University of Virginia
Facilities Management
Annual Report
Fiscal Year 2000-2001
Facilities Management’s mission is to provide timely, cost effective, quality facilities management for the University of Virginia.

For service, visit us at http://fmweb.virginia.edu/WorkRequest/
Or email us at fm-service-call@virginia.edu

For service in the Health System
Health System Physical Plant
Tel 434-924-2267
Fax 434-924-5342
Box 800283
McKim Hall

For service in the Academic Division
Business Management Services
Work Management & Reception
Tel 434-924-1777
Fax 434-982-5894
575 Alderman Rd.

Robert P. Dillman, P.E.
Chief Facilities Officer
575 Alderman Road
Charlottesville, VA 22903
Rpd2n@virginia.edu
434-982-5834
Contents

Foreword
Accomplishments
Performance
Master Plan & Topography
Professional Development
Programs
People
October 2001

The full array of Facilities Management's skills and talents is showcased in the project that renovated and restored Pavilion VII, the Colonnade Club. Guided by Murray Howard, curator and architect for the Academical Village, our tradespeople and project assistants put their talents to work in this historic and unique gallery in which many of the University's most prestigious functions are held. Mr. Howard gives a first hand account of this three-year project later in this report.

Because of a budget impasse between the Governor and the General Assembly, state funds for certain capital projects and maintenance reserve projects were frozen in February of 2001. Eventually all of the maintenance reserve funds for fiscal year 2000-01 were restored, but half the maintenance reserve funds due in the second year of the biennium, 2001-02, were cut. This was a reduction in second year funds from $6,679,589 to $3,339,794. The impact of this cut was much greater than the dollar amount might imply because maintenance reserve funds are commonly paired with other funds to expand projects.

As you read through this report's description of our accomplishments in capital projects, maintenance, renovation and routine services; training and staff development; the programs we manage for the University and our staff's community service; please keep in mind that these accomplishments are achieved by a dedicated staff with years of service and an understanding of and respect for University traditions and protocol.

Facilities Management has two primary goals: To be your choice for all your facilities management needs, and to be the very best and most efficient provider of those services.

Please continue to let us know how we're doing.

Robert P. Dillman, P.E.
Chief Facilities Officer
Congratulations to our Facilities Management colleagues who are long-time University employees:

**Top Five Club**

Bobby Schafer
Fred Gibson
William Johnson
Mary Johnson
Richard Stulting

---

**30 Year Club 2001**

David Miller, Helen Durrer, Clarence Shifflett; Walter Wright, Hollis Lawson, Lukie Browning, and George Wood. Patricia C. Mathews and James Taylor were unavailable for this photo.

**25 Year Club 2001**

Darlene McClary, Mary Burton, Brenda Buttner, Joyce Chewning, Jimmy Williams; Eugene Baugher, William (Red) Dansey, Hattie Agee, Larry Reese and Gary Wood. Page Fox, Thomas Garrison, Edward Marks, Leslie Staton and John B. Agee were unavailable for this photo.

---

**20 Years**

N. Ed Brooks
David E. Gentry
Margaret A. Jackson
James E. Jefferson
Gordon Jones, Jr.
Gerald C. Knight
Ricky O. Morris
Charles T. Rappold
Lynn K. Rush
Edith C. Taylor
Linda M. Walker

**15 Years**

Robert W. Adcock
David L. Clark
Pauline E. Cobbs
Mark S. Conner
Michael F. Daddezio
Kenneth W. Dudley
Calvin C. Harris
Shelby C. Hawkins
Danny K. Lawson
Bruce H. Lovelace
Raymond D. Moton
Josa C. Perry
Juanita M. Purvis
R. Maria Ragland
V. Paul Rood
Michael A. Shumaker

**10 Years**

Melissa S. Berry
Stanley Bolden
Martha L. Clark
Mark W. Fitzgerald
Lawrence W. Harlow
Connie M. Knitting
Elizabeth W. Lawson
Phillip S. Mitchell
William F. Shaw
James E. Spears
Accomplishments

- The past year has witnessed reopening of the Colonnade Club at Pavilion VII, for continued use as a faculty club and venue for academic and social gatherings. (Photos on previous page.) Restoration and renovation carried out within the building over the past three years by the renovations division are complete, with refurnishing to be completed during the autumn season. Exterior work south of the building will soon transform the former alley into a gracious entryway for automobile and pedestrian traffic. Altogether, this project constitutes the most complex restoration yet for any of Jefferson’s Pavilions and is a tribute to Facilities Management’s craftspeople and renovation’s management.

- The 2001 Vision Award was presented by Literacy Fair of Virginia to Al Napier, for "Employee Development Opportunities at Facilities Management." The University’s entry was selected for its commitment to improving the education and life-long learning skills of employees. (See photo in Professional Development, later in this report).

- The University of Virginia was awarded the 2001 ENERGY STAR® Partner of the Year award, presented by U.S. Environmental Protection Agency Administrator Christine Todd Whitman, for “outstanding commitment to pollution prevention through continuous improvement of energy management practices.” Facilities Management’s Energy Conservation Program, managed by Tony Motto, was responsible for that accomplishment.

- The University also earned the Virginia Recycling Association Environmental Excellence award for Institutional Recycling Program of the Year. Facilities Management’s Division of Recoverable and Disposable Resources, managed by Dennis Clark, headed efforts to win that honor.

- During the 2000-2001 fiscal year, Facilities Management had 69% participation and $15,083.35 in donations to the Commonwealth of Virginia Campaign. At the close of the fiscal year, CVC chairpeople within Facilities Management were planning for the annual fall campaign which, each year, surpasses the previous year.

- Annual savings and income this year from energy conservation work and through using central plants to produce energy include:
  - Estimated savings of over $4.4 million by halting the growth of electricity use on a square foot basis in the last decade rather than continue the rapid growth of the 1980’s.
- Calculated savings of almost $3.9 million associated with burning 83% coal instead of 100% gas to produce steam at the Main Heating Plant.
- Estimated savings of over $3 million from using central chiller plants to produce chilled water instead of stand-alone building chillers and direct expansion units.
- Calculated savings of almost $2.5 million on the cost of purchased power obtained from aggregating our power supply through substations rather than having direct drops from Dominion Virginia Power.
- Anticipated savings of almost $100,000 from energy conservation work.
- Calculated savings of $62,000 achieved at the Main Heat Plant by exceeding the plant efficiency goal by 2%.
- Sewer credit refunds of almost $110,000 from the City of Charlottesville.
- Income of almost $15,000 by using the 1250 kW emergency generator at the Main Heat Plant to participate in a standby generation program with Dominion Virginia Power.

