



FY 2016-2017 Annual Report

## **Physical Plant Department**

Submitted by:

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## **Mission and Vision**

### **Mission**

The Physical Plant Department's (PPD) mission is to consistently deliver effective programs and efficient facility services based on sustainable and collaborative outcomes aligned with The University of New Mexico's core mission.

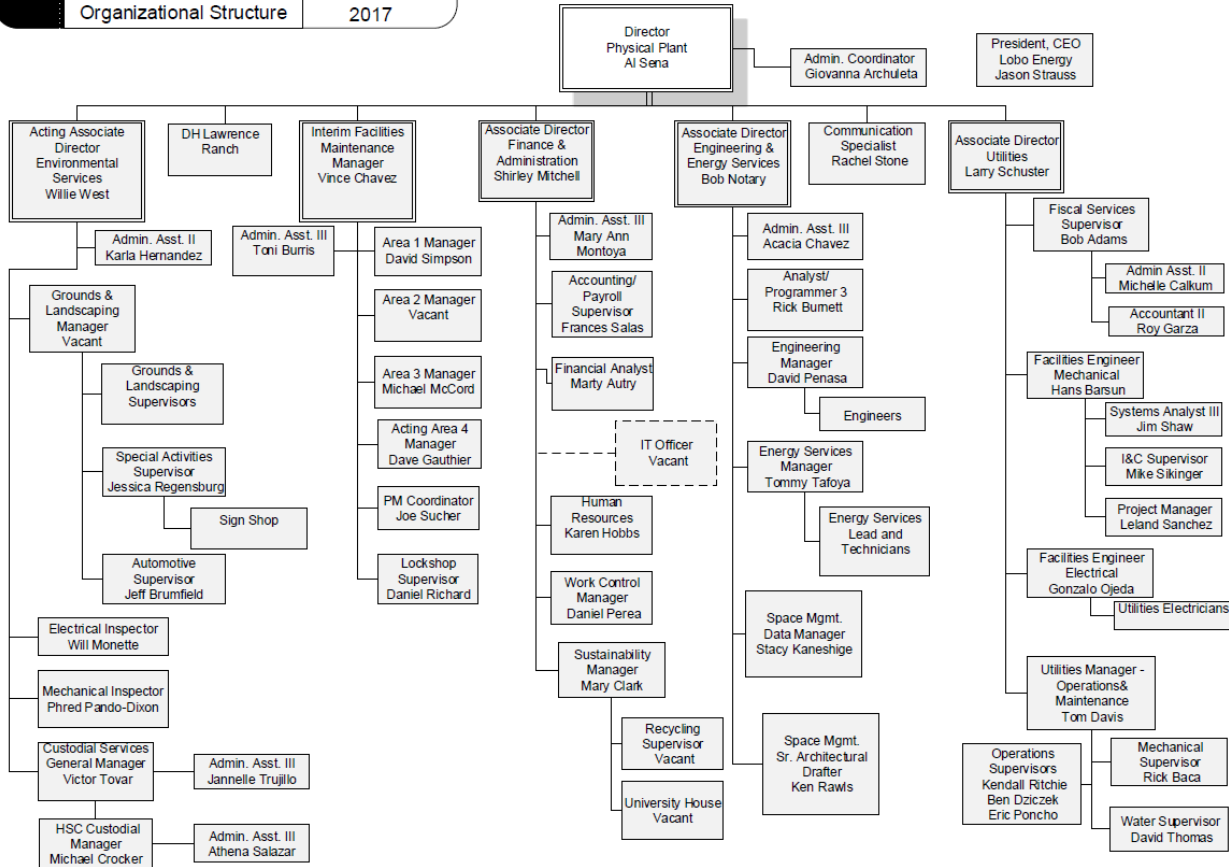
### **Vision**

Our community, state and national peers will recognize The University of New Mexico's Physical Plant Department as a leader in campus sustainability and facilities stewardship.

