



FACILITIES PLANNING & CONSTRUCTION  
2011-2012 ANNUAL REPORT



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**Facilities Planning and Construction  
Annual Report  
2011-2012**

(July 1, 2011 – June 30, 2012)

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## ***Facilities Planning and Construction***

### ***Foreword***

The Facilities Planning and Construction (FP&C) organization is responsible for the execution of the University's Capital Project Program. As such we provide management of all design and engineering services, management of all construction services, and contract administration for all construction contracts and design/engineering services contracts to the University community. Facilities Planning and Construction accomplishes this mission in close coordination and cooperation with the Office of the Architect for the University. Our goal is to be the benchmark institution for higher education capital project execution.

Major responsibilities include:

- Manage projects from inception to occupancy on time and within budget, while assuring appropriate design and construction standards and criteria established by the University, the state, or other appropriate agencies are followed.
- Provide assistance and guidance to the University community in the development of projects for planning and construction.
- Manage the professional and construction services procurement processes to assure conformance to the requirements of the University's restructuring and construction procurement procedures. Conduct all fee negotiations.
- Identify and implement opportunities for reduction of costs through value engineering and other cost reduction initiatives.
- Maintain current project information on line to include budget and project progress status.
- Maintain in house architectural design services in support of the University's various renovation programs.
- Encourage the full participation of all stakeholders in the project management process.
- Encourage diversity in all procurement actions.

The work is accomplished through three production units. Appendix A illustrates the organization of Facilities Planning and Construction.

1. Academic
2. Health System
3. Engineering & Design

They are supported by a Contract Administration Division and an Administration Division.



C. A. "Sack" Johannesmeyer, P.E., VCCO  
Director, Facilities Planning and Construction

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## ***Facilities Planning and Construction***

### ***Overview***

This 2011-2012 Annual Report for the Facilities Planning and Construction Department highlights many accomplishments including:

- Completed and occupied several new major facilities. These are highlighted in the Division sections of this report and total \$307,250,263.
- Awarded 81 construction contracts totaling \$124,875,443.
- Processed 380 professional service contracts and service orders totaling \$12,484,660.
- Put in place construction with a value of \$151,700,000.
- Design and construction continues on major new facilities. These are highlighted in the Division sections of this report and total \$1,029,254,000. Additionally see each Division section for a summary of major projects.

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## Academic Division:

### Studies and Reports:

- Bayly Building Addition
- FM Shop Support Office Building
- Gilmer Hall and Chemistry Renewal
- JAG School Addition

### Planning:

- Alderman Road Residence Phase IV, Building 6
  - Baseball / Softball Stadium Expansion
  - Historic Preservation Master Plan
  - Miller Center Addition
  - Newcomb Road Chiller Plant
  - North Grounds Mechanical Plant
  - Rotunda Renovation
- 
- 4 capital projects in design for a total of \$71,733,092.
  - 17 capital projects in construction for a total of \$255,345,512.
  - 11 capital projects completed for a total of \$298,517,000.

Capital Projects in Design	Capital Projects in Construction	Capital Projects Completed
Cemetery Expansion	Alderman Road Residences Phase III	Alderman Road Residences Phase II
Ruffner Hall Renewal	Alderman Road Residences Phase IV Buildings	Blandy Farm Research Building
College at Wise: Health & Wellness Center & Greear Gymnasium Renovations	Academical Village Chimney Repair & Sprinkler Installation	CAS: Physical & Life Sciences Research Building
College at Wise: New Library	Edgemont Utilities	Garrett Hall Renovation
	FM Landscape Shop	Hunter Smith Band Building
	FM / SEAS Shop Building	Pavilion IX Renovation
	Indoor Practice Facility	Rice Hall: Information Technology & Engineering Building
	New Cabell Hall Renovation	Track & Field Facility Improvements Phase I
	Newcomb Hall Dining Expansion	University Bookstore Expansion
	Newcomb Hall Renovation	College at Wise: David Prior Convocation Center
	North Grounds Recreation Center	College at Wise: Smiddy Hall Renovation and New IT Wing
	Old Cabell Hall Access Ramp	
	Pavilion X	
	Rotunda Roof	
	Thrust Theatre	
	Utility Tunnel Repairs	
	College at Wise: Accessibility	

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## Academic Division Major Commissions

### Alderman Road Residences – Phase II

Dade Van Der Werf, AIA

The second phase of a four-phase master plan to replace, improve and expand first year housing facilities in the Alderman Road area, this project built on the precedent of Kellogg House to provide two new residence halls and a commons building to support increasing enrollments and expectations of the first year residential experience. These new facilities were constructed on the former sites of the aging Balz, Dobie and Watson Houses, which were demolished in the summer of 2009 to make way for the new construction.

Situated on a steeply sloping site, the buildings created courtyards and new open space in the former footprint of Balz House while preserving the wooded area at the center of the precinct. An accessible route connects the buildings to Kellogg House with a new ramp, and is designed to connect to future accessible connections to the Observatory Hill Dining Facility. Intended primarily for pedestrian use, this route will be opened to vehicles for move-in days. Limited parking and drives are provided between McCormick Road and the Commons for accessible spaces and fire and service vehicle access to the buildings. Native and adapted plantings stabilize slopes and further enhance the precinct.

The residence halls house 440 first year students and 10 to 20 resident advisors in student rooms in the five upper floors of these six-story buildings. A one-bedroom apartment with private exterior entrance is located on the first floor of each building to house the area coordinators. The residential community structure is reinforced with common lounges, quiet study areas, and bathrooms dedicated to each individual 24-student community within the building. First floor spaces including



the lobby with casual seating, multi-purpose rooms and a central laundry further enhance the student experience and encourage interaction with other students. The Commons Building provides a location for assemblies of residents of nearby halls for events programmed by Student Affairs. It will include a catering kitchen and AV facilities to support seated dinners for 240, presentations by guest speakers and movie nights.

Ayers / Saint / Gross Architects + Planners of Baltimore, Maryland prepared bridging documents for the project. W.M. Jordan Company of Newport News, Virginia and Clark Nexsen Architects of Charlotte, North Carolina is the design/build team.

The project budget for Phase II was \$44,100,000, of which \$40,200,000 million was associated with the two residence halls. The University accelerated the project schedule to capitalize on advantageous construction market conditions allowing the acceleration of Phase III. In August 2011, the University occupied the two dormitories, which have been named Balz-Dobie House and Watson-Webb House in recognition of the buildings they replace. The Ern Commons building, named in honor of Ernest Ern, a former geology professor and senior University administrator, was occupied in October 2011.

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### **Alderman Road Residences – Phase III**

Katherine S. Meyer / Richard Sergi

The third phase of a four-phase master plan to replace, improve, and expand first year housing facilities in the Alderman Road area, this project will provide two new residence halls (Buildings 3 and 4) to support increasing enrollments and expectations of the first year residential experience. These new facilities will be constructed on the former sites of the aging Webb and Maupin Houses, which are being demolished to make way for the new construction.

Situated at the foot of a steeply sloping site, the buildings will create a gateway to Kellogg House and the Phase II Residence Halls and complete the courtyards begun in that phase, while preserving the wooded area at the center of the precinct. An accessible ramp will connect the buildings to the Observatory Hill Dining Facility and to the new accessible route to Kellogg House created in Phase II. The residence halls will be five stories in height to negotiate the difference in scale between the Phase II buildings and the Observatory Hill Dining Facility. They will house 356 first year students and 10 to 20 resident advisors in student rooms in their four upper floors. A one-bedroom apartment with private exterior entrance will be located on the first floor of each building to house the area coordinators. The residential community structure will be reinforced with common lounges, quiet study areas, and bathrooms dedicated to each individual 24-student community within the building. First floor spaces including the lobby with casual seating, multi-purpose rooms and a central laundry will further enhance the student experience and encourage interaction with other students.

Ayers / Saint / Gross Architects + Planners of Baltimore, Maryland prepared bridging documents for the project. W.M. Jordan Company of Newport News, Virginia and Clark Nexsen Architects of Charlotte, North Carolina, the design/build team for Phase II, comprise the design/build team for this phase as well. The project budget for Phase III is \$52,500,000, of which \$6,000,000 is dedicated to a utilities infrastructure project to support the remaining and future residence halls with medium temperature hot water after the demolition of the antiquated hot water plant in Maupin House. These residence halls will house students in the 2013 fall semester. The University has accelerated the project schedule for this phase of the master plan to capitalize on advantageous construction market conditions to occupy building 5 in fall 2013, concurrent with buildings 3 and 4.





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## Alderman Road Residences Phase IV Building 5

Katherine S. Meyer / Richard Sergi

The fourth phase of a four-phase master plan to replace, improve, and expand first year housing facilities in the Alderman Road area, this project will build on the precedent of Kellogg House to provide one new residence hall to support increasing enrollments and expectations of the first year residential experience. The new facility (building 5) will be constructed on the former sites of Lile House and Tuttle House, which are being demolished to make way for the new construction.

Situated at the foot of a steeply sloping site at the former building footprints of Lile House and Tuttle House, building 5 will create a courtyard with Cauthen House and building 4 and will continue the use of native and adaptive plantings, further stabilizing slopes and enhancing the overall site. Accessible routes will connect building 5 to adjacent buildings and Alderman Road. Intended primarily for pedestrian use, designated routes will be opened to vehicles for move-in days. Treehouse Drive will be realigned horizontally and vertically to improve access and connection to Alderman Road.

The residence hall will house 192 first year students and eight resident advisors in student rooms in the five upper floors of this six-story building. A one-bedroom apartment with private exterior entrance will be located on the first floor to house one area coordinator. The residential community structure will be reinforced with common lounges, quiet study areas, and bathrooms dedicated to each individual 24- student community within the building. First floor spaces include a lobby with casual seating, a multi-purpose room, and a central laundry, further enhancing the student experience by encouraging interaction with other students. The first floor will also include classroom spaces and a post office for this precinct.

Ayers / Saint / Gross Architects + Planners of Baltimore, Maryland prepared bridging documents for the project. W.M. Jordan Company of Norfolk, Virginia and Clark Nexsen Architects of Charlotte, North Carolina, the design/build team for Phase II and III, has been retained for this phase as well. The project budget is \$30,000,000. The University has accelerated the project schedule for this phase of the master plan to capitalize on advantageous construction market conditions to occupy building 5 in fall 2013, concurrent with buildings 3 and 4.



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## Alderman Road Residences Phase IV, Building 6

Dade Van Der Werf, AIA

Building 6 will continue the multi-phase project begun in 2006 to remove and replace the 1960s era residence halls in the Alderman Road Area. The first phase, construction of Kellogg House, was completed in August 2008. Construction of the second phase buildings, Balz-Dobie, Watson-Webb and the Ern Commons was completed in August 2011. Buildings 3 and 4, and 5, are currently under construction and will be completed for the fall of 2013. Construction of Building 6 is anticipated to begin in May 2013 and be completed for the fall of 2015.

The new student housing will offer modern amenities in a configuration that fosters intimate, secure, close-knit communities, creates a strong sense of place, and accommodates growing numbers of students. In addition to student rooms, study rooms, and lounges, entry level floors will be oriented to illuminate and animate gathering places housing a variety of program spaces for teaching, meeting, and recreation. Building 6 may also include modern, efficient office space to accommodate Housing and Residence Life staff.

The general site is located on Alderman Road within the existing first-year student residential complex, near Woody House and Hall 5. The site provides convenient access to the Observatory Hill Dining Hall, the Slaughter Recreation Center, the Aquatic and Fitness Center, and the western edge of the academic core. Dunnington and Fitzhugh Houses will be demolished to clear this site. Site planning and development will support the development of an accessible pedestrian route linking Hereford College, Gooch Dillard and Alderman Road residence halls and providing a strong organizing element for the complex of buildings. Outdoor recreation areas, both structured and unstructured, will also be provided.

The selection of EYP Architects of Washington, DC will be presented for BOV approval at the September meeting. CM procurement for CM at Risk delivery is underway. The design-to construction budget is \$22,000,000.





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## Academical Village Chimney Repair & Sprinkler Installation

James David Wilborn Zehmer

The Lawn and Range Rooms were designed by Thomas Jefferson as student dormitories. The University of Virginia discovered in 2010 that the flue linings within many of the student room chimneys were failing. The threat of fire posed by this condition caused the chimneys to be taken out of service. In the summer and fall of 2012, the University is repairing the chimneys, fireboxes, and hearths, and removing the failed liners and installing new stainless steel flue liners, all with the goal of having the fireplaces functional in time for the winter heating season. In conjunction with this project, sprinklers are being installed in all of the student rooms and in the attics above the rooms to provide another layer of protection for the occupants and for these significant buildings which make up our World Heritage Site.

Facilities Management roofers, carpenters, masons, and fire safety personnel were all key members of a multidisciplinary team that also included Black Goose Chimney Sweep, Virginia Sprinkler Company, and A.G. Dillard as sub-contractors to Martin Horn. Both Sunbelt and Scaffold Solutions were procured to provide access to the attics and chimneys, which has meant that more scaffolding has been installed within the Academical Village this year than in any other year since the University was originally constructed.

This project's budget is \$3,700,000 and is funded by The Commonwealth of Virginia, the Housing System, the Alumni Association, and University Donors.





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## Blandy Farm Research Building

David A. Paley / Steve Ratliff

With the June 2012 completion of the Blandy Experimental Farm Field Lab, all three ecosystems of Virginia are served by recently upgraded field labs affiliated with the University's Department of Environmental Sciences. Blandy Farm, in the Piedmont Region, joins the Mountain Lake Biological station, in the Appalachian Mountains, and the Anheuser-Busch Coastal Research Center, in the Tidewater and Coastal regions, with its brand new lab building. Blandy Experimental Farm has operated as a biological and environmental sciences field station since 1927. Blandy also hosts the State Arboretum of Virginia. At peak demand the research community numbers over 30.

The Blandy Field Lab provides approximately 4,260 gsf of simple, flexible, and efficient field lab space. The laboratory building includes two controlled environmental rooms, a fume hood room, outdoor processing areas, an equipment room, write-up areas, a large shared laboratory and two private laboratories, a conference room, and basic support spaces. It can accommodate up to six principal investigators, twenty graduate students, twenty undergraduate students, six technicians, and three permanent Blandy staff principal investigators. The building itself is similarly simple, flexible and efficient. The design is in keeping with farm buildings typical of the area. A one story, slab on grade, stick built frame, prefabricated wood truss, standing seam metal roofing, with a hardiplank exterior. The large shared lab and the conference room have storefront glazing. The mechanical systems include one fume hood initially with the potential to add another. The building runs on high efficiency split system heat pumps for heating and cooling. One-pass air has been limited to the fume hood room to keep the building energy use and costs lower. The project was designed to achieve LEED Silver; submittal and review are pending.

The project was supported by the College of Arts and Sciences and a grant from the National Science Foundation. It was designed by Train & Partners of Charlottesville, VA. The project budget was \$1,400,000. A Certificate of Use and Occupancy was obtained June 13, 2012.



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## Physical and Life Sciences Building

Craig S. Hiltner / Charles Durrer, BOC Master

Construction was completed on the College of Arts and Sciences Physical and Life Sciences Building (PLSB) in August 2011. The PLSB provides some needed additional space required to support research in physical and life sciences, primarily in chemistry and biology. PLSB is one of several new buildings that are part of the University's science initiative focused on sustaining the ongoing work of existing faculty and attracting new researchers. The PLSB provides modern laboratory facilities to help relieve the increasing shortage of reliable laboratory space on Grounds.

The project consists of a five-story, 105,000 gsf building, plus an accompanying mechanical penthouse. This new research facility features modern architecture and finishes. The building is connected on all floors to the existing Chemistry and Chemistry Addition buildings. The building contains state of the art laboratories, laboratory support areas, administrative and faculty office space, and conference rooms. The mechanical and electrical systems for the main building are contained primarily in the basement and on the mechanical penthouse floor. The interiors were planned to promote collaboration across science disciplines. An inviting and open monumental stair, collaboration niches equipped with audiovisual technology, and open laboratories are features that are available to the researchers to increase the likelihood that chance encounters might result in spontaneous collaborative working sessions.

