		\$64,000	\$67,000
General education building II						\$3,000	\$3,000
<b>Total</b>	<b>\$10,500</b>	<b>\$3,500</b>	<b>\$52,500</b>	<b>\$6,500</b>	<b>\$3,500</b>	<b>\$70,500</b>	<b>\$147,000</b>
DM balance projection	\$0	\$0	\$0	\$0	\$0	\$0	\$0





# UH West O'ahu 6-Year Capital Improvement Projects Plan

Total: \$146.3 million



Source: UH Office of the VP for Administration, Sightlines 2022



## 4.6 UH WEST O'AHU MAJOR PROJECTS

UH West O'ahu's major projects over the next six years include:

### 4.6.1 ROAD B ENTRY PLAZA

Construction of the Road B Entry Plaza. (Road B's official name is Ho'omohala Avenue.) In FY20, the campus received \$400,000 to design the Entry Plaza. This request is to fund the construction. The project will provide a much-needed, safe, and accessibility-compliant connection to and from campus for students, employees, and visitors that take advantage of rail and bus transit or get dropped off at the Ho'omohala Avenue cul-de-sac. The plaza would serve as an inviting welcome mat at the terminus of Ho'omohala Avenue and the University Village main street – a key component of the envisioned college town.

#### LOCATION

Ho'omohala Avenue

#### PROJECT TYPE

Minor

#### SPACE TYPE

Infrastructure

#### FACILITY TYPE

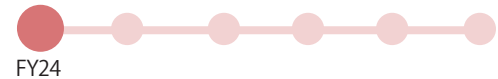
Building

#### BUDGET

FY24 \$5.5M

Total \$5.5M

#### ANTICIPATED FUNDING SCHEDULE



### 4.6.2 CAMPUS CENTER PHASE II

The 6-Year CIP Plan requests \$49 million in FY26 for the construction of Campus Center, Phase 2 (a three-year postponement of last year's request). In 2018, the Legislature appropriated \$5 million in FY19 to design Campus Center, Phase 2 and relocate the existing bookstore. Of these funds, \$2.2 million were allocated for the design of Campus Center, Phase 2, and in 2020, the design contract was awarded. This request is to fund the design-build construction. This project would serve to improve the student experience and create a vibrant hub of student interaction, fostering student life and success by creating flexible spaces for engagement (tutoring, group study, math and writing lab), student organization meetings, academic advising, and student support services. It intends to also incorporate a wellness space (currently occupying a renovated closet), and recreational spaces that would expand student fitness offerings, as the existing Fitness Center (approximately 500 sf) has very limited equipment and workout space. These spaces would allow the current Student Life Center in the campus center (a large space with no partitioning and limited functionality for small group meetings) to be

#### LOCATION

UH West O'ahu

#### PROJECT TYPE

Major

#### SPACE TYPE

Academic

#### FACILITY TYPE

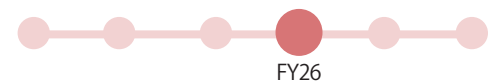
Building

#### BUDGET

FY26 \$49M

Total \$49M

#### ANTICIPATED FUNDING SCHEDULE



### 4.6.3 GENERAL EDUCATION BUILDING I

FY27 anticipates the design-build construction of General Education Building I. While funding for this project was requested in previous years, the funding request has been postponed due to current economic conditions. The campus is anticipating steady enrollment growth in our on-campus, hybrid, and online programs over the next 10+ years as we respond to increased collaboration with our K-12 regional high schools as well as shared facilities with our community college partners. General education classroom facilities will be needed to accommodate shared spaces and encourage multi-disciplinary academic curricula and programs. General Education Building I will house programs in education, STEM, humanities, and social sciences with a focus on: teacher preparation and education leadership development, offering on-site training, educational research, and professional development, and improving and innovating distance/online learning pedagogies. All classrooms will be fitted with up-to-date technology to support blended and/or hybrid learning, thereby strengthening both our on-campus and online footprint.