# Organizational Chart

## Physical Plant Department

Organizational Structure     2017



10/9/2017

PPD Org Chart June 2017 Grayscale

**FY 2016-2017 Annual Report**

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## I. EXECUTIVE SUMMARY

The Physical Plant Department is comprised of five divisions; Environmental Services, Engineering, Energy Services and Space Management, Finance and Administration, Facilities Maintenance and Utilities. During the year, each of the divisions supported the ISS goals of:

- Finance
- Customers and other Stakeholders
- Process Improvement/Quality Initiatives
- Human Resource Management
- Risk Assessment and Compliance

For PPD, the overarching objective of these goals was to continue to identify opportunities to reduce expenses and to efficiently repurpose those funds to improve facilities for our customers. Benchmarking, risk assessment, communication, process refinement, and employee development remained as primary strategies.

PPD continued collaboration with Lobo Energy to complete the identification potential opportunities of an Energy Performance Management program. Eight buildings were selected and approved for the investment grade audit, which was is 98% complete. The program will be finalized in FY17.

PPD's capital projects reporting via project book has been utilized to track project status. PPD's Remodel Group was reorganized at the end of the fiscal year and moved to the Planning, Design, and Construction (PDC) department.

PPD refined processes in several ways in FY17. The monthly financial review meetings were enhanced to include a review of key information from TMA. PPD also continued to revise the department policies and procedures manual. This project will is expected to be complete in FY17.

Lastly, PPD pursued several ways to improve employee performance and job satisfaction. PPD continued annual training programs for managers and supervisors. The program has refresher courses for critical personnel management processes as well as more general courses to improve supervisory skills. Basic computer classes were conducted in both English and Spanish. Personal finance classes were also conducted for Main Campus and Health Sciences Center (HSC) Custodial staff.

Budget Information:

Total Revenues:

- \$80,570,845

Total Expenses:

- \$79,604,972

Year-end Balance:

- \$965,873

*Note: Includes Main Campus and HSC Operating balances*

## II. ACCOMPLISHMENTS/SIGNIFICANT DEVELOPMENTS

### Communications

The communications within the Physical Plant Department is in its fourth year and an important part of PPD's operations.

- Google Analytics have been gathering data on the PPD website traffic which was launched in May of 2016. Here are a few highlights for FY17:
  - There were 71,551 page views in FY17 (Google Analytics began gathering data in September 2016).
  - The top five pages are the home page (21,040 views), campus maps (14,750 views), space database (FAMIS – 7,423 views), lock shop (2,333 views), PPD staff (2,291).
  - The bounce rate is 62.93% which higher than the average. An “excellent” bounce rate is between 26-40%.
- PPD Communications received 29 requests from the media between July 1, 2016 & June 30, 2017, nine of them for Planning, Design, & Construction.
- PPD's Facebook page has been consistently updated, involving a variety of UNM issues, notifications, and stories.
- All employees within PPD received brand presentations from University Communication & Marketing. There were nine presentations given regarding the brand rollout for The University.
- PPD maintains Rocky Mountain APPA Board presence and has defined areas of improvement with regards to RMA's communications; most notably the RMA Facebook presence, RMA website, and delivery of RMA news, which often applies to PPD communications. Several accomplishments have been made:
  - UNM's Water Safety Program was published in the CAPPA Newsletter in 2016.
- A total of 22 news stories and press releases were written in FY17.
- Twenty-one PPD newsletters were produced in FY17.

### Engineering, Energy Services and Space Management

- In-House controls replacement at Dane Smith Hall found fire alarm issues associated with the atrium smoke control system that was subsequently resolved. Engineering and Energy Services (EES) staff, in conjunction with the IT Alarms group performed a broader evaluation of all similar campus systems.
- The project book was developed to report on Engineering and Energy Services projects.
- Replacement of HVAC/Lighting was completed in CERIA, Domenici Hall/MRN, and Anthropology.
- Outdoor lighting projects in various areas (South parking lot, Redondo Dr., walkways for enhanced safety).