- Work by the recycling division achieved a recycling rate of over 43% and continued expansion of the recycling program with a total of 5,693 tons of material recycled or reused – up 1,486 tons or over 35% from the previous year.

- The Utilities Department completed the installation of a second 700 ton chiller in Newcomb Hall and also partnered in the construction of the HSC Chiller Plant South and associated thermal energy storage tank and in the project to construct a new chiller plant for the Central Grounds precinct in the basement of the addition to Clark Hall.

- With continued emphasis on safety, the Utilities Department accomplished numerous outdoor lighting projects and emergency telephone installations.

- To save money for University customers’ electricity charges, our electrical distribution division converted primary service at the Miller Center and the Orchard House from Dominion Virginia Power to the UVA system. Besides, cost-savings, the UVA system provides a parallel system for backup.

- The connection of Cobb Hall to the Central Grounds Chiller Plant will provide an anticipated electrical savings of over $14,000 per year.

- Systems Control Center implemented several enhancements to the monitoring system to improve emergency response.

- Business Management Services staff completed an intensive training program for Oracle Financials and included the areas of accounts receivable, accounts payable, purchasing, purchasing cards, general ledger, funds management, labor distribution and data storage retrieval.
• Participation in the Integrated Systems Project’s Conference Room Pilot series, for systems testing of individual transactions initially and finally testing of integration within Oracle financial modules.

• Business Management’s Information Systems Division planned and implemented an automated payroll reporting system. The new system replaces a manual reporting process and allows, for the first time, maintenance of a database of employee hours worked, leave taken, and shift differential information.

• Facilities Planning and Construction (FP&C) awarded 77 construction contracts totaling $71,774,624 and processed 163 professional service contracts totaling $13,942,843.57.

• FP&C planned and conducted two Inforum 2001’s, separate open houses for contractors and design professionals to meet FP&C staff and learn about proposed projects.

• FP&C continued an aggressive program for increasing the participation of minority and women owned business enterprise firms in procurements made by Facilities Planning and Construction.

• The University’s 2002-2008 Six-Year Capital Projects Plan and the 2002-2004 Capital Budget Justifications for Capital Projects were completed and submitted.

• Facilities Operations’ Scheduling and Estimating Office develops, estimates, distributes and schedules work for 17 cost centers and prepares competitive cost estimates used in the Make/Buy program. The office prepared estimates totaling $1.6 million last year.

• For the annual Day of Caring sponsored by the United Way in September, more than 55 Facilities Management staff joined University faculty and staff to assist with several projects, all designed to help people and organizations serving needy people in Charlottesville and Albemarle, Fluvanna, Greene, Louisa and Nelson counties. Projects included interior/exterior painting, shed demolition, porch and roof repairs and interior/exterior painting for two community service facilities.

• The carpentry shop replaced the roof between Pavilions IV and VI using materials and methods consistent with the original construction of the Academic Village as were the student rooms at Pavilion X and the porch at Pavilion VII.

• The plasterers worked on the East Range student rooms and helped Renovations with Pavilion VII.

• The masons have repaired brick throughout the University they continue to install bollards at different locations. This shop also assisted in replacing the fire doors at New Cabell Hall and installing a walkway in Brooks Hall attic to meet safety codes.

• The plumbers installed new sinks and faucets at Alderman Library, Monroe Hall addition, Gilmer, Chemistry and in Physics and Mechanical Engineering buildings.
Other projects included replacement of condensate pumps at Webb Dormitory, new flush valves in Thornton Hall, Material Science, and Monroe Hall, New Cabell and new floor drains were installed in Old Cabell Hall.

- At Mountain Lake, cabin improvements included replacement of 18 windows and lead paint and asbestos removal. The renovation of six cabins has been completed. A contractor has been hired to improve the sewage treatment plant with work scheduled for completion in the fall. A new permit was approved for effluent water quality in 2000 and the plant is able to treat to the new permit.

- The electricians have retrofitted 169,465 square feet of bulbs and ballasts at the hospital. They completed many projects to update the University’s lighting systems including one that involved changing out approximately 2,200 light fixtures at the Alderman Road dorms. This project was one of several installing energy efficient fluorescent lights for old incandescent lights.

- The Renovations Division completed a number of other significant projects. Classroom improvements continued in Drama, Bryan Hall, Monroe Hall, and Ruffner Hall, with improvements to lighting, HVAC, ITC and multimedia infrastructure, and upgrades to finishes and paint.

- Several laboratory spaces in Thornton Hall were given improved mechanical and electrical systems, and a Psychology research space was built in Gilmer Hall.

- Renovations continued its support of the “Green Lights” energy conservation program. This program retrofits or replaces light fixtures with much more energy-efficient models. Buildings completed this year included Gilmer Hall, Old Cabell Hall, Zehmer Hall, Chemical Engineering, and Material Science. Work continues in Jordan Hall.

- The sign shop was busy this year relocating from the Blue Ridge Complex to Alderman Road. Among the significant projects completed this year was a very large sign order for The College of Virginia at Wise.

- The tool room continues to stock, rent, and maintain all types of equipment for other trades within Facilities Management. Lending equipment to the University student groups and other charitable organizations in the surrounding community for self help projects remains a secondary role for the tool room. When a 6” chilled water line in Gilmer Hall ruptured, the tool room was invaluable for the ready supply of cleanup materials.

- The roofing shop stayed busy doing preventive maintenance on roofs. The roofers were also able to install a terre coated stainless steel roof on the East Lawn student rooms after the carpenters had completed installing new timber for this roof.

- The lock shop last year spent much time at the Carl Smith Center project installing over seven hundred lock cylinders to meet the deadline for the first home football game. They
also changed out the entire locking system in the old JAG School to a seven-pin system to conform to ADA standards and fire safety codes.