#### LOCATION

UH West O'ahu

#### PROJECT TYPE

Major

#### SPACE TYPE

Academic

#### FACILITY TYPE

Building

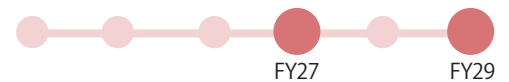
#### BUDGET

FY27 \$3M

FY29 \$64M

Total \$67M

#### ANTICIPATED FUNDING SCHEDULE



### 4.6.4 GENERAL EDUCATION BUILDING II

Additionally, UH West O'ahu's 6-Year CIP Plan anticipates a budget assigned for programming for the General Education Building II with a future request for construction funds (not shown). While funding for this project was requested in previous years, the funding request has been postponed due to current economic conditions. This building will be a vibrant hub for student innovators and entrepreneurs. A place to learn, innovate, and launch start-ups in partnership with our community colleges, regional high schools, and both the Kapolei Chamber of Commerce and regional businesses. The availability of classrooms, innovation spaces, co-working spaces, and tech labs/workshops will encourage partnering across academic programs (IT, Cyber Security, Business, Hospitality, Sustainable Community Food Systems, etc.) and enable students to learn about entrepreneurship and business by working across disciplines. A much-needed Information Technology Center would also be incorporated into the facility.

#### LOCATION

UH West O'ahu

#### PROJECT TYPE

Major

#### SPACE TYPE

Academic

#### FACILITY TYPE

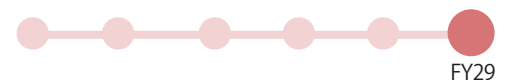
Building

#### BUDGET

FY29 \$3M

Total \$3M

#### ANTICIPATED FUNDING SCHEDULE



---

# 5 University of Hawai'i Community Colleges

## 5.1 UH COMMUNITY COLLEGES OVERVIEW

The University of Hawai'i Community Colleges (UHCC) is a statewide system of seven separately accredited institutions serving more than 30,000 students annually. Embedded within the greater University of Hawai'i System, these seven degree-granting campuses and education centers provide open-door access to affordable, high-quality education in a variety of programs from career and technical to liberal arts education.

### HAWAI'I COMMUNITY COLLEGE

Hawai'i Community College is based in Hilo with a branch campus in Kona (Hawai'i Community College – Pālanui) and an education center in Honoka'a (Kō Education Center). The College enrolls over 2,000 students and offers 26 degree and certificate programs as well as non-credit programs, ranging from health services and hotel operations to business and trades. It also administers the University Center which is located at the Pālanui facility.

### HONOLULU COMMUNITY COLLEGE

Honolulu CC, founded in 1920, is the oldest community college in Hawai'i and enrolls over 3,000 students. Its diverse curriculum includes a strong Liberal Arts program and spans the fields of transportation, construction, communication, and services. The main campus is a short distance from the heart of downtown Honolulu and occupies over 20 acres on Dillingham Boulevard in the Kalihi-Palama area. In addition, it has facilities located near Daniel K. Inouye International Airport for its Fire and Aeronautics Maintenance programs, and Automotive Technology and Heavy Equipment shops on Kokea Street.

### KAPI'OLANI COMMUNITY COLLEGE

Located minutes from Waikīkī and named after Queen Kapi'olani, the University's largest urban community college educates over 6,000 students. The College consists of a main campus and a new facility, the Culinary Institute of the Pacific, on the slopes of Diamond Head crater. The College has strong academic programs in culinary arts, liberal arts, STEM, business, hospitality and travel, and tourism. In addition, academic programs in the healthcare and paralegal fields are offered uniquely at this campus. Kapi'olani CC's academic excellence is further enhanced by its commitment to international education.

### KAUA'I COMMUNITY COLLEGE

Kaua'i CC offers 34 degree and certificate programs in addition to non-credit and advanced courses leading to Bachelor and Graduate degrees through the University Center. It is located in Lihū'e and enrolls over 1,300 students each year.

### LEEWARD COMMUNITY COLLEGE

Located in Pearl City, Leeward CC offers strong liberal arts programs in performing, visual and digital arts, as well as math and sciences to its more than 6,000 students. Other programs include business, computer networking, culinary arts, digital media, engineering, automotive, teaching, and pre-allied health. Leeward CC also operates an education center on the Wai'anae coast.

---

**UH MAUI COLLEGE**

A tri-island college, UH Maui College supports 2,500 credit-seeking students through 17 comprehensive associate and 2 baccalaureate degree opportunities, over 1,700 non-credit students through workforce training and community education, and 90 students through the UH Center. The college has educational centers in Maui Nui, in rural communities in Hāna, and on the islands of Lānaʻi and Molokaʻi.

