

# 2021 ANNUAL REPORT

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**UT Facilities Services**

**FES**

# EXECUTIVE SUMMARY

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The Facilities Services Department strives to advance the University of Tennessee's overall mission by maintaining and optimizing the physical resources and environments of the Main and Agricultural campuses.

The number one priority of Facilities Services is to create and maintain a clean, safe environment for students to learn, faculty to teach and perform research, and staff to work. Our dedicated staff of 700 achieve this goal through their 5,500 years of combined service.

Facilities Services continually improves upon top industry practices in order to support the goal of providing the best possible services while also maintaining the best cost model, with our employees' vested loyalty and ownership in the work they provide to the state of Tennessee and to the UT Knoxville campus community.

As we look forward to the university's continued advancement, with the constant support of our department, we compiled a report of our achievements for the last year in this annual report as we strive to exceed our goals for the 2019-2020 academic year.

This report is presented to showcase the continuing initiatives of the University of Tennessee, Knoxville Facilities Services Department in our drive to become a Top 25 Facilities Department. We are committed to be in the forefront of achieving the university's goal to become a Top 25 Research Institution.

It takes a team of dedicated Facilities Services employees to provide the services worthy of the University of Tennessee. This is an introduction to our commitment to being that team.



# TOP ACCOMPLISHMENTS

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## TOP ACCOMPLISHMENTS:

### Admin & Support Services:

#### Accomplishments for the Business Office:

The Business Office processed 18,311 invoices with a total of \$20.5 million paid to vendors.

The Business Office processed 19,878 work requests and recovered \$16.3 million from other campus entities.

The Business Office processed \$33.7 million in utility payments and recovered \$15 million from other campus entities.

Overall, the Facilities Services Business Office is responsible for approximately \$70.5 million in total processed financials.

#### Accomplishments for the Central Supply and Warehousing Office:

The amount of effort, dedication, and time that our Buyers put into procuring over \$1.2 million in materials and equipment to support the University with COVID-19.

The Central Supply Warehouse maintained an inventor parts accuracy of 98.87%. on an inventory value of \$575,939.

#### Accomplishments for the HR Office:

Hired and onboarded over 150 new employees, during COVID -19 (FY 2021). Processed 24 career ladder promotions and 20 Certified Cleaning Professional promotions. Participated with UT HR on 12 job fairs conducted locally and hosted 2 job fairs at the FSC to increase number and diversity of applicants.

Completed two USDOL Apprenticeship Programs; Landscaping and Building Maintenance. Hired 12 Building Maintenance apprentices. Established a pre-apprentice training program with the State of TN Adult Education/ESL Program. Currently working on an USDOL Electrical Apprenticeship Program.

# TOP ACCOMPLISHMENTS

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## TOP ACCOMPLISHMENTS:

Coordinated with and assisted Knox County CAC in training area workers displaced by COVID. Trainees are working at UTK in the Rocky Top Dining Hall facility and are being paid by a Federal Training Grant managed by Knox County CAC.

10. Developed a new Supervisor Leadership Manual to help develop supervisory skills and provide important HR and Fiscal UT and UTK policy information for new supervisors.

## Building Services:

Opened up and maintained the Zaenah Building and Rocky Top Dining.

Provide Covid Clean response to academic, athletic, and emergency housing areas of campus. Provide microbial protection treatment as well to these areas and strive to maintain hospital level cleanliness to them.

Continue to operate and provide additional support (football) to areas of campus in spite of hiring difficulties and a reduced staff.

## Communication & Information:

Communications & Public Relations: Created an integrated Work Request Survey into our Archibus IWMS system to capture customer feedback on individual requests and projects so we may better improve our services in the future.

Information Technology: Eliminated dependencies on our Legacy CMMS system (decommissioned the system) by deploying an estimating module, a uniform tracking app, and utility billing module into our Archibus IWMS system.

Training & Employee Development: Enabled 8 Facilities Services personnel to pass the CEFP exam, through the facilitation of APPA's P2P training (a program encompassing the full, multi-disciplinary range of educational facilities management principles and practices – from planning, design and construction to daily operations and general management)



# TOP ACCOMPLISHMENTS

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## TOP ACCOMPLISHMENTS:

### Construction Services:

1. Student Union Build Out
2. Classroom Project
3. Panhellenic Markers

### Design Services:

Hosted 235 attendees from 65 institutions for the 2021 Society of College & University Planners Southern Regional Conference. This supports the Strategic Plan Goals of connecting Tennesseans and the world, Vol is a verb, service and leadership, education at every stage of life. The conference theme focused on justice equity and inclusion.

Zeanah Engineering opened for classes Fall 2021 on time and on budget. This major accomplishment supports Strategic Plan Goals of: education at every stage, research that makes life better, and Vol is a verb culture of inclusion.

Education of campus with regard to real world sustainability solutions for the built environment. Manifestations of progress in this area: Stormwater Pond, Andy Holt Mall Extension, Zeanah & EESRB green roofs, Volunteer Boulevard Improvements, and updated Campus Standards for both Architecture and Landscape Architecture. This supports the Strategic Plan Goals of: education at every stage, and research that makes life better.

Creating a culture of leadership. Of our 14 team members, six have leadership roles in important organizations. Garrett Ferry, Tennessee Storm Water Association and Little River Conservation Area. Barbara Tallent, Classroom Committee. Maria Martinez, CFTA and multiple JED&I committees. Tiffany Casteel, TNAPPA Treasurer. Helen Hennon, State President of American Society of Civil Engineers. Andy Powers, Southern Chair Society of College and University Planners. Supports the Strategic Plan Goals of: education at every stage, research that makes life better, Vol is a verb, Nimble and adaptable, and modern R-1 connecting with every Tennessean and the world.



# TOP ACCOMPLISHMENTS

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## TOP ACCOMPLISHMENTS:

### Operations:

Rapid Response Team – Campus wide reduction of all classroom furniture to meet CDC social distancing guidelines prior to fall semester 2020. Restore all classroom furniture to pre-COVID-19 conditions prior immediately following spring semester 2021.

Landscape Services – Setup tents and hammock stands for outdoor study spaces prior to fall semester 2020. Remove tents and repair lawn spaces immediately following spring semester 2021. Provided daily transportation support of saliva samples for COVID-19 testing and monitoring efforts.

Sanitation Safety – Finished a three-year data transfer project of over 8,000 asbestos sample records and hundreds of pages of supporting documentation into the Clean Building Operating system of Archibus.

### Sustainability:

Provided 1700 reusable menstrual cups through Student Health Center and the Big Orange Pantry and 2500 reusable to go containers at 1 residential dining facility which led to full launch of all to-go containers being reusable from 3 dining facilities.

The UT Compost Facility hosted 8 tours with 92 participants and delivered 491,300 pounds of finished compost to campus and university-sponsored community gardens.

We hosted 4 FUTURE interns and the Sustainability Internship Program provided spots for 19 additional student interns working on various projects ranging from mapping out sustainable initiatives on campus to launching a student organization focused on spreading composting awareness on campus.

### Utilities:

Campus Wide , Building Access Card Reader installation for Apple Iphone and Samsung phones.



# TOP ACCOMPLISHMENTS

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## TOP ACCOMPLISHMENTS:

### Utilities Continued:

Replacement of compressors in the chillers serving the West Skybox that went down 2 weeks of the first football game of the season– 1 compressor in the North side chiller and both compressors in the South side chiller

Replacement of condensate pumps to new VFD pumps for energy savings at steam plant.

### Zone Maintenance:

One of our biggest accomplishments this year was to fill all positions in The Apprenticeship Program. Zone Maintenance has an apprentice worker in each zone on campus. This program helps to build the foundation for the future. We are so glad to have these workers on board to assist and help us grow.

Zone Maintenance has the lead role in LED lighting upgrades on campus. This year we have completed multiple buildings. Plant Biotech, Kingston Pike, Melrose G section, Dunford Hall, Greve Hall and multiple of other smaller jobs for energy conservation and efficiency.

The Predictive Maintenance Team has achieved a high success rate in finding compressed air leaks with an ultrasonic leak detector, getting those leaks repaired and quantify a cost savings. We've trained our Zone Maintenance personal to identify and classify air handling equipment, take inventory applied and apply the corresponding QR Codes to that equipment.

# WHO ARE WE?

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The Facilities Services Department is the largest non-academic department on the University of Tennessee, Knoxville campus. Our department is responsible for the basic operation and continuous maintenance of most facilities on the Main and Agricultural campuses of the University of Tennessee.

Campus facilities include approximately 294 buildings, more than 15 million square feet of space, 14 residence halls open for fall 2019, roughly 910 acres of land, and \$1 billion+ in projects under design and construction.

In addition to these facilities we are also responsible for electrical substations that provide power to most of our campus buildings, and a central steam plant that provides heating and hot water in most campus spaces.

We currently have more than 660 employees distributed through several specialized units in our department. These units are Administration, Administrative & Support Services, Communication & Information Services, Construction Services, Design Services, Facilities Operations, Energy Management, Building Services, Special Projects, Utilities Services and Zone Maintenance.

Our specialized offices include the STAR Team, Business Services, Central Supply, Plumbing & Heating Services, Electrical Services, Air Conditioning Services, Steam Plant, Landscape Services, Building Services, Building Finishes, Lock & Key Services, Sanitation Safety, Rapid Response Team, Communications & Public Relations, Employee Training & Development, IT Support & Maintenance, Project Coordination, Construction Team, Estimating Services, Stormwater Management, Landscape Response, Interior Design, GIS Projects, Archive & Space, Codes Enforcement, and Project Management.

Facilities Services staff members also oversee the university's environmental projects through the management of the Office of Sustainability.

Key parts of our organization are operating continuously, 24 hours a day, 365 days a year, and we are always on call.

Anyone on campus can contact Facilities Services 24 hours a day using our "One Call" program at 946-7777. Someone is always available to provide customer service and support to the campus community.

Our goal is to always enhance and maintain campus environments that are highly conducive to learning and research.





# OUR GOALS

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## OUR VISION

Our vision is to be knowledgeable and experienced stewards who serve the university by providing a beautiful, state of the art campus in order to educate, elevate, and improve our community and world.



## OUR MISSION

Facilities Services supports the University of Tennessee as responsible stewards of state resources by providing the campus with safe, clean, state of the art environments and empowering a campus community with a commitment to the tradition of excellence.

We support the University, empowering the campus community with a commitment to the tradition of excellence.



## OUR VALUES

We incorporate several important values into our daily operations. By embracing and enforcing these values, our department can better support the university's own standards in education, research and public service.

Teamwork – Internally and Externally   |   Accountability – Take Ownership   |  
Reliability – Follow Through   |   Commitment – Dedicated Stewards to our Community  
Continuous Improvement – Through Value & Innovation   |   Quality Services – Our Highest Priority

# ACCOUNTABILITY

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## SIGHTLINES & FPI SURVEY

Improving self-assessment and benchmarking measures has been a key component of the Facilities Services reorganization.

The ability to monitor current campus facilities conditions and forecast future risks is crucial to maintaining a safe and enjoyable campus environment.

Engaging with Sightlines Facilities Asset Advisors, the University of Tennessee Facilities Services Department has embarked on rigorous benchmarking and analysis, ensuring that reorganization efforts address critical needs on campus.

See Appendix A for more detailed Sightlines information and Appendix B for detailed APPA FPI Report information.



## ARCHIBUS SYSTEM

A primary component of Facilities Services increased accessibility, self-assessment, and benchmarking capabilities is the implementation of a custom Integrated Workplace Management System to replace the department's previous legacy system for requesting, tracking, and reviewing work orders. Archibus allows Facilities Services to better schedule, dispatch, manage, and report maintenance tasks efficiently using self-service capabilities to reduce operational costs and increase customer transparency and satisfaction.

The Archibus system gives our customers easier access to general work order information, broader access to more detailed reports, and real-time updates on work orders in our system. From there customers are also able to view or submit Project Requests, Key Requests, or Event Solicitations. Financial Officers are able to approve/reject work or provide substitute approvers when they know they will be out of the office.

# ORG CHART





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## ADMINISTRATIVE & SUPPORT SERVICES

### BUSINESS SERVICES OFFICE (BSO)

The Business Services Office is responsible for accomplishing personnel and financial support functions such as: budget build and execution, accounts management, accounts payable and receivable, ledger reconciliations, expense reimbursements, procurement card administration, contract administration, scholarship administration, asset management and movable equipment inventories, and maintaining multiple financial and administrative databases for the Facilities Services Department.

The Business Services Office is responsible for the financial administration and execution of the annual Facilities Services Departmental Budget which encompasses over 40 E&G Cost Centers as well as A, I, and WBS restricted accounts. In addition, this office provides departmental units' information and guidance regarding university fiscal policies and procedures and serves as the central point of contact for all questions related to Facilities Services financial matters.

There are three offices within the Business Services Office: Accounts Payable, Accounts Receivable, and Personnel & Administrative Support Services with responsibilities for each identified on the following pages of this section.

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## ADMINISTRATIVE & SUPPORT SERVICES

### WORK REQUESTS AT-A-GLANCE

63,763

Total Number of Work Requests  
Entered during FY 2021

13,986

Total Completed  
Non-Chargeable  
Work Requests at the  
amount of:

\$4,029,572.51

14,878

Total Completed  
Chargeable Work  
Requests at the  
amount of:

\$8,721,246.38

1,012

Total Completed  
Projects at the  
amount of:

\$7,571,877.73

19,878

Total Completed  
Work Requests and  
Projects for FY 21 at  
the amount of:

\$16,293,124.11

## ACCOUNTS PAYABLE

Accounts Payable operates within the Business Services Office and is the area in which Facilities Services Expenses incurred are processed for payment for items purchased, received, services rendered, etc. These payments include invoices, transfer vouchers, procurement card payments, petty cash reimbursements, and requests for special payment and special remittance.

**TOTAL INVOICES PROCESSED: 14,168**

with \$18,700,732.27 paid to vendors

**TOTAL PCARD TRANSACTIONS: 1,052**

with \$388,045.65 paid to vendors

**TOTAL E-INVOICES PROCESSED: 3,091**

with \$1,449,461.43 paid to vendors

**TOTAL GOODS & SERVICES PROCURED: 18,311**

with \$20,538,239.35 paid to vendors

This office also acts as a liaison between Facilities Services units and vendors for payment questions or contracts related to the procurement of goods and services needed to maintain the University of Tennessee, Knoxville campus.

