

NC STATE UNIVERSITY

FACILITIES OPERATIONS

REPAIR & RENOVATION SERVICES

**ANNUAL REPORT
&
PROJECT SUMMARIES**



Carpentry Maintenance Shop
Carpentry Projects Shop
Construction Services Shop
General Shop
Lock Shop
Paint & Sign Shop
Roof/Waterproof Shop
FCAP Group
Projects Group
Commissioning and Warranty Services

FY 2013-2014

Repair and Renovation Annual Report 2013 -2014

Programs

Program Summary:

The R&R unit consists of the Trade Shops, Projects Group and FCAP& Warranty Group. The unit faced growth challenges at the beginning of the year in the Trades Shops and the Projects Group. The Trades Shop Manager initiated a study of the frequency of work requests by major campus location and recommended adding two new shops to cover the growth. The Carpentry Projects group was added to handle the larger scale carpentry and repair projects and the Roofing and Waterproofing Shop was added to handle the trade specific work that was formally assigned to the General Shop. These changes brought the FTE/Supervisor more in line with the standard for maintenance and repair work.

The Projects Group faced continued demand for minor renovation projects. The complexity and scale of the projects has grown considerably. In addition to growth, the shop faced the retirement of a key career employee. To address the increase in project scope demand the shop added UTS employees with strong backgrounds in construction, good communication and strong organization skills. To address the retirement of key staff the shop manager put a succession plan in place. The project team of the soon-to-be retiree, the potential successor and the manager provided a smooth transition.

The FCAP team finished the first cycle through all of the state appropriated buildings. The FCAP team also picked up the Warranty and Portal functions. The Warranty function improved the tracking and reporting of warranty issues and resolved a number of building construction problems. The FO Portal function underwent a reinventing process to ensure we are meeting the stakeholders' needs at the current post-bond level of activity. The Portal committee studied the needs, current process and best practice now in place in peer institutions. Finally, the group redesigned the process for the current need. In addition to the routine building assessment and warranty work, the team assisted the State Construction Office. The SCO was considering a new state-wide building assessment program and wanted to understand the state of the art. The FCAP team researched the marketplace for software and professional services available for condition assessments. After an exhaustive search and a preliminary qualification process, the team arranged a presentation from three vendors showcasing the range of tools available leaving the final decision to the SCO management.

In an effort to get to know the division better, the unit invited staff from the FHR, CPM, DCS, Budget Office, Fire Marshal's office, OUA and Grounds to attend our monthly meeting. The purpose of the meeting is to meet the people, develop a dialog and better understand the functions within the division. We will continue this in the coming year.

The unit participated with the Sustainability Office in a program designed to bring the concepts of sustainability to the front line staff in the shops. The program included educating the staff in what sustainability meant to each individual and their families. Additionally, each shop highlighted a practice used in the shops to support sustainability.

The unit initiated a project to improve the reliability of the Bell Tower lighting controls for sports and special university events. The project included replacing the controls infrastructure and installing a new web-based interface and live video feed. Currently, all planned events are scheduled via on-line calendar.

Sports events are controlled over the web by the on call administrator. A future project will explore the possibility of controlling the light for regular season sports events.

A. Changes in Scope of Activity

Facility Condition Assessment Program (FCAP), Warranty, Design Review, RoofManager

FCAP

- 2012-2013 FCAP Annual Report was delivered with a Power Point presentation abstract
- All 287 Main Campus state-appropriated buildings assessed, second cycle in progress (nine major buildings assessed since end of first cycle)
- Current sequence of buildings to be assessed is based on mission-critical priority
- Condensed reporting template now includes more captioned photographs, less reliance on text
- Expanded cost reporting brackets facilitate identification of “do-able” projects
- Potentially unsafe campus conditions are identified and solutions are proposed.
- Electrical and/or mechanical projects (T8 lighting upgrades, add VFD’s) are proposed where improvements in energy efficiency can be made.
- Floor plan updates are routinely delivered to OUA for incorporation into AERES/FMI
- Pressing health and/or life safety issues (malfunctioning exit doors or elevators) are referred to the Customer Service Desk for immediate resolution, and less urgent maintenance issues are logged for distribution to be resolved.
- To date, 119 proposed maintenance work orders have been generated. A defined scope of work with photographs and field notes enables fast response and resolution through the AiM database
- The FCAP Procedures Manual was updated in 2014, and presented to UNC-Charlotte FCAP as a model for development of their new program
- Finalized an assessment parametric form for SCO and NC State FCAP
- All FCAP reports posted in FCAP Folder on L: Drive for ease of access to all interested parties. Reports separated by First and Second Cycle completions.

Recent Special Projects:

- Remedy drainage issues at the Joyner Visitor Center
- Restore utilities at the 3501 Avent Ferry property
- Investigate and remedy persistent leaks at Student Health Center
- Provided a list of proposed projects from \$50K and above for possible implementation
- Develop roofing project cost estimates for Biltmore, McKimmon and Mt Hort
- Develop project cost estimates to repair skylight at Marye Anne Fox Science Teaching Laboratory
- Develop below-grade waterproofing project at Patterson Hall

Warranty Shop

In late 2012, the FCAP team absorbed responsibility for settlement of unresolved warranty issues on recently completed construction projects

- Over 200 Warranty Work Orders have been closed, with work completed by the general contractor at no additional cost to the university at recently completed projects, including: DH Hill Library/Atrium, Hunt Library, Student Health Center, Wolf Ridge, and the Talley Student Center
- The current status of open work orders is updated and reviewed weekly