- Commissioning Services were completed on several projects including UNMH Eubank Clinic, Cancer Research, Valencia Campus Chilled Water System,
- Completed storm water study and prioritization of future projects needed.
- Completion of water sustainability project that delivers cooling tower blow-down water from the Lomas Chilled Water Plant to the North Golf Course.
- Replacement of legacy energy control systems with campus standard systems at Continuing Education, Speech & Hearing, Domenici Hall, and HSSB.
- TMA access for managers to track technician time, assign work orders to technicians, track projects budgets and project progress, maintain stock room inventory, and streamline work orders index for proper charges.
- Deployment of the virtual warehouse allowed technicians to scan bar codes on parts, which allow for immediate adjustment to the stock count and charges the work order index as appropriate.
- Started a relationship with the UNM Cancer Center resulting in on-going maintenance agreement and revenue generation.
- Completed a high-level evaluation and recommendations for building systems needs at Clark and Castetter Halls in anticipation of PDC planning efforts for building renewal.
- Continuation of building main electrical gear and emergency generator replacements at Zimmerman, Popejoy and Economics.

### Environmental Services

#### Automotive:

- Automotive technicians completed 2,255 service requests for University fleet vehicles.
- Implemented a head light refurbishing program to reduce costs to our customers for replacing lights.
- Painted the Automotive Center to improve working environment.

#### Custodial Services:

- Created paperless process and time saver by becoming proficient with iPads for weekly inspections and work orders.
- Purchased eight additional Kai Vacs to furnish each area of custodial services, which are compact and reliable. A no touch cleaning system for primarily restroom facilities, which greatly increases staff production rates while providing better service and healthier environments was also implemented.
- Utilized new technology such as the Hygiena program to verify cleanliness and identify problem areas.
- Main Custodial Services maintained over 3,862,742 cleanable square feet at an APPA Level 2 cleaning standard with 105 FTE's.
- The Health Science Center Campus Custodial Services has 34 FTE's and maintains over

1,073,393 of cleanable square feet at an APPA Level 1 cleaning standard. This was accomplished with a reduction of 12 FTE's.

- New shifts were implemented to provide better service to the campus community in the evenings and on weekends.
- Custodial staff training exceeded 4,960 hours. Topics included team cleaning, equipment use, floor care and mandatory compliance training.
- Implemented quarterly chemical inventory reporting to Safety Risk Services (SRS).
- Implemented chemical analysis tracking program.

#### Grounds & Landscaping:

- Maintained over 300 acres of campus landscape to APPA Level 2 standards with a staff of just under 40 FTE's
- Planned and project managed nearly eighty concrete sidewalk projects including coordinating with the Facilities Access Committee in the installation or upgrading of sidewalk ramps. Many projects required extensive advance communications and cooperation from numerous other departments.
- In addition, worked with the Facilities Access Committee and the Governor's Commission on Disability to continue identifying and upgrading handrails on campus. Ten rails were added or modified to bring into Americans with Disability Act (ADA) compliance.
- Worked with student groups to renovate several areas of campus during Fall Frenzy activities in October 2016 including the south side of CERIA, NW of Scholes Hall as well as other locations.
- In conjunction with Special Activities, staff tagged and removed over 60 bikes from campus.
- Continued drainage improvements along the pedestrian walkway north of Simpson Hall and on the west side of Domenici Mind.
- Over twenty storm drain inlets were identified and replaced in walkways for ADA compliance and storm water quality, with assistance from EES.
- Completed two storm water reduction and storm water quality projects including north of Woodward Hall and retention pond at "G" lot with support from EES.
- Pest management technicians responded to 894 request for service and completed over 230 preventative treatments and inspections, and reduced bird roosting sites.

#### Sign Shop:

- Sign Shop technicians completed over 576 signage requests.
- Coordinated with Parking and Transportation Services to update signage in parking lots and event direction signage.
- Created and installed Tobacco free campus signage for new campus policy on Main,



North and South Campus, as well as, creating signage for UNM remote campuses.

- Created and installed firearms prohibited signs at all campus entry points for the UNM Police Department.