In addition, Accounts Payable is responsible for the following:

- Maintaining the Facilities Services Department vendor database, including vendor contracts and contract details.
- Creating vendor requests, updating vendors remit to addresses, and obtaining W-9s for applicable vendors.
- Overseeing the Facilities Services Department procurement card purchases, distributing all of the procurement card charges to the appropriate accounts and reconciling account charges per fiscal policies.



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## ACCOUNTS RECEIVABLE

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Accounts receivable represent debts owed to Facilities Services for maintenance, repairs, rentals and services provided to auxiliaries, departments, groups or individuals surrounding the University of Tennessee's Knoxville campus. These debts are considered short term and are normally expected to be paid to the university within 30 days after the Service Requests are completed. The Accounts Receivable Office operates within the Business Services Office and is the area that invoices and collects Facilities Services maintenance, repairs and service receivables while following set UT policies and standards for the administration and support of any and all UT Facilities Services work requests. Accounts receivable for Facilities Services can be broken down into three main categories: Auxiliary Charges, interdepartmental charges and project charges.

During FY 2021 the Accounts Receivable Office processed the following auxiliaries, interdepartmental, and project recoverable charges and non-recoverable WRs:

Total Work Requests Processed: 19,878 with \$16,293,124.11 billed to and recovered from campus entities.

## UNIFORM ADMINISTRATION

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We provide each shop with appropriate PPE for their job. Employees that handle electrical issues or weld are issued Flame Resistant (FR) uniforms while others who work around campus during dawn or sunset hours are issued High Visibility (Hi VIZ) shirts so they be seen easily by vehicles when working close to roads or in street medians. Safety shoes are issued to all uniformed employees and coordinators who may need to visit jobsites around campus.

Uniforms are now being picked up for cleaning/repair/replacement and delivered weekly to 42 different locker locations across campus. Billing is also done on a weekly basis. With weekly charges we are able to monitor cost trends and easily detect outliers such as lost uniform charges and size changes. We also communicate with supervisors and foremen to ensure all uniforms are returned to us when people separate from the university to avoid no-return charges for the rental of uniforms.

## WHAT ARE WE LEARNING FROM COVID-19?

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Our Business Office has several take-aways from the pandemic of last year. This past year altered our professional and personal lives in many significant ways: remote working, communication, the use of technology, planning, social distancing and mask-wearing. What did we discover about each of these take-aways?

Lesson 1: Masks are useful tools.

They are a key COVID-19 prevention strategy because they provide a barrier that can keep respiratory droplets from spreading. When the pandemic began, it necessitated a global effort to ensure that everyone practiced behaviors to keep themselves healthy and safe—and keep others healthy as well.

Not everyone appreciated the wearing of masks, but they respected the outcome: no transmission of COVID-19 or even the flu for that matter!

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## WHAT ARE WE LEARNING FROM COVID-19?

### Lesson 2: Social Distancing works!

Practicing social distancing includes maintaining a 6-foot distance from those who are not part of your household, whenever possible, and wearing a mask when in public. It can also include avoiding non-essential travel and activities, and minimizing interactions in indoor spaces. New research from MD Anderson shows that social distancing reduces the spread of COVID-19. The study found that putting social distancing policies into practice in the U.S. and internationally corresponded with reductions in spread of the coronavirus. These results suggest that practicing social distancing is an effective public health tool to reduce the spread of the disease. We know that our group stayed healthier last year!

### Lesson 3: Flexibility is key.

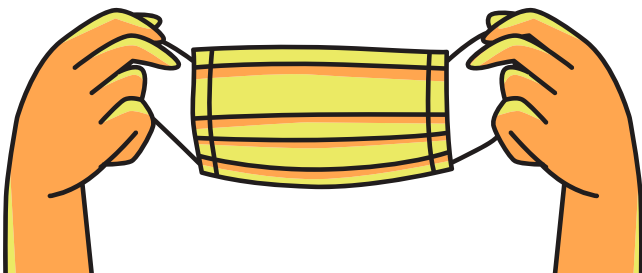
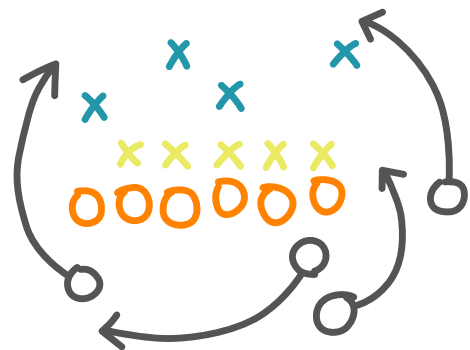
The traditional workday, comprised of a commute, a cup of coffee and eight hours behind a desk, could be behind us now. While it provided a nice routine for those who crave structure and social interaction, the pandemic has proven that with great change, many employees can thrive outside of traditional parameters. Our Business Office has operated on an every-other-day work from home schedule. For most, this schedule allows our employees to unplug from standard office tasks and give them a certain autonomy in their professional life.

Lesson 4: Communicate, communicate, communicate.

We have found that clear communication in a crisis situation is crucial. We learned that in 2020. And we learned that creating a dedicated channel (be it text message, email or intranet) to inform everyone of important news is vital to keeping our employees in the know. This included details regarding office closures, available resources, systems access and more. The key takeaway here is that whether folks are working from home, working from the office or enjoying a mix of the two, communication is an essential foundation to keep our team tight and working together. Group (Zoom) meetings, one-on-one meetings and quick “stand up” sessions were all be essential to keeping our team informed, accountable and connected.

### Lesson 5: Have a plan...work the plan.

One thing that we all have learned from 2020 is to be ready for any crisis that comes our way. Companies and businesses (including Higher Education facilities) should always have a strategic plan in place that can act accordingly for the safety and security of its faculty, staff and students. Even if it isn't 100% reliable, it is much safer to bet on a 90% crisis plan than to not be prepared at all.



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Lesson 6: Use the technology at your fingertips!

Technology is the future which has immensely helped all sectors of the economy to function properly. Education, healthcare and other businesses have been heavily reliant on technology to keep communication and coordination on the track for its workforce. Investing in technical apps and services that assure productivity, organization and communication of the workforce is a good investment. Our work teams were well informed by the host of scheduled ZOOM meetings held by our department leaders. These worked so well that many units function on weekly ZOOM updates. We couldn't have been as successful without our IT Work Team!



## UTILITIES RECEIVABLE

Another responsibility of the Facilities Services Accounts Receivable office is payment and processing of all utility charges on a monthly basis. Utility charges include the following activities: review and audit of utility bills from vendor(s), entering utility data into program for processing, review for accounting and metering accuracy, payment to vendor(s), interdepartmental and auxiliary billing.

In addition, the Business Services Office maintains payments, charges, ledgers, and reports for all Utility Services including:

- Utility meter lists.
- Consumption and charges database and reports.
- Installation and tracking of all new campus construction needs and costs for utility applications.
- Processing of utility contracts, applications and agreements for wastewater capacity and grease control permits.
- Title V compliance certification and emissions fees records and payments.
- Backflow testing requirements.
- Monthly and yearly budgets for all utilities.
- Reconciliation of utility account ledgers.

The Accounts Receivable Office also maintains related fiscal records for the Facilities Service Department while providing detailed information and summaries, service and support to the university community.

During FY 2021 the Utilities Receivable office processed the following:

Utilities E&G Payments: \$18,703,109.00

Utilities Recoveries (Auxiliaries): \$15,001,884.00

Total KUB Invoices Paid: 3,240 at the amount of \$33,704,993.00

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## HUMAN RESOURCES OFFICE

The Human Resources Service Office provides comprehensive Human Resource service for the Facilities Services Department. The HR office is responsible for coordinating and managing the ongoing human resource and payroll functions on behalf of the Facilities Services Department and provides critical support to the eight-unit directors and the Associate Vice Chancellor. The office accomplishes HR services including coordinating, managing and overseeing the recruiting, interviewing, and hiring of new staff, and assisting supervisors and staff with personnel and payroll issues.

The office serves as a vital centralized link between the Facilities Services Department, UT Knoxville Finance and Administration, the UT Knoxville Office of Equity and Diversity, the UT Knoxville Human Resources Office, and the UT Treasurer's Office. The group interprets, communicates, and advises unit directors and supervisory personnel on Human Resources and payroll policies and procedures and provides direction and guidance in accomplishing human resource functions. The unit also coordinates and manages staffing services for more than 600 employees to include coordinating performance review evaluations, managing personnel and payroll changes, leave applications, promotions, and disciplinary procedures. The office prepares reports on staffing levels, career path progression and eligibility, apprenticeship eligibility and training, employee certification requirements and eligibility, employee leave balances, and payroll expenditures for the unit directors' and employees' planning purposes.

Additionally, the HR Office serves as the focal point for the University Apprenticeship Program. This program is the foundation of developing future leaders for Facilities Services and will ensure diversity is maintained within the facilities workforce.

Despite the COVID-19 Pandemic, during FY 2020/2021 this office processed the following HR transactions between July 1, 2020 and June 30, 2021:



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**169 & 144**  
*Job Offers      New Hires*

Job Offers: 169  
Total New Hires: 144  
Declined Offers: 25\*  
Total Terminations: 154  
Position Change Forms: 270  
Personnel Change Forms: 115  
Total Recurring Pay Forms: 112

**19** *Total  
Custodial  
Certification  
Increases*

Total Custodial Certification Increases: 19  
Total Career Path Increases: 24  
Total Payroll-Timesheets/Books Reviews: 11,232  
Additional Pay Forms: 4

**12,232**  
*Total Actions Processed*

HR Exit Forms: 108  
Job Fairs: 1 In house, 6 outside, 2 virtual  
  
In addition, this office edited, corrected and audited 26 bi-weekly payrolls for more than 550 nonexempt employees during FY 2021 and performed 12 monthly payroll edits, corrections and audits for 58 exempt employees during FY 2021.

\*Applicant either No Showed on date of hire (10), called in after accepting the offer to decline (5) or took another job due to the length of hiring time and turned down the offer (10).

## THE SKILLED WORKFORCE - THE FS APPRENTICESHIP PROGRAM

The Facilities Services Apprenticeship program is new to our department, but based on a proven method of career-training built around a strong partnership between higher education, community/technical colleges, and the government. This three-way partnership encourages education, economic development and workforce development and is a financial benefit not only for the apprentice, but for the University of Tennessee. Our apprenticeship program combines supervised on-the-job training (OJT) with related classroom instruction and is a cost effective way that enables the apprentice to get trained while they:

- Earn a living wage and reinvest their earnings into our local economy
- Receive health and other benefits from the university
- Get an education and a sustainable career path
- Are a part of the workforce solution for businesses and industry

Just how are we accomplishing these goals?

Education – Our Apprenticeship program combines on-the-job training (OJT) with classroom instruction, allowing a student worker to earn a living wage while achieving continued growth in their occupation. Strategies have been developed to address the shortage of instructors and need for state of the art training facilities – reinforcing the connection to education.



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## THE SKILLED WORKFORCE - THE FS APPRENTICESHIP PROGRAM (CONT.)

Economic Development – Apprentices earn a wage while they learn on the job. Every six months, as they continue to learn and perform more complex tasks proficiently, apprentices receive pay increases. With wages earned and continued pay increases, apprentices can spend their earnings in our community, stimulating the economy, and providing relief to the State’s unemployment insurance pool and social services. Apprentices also receive health and other benefits from our university and are no longer dependent on the State for those items.

Workforce Development – Apprenticeships are a cost-effective way for our department to train employees. By developing our apprenticeship program, Facilities Services makes a powerful statement...taking on apprentices and training the next generation workforce.

Apprenticeship – Upon completion of an apprenticeship program, participants have higher annual earnings than those who do not participate.

Retention – The University of Tennessee, Facilities Services and the Apprentice shares the benefit of our apprenticeship program with increased productivity, safety, worker versatility, and employee retention. Typically, apprentices remain loyal to their employer because they recognize the fact that the company has invested time and energy to help them achieve their career goals.



## CENTRAL SUPPLY OFFICE

Around the year 2010, UT Knoxville campus administration recognized the need and importance of maintaining the campus assets (buildings, grounds, research labs and equipment, etc.). As part of the Top 25 goal-setting initiative, the Facilities Services administration began a department-wide overhaul and reorganization which included the push for an up-to-date, organized and maintained MRO Storeroom.

As of July 2017, all warehousing locations are clearly marked and undergo a comprehensive, hands-on physical inventory each year. The Central Supply Warehouse includes the following descriptives:

- Part Number
- Part Description(s)
- Part Type
- Part Location(s)
- Quantity on Hand
- Vendor(s)
- Cost Details
- Special Information

Facilities Services Maintenance Supply is consolidated into three main parts and SKU locations for ease of service to the UT Knoxville campus. The FY 2021 Central Supply Warehouse Activity and Office Buyer Activity is detailed below.

Central Supply Warehouse Activity Totals: 50,248 transactions issued, received and replenished with an inventory value of \$572,660.

Value Accuracy: 98.87%

Central Supply Office Buyers Purchase Document  
Total Orders: 5,764 orders placed with a purchase value of \$9,092,229.

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## CENTRAL SUPPLY OFFICE VEHICLE OPERATIONS

After the Facilities Services Department moved to the Sutherland Facilities Services Complex (FSC), we had to address the issue of not having enough parking spaces for personal vehicles. The Central Supply Office implemented a shuttle program to transport staff and student workers to and from the FSC, our Concord parking lot, and the main campus. The schedule allows van operations from 5:30am to 5:30pm, Monday through Friday. This operation was working well until COVID-19 hit in March 2020. We had to suspend the shuttle program until May 2021, and resumed this operation once it became safe to do so.

The Central Supply Office is also responsible for the pooled vehicles in our fleet (currently 16) available to any licensed Facilities Services staff member who may need transportation for job assignments.



## CENTRAL SUPPLY OPERATIONS AND COVID-19

The Central Supply Office played a key role against the outbreak of COVID-19. Some of our buyers dedicated most of their time addressing issues concerning this deadly unseen enemy. They worked closely with Zone Maintenance, Building Services and our directors working at the EOC to help satisfy our immediate and long-term needs. Our warehouse staff served as the front line in receiving outside shipments in a very responsible and safe manner to help assure the safety of everyone else in Facilities Services.