**WINDWARD COMMUNITY COLLEGE**

Located at the base of Oʻahu's Koʻolau mountains in Kāneʻohe, Windward Community College enrolls over 2,300 students and provides a nurturing environment in which to pursue an education in visual and performing arts, veterinary technology, natural and environmental sciences, Hawaiian studies, liberal arts, and exploratory programs in marine and aerospace fields. Short term offerings leading to certification as mental health technicians, web support, information security and nurse aides are also provided.







## 5.2 UHCC STRATEGIC PLAN

The most current UHCC Strategic Directions, 2015-2021 (UHCC Strategic Directions)<sup>1</sup> provides a facilities vision for modern teaching and learning environments at UHCC campuses. While the next strategic plan is still being developed and awaiting the publication of the 2023-2029 UH Strategic Plan for guidance on systemwide priorities, the UHCCs continue to rely on the principles in the 2015-2021 UHCC Strategic Directions. The plan seeks to create an environment that is clean, safe, and well-maintained, and designed and equipped to meet the modern standards of faculty and industry, and also enables and takes advantage of high-speed digital technology. This will be accomplished through a commitment, first and foremost, to creating a sustainable environment on campus, through the implementation and execution of a building and grounds maintenance program that minimizes any DM, through the creation and implementation of design standards for classrooms and laboratories that reflect modern teaching approaches, through ensuring that equipment is current and meeting industry standards, and through developing and maintaining a high-speed digital environment on all campuses.

## 5.3 UHCC 6-YEAR VISION

Currently, UHCC's main focus is to implement a building and grounds maintenance program that minimizes DM while enhancing student learning through the creation and implementation of design standards for classrooms and laboratories that reflect modern teaching approaches. UHCC is also committed to ensuring that equipment is current and meeting industry standards, and to developing and maintaining a high-speed digital environment on all campuses, consistent with the facilities-related strategic plan.

Projects will be prioritized at the UHCC system level by weighing the relative importance of each project against the needs of the seven UHCC campuses. Project priorities will be determined by considering multiple factors which include work order occurrences, failure of systems, complaints from users, Sightlines backlog/useful life information, long range plans for the campuses, and space needs.

As of FY 2022, the UHCCs have a total DM backlog of \$176 million and are facing an average capital renewal each year of \$19 million through FY 2029. Through the strategic prioritization noted above, the UHCCs plan to reduce their DM backlog by 25% by FY 2029.

