



FACILITIES DEVELOPMENT & MANAGEMENT | 2017 - 2018

ANNUAL FACILITIES REPORT



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EXECUTIVE SUMMARY

Facilities Development and Management (FDM) presents the Annual Facilities Report for Fiscal Year 2017-2018 to its internal and external stakeholders. This report highlights the headway and undertakings of FDM Administration, Energy Management & Utility Services, Facility Services, and Planning, Design & Construction.

During Fiscal Year 2017-2018, FDM continued to make great progress in achieving our goals, making this another successful year. Some accomplishments include the Space and Facilities Database (SFDB) data mapping, the formation of the San Diego Energy Collaborative, campus tunnel lighting retrofit to LED lamps, and most importantly, the groundbreaking of the Extended Learning Building and Parking Structure.

FDM Administration realized a surplus of \$128,000 in the department operating budget. In AiM, a new Shop Stock Module was implemented that optimizes inventory utilization. Work Control closed over 17,000 work order phases, while Operations processed roughly 2,700 invoices and over 300 requisitions and purchase order amendments.

Energy Management & Utility Services (EMUS) sustains its effort toward zero waste on campus, developing a Zero Waste by 2025 Strategic Plan, negotiating a new waste hauling contract, and expanding diversion practices to include an office-composting program. Control Specialists saved the campus \$17,000 in energy costs. Also, EMUS successfully converted five annual purchase contracts into multi-year contracts.

Facility Services continued to grow and recruited 13 additional employees to the team. Ten of these employees are custodial, which shows the team's strides to bring custodial in-house. Facility Services maintains 1.6M square feet, closing an estimated 10,400 preventative maintenance work orders, moving them away from a reactive approach toward a preventative approach.

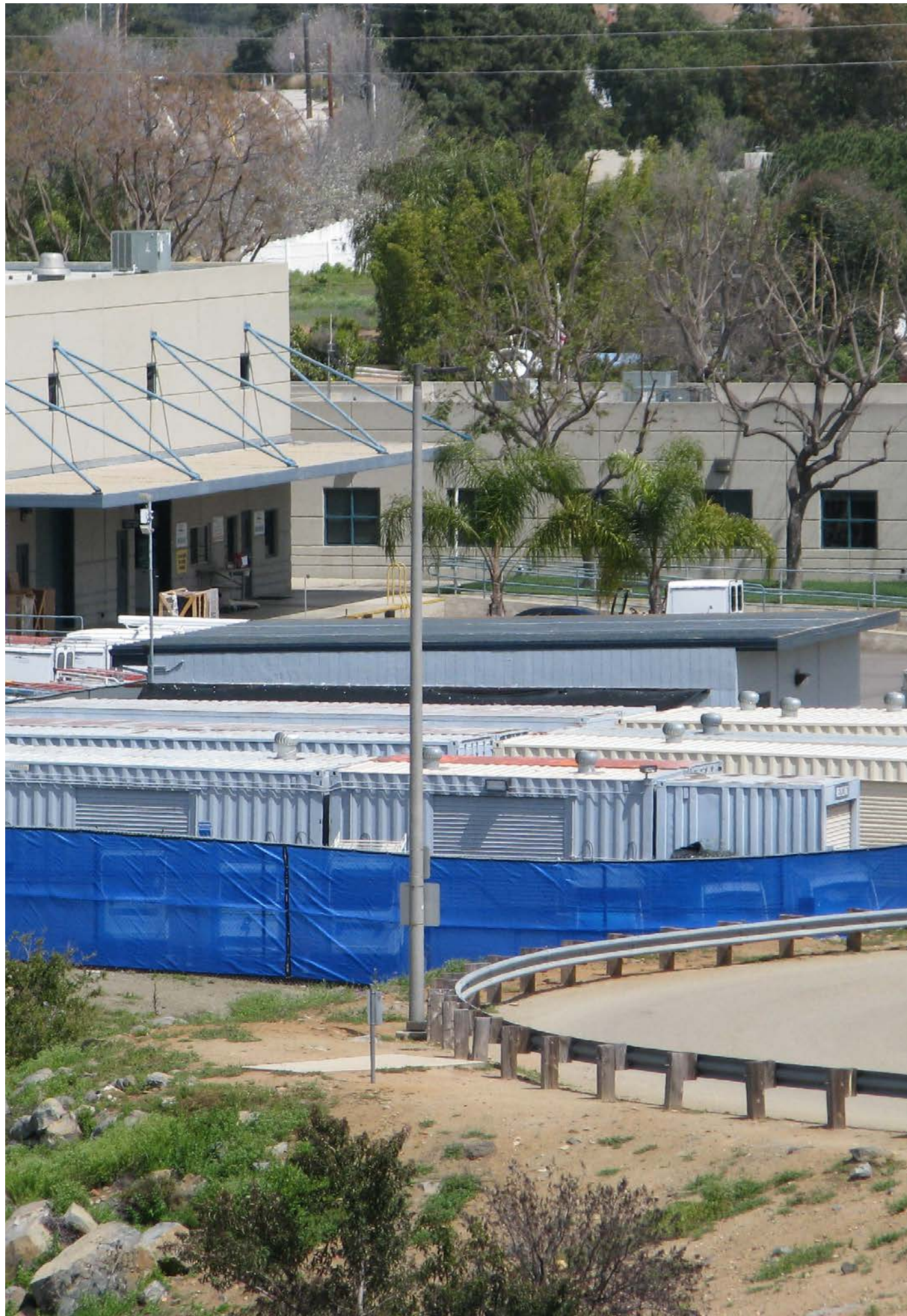
Planning, Design & Construction (PD&C) also had a very productive year. Five large and 39 small Cap projects were initiated with a combined budget of over \$83M. One hundred sixty-nine moves were achieved, and 1,400 items were donated in order to divert waste. PD&C completed the NW Area Master Plan as well as the Athletics Donor Plan, which is now pending approval from the Executive Council.