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## BUILDING SERVICES

### Accomplishments



The Building Services Office maintains more than 17,000,000 square feet of academic and athletic space for the University of Tennessee, Knoxville and University of Tennessee facilities around or on the Knoxville campus. Building Services provides 24 hour per day, 7 day a week service when and where it is needed. This includes all athletic events, concerts, and university functions. With the addition of the West Dining Hall and Zeanah Engineering Complex being open, we have expanded our portfolio to include Dining Services and more Engineering areas.

Additionally, Building Services holds a Cleaning Certification Program for employees which is a 22-week education program on professional custodial techniques. Employees who complete both sections of the program successfully are submitted for a 9% pay increase. This past year, 2 shifts totaling 20 employees, successfully completed the program.

93% of Building Services chemicals are categorized as “Green” Cleaning Products. The 7% which are not considered “Green” are hospital grade disinfectants which Building Services uses for all restroom area type cleaning. The hand soap on campus was designed by the University of Tennessee School of Public Health’s Clean Hands Graduate Committee. Building Services, also, uses Clorox T-360 hydro static disinfection system to routinely disinfect areas of campus. Along with this, we have adopted microbial spraying to protect all campus surfaces from germ growth.

In addition, Building Services provides set ups for our multi-use buildings. The office has 13 supervisors and 260 service aides. Building Services is led by a Director and three Building Superintendents. Building Services employees service all academic and athletic facilities, including the Student Union, in four shifts, seven days a week. Building Services has successfully standardized cleaning products used by the office, resulting in reduced inventory levels. Building Services is committed to keeping the University safe from disease and viruses. We use hospital grade disinfectants and have begun pro actively treating heavily occupied areas for germs. Building Services has been proactive in fighting and preventing the spread of COVID-19 on campus. All zones are trained to do “Enhanced Cleaning” in contaminated areas to prevent the spread of the virus.

Recycling is an important part of what Building Services employees participate in. During the past year, recycling numbers have grown and solid waste numbers have dropped in spite of the university’s continued growth.

Major accomplishments for this year have been:

1. Introduction of robotic vacuuming machines
2. Computerized Building Inspection Program
3. Training of all new employees
4. Development of a Departmental Service Guide
5. Trained enhanced cleaning teams for Covid treatment.

# 2021 ANNUAL REPORTS

## COMMUNICATION & INFORMATION

### Communications and Public Relations

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#### FACILITIES SERVICES SCHOLARSHIP FUNDS

The Student Assistant Student Scholarship Fund was established in October 2017 by a committee that represents each Facilities unit. The scholarship was fully endowed in FY19. Due to COVID-19, precautions had to be taken with our fundraising efforts, but thankfully, we were able to host the golf tournament at Three Rivers Golf Course in May. The golf tournament was a great success with more participants than ever. More than \$20,000 was raised for Facilities Services Scholarship funds (specifically the Bob Evans Scholarship Fund), and we are planning the 2022 tournament while keeping in mind lessons learned from this year.

#### OFFICE OF EMERGENCY MANAGEMENT

The communications coordinator is involved with the Facilities Services portion of emergency management in various levels. The coordinator acts as the Emergency Operations Center Coordinator (EOC) for the department, as well as support for the call center. The office is also responsible for the upkeep of the department's Emergency Response Plan that ties into campus-wide emergency response. The coordinator also acts as the campus-wide Public Information Officer for Facilities Services related emergencies.

This year, the coordinator's role in the EOC has looked a little different in response to COVID-19. Our Communications Coordinator is heavily involved in EOC planning, especially with the coordination of space closures and enhanced cleaning. Initially, the coordinator was brought on to serve as a communications liaison between Logistics and the Joint Information Center (JIC) to develop any communications needs related to Housing, Facilities Services, and/or Vol Dining.

She's also stayed busy communicating interdepartmentally through the activated Facilities Response Center (FRC) to make sure Facilities Services employees are well informed regarding campus protocol related to COVID-19. This work continues and will continue for the duration of the pandemic.

#### APPA FPI SURVEY

Each year, the communications coordinator is responsible for the completion of the APPA FPI Survey.

The coordinator gathers all the necessary information from Facilities, as well as other campus units. While the survey itself was changed drastically in the past year, the Communications Coordinator worked across units to gather information and submit the report.

#### AMERICAN SCHOOL & UNIVERSITY

During the course of the year the office organized, created, and submitted separate portfolios featuring campus buildings for American School & University publications. The portfolios consisted of architectural-style images, project data, site plans, and manufacturer lists.

#### DEPARTMENT EVENTS

The department's two annual large scale events are organized by the communications coordinator. The Fourth of July Picnic and Holiday Parties are planned and executed by Special Projects with the support of Communications & PR. This includes space and event rentals, food orders, soliciting prizes, transportation, and hosting. An additional holiday party has been added to accommodate third shift employees and it takes place the same day as the first shift event. Because of COVID-19 restrictions, we were not able to hold either gathering. Instead, we coordinated and executed meal distribution events that enabled teams to share a meal while maintaining safe distances.



# 2021 ANNUAL REPORTS

## COMMUNICATION & INFORMATION

### Communications and Public Relations

These events were well received, but we hope to resume our regularly scheduled Fourth of July Picnic and Holiday Parties in 2022.

#### FACILITIES SERVICES ANNUAL REPORT

The Facilities Services Annual Report is one of the large-scale projects the Communications & Public Relations Office completes on an annual basis. Last year's document details a department overview, unit summaries, and unit/office annual reports. The Communications & Public Relations Office worked with each Facilities Services office to update their summary and annual review information for the document. Each year the report is published on the department website.

#### NEWSLETTERS

The Communications & PR Office has continued to maintain and expand upon the content in both Facilities Services Weekly and the Facilitator. This year, we shifted focus in the Facilitator to include more content about our people rather than focusing on procedure. Each issue highlights at least one Facilities Services employee who answer a series of questions about their work at UT as well as their life outside of FS. The response from many in the department has been overwhelmingly positive as we work to create buy-in and promote cross-unit collaboration.

Facilities Services Weekly continues to be a wealth of project information for many, both inside and outside of the department. The Weekly is consistently within the Top 10 most visited pages on the Facilities Services website.

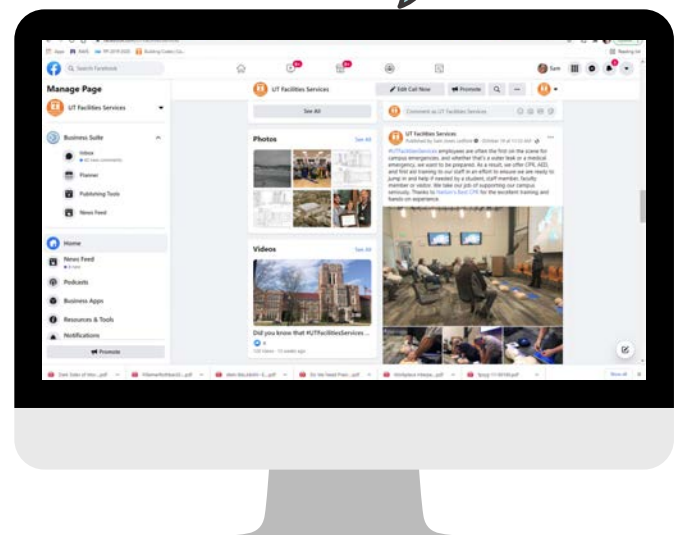
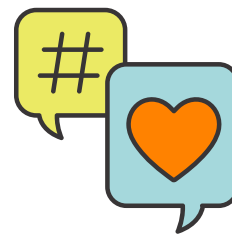
#### EMPLOYEE RECOGNITION PROGRAMS

The communications coordinator organizes and promotes departmental recognition programs. These programs include Employee of the Month and Exceptional Team.

Gift cards are given to Employee of the Month and Exceptional Team members each month and the coordinator organizing all details associated with the programs.

#### SOCIAL MEDIA OUTREACH

The Communications & PR Office is responsible for the management of the department's five different social media platforms – Twitter, Instagram, Facebook, YouTube, and Pinterest. The reach of the department's existing social media accounts expanded considerably during the past 12 months. The FS Twitter account now has 1,575 followers compared to 1,518 in August 2020, the Instagram account now has 1,095 followers compared to 1,016 in August 2020, and Facebook likes have increased to 900 from 855. These platforms are used to promote department events, announcements, notices, and accomplishments. Each month the office produces analytics of each of the social media sites to track the department's progress and reach.





# 2021 ANNUAL REPORTS

## COMMUNICATION & INFORMATION

### Communications and Public Relations

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#### BUILDING REPRESENTATIVE LIST

The office continues to update the campus-wide Building Representative List three times annually. This affords Facilities Services the ability to keep a more accurate list for both maintenance and emergency preparedness.

The office also maintains an emergency contact list for the use of the Office of Emergency Management and UTPD.

Once the list is updated it is posted to the Facilities Services website.

#### BIG ORANGE FAMILY CAMPAIGN

The communications coordinator serves on the executive committee for the UT Knoxville Big Orange Family Campaign. The coordinator organizes all team leads and materials, promotes the campaign, and provides assistance however necessary. In 2021, Facilities Services reached nearly 75 percent participation rate during this year's campaign which is an increase of 10 percent over the previous year.

#### PUBLIC RELATIONS CAMPAIGNS

The Communications & PR Office has implemented multiple PR campaigns in FY 21, specifically within the realm of Facilities Services' involvement in campus efforts to bring back students safely this fall. New in 2021, we're working with Design Services to produce Throwback Thursday content that tells the story of the ever-changing campus landscape. These posts have been well-received and have sparked conversation among our followers.

As Neyland Stadium was prepped for a full schedule of home games, Zone Maintenance held their annual Big Orange Flush event with the purpose of simulating game day usage of the stadium's plumbing.

While that test is not new, we featured content related to the event on our social media platforms for the first time. The response was incredible. Local news stations picked up the story, and a little more light was shed on the many ways we work behind the scenes to prepare campus for students, staff, faculty, and visitors.



#### VOLUNTEERS FIRST IMPRESSIONS CONTEST

While the pandemic prevented our surprise check presentations for Year 3 of the Volunteer First Impressions contest, it certainly did not hinder us from delivering the news to the winning entrants via Zoom call. After announcing the winners, our teams went to work to bring the vision of each winner to life. While Construction, Utilities, and Design take the lead on completing the projects that make a great first impression, the communications coordinator promotes the contests, gathers all submissions, coordinates announcements of the winners, and takes before, in-progress, and after photographs of each project to share once these projects are complete. This year, 12 projects were selected from students, staff and faculty submissions.

### Information Technology

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Much like all of the Facilities Services department, the COVID crisis presented an opportunity for the FS IT (Facilities Services Information Technology) team to shine.

# 2021 ANNUAL REPORTS

## COMMUNICATION & INFORMATION

### Information Technology

The shift towards mobile/remote work methodologies increased the number of devices that the unit supports and increased the number of support contacts/requests to the unit. Even with the increase in workload, the unit was able to place great emphasis on implementing changes designed to move the department forward on the technology front. Some of this year's accomplishments include:

- Created a 5 year rolling technology plan for the IT department focused on keeping the department moving forward in the technology sector
- Established a formal set of metrics to track the annual productivity of the IT team in order to measure year over year progress.
- Created a Succession Plan for the IT unit
- Wrapped up the upgrade to Archibus 24.1. Began adding user requested enhancements.
- Supported the implementation of new Estimating software to move to a paperless process
- Assisted the Design Department with the search and implementation of a new document management software (OnBase)
- Moved from per seat licensing to individual licensing for AutoDesk software (AutoCAD, Revit)
- Began the process of evaluating new CMMS systems as a future system upgrade

#### DEVICES

Total computers supported (PCs & Laptops)	906
Total devices supported (All types)	1652

#### PERSONNEL

Total FS Personnel	577
IT Support Staff	3
IT Staff to User Base - Actual Ratio	1 to 192

- Discontinued use of the legacy CMMS system and server to phase out old software and hardware

-Replaced 88 computers with new models using the centrally funded CUP (Computer Upgrade Program). Scheduled to replace 102 computers with new models next year. Placed emphasis on providing laptops to support the Work from Anywhere model. Management software, and familiarizing users with mobile hardware

-Inventoried radios and upgraded to latest patch. Plan to upgrade to Private Calling next year.

-Supported the implementation of QR coding to tag fixed assets

The FS IT unit also has big goals for the next coming year, which include:

- Migration to Windows 11
- Support GIS, BIM, and TCO initiatives
- Update all radios to Private Calling
- Migrate to One Drive away from H: drives
- Hire IT Technician
- Evaluate, select, and begin configuring a potential new CMMS software
- Dashboard development to support data driven decision making
- Begin purchasing and distributing computers with the latest tech (USB 4.0, PCIe 5.0, DDR5)
- Continue the shift towards mobile-enabled work by procuring more mobile devices, evaluating our current Mobile Device

#### TIME

Total IT Work Hours	5640
% IT Admin task time	6%
% IT Support task time	73%
% IT Training time	3%
% IT Project time	18%

#### TRAINING

Training Hours per IT Staff Member (Average)	52.33
# of IT Projects Completed	34

# 2021 ANNUAL REPORTS

## COMMUNICATION & INFORMATION

### Employee Training and Development

#### PARTNERSHIPS

##### **Environmental Health & Safety (UT System)**

In fiscal year 2021 we continued our partnership with Environmental Health & Safety (EHS). We work with EHS to deliver CPR/First Aid training, respiratory protection training, and forklift training. In addition to respiratory protection training, EHS also conducts respirator fit testing for all Facilities Services employees required to wear a respirator. Brandon Best, Senior Safety Specialist, served on the hiring committee for the open Training Specialist position within Facilities Services, as well.

##### **Employee and Organizational Development (UT System)**

We worked closely with Employee and Organizational Development (EOD) to create our annual OSHA training courses within the K@TE system so our employees can maintain their compliance for safety training. Leigh Mosely, Senior Training Specialist, worked with us to load all the new Archibus training modules to K@TE to prepare employees for the upgrade that occurred.

##### **Human Resources (UT Knoxville)**

Our normal partnership with Human Resources was limited due to COVID-19 restrictions that were in place during FY 2021. Instead of hosting in-person events like benefits chats, we advertised the online sessions that were held for all of campus and the UT system. We participated in the STRIDE for Staff events created for Finance & Administration employees.