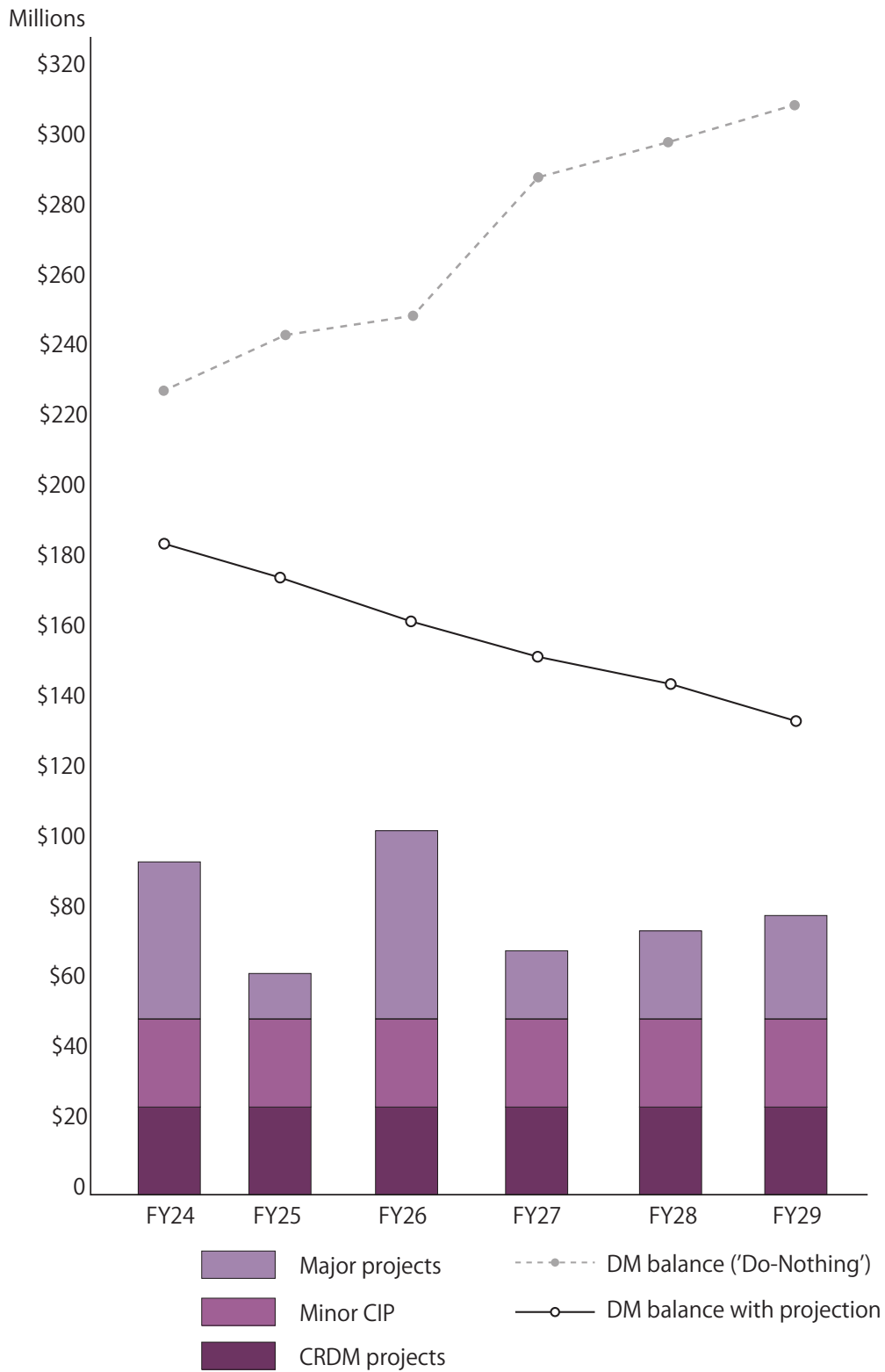
The table and chart below represent the 6-year CIP plan for the UHCCs.

<sup>1</sup> UHCC Strategic Directions, 2015-2021, p. 23-26. [http://uhcc.hawaii.edu/OVPCC/strategic\\_directions/docs/plans/Strategic%20Directions%202015-2021.final.pdf](http://uhcc.hawaii.edu/OVPCC/strategic_directions/docs/plans/Strategic%20Directions%202015-2021.final.pdf)

**UH Community Colleges 6-Year Capital Improvement Projects Plan (in 000's)**  
**Total: \$474.5 million**

Category	FY24	FY25	FY26	FY27	FY28	FY29	6-year total
Capital Renewal and Deferred Maintenance	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$150,000
Minor Capital Improvement Projects	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$150,000
Kapi'olani CC - 'Ohelo AC System Replacement	\$15,000						\$15,000
Kapi'olani CC - Koki'o Renovation	\$2,000	\$10,000					\$12,000
Kapi'olani CC - Kauila Structural Repairs					\$2,000	\$10,000	\$12,000
Kaua'i CC - Fire Alarm and PA System Upgrade	\$8,500						\$8,500
Hawai'i CC - Renovate/Modernize Shops - UHH			\$12,000				\$12,000
Campus redevelopment	\$2,000			\$2,000	\$20,000		\$24,000
Technology Renovations, Phase 2	\$3,000		\$15,000				\$18,000
Maui College - Library Renovation			\$10,000				\$10,000
Maui College - Vocational Technology Renovation and Expansion			\$20,000				\$20,000
Maui College - Pāi'na Various Repairs				\$2,000		\$15,000	\$17,000
Windward CC - 'Imiloa HVAC / Fume Hood System Replacement and Water Infiltration Mitigation/Repairs	\$11,000						\$11,000
Windward CC - Alaka'i Building Renovation				\$15,000			\$15,000
<b>Total per year</b>	<b>\$91,500</b>	<b>\$60,000</b>	<b>\$107,000</b>	<b>\$69,000</b>	<b>\$72,000</b>	<b>\$75,000</b>	<b>\$474,500</b>
DM balance with projection	\$182,678	\$174,060	\$159,136	\$155,846	\$143,787	\$131,312	

## UH Community Colleges 6-Year Capital Improvement Projects Plan Total: \$474.5 million



Source: UH Office of the VP for Administration



## 5.4 UHCC PROJECTS BY CAMPUS

### 5.4.1 'OHELO AC SYSTEM REPLACEMENT

The 'Ohelo building at Kapi'olani CC houses the Culinary Arts department, Ka 'Ikena Laua'e Dining Room, and Tamarind Dining Room. This project includes the replacement of the existing HVAC system throughout the building, a new fire sprinkler system, replacement of the hood suppression system and boiler, and renovation of classroom spaces used for public dining. These improvements will minimize health and safety concerns, improve building comfort and positively impact teaching and learning outcomes for the Culinary Arts program.