Finally, the overall annual customer satisfaction and employee engagement surveys prove once again that FDM is held in high regard across the campus.

FDM's continuous goal of providing exceptional support and leadership does not end within the subunit. Rather, this supportive leadership extends on campus to include the Sustainability Advisory Committee, the Safety Committee, Disability Access & Compliance Committee, and the Campus Public Arts Advisory Group.



Mark Norita
Associate Vice President
Facilities Development &
Management



F D M A D M I N I S T R A T I O N

FDM Administration is the hub of FDM and consists of three functional areas: Operations, Work Control and Technology. Operations is responsible for strategic planning, employee engagement, survey management, development and management of a \$11.9 million budget and its associated procurements, human resources, and accounts payable functions on behalf of FDM (less PD&C). Technology maintains and implements AiM functionality and the preventative maintenance program, iPads, data and data integrity, process improvement, the FDM website, SharePoint, and OneDrive. Work Control is the customer service, communications, and dispatch center for the University as it relates to facilities.

OPERATIONS

- Managed 14 operating department budgets and 3 trusts
- Processed 2,740 operational invoices
- 509 ProCard transactions totaling \$226,342
- Processed 363 requisitions and purchase order amendments
- Completed the FDM 5-year Staffing Plan
- Organized five FDM meetings/trainings
- Completed the FY16/17 Annual Facilities Report
- Completed the Strategic Facilities Plan 2018 Update
- Continued morale and team building opportunities
- Prepared in-depth reports to identify staffing levels needs. Data is based on two fiscal years prior, reactive work hours per shop plus one year preventative maintenance hours per shop retrieved out of AiM.
- Upcoming projects:
 - Partner with Instructional & Information Technology Services (IITS) to develop a process for keeping occupant data current in AiM utilizing IITS maintained data sources and working with IITS to develop an Extract Transform Load (ETL) process for keeping the data up-to-date moving forward.

TECHNOLOGY

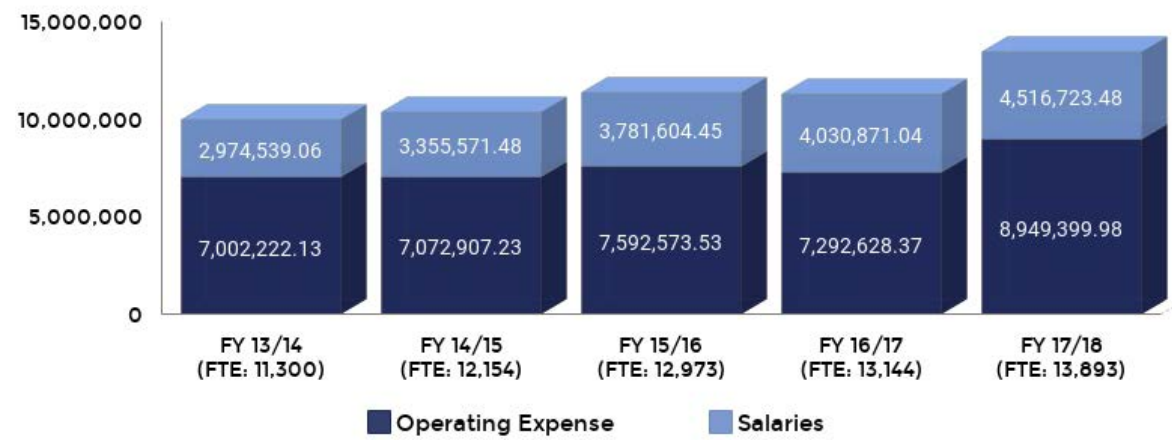
- Asset tagged and developed a preventative maintenance (PM) program for the University Student Union (USU) and Clarke Field House (CFH) buildings for the transition to state side. 120 assets were tagged in USU and 19 assets were tagged and/or updated in CFH. In addition, 40 PM Templates were created for the USU and 52 were created or reactivated for CFH.
- Completed the data mapping, Space and Facilities Database (SFDB) data upload, AiM space data upload process documentation, and are now ready to meet with PD&C to determine the best way to keep both systems up-to-date and to export data for the annual SFDB report.

WORK CONTROL

- Created 18,294 work order phases
- Closed 17,349 work order phases
- The majority of work order phases were Preventative Maintenance, indicating a shift to a preventative maintenance approach over reactive/repair maintenance
- Upcoming projects:
 - Estimate backlog through estimating time to complete
 - Use problem codes functionality to auto populate the most common work requests
 - Use AiM to track purchase orders and contracts



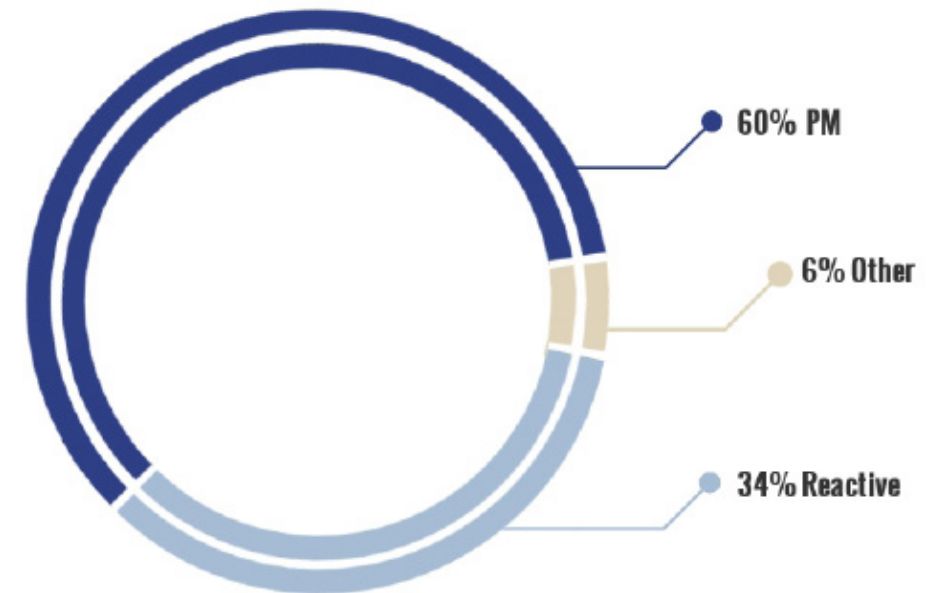
**FDM YEAR EXPENSE SUMMARY:
SALARIES, OE&E, AND ENROLLMENT**



As shown in the chart above, operating expenses have grown consistently with student enrollment growth. This indicates a high correlation between enrollment growth and operational costs. Operating expenses include utilities and chargeback activities.