#### COLLABORATIONS

In addition to external partnerships in fiscal year 2021, Training & Development effectively collaborated with internal Facilities Services units to provide training and services to our employees. Highlights of this collaboration include:

Human Resources – Weekly orientation of employees during the height of COVID to ensure staffing numbers were as high as possible.

Building Services – With the increase in the number of temporary employees needed, we established a set schedule for when people would be available to provide temporary employee processing.

Utilities Services – Developed and implemented Unit Level Orientation.

#### ACCOMPLISHMENTS

In addition to external partnerships and collaborations in fiscal year 2021, Training & Development effectively accomplished many additional tasks. Highlights of these tasks include:

New Employee Orientation (NEO) – Facilities Services takes pride in its attentive process of welcoming and orienting new employees. As the largest non-academic department on campus, we hire a significant number of people every year. In fiscal year 2021, the Training & Development team conducted 29 NEO sessions for a total of 71 new employees. This is an increase of three (3) NEO sessions from the previous fiscal year with a reduction of 28 total employees. This reduction in the number of employees hired and oriented is due to the hiring freeze put in place by UT System Human Resources during the COVID-19 pandemic.

# 2021 ANNUAL REPORTS

## COMMUNICATION & INFORMATION

### Employee Training and Development (cont.)

#### Accomplishments (cont.)

Fiscal year 2021 Respiratory Protection Program – Specific work tasks require employees from Utilities Services, Zone Maintenance, Paint & Sign Services, and Sanitation Safety to use a respirator for protection from exposure to hazardous atmospheres. Training & Development schedules medical evaluations, provides fit testing (in partnership with EHS), and PPE and respiratory protection training for affected employees. Fit testing was offered monthly to medically-approved employees. Data was collected from fit-tested employees on the frequency of respirator use and tasks performed while working. 90 employees were scheduled to attend breathing tests at Occupational Health Services. Of those, 74 were approved for fit testing. From those 74 employees that were approved for fit testing, 58 employees passed their respirator fit test.

Training & Development strives to implement several different safety training events throughout the year when social distancing requirements are not in place. Unfortunately, due to the COVID-19 pandemic, our normal training sessions were not able to happen for a variety of reasons. OSHA Compliance Training – We reported a compliance rate of 99.2% among full time employees for calendar year 2020. This is an increase of 2.2% from 2019.

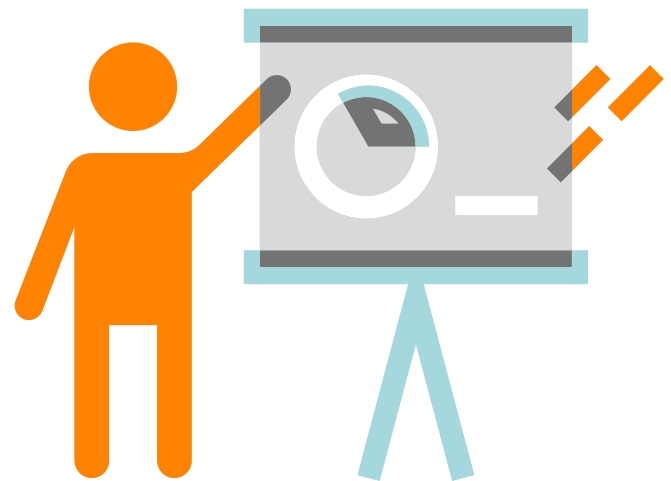
Career Paths – The responsibility of developing future career paths was transferred to FS Human Resources.

Employee Changes – Rob Moyer, Training Specialist, left UT to pursue another career opportunity. A search for a new Training Specialist has been underway since February 2021.

Throughout fiscal year 2021, the Employee Training & Development team worked to support the department as they worked from home, in the office/field, and as they were quarantined or isolated. Paper training packets prepared in FY 20 were used in FY 21 and continued to be hand graded, recorded, and filed. From July 2020 through May 2021, our team worked remotely with the exception of coming in to process temporary employees or conduct new employee orientation.

During this time, the development of several training programs was completed by Training Specialist, Beth O'Neill. She implemented a new training program called the Facilities Services Mini Train. Five videos were created in the second half of FY 21. Additionally, she completed the development of Basic Computer Training that will be implemented in FY 22. Leadership and Management training programs were also developed during the final months of FY 21.

The Employee Training & Development team remains focused on implementing new training programs for the department and ensuring those training programs can be offered in a format that proves to be accessible to the vast majority of employees.



# 2021 ANNUAL REPORTS

## CONSTRUCTION SERVICES

Over the last year, it has been very exciting in the Facilities Services Construction department. The Facilities Services Construction Department consist of, Projects, Building Finishes/STAR, and Paint & Sign, as a team we have completed over 1700 work request and/or projects and have over 600 currently open. During 2020 projects were put on hold unless they were needed for safety or security on campus, January 2021 projects was released. We started with a backlog of 100+ projects and by June of 2021 we had completed our backlog of projects. We completed 23 classroom projects with more scheduled for this fall.

### Project Team

Volunteer Hall- Painting all rooms and common spaces on the 9th and 10th floors.

Art & Architecture- Ewing Gallery.

Science & Engineering- Lab renovation.

Ceramics Annex- Structural project.

Andy Holt Chiller building- New roof.

Pedestrian Mall- Constructing a display for Panhellenic markers.

Stokley Management Center- Renovation of second floor.

UT Drive Building B- Wind Tunnel lab renovation.

UT Culinary Institute and Creamery- Constructing Creamery retail space.

Nielsen Physics- 6th floor painting.

McCord Hall- Lab renovation.

Morgan Hall- Time capsule removal.

Student Union- Shell buildout space.

Communications- Water Intrusion and Renovation

Glazer Building- Classroom Renovation

Min Kao- Lab Renovation

### STAR Team

Conference Center – Pacline delivery.

Supporting research.

267 work orders completed since 7/1/2020.

### Paint and Sign

COVID-19 signage across campus.

McClung tower- Maintenance painting.

492 Work orders completed since 7/1/2020.

## DESIGN SERVICES

Like most staff on campus, Design Services started FY2020-2021 working remotely. Even remotely, we continued progress on all projects, and our team maintained a presence on campus throughout the pandemic as all our design and construction work continued as planned. We transitioned back to our offices in Facilities Services during the summer as the University prepared to welcome back students, faculty and staff to campus for a full in-person experience during Fall 2021.

### COVID-19 Response Efforts

Design Services continued efforts to support the University as students, faculty and staff return to campus. We continued to visit and review office spaces with users throughout campus offering evaluations, wellness screens and social distancing guidelines. We also assisted in post-COVID re-setting of classrooms and other public spaces.





# 2021 ANNUAL REPORTS

## DESIGN SERVICES (CONT.)

### Capital Projects Team

The Capital Projects Team manages UTK's capital building projects, and plans and estimates funding for future Capital Projects. We work in concert with Facilities Planning and manage projects from the campus representation side. Our work involves extensive organization and involvement with user groups, facilities services departments such as utilities, zone maintenance, construction, and commissioning. The work includes conceptual development of projects and cost estimating, programming activities, design phases, value engineering, and construction administration, and closeout. During FY 2020-2021, the team accomplished the following:

#### •Completed Projects

- o Rocky Top Dining Hall.
- o Third Creek Building.
- o Reese Hall chiller installation.
- o Renovation of old Thackston school building to host the Pediatric Language Institute.
- o Mezzanine and Conference Center ASP Phase 1.
- o Student Union shell space.
- o UT Culinary Institute and Creamery.



#### •Capital Projects in Progress

- o Zeanah Engineering Complex
- o Vet Med Teaching and Learning Center
- o Energy and Environmental Science Research Building (EESRB)
- o HVAC Improvements (Taylor Law Chillers)
- o ADA Improvements – Perkins & Nielsen Stairs
- o Neyland Stadium – New LED Lighting, West Lower Bowl and North Videoboard
- o Multiple Building Fire Safety Upgrades 19/20
- o AHT Chiller Building Roof Replacement
- o Walters Academic Building Improvements – Phase 2 and 3



#### •Capital Projects in Design

- o Science and Engineering Infrastructure Upgrades
- o Haslam Field Expansion – Anderson Training Center
- o Art + Architecture Improvements
- o William T. Bass Building Addition
- o Nursing Building Renovation
- o Thompson Boling Arena Improvements
- o Hodges Library Renovation for UT Press
- o Academic/Research Storage Building
- o Conference Center Tunnel Repair
- o Programming for new Chemistry Building
- o Programming for new Carousel Theatre
- o Programming for Haslam Business Expansion
- o Programming for Melrose Hall Demolition/Renovation
- o Programming efforts for Innovation South Project

# 2021 ANNUAL REPORTS

## DESIGN SERVICES (CONT.)

### Special Projects & Studies

- o Buehler Structural Repair Study
- o Facilities Assessments
- o HVAC Systems Improvements at HPER
- o Continuing to resolve outstanding POCAs around campus
- o Development of Fire Impairment procedures
- o Preparation of documentation for THEC and the SBC
- o Construction Administration
- o Campus Standards Update



In addition to these ongoing projects, the team also prepared funding applications for \$52,587,700 of Capital Projects. This included:

- \$4.3 Million of space refreshing
- \$4.85 Million of space renovation
- \$3 Million of lab renovation
- \$300,000 of demolition
- \$15 Million of Grounds improvement such as West Volunteer Streetscape and creek stabilization
- \$2.2 Million of lighting improvements
- \$1 Million for the Master Plan
- \$1 Million for utilities improvements.

Design Services provided budgeting, and project management throughout design and construction, and brought the Zeanah Engineering Complex in nearly \$4 Million under budget. This remaining money will be released to the University to fund maintenance activities. Navigating our way through the pandemic of 2020, we regularly communicated with campus administration and the Office of Capital Projects to stop and start projects as funding allowed. A “Go/No Go List” was maintained throughout the year as a communication tool for this effort.

### Landscape and Natural Resources Team

The Landscape and Natural Resources Team goal is to create a landscape that reinforces a sense of community for learning and living; that conveys a sense of place, history, and character unique to the University of Tennessee; conserves and protects natural resources through functional design and responsible stewardship. To achieve our team vision and support the primary mission of Facilities Services, this team develops and maintains the Campus Landscape Vision and Site Standards document. The team prepares site construction documents and specifications for projects to be executed by the Facilities Services Department and plays a vital role in site design review and construction administration for projects executed by the Facilities Planning Department. This year’s accomplishments include the following:

#### Landscape

- Structural assessment of Andy Holt Tower Garage
- Armed Forces Memorial Design – In design and fundraising efforts
- Campus Master Plan Preparation including hosting several in-house charrettes and sector plans to gather user input.

# 2021 ANNUAL REPORTS

## DESIGN SERVICES (CONT.)



### Landscape (cont.)

- Completed Athletics Master Plan Development and amendment to Concord Property Master Plan.
- Implemented a Campus Wide License Plate Recognition (LPR) Camera Project.
- Cumberland Ave. Lighting and Signalization upgrades.
- Participated in Facilities Services First Impressions Contest 2020 & 2021.
- Internal study on Historic Building Review
- Completed construction of Johnson Ward Pedestrian Mall Phase 1 and began construction of Johnson Ward Pedestrian Mall Phase 2.
- Continued our Liaison Role with Tickle College of Engineering and College of Arts and Sciences
- Began construction on the National Pan-Hellenic Council Plaza
- Several signage projects including COVID, General campus exterior signage, Center for Global Engagement, UT Gardens, Conference Center Parking Garage, Donor Signage, Egress Signage, Means Restriction (Suicide Prevention)
- Began construction on TREC Pool Project – Phase 1, as well as preparing TREC Pool Project – Phase 2 for construction
- UTIA Gardens Education & Discovery Center Program.
- UT Research Park at Cherokee Farm Parking Lot
- Wayfinding Signage Materials – New vendor contract procured
- Began design process of West Volunteer Streetscape

### Natural Resources

- Completed 68 Stormwater Compliance Inspections on active construction projects
- Completed first-round assessment of 12 miles of shoreline
- Completed rehabilitation of a 2nd Creek segment following a significant slope failure
- Conducted dry weather screening on all 74 of UTK's outfalls
- Converted approximately 30,000 square feet of impervious surface to drain to green infrastructure
- Hosted "Paddle-Off event with the Water Quality Forum to raise funds and awareness for local water quality
- Hosted a rain barrel auction at UT Gardens with the Water Quality Forum to raise funds and awareness for local water quality
- Hosted and coordinated 12 Adopt-A-Stream cleanups
- Regional Stormwater Storage Facility – In design
- Second Creek Rehabilitation Project – In design
- Second Creek Stabilization Project – In design
- Successfully completed full MS4 program TDEC audit



# 2021 ANNUAL REPORTS

## DESIGN SERVICES (CONT.)

### Digital Assets Team

The Digital Assets team provides ongoing support to Facilities Services and the University in creating, collecting, updating, managing, and maintaining all digital information relating to the University's physical environments, assets, and archived documentation. During FY2020-21, our team has accomplished the following tasks in the following four disciplines:

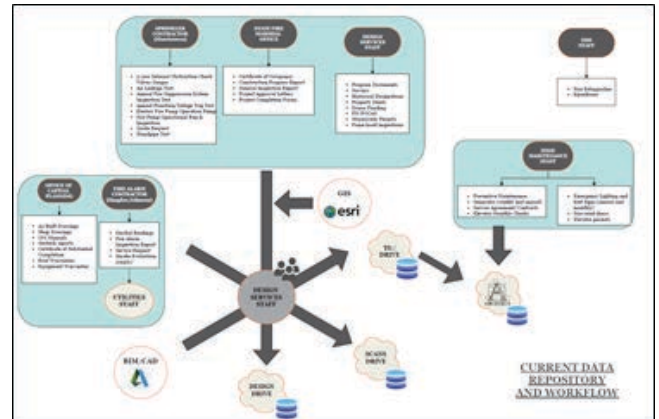
#### Space

- o Completed the Annual Space Survey of all rooms maintained by Facilities Services.
- o Trained and assisted space managers throughout campus in auditing rooms
- o Completed 21 building space audits and updating small-scale floorplans
- o Assisted in completing space building audit drawing changes
- o Ongoing effort in updating campus wide building evacuation plans.
- o Assisted in completing the APPA 2020 FPI Survey report.
- o Assisted in completing the SCUP 2021 Survey report.
- o Assisted in completing the campus annual Schedule D report to THEC.
- o Created layouts of the MicrobeCare cleaned rooms on campus.
- o Generated FFE furniture plans for 2021 Classroom upgrades.