The project has been submitted for LEED certification and the application is under review by the USGBC. The project was designed by Bohlin Cywinski Jackson Architects of Pittsburgh, Pennsylvania and the construction was managed by W.M. Jordan Company of Richmond, Virginia. The project was completed within the \$88,900,000 project budget.



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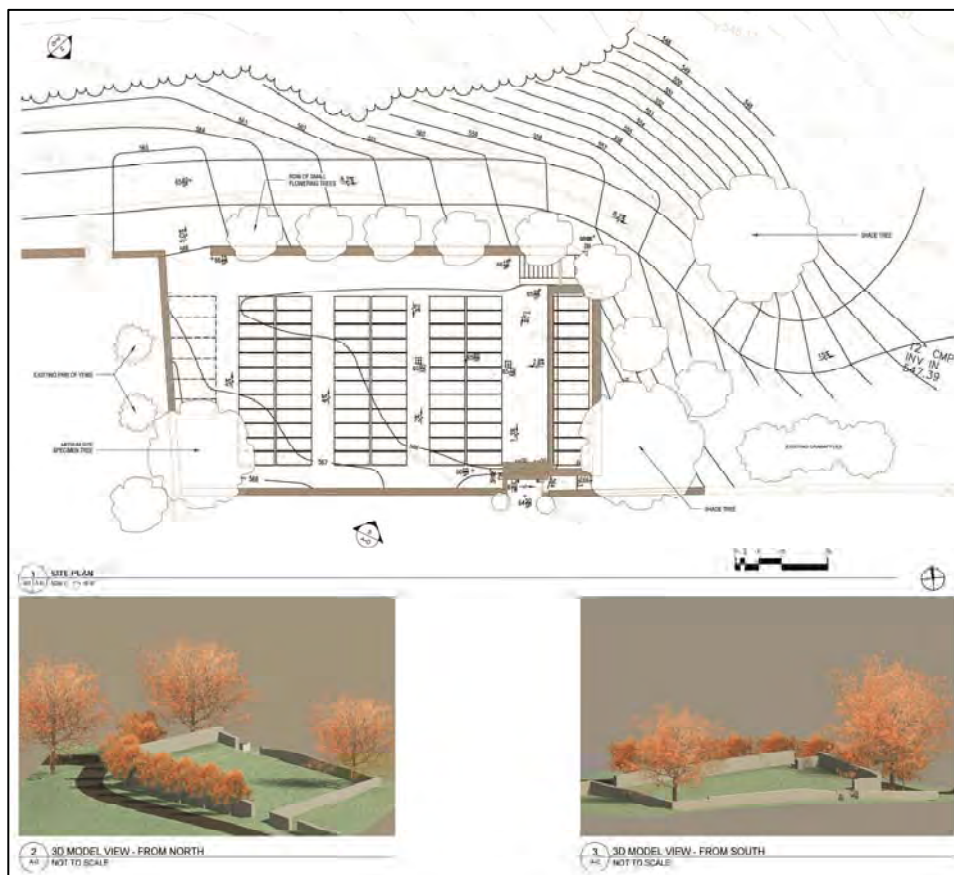
## Cemetery Expansion

Joseph Dye Lahendro, AIA

The Cemetery Expansion Phase III project is the first addition to in-ground burial plots since the 1940s. Expansions I and II in 1990 and 2003 respectively were columbarium wall installations along the north side. The current project conforms to the master plan that was commissioned by the University Cemetery Committee in 2004. The University Cemetery dates to 1828. It is a sacred burial space, an ad hoc history of our institution, and a peaceful refuge on Grounds.

The current expansion will accommodate 126 columbarium niches and 72 double height crypts; a row of twelve crypts will be reserved for presidents of the University. The cemetery site slopes steeply toward the dell in this area. Enclosing stone walls will also serve to retain soil and ease the natural grade in this portion of the cemetery. Spoils from re-grading the site will be used to raise an adjacent service road. The columbarium wall will continue along the north edge of the cemetery in line with the existing columbarium walls. Construction materials will match the existing cemetery; walls will be constructed with Shenandoah field stone and columbarium niches will have a contrasting granite face panel.

The project is designed by TEC, Inc. Completion is scheduled for spring of 2013. The project budget is \$900,000.



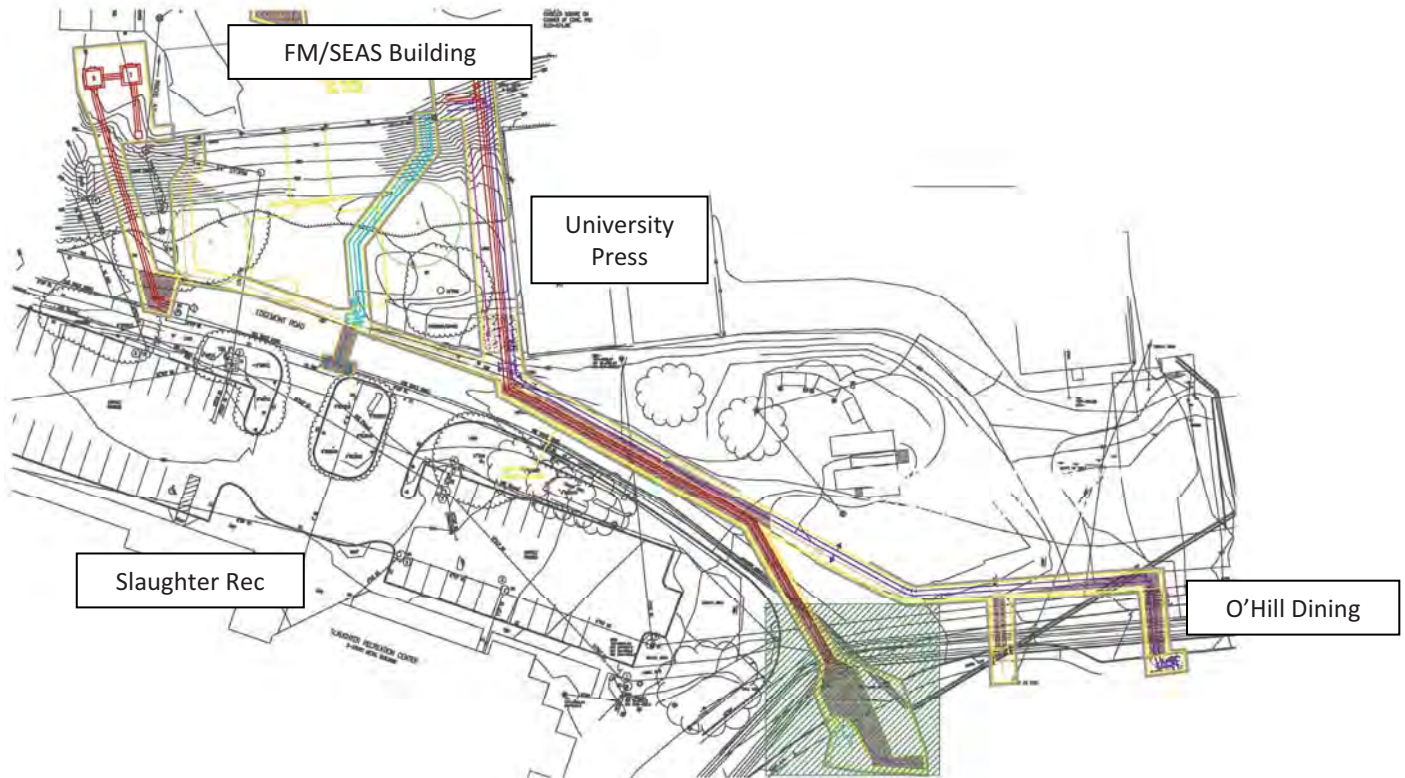


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## Edgemont Utilities

J. Shannon Barras, AIA, LEED AP BD+C

The Edgemont Road Utility project was constructed to extend central utilities to the Facilities Management area in anticipation of three future buildings – SEAS/FM Building, Landscape Building, and the Leake Extension. A steam to hot water converter was placed in an underground vault near the Watson/Webb Building. Hot water will then be circulated from the vault to these three buildings via a direct bury piping system. Other utility extensions included chilled water, gravity sanitary sewer, domestic/fire water, electrical service, and communication lines. The project is being constructed by the UVA Utilities Department. The project engineer is Dewberry Davis. Project completion is August 2012. The project budget is \$1,400,000.



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## FM Landscape Shop

David A. Paley / Charles Durrer, BOC Master

The Facilities Management Department is replacing the existing landscape shed, which is too small and in subpar condition. Equipment and materials are stored in various locations in the FM yard, causing inefficiency. Also, Facilities Management has recently completed a space needs assessment which indicated a dramatic need for more square footage overall and, in particular, better work shop space. A 2008 master plan for the FM yard shows the current landscape shed and surrounding area being cleared for a different use.

The building will be located at the west end of the FM yard, adjacent to the FM/SEAS building currently in construction. The proximity of the two projects will bring significant efficiency, since the required utilities have already been brought to the area. A salt shed and storage warehouse have been removed from the project site, and a recycling shed is being relocated. Performed in a design-build format, the project includes design of the building and pad in conjunction with the University, then fabrication and installation of a steel structure of approximately 10,000 gsf, including a 2nd level or loft space as needed to accommodate program needs. The building will contain offices, meeting and lounge areas, workshops including a welding shop, engine repair areas, storage areas for tools and spare parts, restrooms and locker areas. The exterior will be insulated metal wall panels; the window frames, garage doors, and roof will all be metal. The foundation system will consist of concrete slab on grade with spread footings. Project budget is \$1,960,000.

Another nearby area will be regraded and used for storage. A metal roof structure with open sides, fabricated for this purpose by the same manufacturer as the Landscape Shop, will be installed. A pedestrian bridge will connect this area, which is at a higher elevation, with the second floor of the adjacent Landscape Shop, providing accessibility to the office area without need for an elevator.



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## **FM / SEAS Shop Building - School of Engineering and Applied Sciences, Student Projects and Facilities Management Shop Building**

Katherine S. Meyer / Randall Porter

Facilities Management is excited to collaborate with the School of Engineering and Applied Sciences on a building designed to give each department its own work space and encourage sharing of ideas and equipment. The four story SEAS/FM building provides approximately 5,000 gsf per floor. Each department will occupy two floors. One floor will be standard height the other will offer high bay work space. This phase is providing a masonry core and shell building with metal standing seam roof. In the next phase the occupants will provide their own fit out. The site allows for separate and convenient access. The building's third floor entrance on Edgemont Road will be used by SEAS. The ground floor opens into the Facilities Management yard.

The Design/Build team is Barton Malow and SHW Group both of Charlottesville, VA. Core and Shell construction will be completed in fall of 2012 for occupancy in early 2013. The project budget is \$4,200,000.





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## Garrett Hall Renovation

Joseph Dye Lahendro, AIA / Steve Ratliff

The Frank Batten School of Leadership and Public Policy moved into its new home in Garrett Hall in August 2011. Garrett Hall, designed by the preeminent architectural firm McKim Mead and White in 1908 and known then as the Commons, was the University's first large dining hall. The three-story, 16,760 gsf building remained in use as a dining hall until the completion of Newcomb Hall in 1958, when it was converted to offices for the registrar and bursar and renamed Garrett Hall after the University's first bursar. The 8,640 gsf underground annex on the east side was added in 1970.

The renovations will create offices and assembly spaces to support the programs of the students, faculty, and staff of the Batten School. The scope of work includes corrections to structural issues in the main building, replacement of HVAC, electrical and plumbing systems, and code-required upgrades including ADA compliance. The work also includes exterior repairs, restoration of the original main dining room and two-story entry, reconfiguration of interior spaces to accommodate the Batten School program, elevator renovation, and improvements to the interior of the annex. The project complies with the University's sustainability program and follows University and state guidelines for historic preservation.

Architectural Resources Group, Inc., located in San Francisco, California, teamed with Frazier Associates in Staunton, Virginia to design the project. The Christman Company of Alexandria, Virginia is the construction management firm. Construction began in November 2009. The project budget was \$12,240,000.



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## Hunter Smith Band Building

James A. Kelley, G.C., CCM. / Steve Ratliff

The site of the Hunter Smith Band Building is bounded by Culbreth Road and the Buckingham Branch Railroad, and is adjacent to the recently completed Ruffin Hall and Culbreth Road Parking Garage. The new facility contains a 4,000 gsf rehearsal room and an 1,800 gsf multipurpose practice and teaching area. The remainder of the 17,900 gsf building is used for instrument storage and administrative functions.

The building exterior is brick and curtain wall, complementary in appearance to Ruffin Hall and Culbreth Theatre. Copper-clad roof elements are reminiscent of Ruffin Hall's pitched skylights. A small, finely detailed plaza distinguishes the building's entry. The project forms the northeast corner of the Arts Grounds Landscape Master Plan, currently in development.

The new building provides indoor practice space for the Cavalier Marching Band, and a permanent home within walking distance of the Carr's Hill practice field and Storage Facility. A unique combination of spaces can accommodate the entire band, smaller instrument section rehearsals, or band ensemble practice. As the marching band's new home, the building will also serve as an impressive gathering place for family, friends, and alumni during the very active football and basketball seasons.

The project was designed by William Rawn Architects of Boston, Massachusetts and the construction was managed by DPR Construction of Falls Church, Virginia. The project budget was \$12,700,000. Construction began in December 2009 and was completed in July 2011.





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## Indoor Practice Facility

Dade Van Der Werf, AIA / Randall Porter

The project will provide an indoor practice facility for UVA Athletics on the site of an existing practice field, where teams can continue to take advantage of locker rooms, offices and other amenities in the nearby McCue Center and University Hall. The 83,000 gsf facility will include a full 100 yard football field with end zones and five-yard overruns, and will provide a 65' clear height at the center of the field for kicking practice. An elevated camera platform will support filming of practice within the facility and on the adjacent outdoor field.

Construction began in April 2012 and is expected to be complete by March 2013. The architect is VMDO and the construction manager is Barton Malow Company, both of Charlottesville, Virginia. The project budget is \$13,000,000.



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## New Cabell Hall Renovation

Craig S. Hiltten / Charlotte P. Dickerson / Charles Durrer, BOC Master

Built in 1952, New Cabell Hall is the workhorse of the College of Arts and Sciences, with 46 classrooms and 390 faculty and staff offices. The six-story, 150,000 gsf brick building will be completely modernized including new heating, plumbing, power distribution and lighting systems. Central air conditioning and fire suppression systems are being added. Elevators, telephone and data distribution systems are being replaced. Asbestos and lead are being removed. Interior finishes are being replaced and upgraded. Handicapped accessibility to the building will be vastly improved.

Classrooms in this historic building will be equipped with state of the art teaching aids equal to those now found in other new classrooms on Grounds. On the exterior, the enclosed courtyard between New and Old Cabell Halls is being terraced and landscaped to transform the previously under-utilized space into a vibrant new destination, with direct connections to the surrounding buildings. A new multi-story curtain wall will introduce daylight deep into the corridors of New Cabell and provide an accessible connection to the South Lawn plaza. Following the New Cabell Hall modernization, the mission of teaching will resume and the mix of classroom space and departmental offices will be restored.

The architect of record is Goody Clancy of Boston, Massachusetts and the construction is being managed by Barton Malow of Charlottesville, Virginia. The project budget is \$64,500,000 with completion scheduled in fall 2014.





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## **Newcomb Hall Dining Expansion**

Dade Van Der Werf, AIA / David Fiero

The Newcomb Hall Dining Expansion project will address the increased demand for dining space at Newcomb Hall, and enhance the dining experience with a revitalized, more open and light facility for dining and food service functions.

The project will include a new 16,000 gsf, two-story addition to the west side of Newcomb Hall, and the renovation of 32,000 gsf of existing dining spaces on the first and second floors. Approximately 500 new seats will be added altogether. New food service equipment and improvements to the mechanical infrastructure will increase operational and energy efficiency, encouraging the introduction of contemporary menus and improved food preparation methods.

Additional improvements will include a lobby and information center, relocated post office and convenience store, and new restrooms. Sitework at the Newcomb plaza will include new utilities, relocation of existing utilities and restoration of portions of the plaza adjacent to the new addition.

In addition to improving the appearance and functionality of Newcomb Hall, the project will address pedestrian circulation issues to improve way-finding and to enhance and modernize the Newcomb Hall precinct, by capturing historical unifying values of the University.

