Facilities Services & Planning, Design & Construction Update:

Deferred Maintenance and Capital Projects

Campus Finance Committee Meeting
December 8, 2022

UC RIVERSIDE

Agenda

- Campus and Systemwide Priorities
- FY24 State Funding Request
- Deferred Maintenance Process
- Preventative Maintenance (PM)
- Historical State Funding Allocations
- FY24 State Funding Request
- Primary Power
- Progress on Deferred Maintenance Projects
- Energy Projects
- Annual Capital Financial Plan (CFP)
- State Capital Funding Allocations
- Non-State Capital Funding Allocations
- New Capital Projects in Construction

UC RIVERSIDE

Campus and Systemwide Capital Priorities

Deferred Maintenance

Existing UCR facilities and infrastructure have significant deferred maintenance needs, estimated at $740 Million.

Seismic Improvements

Campus Seismic Plan ($1.91B in need)

Impossible goal

Carbon Neutrality

Not projected, but likely will cost over a billion.

Impossible goal.

New Construction

See CFP Priorities

UC RIVERSIDE

FY24 State Funding Request

- $126M request as part of a systemwide one-time state funding ask of $1.2B.
- Historically, UCR has received a lower allocation of one-time state funding than other campuses (mid-single digit percentages). $126M represents 10.5%, an improvement over previous years.
- $103M remaining for Undergraduate Teaching and Learning Facility (Legislative intent from FY23, which is an additional capital request for UCR).
- These projects would advance multiple goals including climate action, enrollment growth, and the restoration and renewal of facilities.
- Proposed State budget is released in January, UC likely not to receive full $1.2B. Final state allocation in June, with UCOP distribution to follow.

UC RIVERSIDE

Deferred Maintenance (DM) Process

UCOP

- Instituted the Integrated Capital Asset Management Program (ICAMP) in 2018.
- Implemented ICAMP to create a standard process for evaluating campus DM needs. It assumes all UC's are homogenous.
- ICAMP contains an inventory of assets, condition, and asset replacement costs.

UCR

- Manages DM as a shared governance between Facilities Services and Planning Design and Construction
- Priorities are organized by a few main categories – for example:
  - Mechanical, Electrical, and Plumbing (MEP)
  - Infrastructure
  - Roofs

UC RIVERSIDE





Life Sciences Roof







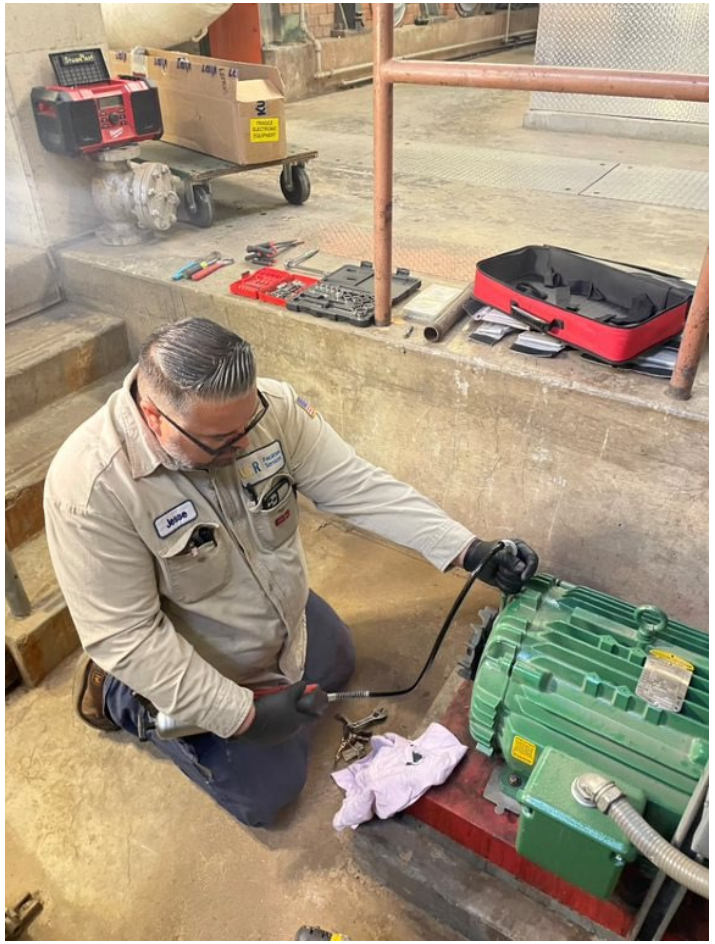
Spieth Hall Mechanical

Preventative Maintenance (PM)

Facilities PM implementation started in March 2022

Goals:

- Provide inventory of issues related to building systems.
- Reduce DM over the long term.
- Inventory building equipment and assets.
- Reduce emergencies and reactionary work, which is costly