#### LOCATION

Kapi'olani CC

#### PROJECT TYPE

CRDM

#### SPACE TYPE

Academic

#### FACILITY TYPE

Building

#### BUDGET

FY24 \$15M

Total \$15M

#### ANTICIPATED FUNDING SCHEDULE



### 5.4.2 KOKI'O RENOVATION

The Koki'o building is the only science building on campus and houses the Science, Technology, Engineering & Math (STEM) program. While the STEM program is popular for its academic rigor and faculty, the current facility cannot support modern technology and teaching/learning methodologies. This project includes the renovation and modernization of the building's laboratories and classrooms, replacement of the existing HVAC and fume hood exhaust systems, reroofing, electrical work, exterior repairs, and related work.

#### LOCATION

Kapi'olani CC

#### PROJECT TYPE

CRDM

#### SPACE TYPE

Academic

#### FACILITY TYPE

Non-classified

#### BUDGET

FY24 \$2M

FY25 \$10M

Total \$12M

#### ANTICIPATED FUNDING SCHEDULE





### 5.4.3 KAUILA STRUCTURAL REPAIRS

The Kaula building currently houses the Emergency Medical Services Department and Health Sciences Department. This project will address interior structural damage and replace interior finishes as needed.

#### LOCATION

Kapi'olani CC

#### PROJECT TYPE

CRDM

#### SPACE TYPE

Infrastructure

#### FACILITY TYPE

Building

#### BUDGET

FY28 \$2M

FY29 \$10M

**Total \$12M**

#### ANTICIPATED FUNDING SCHEDULE



#### 5.4.4 UPGRADE FIRE ALARM AND PA SYSTEM

The existing fire alarm system was constructed in 2004 and frequently experiences issues due to the age of available parts and water and dust infiltration over time. This project would enhance safety on campus by replacing the existing fire alarm system with an upgraded campuswide looped fire alarm system covering all buildings.

**LOCATION**

Kaua'i CC

**PROJECT TYPE**

CRDM

**SPACE TYPE**

Non-classified

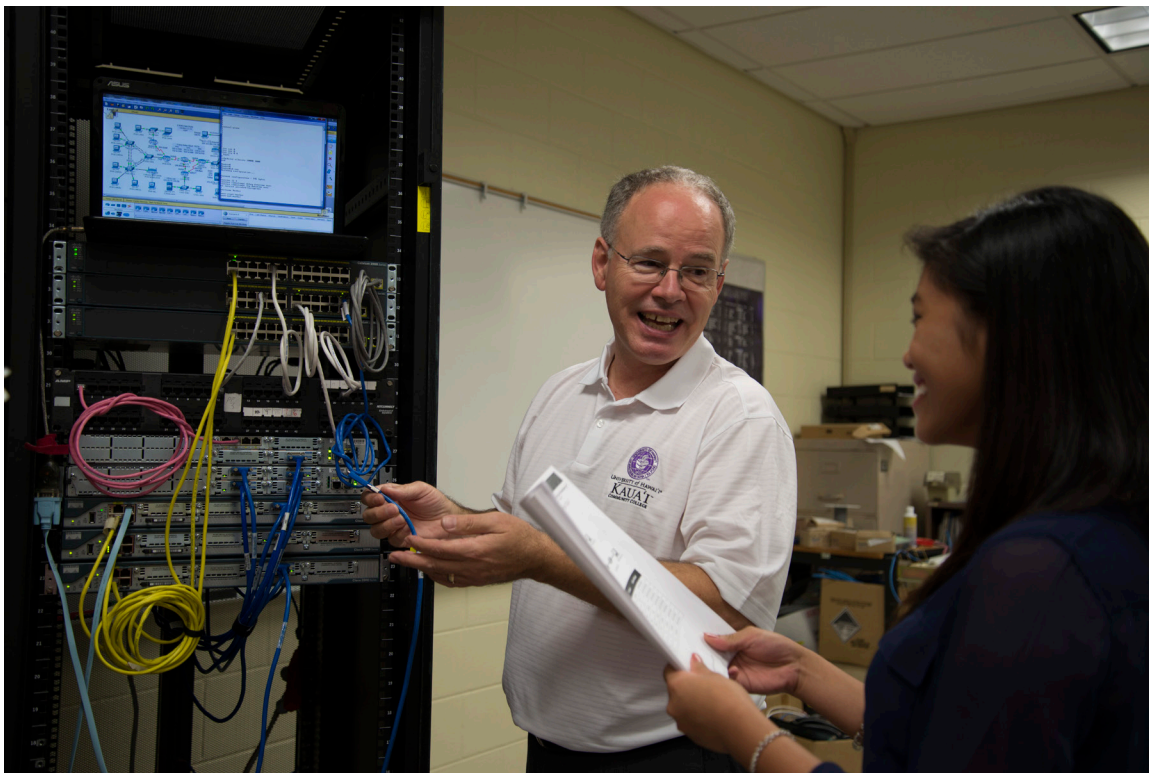
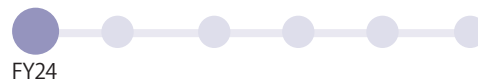
**FACILITY TYPE**