#### Special Activities:

- Special Activities staff completed over 863 work requests for moves, event support and equipment rental.
  - Spent over 1,066 hours on graffiti removal.
  - Completed transformer quarterly maintenance, Lobo box maintenance, recycling of all fridge/freezers and pallets.
  - Major moves: Anderson School of Management, BBER, and Johnson Gym.
- Worked with Accessibility Services to remove & install ADA tables and chairs in classrooms to accommodate student needs each semester.
- Installation and removal of banners throughout campus.
- In partnership with grounds, staff tagged and removed abandon bicycles from campus.
- Installed and refurbished outdoor furniture at numerous locations on campus.

#### Finance & Administration

- A Lunch with the Director program was initiated in February. Each week ten employees are randomly selected from the five divisions of PPD to have lunch with the director. The employees are given an opportunity to share what they like about working at PPD; what they think is done well. They are asked if they have any suggestions for improvement and what we can do better. The lunches have been very successful. Management has been able to research and resolve some issues that were brought to our attention, and consider solutions to issues that need to be addressed. Once all employees have had an opportunity to participate in lunch, the program will recycle.
- The PPD Trades Training Program was enhanced to allow Trades Training Program participants the ability to use Tuition Remission for classes taken at Central New Mexico Community College (CNM). The registration and payment processes were mapped out with officials from CNM. Our first Trades Training Program participant starts the HVAC track at CNM this fall.
- PPD continued with its monthly review process for Financial and Capital Project Reporting. Key information from TMA is reviewed each month with Area Managers to ensure critical tasks are completed timely. Meetings continue to be conducted with the Director, Associate Directors, and Managers of each division. Budgets, Year-to-date Expenditures, and anticipated Balances are reviewed for all Operating Indexes. Completion Dates and projected Budgets are reviewed for all Capital Projects managed by PPD.
- Working with Contact Wireless, PPD staff implemented a texting program that will increase the timeliness of reporting and addressing potential issues in our high-traffic buildings. Signs were placed in the restrooms of several Main Campus and HSC

buildings alerting the occupants (staff, students, and the public) to text PPD with issues. Information is relayed to the Work Control staff who then generate a work order or phone call, depending on the urgency.

- Management of PPD Asset Inventory was reorganized and an electronic filing and communication system was put into place prior to the annual inventory review in the spring of 2017. By the end of FY17, almost all paper communication with UNM Inventory Control was accomplished by e-mail, saving time and documenting transmission of required responses.
- UNMJobs was replaced with a new talent management system. The PPD HR staff attended training classes and participated in testing of the new system. Training was conducted for all PPD staff who were impacted by this change.

#### Accounting:

- The Accounting Department continued the process to eliminate LoboTime “Buff sheets”. Finance & Administration and Engineering & Energy Services were the original pilot groups. Remodel, Lock shop, and one Maintenance & Operations area (Area 1) began using the process this fiscal year. Timecards are now reviewed and approved in LoboTime by the employee and supervisor; eliminating the need for after-the-fact reporting of time.

#### ISS IT:

- In January, the process began to transition the PPD ISS IT team into the Main Campus IT organization. The Main IT group is using a phased in approach whereby all IT staff will report to the Main Campus IT group, but still provide the same level of service to PPD and other departments within ISS.
- ISS IT completed the update of the Mitchell System (automotive billing system) and updated the computer systems to support the new version.
- ISS IT implemented System Center Configuration Manager (SCCM) which will allow them to push out updates, install software during off hours, and manage software licensing, thereby preventing down time for employees during regular working hours. This also reduces the time it takes for IT staff to implement changes, allowing technicians to focus on other tasks.
- ISS IT participated in a volume purchase of replacement computers, allowing departments to purchase at a savings of up to thirty percent off systems. This also standardizes computer systems across campus. This allowed PPD to purchase 44 replacement computers, and a total of 96 across all ISS departments.
- ISS IT coordinated the purchase and installation of several camera systems around the PPD complex to provide greater security for staff and property.

#### Recycling & Sustainability:

- The Office of Sustainability created the Sustainability Council with faculty, staff, and students from across campus. The Council meets monthly to discuss collaborative projects and improving communications about sustainability at UNM.