UCR Historical State DM Funding Allocations

Fiscal Year	UCR State Funding (AB94 & One-Time Funds)	UCR % of Total Funding	Total State Budget for DM Funding - All UC Campuses
FY 16-17	$ 1,806,500	5%	$ 35,000,000
FY 17-18	$ 3,800,000	8%	$ 46,580,000
FY 18-19	$ 3,720,000	5%	$ 70,000,000
FY 19-20	$ 8,701,000	6%	$ 153,302,500
FY 20-21	$ 2,296,000	7%	$ 35,000,000
FY 21-22	$ 20,564,001	6%	$ 325,000,001
FY 22-23	$ 5,391,000*	4%	$ 125,000,000
UCR has funded an additional ~$30M towards DM projects over this time period			

*Includes $1M for decarbonization study.

UC RIVERSIDE

Top 10 DM Priorities for FY24

The following 10 represent a total request of $23.2M (18%) out of our $126.2M request.

Top 10 DM Projects	DM Project Description	DM Category	Estimated DM Project Cost
1	SUBSTATION - Site Switchgear/Breakers improvements: Substation Improvements	Primary Power	$ 4,690,000
2	SPIETH: HVAC - Equipment/Controls - Phase 1 Commissioning and Ducting Replacement	Mechanical Systems	$ 645,569
3	SPIETH: HVAC - Equipment/Controls - Phase 2 Replace Air Handlers 1 & 2	Mechanical Systems	$ 6,308,741
4	Main Domestic Water Station - Drives and Controls, Electrical Distribution Replacement	Mechanical Systems	$ 1,750,000
5	PHYSICS - Ductwork and Exhaust VFD	Mechanical Systems	$ 4,900,000
6	FAWCETT LAB - Replace roof covering	Roofs	$ 868,000
7	RIVERA - Air Handler 2 Replacement	Mechanical Systems	$ 2,100,000
8	OLMSTED: HVAC - Equipment/Controls: Replace economizers for fresh air controls for all Air handlers	Mechanical Systems	$ 420,000
9	OLMSTED: HVAC - Equipment/Controls - Repairs to Air Handlers	Mechanical Systems	$ 420,000
10	SPROUL - HVAC - Equipment/Controls - Replace Heat Exchangers/VFD Pumps	Mechanical Systems	$ 1,050,000

UC RIVERSIDE

Primary Power

How it works

- UCR substation is shared ownership with RPU.
- UCR receives 12kV from the city.
- Switches and cables carry electrical power to campus buildings.

Risk to Campus

- There is a single point of failure at the substation.
- Infrastructure is outdated and has not been maintained; switchgear, cables, transformers, etc.

Next Steps

- Continue progress with major cable and switchgear replacement: moved 4kV switch and transition campus to 12 kV
- Identify opportunities to build redundancy into the system.
- Improve reliability through project work.





UC RIVERSIDE

Progress on Deferred Maintenance Projects

Some Recently Completed Projects

- Pierce Hall
- Watkins 1000 Improvements
- Physics Building:
  - Physics 2000
  - Elevator modernization
- Olmsted tunnel and sidewalk
- Watkins Elevator Cab and Controls Improvements
- Weber Elevator Cab Improvements
- PE/Athletics Elevator Cab Improvements
- Electrical Substation – Feeder Replacements and relocation of switch 3' from freeway

List does not include Auxiliaries projects.

In Construction

- Batchelor Hall Building Systems
- Primary Power Reliability:
  - Feeders, equipment replacement work is ongoing. Next set of projects beginning construction include medium voltage infrastructure, switch replacement, substation metering
- Spieth Hall Roofing
- Arts Building Performance Lab Exterior
- Webber Hall Elevator Controls (December construction start)
- Skye Hall HVAC Replacement
- Data Center Upgrade & Improvements
- Bourns Fire Alarm
- Museum of Photography
- ADA Upgrades – Across Campus

UC RIVERSIDE

Progress on Deferred Maintenance Projects

In Planning/Design

- Rivera Library Air Handler
- Rivera Library Fire Suppression
- Boyce Hall Mechanical
- Physics Roof Replacement
- Physics Building Mechanical Replacement (HVAC)
- Boyce Hall Roof Replacement
- Orbach Science Library Roof
- Geology Roof Replacement
- Corp Yard Roof Replacement
- PE & Dance Mechanical Systems Controls
- Greenhouse Improvements
- Spieth Hall Mechanical
- Arts Building Decking
- West Campus Irrigation Infrastructure
- West Campus Internet Improvements (Fiber Optic)
- Campbell Hall and University Office Building Mechanical Systems
- Natural Reserves projects
- Access controls on entry floors
- Spieth Hall North Elevator Controls

List does not include Auxiliaries projects.