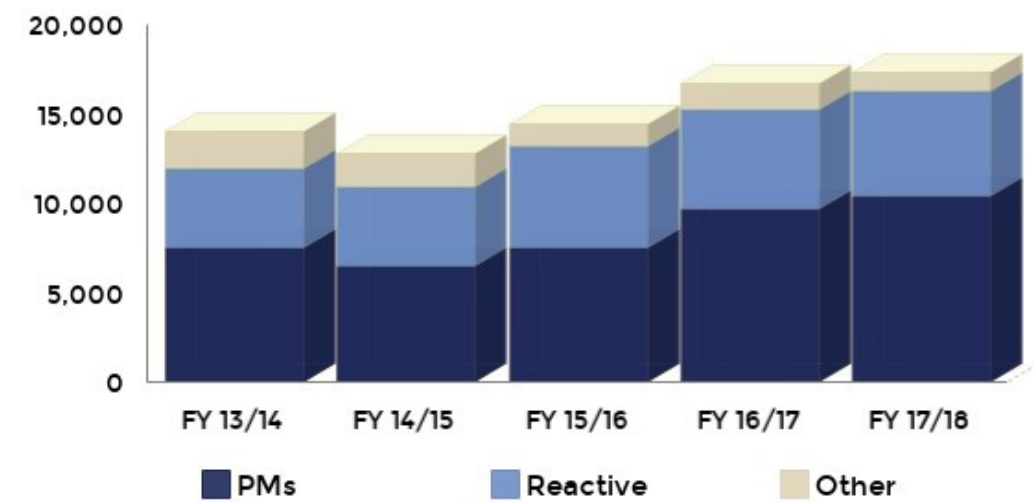
FY 17/18 WORK ORDER PHASE COUNTS BY TYPE

FDM Administration creates each work order phases, whether through generated preventative maintenance programs or through work requests received by phone, email, web, or walk-in request.



Note: Reactive work orders include low dollar, planned work orders.

WORK ORDER PHASE TYPES



Note: Preventative maintenance work orders continue to increase, indicating a more proactive method of maintaining buildings.





ENERGY MANAGEMENT AND UTILITY SERVICES

Energy Management and Utility Services (EMUS) is charged with the oversight, operations and efficient management of the campus' utility infrastructure, energy efficiency projects and energy production and delivery. This includes the ongoing maintenance and operation of electrical and natural gas service, domestic, well and sewer water as well as campus waste, recycling and compost. The department is comprised of management, skilled trade professionals, analysts and administrative support. The team focuses on energy service and campus occupant comfort with the successful operation of the Central Plant and the delivery of reliable energy resources through a series of tunnel systems which circulate throughout campus. The EMUS team is also responsible for the implementation of energy efficient building controls strategies, projects and equipment maintenance. Additionally, EMUS is responsible for forecasting and managing budget requirements for electricity, natural gas, waste/recycling, water and sewer services. The department also works closely with Safety, Health & Sustainability to provide sustainability program support for the campus.

ACCOMPLISHMENTS

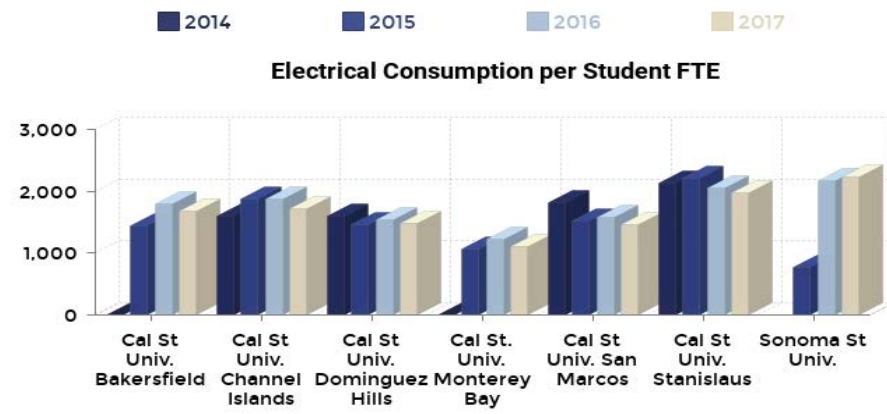
<p>Increased Energy Efficiency: The EMUS team reprogrammed the Sports Center rooftop units, setting units to standby when lighting sensors are off during occupancy hours. This energy efficiency measure will ensure HVAC is not running in unoccupied spaces.</p>
<p>Increased Lighting Control: Kellogg Library's 4th floor lighting panels were upgraded to be compatible with our building automation system, allowing controls specialists better control over Kellogg's lighting needs.</p>
<p>Cost Savings: Control specialists repaired Sci2 Lab Room Server Power Supply and avoided \$17,000 in energy costs.</p>
<p>Student Assistance: During student move-out, 1,400+ lbs of food were collected for the on-campus food pantry, which works to resolve food insecurities among CSUSM students. Staff provided approximately 100 boxes to help UVA students move out. EM&US plans to continue working on getting weights for food donations and new durable goods reuse program.</p>
<p>Charitable Donations: Over 7,000lbs of material (clothing, housewares, etc.) and 8,450lbs of furniture were donated to Goodwill during student move-out.</p>
<p>Zero Waste Goal Progress: Zero Waste Action Plan has been submitted to leadership for review.</p>
<p>Community Education: Staff participated/taled at the Annual Super STEM Saturday, a community outreach about our Zero Waste goals.</p>
<p>Improved Recycling Rates: CSUSM moved to single stream recycling as of 11/17 to help improve recycle rates and remove safety concern of pests attracted to the material.</p>
<p>Best Practice: A completed waste characterization study shows <2% recyclable material was found in waste stream, indicating campus community is dedicated to proper waste diversion practices. Additionally, hydration station meters show we have avoided adding 330,000 water bottles to the waste stream over the spring semester.</p>
<p>Employee Recognition: Sandra Basave, Jack Houston, and Lindsey Rowell received nominations for Rising Star, Legendary Service, and Legendary Leader, respectively.</p>