- As we continue to strive for better fire protection for the University, the fire crew installed a number of systems throughout our facilities this past year that include Dawson's Row number two, three, and four. We also put new systems in the Chemistry building, East Lawn, Pavilion VII and the French House. The fire protection shop also continues to do inspection and repair on all the fire systems and the all types of sprinkler systems.

- The elevator shop worked with contractors on seven elevator installations. The shop inspected these projects and assisted with the safety aspects of these units to help get them certified for use. The preventive maintenance program continues to be enhanced to help keep these units reliable and available.

- The North Grounds zone maintenance team had a challenging year with major construction being performed at the Miller Center, Darden School, Law School and JAG School in the North Grounds area. The zone team works directly and indirectly with contractors to solve or prevent problems from occurring in occupied space within these buildings.

- The North Grounds zone team took on another special request from Law School to install 10 circuits for the modular furniture being relocated in Withers Brown second floor level. This project was related to the renovations of Slaughter Hall, which is in progress at this time. The zone team also did a very similar project for Darden School Library. The zone team has worked with all the North Grounds coordinators to address their needs including weekend coverage for Graduation and Alumni events. As in the past, the North Grounds zone team continues to work very closely with the coordinators to give them control over projects by reducing coordination to a single point of contact.

- The landscape division was involved with the new irrigation system installed on the Lawn; this system allows automated and remote operation tied to a weather information system.

- During the winter, several of the large, old trees on and around the Lawn were removed for safety reasons and new trees were planted.

- A landscape master plan for the President's residence on Carr's Hill was prepared and approved, and implementation begun.

- Heating, ventilating and air conditioning support to the University is provided by six individual groups of trained personnel that maintain, install equipment and respond to service calls. With an average of more than 15 years experience, tradesmen are capable of providing the depth of service to accommodate almost every situation.
• Major maintenance funding has made various improvements to HVAC systems throughout the Grounds, including:
  • New cooling towers installed at Garrett Hall and Rotunda
  • Installed new A/C system for ITC room at Astronomy Building
  • Boiler replacements at Morea, Montibello, Zehmer Annex and the International House
  • Replacement of A/C system at the Fan Mountain Observatory
  • Installed high efficiency purge units on the chillers at Wilson Hall, Highway Research, Carruthers Hall, and Ruffner Hall
  • Installed variable frequency drives on air conditioning units and pumps at Old Cabell Hall, and Bryan Hall
  • Replaced two D/X systems at the Heating Plant with chilled water systems
  • Installed new heat pump for the west wing at the Rotunda
  • Replaced rooftop air conditioner at Alderman Library

• Large HVAC projects for the year included the Pavilion VII renovation and renovation of the Monroe Addition Trading Room Project involving a very sophisticated air conditioning scheme operating a large computer room environment.

• Many air-filtering systems have been upgraded with higher efficiency filters to promote cleaner air within our buildings. This department works closely with the Environmental Health and Safety Division to inspect the air quality in all buildings at the University that are maintained by Facilities Management as safe as possible.

• Additional computers and training for each HVAC crew directly supports the goal of being more efficient on the job and being able to detect problems in the building systems and respond before temperatures become critical.

• For the first half of the year, Building Services averaged a 12.5% vacancy rate. The high vacancy rate challenged the division to maintain the cleaning frequency and a satisfactory level of cleanliness. During the last half of the year, the vacancy rate averaged 8%. The declining vacancy rate was attributed to a slowing economy, local plant closings, converting additional evening shift buildings to a day shift and elevating the salaries of employees above the federal poverty level. The lower vacancy rate raised the level of cleanliness in the buildings and increased morale.

• Housekeeping workers attended computer training and supervisors obtained additional supervisory classes and computer training. New fields of training included OSHA Compliance and Accident Prevention.

• Health System Physical Plant provided reliability and responsiveness of facilities services as evidenced by a record 32,216 work orders performed for service and emergency calls and 29,888 work orders performed for preventive maintenance projects.
Health System Physical Plant achieved an average Utilities Performance Score of 828 representing minimum equipment failures and a satisfactory preventive maintenance performance.

Health System Physical Plant maintained a Life Safety compliance level exceeding 95 percent, in keeping with code requirement standards of the Joint Commission for Accreditation of Healthcare Organizations (JCAHO).

A formal review of Facilities Management’s processes and procedures for care, maintenance and testing of elevators was completed by an outside consultant. Recommendations will be implemented over the next several years, allowing us to further improve our care of elevators.

Health System Physical Plant successfully completed an inspection and plan of correction for the Center for Medicare and Medicaid Services (CMS) by satisfying all code requirements.

The University’s audit department audited Facilities Management’s operations to ascertain our effectiveness and efficiency. The audit results reflect well on Facilities Management.

Health System Physical Plant noticeably improved landscape environment for over 20 acres of HS grounds and initiated the first ever on-demand construction contract for Health System facilities.

At the Rotunda, the second year of work to rebuild deck stonework is underway. By October 2001, the entire southern aspect of the decks will be restored, leaving the two northern segments for completion in the summers of 2002 and 2003. The now-familiar trompe l’oeil construction fence was adapted for use between the Rotunda steps and Pavilion II.

Craftsmen and interns once again collaborated on restoration of missing or altered features at the historic student quarters, East Lawn 36 through 52. Included were mantels, doors, windows and furniture. Completion of this type of work for all 108 rooms on the Lawn and Ranges will require about ten more summer work sessions.

Paralleling restoration of missing or altered features at Lawn rooms, the summer of 2001 is the third year of a four-year undertaking to completely rebuild electrical services for all 108 Jefferson-era student living spaces. Work in the past two summers has benefited the 54 Range rooms. This summer concentrates on the East Lawn rooms. Next summer, work on the West Lawn rooms will complete this important project to address safety and modern utility needs.

After brief remodeling this summer, Pavilion X receives new occupants, the family of Carl and Charlotte Zeithaml.
• The office of the curator and architect for the Academical Village is doing research and documentary studies for its next major project, anticipated to be one of the original Hotels.