- The UNM Green Fund was modified to only fund student projects on campus. This provides an opportunity to allow students to expand on their ideas and passion for sustainability through project implementation and community engagement.
- Recycling Services conducted a thorough review of its billing and work processes to become more cost-effective and efficient.

#### Work Control:

- This year PPD initiated and completed 61,466 work orders. This included 30,125 Corrective Maintenance work orders and 31,341 Preventive Maintenance work orders. PPD uses TMA as its computerized maintenance management system. A total of 4,998 phone calls were received by Work Control staff during this fiscal year.

#### Maintenance & Planning

- The Maintenance and Planning division completed 41,480 work orders last year. That equated to \$9,241,744 in cost.
- The PPD Safety committee continues to promote staff safety and awarded five safety awards, which allows for one day off with pay. The committee has established a tab on the PPD website. It will be used to drive safety topics and be a location for safety videos, award nomination forms and communications from the committee. The department had twelve reported accidents from June 2016 to July of 2017.
- All area maintenance staff received four hours of training in customer service and;
  - o Electricians received training in NFPA 70B.
  - o Plumbers received steam systems and water treatment training.
  - o HVAC technicians attended vibration and alignment training.
  - o Structural techs received concrete and block repair and maintenance training.
  - o All area managers and supervisors attended several trainings. Topics included bargaining unit, FMLA and OSHA 10 cards. Total cost of these programs was approximately \$32,654.00
- The maintenance areas continue to improve the completion rates of preventive maintenance works orders. They completed 24,190 preventive maintenance work orders or 58.8% of total work orders. They completed 41.25% corrective work orders. This trend indicates a reduction in the corrective work required. The trend continues to improve year to year and could become a factor in reduced future budgets and services.
- Elevator hydraulic cylinders in Fine Arts were replaced. The department's elevator program completed projects upgrading elevator code deficiencies and added hydraulic leak containment to prevent future environmental contamination. Safety stops were replaced at the football stadium. As part of the renovation of Farris Engineering building a completely new machine room-less traction elevator will be installed. These units are our new standard and reduce space needed for the hoist way and increase efficiencies. Elevators at Zimmerman Library are being evaluated for renovation.

- UNM continues to be a leader with a comprehensive, hazard analysis and critical control point based water management plan (HACCP). This year the committee developed a campus wide water and bottled water dispenser cleaning protocol. It also began the verification phase of the program. Good progress was made verifying our prevention measures are effective. The verification rate is 35%. Areas along with the PM coordinator completed four quarterly sets of total bacteria and legionella water test. Two hundred sixteen individual tests were completed, one test came up positive at the Research Park and was immediately corrected.

## Utilities

- The division ended the fiscal year with a \$231,000 deficit. This was due primarily to a requirement that a payment equivalent to the retired \$314,000 debt service for the North Campus Sub-station be continued.
- The Ford Plant had a loss of utility controls failure at the end of the year. The plant failed to “island”, i.e. provide continuous power to the plant during loss of utility power, numerous times during the year. The division engaged in a rigorous evaluation to determine and correct the cause(s), which is ongoing.
- A contract with New Mexico Gas Company (NMGC) was executed to extend 400 psig high pressure natural gas to Ford Utilities Center. This will allow the plant to run its gas turbine-generators without the gas compressors, resulting in improved reliability and reduced costs. The project is expected to complete in December 2017.
- The tunnel security system was upgraded which included cameras being added at each plant.
- Thanks to the generosity of a donor, the final increment of matching funds combined with a bond match was used to install a 127kW solar PV system at the Valencia Campus.
- Gas Turbine Generator (GTG) #2 tripped numerous times during rainstorms, causing significant demand charges. The cause was determined and eliminated. Several control valves on the gas train piping preventing turbine startup were replaced.
- The plant’s Rockwell control system was upgraded to the latest hardware and software.
- Several sections of domestic water pipeline were replaced as part of a replacement program and included some due to failure.
- All units requiring testing passed their Air Quality Permit emission’s tests.
- The division completed a series of projects that upgraded the protective relay and metering schemes, improved load voltage monitoring, and moved alarm monitoring to the Ford Utilities Center control room.
- The Ford GTG#1 blackstart generator, and Central substation battery systems, including new battery chargers were addressed. Uninterruptible power supplies were installed on both heat recovery steam generators.
- The plant completed coordination, short circuit, and arc flash studies for the 480V switchgear for the Ford Electrical Distribution System. Work included implementing settings and stickers for each device.