#### Archives

- o As part of Facilities Services' SMART Goals for FY2020-21, the Digital Assets team collaborated with OIT to identify a Document Management Search Tool which can be used to search for and locate documents contained within the Facilities Services Document Management pertaining to the University of Tennessee's buildings.

- o Continued organization of archives room.
- o Continued effort in digitizing our paper documents and drawings.

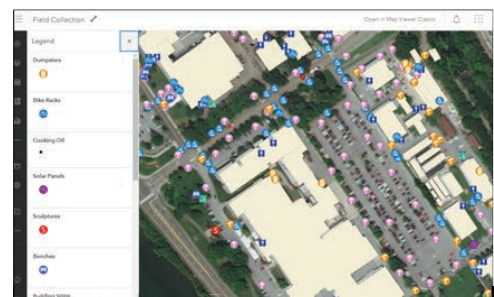


#### BIM

- o Ongoing efforts to model the architectural components of our existing buildings.
- o Ongoing QA-ing and developing of BIM models.

#### GIS

- o Continued GIS support for roadway paving program and shoreline assessment.
- o Continued updating existing GIS campus data.
- o Provided GIS and cartographic support services to several departments on campus such as Parking Services, OIT, Housing, UTPD and Athletics Department.
- o Working on GPS and inventory outdoor assets across campus.
- o Continue supporting the Office of Emergency Management with tasks related to the University's COVID response.



# 2021 ANNUAL REPORTS

## DESIGN SERVICES (CONT.)

### Interior Team

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The Interior Environments Team strives to create and enhance environments for learning. The team stays knowledgeable of current design research to provide students great interiors for learning and living. We also provide design services to UTFS Construction Services, Users, and the Classroom Committee. Another facet of our team is maintaining the Campus's signage standards and collaborating with Creative Communications to assure the University's brand is upheld. Lastly, we review and assist in the direction of interior design on capital projects. During FY2020-21, the team accomplished the following:

#### Space

- o Participated in room evaluations, drawings and FFE specifications for more than 30 classrooms as part of Classroom Upgrades 2021, and another 10 in preparation for 2022 upgrades.

#### Signage

- o Replacement of building signage at McClung Museum among other signage projects

#### Facilities Management through Interior Design

- o Collaborated with Zone Maintenance on numerous projects such as providing guidance and specifications for finishes following building damage, finish selections for elevator upgrades and LED lighting fixtures for use with our older Lutron systems. We also coordinated the repair and replacement of backlit graphics panels in Phase 1 of the Student Union.
- o Space planning for the new Department of African Studies in McClung Tower.
- o Started feasibility study for dining options on UTIA Campus.

#### Partnering

- o Launched a graphics initiative for Bailey Education in collaboration with the College of Arts & Sciences that included building signage upgrades.
- o Collaborated on several First Impressions awards submissions
- o Partnered with Creative Communications on numerous branding and graphic design projects.
- o Worked with Donor Relations to design plaques and signage for donor recognition.



#### FFE and Finish Selection

- o Provided space planning, finish selections and FFE procurement for the Student Union shell space, now the Pride Center, Smokey's Closet, Nondenominational Meeting Room and Administrative Offices.
- o Finish selections for Athletics Department's Cryotub project.
- o Developing designs to create student gathering and collaboration spaces in Biosystems Engineering and Plant Biotechnology.
- o Color scheme selection for McClung Tower, Ferris and Perkins Halls.

#### Capital Projects

- o Programming and schematic space planning for the renovation of Stokely Management Center, 2nd floor. Working with the Construction Unit to assist with project management, FFE specifications, oversight of graphics and signage.

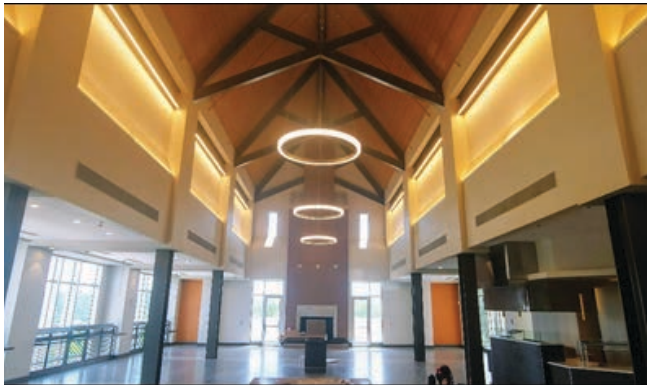


# 2021 ANNUAL REPORTS

## DESIGN SERVICES (CONT.)

### Capital Projects (cont.)

- o Delivered Pre-Design Programming and schematic design packages for renovations of Andy Holt Tower and the Presidential Court Building.
- o Developed renovation design packages for the conversion of the Presidential Court POD market into a shipping and supply outlet for UPM, Applied Sciences Lab relocation to Drive Services Building and Student Orientation's suite in the Student Services Building.
- o Provided interior oversight on several Capital Projects including Energy and Environmental Science and Research Building, VetMed Expansion, Rocky Top Dining Hall, Zeanah Engineering and TN Press at Hodges Library.



## ENERGY MANAGEMENT

The Energy Management (EM) Section of Zone Maintenance was created in 2019 to help the campus use utilities more efficiently, reducing costs where possible, while maintaining acceptable indoor air quality and other health and safety considerations.

Fiscal Year 2021 will always be remembered for the COVID-19 pandemic. While most of the efforts of EM were towards the campus emergency response, EM helped steer the efforts relating to utility use during the pandemic. In these efforts, CDC and ASHRAE guidelines were referenced and applied as best as could be accomplished given the systems on campus. Outside air ventilation rates were increased where it was possible to do so, ventilation systems were operated for longer periods of time, and filtration efficiency was increased where possible. Investigations into air treatment systems using ion generation systems were begun.

EM applies funds from the Student Environmental Initiatives Fee Revolving Fund to reduce utility use across campus. Most of the work to-date has been in retrofitting of lighting systems to LED. Savings from Revolving Fund projects are reinvested into the Revolving Fund from the corresponding utility account that benefits from the savings. Savings will reimburse the Revolving Fund for the cost of the project, plus the next five years of savings. This allows the fund to increase as projects are completed. In FY 2021, over \$550,000 was reimbursed into the fund. At the beginning of 2022 the fund has a balance of about \$1M so additional projects are being considered.

# 2021 ANNUAL REPORTS

## ENERGY MANAGEMENT (CONT.)

Beginning in 2018, the cost of LED lighting had reduced to a point that simple retrofit of a standard fixture with 4-foot fluorescent tubes had a payback of less than one year. When this occurred, the campus administration agreed to funding \$250,000 per year from the electric account toward these retrofits. While most 4-foot fixtures on campus have now been retrofitted, this investment has continued into FY 2022, even though the payback for other fixtures is greater than one year.

The Facilities Services Energy Task Force was created in about 2010. This is made up of FS employees involved in utility systems, and has recently been joined by members from the Tennessee Valley Authority and Knoxville Utilities Board. While this group was pre-empted during the pandemic we have reactivated and starting to review various system issues and utility savings opportunities.

Using FY 2002 as a base year, at the conclusion of FY 2021 the campus has avoided utility costs of over \$70 million based on utility usages per square foot and changes in utility costs. BTU/gsf is about 9% less than in FY 2002. Water usage is over 20% less than in FY 2002.

For FY 2022 we are looking forward to generating additional Revolving Fund projects, and revising the Energy Procedure for the campus. We are also performing analyses of an additional gas turbine with heat recovery for the Steam Plant and studies of the estimated costs and ROIs for photovoltaic systems on several campus buildings.

## OFFICE OF SUSTAINABILITY

Sustainability focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs.

The Office of Sustainability (OoS) works to meet that goal through educating, supporting, and innovating throughout the university. From big goals like obtaining carbon neutrality by 2061 to everyday accomplishments of our zero waste events, OoS highlights the importance of work efficiency and cost savings in order to create the biggest impact possible. As with most units on campus, COVID-19 had major impacts on the Sustainability Unit within the Facilities Services Department. For the 2021 Fiscal Year, the Sustainability Unit had 4 full-time employees including the Sustainability Manager (Jay Price), Recycling Supervisor (Khann Chov), Compost Operations Specialist (Wayne Mason), and Recycling Truck Driver II (Dave Byrne). Sustainability also had a part-time post-retiree Recycling Truck Driver (David Brown). Additionally, Sustainability had 3 full-time AmeriCorps members in the Academic Engagement Specialist position (Cassie Austin), the Zero Waste Operations Coordinator position (Rachel Manning), and the Social Impact Coordinator position (Amber Heeke), down from a total of 7 full-time AmeriCorps members in previous years. There were also fewer student workers in Sustainability, with 8 instead of 14, and with 5 Work Study students that rounds out the group of employees. There were 19 students who participated in the year-long Sustainability Internship program as well. A major change came to the unit when the waste hauling contract changed hands July 1, 2020 to a new waste hauler. That hauler added cardboard collection to their services, shifting that route to the contractor for the first time. That change has provided overall better service to campus at a similar cost, and allowed the Sustainability unit to focus on improving services elsewhere including expanding the composting program.

# 2021 ANNUAL REPORTS

## SUSTAINABILITY (CONT.)



### Zero Waste Efforts:

- Zero waste events have become increasingly popular on campus. Matched up with campus dining, all the food, utensils, and drinks can either be composted at the university compost site or recycled.
- Launched a pilot of the Eco To-Go Program and provided 2500 reusable to-go containers in Stokely Hall. A survey showed that 86% will continue to use the program. For the 2021-22 academic year, all to-go meals from WC Dining, Fresh Food Inc, and Southern Kitchen will be in reusable to-go containers.



### Outreach:

- Hosted an all-day event about accessing and utilizing Supplemental Nutrition Assistance Program (SNAP). With the most wanted event being a documentary on eating healthy on this government assistant program.
- Hosted a sustainability meet and greet between dozens of students interested in sustainability who wanted a chance to get involved in sustainable actions in the region. Students got to learn about several clubs and organizations on campus.
- The 2021 Environmental Leadership Awards reached out across campus to recognise the momentum students and professors have built towards a sustainable campus.
- The Department of Public Health integrated sustainability into its curriculum by partnering with OoS.
- Spent all of April hosting in-person and virtual events to celebrate Earth Month. Events included a popular Sustainability Career Mingle, Litter Clean Up Day, Free Store Pop-Up, and the Sustainability Day of Service.

### Campus Garden, Food Recovery, Donations, and Composting

- The UT Office of Sustainability Free Store has been operating for 3.5 years months as a series of pop-ups on campus. The goal is to help address the problem of too-much and too-little. OoS is tasked with finding appropriate ways to divert those items from the landfill whenever possible. The Free Store is currently in the process of transitioning to a permanent space at the 22nd Street Duplex.



# 2021 ANNUAL REPORTS

## SUSTAINABILITY (CONT.)

- The Grow Lab provides food for the Big Orange Pantry which opened in the fall of 2020 to meet the increased need of short-term meal assistance by anyone attending or employed by the University of Tennessee Knoxville. In the past year the Grow Lab provided multiple deliveries of fresh produce to the pantry which was well-received by patrons.
- OoS provided 1700 reusable menstrual cups to students at the Student Health Center and the Big Orange Pantry.
- From the events there was 5,241 pounds of food donated to various pantries.
- Students created a video of campus efforts that can be viewed at <https://sustainability.utk.edu/initiatives/campus-composting/>
- Our compost site has delivered 491,300 pounds of finished compost to campus or campus-sponsored local farms and community gardens.



## Academic Engagement

- Hosted a Sustainability Symposium where students displayed their work. This included research projects and a virtual art gallery.
- The POWER CHALLENGE was in the month of October. During which time each student in the residence halls decreased their own water consumption on average by 300 cubic feet per week. Each residence hall decreased their energy usage by 43 kWh per week.
- Throughout the year there were 8 tours of the UT Composting Facility with 92 total participants.

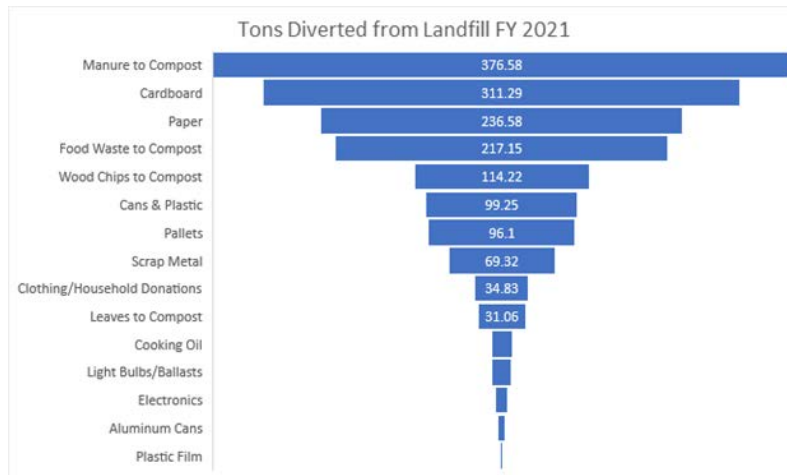


## Student Employment

- Provided 14 positions for student workers in areas ranging from recycling operations to graphic design.
- Hosted 5 Work Study students in various positions including donations assistants for the Free Store, and data analytics.
- The Sustainability Internship Program provided spots for 19 students with the overwhelming majority participating for two semesters in various projects ranging from mapping out sustainable initiatives on campus to launching a student organization focused on spreading composting awareness on campus.

# 2021 ANNUAL REPORTS

## SUSTAINABILITY (CONT.)



We had 4 major goals for the latter half of the 2021 Fiscal Year:

- 1 – Remove all Styrofoam to-go containers at each dining facility on campus & replace with compostable or reusable alternative by December 2021.

We piloted a reusable to-go container program in the Fresh Food facility inside Stokely Hall during the spring 2021 semester, which has greatly expanded so that all to-go containers are reusable at the Fresh Food facility, Rocky Top Dining, and Southern Kitchen and no Styrofoam to-go containers are used at any of those 3 major dining facilities on campus.

- 2-Implement MTT across all applicable offices on campus

While we have not completed that goal, we are well over 90% of the way done with it and should be able to finish implementing the program in the remaining offices during the fall 2021 semester.