APPA NACUBO KEY FACILITIES METRICS

This survey was initiated by NACUBO's Sustainability Advisory Panel (SAP) with the belief that all finance and facilities leaders should know "Key Facilities Metrics" by which to plan, make strategic decisions, and operate the campus more efficiently.

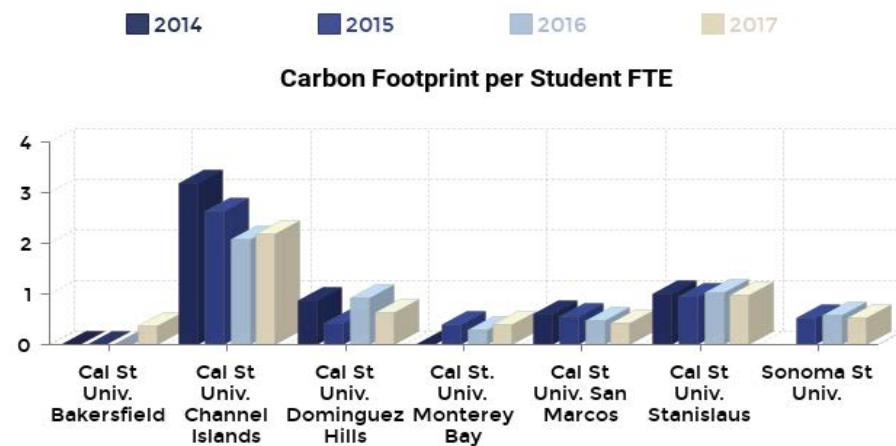
Electrical Consumption Per Student FTE



Despite growth, Cal State San Marcos has reduced its electrical consumption per FTE. This has been achieved through the replacement of obsolete equipment with new energy efficient models, efficient lighting technologies, and expert controls specialists ensuring that resources are not serving empty spaces as well as the efficient design of new spaces on campus. EMUS is working to craft a GreenFund program that would create a revolving fund intended to save the campus more money through avoided energy costs.

Note: Electric consumption measured in kWh per total FTE and GSF.

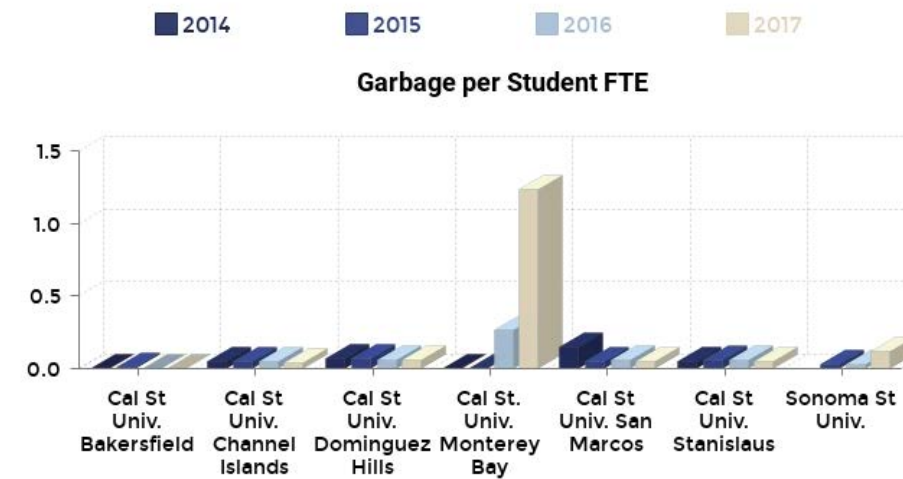
Carbon Footprint Per Student FTE



Despite the addition to our carbon footprint with the addition of an 880kW fuel cell in late 2015, Cal State San Marcos has continued to perform well with regard to carbon impact. While campus growth will lead to increases, CSUSM still performs as a small campus with regard to CO2 output per FTE. This gives us a high standard to maintain in future years as building construction increases and student FTE grows.

Note: Carbon footprint measured in metric tons per total GSF.

Garbage Per Student FTE



CSUSM has enjoyed a relatively low garbage rate thanks to the dedication of the campus community and recycling staff to divert as much waste from landfill as possible. It is therefore even more impressive that we have continued to reduce our landfill waste over the last 3 years. Moving forward we will continue to seek out opportunities to grow our diversion program and branch out into new strategies for limiting the waste we send to landfill as we move toward our goal of Zero Waste by 2025. We have worked hard over this last year to increase our presence on campus and educate the campus community about our zero waste goals. These efforts will continue as we draw nearer to 2025.

Note: CSUMB was an outlier, likely due to an error in reporting. Bakersfield did not participate.