## **CURRENT/FUTURE PROJECTS**

### Communications

- Rachel Stone continues to write stories for the PPD News and UNM Newsroom; as well, as press releases. Her duties will expand to include all media relations within ISS and serves as the “Logo Liaison” for ISS departments who do not have a dedicated marketing/communications staff member.
- Rachel will serve as chair of the ISS Communication & Marketing Committee.

### Engineering, Energy Services and Space Management

- Deploy Energy Service contract with YESCO as part of the Investment Grade Audit.
- Continue the Space Data Update by working with departments to ensure space data is accurate in configuration, classification and assignment in FAMIS.
- Implementation of storm drainage augmentation projects on central campus as prioritized by recently completed Storm Water Study.
- Continuation of HVAC and lighting replacement projects in various campus buildings to increase system reliability and energy efficiency.
- Commissioning of HVAC and lighting systems in accordance with LEED and campus standards in various projects.
- Support of capital projects in design and construction phases including system commissioning and HVAC control system programming, various building projects, and Smith Plaza renovation.
- Continue the systematic replacement of legacy INET control systems that no longer have replacement parts available.
- Student Residence Center replacement of underground domestic water distribution systems throughout the complex with construction anticipated during summer 2018.
- GIS Mapping of storm drainage system will be a pilot program for Area 3.
- FAMIS database update and continuation of Space Utilization Initiative.
- Continue to market commissioning services to improve building performance and generate revenue.
- Training program for PPD Area maintenance technicians on control systems.
- Continue to market controls maintenance contract to auxiliaries, branch campuses and UNMH
- Increase the number of Energy Services staff to meet growing needs of HVAC control system operation and allow for an increase in revenue generating controls installation work.
- Modify organization structure within the Energy Services group to increase ability to

accept revenue generating work and ensure emphasis on control system and building system performance.

### Environmental Services

- Evaluate the Grounds and Landscape division for implementation of new shifts to also provide additional services to the campus community
- Pursue revenue enhancement opportunities with all divisions to offset funding reductions. This will especially apply to the Sign Shop and the recently acquired 3-D printer.
- Continue CNG tank replacement on university vehicles to keep costs down and extend vehicle lifespan.
- Incorporate trash compactor locations with current building projects to reduce refuse removal costs.
- Continue installation of deterrents to reduce bird roosting and nesting on buildings and structures.
- Renovation of the Duck Pond.
- Fully staff vacant positions.
- Custodial Services is to improve customer relations with quarterly meetings with their clients by informing them of new changes, custodial services job description, duties and expectations.
- Continue to implement equipment tracking program by video in-house equipment training library for Custodial Services.

### Finance & Administration

- PPD will continue to work with the Main Campus IT Department to complete the transition of the ISS IT function into their organization. Budget impact related to this change will be evaluated and presented to the senior management team in early 2018.
- The Accounting Department continues to add other departments to the new LoboTime approval process to eliminate LoboTime “Buff sheets”. The remaining three Areas (Area 2, Area 3, and Area 4) will be added early FY18 with a goal to have all Areas following the new process by October 2017. Special Activities, Sign Shop, and Automotive will be added in the latter part of calendar year 2017 with a goal to have those departments using the process by calendar year end. Following this new process will eliminate the need for after-the-fact reporting of time.
- The Trades Training Program will be expanded to include other job grades and positions within PPD. We will first review the Facilities Services Tech positions to see if there are opportunities to prepare them for future HVAC, Electrical, and Plumbing positions. PPD has had difficulty recruiting for these positions due to a high demand for trade positions in the Albuquerque market area.
- There is no redundancy for the monthly billing process. This process will be

documented by the Financial Analyst to ensure there is no interruption of service for this high-priority task. Thorough documentation of this task will minimize the potential impact of this critical process.