Construction began in March 2011 and completion is scheduled for December 2012. The architect is Cole & Denny, Inc., of Alexandria, Virginia and the construction manager is R.E. Lee & Son, Inc. of Charlottesville, Virginia. The project budget is \$18,000,000.



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## **Newcomb Hall Renovations**

Dade Van Der Werf, AIA / David Fiero

Newcomb Hall serves as an important hub of activity for students, faculty and staff of the University throughout the calendar year. The building serves as a gateway to visitors due to its diversity of functions and its location within the Central Grounds precinct. The building has undergone several renovations since its original completion in 1958, and now contains over 160,000 sf on six levels. Meeting spaces include a large ballroom, lounge and art gallery, dining facilities, and a theater. In addition, various offices and support spaces are located throughout the building.

The Newcomb Hall Renovations project responds to an increased demand for programs and activities, while improving the facility's functionality and supporting infrastructure. Aesthetic improvements throughout the building will create a fresh, inviting, and more unified atmosphere while preserving traditional elements of the architecture and surrounding landscape. Mechanical and electrical upgrades will provide increased energy and operational efficiency, as well as improved comfort and safety for the occupants. Maintenance and repair of existing building elements will be implemented where warranted. Restoration of the exterior terraces will enhance the visitor experience by creating inviting and memorable spaces surrounding the east side of Newcomb Hall.

Phases 1 and 2 of the Newcomb Hall Renovations project are substantially complete, with completion of Phase 3 scheduled for November 2012. The architect is Cole & Denny, Inc., of Alexandria, Virginia and the construction manager is R.E. Lee & Son, Inc. of Charlottesville, Virginia. The project budget is \$15,200,000.

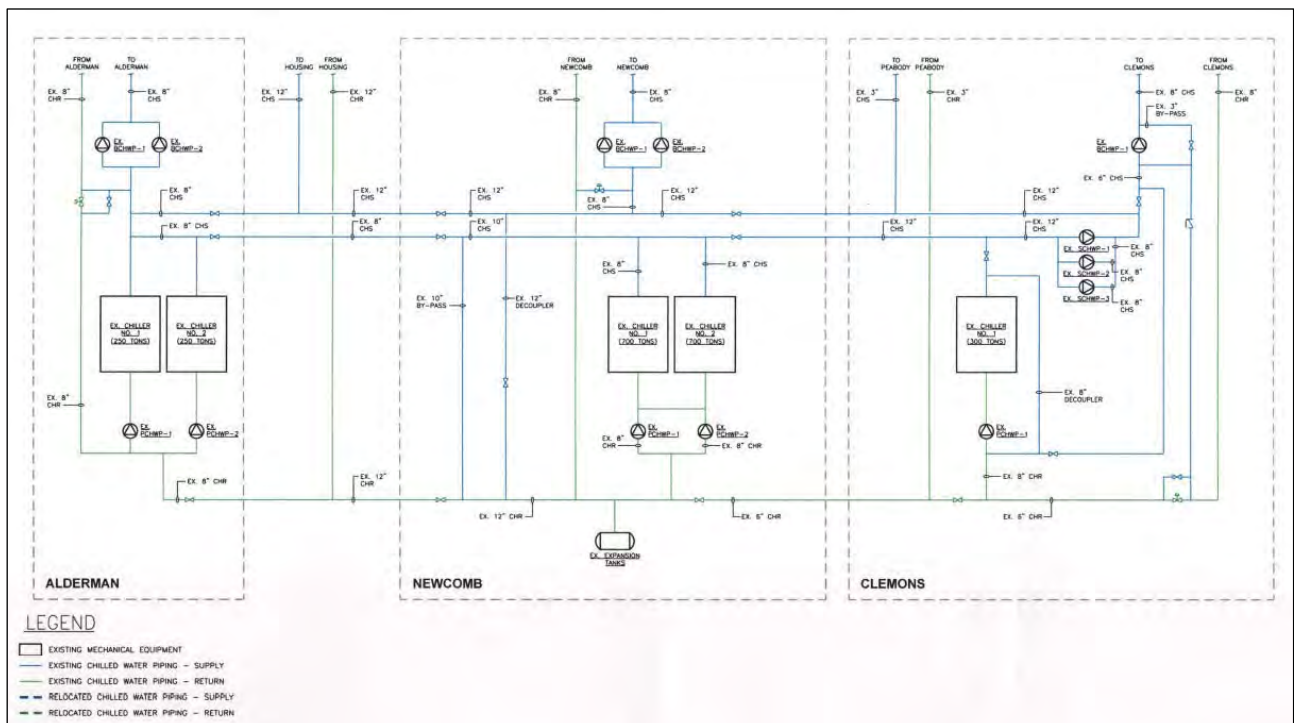


## Newcomb Road Chiller Plant Capacity Replacement

Michael James Vanderweide, P.E.

Project planning and design engineer selection for the Newcomb Chiller Plant upgrade began earlier in 2012. The project will replace the existing 2,200 tons of chiller capacity with new equipment. The designers will also explore opportunities to improve the efficiency of the plant through consolidating equipment into a new building or through the use of new high efficiency technologies.

Selection of a design engineer is currently underway. A Construction Manager will be selected in the fall of 2012 to participate in the design process. The construction is expected to be completed in the summer of 2014. The project budget is \$11,640,000.





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## North Grounds Mechanical Plant Capacity Replacement

Michael James Vanderweide, P.E.

Project planning and design engineer selection for the North Grounds Mechanical Plant capacity upgrade began earlier in 2012. The project will replace the existing 15 MMBtu/hr boilers, the two existing 800 ton electric driven chillers, and associated equipment. The existing equipment has reached the end of its useful life, with the cost of continued maintenance exceeding the replacement cost. In the process of identifying replacement equipment and technology, this project will also evaluate opportunities to use sustainable fuels and technologies such as bio-fuels and geothermal heating and cooling.

Design services are being provided by Hammel, Green, Abrahamson, Inc. The construction manager will be selected in the fall of 2012 to participate in the design process. Design is expected to be completed by summer 2013 with construction completed by summer of 2014. The project budget is \$13,110,000.



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## **North Grounds Recreation Center**

Amy C. Eichenberger, AIA LEED AP / Steve Ratliff

The North Grounds Recreation Center Expansion, currently under construction, will be the first of three projects to improve existing intramural recreational facilities on Grounds.

The project will include a new 33,000 sf addition with a 25 meter 10-lane pool, whirlpool, sauna, wet classroom, mind-body multi-purpose fitness room and two new squash courts. The project will also renovate three existing racquetball courts. Minor improvements to the lobby and social gathering spaces will enhance the connection between the existing building and the new addition, which will be located to the west of the existing facility.

The exterior materials palette for the new addition will complement the existing building and other neighboring buildings in the North Grounds Precinct.

Cannon Design of Arlington, VA is the architect and Donley's LLC of Richmond, VA is the construction manager. Construction began in April, 2012 and will be completed in August, 2013.

The project budget is \$17,210,000.





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## Old Cabell Hall Access Ramp

James David Wilborn Zehmer

A temporary metal ramp has provided ADA access to Old Cabell Hall since approximately 1994. This new design will result in a permanent steel ramp supported by brick piers, conforming architecturally to the McKim, Mead, and White building design of 1898. The east and west sets of steps will be shifted north to provide symmetry and a place for the ramp to end on a level surface even with the interior lobby. The ramp will be illuminated and will have outlets to provide power to heated mats in case of an ice storm.

The project was designed by Frazier Associates of Staunton, Virginia. UVA's Project Services will execute the project in conjunction with Harrisonburg Construction. The total project budget is \$385,000.





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## Pavilion IX Renovation

James David Wilborn Zehmer

Pavilion IX was completed in 1822 as part of Thomas Jefferson's Academical Village, and was last renovated in 1983. In the current renovation, all the existing electrical and plumbing systems were upgraded, and the radiators and window air conditioners were replaced with a new HVAC system. A new fire suppression system was installed, along with a fire detection system monitored by UVA's Systems Control Department. Trunk utility lines, exposed in the basement, were re-routed through a "directional boring" process under the back patio of the building. This allowed for the installation of the new systems, resulting in a much more pleasant living environment.

Architectural improvements included a completely upgraded kitchen, with a new double-window facing the pavilion garden. New fixtures were installed in all the bathrooms, and the original front and rear doors were restored by a graining process to their Jeffersonian faux-mahogany appearance. A notable architectural achievement was the restoration of the west window to the original classroom. This window was removed at some point in the building's history, but the original architraves were stored in the attic. Missing pieces were replicated, and the window was restored to its original location.

The systems design was completed by the engineering firm of Obenchain, Linkous, Daniels, and Sowick of Richmond, Virginia, and the architectural design was by UVA. The general contractor for the project was UVA's Project Services Department. The project budget was \$2,100,000, with funding from private donations to the UVA Historic Preservation Endowment. Construction was completed on August 1, 2011.



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## Pavilion X

James David Wilborn Zehmer

Pavilion IX was completed in 1822 as part of Thomas Jefferson's Academical Village, and was last renovated in the 1960s. The renovation is a systems upgrade including replacement of all of the existing electrical and plumbing, and replacement of radiators and window air conditioners with a new HVAC system. A new fire suppression system has been installed, along with a fire detection system monitored by UVA's Systems Control Department. An unusual feature of this project is the use of sub-grade air ducts below the basement floor, which preserves the roominess of the basement by eliminating the need for large bulky soffits.

Architectural improvements include a completely upgraded kitchen, and new fixtures in all the bathrooms. The original balcony and rear doors have been restored by a graining process to their Jeffersonian faux-mahogany appearance. Two original window openings have been filled with replica windows to help define the footprint of the original Jeffersonian building. A full staircase to the attic replaces the existing ladder, facilitating access for storage and maintenance. Reconfiguring some second floor spaces has resulted in a master bedroom suite with a walk-in closet and nearby laundry facilities. This will also allow the original second floor parlor to return to its original use as a comfortable space for intimate gatherings or private study.

The architectural design was by Mesick, Cohen, Wilson, Baker Architects and the systems engineering was by Quantum Engineering, both of Albany, New York. UVA's Project Services Department has served as general contractor. The project has a budget of \$3,000,000 and is funded through private donations to the UVA Historic Preservation Endowment. Construction is scheduled for completion September 1, 2012.



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## **Rice Hall: Information Technology and Engineering Building**

Craig S. Hilten / Charles Durrer, BOC Master

Rice Hall was completed in August 2011 and provides much-needed space for teaching, computational research, and student projects at the School of Engineering and Applied Science. Rice Hall is one of several new buildings that are part of the University's science initiative focused on sustaining the ongoing work of existing faculty and attracting new researchers. The building occupies a prominent location at the corner of Whitehead Road and Stadium Road just behind Olsson Hall. Designed by the Pittsburgh, Pennsylvania office of Bohlin Cywinski Jackson Architects, the project consists of a five story, 100,000 gsf building with a basement and penthouse mechanical space.

This new research facility features modern architectural elements and helps define the south entrance to the science and engineering precinct. The main entrance to the building is on Engineer's Way and is connected to Olsson Hall at the basement level. The focus of the building is information technology, with classroom laboratories, research laboratories, departmental and faculty offices, and a 150 seat auditorium. Rice Hall features a flexible and robust infrastructure that permits the collection of building systems data for use in the School's curriculum. This "Living Laboratory" showcases the University's commitment to responsible energy management and building systems research. Numerous metering devices within the building stream live data to an energy dashboard located in the main lobby.

Construction management services were provided by W.M. Jordan Company of Richmond, Virginia. Rice Hall was designed and constructed concurrently with the College of Arts and Sciences Physical and Life Science Research Building and was delivered on a fast-track schedule. Occupancy of the new facility was achieved in the summer of 2011. The project budget was \$76,300,000.





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## Rotunda Roof

Joseph Dye Lahendro, AIA

This first phase of Rotunda renovations will replace the leaking roof and oculus skylight, as well as make repairs to the exterior brick walls, windows and ornamental sheet metal. Future renovation phases shall include replacement of the marble column capitals at the porticos; replacement of the elevator; repairs and improvements to the mechanical, electrical, plumbing, sprinkler and data systems; accessibility improvements; and programmatic enhancements.

Designed by Thomas Jefferson as the centerpiece of his Academical Village, the Rotunda is the symbol of the University of Virginia. Originally completed in 1826, it was gutted by fire in 1895 and soon rebuilt to the design of McKim, Mead, and White. In 1976, Jefferson's interior spaces were recreated and the present roofing and oculus were installed. Today the internationally recognized Rotunda is listed on the state and federal registers of historic places and designated as a National Historic Landmark. The Rotunda is part of the World Heritage Site that includes Jefferson's Academical Village and Monticello.

The existing painted, terne-coated steel roofing is severely deteriorated and has been leaking for many years, as has the aluminum-framed glass oculus. The roofing will be replaced with a copper roof, painted white and installed on a vented base. A new oculus will more closely resemble the skylights designed by Jefferson. Two 1976 concrete steps at the base of the dome will be removed so the supporting tile structure and iron tension ring, both from 1897, can be repaired; then the steps will be reinstalled. Damaged and eroded mortar joints in the exterior brick walls will be repointed, and afterwards all brick walls will be cleaned. Window sashes from 1897 and 1976 will be removed to strip paint and replace damaged glass and hardware. The molded copper sheets that form exterior decorative features, such as cornices, entablatures, window frames and first floor pediment hoods, will be stripped of all paint, repaired, and repainted.

John G. Waite Associates, Architects, a specialty preservation firm in Albany, NY, is delivering the documentation, research and design for the Rotunda work. A joint venture, Christman/Gilbane, is providing construction management. Construction began in May 2012 with completion planned for July 2013. The project budget is \$7,190,000.



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## **Ruffner Hall Renewal**

Lynn K. Rush, RLA / Richard Sergi

Ruffner Hall is an 85,000 gsf, 4 story academic building providing general classrooms, offices, and meeting and research space for faculty, staff, and graduate students of the Curry School of Education. Ruffner has been home to the Curry School of Education since its construction in 1973. Almost 40 years later, the school has outgrown the original building, and has expanded into leased space on and off Grounds. The renovation work includes the replacement of HVAC and electrical systems and plumbing fixtures, removal of asbestos and lead paint, roof replacement, structural repairs, replacement of windows with low-emissivity glass, removal and reinstallation of soffits and repairs to exterior masonry, replacement of an elevator, and various modifications to achieve ADA compliance.

Interior finishes will be replaced except for existing perimeter office walls. Ceiling and floor tiles, interior doors, and stair rails will be replaced. The accessible route from the south parking lot will be upgraded. A new entrance will also be provided that will open to the courtyard at Bavaro Hall.

Construction documents will be completed in October 2012. Construction is expected to begin in January 2013, with completion scheduled for late summer of 2014. The project budget is \$19,283,092.





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## Thrust Theatre

James A. Kelley, G.C., CCM. / Steve Ratliff/ Mike Garascia

This project is the first part of a two-phase expansion of the existing Drama Building on Culbreth Road. The new two-story facility will be partially below grade in the steep hillside to the east of the existing Drama Building, adjacent to Culbreth Road Parking Garage and Ruffin Hall. The lobbies of Thrust Theatre and the existing Culbreth Theatre will be joined, and the two will share a ticketing area.

The project includes approximately 4,000 gsf of much needed renovation to the existing lobby and adjacent ticketing area currently serving the Culbreth Theatre. The addition will contain a 7,000 gsf multi-purpose performance and film venue. Performance and stage support, storage, and restrooms make up the balance of this 20,540 gsf project. The building will utilize load bearing concrete and masonry as its principal structural system. The exposed northern façade will consist primarily of structural curtainwall to maximize daylight. The Ruth Caplin Theatre portion of the project was underway in May 2011, with an early site utility package.

The project is designed by William Rawn Architects of Boston, Massachusetts and the construction is being managed by Nielsen Construction from Harrisonburg, Virginia. The project budget is \$13,500,000.