- The Construction Warranty Expiration Countdown Calendar is a spreadsheet which triggers DCS and CPM PM's to schedule 9-month and 10-month final project walk-throughs to document any unresolved issues; it is updated and reviewed weekly
- Communications have significantly improved among BM&O upper management, BM&O Zone Shops, the Warranty Shop, Capital Project Management, Design and Construction Services, and our customers, including Campus Enterprises, Housing, and Athletics. A flow chart has been distributed to the Zone Shops to illustrate when to contact the Warranty Shop. A quarterly conference provides a forum for discussion and facilitates further cooperation
- Vendor training sessions related to the opening of the Hunt Library were coordinated by the FCAP team; assisted with receiving, storage, and disposition of materials attic stock
- O&M manuals for recent closeouts are now issued by OUA for pickup by the Warranty Shop for distribution to appropriate Zone Shops
- A Warranty Procedures Manual is in development

Design Review

A continued initiative is underway to revitalize this program, which encourages review-and-comment participation from numerous agencies in the development of new construction and renovation projects

- A New Building Checklist Summary is also provided to directors each month. This report provides an updated progress report of the percentage of completion for the transition from project completion to hand over of facilities.
- Participation in building walk-throughs are also attended as needed.
- Created a Facilities Operation Portal list. A list of all facilities operations personnel for distribution of reviews and submittals
- Currently in the process implementing new procedures to streamline the design review process
- Currently have reviewed and processed over **69** projects for Design Review since tracking log began.

Roof Maintenance, Roof Manager®

- 2013 edition of Top 20 Worst Campus Roofs report was published June 2013
- Improved Roof Manager reporting capabilities are in place to produce more timely and more concise reports
- 2014 edition of Top 20 Worst Campus Roofs is in development, target publication date April 30

Waterproofing Database

An Excel workbook is in development to compile and report projected costs associated with above-grade and below-grade waterproofing needs across campus. Annual and on-demand reports will be similar to Roof Manager® reports.

Assisting Other Groups

- Presented a lock out tag out update to the R&R shops
- Assisted Lock Shop with campus wide door counts for Simple K
- Assisted Construction Shop with installing and cataloging Firefly transmitters

Energy Management Group Assistance

FCAP personnel supervised four projects designed to pay for themselves and continue to provide significant

savings to the university:

- Constructed Facilities Lab
- Brooks Hall
- Scott Hall
- Poulton Innovation Center

Construction Services

In this fiscal year the Construction shop has completed 164 projects ranging from small work orders to large projects. A total of 344 phases have been completed July 1, 2013 to April 23, 2014

The construction shop has evolved into a full repair & renovation shop taking on many new projects concerning lab room upgrade to installing heat exchangers for testing, along with removing antiquated fume hoods and installing newer updated units to assist the teachers in their testing needs.

The construction shop has up-graded HVAC systems adding new terminal units or fan coils were needed and adding additional chilled water taps to supply new testing equipment.

All the shops look to continue this growth and appreciate all of our NC State partners who look to us for their renovation needs in 2014/2015.

- **WEST DECK** - Campus police is requesting an estimate to install a chain link fence at the bottom of the west deck for storage, 3 bays.
- **WITHERS** - Renovating the withers hall 2nd fl. display case
- **CVM MAIN BLDG** - Renovate labs b104h & b104m. Renovate spaces b104l, n & e. Reconfigure cabinets & install new cabinets. Remove wall. Install new door. Install exhaust system in existing chase.
- **VARIOUS LOCATIONS** - Datamatic mosaic firefly utility meter reader installations (50)
- **POLK** - room 30, renovate lab.
- **SCHAUB HALL** - Renovate rooms 39, 40, and 40A.
- **POE HALL** - RMS 102, 103, 104, Move the electrical floor boxes that stick up from the floor cut off and put in the floor.
- **DANIELS HALL**- Renovate room 424 to lactation room
- **POLK** - RM 29 install a wall in order to close off a tissue culture work area in a lab.
- **THOMPSON** - ROOM 150/149 demo existing duct work.
- **PARTNERS I** - SUITE 2450 demo & renovation
- **CVM** - Remove chemical fume hood remove wall mounted counters, sink and shelving. Remove sheetrock on one side of wall to inspect utilities.
- **PARK SHOPS** - Modify the space as requested per sketch.
- **SCHAUB HALL** - 102 and lobby.
- **COT** - electrical and plumbing connection for a Mathis pad and a Mathis steamer.
- **JORDAN** - Remove wall-hung shelving on south wall of 2120
- **SAS** - Create office from conference room in SAS 5109A
- **NELSON HALL** - Renovate 1129 & 1147
- **ADMIN III** - Provide new duplex outlet in copy room.
- **EBIII** - ROOMS 3117 AND 3119 add a partition wall and door
- **WILLIAMS** - Suspended ceiling in room 2208.
- **EB 3** - Add a sink to lab 1401 as well as new lab casework.
- **CORPORATE RESEARCH I** - Move condensing unit from main roof to high bay roof.
- **GARDNER 4302** - Remove 1 lab bench with water, drain and gas.
- **COT** - Install water line in room 1226.