• In October 2000, President Casteen named James Murray Howard, FAIA, the first holder of the Kenan-Lewis Fellowship in Historic Architecture, recognizing his curatorial and architectural work of the past two decades in the Academical Village.

• The Office of Human Resources and Training continued to take a leadership role in the area of employee training and development. In addition to classes provided by tuition reimbursement and tuition waiver at local resources, Facilities Management staff members completed classes on topics such as firestop, ramset, roofing, solid waste management, and forklift training.

• The Supervisory Development Series (SDS) completed a fourth successful year. As the fiscal year ended, 21 participants were slated to receive certification in both the Supervisory Development Series and the National Safety Council Series and one participant completed both series as well as the WorkSkills for the New Millennium. Five others completed only the SDS and one completed the safety series alone. See Professional Development later in this report.

• Three apprentices were scheduled to graduate from the University’s four-year program. Eight new apprentices were selected and scheduled to begin early in July 2001.

• For the fifth consecutive year, the Office of Human Resources and Training offered in-house Computer training course for more than 100 Facilities Management staffers.
The chart below illustrates the dollar value of the actual spaces we have built for students, patients, faculty, staff and researchers over the past years, and what we expect to build this year.
### Utilities Improvements
- Utilities Systems Mechanical Repairs and Maintenance: $586,055
- Energy Conservation Projects: $3,605,272
- Utilities Distribution System Repairs & Maintenance: $819,601
- Utilities Improvements Major Projects: $1,150,046
  - Total: $6,160,974

### Heating and Chiller Plant Activities
- Repairs and Maintenance-Chiller Plants: $4,274,664
- Repairs and Maintenance-Heating Plants: $3,805,072
- Purchase of Fuel: $1,760,776
  - Total: $9,840,512

### Purchase of Utilities
- Electrical Service: $15,409,656
- Recycling Activities: $933,701
- Sewage Disposal: $1,018,310
- Systems Control Center: $1,058,003
- City Water: $982,763
- Fuel Oil: $92,255
- Natural Gas/Propane: $1,892,614
  - Total: $21,387,302

### Planning, Construction, Maintenance, and Operations
- Personal Services: $22,270,886
- Architectural and Engineering Consultation Services: $9,117,774
- Information Systems: $19,107
- Travel and Training: $230,276
- Contractual Services for Planning, Construction, Maintenance: $17,226,147
- Facilities Management Administrative Expense: $715,670
- Supplies for Planning, Construction, Maintenance: $11,396,548
- Equipment Rental: $185,574
  - Total: $61,164,982

### Lease-related Activities
- Repairs and Maintenance: $928,567
- Utilities: $629,026
- Capital Projects: $355,000
- Transfer to Judge Advocate General School Maintenance Reserve: $638,000
  - Total Lease-related Activities: $2,550,593

### Total Facilities Management Expense
- Total: $101,104,363
**UNIVERSITY OF VIRGINIA FACILITIES MANAGEMENT**
**SUMMARY OF OPERATIONS FOR FISCAL 2000-2001**

**Utilities Improvements**
- Utilities Systems Mechanical Repairs and Maintenance $484,263
- Energy Conservation Projects $1,976,450
- Utilities Distribution System Repairs & Maintenance $909,966
- Utilities Improvements Major Projects $593,442
  **Total** $3,964,121

**Heating and Chiller Plant Activities**
- Repairs and Maintenance-Chiller Plants $3,937,003
- Repairs and Maintenance-Heating Plants $3,807,601
- Purchase of Fuel $2,583,848
  **Total** $10,328,452

**Purchase of Utilities**
- Electrical Service $16,091,766
- Recycling Activities $820,159
- Sewage Disposal $921,891
- Systems Control Center $925,077
- City Water $987,656
- Fuel Oil $181,253
- Natural Gas/Propane $2,603,375
  **Total** $22,531,176

**Planning, Construction, Maintenance, and Operations**
- Personal Services $23,478,447
- Architectural and Engineering Consultation Services $9,999,696
- Information Systems $114,180
- Travel and Training $221,334
- Contractual Services for Planning, Construction, Maintenance $45,713,024
- Facilities Management Administrative Expense $1,670,463
- Supplies for Planning, Construction, Maintenance $13,094,601
- Equipment Rental $582,729
  **Total** $94,874,473

**Lease-related Activities**
- Repairs and Maintenance $1,007,843
- Utilities $645,477
- Capital Projects $413,918
- Transfer to Judge Advocate General School Maintenance Reserve $696,000
  **Total Lease-related Activities** $2,763,238

**Total Facilities Management Expense**
$134,461,460
FACILITIES MANAGEMENT CUSTOMER SURVEY
MINOR WORK - ACADEMIC DIVISION

This chart represents the level of customer satisfaction with minor work performed by Facilities Management workers. Customers were asked to respond to questions about their satisfaction with communications, timeliness, and quality of work. In addition, we asked if the work was reasonably priced.

FACILITIES MANAGEMENT CUSTOMER SURVEY
SERVICE CALLS - ACADEMIC DIVISION

We have collected 8 years of customer responses to surveys distributed after service call work has been completed. The responses represent level of satisfaction in the areas of courtesy, timeliness, and quality of work performed and communications with staff.
E&G MAINTENANCE EXPENDITURES
AND GROSS SQUARE FOOTAGE

The relationship of Educational and General gross square feet maintained to maintenance

MAINTENANCE COST

$15,000,000
$13,000,000
$11,000,000
$9,000,000
$7,000,000
$5,000,000
$3,000,000

1993/94
1994/95
1995/96
1996/97
1997/98
1998/99
1999/00
2000/01

TOTAL E&G GROSS SQUARE FEET

12,000,000
11,000,000
10,000,000
9,000,000
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000

MAINTENANCE RESERVE EXPENDITURES
MAINTENANCE OPERATING BUDGET EXPENDITURES
GROSS SQUARE FEET

MAINTENANCE CHARGES
as a percentage of replacement value
FISCAL YEAR 2000/2001

$1,100,000
$1,000,000
$900,000
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0

$35.0%
$30.0%
$25.0%
$20.0%
$15.0%
$10.0%
$5.0%
$0.0%

TOTAL MAINTENANCE COST
ANNUAL % OF REPLACEMENT VALUE

Annual Report 2000-2001
The University of Virginia’s Master Plan addresses four areas: the Physical Plan, the Precinct Studies, Pedestrians and Bicycles (Groundswalk), and Landscape and Resources.