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## Track & Field Facility Improvements Phase I

Katherine S. Meyer / Randy Porter

The Track & Field Facility Improvements Project, Phase I, replaced the existing track with a new layout based on a wider turning radius, which results in a faster track and reduces strain on runners' joints and ligaments. The wider track provides a larger infield, allowing for a more efficient and safe layout for field events. This phase also adds sports lighting, and upgrades the site and utilities that will support the final build-out, including storm water, power, and domestic water services. A key feature of the new track is a 13mm polyurethane-based competitive sports surface. The infield is sodded with a Bermuda cultivar sod. The track is encircled by a low fence with a 3' sidewalk running the length of the straightaway. This phase also includes a new ticket booth and reconfigured sidewalk plaza and entry area.

Phase II envisions a 1,500 spectator grandstand with team facilities, concessions, press box, and officials' booth. It includes a colonnade along the first turn, which is reminiscent of other University athletics venues such as Lambeth Field and John Paul Jones Arena. A new scoreboard, a measured running path, and landscape improvements along Copeley Road complete the current master plan for Lannigan Field.

The project was designed by VMDO Architects and the construction was managed by Barton Malow, both of Charlottesville, VA. Phase I construction was completed in time for the University to host the 2012 ACC Spring Championships. Phase II is awaiting resolution of funding issues. The project budget for Phase I was \$7,000,000.





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## University Bookstore Addition

Craig S. Hiltner / Richard Sergi

Construction on the expansion project began in the summer of 2010 and was completed in the fall of 2011. The University of Virginia Bookstore (UVAB) is a financially self-supporting, non-profit organization that is owned and operated by the University. Built in 1994, the existing UVAB occupied 34,500 sf on the 4th level of the Central Grounds Parking Garage across from Newcomb Hall, with an additional 10,500 sf mezzanine.

Increasing demand caused over-crowding of the existing facilities; the expansion significantly improved the UVAB's functionality and usefulness. This capital project extended the main level westward with 16,500 gsf of new mixed use space above the existing 3rd level of the parking garage. The expansion includes necessary tie-ins of electrical, mechanical and life safety systems and finishes at the western wall. The UVAB and the parking garage both remained fully operational throughout construction. Structurally, the entire expansion was built without putting any additional load on the parking garage below.



Bowie Gridley Architects of Washington, DC was the architect of record and W.M. Jordan Company of Richmond, Virginia was the construction manager. The project budget was \$10,631,000.





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## Utility Tunnel Repairs

Will Moore / Charles Durrer, BOC Master

Steam, hot water, and other building utilities are delivered through underground tunnels, which provide access to the pipes for maintenance. The tunnels in this project, which are along Emmett Street and across the Lawn, can support sidewalks and even vehicles including fire trucks for access to buildings on the Lawn. The tunnels experience degradation over time and are being upgraded to withstand current vehicle loads. Additionally, a steam line will be upgraded to support the new Alderman dorms. The tunnel work is to be completed in August prior to the start of fall classes. The steam line will be operational for the fall 2012 heating season.

Design services are being provided by Dewberry & Davis, Inc. Faulconer Construction Company is the general contractor. The project budget is \$8,538,512.



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### College at Wise: Samuel R. Crockett Award

Stephan P. Nelson, supervisory senior project manager with Facilities Management, Facilities Planning and Construction, was awarded the Samuel R. Crockett Award for his "significant efforts toward strengthening the relationship between the University of Virginia and the College." In making the presentation at the May 22 UVA Board of Visitors meeting, Simeon Ewing, vice chancellor for finance and government relations at the College at Wise, described Stephan as a perfect choice for the award in 2012. The vice chancellor said Stephan has served as a tireless advocate for improving the quality of the College of Wise – work that included oversight of more than 20 projects at the College since 1996. The award was first presented by Clinch Valley College in 1995, and is named for Samuel R. Crockett Jr., who in 1954 was the University's extension division representative in Southwest Virginia. Crockett was instrumental in early efforts to establish a branch campus in Wise. Nelson told board members that he appreciated the honor, and was proud to play a role in expanding College facilities over the years into something "everyone can enjoy."





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### **College at Wise: Accessibility**

Stephan P. Nelson, AIA / John Carter

This project provides an accessible connection between the College's athletic precinct and the main campus residential precinct. Previously the only way to cross between the two precincts was to climb a long flight of stairs or drive out of the main campus onto a public highway. In addition to providing an accessible pathway, the project also provides a convenient daily walkway for students, faculty and visitors, linking the main campus residential area with the football stadium, the intramural practice field, and the newly constructed David Prior Convocation Center.

In order to construct the walkway, it was necessary to cut through a forested ridge that separated the two precincts both physically and visually. The project consists of a landscaped concrete sidewalk, approximately 1,400 linear feet in length, requiring the removal of about 10,800 cubic yards of soil and rock. The walkway is lighted by decorative post fixtures.

The project was designed by Thompson and Litton of Wise, Virginia and the construction was managed by Quesenberry's Inc. of Big Stone Gap, Virginia. The project budget was \$1,062,000.



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## College at Wise: Health & Wellness Center & Greear Gymnasium Renovations

Stephan P. Nelson, AIA / John Carter

This work consists of two separate projects that are to be constructed concurrently.

The University of Virginia's College at Wise intends to build a new health and wellness facility as an addition to the existing C. Bascomb Slemp Student Center. Bowers-Sturgill Hall, one of the two original campus buildings, is next door. The Health and Wellness Center will provide new fitness facilities for students, faculty, staff and the general public from Wise County and surrounding areas. The addition will provide an exercise area, multipurpose room, conference rooms, locker rooms, offices, café and entry lobby. The site for this addition is a steep hill which will require careful handling of earth retention issues. The building will be a two-story, 11,500 gsf structure, connected to the existing fitness areas located in the student center.

The Greear Gymnasium Renovation will address about 7,250 gsf of the existing 25,000 gsf building. The renovation scope is limited to the existing varsity locker rooms, showers, toilet areas, exterior entry colonnade, and the existing public entry lobby and public toilets. The renovation will upgrade men's and women's varsity facilities for baseball, softball, cross country, tennis and golf.

The total project budget is \$8,300,000, with a budget of \$6,200,000 for the Health and Wellness Center and \$2,100,000 for the Greear Gymnasium Renovation.

Design of the project is complete as of August 2012 and construction has begun, with completion planned for December of 2013. Train and Partners of Charlottesville, Virginia is the project architect. BurWil Construction Company of Bristol, Tennessee is the construction manager.





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## College at Wise: David Prior Convocation Center

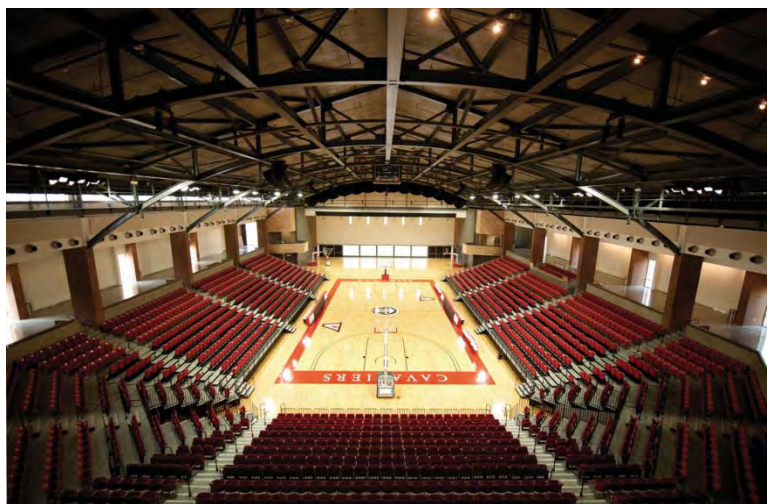
Stephen J. Dempsey / T. C. Cooper

The new David Prior Convocation Center is located in the heart of the campus's emerging athletics precinct, adjacent to the existing football field and field-house. The Center is the College's primary intercollegiate basketball and volleyball athletic facility, and also serves the greater Wise community as a venue for concerts, civic functions, trade shows, athletic tournaments, and graduations.

Sized to accommodate the increasing growth of the College's athletic programs and future student enrollment, the facility was designed to accommodate a variety of programs and attendance levels. The Center meets the growing demands of the College's athletic programs and addresses the community's desire for a facility that can support the entertainment needs of the region and function as a driver of economic vitality and development.

The David Prior Convocation Center is approximately 79,000 gsf. The building features a multi-tiered arena that will accommodate 3,000 fixed and semi-fixed seats. Additional capacity of over 500 seats is available as removable floor seating. The facility is home to the men's and women's intercollegiate basketball programs and the women's intercollegiate volleyball program. Additionally, the Center provides facilities for athletic offices, athletic training room, special events and catering, ticketing, concessions, retail operations, and meeting space. The project budget for the David Prior Convocation Center was \$29.6M.

Construction began in June 2009 and was completed on September 1, 2011, meeting one of the goals of opening in time for the fall sports season. The project architect was VMDO of Charlottesville, Virginia. Quesenberry's, Inc., of Big Stone Gap, Virginia served as the construction manager.



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## College at Wise: New Library

Stephen J. Dempsey / John Carter

The University of Virginia's College at Wise is planning a new library facility at the center of campus, to be the heart of the academic life of the College. The proposed site will allow the building to serve as a 24 hour-a-day study center and a much-needed vertical link between the upper and lower campuses for all faculty staff and students, including those requiring ADA accessibility. The building will house the College's collection and will provide study, instructional, and multimedia resources for future anticipated enrollment of up to 3,000 students. The new library is also needed to maintain the College's accreditation since the present library is at capacity.

Lobbies on multiple floors will be open extended hours and will feature café tables, informal seating, and access to group study rooms so that students can study, collaborate, and socialize throughout the day and evening. The lobbies will also serve as the point of entry to the multimedia learning labs.

The proposed design for the new library is a five story, 68,000 gsf structure consisting of space for general and special collections, multi-media labs, classroom space, study areas, offices, and a café. The project budget is \$43.25M.

The College at Wise New Library project is currently in the design phase. Construction is planned to begin in the spring of 2013, with completion planned in spring of 2016. Cannon Design of Arlington, Virginia is the project architect. Quesenberry's Inc., of Big Stone Gap, Virginia will serve as the construction manager.





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## College at Wise: Smiddy Hall Renovation & New IT Wing

Stephen J. Dempsey / John Carter

The Smiddy Hall project included major renovations to Smiddy Hall (23,000 gsf) and the addition of a new Information Technology Wing (6,000 gsf). The scope of the renovation included replacement of all windows, interior finishes, HVAC, fire protection, electrical and plumbing systems. The existing lobby and west wing were demolished, and replaced by a new administrative office wing and a double-height atrium lobby, which functions both as an entry to the facility and as informal meeting space.

The new IT wing, completed in December 2009, is a two story addition located on the east side of Smiddy Hall, housing the new campus data center, offices and support space. A back-up generator ensures continuous operation of mission critical campus functions.

Smiddy Hall is in a highly prominent location at the entrance to the College. The exterior renovations enhance and modernize the building's appearance, and are in harmony with adjacent buildings.

The project was designed by Train & Partners Architects of Charlottesville, Virginia. Construction was performed by Rentenbach Constructors of Knoxville, Tennessee. Construction began in the fall of 2008 and was completed in the summer of 2011. The project budget was \$13,660,806.



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## Health System:

The Health System Division responded to 19 new requests for services, contributing to a total workload of 62 active projects, including projects that have reached Construction Completion in the last year. Using the HECOM threshold of \$1,000,000 for a Capital Outlay project, these active projects included:

- 18 projects in startup / request phase, budget / scope not yet developed.
- 29 small non-capital projects with an average size of \$194,129 for a total of \$5,823,875.
- 10 large non-capital projects with an average size of \$905,080 for a total of \$9,050,795.
- 17 small capital projects with an average size of \$2,453,593 for a total of \$41,711,093.
- 17 large capital projects with an average size of \$32,981,012 for a total of \$560,677,210.
- 5 capital projects in design for a total of \$34,356,023.
- 14 capital projects in construction for a total of \$311,542,370.
- 10 capital projects completed for a total of \$66,453,265.

Capital Projects In Design	Capital Projects In Construction	Capital Projects Completed
CRU & Neurosurgery Renovations Davis / Barringer / McIntire	Battle Building at Children's Hospital	415 R. C. Hunt Spine, Hand & Radiology Renovation / 3 <sup>rd</sup> Floor
Culpeper Hospital	East Chiller Plant / Lee Street Realignment	LiSA Yeager Electron Microscope Renovation
University Hospital Emergency Room Phase III	ERCP Expansion	McLeod Hall Renovation Phase I
University Hospital NICU Renovation / Level 7	Lee Street Entry and Connective Elements	MTHW – Main Heat Plant
University Hospital Radiology Sonata Equipment Upgrade Level 1	McLeod Hall Phase II	Old Jordan Hall 4 <sup>th</sup> Floor Rooms 4067-4084 Refurbishment
University Hospital level 2 Sprinkler – Surgical Pathology	MTHW Conversion MHP	Primary Care Center Gamma Knife Renovation / 1 <sup>st</sup> Floor
	Old Jordan Hall HVAC Infrastructure Replacement	School of Medicine Cyclotron Project in LiSA
	Outpatient Surgery Modular Unit Improvements	South Chiller Plant Expansion Chiller #3
	University Hospital Bed Expansion	University Hospital Heart Center Renovation / Level 2
	University Hospital Bone Marrow Transplant Renovation / Level 8	University Hospital Level 5 Inpatient Psychiatric Bed Consolidation
	University Hospital Fire Alarm Replacement	
	University Hospital Helipad Rooftop Expansion	
	University Hospital Radiology Master Plan – Remaining Phases / Level 1	
	University Hospital Roof Replacement Project Phase 1	

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## Health System Major Commissions

### **415 Ray C Hunt Dr. Spine, Hand and Radiology Renovation / 3<sup>rd</sup> Floor**

Kristine C Vey, LEED AP ID+C

The Hand and Spine Centers were completed and began seeing patients last year. Both Centers provide patient access to multiple services under one roof. Four x-ray rooms were included to serve both Centers. The remaining shell space was completed in early 2012 and provides seven additional exam rooms, a subwaiting room, team work room and support space for the Neurosurgery Clinic. An emergency generator with a new brick screen was provided in the adjacent parking lot to service the elevators.

The selected finishes match the adjacent Spine Center which achieved LEED Silver Certification. All finishes are approved by the Health System Finishes Committee and match existing finishes throughout the Health System in regard to quality.

Design Services are being provided by Daggett + Grigg Architects PC of Charlottesville, Virginia. Construction management services are being provided by DPR Construction of Glen Allen, Virginia.

Construction of the shell space began in August, 2011 and the space was completed in January, 2012.





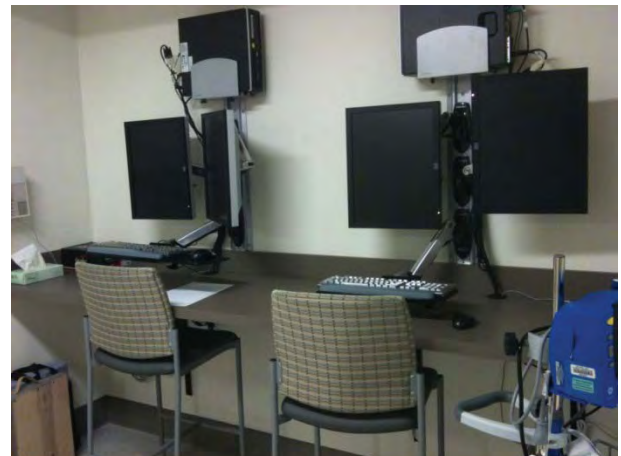
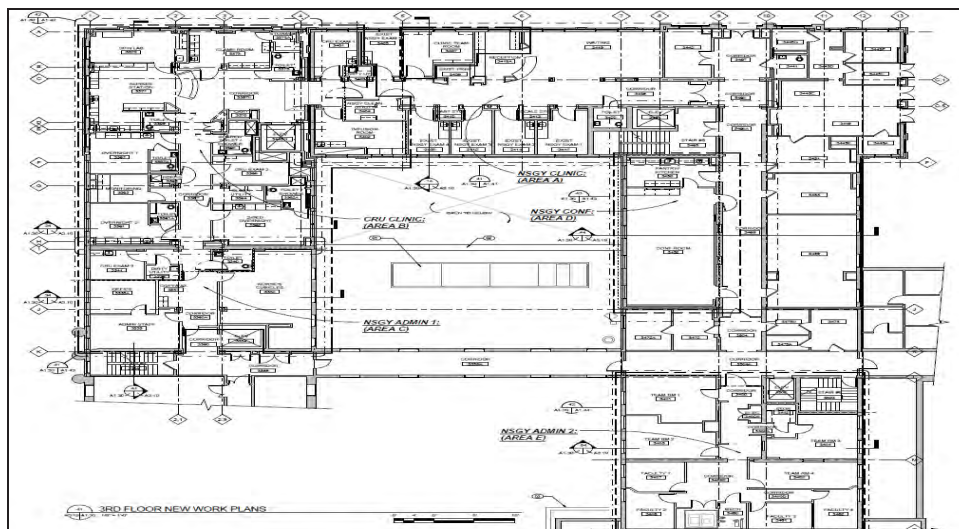
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## Clinical Research Unit (CRU) & Neurosurgery Renovation (Davis / Barringer / McIntire)

Kristine C Vey, LEED AP ID+C

This project will provide overnight and day use rooms for clinical research. It will also provide multiple offices for Neurosurgery faculty, as well as a new conference room with improved audio/visual capabilities. The project includes the entire third floor of the McIntire building (Neurosurgery offices) and Barringer expansion (CRU), as well as part of the third floor of the original Barringer building (conference room) and Davis building (Neurosurgery offices). In total, it is approximately 9,000 gsf.