STUDENT HOUSING MOVE-IN PROGRAM

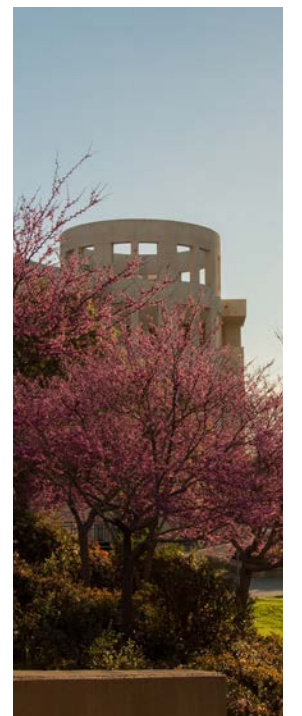
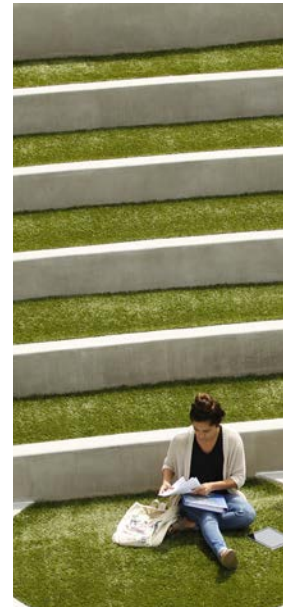
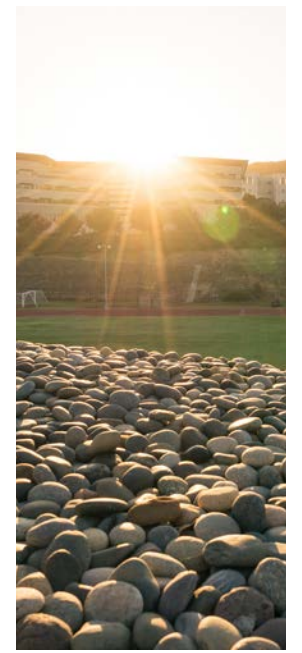


In coordination with the UVA staff during move-out 2017 approximately 300 pounds of kitchen items (pans, cups, plates, etc), were collected. The items were stored over the summer, then placed in common areas at the UVA and the Quad during move-in 2018.



Resident Assistants made signs and free giveaway tables were set up. It was a small step in the world of move-out; where established programs donated re-usable items to Goodwill and non-perishable food to the Cougar Pantry.

The objective of this new program is to provide our new residents with a sustainable environment from their very first their experiences on campus.

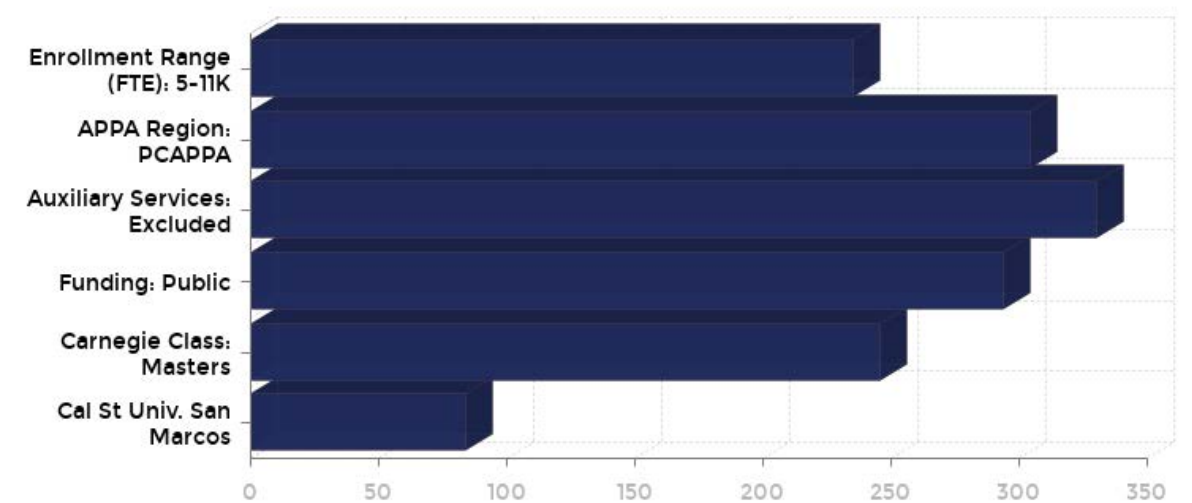




FACILITY SERVICES

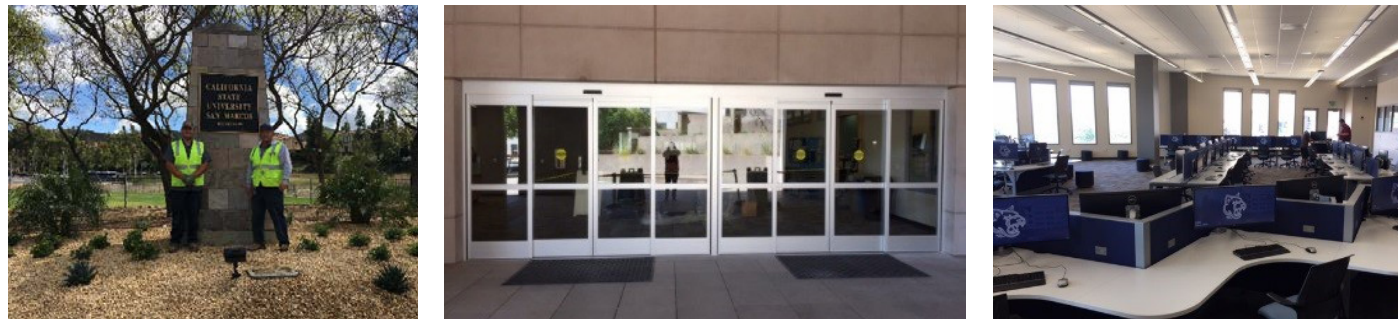
Facility Services (FS) proudly maintains a clean, sustainable learning, and working environment for our students, faculty, and staff. Facility Services is responsible for building maintenance, automotive maintenance and sourcing, custodial services, electrical, plumbing, grounds, key and lock services, and deferred maintenance and capital renewal planning.

Average GSF/Student FTE



As the campus' population grows, the square foot per student decreases. This is the density of the campus. The impact of density on a campus facility include heavy use of doors, elevators, restrooms, furniture, flooring, and other related building components.