According to the University Architect’s website, “This Physical Plan is intended to preserve and develop an academic environment that will enhance the University’s three-fold mission of teaching, research, and public service within a setting that promotes a sense of community and protection of valuable green space.

“Thomas Jefferson’s original "academical village" is an exemplar of coherent planning, a community, an ideal setting in which to nurture the life of the mind. In looking ahead to the 21st century, we look back to Jefferson’s belief that the principles which shape the physical character of the institution are derived from the principles which guide its academic undertakings. This Plan is founded on five core principles:

- Extending the Legacy
- Integrating Academic, Residential, and Recreational Uses in Functional Zones
- Creating a Walking Environment
- Re-Connecting All Sectors of the University Grounds
- Serving the Larger Community
The following pages show North Grounds, Central and West Grounds, and the Health System Area, respectively, as aerial views taken March 16, 2000. These maps are part of a complete rework of Grounds maps, which were last done in 1992 and updated in 1997. The Office of Real Estate and Space Management plans mapping updates every five years to provide accurate and current mapping and to illustrate new development and facilities.
In May, Al Napier was awarded the Vision Award by Literacy Fair of Virginia in their program Literacy: It's Everybody’s Business. His entry entitled "Employee Development Opportunities at Facilities Management" was selected for its commitment to improving the education and lifelong learning skills of employees. The award was originally presented in May at Longwood College. Because all directors contribute to the successful training opportunities at Facilities Management, they joined Mr. Napier, Bob Dillman and Len Hassell to present the award to Colette Sheehy, who is also very supportive of and committed to training.
Facilities Management’s Supervisory Development Series had 21 graduates receiving certification for their training during the 2000-2001 fiscal year. They were recognized at a ceremony in the Rotunda Dome Room in July. Pictured here are (front L-R) Bill Farish, Jeanne Warfield Steppe, Sandra Payne, Mary Frances Johnson and Barry Napier; (2nd L-R) Jessie Johnson Sr., Ronnie Herrion, John Trainum Sr., Scott Acree, Roy Brown, Ed Gatehouse and Ed Brooks. Other graduates not pictured here were Gerald Allen, Hattie Booker, Martha Clark, Steven Clark, Tommie Collier, Martha Creasy, Frances Cruz, Barbara A. Herring, Tara Holsapple, James E. Hughes Jr., Scott Jarrell, Eugene Lawson, Ronald Morgan, Karl Oswald, Tommie Rappold, Martin Rush, Freddie Snoddy, and Louise Toliver. This year, certification was also granted to these 21 and an additional participant who completed National Safety Council Training.

Left photo: Another participant, Jeanne Warfield Steppe, with Linda Mijatov, CATEC instructor, and Bob Dillman, chief facilities officer for Facilities Management, earned both SDS and NSC certification as well as WorkSkills for the New Millennium.

Right photo: Graduates enjoy an informal chat at the Pavilion I garden reception after the ceremony.
On August 8, 2001, three apprentices graduated from the University’s four-year program; the new journeyman electricians are (center, holding certificates) Lee Meadows, Nikki Patterson and Ed DeBary. Congratulating them are (L-R) Chief Facilities Officer Bob Dillman, State Department of Labor & Industry Apprentice Program Director Jennifer Nolan, UVA Executive Vice President and Chief Operating Officer Leonard Sandridge, and Regional Labor & Industry Apprentice Representative Bill Poats. Eight new apprentices were selected and scheduled to begin work in July 2001.

At the Apprentice Program graduation reception, Facilities Management staff and graduates and their families relax and discuss shop, career goals or just congratulations and plans for a vacation now that the rigors of classes are completed.
For the fifth consecutive year, the Office of Human Resources and Training offered in-house Computer training course for more than 100 Facilities Management staffers.

Employees throughout Facilities Management pursued professional development either through in-house computer classes or specialized classes for their specific trades. For example, Ira Seamster (left) of Health System Physical Plant's elevator team, completed extensive training for certification by ASME. This training was shared with other members of the elevator crew to ensure reliable and safe service for the patients and staff in Health System facilities. In the next fiscal year, more training is scheduled for Mike Remley, Everett Simmons (shown here) and other elevator mechanics.

UVA Executive Vice President and Chief Operating Officer Leonard Sandridge (left photo), keynote speaker for the Apprentice graduation and Vice President for Management and Budget Colette Sheehy (above), keynote speaker for the Training Recognition ceremony, have supported Facilities Management's effort to ensure a well-trained and highly qualified workforce for the University.
Programs
Maintenance Programs

Facilities Management performs three basic types of maintenance work:

- **Preventive Maintenance** is a high priority service in our approach to comprehensive maintenance programs. Accounting for approximately 20 percent of the operating budget for maintenance and repair, preventive maintenance is an effective method of avoiding potential failure of facilities equipment and systems. Through an automated inventory and scheduling system, work crews are assigned to perform inspections, adjustments, cleaning, and routine service on virtually all facility related major equipment and systems. The Work Management Division issued over 23,500 preventive maintenance work orders in the 2000-2001 fiscal year.

- **Corrective Maintenance** is the second category of maintenance work performed by Facilities Management. Both routine and emergency service calls are received by Work Management or the Systems Control Center 24 hours a day, 365 days a year. During the 2000-2001 fiscal year, over 15,000 service calls were received and dispatched by Work Management.

- **The third category of maintenance work** is major work, which represents projects larger in scope than preventive or routine maintenance services. Most maintenance projects accomplished as major work are included in a listing of major maintenance projects or the Maintenance Reserve program. The major maintenance program is funded through Facilities Management’s operating budget and normally supports maintenance projects ranging from $5,000 to $25,000. Last year this program identified and funded about 250 projects. Many of these projects were identified through the facility assessment program described below, or through the direct requests of building occupants. The Maintenance Reserve program is a biennial State Capital Outlay appropriation intended for maintenance projects in excess of available operating budget funds.