- **BURLINGTON** - Room 3148 install 20 gal water tank, power, and support shelf be installed and connected to water delivery system for lab equipment.
- **DS WEAVER** - Install new ice maker in lab 270a.
- **JOYNER** - BOC onboarding improvements.
- **BILTMORE 2010** - Remove control room and refinish back of classroom per architectural drawings
- **PARTNERS I** - Demo suite 1600
- **CORPORATE RESEARCH I** - RM 275 (MENS) - urinal will not flush, bad batteries
- **BTEC** - Room # 133, hallway 117 modification
- **PARTNERS I** - SUITE 1200 Renovation
- **CVM** - Install a filtration system for scrub sinks in d217j.
- **POE** - Repair & replace the existing WC defective carrier to the 3rd floor (third stall) in women's bathroom Poe 325.
- **THOMPSON** - Install water fountain at Frank Thompson Theatre corridor, inside door 149.
- **RESEARCH II** - Suites 312 and 313 repair HVAC issues
- **SCOTT** - Remove sink cap off water and drain line at the wall in room 252 D.
- **MRC** - Assist with installation of new equipment in room 209.
- **PARTNERS III** - Improve labs for laser operation, glove box, and other scientific instruments.
- **PARTNERS II** - Suite 3700 walls, electrical, and mechanical work.
- **POE HALL, RMS 400 & 400H.** Updating ceiling to library stacks & update HVAC
- **COX HALL** - Room 3C, Install cooling unit in magnetic instrument lab.
- **STUDENT HEALTH.** Install additional sinks in rm. 2118d.
- **PARTNERS I** – Renovate Suite 1600 MANN+HUMMEL
- **STUDENT HEALTH.** Demolish receptionist desk. Cap off electrical and HVAC.
- **BIOLOGICAL RESOURCES** - Room 113 Elec. circuits, plumbing, wall installation, install grill covers on HVAC vents and floor drains, paint and patch wall.
- **WOLF RIDGE BUS STOP-** Construct a pad and install the bus shelter on the Wolf ridge dorm site.
- **RESEARCH IV** - Remove a small interior wall.
- **MRC** - Room 209 relocate chemical hood along wall. Re-connect services: power, fire suppressor, nitrogen lines, and exhaust.
- **EB2** - 2090 – Patch and finish room for new paint.
- **JORDAN** - Patch and finish room for new paint.
- **RESEARCH III:** Remove and dispose of 2 neon signs, remove and dispose of all track lighting, remove track lighting power switches and dimmer and cap repair large holes in office wall.
- **COT** - Room 3338 remove sink, carpet floors and paint walls. Currently storage room but will be used for an office.
- **THOMAS** - Modify cabinets and relocate sink in rooms 3566 and 3570 paint and patch walls in 3570,3568,3566

- **PARTNERS 1- SUITE 2450, DELTA 1)** 1) installation & wiring of "wall wash" light fixtures. 2) Adjust circuit load distribution by pulling new circuits into suite.
- **POE** - Replace a ceiling tile and light sensor.
- **MCKIMMON CENTER.** - Install door between offices 223 and 225.
- **COX** - 104B - Install duplex outlet in existing outlet location.
- **SCHAUB HALL** - Exchange of room g16a, storage room, for university hskpg office G27
- **GARDNER 1-** Install door in wall in between 2301a & 2301
- **MRC** - Install new hood and connection to exhaust in room 211
- **WITHERS** - Rm 359 - Add door to withers 356. Take down walls
- **THOMPSON** – Install electric for ADA access door.
- **POE 104B** - V-1000 power strip to 3 walls (2x15') 1x10'), plus repair floor tile & baseboard.
- **NELSON** Cut door to hallway for office 2120A and patch existing door to office 2120.
- **CVM MAIN BUILDING** - Room 246a. Remove shelving on wall, wall standards, carpet and base. Patch and paint walls.
- **POE** - Place a battery back-up light in the Poe 324 electrical room.
- **EB II** -B005 cabinetry and sink installation
- **CCVM MILKING PARLOR** - Paint parlor inside and out. Use epoxy on inside. Pressure wash/clean. Repaint cracks in masonry. Repair doors and frames. Repair cracked concrete outside. Replace lighting on inside. Etc.
- **JOYNER VISITOR CENTER** - Suite 102-Onboarding center-mount TV/monitor in lobby for billboard.
- **RESEARCH III** - SUITE 101 (FORMER BOOKSTORE) Remove electrical and shelving from walls.
- **MANN HALL** - RM. 108 - Complete installation of side-tray for stainless steel sink previously installed and installs a faucet (hose-bib-spigot) for a 3/4" garden hose.
- **RESEARCH III** - National Weather Service, install permanent meters
- **JORDAN** - Lower 2 outlets in 2120 Jordan. Cover existing outlets with metal wall plate.
- **BROUGHTON DR-** Install an exit gate on the north end of Broughton Dr.
- **POULTON INNOVATION CENTER** - Research, Innovation & Economic Development space improvement
- **WILLIAMS** - 2124-2125 Active Learning Classroom renovation.
- **CVM MAIN BUILDING** - Room C248. Minor renovations to technician office space.
- **CVM MAIN BUILDING.** Divide room b209b to create separate cat ward and small dog ward.
- **RESEARCH IV** - RM 1210A Renovate break room.
- **PARK SHOPS PORT CITY** - Install electrical wiring and covering for the new grille gate at PCJ park shops.
- **EB III** - Relocate sink and fume hood and provide corner cabinet/work surface.
- **CREATIVE SERVICES BUILDING** - Renovation for new business operations center.
- **COT** - Room 1226 Install heat exchanger