Images from recent Spieth Hall Building Condition Assessment

UC RIVERSIDE

Energy Projects

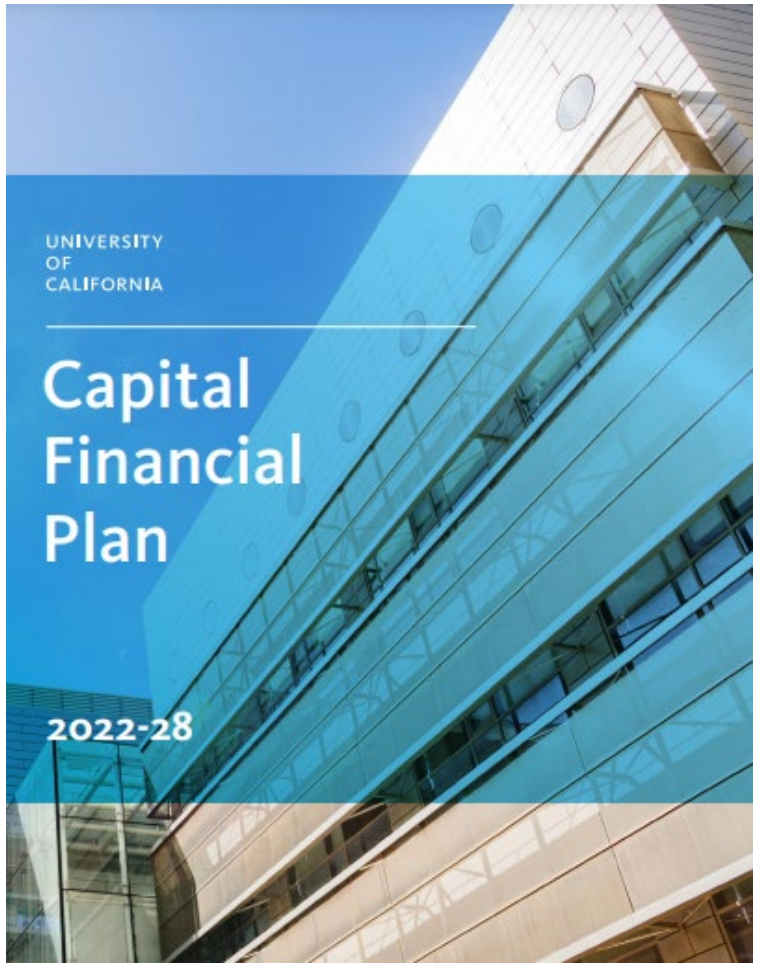


- $1M in one-time state funding for decarbonization study.
- LED Phase II starting in 2023 (LED Phase 1 complete)
- Steam trap replacement project under review
- Inflation Reduction Act (IRA) Grant funding investigation
- Additional Solar installation opportunities being evaluated
    - Recently completed 3 rooftop solar projects and SOM II & Business will have PV installed as well.
- Building controls updates underway
- Inset projects to mitigate 2025 carbon offset needs to meet UC Carbon Neutrality Goal
    - UCOP approval for inset program

UC RIVERSIDE

Annual Capital Financial Plan (CFP)

- Annual process to solicit feedback from across the campus on capital needs and priorities.
- PD&C meets with stakeholders in Spring to review capital space needs and organizational priorities.
- Starting with the previous year's plan, priorities are documented and presented to the CFC for review and recommended approval, prior to final approval by the Chancellor.
- Campus prepares CFP and submits draft CFP to UCOP in August/Sept.
- Regents review and approve the CFP every November. Projects listed in the CFP allows the streamlining of project approvals.
- This year's narrative and objectives covered:
  - 2030 Capacity Plan and shortage of academic and support space
  - Student housing
  - Deferred maintenance and infrastructure
  - Seismic Safety Policy requirements
  - Post-pandemic issues



UC RIVERSIDE

Annual Capital Financial Plan

Priority new construction projects include:

- Undergraduate Teaching and Learning Facility (UTLF)
- Undergraduate Teaching and Learning Facility 2 (UTLF2)
- Business School Building: construction currently starting
- Engineering Building: Computer Science – Proposal
- Clean Technology Park: funded by state with $15M in FY22 and $47M in FY23.