Facilities Management expended a total of $17,546,538 for maintenance and repair of the University’s Academic Division educational and general (E&G) buildings and grounds during the 2000-2001 fiscal year. A comparison of expenditures in 2000-2001 with expenditures for prior fiscal years follows:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Budget - Maintenance Reserve</td>
<td>$6,919,851</td>
<td>$5,949,832</td>
<td>$4,821,378</td>
<td>$3,901,548</td>
<td>$3,424,088</td>
</tr>
<tr>
<td>Maintenance Operating Budget</td>
<td>$7,528,505</td>
<td>$7,510,745</td>
<td>$6,858,404</td>
<td>$6,017,086</td>
<td>$6,394,877</td>
</tr>
<tr>
<td>Utilities Chiller &amp; Distribution System Maintenance</td>
<td>$1,410,101</td>
<td>$1,488,082</td>
<td>$1,265,289</td>
<td>$1,353,800</td>
<td>$1,119,900</td>
</tr>
<tr>
<td>Grounds</td>
<td>$1,688,081</td>
<td>$1,407,154</td>
<td>$1,398,812</td>
<td>$1,094,969</td>
<td>$1,164,501</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$17,546,538</td>
<td>$16,355,813</td>
<td>$14,363,883</td>
<td>$12,367,403</td>
<td>$12,103,366</td>
</tr>
</tbody>
</table>

University of Virginia Facilities Management
Maintenance Reserve Program

Maintenance Reserve appropriations are used to supplement the operating budget by funding major repairs and replacement of facility components including such items as failing roofs, deteriorating utilities distribution systems, unreliable building utilities and structural defects in aging buildings. The capital budget for fiscal 2000-2001 included half of the biennial Maintenance Reserve appropriations or $6,679,589. Some of the more important projects funded included:

- Rotunda deck waterproofing. The first, southwest wing, was completed, and the second, southeast wing, was begun.
- The completion of the Hospital Drive sidewalk project.
- The completion of the McLeod exterior masonry investigation and repair.
- Lawn and Range electrical system. This was the third year of this four-year project.
- Replace the roof on the Astronomy building and the East End Electrical Substation
- Renovations to the intercom and stage lift systems at the Drama School were begun.
- Joint funding to replace the HVAC system in the Old Medical School vivarium.
- The first phase of the replacement of air handlers at Law School was completed.

By far the biggest event concerning maintenance reserve this year was a budget reduction. Because of a budget impasse between the Governor and the General Assembly, state funds for certain capital projects were frozen in February of 2001. This included maintenance reserve. Eventually all of the maintenance reserve funds for fiscal year 2000-01 were restored, but half the funds due in the second year of the biennium, 2001-02, were cut. This was a reduction in second year money from $6,679,589 to $3,339,794. The impact of this cut was much greater than the dollar amount might imply.

Because the majority of the maintenance reserve allocation is required to be spent in the biennium it is allocated, and because large maintenance reserve projects can take years to be researched, designed, bid and implemented, many of the projects planned for major expenditures in a biennium are actually begun years earlier. At the time of the cut we already had numerous projects that were so far along it was not possible or prudent to stop them. In order to make sure we had enough money to complete these, we had to curtail many other projects that were still in the planning stages, some of which were planned for 2001-2002, and some of which were not expected to be implemented until the 2002-04 biennium. In addition, there were several critical projects that were considered essential and planned for 2001-2002 that we could no longer afford to implement. These were continued using other funds, some with the expectation that maintenance reserve would pay back the temporary funds in the future. To compound the complexity, the amount of the 2002-04 allocation, which will begin in July of 2002, is unknown. In the past, maintenance reserve funding was relatively steady from biennium to biennium, actually increasing slightly. This allowed us to predict a level of funding from year to year and plan long-range projects to fit our expected income. Now only a few months before the beginning 2002-04 biennium will we learn if the cuts are to continue, go even deeper, or if original funding levels will be restored. The result is not
only a reduction in the funds immediately available, but the inability to commit funds to new projects as well.

**Exterior Paint Program**

Each year Facilities Management funds exterior painting projects for E&G facilities. The following are some of the significant painting projects funded or completed during the 2000-2001 fiscal year:

| Old Cabell Hall | Bryan Hall Bridge |
| Minor Hall | Olsson |
| Montebello | Morea House |
| East and West Ranges | Police Building |

Work Management has the responsibility for all lead-based paint removal specifications and removal. Our contract administrator has been trained and certified to act as the on-site authority for this important and sensitive process.

**Facilities Assessment Program**

The Facilities Assessment Program is an important Work Management function designed to periodically assess the condition of University facilities and to document maintenance and repair needs. Through a facility condition inspection, building systems and components are inspected to identify facility maintenance and repair requirements. These requirements are then quantified to provide essential information for a comprehensive approach to maintenance programs and funding needs. The inspection results are shared with the occupants of the buildings so that they may be involved in the planning and prioritization of repair work to be accomplished in their facility. The FM Facilities Operations staff, the women and men that maintain and repair building systems, possess a wealth of knowledge. They evaluate maintenance needs and assist with prioritizing maintenance work. FM Facilities Operations and Work Management collaborate to identify and prioritize all possible maintenance needs.

For the 2000–2001 period, the deferred maintenance backlog for the E&G facilities is over $87,000,000, indicating that total plant maintenance funding has been inadequate to attain a condition of "maintenance equilibrium". This equilibrium funding level is the annual amount which is required to support facilities and grounds operations and maintenance, while at the same time providing for facilities renewal required to maintain the current value of the facilities for their present uses. The Work Management Division publishes annually the “Report on the Condition of University Facilities” summarizing the results of the assessment program. Copies of the report are available upon request and are posted on the Facilities Management World Wide Web site at http://fac.mgmt.virginia.edu.
Major facilities inspected during the 2000-01 year include:

- All Lawn & Range Buildings
- All Darden Buildings
- Nuclear Reactor
- Police Building
- CDW Utility (Lithotriptor Generator)
- Cavalier Substation
- East End Substation
- International House & Garage
- Dawson’s Row #2
- Morea House
- Morea Garage
- Law School
- Wertland Street Lab & #1308
- Judge Advocate General’s School
- Duke House / Sunnyside
- Little Morea
- Physics
- Chemistry Building

"Make/Buy" Program

Facilities Management continues to emphasize the "make/buy" option to our customers. "Make/Buy" seeks competition between University forces and private contractors where feasible. By injecting competition, Facilities Management hopes to continue:

- Ensuring that customers obtain services in the most economical manner available.
- Offering customers the widest possible range of available alternatives.
- Creating incentives to University shops to improve productivity.
- Assuring that contractors in the private sector are as competitive as possible.