- **POE** – Room106 install V-3000 power strip to classroom - approx. 60 feet of strip on the back wall.
- **PARTNERS I** - 1600 – Punch list items.
- **ENTOMOLOGY STORAGE** - Demolish modular buildings 165c and 165d
- **HEADHOUSE UNIT 2** Repairs due to a roof leak. Ceiling is falling in at room #8.
- **PAGE HALL** – Install new closets In Page Hall corridor.
- **THOMAS HALL** -3510A Construct new wall to divide office and install new door.
- **BTEC** - RM 294 - Build a sheet rock walls with in room 294.
- **POULTON INNOVATION CENTER** - Lobby renovation
- **PARK SHOPS - RM 225** - Connect Millipore water filtration system.
- **CARMICHAEL** - Install anchors into pool deck for starting blocks (50 meter pool) and anchors for ladder (25 yard pool).
- **DABNEY HALL** - Room 210, install new lighting, new dropped ceiling.
- **WILLIAMS HALL** – Disconnect and cap off autoclave in 3130 Williams hall.
- **PATTERSON** – Renovation of offices.
- **RESEARCH III** – Remove electric from ATM machine and repair walls.
- **CBC, MAIN BLDG.** Move and reattach plumbing for various pieces of equipment in Clin-Path.
- **RESEARCH II** - RM 102A tapping into chilled water line.
- **EB II** - 2201 Install an additional power outlet.
- **PARTNERS I.** - Install cooling unit, t-stat and duct work to delta studio room 2353.
- **CVM MAIN BUILDING.** Room c274. Install two new exam lights in ceiling.
- **COX** - Wall modification/repair to closed doorways in lobby area of the College of Sciences Dean's office
- **WINSLOW** Install charging station.
- **EB II** 3228 & 3231 Remove power poles for carpet installation.
- **SCHAUB HALL-** Install lab grade shelving & storage cabinet on existing center lab bench in lab 214.
- **POE-520.** Install new drop ceiling, lighting and sound trap to doors in Grad offices.
- **WILLIAMS** - HVAC
- **BROUGHTON** - 3rd and 4th floor renovation.
- **CVM TERRY CENTER** - Install corner guards in various locations.
- **FRIDAY INSTITUTE** - Need smart boards and other items removed from rms. 109, 115 and 201.
- **CVM** - RM C229 Renovation
- **GARDNER** Remove cabinets from 3211 ga and install in 3209 ga. Demolish wall unit shelves and paint wall in 4115 ga
- **WOLF RIDGE PLAZA HALL** - Order and install shelving units
- **COX** - Add chilled water line hot taps to serve existing Liebert unit in room 6c.
- **RESEARCH IV** - Install urinal in 2nd floor men's restroom.
- **CVM TERRY CENTER.** Rooms 2177 and 2114. Install new eyewash and tempering valve in each room.

- **ADMIN II** - Install hot water tap (similar to what is in Holladay hall suite b) at break area sink.
- **CVM MAIN BUILDING.** Office a222. Remove all furniture including desk and wall-mounted shelves, move items to loading dock. Once furniture is moved, patch and paint office.
- **COT** -Room 2102 disconnect water lines and power to a weather meter and chiller that is being surplused.
- **EBII ROOM B005** -- Exhaust installation. Provide and install duct work for lab equipment and tie into exhaust duct in room.
- **NORTH VIC STINSON GATE ISLAND** - Repair and replace the damaged island. Run conduit to the island for power and communication.
- **POE LIBRARY & 400H** - New drop ceiling / lighting to replace metal ceiling & fix HVAC flow.
- **BTEC RM 224 & 235** - add circuits and sink plumbing
- **PARTNERS I** - RM 1650 - replace ~200" 3/4" water line and install heat tracer to oven.
- **SCHAUB HALL** -Install new 160f water line at sink in room g32a.
- **GARDNER** - RM 3412 - Install a t with a shutoff valve in our current cold water line (the sink near the fume hood)
- **NELSON HALL** - Energy and water upgrades. Replace lights in stairwells and replace toilets in bathrooms.
- **COLLEGE OF TEXTILES** - PORT CITY JAVA -Fix broken water fountain near island.
- **NELSON HALL**- Renovate two offices and two conference rooms; removal of two whiteboards; and one electric outlet relocate.
- **CVM MAIN BUILDING.** D217 and E209. Install brackets for c lockers. Relocate shelves and coat hooks. Touch up paint. Paint wood surfaces with heavy duty gloss enamel. Paint sheet metal covers to match walls.
- **BROUGHTON** - Bioinformatics swing space partition 4217 & 4221.
- **TALLEY** - Fix leak under sink at Jason's deli.
- **THOMAS GROWTH CHAMBER** - Room 2501 Repair cooling units and lighting.
- **CVM MAIN BUILDING.** Room a202. Remove partial height wall around reception desk. Retain electrical and network for new desk in that area.
- **WILLIAMS** - 3115 Install new ceiling and new lighting
- **EBIII # 4410** : Electrical and plumbing modifications
- **EB III** - Add compressed air and vacuum to 3264. Connect from ca and lv lines above ceiling outside of room 3272. Stub off tees with ball valves outside of 3272, 3268 and 3267 for future use.
- **EB III** - Add chill water loop (1 inch tubing) from chill water supply across 3268 to room 3401.
- **BOSTIAN** - Outlets relocated, a new ceiling flush-mounted outlet installed, conduit installed for a touch panel box, and a data/phone faceplate.
- **CARMICHAEL ADMIN BUILDING** - Add a quad outlet on the wall to the second office in room 2012.