- 3- Audit water bottle refill stations

We have completed some building audits for this and added 34 bottle refill stations to campus. More work remains to be done there.

- 4- Update sustainability section on campus interactive map

This goal was completed as intended. The sustainability section on the campus interactive map is significantly expanded with significantly more items and better organization. We will continue to provide updates to this as things change and improve it to include more information about each item including photos where applicable.

Additional goals for the latter half of the 2021 fiscal year include:

- Establish permanent free store location on campus- which is in the final stages of renovation and should open during the fall 2021 semester.
- Install biodiesel tank at UT Compost Facility and use B20 in all Sustainability/Recycling diesel equipment and trucks. The tank is onsite at the composting facility awaiting final installation should be filled with our first biodiesel at a lower blend by Oct 2021.
- Roll out the customized Recollect waste sorting game on our website and have at least 1000 people complete it for a certificate by the end of the year. We're well on our way to achieving this goal with hundreds of completions to date.



# 2021 ANNUAL REPORTS

## OPERATIONS - LANDSCAPE SERVICES

### Accomplishments

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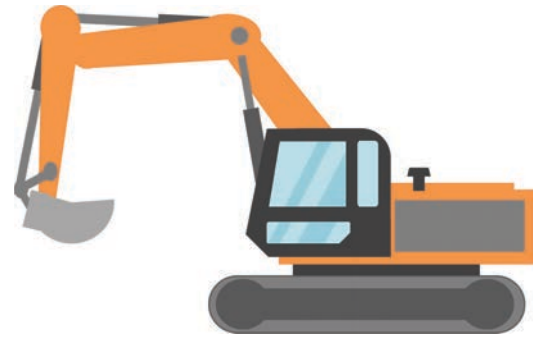
- Completed over 2100 work requests.
- Volunteer Blvd. Streetscape Phase III: Worked with the installation contractor for seamless maintenance carryover.
- Seasonal flowers: Installation of 16,000 seasonal flowers and 3,600 tulip bulbs.
- 900 cubic yards of hardwood bark mulch and 6000 bales of pine needles applied to campus landscapes.
- Campus wide turf fertilization, weed control, aeration, and over-seeding program.
- Continued infrastructure improvements for central control capabilities of campus irrigation systems.
- Retained campus certification for both Bee Campus and Tree Campus designations.
- Campus wide snow/ice treatment and removal.
- New Construction Document Construction Progress Review: Plant Sciences Building, Vet School Extension, Andy Holt Mall project, Zeanah Engineering
- Sorority Village: Assist with excavation and landscape repairs associated with geo-thermal system repairs.
- Sorority Village: Prep and event support for sorority recruitment events.
- Housing: Spruce-up landscape at dormitories prior to student move-in.
- Support for Student Life Welcome Back outdoor events.
- Support for Chancellor's Picnic.
- Provide excavation and site restoration for ongoing campus-wide underground utility repairs (high voltage, steam, water, telephone).
- Provide excavation and site restoration for ADA ramp installation on campus walks.
- Cherokee Farm: Provided year-round landscape property maintenance to include the Knoxville city greenway expansion.
- Prep for Board of Trustees visits.
- Emerald Ash Borer: Treatment of ash trees throughout campus for protection against EAB.
- Powdery mildew treatment to dogwoods and crape myrtle.
- Sorority Village: Provided landscape and irrigation maintenance to common areas and 13 sorority houses.
- Hazardous tree removal across campus.
- Tree pruning as needed throughout campus to provide clearance around security cameras, campus lighting, signage, and bus stops. Approximately 250 trees.
- Transplanted large, old Japanese maples from Ellington Plant Sciences bldg. to McCord Hall in advance of building demolition.
- Inventory and develop a plan for street tree replacements during winter months.
- Plant and inventory new trees throughout campus.
- Performed structural and maintenance pruning of over 800 trees.
- Performed 68 tree removals and cleanup associated with mortality, construction and storm events.
- Systemic insecticide treatment of hackberry and river birch for aphids over parking/seating areas



# 2021 ANNUAL REPORTS

## OPERATIONS - LANDSCAPE (CONT.)

- The University Tree inventory database (ArborPro) continued to be updated.
- Developed draft of UT Facilities Arboriculture Internship program.
- Campus wide asphalt pothole repair.
- Bush hog mowing along non-UT properties adjacent to campus.
- Campus wide construction: Provided daily support to contractors and Facilities Services to ensure construction quality.
- Pre/Post football game preparation and cleanup throughout campus.
- Prep and Clean-up associated with Homecoming bonfire, parade, and events.
- Campus-wide street sweeping.
- Landscape Irrigation Systems: Monitor, repair, adjust, and winterize campus-wide. Upgrade irrigation controllers and connect to central control management system.
- Leaf removal: 300 tons of leaves campus-wide taken to compost site.
- Monitor rose population throughout campus to control Rose Rosette virus management.
- Sod repairs throughout campus.
- Emergency roadway repair campus wide caused by sinkhole activity.
- North Concord property: Cut grass around parking lot and spray weeds in pavement cracks.
- New building construction: Transplant shrubs and trees from the site prior to site demolition
- Grounds equipment maintenance and repair for all units with Landscape Services
- Performed cultural practice on all event lawns throughout the year including – Aeration, verticutting, and topdressing.
- Updated and maintained equipment inventory.
- Provided support to UTPD with several potential protest events.



## Heavy Equipment

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- Concord Property: Raze 12 structures (recycle metals, haul-off waste, grade and gravel for parking lot).
- 908 Twenty-First Street: Complete building demolition, haul-off waste, grade and sew lawn for ELC.
- 909 Mountcastle Street: Complete building demolition, haul-off waste, grade and gravel for parking.
- 2101 Terrace Avenue: Complete building demolition, haul-off waste, grade and sew lawn.
- Grade and gravel lot at Andy Holt Ave/Twenty Street for additional non- commuter parking.
- Sorority Village: Assist with excavation and landscape repairs associated with geo-thermal system repairs.
- Provide excavation and site restoration for ongoing campus-wide underground utility repairs (high voltage, steam, water, telephone, and irrigation).
- Campus wide snow/ice treatment.
- Provide excavation and landscape renovation for First Impressions Projects.
- Install new pedestrian crosswalk signs across campus.
- Football home games: Preparation and clean-up, assist with set-up of VIP trailers and setting out barricades for homeland security.
- Campus wide asphalt pothole repair.

# 2021 ANNUAL REPORTS

## OPERATIONS - LANDSCAPE (CONT.)

- Cherokee Farms, Concord Street and Stevenson Drive: Bush hog and boom mow.
- Assist with tree cleanup associated with storm events.
- Raintree Street: Excavation to relocate fire hydrant and valve replacement.
- Clarence Brown Theater: Assist with transport of production scenery storage trailer.
- Service and repair equipment for Heavy Equipment shop and High Voltage shop.
- Transport semi-trailers used for storage to Athletics and Recycle as needed.
- UT Gardens: Assist with removal/installation of garden sculptures.
- Pat Summitt Street: Excavate to repair dropout in road and ADA ramp.
- Pat Summitt Street: Excavate to reconfigure entrance/exit to Staff Lot 23.
- Provided transportation support of saliva samples for Covid testing and monitoring efforts.
- Assisted with distribution and packaging of Covid related PPE and safety items.
- Continued on-going support of solar powered robotic mowers.
- Dr.Bass Anthropology Facility: Provide removal of fallen trees, fence repair, service road maintenance.
- Assist Urban Forestry class with basic rope setup for climbing instruction.
- Hosted 5th Annual Campus Arbor Day celebration at Second Creek on Tennessee Arbor Day. Planted 1,000 trees.
- Coordinating talks with Urban Forestry and Facilities Services staff to develop tree inventory data collection tools, i.e. PDA, laptop, GPS, etc.

### Academic Research and Support

- Installation of Covid tents and hammock stands for outdoor study spaces.



### Training

- Landscape Academy: On-going development of program to incorporate apprenticeship program.
- Developed career path for Landscape Services team.
- Landscape staff holding a Tennessee Department of Agriculture Pesticide Certification attended the Ag Extension Turf and Ornamental Field Day and Knox County Extension Grounds Management Short Courses.
- Heavy equipment staff attended OSHA training to include Trench Safety, Trench/Excavation Competent Person, and construction site safety.
- Excavation and backhoe hand signal training for heavy equipment team.
- Conduct departmental snow removal training and SOP review.
- Aerial lift training (Arboriculture)
- Completed required safety and continuing education training.

# 2021 ANNUAL REPORTS

## OPERATIONS - RAPID RESPONSE TEAM

### Overview

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The Rapid Response Team is responsible for the transfer, hauling, and relocation of furniture on campus, for various reasons. They also provide other services, such as setting up for special events and hanging banners on campus.

#### Social Distancing Protocol

The Rapid Response team was responsible for the moving, warehousing, and setup of furniture in classrooms and labs campus-wide to accommodate social distancing recommendations.

#### Spring Cleanup

Spring Cleanup is a special event held for nine weeks annually as an effort to declutter academic buildings by moving items no longer needed. Staff from Rapid Response Team work building by building to help simplify the process. Computer and laboratory equipment, furniture, office supplies, paper files, and more can be recycled, discarded, or sent to UT Warehousing.

#### Special Events

RRT is responsible for setup and tear down of special events on campus. This includes delivery and setup of tables, chairs, stages, and containers for recycling and trash. During the 2018-19 academic year more than 650 work requests were completed by RRT.



#### Surplus Moves

RRT performs moves of unwanted items to the Surplus Warehouse from offices and buildings on campus. The team also moves items requested from the Surplus Warehouse to offices and buildings.

#### Banners

Installation and maintenance of banners for the Main and Agricultural campuses is the responsibility of RRT.

#### Relocations

RRT performs whole building and office relocations. New building moves consist of complete move-in of equipment, furniture, supplies, and personnel into facilities. Rapid Response Team handled the moves associated with the Mossman Building and Student Union Phase II.

#### Classroom "Clean out"

When a classroom is scheduled for a construction project, RRT removes all furniture, desks, etc. from the space and takes items to storage until the construction project is complete. Once the project is finished, RRT returns items back to the classroom.

## OPERATIONS - SANITATION SAFETY

### Overview

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Sanitation Safety is responsible for Pest Control, Wildlife Management Control, Asbestos & Lead, Restoration Coordination for Floods & Fire, and Mold Remediation for each of the 250+ buildings on and off campus. This year we have worked alongside the University of Tennessee – Martin to develop a Pest Control unit for their campus. This unit will serve under the Assistant Director's state license for the two years required or until they are able to obtain their own license. Each member of the office holds multiple State and/or Federal Licenses and Certifications, which requires personnel to complete multiple hours of refresher training every year.



# 2021 ANNUAL REPORTS

## OPERATIONS - SANITATION SAFETY (CONT)

### Overview (cont.)

Employees also take the opportunity to seek out additional training via workshops and seminars to better their understanding of their own work and to learn how to communicate more effectively with customers. The office is headed by an Assistant Director licensed by the State of Tennessee in Commercial Pest Control Operations, Asbestos Operations and conducts Property Restoration for the University. Each of the technicians are Certified Basic Wildlife Control Operators and Certified Applicators. Services provided include insect, rodent, feral cats and dogs, termite, bird, odor, and biological control. Sanitation Safety has managed these services on and off campus for more than 40 years. The ARCHIBUS system enables prompt response to trouble calls. Each year employees process and complete scores of work requests, the large majority of which are self-generated, Preventative maintenance work requests.

### 2020-2021 Academic Year

During the last fiscal year, the unit processed and completed approximately 3,300 work requests.

Sanitation Safety coordinated and supervised the application of BioProtect in classrooms and labs all across campus, in an effort to shield surfaces from harboring the Corona Virus.

In each building, the team is responsible for either a weekly, monthly, quarterly, or annual treatment, in addition to the on-demand work requests submitted by our customers. While the Pest Control portion of the office's staffing numbers have stayed the same, the service level provided to our customers has not diminished, despite the fact that the square footage we manage has greatly increased.

**Asbestos Abatement:** Samples have been taken campus-wide to determine the type, location, and quantity of asbestos in our buildings. During this fiscal year, with the help of student workers, we have completely transformed the asbestos data base of over 8,000 samples and hundreds of pages of supporting documentation into the Clean Building Operating system of Archibus. The Sanitation Safety office coordinates asbestos abatement when said materials are found during a renovation or maintenance project being conducted by the Facilities Services Department. Facilities Operations has two individuals on campus who are state licensed as asbestos abatement supervisors, inspectors, designers, and monitors.



## SPECIAL PROJECTS

### **Overview**

The office of Special Projects operates within FS Administration and is tasked with the execution and completion of all special projects assigned by the Associate Vice Chancellor. In addition, Special Projects also performs ongoing research regarding innovations and best business practices within the facilities management industry and analyzes the results to identify those innovations most applicable to Facilities Services and the University of Tennessee, Knoxville. Consults with FS Senior Management on selecting innovations to become special projects as well as taking the lead in working with FS personnel to develop, test and implement those projects.



# 2021 ANNUAL REPORTS

## SPECIAL PROJECTS (CONT)

### Overview (cont.)

Additionally, Special Projects manages and coordinates departmental special events from inception to completion. Collaborates with other Facilities Services units on needs for events as well as support needed before, during and after events.

Special Projects continues to work with Archibus (our Integrated Workplace Management System) to help maximize the capabilities of the system. In addition, to our work on Archibus we are also serving on the committee to upgrade our IWMS.

### Best Practices

In order to grow and learn, Special Projects works to schedule and coordinate meetings with other Tennessee higher education facilities professionals to share best practices and innovative ideas.



### Research

This unit is constantly conducting research regarding innovations and best business practices within the facilities management industry. Analyze the research results to identify those items most applicable to improvements here at the University of Tennessee, Knoxville. The goal is to stay on the cutting edge of best industry practices.

### Service

Special Projects gladly serves on multiple committees throughout the year to support the department and the University in its ongoing commitment to our students, faculty and staff. Some of those include: Archibus, IWMS Upgrade, Communications Culture, Chuck Thompson Award and Student Assistant Scholarship.

### Departmental Events

Facilities Services is like a family, and we want to celebrate our employees as such. That's why this unit coordinated and collaborated with FS Communications & Public Relations office in organizing various events hosted by the department including, but not limited to:

**Pink Day:** Every October, employees are encouraged to wear pink in support of Breast Cancer Awareness Month. This event hosts a sale of Breast Cancer Awareness items with all proceeds going to the Susan G. Komen Foundation.