Environmental Programs Management

Work Management currently acts as the focal point in Facilities Management for coordinating environmental programs and regulatory compliance programs. These programs include issues like underground and aboveground storage tanks and CFC's.

2000-2001 fiscal year highlights include:

- Fire and life safety improvements continue in University facilities, most notably the installation of detection and alarm systems in more of the Lawn and Range student rooms and continued installation of a sprinkler system in Jordan and Maury Halls. Fire alarms, exit signs, and pull stations continue to be installed or upgraded in buildings that lack these safety devices, such as Chemistry, Drama and the Dawson’s Row buildings.
- Classroom improvement collaboration continues between the Provost, ITC, and Facilities Management. This effort resulted in the renovation and technology upgrade of Drama 217, Campbell 107, and Ruffner 223, 281 and 283.
- Budget Freeze – Reprioritization and deferral of work
- Executed E&G maintenance budget to within <1% of budget
- Designed and launched Web-based work order utilities application
- Scott Stadium paving and vicinity sidewalks
- New bus pull off at Tree House, Student Activity building and Olsson Hall
- Completed Halsey Drainage project to prevent building flooding
• Carruthers/Michie grounds improvements
• Hosted visitors from the City of Charlottesville, Bank of Turkey, University of Miami (Ohio), and University of Kentucky interested in our operation
• Upgrade Fontaine service drive
• Old Cabell mural installation
• Thornton Hall Clean Room – process cooling water system – evaluation, redesign and modification

Energy Management Program

The Utilities Department has university-wide responsibility for minimizing energy use. The energy management program at the University is a comprehensive program that considers all opportunities for achieving energy savings including replacing building chillers and boilers with central plant connections, the design and construction of energy conservation measures, the implementation of energy saving operation and maintenance procedures, the utilization of an extensive university-wide building energy management system, and a university-wide commitment to modifying local behavior to decrease energy consumption.

The University of Virginia was honored this year by winning the 2001 ENERGY STAR® Partner of the Year award, and was presented the award by EPA Administrator Christine Todd Whitman in a special ceremony in Washington, DC on March 20, 2001. UVA won the award for "its outstanding commitment to pollution prevention through continuous improvement of the University’s energy management practices". In just this year alone, the University’s energy program has saved almost $100,000.

Christine Todd Whitman, US EPA, presenting the 2001 ENERGY STAR® Partner of the Year award to James Copeland, Tony Motto, Cheryl Gomez, Robert P. Dillman, and (to Ms. Whitman's left) Debbie Thacker, David Mumma, Dhruv Jain, and David Gentry. With them is Melissa Payne, EPA’s Energy Star regional coordinator.
The Utilities Department energy management program has garnered several other awards over the years including:

- 1999 EPA Honor Society, Magna Cum Laude
- 1999 US EPA Green Lights Partner of the Year
- 1998 US EPA Honor Society Magna Cum Laude
- 1998 US EPA Green Lights Partner Honorable Mention
- 1997 US EPA Green Lights Honor Society
- 1997 Association of Energy Engineers Region 2 Energy Manager of the Year Award
- 1997 US EPA Certificate of Appreciation for “outstanding dedication to voluntary pollution prevention”
- 1996 US EPA Green Lights Program Bronze Award

1. Region 2 is comprised of Georgia, Florida, North Carolina, Kentucky, Alabama, Virginia, Tennessee, and Washington, D.C.

Highlights of the energy conservation efforts accomplished this year include:

- The installation of 433 motion sensors with estimated annual savings of almost $6,300. To date, 2,455 motion sensors have been installed yielding overall estimated annual savings of over $36,000.
- The completion of a study to evaluate the use of existing emergency generators to reduce the cost of the peak electrical demand component of the University’s electricity bill. The study indicated that using the generators could result in significant savings if the generators could be made available for demand management when needed. It is anticipated that this program will be implemented once additional emergency generators are installed at the new research buildings.
- The implementation of the first performance contract between the Utilities Department and the Housing Division which resulted in the upgrade of lights in the Alderman Road Dormitories to a more efficient lighting system. When completed, it is estimated that the annual savings of this project will be over $90,000.
- The replacement of 42 electric motors with high performance, energy efficient motors. These motors were scheduled for replacement due to age and poor condition. It is estimated that the new motors save roughly 10% in energy usage over the old motors.
- The completion of several lighting upgrades in 10 buildings totaling over 802,000 NSF this year with estimated annual savings of over $87,000. To date, partial to full lighting upgrades have been completed in 94 buildings for a total of 4,955,904 NSF or 62.85% of our EPA reportable space. The annual savings from all the lighting projects completed to date total $601,135.
<table>
<thead>
<tr>
<th>Location of Lighting Upgrades Completed in 2000-2001</th>
<th>Project Cost</th>
<th>Estimated Annual Savings</th>
<th>Simple Payback (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zehmer Hall</td>
<td>$23,041</td>
<td>$4,376</td>
<td>5.3</td>
</tr>
<tr>
<td>Material Science</td>
<td>$33,476</td>
<td>$4,281</td>
<td>7.8</td>
</tr>
<tr>
<td>Chemistry</td>
<td>$132,577</td>
<td>$23,067</td>
<td>5.7</td>
</tr>
<tr>
<td>University Hospital 1st Floor</td>
<td>$33,819</td>
<td>$2,817</td>
<td>12.0</td>
</tr>
<tr>
<td>Halsey Hall</td>
<td>$7,203</td>
<td>$2,238</td>
<td>3.2</td>
</tr>
<tr>
<td>Lady Aster Pavilion</td>
<td>$1,772</td>
<td>$167</td>
<td>10.6</td>
</tr>
<tr>
<td>Alderman Library</td>
<td>$607,381</td>
<td>$32,486</td>
<td>18.7</td>
</tr>
<tr>
<td>Chemical Engineering Research Bldg</td>
<td>$18,142</td>
<td>$4,153</td>
<td>4.4</td>
</tr>
<tr>
<td>Gilmer Hall</td>
<td>$123,093</td>
<td>$12,059</td>
<td>10.2</td>
</tr>
<tr>
<td>Old Cabell Hall</td>
<td>$34,405</td>
<td>$1,613</td>
<td>21.3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$1,014,909</strong></td>
<td><strong>$87,257</strong></td>
<td><strong>11.6</strong></td>
</tr>
</tbody>
</table>