- **POE HALL** – Provide and install a 360 degree motion detector for Poe 103 - swap out the existing poor detector.
- **WITHERSPOON** - Replace existing h2o fountain w/ a refill station. 1st floor.
- **PRICE** - Replace existing h2o fountain w/ a refill station. 1st floor
- **DANIELS** - RM 223 – Renovation.
- **EBIII # 4401** : Electrical and plumbing modifications
- **CFL LAB** - Upgrade all lighting to LED.
- **WILLIAMS** - RMS 2126 & 2203 - seal-off door between 2 offices/
- **THOMAS** - Attach the Nanopure water purification system to the deionized water line in room 3568.
- **EBII ROOM B005** -- Add hard copper line for compressed air.
- **CVM MAIN BUILDING** - Room c269. Install plumbing drain for slide strainer.
- **BROOKS HALL** - Renovation
- **BILTMORE HALL** - Renovation
- **BROUGHTON** - Add horn strobes in 4211, 4216, 4216b, 4216c add sink and break room counter cabinets in room 4216.
- **THOMAS** -In room 3517: update flooring, modify two doorways for prescribed access, and provide signage for a storage room being remodeled.
- **EB II** - RM B005 -- compressed air work.
- **HEADHOUSE UNIT 4 1** - Extend the existing water line in 118d to 118b. Relocate water filter, located at the terminus of the existing water line to 118b. Install a shut-off valve before the filter.
- **PARK ALUMNI CENTER** – Repair Fountain.

Construction Shop Electrical Service

For this fiscal year the Construction Shop Electrical Service Department has completed **86** small – to – medium electrical projects for a total of **\$109,311.00**. This is an average of **\$1,271.00** per work order.

Trades Shops

Carpentry Projects Shop

- Floods that we responded to: Research 1, Language and Computer Labs. EB II, Scott Hall, Arboretum, Pulp and Paper, EB III, MRC, Partners II, CVM
- Wolf Ridge custodial shelving buildings 1, 2, 3 and Grove Hall.
- Centennial Campus, install temporary signs in two locations until new signs were made.
- Polk Hall, remove existing door and install dark room revolving door.
- Joyner Visitor Center, remove giant mobile in lobby.
- Biltmore Hall, modify and re-install oak display cases. Build a 20' sheetrock wall, install new ceiling grid, ceiling tile and track lighting.
- CVM, cover existing chicken shed with new green metal siding.
- Partners II and III install new thresholds and weather stripping on all exterior doors to make buildings more energy efficient.
- C.V.M milking parlor, cover entire ceiling with FRP board.
- C.V.M installed all new wall guards and corner guards throughout Terry Center.

- Weiner Brown, reconfigure existing laminate counter tops and modify base cabinets.
- Withers and C.O.T remove existing store fronts to make more open space.
- 65 Dan Allen, installed over 1,500 square feet of VCT tile in sever room.

Carpentry Maintenance Shop

- Design and fabricated skate board racks for dining
- Provided support for presidential visit
- Made repairs to all three buildings at CVM in advance of accreditation visit
- Replaced 29 pieces of obscure glass with clear at Carmichael to allow for more natural lighting
- Installed new weather stripping on all exterior doors at Dabney and Cox
- Replaced multiple pieces of glass in bus shelters around campus
- Replaced multiple doors at Fountain Dining
- Replaced numerous pieces of broken glass throughout campus
- Completed numerous moves throughout campus
- Made multiple laminate repairs at SHC
- Made numerous VCT repairs throughout campus
- Made repairs to numerous doors throughout campus
- Replaced numerous stained and damaged ceiling tile throughout campus
- Repaired numerous doors throughout campus

General Shop

- Fabricated and installed 175' of 2" railing at CVM Milking Parlor to contain the cows
- Resurfaced the granite entrance steps of seven buildings on Main Campus
- Installed numerous building and directive signs throughout campus for OUA
- Removed the concrete and brick stair treads, waterproofed the support base, poured a cheek wall and reinstalled the stair treads and bricks at the MRC parking deck
- Repaired, resealed and painted the outside fountain at the McKimmon Center courtyard
- Fabricated and installed aluminum overhead gates in eight of the dog kennels at CVM
- Removed the AHU coil and drain pan, repaired the pan and reinstalled the coil at Language and Computer Lab
- Tore down the exterior cooling tower at Poe Hall for BM&O, demolished the concrete support bases and poured a new slab
- Fabricated two new roof top ventilation louvers for BM&O that had blown off the roof of the MRC building during a wind storm
- Demolished the gate island at the visitor entrance on Stinson Drive. Fabricated and installed new bollards for the new island.
- Installed various bike racks and bike fixit stations throughout campus
- Installed newspaper drop boxes campus wide for Campus Enterprises
- Built a lamp for Kevin McNaughton's retirement
- Bricked in A/C openings in various buildings at the Western Manor Complex for housing
- Welded patches inside of the fire box of the new Cogent boiler at the Cates Steam Plant
- Demolished 2 modular trailers at the Dearstyne Entomology Department site

- Demolished the block walls and floor of the CVM cat and small canine ward and rebuilt them per new specifications
- Assisted with the taping of the Scotty McCreery video on the Brickyard
- Provided support for the President's visit to the Isenhour Tennis Complex

Lock Shop

- Lock Shop provided hardware removal from Talley at the beginning of phase one as well as phase two for sustainability and reallocation.
- The Lock Shop worked closely with project managers and architectural security door hardware vendors and UOA regarding the specified hardware requirements and keying parameters for Talley phase 1A and 1B. Lock shop is continuing to work with the construction managers on phase two.
- The Lock Shop installed all over twenty five hundred cores for Wolf Ridge housing project with more to come. The Lock Shop also provided punch list support by visiting each and every door to insure proper installation of hardware and operation.
- Lock Shop installed eighteen Best Keypad locks for lactation rooms established around campus.
- Lock Shop replaced entrance doors at Gardner Hall.
- Lock Shop completed Poe Hall ADA automatic operators for the bathroom renovations.
- Lock Shop rekeyed all of the perimeter doors for Greek Housing to card reader cores as the readers came on line.
- Lock Shop rekeyed Greek House 2 and Greek House 11
- Simple K continues to move forward. In the past year the lock shop completed five building, Primrose, Page, Peele, Harris, and Friday Institute, as well as Cherry and Hunt Library. We are in the process of rekeying Burlington and plan for DH Hill to begin rekeying during summer break
- Rekeying will also take place at EH&S, Brooks, Leazer, and Ricks.
- All of the locksmith's in the lock shop have met the State of NC requirements and received their Locksmith licenses.
- Shop participated in fire door inspector education class this winter.
- The Lock shop handled a total of 1,700 urgent work orders all within a four hour window each.