The concentrated use within a compressed schedule minimizes the time that Facilities has to perform maintenance and repairs. Density also affects our landscape, athletic fields, roads, and parking lots. Compared to universities with similar institutional profiles, CSUSM is an extremely dense campus.

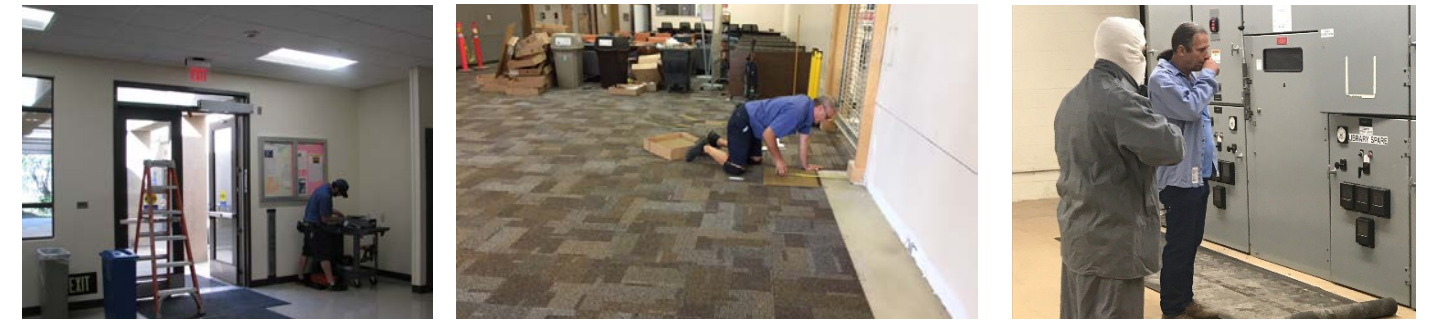


CAMPUS WIDE SYSTEMS DEFERRED RENEWAL

- A significant number of campus roads are showing signs of pavement deterioration, which must be continually addressed over the next five years. Some areas will need only a slurry sealcoat, while others should have the pavement scarified or milled as necessary to improve drainage patterns. Affected areas should then receive a 1.5- to 2-inch asphalt surface course and new striping. The current project needs to address the roadway deferred renewal exceeds \$1.8 million.
- Continue to refine the annual process of reviewing and prioritizing the campus's deferred renewal and maintenance needs, add the utility tunnel and central plant to the FCA model. Continue to use data to secure funding to maintain the campus at an APPA level 2.
- Integrate the annual process with the Facilities Renewal and Capital Improvement Plan used by the Chancellor's Office to fund large-scale projects. This process should be imbedded as part of our annual review shared with Executive Council. The goal is a holistic approach to coordinate planning and maximize available funding to reduce CSUSM's deferred maintenance backlog.
- Upgrading the distribution networks and primary electrical equipment accounts for the largest percentage of needs, followed by the interior lighting systems. While a smaller portion of the overall electrical needs, replacement of variable frequency drives and exterior lighting could provide an energy savings payback. Currently, the needs for our building level electrical deferred renewal exceeds \$9.5 million.



Meet the Facility Services Custodial Team! We're proud to have successfully transitioned 19 custodial positions in-house.



ACCOMPLISHMENTS

Twin Oaks Monument: Our landscape team transformed the Twin Oaks monument. The old worn planting was removed and new drought tolerant planting was installed along with new irrigation.
Kellogg Refresh: Our Facility Services team replaced the Kellogg Library carpet and cove base, repainted the walls and hard ceiling, and reconfigured an electrical whip to allow new functional work space in the computer lab. We also completed a refresh to the second and third floor main entrances to include installing ADA friendly sliding doors.
Upgraded Street Lighting: The electrical team upgraded the street lighting to new LED lighting which provide three times the the lighting with much better throw of light to cover more area and maintains the campus electrical infrastructure.
Markstein Chill Water Repairs: Our Plumbing team has repaired the Markstein Hall chill water piping. The piping had become corroded on the inside; the pipe was cleaned and epoxied to prevent any potential major re-pipe of the chill water system.
Safety Fair: We held an annual safety fair with approximately 15 vendors and 15 safety-training sessions, which was attended by on and off campus participants.
Electrical System Maintenance: Campus electrical systems have been cleaned, tested, and torqued to help ensure the system stays up and running.
Tunnel System Retrofit: The campus tunnel system has been retrofitted to LED lamps which provide a substantial savings in energy.
General Campus Repairs: We completed campus trip hazard paver and roadway repairs.
Improved Accessibility: Campus ADA door operators have been replaced, totaling 40 door operators and 36 inch entry paddles throughout Kellogg, ACD, and UHALL.
Improved Security: SBSB 4115 was put on key card access to secure the College for Humanities, Arts, and Behavioral Sciences.
Improved Resource Conservation: Replaced 50 waterless urinals with hybrid urinals. Hybrid urinals use 100 gallons of water annually VS the 40,000 gallons for traditional urinals. They automatically flush 1 gallon every 72 hours, which helps to keep the urinals clean and odor free as well as help keep piping clear and eliminate clogs.
Waste Diversion: We upgraded campus storm drains with an install of full capture systems at all outfall locations. These full capture systems keep any trash or debris from campus that make it into our storm drain system from ending up in local streams, rivers, lakes, and ultimately the ocean.

IN THE MEDIA

Our Facility Services team members are doing great work! Recently, Obdulia Perez (bottom left, with Jim Hamerly) and Patrick Pelonero (bottom right) were recognized for their stellar efforts in keeping our campus community running smoothly.