- The Accounting Department completed an evaluation of asset depreciation for all vehicles and large equipment owned by PPD. Recommendations for a phased-in approach will be made to the management team for consideration.
- The monthly review process for Financial and Capital Project Reporting will be enhanced for all divisions of PPD. Key information from TMA will be reviewed each month to ensure appropriate emphasis is placed on all critical areas. Meetings will continue to be conducted with the Director, Associate Directors, and Managers of each division. Budgets, Year-to-date Expenditures, and anticipated Balances are reviewed for all Operating Indexes. Completion Dates and projected Budgets are reviewed for all Capital Projects managed by PPD.
- Management will identify options to address the security concerns brought to our attention by the custodial staff. The majority of our custodial staff begins their day at 4:00 am. There is concern for their personal safety when traveling between their parked car and their work location. Providing a shuttle for the staff is an option under consideration.
- In an effort to improve communication within PPD, management will review the possibility of using electronic boards to communicate timely information. The boards would be located in each of the central areas. Documents will be posted in both English and Spanish.
- Recycling Services will hire a new supervisor and that person will be tasked with using TMA to create PM's for all recycling routes and work processes.

#### Maintenance & Planning

- Complete renovation of the first floor bathrooms at Social Sciences, at a cost of \$200K.
- Replace Reznor units with Aeon's HVAC units on the roof of the Mattox sculpture center at a cost of \$100K.
- Replace the leaking windows in the atrium area of the New Art Building, cost \$150K.
- Replace the roof over the original Natatorium pool at Johnson Center at a cost of \$250K.
- Replace the roof at Simpson Hall at a cost of \$150K.
- Replace skylights over Castetter Hall atriums at a cost of \$185K.
- PPD Safety committee produced a safety video to share with the campus in September. The video can be viewed on the PPD website.

#### Utilities

- Ford Utilities is conducting a loss of utility testing at their facilities. A complete review of all required control sequences to allow the plant to successfully continue operation

- during a campus power failure is underway. Several deficiencies have been corrected after power failure simulation testing.
- A high-pressure gas line is in process of being extended to the Ford Utilities Center. Several GTG trips have been attributed to the gas compressors. The gas compressors will be removed and salvaged, if possible.
  - An approximately 70kW PV system will be installed at the Valencia campus. This is Phase II of the PV system.
  - ECAP utilities billing implementation is currently in the commissioning phase of the system. Once the remainder of the bugs are worked out, we will go live. Estimated completion September 28, 2017.
  - Required engine and reduction gear replacement of GTG #1 is scheduled.
  - Replace the Trane chilled water control system with an expansion of the recently upgraded Rockwell controls.
  - Evaluate the current and future campus chilled water and steam load profiles to determine how best to supply needed additional cooling capacity to the campus. The effects of the coming construction of new large facilities including the Physics and Interdisciplinary Science Building (PAIS), McKinnon Center for Management and the expansion of Johnson Center on these profiles is also being evaluated.
  - Determine metering and data management needs to restructure I&G Utilities billing process from a lump-sum amount to building-by-building billing using ECAP. Assign responsibilities of Fiscal Services Supervisor and Accountant II accordingly.
  - Perform complete preventative maintenance inspections of switches and transformers at Central and North Campus Substations. Replace substation class battery system.
  - Pursue the use of iPads in conjunction with TMA, and evaluate their use for gathering plant operating data.
  - Develop a comprehensive plan for replacement of remaining old domestic water piping.
  - Revise and update the Utilities Division Construction Guidelines and integrate them with the PPD Engineering & Energy Services Design Standards.
  - Review and expand Division Standard Operating Procedures.



### **III. PERSONNEL APPOINTMENTS/SEPARATIONS**

PPD began the year with 419 staff members. Twenty-four employees joined our team this fiscal year. Seventy-two employees were separated (retirement, resignation, transfers, etc.) ending the fiscal year with 371 PPD employees. These totals exclude student and on-call employees. The department also welcomed a new director the last week of the year.