The project architect is Louviere, Stratton, and Yokel of Silver Spring, Maryland. Construction is expected to start in December 2012 and will be complete by mid-2014.



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## East Chiller Plant / Lee Street Realignment

Thomas G. Snow, P.E. / Kim Speer

A study of the Health System Chiller Plant System completed in January 2010 reviewed chilled water demand and system capacity for the next 20 years. The study provided recommendations for existing chiller replacements as well as capacity increases. The East Chiller Plant project is a result of that study and also includes the realignment of Lee Street to Roosevelt Brown Boulevard in order to best accommodate the new chiller plant site, and streamline traffic flow to the Health System facilities and parking structures.

Currently, there is a need to replace five 1,200 ton chillers (6,000 total tons) in the North Chiller Plant that are at the end of their useful life. The new East Chiller plant will provide a building shell for a 10,000 ton plant with 6,000 tons of initial installed capacity in the form of three, 2000 ton chillers.

The Lee Street realignment package started construction in August 2001, the chiller plant site development started in February 2012, and the final building package was awarded in May 2012. Completion of the plant is scheduled for May 2013.

Affiliated Engineers, Inc. is the design firm with HOK as the Architectural consultant. Gilbane is the Construction Manager. The total project budget is \$36,500,000.





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## **ERCP Expansion – Digestive Health Department**

D. Andrea Fraley, RA, AIA, LEED AP

The ERCP (Endoscopic Retrograde Cholangiopancreatography) project was a complete emergency renovation and expansion of the existing procedure room to accommodate the replacement of old ERCP fluoroscopy equipment which was at the end of its useful life and was experiencing significant breakdowns/downtime. The room is highly specialized as it is the only interventional endoscopy room at the Medical Center. In addition to the new state-of-the-art equipment, the project provided enhanced lab infrastructure, power, and HVAC.

The A/E team was led by HKS, Inc. and the General Contractor was SRC, Inc. The first procedure in the new space was performed in May 2012. The total project budget not including equipment was \$1,300,000.





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## Lee Street Entry and Connective Elements

James Loman, AIA / Melanie Bree Knick, LEED AP

This project includes an expanded front entry to University Hospital, a new plaza/traffic oval centered on the hospital entrance, a new bridge over Lee Street between the hospital and the Lee Street Parking Garage, and a new vertical circulation tower that joins the Lee Street Garage with the bridge to the 11<sup>th</sup> Street Garage on the north side of the railroad tracks.

The Emily Couric Clinical Cancer Center and the Hospital Bed Expansion were designed to complement each other and have changed the public face of the Health System at its front door - Lee Street. The Lee Street Connective Elements project will tie them together, allowing a unified sense of place and a new point of arrival. The plaza/traffic oval will provide for better vehicular flow and control the increased usage that will result from the completion of these projects. The first phase of construction – the new circulation tower next to the Lee Street Garage – opened for public use at the end of April, allowing for the demolition of the existing brick stair tower and the erection of the new bridge over Lee Street at the end of June. The structure for the expansion of the hospital lobby and canopy are nearly complete, in preparation for the new curved glass front, and the new hospital entry and plaza. Additional work in the Hospital Lobby includes new information desks, a new gift shop, and a new coffee shop.

This project uses the same architect that designed the cancer center, Zimmer-Gunsul-Frasca Partnership of Washington, DC, to ensure design continuity. All three projects share a new vocabulary of patterned glass curtainwall modulated by the rhythm of vertical mullions and columns. New sidewalks and street trees will create visual continuity from the plaza out to Jefferson Park Avenue. Construction management services are being provided by Gilbane Building Company of Laurel, MD. The total project budget is \$29,216,500, and construction began in May 2010.



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## LiSA Yeager Electron Microscope Renovation

Brian Russell Pinkston, PE, PhD / Nat Brown

This project constructed a suite of rooms (3,400 gsf) in the Life Sciences Annex at the Sheridan G. Snyder building to accommodate the new Center for Molecular Electron Microscopy (CMEM). CMEM houses two highly advanced electron microscopes for use in basic research. It will be utilized by researchers throughout the University, though primarily by the Department of Molecular Physics and Biophysics in the School of Medicine. The construction was funded by a grant by the National Institutes of Health using ARRA (American Recovery and Reinvestment Act or “stimulus”) funds. The project architect was Perkins & Will of Washington, DC. The general contractor was Crenshaw Construction of Culpeper, Virginia. Project budget was \$2,460,000. Construction was substantially complete in December 2011.



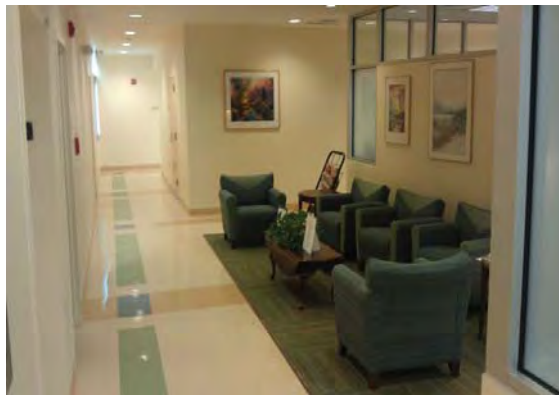
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## McLeod Hall Renovation Phases I and II

Brian Russell Pinkston, PE, PhD / Kemper Tomlin

McLeod Hall was the central facility for the School of Nursing until the opening of the Claude Moore Nursing Education Building (CMNEB) in 2008. McLeod is forty years old and has had no building-wide renovations or infrastructure upgrades until now. Beyond the bare facility needs, the School also wishes for McLeod to approach the aesthetic quality of CMNEB. This renovation project will address these needs in two phases. McLeod consists of five core floors of offices and classrooms, two underground parking levels, and an auditorium. (The area of each core floor is 10,000 gsf.) The scope of this project includes the five core floors only. The goal is to renovate these floors in two phases. Phase I will renovate the first, fourth and fifth floors; Phase II will renovate the second and third floors. The phasing is based on the priorities of the school and on the funding currently available.

All construction for Phase I is now complete: The first floor in August 2010; the fourth floor in February 2011; and the fifth floor in August 2011. With respect to Phase II, construction of the third floor began in June 2012 and will be complete by December 2012. The total project budget for the third floor is \$1,350,000. The schedule for the second floor has not been determined as it is contingent on the availability of additional funds. The project architect is Bowie Gridley Architects of Washington, DC. Construction is being done by in-house forces from the Project Services group of Facilities Management.





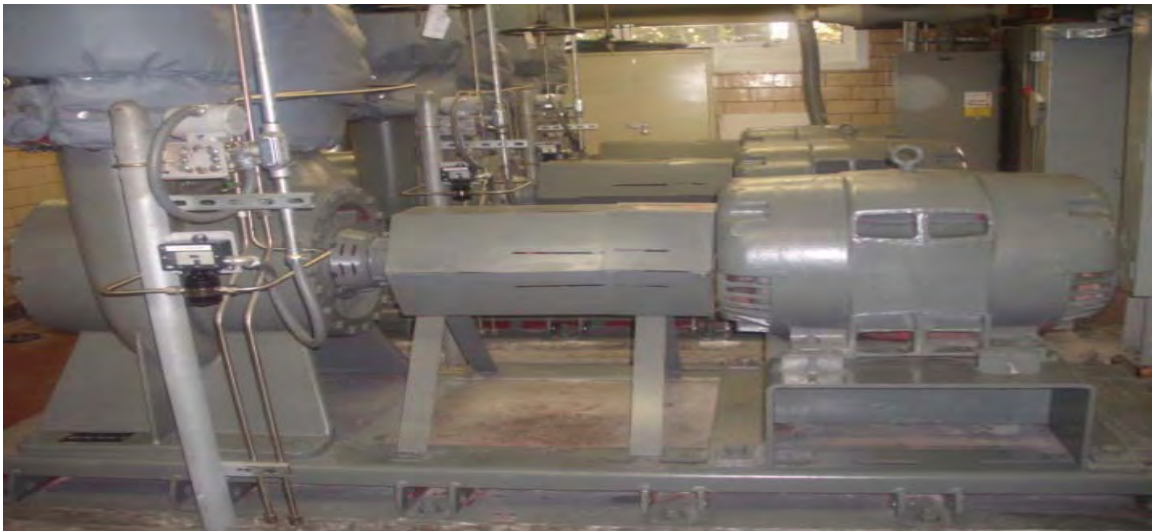
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## Medium Temperature Hot Water Conversion MHP

Will Moore / Mike Garascia

Medium Temperature Hot Water (MTHW) is generated in the Main Heating Plant and used to heat the buildings on grounds as well as create domestic hot water. Increasing the capacity of the system is part of the 50 year plan for the University. A computer model was developed to confirm existing system capabilities and to project the University's growth for the next ten years. The model has identified the need to increase the size of the heat exchangers that convert steam to hot water as well as, increasing the capacity of the pumps to deliver this through a piping system that extends from the heating plant to Runk Hall. The work will include minor piping modifications to eliminate flow restrictions as well as, improved control to the various buildings and dormitories. This upgrade was operational for the Fall 2011 heating season. System refinements are currently in process.

Ross Infrastructure is providing the design services for this upgrade. The Energy and Utilities Department of UVA is self-executing the construction work. The project budget is \$3,842,730.



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### Old Jordan Hall 4<sup>th</sup> Floor Rooms 4067-4084 Refurbishment

Brian Russell Pinkston, PE, PhD / Stephen Keith Payne

This project renovated 4,000 gsf of space in Old Jordan Hall to provide a new laboratory for the Chair of the Department of Microbiology in the School of Medicine. The project architect was Nalls Architecture of Philadelphia, Pennsylvania. The general contractor was Woodland Construction of Richmond, Virginia. Project budget was \$1,300,000. Construction was completed in March 2012.



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## Old Jordan Hall HVAC Infrastructure Replacement

Brian Russell Pinkston, PE, PhD / David Booth

The original portion of Jordan Hall ("Old Jordan Hall") is a seven story building that opened in 1971. A new addition providing laboratory, office, and classroom space was opened in December 1995. This HVAC replacement is for the original building and does not include the new addition.

The first floor of Jordan Hall contains two lecture halls, each seating 152 students, as well as a smaller seminar room and anatomy laboratories. The majority of the first and second year lectures are given here. The second floor houses additional student laboratories designed for both individual exercises in histology and pathology, as well as group experiments and teaching sessions in microbiology. The rest of the second floor contains basic science research laboratories. The academic offices and research laboratories of the Departments of Anatomy, Physiology, Cell Biology, Pharmacology, Biochemistry, and Microbiology occupy floors three through seven.

In June 1999, the University completed an exhaustive study of the HVAC infrastructure of Old Jordan Hall. The major findings of the study were as follows: 1) nearly all of the HVAC infrastructure equipment was as old as the building, and thus was well beyond anticipated life expectancy and in dire need of replacement; 2) distribution components (ductwork and piping) were obstructed and/or overloaded; 3) controls were functional but were outmoded, limited flexibility, and included only minimal interface with the central campus system; 4) provisions for energy reclamation, system redundancy, and adaptability to change were minimal to nonexistent; 5) space capacity existed for heating only, which wasted energy; 6) there was no smoke evacuation or stairway pressurization, which was not compliant with code; and 7) the HVAC infrastructure concepts were no longer commensurate with modern research laboratory facilities. Also, the study concluded that the emergency power system was marginal and would not support necessary HVAC upgrades. The purpose of this project is to resolve all of these problems.

RMF Engineering, Inc. of Charlottesville, VA has completed the construction documents and is providing construction administration. DPR Construction, Inc. out of Falls Church, VA is providing construction management services. Construction began in August of 2010 and is scheduled for completion in the Spring of 2013. The total project budget is \$33,000,000.





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## Outpatient Surgery Modular Unit Improvements

Thor Evans, PE / Christian Pouncey

To meet the demand for operating rooms at the UVa Outpatient Surgery Center (OPSC) and allow capacity to grow in advance of the Battle Building Outpatient ORs, two modular operating rooms (MSUs) were added to the OPSC. The Project includes the area where the modular ORs are located, utility interconnections, emergency power, medical gas storage, a link (including support spaces) from the ORs to the OPSC, a new entry canopy and a screening wall surrounding the modules. The total project cost, excluding the modules and medical equipment, is \$3,000,000. Baskervill, Valley and Pinnacle formed the A/E Team. Crenshaw Construction was the Contractor. The MSUs are in service. As of early July 2012, only the screen wall remains to be finalized.





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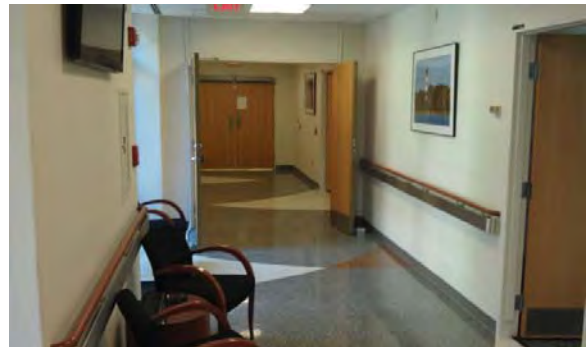
## Primary Care Center Gamma Knife Renovation / 1<sup>st</sup> Floor

David MacPhail

The Primary Care Center was built in 1979. The Gamma Knife addition was constructed in 1989. It contains a control room, several offices, and the treatment room. Since that time, the area had been aesthetically updated but no major renovations had occurred. The space required renovation to meet the latest requirements for treating Gamma Knife patients.

The renovation project was divided into three phases. Phase I renovated the control room and offices adjacent to the treatment room, allowing the doctors to utilize the latest technology. Phase II converted the original file storage and administrative area into a patient waiting room. Before, there were no patient waiting areas except for the alcove in the corridor of the control room. The new space can handle four patients at a time. One of the bays also allows for private consultations. Phase III renovated the x-ray storage area and reading room. The existing shelving was removed and replaced with a compact shelving system. The film reading room was updated to handle the latest audio / visual technology.

Facilities Management's Engineering and Design group completed the construction documents and provided construction administration. Facilities Management's Project Services department constructed the project. Construction of all Phases was completed in October 2011. Project budget was \$802,000.



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### South Chiller Plant Expansion Chiller #3

Will Moore / Kim Speer

Chilled Water is used throughout the University for building cooling. The Health System Chilled Water Precinct includes two plants, a north and south, to provide chilled water and cooling to educational, research, clinical facilities and the hospital.

This project installed the last chiller in an open bay in the South Chiller Plant and emergency power generators for cooling the critical patient care areas of the hospital. The chiller installation consists of a chiller, cooling tower, pumps, piping and the systems to control these. The chiller provides N+2 capacity for the Health System to assure that even if two chillers were out of service, there is capacity to cool all space within the system.

During a power outage in the health system, life safety needs are provided by emergency generators for each of the facilities. There is also a need to provide cooling for critical patient care areas within the hospital during such an event. Two 2,500 kW generators and the controlling switchgear have been installed in a new generator farm located between the East and 11<sup>th</sup> Street Parking Garages.