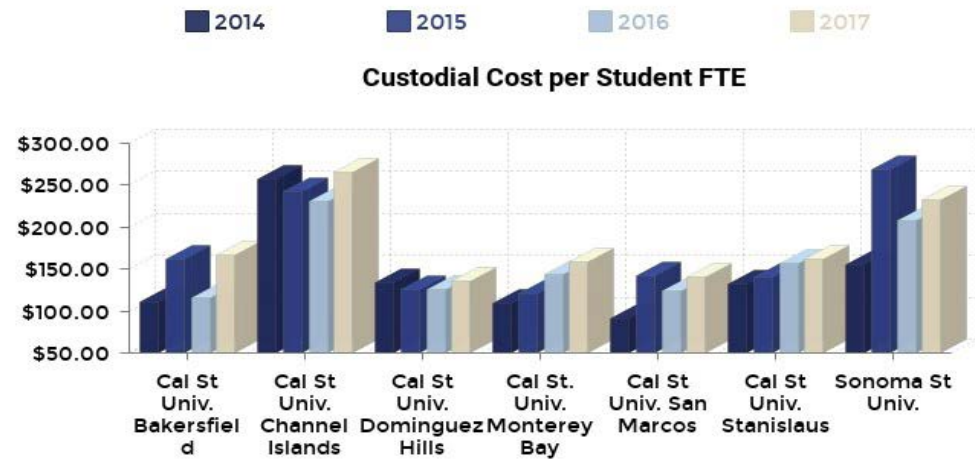




APPA NACUBO KEY FACILITIES METRICS

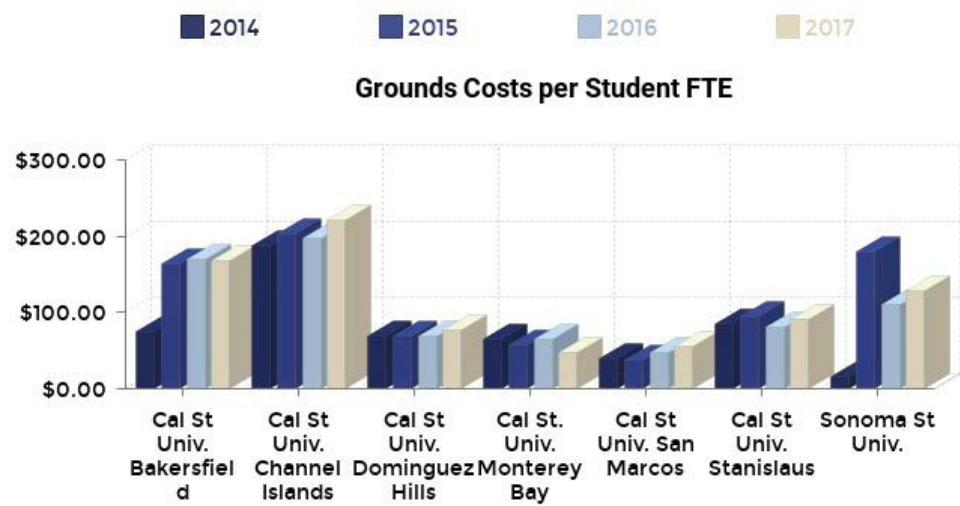
CSUSM is a member of PCAPPA, the Pacific Coast Region of APPA Leadership in Educational Facilities. Each year universities participate in a comparative analysis which allows universities to compare key performance metrics among its peers. Of the many metrics available for comparison, costs per gross square foot (GSF) for custodial and maintenance, cost per acre for grounds, and average student per GSF are compared against other CSU's with a listed enrollment range of 5,000-11,999 at the time of the survey.

Custodial Cost Per Student FTE (in USD)



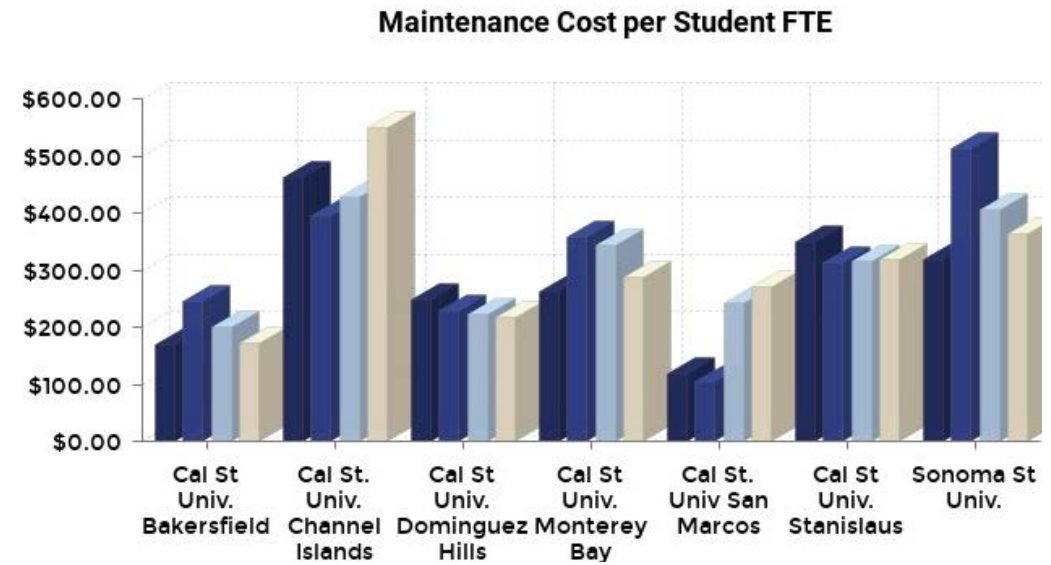
Calculation of total custodial costs per student FTE, which normalizes the costs among institutions of all student enrollment sizes for comparison purposes. Calculations rounded to nearest dollar.

Grounds Cost Per Student FTE (in USD)



Calculation of total grounds costs per student FTE which normalizes the costs among institutions of all student enrollment sizes for comparison purposes. Calculations rounded to nearest dollar.

Maintenance Cost Per Student FTE (in USD)



Calculation of total maintenance costs per student FTE which normalizes the costs among institutions of all student enrollment sizes for comparison purposes. Calculations rounded to nearest dollar.