Coordinated food drive to benefit Big Orange Pantry.

Assisted Communications with the First Impressions contest.

Several departmental events were scheduled to take place in 2021, but due to COVID-19 had to be cancelled or re-imagined. For example: 4th of July Celebration; Annual Holiday celebrations, Chuck Thompson Awards, Employee Appreciation Week, Student Assistant Appreciation Week and a Retirement Reception (for those who retired in 2020/2021).

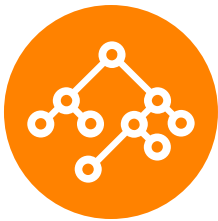


# 2021 ANNUAL REPORTS

## SPECIAL PROJECTS (CONT)

### Special Events Reimagined

Through COVID-19, Special Projects re-imagined special events due to strict Covid-19 guidelines. Since we weren't able to host our annual celebrations, we held two Employee Appreciation Meal Events where supervisors picked up meals for their employees to enjoy. We also reimagined how we awarded our annual Chuck Thompson Awards by surprising them in a small, physically distanced setting with their own subunit, recorded the presentation and then played the award ceremony on our departmental Zoom meeting.



### Space Closures and Tracing

Special Projects shifted focus to assist the campus Emergency Operations (EOC) with pandemic needs. Processing of isolation form for the University by performing space tracing and closures for the Knoxville campus. Worked and collaborated closely with the EOC, FS Communications, Zone Maintenance and Building Services to determine if space(s) on campus needed to be closed and/or enhanced cleaning performed to reopen space(s) for use by the campus community. Attended EOC meetings, trained members of the space tracing team and developed standard operation procedures (SOPs) for isolation forms/space tracing. Throughout this time, Special Projects has worked and collaborated with University personnel and stakeholders. Special Projects also assisted with the assembly and distribution of wellness kits as well as saliva tube labeling for student Covid-19 testing.

Additionally, Special Projects served as the lead for our Facilities Family Support Center which was enacted to assist employees within the department who may need assistance either physical or emotional. Provided resources concerning UT's Employee Assistance Program (EAP) if needed/requested.

## UTILITIES SERVICES

### Overview

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The Utilities Services unit is responsible for the operation, installation, and maintenance of all Utility systems on campus. The unit is comprised of four distinct offices including Electrical Services, Heating Ventilation and Air Conditioning Services (HVAC), Plumbing and Heating Services, and the Steam Plant. The unit has approximately 100 full time positions consisting of various skills and trades. We operate and maintain large, university owned, utility systems including electrical, sewer, storm sewer, gas, water, cooling water, air, and steam.

The acquisition of many streets by the university has greatly expanded these responsibilities by adding miles of storm water piping, many additional street lights, and other facilities previously owned by the city. We work very closely with the local public utility providers. We are by far the largest user and place a high demand on their systems, therefore, maintaining a close professional relationship is a necessity.

Our Senior Accountant receives, audits and records for payment, all utility bills from utility providers, calculates cost of service, and bills auxiliary operations such as Student Life, Athletic Facilities

# 2021 ANNUAL REPORTS

## UTILITIES SERVICES (CONT)

### Overview (cont.)

and Food Service for budgetary recovery as these entities are not funded by the university. This position is also responsible for monitoring the utility budgets, record keeping for all utility consumption for management, audit and reporting purposes, and many other utility operation accounting responsibilities. For perspective the 2018-2019 utility commodity cost is approximately \$38 million for the campus. This includes electricity, water, sewer, and gas and steam production but not the operational costs of the Department.

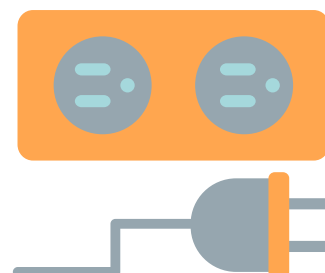


### Electrical Services

The Electrical Services unit operates and maintains the electrical distribution systems and equipment on campus. This is primarily comprised of two main substations which distribute 13,200-volt power to all campus buildings. This power is distributed through 18 separate high voltage circuits originating from the respective main substations to various areas of campus. This unit also operates and maintains all related equipment such as building transformers, system switches, underground high voltage cables, and building switchboards. They maintain and repair building electrical systems, fire alarm, and access security systems, provide electrical power for special events and fire watch coordination. They also check, maintain, and repair all outdoor lights on campus.

### FY21 Projects for High and Low Voltage:

- New EESRB Building - Electrical Support for Construction
- EESRB at Ag Campus - Electrical Support - Design support
- UTK Outdoor Pool Renovation - TRECS - Design support
- AG Campus - Food Safety - Emergency System Evaluation
- Neyland Stadium's new LED Lights for football field
- Streetscape - Pedestrian Mall - Electrical Support - Construction
- Main Substation and Laurel substation cameras
- Meter Survey - Campus Wide
- West Campus Dining - Construction Support
- Neyland Stadium West Renovation - Design support
- Neyland Stadium New Scoreboard - Design support
- Laurel Substation Ckts - Complete 15KV cable installation of LA8
- SERF Gen Repair
- SERF 15KV enclosure
- Vet Med Library Addition - Construction Support
- Chiller Installation Taylor Law - Electrical Support
- Zeanah Engineering Complex- Electrical Support for Construction
- Nielson/Hesler & Ferris/Perkins- Support lights and removing old H.V. piping.



# 2021 ANNUAL REPORTS

## UTILITIES SERVICES (CONT)

### FY21 Projects for Fire Alarm:

- Upgrade of Fire Safety system on various buildings on campus.

### FY21 Projects for Security:

- Project to update and add security doors on the Academic Buildings
- Completed phone and app access for all CARDAX readers on campus.



## Air Conditioning Services

The HVAC unit is responsible for the operation, repair, and maintenance of all heating, ventilation and air conditioning systems such as chillers, large air handlers, hot water heating equipment, humidification and de-humidification equipment, heating water and chilled water pumps, control and process air compressor systems, process chilled water systems and individual room equipment serving dormitory rooms, offices, and research areas. They also program, operate, and maintain the energy management and control system which remotely monitors and operates building systems.

This system provides the data needed to confirm efficient operation and allows for such operational procedures as setback of temperatures during low occupation periods, use of outside air in lieu of mechanical cooling when temperatures allow, and monitoring of air flow and temperature for comfort and research requirements. They operate underground chilled water distribution equipment and piping from central plants, monitor, and chemically treat and maintain cooling towers and cooling water.

### FY21 Projects:

- Adjusted / re-programmed campus HVAC control systems to meet ASHRAE / OSHA guidelines for COVID 19 disease.
- Monitored and repaired control systems (hardware or software).
- All planned control projects were put on hold for the year.
- Updated RPF for water treatment to transfer from liquid to solid chemicals
- Removed existing chemical tanks and installing solid chemical feeders
- Replaced several obsolete water treatment controllers with new Wi-Fi capable controllers
- Designed a new bromine feeder system
- Designed an experimental closed loop chemical feed system
- Completed 252 work requests and PM's
- WLS - replace condenser water pump
- SERF - replace tube bundles in heating water heat exchangers
- West Skybox - replace compressors in both Trane chillers
- Mossman - repair Triple duty valve on condenser pump 2B
- Lawson - Install 3 each 5-ton supplemental AC system for Ray Hand Studio
- Alan Jones - repair slide assembly in compressor 2 on McQuay chiller
- Claxton - replace secondary chilled water pump serving Claxton

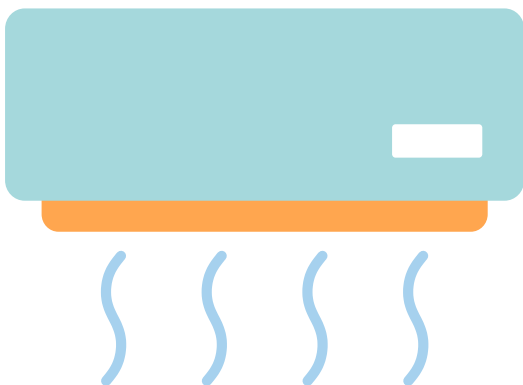


# 2021 ANNUAL REPORTS

## UTILITIES SERVICES (CONT)

### AC Services FY21 Projects (cont.)

- Hesler- replace gearbox and fan assembly in cooling towers
- SMC -replace gearbox and fan assembly in cooling tower 2
- SERF- repair York chiller no. 3
- Grier - install blowdown valves in WSHP loop
- Brown - Replace cooling tower fan motors
- WLS - replace 15hp motor and repair heating water pump
- Pratt - Install soft start retrofit kit on McQuay Chiller
- Student Aquatic- replace heat exchanger serving dive pool
- CRC - replace 2 R22 AC systems to 410A AC systems
- McCord - replace air compressor for control air system
- Humanities - Repair both Trane chillers
- Campus - rebuild multiple centrifugal water pumps
- Humanities - replace motor and gearbox in cooling tower no. 1
- Student Housing - repaired multiple water source heat pumps
- Middlebrook - install soft start retrofit kit on McQuay chiller
- Alpha Delta Pi - Repaired water issues in with backflush



## Plumbing & Heating Services

The Plumbing and Heating unit is responsible for maintaining all plumbing systems on campus including air, water, sewer, storm, and steam. This includes the high-pressure steam distribution system piping across campus and all other utility piping that does not belong to a public utility.

This unit also constructs new and renovates existing systems, test and maintain fire hydrants, maintains both storm and sanitary sewers, performs various construction projects, and works special events as necessary. They construct and maintain handrails and perform many other welding and fabrication projects that require welding or plumbing skills. They are responsible for inspection and maintenance of metering, locating and repairing leaks, and emergency repairs.

### FY21 Projects:

- Install sewer and water line at Neyland Stadium for Portable bathrooms.
- Completed sewer sampling ports in all dorms, sororities and fraternities across campus for COVID virus detection.
- Completed water heaters in Jessie Harris, Allan Jones, Burchfiel, Regal Soccer Stadium, Hodges Library, Gate 25 at Neyland Stadium, and Lee Softball Stadium.
- Completed main water lines at Reese and Carrick Halls for future tie in of Caledonia main water line.
- Completed installation of fire hydrant at River Drive.
- Completed chilled water and steam lines to equipment at Fiber and Composites Manufacturing Facility.
- Completed Replacing cast iron sewer line stack from ground level to top floor at Reese Hall and North Carrick Hall.
- Installed sink and two bottle fillers in new break room at Melrose Hall.

# 2021 ANNUAL REPORTS

## UTILITIES SERVICES (CONT)

### Plumbing & Heating Services FY21 Projects (cont.)

- Completed storm drain and irrigation valve at Hesler Mechanical Room.
- Completed new piping and drains for 4th floor in the Conference Center Kitchen.
- Completed storm drains across the road at the Steam Plant.
- Managed shut down of building plumbing systems during Covid-19 shut down on Campus.
- Completed piping to new dirt separator on chilled water system in Orange Hall, White Hall, and Bailey Building.
- Campus wide steam outage to maintenance steam line in tunnels and vaults.
- Installed sewer drains and water lines in new creamery.
- Installed new water and sewer lines in McCord Hall lab remodel.
- Installed new PVI water heater at J.I.A.M. building.
- Installed Bottle fillers and handsfree faucets in building across campus.
- Processed 2381 work requests.



## Steam Plant

The Steam Plant produces all steam for distribution to campus; this is accomplished by the five, water-tube boilers that are capable of producing over 400,000 pounds of steam per hour. Four of the units are stand-alone boilers and the additional unit is a waste heat recovery boiler. In addition to the boilers there is a 4.5-megawatt generator. The waste heat is recovered from the generator then used to produce steam in conjunction with the fifth boiler. The generated electricity produced is then used to supplement campus electrical needs. Maintenance and repairs for the plant are done internally by Steam Plant personnel. This includes repair or replacement of piping, boiler repairs and operation, water treatment, pump repairs, operation of the natural gas turbine for the production of electricity and keeping of records for environmental and regulatory purposes. Steam is a very versatile commodity and has many uses including, but not limited to, the heating of buildings, sterilization of laboratory equipment or vessels, domestic hot water production, cooking, humidification, and de-humidification. The plant operates 24/7/365 and is only out of service for scheduled major maintenance activities that cannot be performed under operational conditions.

### FY21 Projects:

- Replaced positioner on #2 boiler, Retuned boiler to meet EPA requirements.
- Chemically cleaned #1 & # 4 boilers.
- Rebuilt Main and auxiliary softeners.
- Changed out boiler safety valves.
- Replaced continuous blow down lines on # 3 boiler with stainless steel.
- Treated seven fuel oil tanks with algaecide.
- Installed new condensate pump.
- Installed new drum level transmitter # 3 boiler.
- Inspected DA tanks had mag particle testing performed.
- Changed intake air filters on turbine.
- Replaced oil cooler on Sullair compressor.

# 2021 ANNUAL REPORTS

## UTILITIES SERVICES (CONT)

### Steam Plant FY21 Projects (cont.)

- Replaced huff-n-puff air filters.
- Relocated steam flow transmitter #4 boiler.
- Replaced piping on heater in fan room.
- Cleaned lube oil cooler on turbine.
- Rebuilt #4 condensate pump.
- Replaced resin in the aux. softeners.
- Repaired gas line #5 boiler.
- Replaced maxon gas valve #4 boiler.
- Lowered the continuous blow down lines inside the steam drum on boilers 2 & 3.

### Wrap Up

In addition to these responsibilities, the Utility Services unit participates in the design and planning of major building and construction projects on campus. The institutional knowledge of the unit is unequaled and invaluable for these activities and helps to control the overall cost of such projects by providing capacity and historical information to the design team thereby avoiding many conflicts during construction.

Utilities Services works to support all other Facilities units and provides services for all special events.

## ZONE MAINTENANCE

### Zone 1

- We have been through the buildings this summer making sure we had each room ready for move in and repaired all sinks faucets, showers, and lights.
- Chillers were cleaned for all resident hall buildings.
- Our Zone blew-down the risers in both Carrick's and Reese.
- We're able to get all P-tac units in Massey and Hess ready but they have been some issues with Housing keeping up with the turn around on the units.
- The issue with the air handler at Clement is going to be addressed in following months this year. But we have had very little complaint of A/C at clement.
- The pool at Student Aquatics has been put back on course and is very cleaned we had to hand feed 500lbs. of shock into it to get it back up.
- Greg Burrus has stayed on top of the sorority's and fraternities getting the smoke detectors going in the Frats while having to deal with a small mold issue in the sororities.
- There is still an issue with the a/c for the staff kitchen at Fred Brown that has been ongoing for 3 months now that needs to be fixed.
- There's been several new motors installed at the student aquatics and the Trec over the summer to for the air handler at the TREC and new gutter pump for outside pool.
- The generator at the student union is in the process of being repaired this week is having an issue with blowing white smoke.