Top priority renovations projects include:

- Spieth Hall Renovation and Seismic Upgrade
- Physics Building Systems Renewal
- Rivera Library Improvements and Seismic Upgrade
- Webber Hall Improvements and Seismic Upgrade
- Orbach Library Seismic Upgrades
- PE / Dance Improvements and Seismic Upgrade

UC RIVERSIDE

State Capital Funding Allocations

Recent State-Funded Projects Completed, in Construction, or in Planning

- Pierce Hall Building Systems Renewal ($34.680M Sate - $59M total)
- Batchelor Hall Building Systems Renewal ($18.083M State - $36M total)
- Student Success Center ($50M State - $61M total)
- School of Medicine Education Building II ($100M)
- Undergraduate Teaching and Learning Facility
  ($51.5M, $103M in subsequent years)
- Clean Technology Park ($62M)

UC RIVERSIDE

Non-State Capital Funding Allocations

Recent Non-State Funded Projects Completed, in Construction, or in Planning

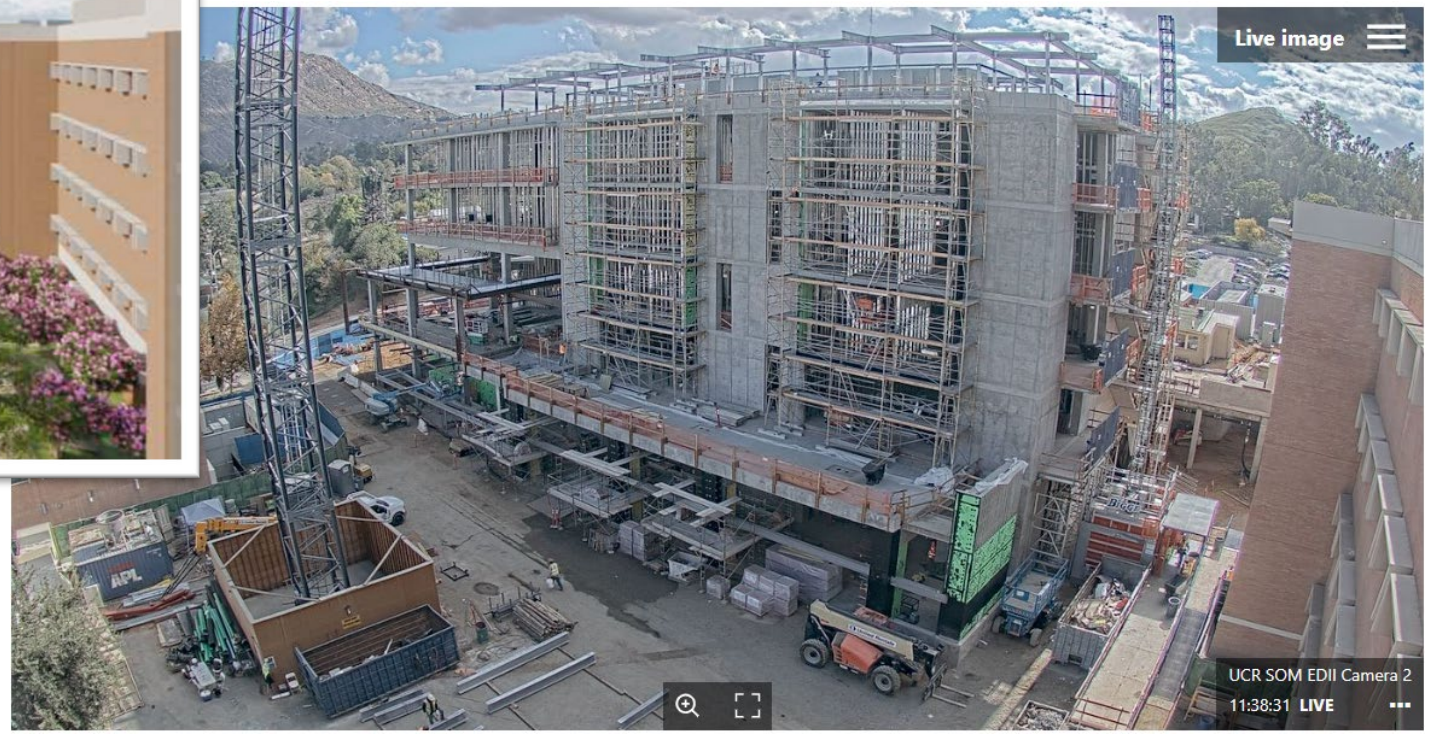
- The Barn Expansion ($29M)
- Dundee-Glasgow ($160M, P3 delivery)
- North District Phase 1 ($220M, P3 delivery)
- Big Springs Parking Structure ($30M)
- Plant Research 1 ($27M)
- Student Health and Counseling Center ($37M)
- Orbach Science Library Basement Simulation Suite ($7M)
- School of Business ($87M)
- Multidisciplinary Research Building 1 ($164M)
- North District Phase 2 (pursuing state funding in 2023)
- Gender-Inclusive Restrooms in Spieth Hall and PE and Dance Building (1st Phase)

UC RIVERSIDE

New Capital Projects in Construction

School of Medicine Education Building II
Completion/opening: Summer 2023





UC RIVERSIDE

New Capital Projects in Construction

Student Health & Counseling Center
Completion/opening: Fall 2023





UC RIVERSIDE

New Capital Projects in Construction

School of Business

Completion: Summer 2024



UC RIVERSIDE


Questions?
UC RIVERSIDE