PLANNING, DESIGN & CONSTRUCTION

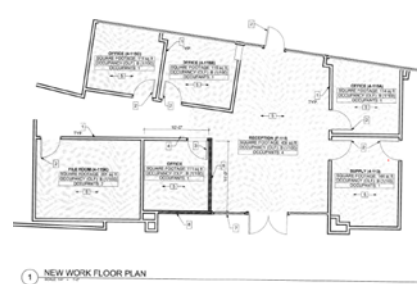
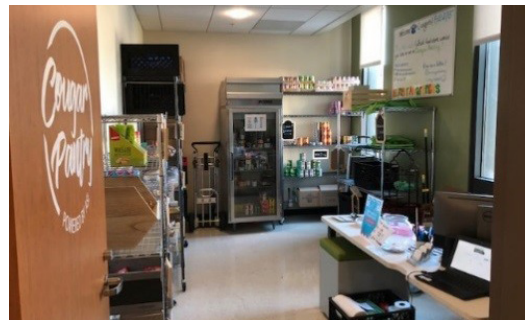
Planning, Design & Construction (PD&C) serves the campus community in the development of environments that promote learning, interaction, innovation, and collaboration in support of the vision, values, and goals of California State University San Marcos. PD&C is responsible for space planning, campus moves, furniture, long range capital planning, building design, and construction management.

ACCOMPLISHMENTS

Number of Design/Construction Large Capital Projects Initiated Per Last 5 Fiscal Years

Fiscal Year (FY)	# Projects Initiated	Carried Through to Next FY	Total # Projects/FY	Total Projects Budget
13/14	5	4	5	\$12,813,543
14/15	6	2	10	\$669,287
15/16	3	2	5	\$2,960,093
16/17	0	0	2	\$0
17/18	5	5	5	\$81,555,609

Note: Carried-through projects extend to the following fiscal year. Total budget does not include carried-through project budget.



Number of Design/Construction Small Cap Projects Initiated Per Last 5 Fiscal Years

Fiscal Year (FY)	# Projects Initiated	Carried Through to Next FY	Total # Projects/FY	Total Projects Budget
13/14	33	13	33	\$919,082
14/15	34	18	47	\$1,484,272
15/16	61	37	79	\$2,372,439
16/17	44	21	81	\$2,717,281
17/18	39	11	60	\$1,451,450

Notes:

- The number of small projects has seen an increase year over year, with major increases in 15/16 and 16/17 due to the USU opening and its secondary effects. PDC is facing a similar challenge in FY 18/19 due to the EL building and its secondary effects.
- This data does not account for additional scoping and pre-design work on tertiary projects and/or shared projects with Facility Services and Energy Management and Utility Services.
- Carried-through projects extend to the following fiscal year. Total budget does not include carried-through project budget.

Number of Planning/Feasibility Projects Initiated Per Last 5 Fiscal Years

Fiscal Year (FY)	# Projects Initiated	Carried Through to Next FY	Total # Projects/FY	Total Projects Budget
13/14	1	0	1	\$244,485
14/15	0	0	0	\$0
15/16	2	1	2	\$168,645
16/17	0	0	1	\$0
17/18	1	0	1	\$107,065

Note: Carried-through projects extend to the following fiscal year. Total budget does not include carried-through project budget.

Campus Moves Data Per Last 5 Fiscal Years

Fiscal Year (FY)	# Moves	Total # Move Days	Total Recovered vs. Actual	Total Items Donated	Total Weight Donated (lbs.)
13/14	129	41	\$211,311	--	--
14/15	155	59	\$275,444	--	--
15/16	215	69	\$215,778	179	--
16/17	192	66	\$185,147	1,117	24,458
17/18	169	53	\$146,537	1,432	58,509

Note: Data does not account for additional scoping and pre-design work on tertiary projects.

Project Status

Project Name	Type	Status	Scope	Budget
Athletics Exterior Weight Room	Small; Addition	Completed	--	\$131,329
ASI Food Pantry	Small; Renovation	Completed	--	\$28,760
SBSB 4115 Office Addition	Small; Renovation	Construction	--	\$84,000
Cell Tower/ Lighting Upgrade	Major Capital; New Construction	Completed	AT&T paid to install (4) LED light fixtures at Mangrum Track with cell antenna equipment on one of the fixtures. Construction of a small electrical building at the foot of McMahan House to serve lights and lower fields area.	\$1,200,000
Extended Learning Building	Major Capital; New Construction	Construction	135k GSF building to house Extended Learning, CSUSM Corporation, academic success centers, and other stateside departments. Will also include ~14k GSF retail that will be owned/operated by UVSM and a 707-stall parking structure owned/operated by CSUSM but with shared use and revenue with UVSM. In addition, an access bridge will span across Barham Drive to connect the 2nd floor of the building to campus.	\$70,872,598
Science Hall I - MEP Upgrades	Major Capital; New Construction	Bidding	Upgrade exhaust system into a centralized system with redundancies. Replacement of (3) variable volume exhaust fan systems on the 3rd floor and complete roof replacement.	\$1,100,000

Notes:

- 75% of small projects started were completed with an average completion time of 219 days.
- Major capital projects totaled over \$83MM.

Awards



CSUSM was recognized for its efforts in an alternative Design Build method in collaboration with West Coast Air Conditioning.

The project was innovative with its multifaceted installation approach consisting of exposed and entombed hot water piping system with the latest in leak detection technology for monitoring purposes.

The campus can now safely and efficiently deliver heating hot water at a temperature of 180 degrees adequately to the University buildings' fluctuating heat demands.

APPENDIX A: FY 17/18 CUSTOMER SATISFACTION SURVEY RESULTS

Please see the link below for the 2017/18 results of the Customer Satisfaction Survey for FDM:

https://www.csusm.edu/qi/measures/customersatisfactionpdfs/2018/facility_services_17.18.pdf

APPENDIX B: FY 17/18 EMPLOYEE ENGAGEMENT SURVEY RESULTS

Please see the link below for the 2017/18 results of the Employee Engagement Survey for FDM:

https://www.csusm.edu/qi/measures/employee_engagement/2018/ees_fdm_2018.pdf