# 2021 ANNUAL REPORTS

## ZONE MAINTENANCE (CONT.)

### ZONE 2

- Replaced L.E.D lighting at Clarence Brown.
- Cleaned air grates on fan coil units throughout the zone.
- Replaced window screens in Bailey.
- Cleaning gutters at Claxton 3rd story.
- Replaced drain pan for rotten air handler on top of Nursing
- Installing another drain pan to catch the water compensating from new drain pan at College of Nursing.

### ZONE 3

- Conducted room to room maintenance and repairs in each Building.
- We conducted mold checks throughout our Zone and addressed any issues.
- We have focused on LED lighting upgrades.
- Major renovations to the Conference Center.
- Haslam College of Business Cooling Tower's had to have upgrades on Motors and drives.
- We concentrated on getting ready for full capacity of the return of Students and Faculty.
- LED lighting upgrade continues throughout Zone 3.



### ZONE 4

- UT Culinary converted over to LED lighting.
- Removed all gas equipment for cleaning and re installed.
- Pm equipment in all Units.
- S. Union Install new ice machine.
- PCB disconnect all gas equipment for surplus.
- All ARAMARK units replace ceiling tile as needed.
- S. Union rebuild char grill.
- UT culinary replace all ceiling tile in lobby.
- All units PM on air handlers
- All unit's clean coils on mobile equipment.
- All unit's PM tray conveyors and commercial mixers.
- S. Union move old equipment out for new franchise.
- Completed 1423 work requests on time.

### ZONE 5

- Throughout the zone, we have been converting Lights to LED to finish up the buildings. We stocked up on filters for COVID-19. We changed and cleaned all chillers and cooling towers and greased equipment and changed belts.
- We changed out a large amount of motors. Upgraded emergency lights to LED frogeyes and LED exit lights for fire marshal for preseason at Neyland Stadium for football season.
- Had all generators serviced and load tested prior to the beginning of football season.
- Assisted contractors and engineers at Neyland Stadium in prep for the remodel.
- Assisted Electric Shop in testing lighting for football season.
- Assisted all over zone with contractors in various upgrades in Athletic Buildings.
- Completed LED light upgrades outside of Neyland Stadium for energy savings.



# 2021 ANNUAL REPORTS

## ZONE MAINTENANCE (CONT.)

### ZONE 6

- Placement of COVID-19 signage.
- Filter replacement.
- Flushing water lines.
- Daily security checks.
- Clean roof drains.
- LED projects.
- Repair steam equipment. Preparing for football.
- Normal preparation for student returns.
- Wetting of drains.
- Scheduled contract work.
- Scheduled shop work.

### ZONE 7

- We cleaned the HRUs at SERF, changed filters, belts, etc. After a power outage we are now working with Stowers to get one of the emergency generators repaired.
- We have conducted room to room maintenance inspections making repairs throughout the zone from our daily building walkthroughs to all hands-on deck cleaning water up from leaks. Dougherty is still having some HVAC issues with all the new a/c units, and new pipping.
- Throughout the summer, our main focus was preparing the campus for the return of students, everything from fixing all burnt out lights to making sure all a/c units were working properly. It was our hopes in the summer or 2021 that Coved would be over never to return.
- Now that students, and those staff that were working from home are back we are working on replacing signage to doors warning that mask must be worn inside all campus buildings again.
- We have been working with contractors trying to get the new engineering building ready for first day of classes.

- We have changed all air conditioning filters throughout Zone 7 and spent hours doing room to room checks trying to catch any mold or A/C issues before the mold issues started.
- The Zone 7 team has done extensive cleaning on shops, and machine rooms.
- We have cleaned all condensing coils on air conditioning units helping in the energy savings part of zone maintenance.
- Our team has worked on LED lighting upgrades and helped other Zones with these initiatives.
- A major accomplishment for Zone 7, was having everyone work as a team to prepare for students in some close conditions without catching Coved.
- We renovated the Dougherty Engineering building HVAC system. Our team worked lots of late hours getting it ready, and assisting contractors. Now we are still assisting contractors to get all the bugs worked out of new insulation.

### ZONE 8

- BESS Labs -We have been working on roof top units and getting much needed work done on the roof.
- Brehm Animal Science - We recently moved our maintenance operations for the AG campus to Brehm 231.
- Business Incubator - We continually strive to maintain a high quality of service to our customers and keep our building systems operating at peak efficiency.
- Ceramics Annex Building - Making sure that the drains remain clear is a priority for this building.
- CRC Bioenergy - We recently had our DI water system pump upgraded and continue to monitor all building systems.

# 2021 ANNUAL REPORTS

## ZONE MAINTENANCE (CONT.)

### ZONE 8 (CONT.)

- CRC Material Science – We cleaned all the HVAC units and have been working with the contractor for all warranty work on our new units for the building. Some of our older units create a constant challenge.
- Crop Genetics – We constantly have to keep a close eye on our HVAC units as problems arise in a very old building.
- Ellington Plant Science – This building was recently razed and the new EESRB Building is currently under construction at this site.
- Environment & Landscape – We cleaned all of our HVAC systems.
- Food Science – We have been working through several different changes in the lab areas.
- Greenhouses – North, Central and South – We have been changing numerous louver motors and keeping a diligent eye on our ventilation systems within the greenhouse bays.
- JARTU – We continue to work with the building manager to support all of the research activities and work through the constant challenges our HVAC system presents.
- JIAM – We recently got a totally new domestic hot water system installed. We have also been changing filters for our processed chill water system.
- Kingston Pike Building – We have been working with roofing contractors on necessary repairs.
- McCord Hall – We are installing new wall units to replace very old central air handlers in the attic.
- Morgan Hall – We continue to work on HVAC units by cleaning and making sure that they are operating at peak performance.

- Plant Biotech – We continue to make progress on our LED lighting upgrade project. Our chilled water plant and the supply loop to most of the AG campus is a constant challenge to maintain peak operation and as always, during the summer, we perform routine cooling tower cleaning.
- Publication and Services – We upgraded our HVAC units to higher efficiency rated filters for better air quality.
- Racheff Greenhouse – Our LED lighting project proceeds as work requests come in for the bays.

### ZONE 9

- 525 University Avenue – We continue to convert our lighting system to LED.
- 1610 University Avenue – We recently serviced all of our rooftop units for peak operating performance.
- Facility Services Complex – We have upgraded all lighting in the warehouse to LED. Servicing our exhaust fans in the warehouse area is an area of priority while at the same time, making sure that all of our building systems are operating normally.
- Glazer Building – We continued to convert our Lutron lighting system to LED. We recently installed new items in the kitchen area.
- Middlebrook Building – Our LED lighting upgrade continues and several repairs and upgrades have been made to the roof and exterior of the building.

# 2021 ANNUAL REPORTS

## ZONE MAINTENANCE (CONT.)

### Specialties

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- Installed handicap operator at Haslam Business, Communications, Conference Center, Fred Brown, Walters Life Science, Hearing and Speech, Min Koa, Third Creek Building, Art and Architecture, Clarence Brown Theater, Student Union, 3rd floor Student Union, Clarence Brown Theater, Burchfield Building, Dunford Hall, Hodges Library.
- Installed multiple handicap operators at Ares Hall (4), Baker Center (2), Zena Building (4), West Dining Hall (18), Cappa Cappa Beta (2), Clement Hall (4).
- Installed new Roton hinges at Plant Bio Tech, Hodges Library, Kingston Pike Building, Dougherty Engineering, PCB Court.
- Installed 30 power chips on handicap operators across campus.
- Installed new doors at Nursing, Dabney Buhler, Green House #2, Thompson Boiling Arena.
- Sealed roof, installed new electrical panel, installed new power to roll up doors, installed new power to outside time clock, wired new lights in large bay, core drilled concrete, and installed new heaters at Concord.
- Repaired multiple pole lights across campus.
- Installed glass shop with multiple large pieces of glass across campus.
- Installed handrail at Stokely Management.
- Installed sneeze guards in transport vans.
- Installed new door pivots at T-RECS building.
- Repaired multiple parking Garage lights in parking Garages.
- Repaired 20 exhaust fans for Vol Hall parking Garage.
- Worked on outdoor lighting project across campus.
- Prepared for GoLive of new Archibus v24 upgrade by testing Equipment and PM Modules in Archibus QA server.
- Worked with FS Design space inventory team to create building codes for chiller buildings not included in current space inventory so that PM inspections could be scheduled.
- Senior leadership announced a department goal to barcode/or QR code and tag equipment assets in campus buildings for 2021. Worked with FS Archibus team and ZM management to set priority areas focusing on major air handling units that receive regular preventive maintenance by ZM work teams. Used Archibus team guidance on QR coding type (static QR code) and software (QRCode monkey) for method of production.
- Compiled and completed inventory checklists for each building/zone that included only major air handlers. Checklists were used to verify location of units and whether a unit was present, in-use, decommissioned, or replaced.
- Created a procedure guide and decision tree on classifying, photographing, and QR coding air handlers for technicians to use in the field. Air handlers classified included large capacity recirc, fresh air only, and multizone chilled water units, large capacity DX and chilled water rooftop units, computer room/data center standalone and split units, and heat recovery units.
- Classified AHUs then created, printed, applied QR codes for Facilities Svcs Complex as pilot building.
- Trained Zone 7, 6, 3, and 4 to collect equipment data for all large capacity air handling units in their respective zones. (Pilot training locations: Dougherty, SERF, Strong, Hoskins, PCB).

# 2021 ANNUAL REPORTS

## ZONE MAINTENANCE (CONT.)

### SPECIALTIES (CONT.)

- Actively worked with appointed technicians in zones 7, 6, 3, and 4 on collecting, entering, updating air handler data in Archibus using labeling procedure guidelines. Buildings included Dougherty, SERF, Nuclear Engineering, Perkins, Ferris, Min Kao, Fibers & Composites, Senter, Tickle, Alumni Memorial, South College, Ayres, Hesler, Austin Peay, Walters, Burchfiel, Mossman, Strong, Hoskins, Blount, Law Complex, Panhellenic, SMC, UTPD, Conference Center, Presidential Court.
- After collecting and updating data, pictures were attached to individual equipment codes as survey and equipment tag photos, QR codes were created and sent to Sign shop for printing, labelling keys were created, then labels were delivered to buildings for application.
- Photographed and added new DX unit heat pumps to UT Drive Bldg B.
- Updated equipment for Anderson Training Center using closeout docs.
- Added photos for rooftop units on Jewel building, correctly assigned PMs.



- Corrected rooftop unit equipment codes for Glazer Building, correctly assigned PMs.
- Entered all kitchen exhaust hoods for food service locations based on documents from FS Codes team.
- Assisted dispatch, Zone 1, and Biology Services Facility in identifying pressure vessels for TN State Boiler Inspections. Created or updated records in Archibus.
- Assisted dispatch and elevator team to correct elevator data for TN elevator inspection permits.
- Assisted Sustainability work team in updating campus water bottle filling stations in Archibus.
- Assisted Plumbing shop with inventorying fire hydrants.
- Created and scheduled PM procedures:
- Annual HRU cleaning and maintenance scheduled for SERF HRUs.
- Monthly Aramark Elevator Services for all Aramark elevators.
- Annual Cooling Tower Cleaning scheduled prior to cooling season (April) to individual equipment.
- Annual Coil Cleaning by location and scheduled prior to cooling season (April) for all buildings.
- Annual Coil Cleaning by equipment and scheduled prior to cooling season (April) to individual equipment.
- Annual Roof Inspection edited and rescheduled for fall season (Sept-Nov) for each campus roof.
- Monthly Sprinkler & Standpipe System Inspection scheduled for all buildings.
- Monthly and Quarterly Grease Trap Services scheduled for all dining locations.
- Any new equipment added to inventory requiring preventive maintenance was scheduled for equipment specific PMs.
- Scheduled existing inspection PM procedures for new chiller buildings and Third Creek Building.



# 2021 ANNUAL REPORTS

## ZONE MAINTENANCE (CONT.)

### SPECIALTIES (CONT.)

- Corrected Water Sensor Automatic Valve procedure and rescheduled for SERF.
- Corrected Big Orange Pump procedure and rescheduled for Plumbing shop.
- Annual Fire Hydrant procedure for Plumbing shop.
- Semi Annual Battery Replacement for wireless panic buttons scheduled for Building Security shop.
- Assisted Archibus users with the new system upgrade, reported bugs, fixes, and enhancements to the Archibus team and OIT during September through November 2020.
- Created forwarding and shop assist job aid for Zone 2.
- Assisted Zone 8 and 9 with work order closeouts and managing console to prevent work order backlogs. Created a one-page guide to help simplify process of managing work orders in Archibus console.
- Replaced broken windows at Clement, Reese, Hess, North and South Carrick dorms
- Installed new windows in Fred Brown and Stokely Hall
- Re-aligned and replaced glass partitions in all west side skyboxes at Neyland Stadium
- Replaced broken glass in Walters Academic, Communications, and Humanities and replaced hazed windows at SERF
- Replaced three large windows at Bailey Education
- Replaced broken door glass at Delta Tau Delta
- Replaced integrated window blinds in Clement Hall
- We have assisted in correcting building pressure at Third Creek Building.
- We have kept up with fume hood calls for labs around campus.
- Corrected airflow in Mossman Vivarium.
- Air Balanced Black Cultural Center.
- Assisted A/C Controls in calibrating sensors around campus.
- Water balanced many locations around campus.
- Set fresh air exchanges in former vivarium in Walter's Academic Building.
- Inventoried manlifts and forklifts.
- Completed Air Balance Certification with NCI in Cleveland, Ohio.
- Assisted A/C Controls in calibrating damper actuators around campus.
- Participated in Forklift training.
- Participated in Lift training.
- Took pump readings around campus for Zone Maintenance and A/C Shop.
- Assisted Zone Maintenance in correcting water flow issues in North Carrick Hall and Reese Chiller plant.