Engineering for this project was provided by Affiliated Engineers, Inc. The construction general contract was awarded to Design Electric, Inc. Systems were operational in June of 2011 for a total project budget of \$13,700,000.



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## University Hospital Bed Expansion

Joseph Rainwater, R.A / Christopher J. Hoy / David Watkins / Melanie Bree Knick, LEED AP

The Hospital Bed Expansion (HBE) adds 72 acuity adaptable patient rooms to the University Hospital. The project consists of 12 private room nursing units located on each of floors 3 through 8. The patient rooms are designed to be critical care capable with a full bathroom. This design allows the room to be used for critical care, step-down care, or acute care. This project provides much needed bed capacity to the Hospital while providing maximum flexibility.

Designed by the SmithGroup, Inc. in Washington, DC, the project is a six story, 61,000 gsf addition to the north façade of the Hospital's Central Bed Tower. The HBE bears on a truss structure constructed over the second story roof of the Hospital Lobby. An expanded mechanical penthouse is included to house new air handling equipment to serve the HBE. The project also involves 62,000 gsf of renovation to create the adjacent nursing units on each of the six patient care floors. Gilbane Building Company, in association with H. J. Russell & Company, provided Construction Manager-as-Agent services through the design, procurement, and construction phases of this project.

The design of the exterior of the HBE was influenced, in large part, by the design of the Emily Couric Clinical Cancer Center (ECCCC). The University Hospital Bed Towers are oriented to face the ECCCC building site. The HBE facade is a unitized factory-glazed curtainwall system. On the interior, the patient rooms are oriented to fully utilize this system to provide wall-to-wall and floor-to-ceiling glass. This maximizes the use of natural light in the patient rooms while taking advantage of the northern exposure.

The HBE began construction in October of 2008 with completion in mid-2012. By combining several trade packages with the ECCCC project, high trade interest in this project, and a favorable bidding climate, excellent construction pricing was achieved. The total project budget was \$82,500,000.





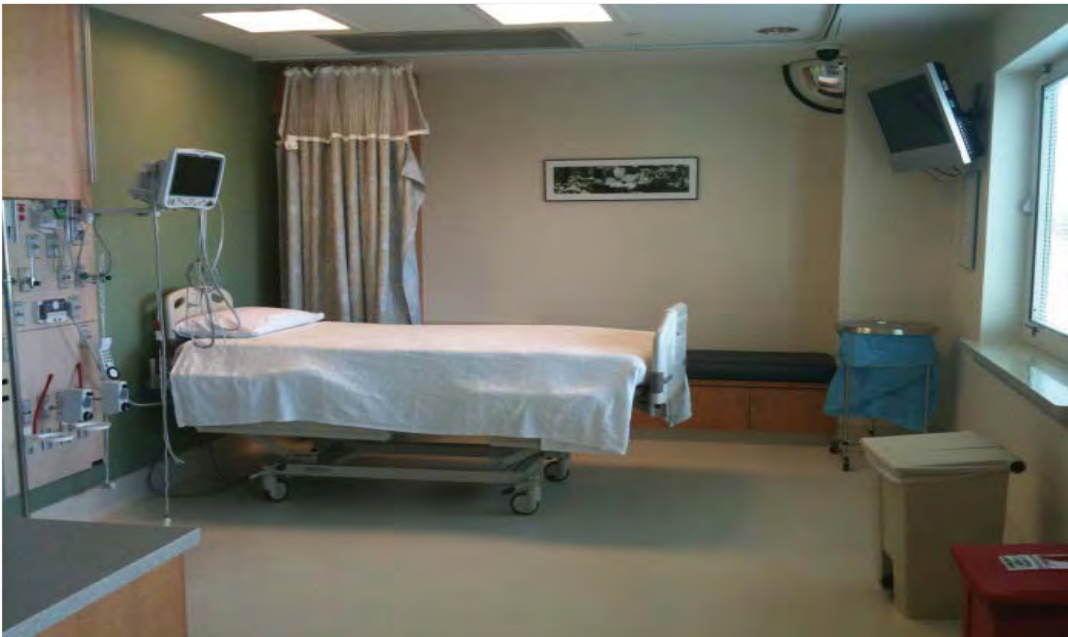
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## University Hospital Bone Marrow Transplant Renovation Level 8

Michael James Vanderweide, P.E. / Christian Pouncey

**Bone Marrow Transplant Unit:** This project created a 6,000SF Bone Marrow Transplant Unit complete with a Cell Processing Lab, an Apheresis Room, and eight patient rooms. Bone Marrow Transplant had not been available at the University Hospital before this project, with many patients in Virginia having been referred out of state. The completion of this Unit allows the University Hospital to provide this medical care much closer to the patient's family support base.

Design services were provided by Nalls Architecture Inc. The general contractor was SRC Inc. The project started construction in August 2011 and was substantially complete by January 2012 at a cost of \$1,610,000.



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## University Hospital Fire Alarm Replacement

Thomas G. Snow, P.E. / Kim Speer

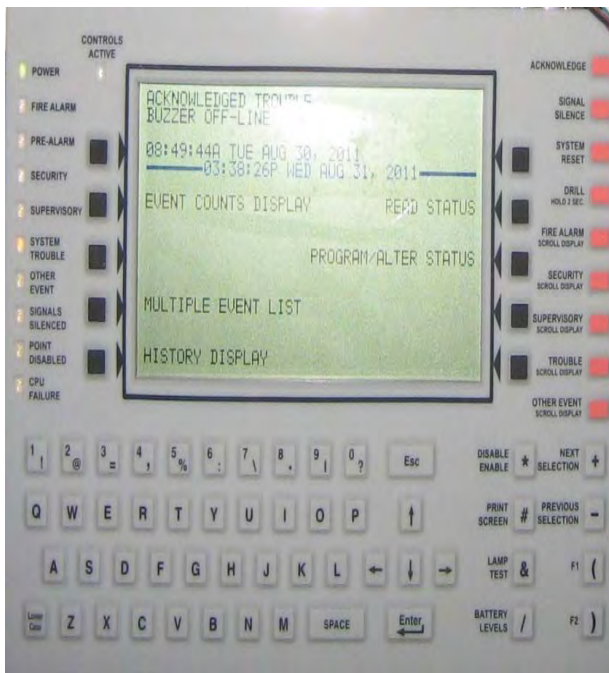
The hospital fire alarm replacement will provide a completely supervised and addressable fire detection system throughout the facility. This upgrade will include the infrastructure to support expansion of the system as required for future hospital renovations and additions.

The project scope includes construction of a new fire control room for system monitoring that will also serve as a base of operations for the Charlottesville Fire Department and University fire protection personnel during emergency situations. Throughout the hospital, the new infrastructure will connect to new initiating and existing alarm devices. This new addressable system will identify the specific locations of devices in alarm, replacing the existing system that only displays the zone from which the alarm originated. The entire system will be monitored by Systems Control through new radio transceiver equipment. A digital voice alarm capability will also be provided throughout the entire hospital.

Additional life safety emergency power distribution within the hospital will also be constructed under this project. Emergency power circuits dedicated to life safety functions are currently at their limit. This project will add enough circuits to not only supply the new fire alarm system, but also create spare circuits for future projects that require dedicated life safety power (e.g., medical gas alarm panels).

The project was designed under contract with Smith Group. Protective Engineering Group, Inc. was the Fire Alarm design consultant. The construction contract was awarded to Communications Specialists, Inc. (CSI) in January 2011. The new system will be commissioned by zones with final completion scheduled for August 2012. The total project budget is \$6,450,000.

Below: Network Control Annunciator (left) and Voice Command Panel (right).



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## University Hospital Heart Center Renovation / Level 2

P. Kevin Silson, AIA / Christian Pouncey

This project has completely renovated all 21,600 square feet of the east end of the second floor into the new invasive wing of the Heart Center. This project consists of a new hybrid cath lab, four new electro physiology labs, support offices, supply rooms, and locker rooms. The five new procedure rooms are being added to the existing four rooms to give a total of nine procedure rooms available to the Heart Center. The corridor system within the Heart Center was also renovated to meet semi-sterile standards and will be closed to the public.

One of the most complex components of this project was the construction of a floor in the two-story space above the emergency room public entrance. This was built while the emergency room entrance remained open, which required an elaborate temporary pedestrian tunnel to keep the entrance safe.

Construction was completed in October, 2011, with the administrative offices, F Lab, C Lab (the Hybrid Cath Lab), and the renovation of the existing corridors already complete. G Lab and H Lab was finished by September, 2011, and I Lab completed by the end of October.

Construction of this project has been relatively complex because the four existing procedure labs and temporary offices had to remain open while the new labs were being built.

Perkins Eastman of New York, NY provided design services, and DPR Construction, Inc. of Glen Allen, VA is the Construction Manager for the project. The total project cost is \$14,692,000.





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## University Hospital Helipad Rooftop Expansion

Stephen C. Rohr / Nat Brown

A new Health System Chiller Plant is under construction to better accommodate existing and future loads. This building will negatively impact the flight paths associated with the existing ground-based helipad. A new helipad was constructed on the roof of the University Hospital to mitigate the potential conflict of the East Chiller Plant and a proposed Emergency Department Expansion. The new helipad functions as the main landing pad for helicopters arriving at the Hospital.

The project is substantially complete. It included the extension of two hospital service elevators in the East Elevator Bank, safety nets, and a walkway to the pad location from the extended East Elevator Bank, as well as column upgrades to support the helipad loads. The helipad is a 46 foot square aluminum pad above the existing roof. The helipad system is designed with provisions for a snow melt system, all required FAA lighting and wind indicators, and required filtration to protect the penthouse air intakes for the Hospital's HVAC system.

Smith Group Inc. of Washington, DC provided the design, and Gilbane Building Company is the construction manager for the project. The project budget was \$6,700,000.



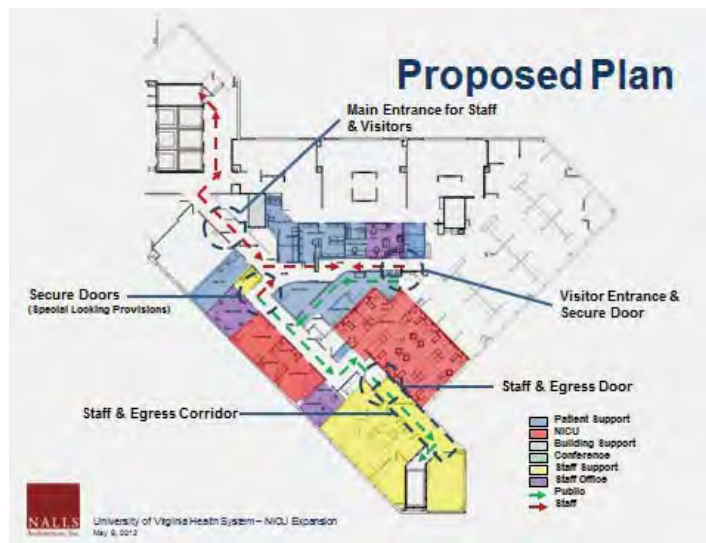
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## University Hospital NICU Renovation / Level 7

Frederick P. Dunn / Christian Pouncey

The Neonatal Intensive Care Unit Expansion is an eight bed expansion of the existing neonatal unit located on Level 7 East. The expansion consists of neonatal bed areas and support facilities for neonates requiring the most critical intensive care. The project will take existing support spaces within the unit and renovate the area to become an eight bed, enclosed expansion of the NICU. The surrounding support facilities will be renovated or reconfigured to become more efficient and effective. Support spaces include clean and soiled utilities, equipment room, overnight sleeping rooms for families, staff offices, and ancillary patient support areas such as lactation, education, and counseling.

Nalls Architecture Inc. of Philadelphia, PA provided design services and Crenshaw Construction Inc. of Culpeper, VA is the general contractor. The total project cost is \$2,700,000.



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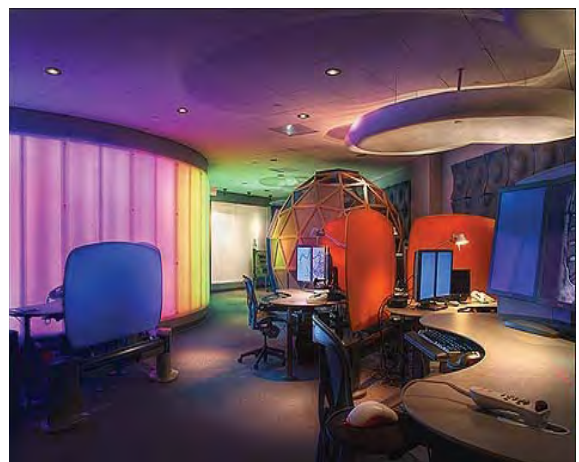
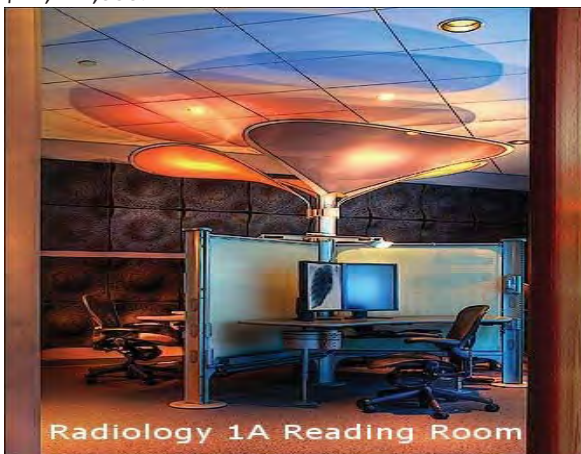
## University Hospital Radiology Master Plan – Remaining Phases / Level 1

D. Andrea Fraley, RA, AIA, LEED AP

In 2005, the Department of Radiology identified the need to modernize and update their entire department located on the first floor of University Hospital in order to incorporate new technologies and protocols to enhance patient care and revenue generating areas. A study was produced in late 2006 recommending and detailing 11 sequential renovation projects to be completed over a five-year period, resulting in the following enhancements/improvements for the department: 1) Better define Radiology and adjacent departments' circulation within Level 1 of the Hospital in order to improve staff and patient functions and way-finding; 2) Improve patient preparation and holding / PACU functions to improve efficiency and privacy and remove patient holding from open circulation corridors; 3) Make the front door to the department more user-friendly and hospitable to patients and family, and improve functionality for the staff; and 4) Provide more efficient reading workspace for staff and improve the quality of spaces for consultation.

Five of these phased projects have been completed. The remaining six phases encompass approximately 28,000 gsf and began phased construction in the fall of 2010.

The designer for all phases of the project is Perkins Eastman Architects. The construction manager is DPR Construction, Inc. Construction began late in 2007 and will be completed by early 2013. The total project cost is \$21,212,000.





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## University Hospital Radiology Sonata Equipment Upgrade / Level 1

P. Kevin Silson, AIA / Christian Pouncey

This project replaced the existing MRI with a more powerful 3T magnet. The work consisted of adding a new copper RF shielding enclosure and upgrading all room finishes and mechanical and electrical services.

Perkins Eastman of Charlotte, NC provided design services and Martin Horn, Inc. of Charlottesville, VA was the general contractor. The total project cost is \$1,115,080.



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## University Hospital Roof Replacement Project

Stephen C. Rohr / Nat Brown

University Hospital, a 608-bed facility with a Level 1 Trauma Center, was completed in 1989. Due to the age of the existing roof, and the costs of maintaining it, a thermoplastic polyolefin (TPO) roof is being installed. The work began in late 2011 and the upper roofs are now complete. All of the lower roofs with the exception of the area in front of the North Tower will also receive the same roof system. The remaining roof area will be a green roof consisting of vegetation planted in a growing medium over the waterproof membrane.

The TPO roof was designed by Heyward Boyd Architects, PC. Lynch Roofing was the contractor for first phase of the work. The total project budget for all phases of the work is \$6,700,000.



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## Engineering and Design:

Engineering and Design is composed of two work centers, the Design Group (CC 07) and the Project Management Group (CC 78). Engineering and Design was active in the design and/or execution of over 130 individual projects and other activities in support of University facilities throughout fiscal year 2011-2012 and executed approximately \$10,000,000 in project and technical support activities.