With the exception of Halsey Hall and the Chemical Engineering Research Building, lighting projects in this list of buildings were co-funded with maintenance and energy conservation funds due to the poor condition of the lights and the need to replace them. The lighting upgrades in Halsey Hall and Chemical Engineering Research Building were completed strictly based on the opportunity to save energy.

Other activities of the energy program this year include:

- The publication of four *Watts Happening* newsletters which update the University community about energy and recycling work at UVA and provide information on how to save energy dollars at work and at home. The most recent publication had a distribution of 11,807.
- The sponsorship of the sixth annual UVA Energy Awareness Day in September, holding one outreach event each in the Academic and Health Sciences areas.
- *District Energy*, published by the International District Energy Association, mentioned UVA’s energy program in its April / May 2001 issue.
- The White House cited UVA’s energy program at the Fifth Conference of the Parties, United Nations Framework Convention on climate change held in Bonn, Germany.
- *Inside UVA* published an article on August 18, 2000, about the 1999 EPA Honor Society Award.

**Recycling Program**

The Division of Recoverable & Disposable Resources (DRDR) enjoyed another year of growth and success. Once again, the University’s recycling totals increased (over 35%), but for the first time in eight years, so did the amount of material that was landfilled (almost 5%). Also for the first time in eight years, the total amount of disposable
materials generated by the University increased (over 16%). The rate of recycling now stands at an all time high of over 43%. However, the University community needs to place a greater emphasis through its procurement procedures on reducing the amount of total disposable materials coming into the University.

DRDR was recognized throughout Virginia and the country’s higher education community as a leader in recycling, education, and disposable materials management. Examples of its leadership this year included participation at two statewide focus groups - the Virginia Litter Council and a nationwide US EPA satellite downlink (“Recycling Gets a Higher Education”), presentations at the Virginia Conservation Network and at EPA regional conferences, and winning the Virginia Recycling Association’s highest award for Outstanding Institutional Program.

Members of our landscape team were featured in the cover story in the Fall 2001 Alumni News magazine. Photo by Ian Bradshaw and courtesy of Alumni News.
Facilities Management’s greatest resource is our people – their commitment and skills add strength to the University’s infrastructure. Our employees work throughout the University and the Health System on every construction, maintenance or renovation project in some capacity. The same is true of almost every event or special occasion. For example, as we were completing our report for the 2000-2001 fiscal year, we were all stunned and saddened by the events of September 11. When the University held a special memorial service on September 14 (photos above), Facilities Management staff was there, but not only as attendees. Our shops set up the chairs, staging and sound system at U Hall, remained behind the scene through the event to assure that all systems worked properly, and then, after every one left, took down the entire setup.

For other projects we support, our team’s skills are more visible, such as the renovation and restoration of Pavilion VII (below). Over 150 of our colleagues contributed their expertise to that historic site.

The photos on the following pages can show only a few of our approximately 750 employees who are at work throughout the Grounds and facilities but we thought you might recognize some of the people you see here. When you see us in person, let us know how we’re doing and if there is anything we can do to help you do your job for the University of Virginia.
Renovations, Electrical and Lock Shops
The Miller Center Addition

Groundbreaking October 2000

Construction underway 2001

Libba Bolling and Steve Ratliff
Health System Area

Monroe Lane Project- Mashal Afredi and Richard Sergi

MR-5 - Dick Laurance, John Sorg and David Booth
Carruthers Hall renovation: Sally Fields, project manager, and Eugenio Schettini (right)

A typical site meeting for the Carruthers project.

Inforum 2001 - March and June
Contract administration: (above) Pat Mathews, Richard Dickman and Juanita Purvis; (right) Christine Eppard and Don Crosby with FP&C’s Don Riggin and (far left) Nancy Rush met with contractors at Inforums.
Distinguished Service Nominees

Seven Facilities Management employees were nominated for Distinguished Service to the University. They are (clockwise from top center) Mike Daddezieo of the heating plant, David Gentry of electrical maintenance, Larry Dorrier of HVAC, James Morris of the heating plant, Phyllis Gough of housekeeping for the Rotunda, Joyce Chewning of Business Management Services, and Garth Anderson of the FP&C’s Resource Center. Being nominated is an honor in itself since only 10 awards are presented to winners nominated from UVa’s 19,000 employees.

Special recognition was given to Dick Laurance (center right), senior project projects manager, for his outstanding work on the Carl Smith Expansion Project - a commemorative photo was presented by (L-R) Executive Vice President and Chief Operating Officer Leonard Sandridge, Athletic Director Terry Holland and Facilities Management Chief Facilities Officer Bob Dillman.
And other offices and shops...

Right: Occasional ice cream parties helped lessen the pressure of Oracle training and implementation deadlines.
Contributing to the Community

Facilities Management staff members have, as a group, consistently supported community activities such as the Combined Virginia Campaign, the Day of Caring (shown here), Christmas in April, and other events.

As individuals, our colleagues also volunteer within their communities. Many are engaged in a variety of community service activities such as coaching and assisting with youth YMCA basketball, Peaches and Babe Ruth baseball and youth basketball association, playing church piano, Recordings for the Blind and Dyslexic, assisting with Boy Scout troops, assisting at the Albemarle County Fair, volunteering for Children’s Miracle Network, participating in hunger relief efforts, Mason’s Club, rescue squads, Greek Volunteer Day, municipal band member, emergency operations board volunteer, wildlife board member, and National Park Service volunteer.