Paint Shop

- Patched & painted in 9 buildings after repairs were made
- C.V.M. painted for A.L.A.C. inspection
- Bio. Research painted for A.L.A.C inspection
- Painted common areas in Bureau of Mines, Dabney Hall, Harris Hall, Page Hall, Hillsborough Bld., McKimmon Center, Pare Hall, Patterson, Riddick Labs, Alumni, And Winston Hall
- Cleaned graffiti off Wolf statues
- Painted Poe Hall Suite 317
- Painted 45 rooms at Student Health

- Cleaned graffiti around campus.
- Painted Partners I Suite 1200
- Painted Patterson Suite 112
- Painted Broughton Hall 4th floor
- Painted exterior ceiling at Alumni
- Remove wallpaper and painted Williams Hall suite 3403
- Painted Carmichael Gym suite 2602
- Painted Poe Hall Suite 2402
- Power washed exterior of Cox Hall and outdoor classroom at Tompkins Hall.

Roofing/Waterproofing Shop

- Witherspoon-Resealed all coping and control joints
- McKimmon Center-Repaired failing seams and patches
- D.H. Hill-Resealed coping stones on tower and East wing
- SAS Hall-Air sealed parapet wall and all penetrations on the roof
- MRC Parking Deck-Fabricated and installed temporary roof, water proofed steps, and new concrete slab
- Thompson Theater-Re-routed downspouts, repaired and water proofed wall
- Park Alumni-Repaired over 700 feet of deteriorated membrane at seams
- Biltmore-Repaired many punctures, failing seams and flashings
- Harrelson-Repaired 150 feet of failing edge metal flashing
- Dearstyne Avian Health-Repaired open seams and edge flashing
- 3501 Avent Ferry-Secured building and removed all furniture and debris
- Fountain Dining Hall-Resealed all coping stone and control joints on entire building
- Daniels-Excavated, repaired and waterproofed section of wall
- C.O.T.-Re-routed steam vent, repaired and waterproofed wall
- Turlington-Installed new copper downspouts on East and West sides
- C.F.L.-resealed all coping stones

Projects Group

- Assigned over 445 projects at a total cost over \$6,400,546 including :
- Management of the database for all work orders assigned, monitor, close and bill upon completion for Repair & Renovation Services.
- Roxane Waller joined the team as temporary Document Control Specialist; she has facilitated a smoother processing with AiM and assists with obtaining quotes from vendors and submission of invoices for final payment.
- Annette Snead joined us full time as a Project Manager, aiding us with her knowledge of ADA issues other compliance requirements.
- Building Inspections were conducted on 34 different buildings. This identified deficiencies that work orders were created for different shops to make repairs.
- Milled and repaved over 788 tons of asphalt on DH Hill loading dock, Nelson Hall West Parking Lot, Nelson Hall South Parking Lot, Patterson Hall North Parking lot and Patterson Hall South Parking lot. Patching was accomplished on

various locations (Sullivan Drive, Dan Allen Drive, Dan Allen Extension, Frat Court, Varsity Drive and Wolf Ridge Way) replacing curb and gutter, patching pot holes and repairing utility cuts.

- Recycled 494 tons of asphalt for reuse.
- Major roof repairs were accomplished on DH Hill, South Tower and Mills River Facility at Mills River, NC. Repairs were removing damaged and wet insulation, replacing rotten nailers and sealing various penetrations.
- Waterproofing efforts were applied at CMAST Facility at Morehead City, NC. including resealing the exterior brick, painting, replacing exterior electrical elements and adding a brick enclosure for the mechanical equipment.
- Glass repairs on several buildings, DH Hill Library, Engineering I, Scott Hall, Winston Hall, Research IV, Jordan Hall that had either broken glass or fail seals in various areas.
- Replacement of 2,152 sf failing vinyl flooring in Butler Communication Building. Installed 2350 sf of vinyl flooring at Partners I, 1450.
- Tasked with installing carpet on over 100 projects.
- Installed over 3398 sq. yards of carpeting in Poe Hall, Tompkins Hall, Winston Hall, Polk Hall, Patterson Hall, Student Health, Research II, Partners I and II and others. Approximately \$146,791 was spent on carpet.
- This has been a heavy year in completing lab renovations: Polk Hall, 2 labs, Williams Hall, 6 labs, Dabney Hall, 2 labs, Partners II, 1 lab, Partners III, 2 labs, Schaub Hall, 1 lab, Kilgore Hall 1 Lab and CVM, 3 labs. This included renovations for new casework, new energy efficient lighting, new ceilings, bench tops, sinks, fixtures and flooring.
- Renovations to modify office space and common areas in various locations, Caldwell Hall, Winston Hall, Tompkins Hall, David Clark Labs, Nelson Hall, Daniels Hall, SAS Hall, Friday Institute, CVM, Research II, Partners I, Partners II, BTEC, Corp. Research I, Monteith Research, College of Textiles and others. Renovations included items like painting, moving walls, doors, locks, HVAC modifications, address life safety, ceilings, lights and flooring.
- LED Lighting - Partners I, 1450 Telecom Room, replaced all lighting with new LED lighting. DH Hill was able to change out several sections of lights to new LED lighting.
- Insulation - Peele Hall and SAS. Additional insulation was added to the attic in Peele Hall and sealed the roof membrane for air leaks at SAS.
- Exterior painting was accomplished on several buildings, CMAST, Schaub Hall, East and West Barns, Winslow Hall, Fountain Courtyard and 1911.
- Interior painting was accomplished on CVM old section, Poe Hall, Winston Hall, Dabney Hall, Friday Institute, Jordan Hall, Poulton, Schaub Hall, BTEC and others.
- Replaced ceiling tiles in Poe Hall Library area, adding new ceilings and LED lighting.
- Water proofing of Monteith Research elevator tower area. With help from RR General Shop and others, the stairs were removed and replaced. Water proofing was reapplied to help seal the areas for repeated moisture problems at the entrance.