### Project Management Group

<u>In Design</u>	<u>In Construction</u>	<u>Completed</u>
Albert Small Building Roof Replacement	Aquatics and Fitness Center (AFC) HVAC System Upgrades	Alderman Road Dorms Concrete Inspections 2011
Alderman Library Built-In Gutters & Low-Slope Roof Replacement	Bookstore Roof Replacement	Carr's Hill Chilled Water Optimization Measures
Batten Incubator Renovations	Darden Terrace Expansion Joint Corrections	Chapel Tower Capstones Inspections
Chemistry Northern Penthouse HVAC Improvements	Fire Alarm Upgrades – McCormick Road Dorms	Chemistry Exhaust Infrastructure Upgrades
Darden Terrace Wall Repairs	Gilmer Hall Addition Elevator Modernization	Clemons Library Elevator Modernization
East Range Roof Replacement	Lambeth Apartments Renovations Phase 5	Dorm Waterproofing – McCormick Rd, Copeley, UGardens, Brown College
Gilmer Hall Façade Repairs	Lambeth Field Residences Roof Replacement	Fire Alarm Upgrades – Copeley, Lambeth
JPJ Building Envelope Study	Memorial Gymnasium Volleyball Locker Room Renovation	Ivy Stacks Retrofit
Jordan Hall Stair Towers Reinforcements	Olsson Hall Renovations	Lambeth Field Apartments – Interior Renovations Phase 4
Old West End Substation Upgrades	Slaughter Hall Renovations	Lambeth Apartments Renovation Phase 4
Olsson Hall Low-Slope Roof Replacement		Law School Faculty Meeting Room Renovations
Student Activities Roof Replacement		Mountain Lake Biological Station Domestic Water Supply Repairs and Restoration
Thornton Hall C-Wing Fire Supp. Sprinkler Water Line Study		Nuclear Reactor Bldg – SEAS Plasma Arc Spray Facility
		O'Hill Water Tank Inspections and Repairs
		Special Collections Humidification Study
		Sponsors Hall Gatehouse Stairs Repair
		U-Hall Structural Inspections
		Withers Brown AHU Replacement

## Design Group

<u>In Design</u>	<u>In Construction</u>	<u>Completed</u>
Batten Incubator Renovations Sponsors Hall	Culbreth Theater Renovations	Alderman Dorm Mailroom Relocation (Fitzhugh Mail Room)
Drama Shop Paint Frame Replacement	Drama School Sprinkler & Fire Alarm	Brooks Hall 103 Classroom Improvements
FM Shops Master Planning	Harmon, Grainger/Keller, & Kucenas Lab Renovations	Chemistry Room 411 Renovations
Gala Life Replacement, Culbreth Theater	Helms Theater Traps Replacement	Clark Hall Roof Repairs
JAG School Roof Replacement	Lambeth Residences Roof Replacement	Clemons Library Telepresence Room
Physics Room 204 Seating Replacement	Lawn/Range Bathroom Renovation (Phase 4)	Culbreth Theater Fire Curtain Replacement
Rare Book School, Alderman Library, Phase 2	ME Classroom 339 Renovations	Darden Library Renovations (Phase 1)
Surgery & Transplant Renovations, 4 <sup>th</sup> Floor MSB	Olsson Hall Renovation for SIE	EVP/COO Offices Suites
Ticket Booth & Associated Renovation, Old Cabell Hall	University Bookstore Roof Replacement	Gamma Knife Renovations
		Handrails, Old Cabell Hall Auditorium
		JAG Legal Center & School, Building Envelope and Structural Repairs
		JAG Lodging Rooms Fan Coil Replacement
		JAG Lodging Rooms Renovation
		Minor Hall Partial Roof Replacement
		Physics Door Operators
		Randall Hall Reroofing
		Rare Book School, Alderman Library, Phase 1
		Scott Stadium Replay Booth Enclosure

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## Engineering and Design Major Commissions

### Aquatics and Fitness Center (AFC) HVAC System Upgrades

J. Shannon Barras, AIA, LEED AP BD+C

The original HVAC system supplying the natatorium installed in 1996 has been failing for some time and was in need of replacement. Chloramine levels in the natatorium have been affecting both the elite swimmers and the pool area equipment. A new system has been designed which will help improve the air quality, air distribution, efficiency and reliability. As part of this project a new HVAC system and new sprinkler piping services the pool area will be installed. The construction is being completed over a very short timeline so as to minimize the pool shut down time as much as possible. Therefore the installation of the new equipment will take place over a two month period. The project will be complete in September of 2012. The project budget is \$3,250,000. The project contractor is Sullivan Mechanical. The project engineer is 2rw.





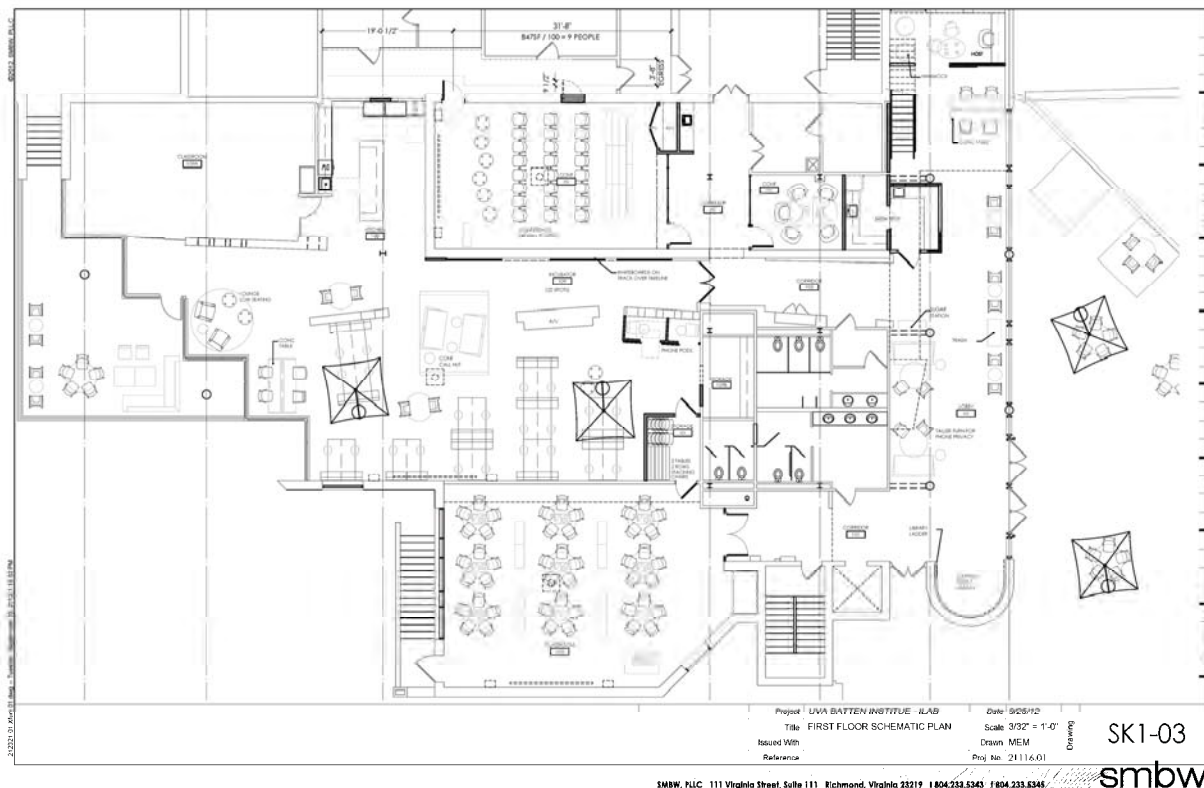
## Batten Incubator Renovations

Taryn Harrison / Eugenio Schettini

The W.L. Lyons Brown Innovation Laboratory (i.Lab) located in Sponsor's Hall offers the Darden School of Business a facility that promotes and encourages the incubation of business ideas and creates opportunities for students interested in starting their own ventures.

The Batten Incubator project strives to provide an attractive space to support prospective students interested in entrepreneurship. The scope of this project includes the renovation of approximately 6,200 square feet in order to provide new meeting rooms, an incubator, offices and renovations to the lobby and terrace.

The architect of record is the UVA FM Design Group. Construction is being implemented by UVA FM Project Services Group. The project cost is \$4,000,000.



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## **Culbreth Theater Renovations – Drama Education Building**

David Villiott

The Culbreth Theater has been in service, without major improvements, since the construction of the drama Education Building in the early 70's. This project will improve the finishes and lighting as well as the seating in the Theater. The project consists of the replacement of auditorium seating and aisle lighting with installation of new handicapped seating areas; the replacement of acoustical wall finishes and ceiling tile and grid; the replacement of carpet; and new wall and ceiling paint finishes, and new house lighting.

The Facilities Management Design Group is the Architect and Project Manager for the renovation; Nielsen Builders is responsible for construction. The project budget is \$385.000. Project completion is scheduled for October 2012.



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## Ivy Stacks Retrofit

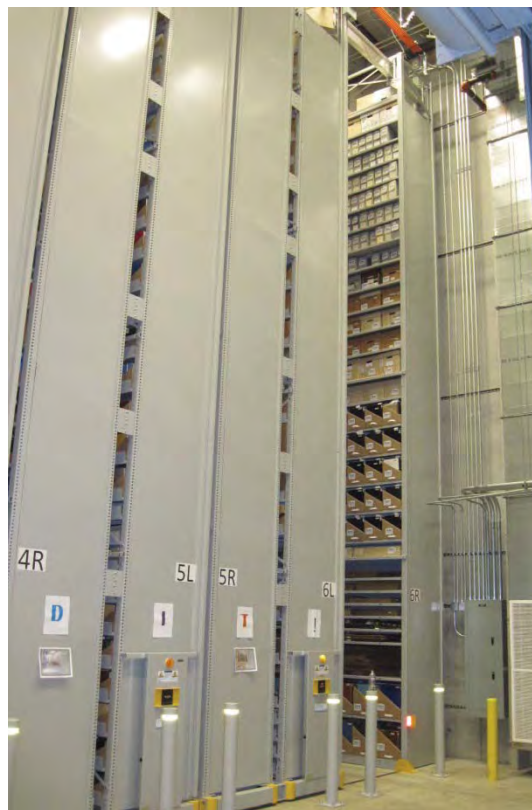
Taryn Harrison / Stephen Keith Payne

The Ivy Stacks building located at 2450 Old Ivy Road was retrofitted this past year with a new high-bay mobile storage system that more than doubles the storage capacity for the Library. The new Xtend shelving system offered by Spacesaver Corporation stretches almost two-hundred feet in length and extends thirty feet above finished floor capitalizing on the existing footprint of the building.

Building infrastructure upgrades included a new ESFR fire suppression system supported by a diesel engine fire pump, new lighting on occupancy sensors, a new fire alarm panel and new air supply ductwork.

Decanting the building started in the fall of 2010 and involved moving approximately 50,000 boxes to three off-site storage facilities. The library completed accessioning 909,084 items in June 2012. Ivy Stacks has transitioned to an operational mode and staff continues to plan for the best use of the available shelving and preparing a comprehensive collections management plan.

Construction was procured through Competitive Negotiation and Martin Horn was the successful firm. Obenchain, Linkous, Daniels and Sowick (O.L.D.S) were the Engineer of Record. The project budget was \$4,800,000. One can see more pictures and read the project blog by Paul Rittlemeyer, Director of Interlibrary Services. The blog is available at <http://ivystacks.lib.virginia.edu/>.





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## **The Judge Advocate General's Legal Center & School, Building Envelope and Structural Repairs**

Joseph Barclay Fleming Phillips, RA, CSI

Extensive building envelope and structural repairs to the third and fourth floors of the Judge Advocate General's Legal Center and School were executed in this period. Remedial work was required to repair and replace deficient building elements discovered during demolition for interior renovation of the lodging rooms at this facility. The exterior brick veneer walls were removed and replaced in their entirety, including framing, sheathing, insulation, flashing, and air/water barriers. Additionally, structural repairs were effected on 40 concrete beams and structural steel framing. The work as a whole provides improved envelope performance, including thermal efficiency and weather resistance.

Whitlock Poston Dalrymple & Associates was the A/E for the project. Management of design and quality control was performed by Engineering & Design; Project Services was responsible for construction and construction project management. Total budget for both projects combined was \$1,911,300; project completion was achieved October 2011.



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### Lambeth Apartments Renovation Phase 4

J. Shannon Barras, AIA, LEED AP / Stephen Keith Payne

The Lambeth Field Apartments consist of 24 buildings totaling 174 apartments. Each apartment has 1 ½ or 2 baths, a living room, kitchen and either two or three bedrooms. Renovations have extended over 4 summers with the summer of 2012 marking the completions of the renovation process. Renovations have included the installation of new flooring, cabinets, plumbing lighting fixtures, painting and drywall repair. The architect of record is Heyward Boyd Architects and the contractor is Harrisonburg Construction. The project budget for the summer of 2012 is \$2,144, 088. The project will be complete in August of 2012.



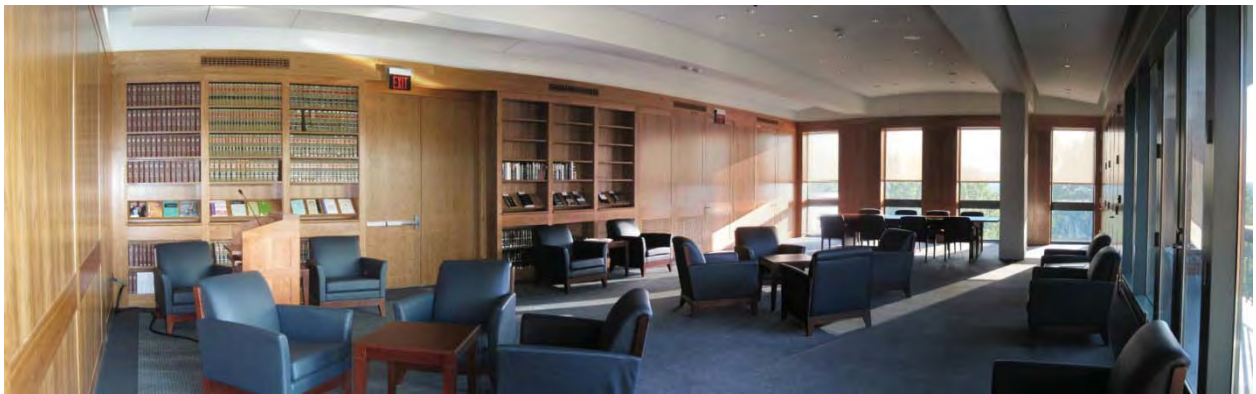
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## **School of Law School Faculty Meeting Room Renovation**

Taryn Harrison / Stephen Keith Payne

Founded by Thomas Jefferson in 1819, the School of Law at the University of Virginia is world-renowned for its faculty of nationally acclaimed experts in their fields and outstanding teachers. Increased growth of Virginia Law faculty and the need to host frequent meetings and seminars prompted a renovation to the existing Faculty Meeting Room. The renovation focused on creating a new break room that adequately serves the faculty and staff, architectural enhancements including cherry wall paneling, a new ceiling system maximizing the volume of the space, a new storefront, and replacement windows.

The architect of record is Train & Partners Architects in Charlottesville, Virginia. Construction was managed by Martin Horn. The project budget was \$886,000 and was completed in August 2011.





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## Mountain Lake Biological Station Domestic Water Supply Repairs and Restoration

Ernest H Barber, PE

Mountain Lake Biological Station (MLBS) is a residential research and teaching field station that is located in southwestern Virginia and is operated by UVA's Department of Biology. During peak use in the summer months, the Station is home to up to 100 residents. The Station is set on 600 acres and encompasses 31 buildings dedicated to housing, dining, education, research, and utility functions.

The Station's domestic water supply is well water that is treated and filtered to meet Virginia Department of Health (VDH) drinking water standards and then pumped to two buried 1500 gallon concrete storage tanks. Water is then piped from the storage tanks to the Station water distribution system on demand.