Building

**BUDGET**

FY24 \$8.5M

Total \$8.5M

**ANTICIPATED FUNDING SCHEDULE**

#### 5.4.5 RENOVATE SHOPS - UHH

Located off of West Kawili Street on the UH Hilo main campus, the Hawai'i CC Auto Body, Auto Mechanic, Diesel and Machine Welding and Industrial Mechanical Technologies buildings are in need of repairs. This project will renovate and modernize the buildings to provide updated classrooms and offices for the Hawai'i CC shop trades programs.

##### LOCATION

Hawai'i CC

##### PROJECT TYPE

CRDM

##### SPACE TYPE

Infrastructure

##### FACILITY TYPE

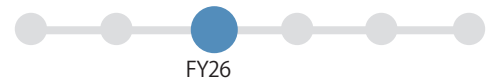
Building

##### BUDGET

FY26 \$12M

**Total \$12M**

##### ANTICIPATED FUNDING SCHEDULE



#### 5.4.6 CAMPUS REDEVELOPMENT

The UHCC is currently working with a planning consultant to redevelop the Manono campus for Hawai'i Community College in Hilo. Previous funding for minor CIP projects has been used to fund the initial planning and design phases of this project. The upcoming \$2-million funding requests are to continue current efforts to create a redevelopment plan for the campus, followed by construction funding in the later years of the 6-Year CIP Plan. This project will include ground and site improvements, infrastructure, on-site and off-site improvements, equipment and appurtenances, new facilities, parking, and all project-related costs. The current facilities at the Manono campus are sorely inadequate given that many of the structures were designed and constructed in the 1940s, 1950s and 1960s as part of the Department of Education's Hawai'i Vocational School. A major upgrade in the physical plant is needed to provide students with adequate facilities to pursue post-secondary educational opportunities that will ultimately support local economic development initiatives. The improvements are also needed to address findings by the Accrediting Commission for Community and Junior Colleges reporting the inadequacy of facilities located at the Manono Campus. Continued use of the substandard facilities at the Manono Campus will have negative impacts on the effectiveness and quality of Hawai'i Community College educational programs and provide increasing challenges in meeting student recruitment and retention goals.

##### LOCATION

Hawai'i CC

##### PROJECT TYPE

CRDM

##### SPACE TYPE

Non-classified

##### FACILITY TYPE

Building

##### BUDGET

FY24 \$2M

FY27 \$2M

FY28 \$20M

**Total \$24M**

##### ANTICIPATED FUNDING SCHEDULE



### 5.4.7 TECHNOLOGY RENOVATIONS, PHASE II

Phase II of this project will focus on renovations to Building 8805 to modernize the facility while repurposing it from a science building to a student-centered space that includes student support services, classrooms, computer labs, a maker space, and student life activities. The enhanced student-focused space will be flexible to support both more traditional lecture classes as well as laboratories for hands-on experiments and activities. Modern technological infrastructure will be installed to enable distance learning capabilities and modern teaching and learning methods.