B. Volume of Activities

There were a total of 11,569 work requests completed by Repair & Renovations for this fiscal year.

<u>R&R Work Requests</u>	<u>13-14</u>
Admin	14
Carpentry Maintenance Shop	2,317
Carpentry Projects Shop	246
Construction Services	475
FCAP	13
General Shop	1,055
Lock Shop	3,896
Paint Shop	792
R & R Projects	1,216
Roofing/Waterproofing Shop	631
Sign Shop	865
Warranty	49
Total	11,569

C. Special Achievements of Significance

D. Special Program Reviews, Studies or Plan

II. Compact Plan: Major Initiatives

Bell Tower Lighting Controls
Improve R&R Portal Status
Simple K and Campus Rekey Phase II
Trades Shop Expansion
R&R Sustainability Initiative & Sustainability Champions
Business Controls and Reporting
FCAP Second Cycle

III. Diversity

IV. Staff

A. Major New Appointments

New Hires

- Steven Eisenberg, UTS Temp to Project Manager, Projects Group
- Annette Snead, Project Manager, Projects Group
- Alex Brininger, MM IV, Roof/Waterproof Shop
- Sean Kennedy, MM III, Roof/Waterproof Shop

Promotions

- John O'Connor, MM III to Carpentry Projects Supervisor
- Joe Hill, MM IV to Roofing/Waterproofing Supervisor

B. Kudos, Professional Activities and Recognition

APPA Institute for Facilities Management, Rich Hassard

APPA 2013, David Hatch

CEFP Certification, David Hatch

HR Academy, Joe Hill, John O'Connor

AutoCad Level 1, Doug Lynn, Bill Moog, Steven Eisenberg, Annette Snead

HVAC Certification, Joe Riley

SRAPPA 2013, David Hatch, Kevin Ingalls, Rich Hassard, Cathy Blanchard

Public Utilities Cross Connection, Jeff Johnson

Excel Level 1, Wayne Lynch, Mike Ellison, Rich Hassard, Jack Walder, Ruth Johnson, Chris Wolfgang, John O'Connor, Kevin Cummings, Scott Crowder, Joe Riley

Excel Level 2, Tara Williams, Kevin Cummings, Scott Crowder, Joe Riley

Excel Level 3, Kevin Cummings, Scott Crowder

HR Academy, John O'Connor

International Roofing Conference, David Hatch, Joe Hill

World of Concrete Expo, Rich Hassard, Chris Wolfgang

Painting & Decorating Expo, Bud Brannock

AutoCad Level 2, Pat Ferguson, Annette Snead, Steven Eisenberg

AutoCad Level 3, Gene Copley

Shelton Leadership Forum, Kevin Ingalls

RS Means Facilities Estimating, Tom Moore, Jeff Luz

Performance Leadership, Toby Myatt

Supervisor's Toolkit, Joe Riley, Wayne Lynch

Polar Plunge Charity Event, Joe Riley

Habitat for Humanity, Kevin Ingalls, Kevin Cummings,

2014 NCAPPA Conference, David Hatch, Kevin Ingalls, Rich Hassard, Johnny Cline, Cathy Blanchard, Gene Copley, Derick Kristeller, Tom Moore, Jeff Luz, Jack Walder, Wayne Lynch, John O'Connor, Joe Hill, Toby Myatt, Chris Wolfgang, Bud Brannock

Stop Hunger Now Food Drive, David Hatch, Cathy Blanchard, Joe Riley, Mike Ellison, Kevin Ingalls, Scott Crowder,

Highlands Ability Battery, David Hatch, Kevin Ingalls, Sally Smolensky, Cathy Blanchard, Rich Hassard, Johnny Cline

Water Damage Restoration, Mark Livesay, Rodney Holmes

Kudos from customers:

John Jefferds from JoAnn Henry for move from McKimmon Center to Varsity Research; Terry Ennis from Chris Brown, replaced hardware at Polk Hall; Mark Krucke from M.G. Waggen for renovation of conference room in Williams Hall; Gene Copley, James Valentine, Carl White, Pat Cirillo, Wilton Robinson, Dennis Johnson from Marjorie Santoro for renovation at Friday Institute; Joshua Pipkin, Steven Bostic from Kelly Schneider moved a cabinet into EHS Bldg.; James Alexander, Stacey Duperry, Calvin Whitaker from Christina Carrillo for painting in Poe Hall; Mark Rose, Jody Strickland from Courtney Parnell for reconstructing rabbit bank caging at CVM; Joe Riley from Yevonne Brannon for light switch in Urban Affairs; Kevin O'Neal from David Josephus for sign at Cox Hall; Calvin Whitaker, James Alexander, Tony Fowler, Chris Camilleri, Tim Dunn, Ahmed Almaghribi, Bill Gaines from Erika Knox for painting in Page Hall; Joe Hill, CB Banks from Mark Dearmon for operating lift for cameraman for Scotty McCreery video; Jeff Luz, Mike Gill, Jackie Riley, Mike Cossin for Grifols Telecom Closet from Melanie Rivera; Bud Brannock, Calvin Whitaker, James Alexander, Wayne Lynch, Andy Miller, Larry Faulkner for work at Gardner Hall from Bill Moog; Jeff Luz, James Valentine, Carp Shop, Const. Shop, General Shop, Lock Shop for Corporate Research I demolition from Bill Davis; David McHone for work at West Dunn from Jeff Elliott, Allen Boyette; for work at MRC from David Modlin; and work at COT from Jeffrey Kraus; Bill Moog, Rodney Holmes, Mark Krucke, Mark Livesay, Tim Campbell, Sam Curtis, Tim Dunn, Donny Jarman, Bobby Ray Smith for work at Poe Hall from Don Patty; Bill Moog, Mike Ellison, Andy Miller, Larry Faulkner for work at Poe Hall from Brian Matthews; Mark Livesay, George Harris Jr., David Hogg, Lee Barefoot for work at Agricultural & Resource Economics Dept. from Jennifer St.Jean; John Jefferds, James Beasley for moving bacterial shaker into new lab space from Laura Ott; Andy Miller, Mike Ellison, Larry Faulkner, Fitzroy Morrison for work at DH Hill from James Chapman; Graham Drewes for installing cores at College of Design (Leazer/Brooks Halls) from Jim Rains; James Alexander, Stacey Duperry, Tim Dunn, Paul Keyser & Michael McGovern for the exceptional teamwork that was done at the Department of Agricultural & Resource Economics on their Renovation Project in Nelson Hall.

Bobby Ray Smith, Tim Dunn, Tony Fowler and Ahmed Almaghribi for the great paint work that was done at the Department of Elementary Education in Poe Hall.

Rich Hassard for building a great R&R Team. (Kevin MacNaughton)

Andy Miller, Larry Faulkner & Mike Ellison for the successful outcome of the time critical Stinson Gate Installation Project.

Lee Barefoot & Steve Koleno for doing a wonderful job removing and re-installing the display cases in Biltmore Hall.

Mark Krucke & Tim Campbell for the great job they did installing partitions in Rooms 4217 & 4221 in Broughton Hall.

Tara Williams for handling herself in a professional manner and putting out some fires while filling in for Rich Hassard while he attended the NCAPPA Conference.

David McHone & Kevin Cummings for the outstanding job on the fabrication & design of the roof vent louver replacements for MRC.

Jeff Johnson, Donald Iannucci & Anthony Strossi for doing an excellent job on installing a stainless steel duct in the Necropsy Department at CVM.

Stacey Duperry & Tim Wiley for doing a great job on the office painting & being very easy to work with over Spring Break at Pulp & Paper.

Bobby Ray Smith & Michael McGovern for the outstanding job they did painting the bathrooms in the Pylon Building.

Jody Strickland, Mark Rose, George R. Harris, CB Banks & John Jefferds who helped make the improvements for the AVMA accreditation in the Teaching Animal Unit at CVM.

James Beasley for replacing step threads between rooms 110 & 118 in Daniels Hall.

Rodney Holmes, Sam Curtis, Tony Pennock, James Valentine & Carl White for the fantastic job they did at Withers Hall.

Jack Walder for helping with a lock problem at CMAST.

Derek Kristeller, Cathy Blanchard, Rich Hassard, Johnny Cline, Rebecca Echerd and Sally Smolensky for all the great work in making the R&R web presence a reality.

John Jefferds for the great job he did replacing a broken window in the Department of Crop Science.

Rodney Holmes and Mark Livesay for doing an exceptional job on the Renovation Project at the Department of Agricultural and Resource Economics.

Lee Barefoot and Steve Koleno for the great work they did on installing the kitchen cabinets and sink at Broughton Hall.

V. Recommendations and Concerns for the Future

Invest in reroofing. \$2.1M in roofing is in failed status and difficult to maintain. Another \$5M will be needed in the next 5 years.

Analyze which APPA service level can be supported at the current level of institutional investment in maintenance and operations. Communicate our capabilities and priorities to the campus.

Keep salaries current and equitable for all of NCSU FMT-B and FMT-M positions. Recently, similar classifications in the masonry trades paid significantly differently between units causing tensions and interrupting the smooth progress of work.

Leverage mobile technology and AiM to reduce response time, reduce overall job cost, and empower employees to input time directly to the system.

Continue campus rekey initiative.

Continue to monitor R&R Projects Group for workload/project manager and impact to the budget from onslaught of year end project work.

VI. Impacting Energy and the Environment

Each shop in R&R had a representative to work with the sustainability office to increase awareness of sustainability in the shops and promote sustainable practices. Each shop hosted a meeting with a representative from the sustainability office to explore what sustainability meant to the individuals and to the shop. The R&R sustainability champions then showcased one new sustainable practice. Examples included buying bulk materials and breaking the packaging down to manageable sizes, new filter bags to strain concrete washout and reuse of building materials.