#### LOCATION

Honolulu CC

#### PROJECT TYPE

CRDM

#### SPACE TYPE

Non classified

#### FACILITY TYPE

Non classified

#### BUDGET

FY24 \$3M

FY26 \$15M

Total \$18M

#### ANTICIPATED FUNDING SCHEDULE



### 5.4.8 LIBRARY RENOVATION

Due to the relocation of the Learning Center into the Maui College Library, changes are needed to better accommodate the program and repurpose the space. The renovation and modernization project includes modification of the interior wall configuration, electrical revisions, and updates to the library entry and entrance doors.

#### LOCATION

Maui College

#### PROJECT TYPE

CRDM

#### SPACE TYPE

Library

#### FACILITY TYPE

Building

#### BUDGET

FY26 \$10M

Total \$10M

#### ANTICIPATED FUNDING SCHEDULE



### 5.4.9 VOCATIONAL TECHNOLOGY RENOVATION AND EXPANSION

The UHCC was appropriated \$4 million in FY23 for the design of the Vocational Technology Complex renovation and expansion. This request would fund the construction of the project, which includes the construction of a new CTE Super Center and the relocation of four CTE programs (automotive, building trades, welding, and carpentry) that are currently operating out of buildings that were constructed in 1949 and are 73 years old. Due to the age and condition of the existing buildings, it is not possible to install industry-standard CTE equipment for teaching and training purposes. These upgrades are necessary to accommodate a mixture of in-person and distance learning, new technological advances, and state-of-the-art equipment that is used by those in the industry. For example, the new, technologically-enabled facility will allow the Automotive Technology program to add electric and hybrid cars to its curriculum. The new building will also allow the programs to expand and accommodate additional students that are currently waitlisted.

#### LOCATION

Maui College

#### PROJECT TYPE

CRDM

#### SPACE TYPE

Academic

#### FACILITY TYPE

Non-classified

#### BUDGET

FY26 \$20M

Total \$20M

#### ANTICIPATED FUNDING SCHEDULE



### 5.4.10 PĀ'INA REPAIRS

The Pā'ina building houses the Maui Culinary Academy and the Leis Family Class Act Restaurant. This project includes repairs to the roof structure, HVAC system, and soffits, and replacement of the existing roof.

#### LOCATION

Maui College

#### PROJECT TYPE

CRDM

#### SPACE TYPE

Academic

#### FACILITY TYPE

Non-classified

#### BUDGET

FY27 \$2M

FY29 \$15M

Total \$17M

#### ANTICIPATED FUNDING SCHEDULE





#### 5.4.11 HALE 'IMILOA HVAC/FUME HOOD SYSTEM REPLACEMENT + WATER INFILTRATION REPAIRS

Hale 'Imiloa is approximately 25 years old and houses classrooms and laboratories for the Windward CC Natural Sciences department. This project would completely replace the current HVAC system. The current HVAC system has had significant issues with maintaining consistent temperatures and humidity. Additionally, inconsistent airflow issues create spaces with either very high or very low negative pressure, causing safety issues when heavy doors slam shut or doors fail to close. Fume hood issues also cause inadequately ventilated spaces. This project would remedy these issues and improve the conditions of laboratory and classroom spaces, positively affecting learning outcomes and health and safety.

##### LOCATION

Windward CC

##### PROJECT TYPE

CRDM

##### SPACE TYPE

Non-classified

##### FACILITY TYPE

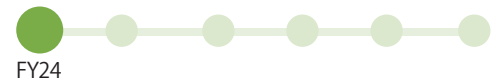
Building

##### BUDGET

FY24 \$11M

Total \$11M

##### ANTICIPATED FUNDING SCHEDULE



#### 5.4.12 ALAKA'I BUILDING RENOVATION

Hale Alaka'i is the central administration and student service facility for the Windward CC Campus. This project includes a full renovation of the building, including repainting; repairing the building exterior and structure; new flooring, windows, and doors; and HVAC, utility and infrastructure improvements.

##### LOCATION

Windward CC

##### PROJECT TYPE

CRDM

##### SPACE TYPE

Academic

##### FACILITY TYPE

Building

##### BUDGET

FY27 \$15M

Total \$15M

##### ANTICIPATED FUNDING SCHEDULE