During the 2011 summer season, water supply fell critically short at the Station. Only through significant water conservation measures was the station able to complete its committed programs. In the fall of 2011, FP&C Engineering and Design was asked to assist Facilities Management Operations to evaluate the water system and implement measures to restore the water supply. Through the efforts of Schnabel Engineering (well performance evaluation and the addition of a new well), Anderson and Associates Engineers (new well development into the system), Fenton Well Drilling Services, and Eastern Tank and Utility (repairs and restoration of storage tanks), the water system was restored to fully operative in spring of 2012.



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### **Nuclear Reactor Building – SEAS Plasma Arc Spray Facility**

J. Shannon Barras, AIA, LEED AP / Stephen Keith Payne

During the Fall of 2011 a new Plasma Spray Booth was installed within the Observatory Mountain Engineering Research Facility. This new spray booth was installed in part due to a grant from the US Navy. The school of engineering seeks to develop a material that can improve the performance of the decking of aircraft carriers. The project cost was approximately \$435,000. The engineer of record was Vansant and Gusler. The general contractor was Woodland Construction.



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## Olsson Hall Renovations

Taryn Harrison

Olsson Hall is a 3-story academic building originally constructed in 1960. The construction of Rice Hall on the south end of Olsson Hall enabled Computer Science to vacate Olsson Hall and Systems Information Engineering to consolidate its department on all three floors of Olsson. The scope of the architectural renovation included the demolition and reconfiguration of the east wing on the 1<sup>st</sup> floor creating large conference rooms and faculty and staff offices outfitted with new carpet, paint, ceilings and lighting. The MEP scope of work included the enlargement of the fire service entrance closet; a new sprinkler service entrance to serve a fully sprinklered building; the replacement of five VAV air handlers; and a partial new fire alarm system in the renovated areas.

The Architect of Record is the UVA Design Group and the Engineer of Record is Obenchain, Linkous, Daniels, and Sowick. UVA FM Project Services Group implemented the construction. Project cost was \$4,250,000.





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### **Scott Stadium Replay Booth Enclosure**

William H. Blodgett, AIA, NCARB / Eugenio Schettini

The University Athletics Department requested an enclosure for an existing open-air box used by ACC officials for reviewing instant replays. The enclosure needed a hard ceiling and glass walls to form a booth protecting electronic equipment and providing a measure of isolation for those officials.

The Facilities Management Design Group developed a design to meet those requirements, with the enclosure encompassing a suspended structural frame supporting its roof and ceiling, as well as lighting, ventilation, fire suppression, and a glass wall system.

Construction execution was coordinated by Facilities Management Project Services with primary fabrication, erection, and construction of the suspended framework provided by Industrial Fabricators of Fishersville, Virginia. Construction was completed in August 2011 in time for the season's first football game. The project cost was \$65,400.



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## South Slaughter Hall Renovations – School of Law

Taryn Harrison / Stephen Keith Payne

The University of Virginia's School of Law began planning efforts for the renovation of the south end of Slaughter Hall in the summer of 2011. Primary goals for the renovation were to resolve inadequate office and work areas for admissions and other administrative and student groups. The scope of the 33,000 square foot renovation included the demolition and reconfiguration of the 1<sup>st</sup> and 2<sup>nd</sup> floors and selective demolition and repurposing of some rooms on the 3<sup>rd</sup> floor.

The addition of a new two-story lobby pavilion serves as an extension of student services offices located on the 1<sup>st</sup> and 2<sup>nd</sup> floors, with a connecting interior stair and roof terrace accessible from the 3<sup>rd</sup> floor Alumni Lounge. The lobby pavilion expands into Purcell Garden, an existing interior courtyard that is currently being rehabilitated. That work is anticipated to be completed by October 2012.

The project also included the replacement of some exterior windows in the renovated areas of the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> floors as well as a new storefront system in the Purcell Reading Room. The existing central VAV air handler (AC-1W) located in the basement Mechanical Equipment Room serves a majority of South Slaughter Hall and was replaced as part of this project.

Slaughter Hall is an existing building located in the North Grounds Precinct at the University of Virginia. The building was constructed in 1974 with other major renovations that were completed in 1980 and 1997.

The architect of record is Train & Partners Architects and the engineer of record is Obenchain, Linkous, Daniels, and Sowick. Construction Manager was Martin Horn inc. The project budget was \$8,700,000 and was completed in August 2012.



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## University Bookstore Roof Replacement

Zachary P. Brackett, RRO / Eugenio Schettini

This project will replace all existing roof systems which are part of the original portion of the University Bookstore. Initial investigations of both the low-slope ballasted EPDM and steep-slope standing-seam metal roofs were performed by the Facilities Management Design Group. Findings showed that the EPDM roof had reached the end of its service life and needed to be replaced. While the metal roof was in satisfactory condition, the integral gutters had reached an advanced state of deterioration and needed to be replaced as well. It was also determined that the original construction did not provide a separation of gutter from roof, necessitating replacement of the metal roof.

The low-slope roof will be replaced with 20,500 square feet of fully-adhered, 60-mil reinforced EPDM membrane, including flat rigid insulation board, and all associated shop formed metal flashing components.

The steep-slope roof and gutters cover an additional 17,200 square feet and will be replaced with a manufactured Galvalume standing-seam metal roof with a factory Kynar finish, and shop formed stainless steel gutters. The Design Group was also able to devise new separation details to allow for separate replacement in the future.

Both the initial investigation and design services for this project were performed by the Facilities Management Design Group, with construction services provided by Whitley/Service Sheet Metal and Roofing of Richmond, Virginia. Construction began May 2012 and will be completed in September of the same year. The total budget for this project is \$655,500.





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## Support Divisions

### Contract Administration:

The number of contracts processed increased 11% as compared to the previous year. The Office of Contract Administration managed the procurement processes for and made awards on a total of 461 contracts in the 2011-2012 fiscal year (FY12) compared to 416 the previous year.

Professional services contracts (architectural, engineering, and consulting), and service orders on consulting term contracts, numbered 380 for a total of \$12,484,660 compared to 333 contracts the previous year totaling \$14,571,144. There were 84 change orders processed with a net additive value of \$5,525,513.

The construction side of the office handled 81 procurements for a total of \$124,875,443 in a favorable bid market, compared to 83 procurements the previous year totaling \$100,998,080. There were 383 associated construction change orders processed with a net value of \$30,347,969 compared to 414 change orders the previous year totaling \$34,032,207. The only change order included in this total over one million dollars was the planned change order for the Track and Field Facility Improvements (Lannigan Field) valued at \$1,524,041.

During the year the office issued a total of 28 requests for proposals (RFPs) compared to 12 RFPs the previous year. The number of professional services RFPs executed this year was 15, and construction RFPs totaled 13.

We continue to team with Supplier Diversity to strategize and plan for increased diversity in Prime and Trade Contractor spending through recruitment of small, women, and minority-owned (SWaM) firms. In addition the following SWaM initiatives continued in FY12:

- 1) New Director of Supplier Diversity was hired and meetings were held to bring him up to speed and to understand his initiatives.
- 2) Participated in Construction Services Education Session titled “UVa Construction Opportunities De-Mystified” put on by Supplier Diversity to meet and assist SWaM firms in May 2012.
- 3) An emphasis on SWaM participation in Facilities Management’s procurements continues with an overall aspirational goal of 42% for SWaM spending for the University’s 207 and 209 agencies. Special efforts are made for women and minority-owned firms to improve their representation in the overall total spending.
- 4) Our Manager of the Office of Contract Administration continues to take the lead in promoting SWaM participation in our procurements and he participated in the National Minority Supplier Development Council (NMSDC) seminar again this past year. He also participated in the Bluebook Network – GC Showcase in Charlottesville at the JPJ Arena in April 2011.
- 5) Members of the Office of Contract Administration staffed a booth at the excellently attended SWaM Fest VII in Short Pump in September 2011 and participated in various SWaM outreach meetings.

The University of Virginia Higher Education Capital Outlay Manual (HECOM) is undergoing a general update. Updates and revisions of this 250+ page manual involve many hours of editing by our Office to implement the

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steady flow of suggestions for improvement. The electronic document is now fully linked with our web site content for ease of reference.

The Office continues to spearhead efforts to update the Contract Administration web site, the “Links and Forms” web page, and the “Desktop” computer resource as a service to and as professional tools for the FP&C Staff, and University Consultants and Contractors. The continuous improvement effort is contributing to increased FP&C consistency. Significant updates, modifications, and additions have been made and we are continuing to incorporate process and document improvements as we work in conjunction with the Associate General Counsel and Special Assistant Attorney General for the University. Existing web pages and templates including the UVA HECO/CO/DGS Forms page continue to be updated.

As part of ongoing improvements to the capital project execution process, we are implementing Building Information Modeling (BIM) as a design collaboration tool and for contracting with major Trade/Subcontractors early in the design process as part of a design assist methodology. Procedures and contract documents have been drafted for use in procuring Architect/Engineer, Construction Manager, Commissioning Agent, and Trade/Subcontractor services.

A BIM presentation/discussion was held in December 2011 with UVA’s design and construction partners where the draft procedures and documents were presented. Comments were received and are being considered for incorporation. Minor revisions to our BIM documents are anticipated.

We have identified the University Hospital HVAC Upgrade Phase II as the pilot BIM project. The pilot project Engineering firm and three new Commissioning Agent term contract firms have all been selected using a competitive process that considered BIM evaluation criteria. We have currently advertised for the pilot project CM firm using a similar process and criteria.

The Office consistently promotes and encourages professional involvement, certification, and training. Members of the Office, with the support of the Director of FP&C, attended the Virginia COAA semi-annual workshops and the annual meeting for the national organization. In addition the Office Director served as the COAA Virginia Chapter Treasurer again this past year and UVA hosted the March 2012 Virginia COAA workshop with 120 people registered representing facility owners from around Virginia. The workshop included sessions on Sustainability, Contracting Methods, and a tour of the new ITE Building. Contract Administration staff also participated in and helped lead FP&C training sessions that were held for staff and participated in numerous other training opportunities.



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### **Administrative Division:**

The mission of the Administrative Division of Facilities Planning and Construction comprised of the Support Staff, Resource Center, and Finance Services Office is to provide a variety of administrative, technical and financial support functions to personnel in the Facilities Planning and Construction operational divisions.

**The Administrative Division & IT Manager** continued to manage the Administrative Division staff, coordinate all FP&C Department Information Technology issues and serve as the department Webmaster, overseeing the FP&C Department website, the FP&C Desktop website and the FP&C SharePoint intranet and extranet sites. The FP&C IT Associate continues to be an asset to the department, assisting with a multitude of routine IT related duties and responsibilities while focusing on both life-cycle computer system replacements and the development and deployment of Microsoft SharePoint 2010. The use of SharePoint continues to prove beneficial in facilitating collaboration and the exchange of information between FP&C staff and construction and professional services personnel on over forty construction project team sites, as well as the use of Workflow features for the electronic routing of HECO, D&F, and other forms. The IT Associate has developed numerous customized web pages utilizing various Web Parts to provide filtered content to users based on their login.

The Administrative/IT Manager and the IT Associate continue to utilize an IT Intern assigned through the Piedmont Virginia Community College (PVCC) degree completion program and he continues to be a valuable asset to both the FP&C Department and Facilities Management. The IT Associate identified and initiated specifications to replace twenty-five staff computers based on our life-cycle replacement policy, with many of these being notebooks to aid senior and project management staff to work more productively while away from the office. We continue to increase the use of smartphones and other mobile devices with the department now supporting 51 iPhones, 12 iPod Touches and 3 iPads. These smart mobile devices allow department staff to optimize their time away from the office by easily and quickly handling e-mail, accessing web applications and updating their calendars. The Administrative/IT Manager and his telecommuting wage IT assistant continued to maintain both of the standard websites, which included assisting the Construction Services & Contract Administration Director with his efforts to update and reorganize department web pages to better assist project managers, construction administration managers, project teams and other staff with user-friendly updated forms and document templates.

The **Support Staff** continues to expand and leverage its use of the departmental SharePoint system. Utilizing SharePoint's workflow capabilities the Support Staff is routing key HECO forms for approvals resulting in quicker response times, increased document tracking and visibility. Additionally, the Support Staff completed all coordination and planning for the 16<sup>th</sup> Inforum event which was held in May 2012 with 141 representatives from 99 organizations attending.

The **Resource Center** continued its mission to acquire, archive and distribute design and construction data in support of FP&C projects, FM staff and the University's planned growth. The collection grew by 376 new sets of drawings (containing a total of 3,748 sheets) and 517 new specifications and reports. We added 25 GB of new digitally archived operation and maintenance manuals, submittals, and shop drawings. In the past year, we have adopted MS SharePoint as our tool for transferring files to (and from) consultants to our office. Each transfer leaves a record of who has accessed our network; this method improves FM network security.

We continue to train FP&C staff in the use Best Management Practices for Records Management. This year we presented Digital and Paper Record Management Best Practices to the Academic and Health System PMs and CAMs. To support this effort, we created custom SharePoint tools to provide Project Managers with an interactive checklist of Permanent Records.

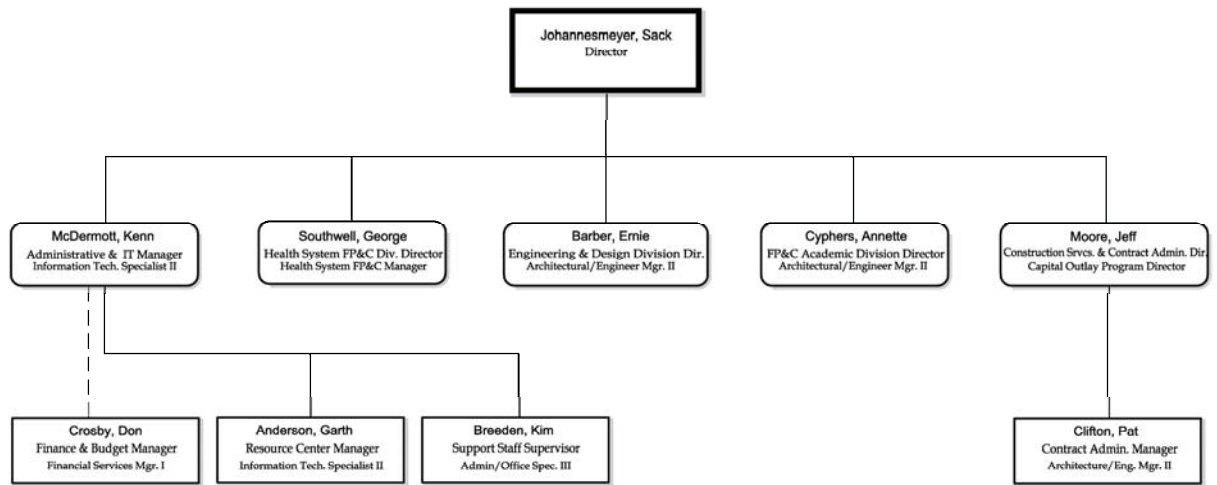
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We now manage FP&C's non-permanent record storage through the University Records Management Application (URMA). Together with HS admin staff, we have entered more than 75 non-permanent records into the URM Application. This application allows us to track paper and digital records through their retention and ultimate destruction. In addition, this year we destroyed 249 linear feet of expired records in Fontana. In the past 3 years, the Resource Center staff has examined and destroyed more than 35% of the dead-files stored there.

In June of 2012, the Resource Center was invited to speak at the Information Security, Policy, and Records Office (ISPRO) Conference about our experience with digital record management for FP&C. Inspired by our experiences, staff members of Environmental Health and Safety contacted the Office of Records Management and asked that we assist them in the design of the EH&S Records Management plan. The methods and priorities that we've implemented in FP&C for dealing with retention of both digital and paper records are at the leading edge of digital records management at the University.

We would like to highlight two recent examples of our work to reduce the amount of Construction Document printing while increasing availability of the information. First, Sarita worked with Mike Gibson to troubleshoot the use of PDF files for his iPad so that he could view drawings on screen. By finding the best type of PDF and converting all of his construction sets and specs she helped him save over 6,000 sf of paper and over 800 dollars in the past 6 months. Second, we've improved and streamlined the process for the general review of projects submitted to UBO for Code review. Nearly 100 persons regularly receive notification of the opportunity to comment on the project documents which are sent to UBO for code review. Notification is also sent to FM Trades who are able to monitor and comment on the projects sent to UBO for review. We no longer need to print copies for FM trades review.

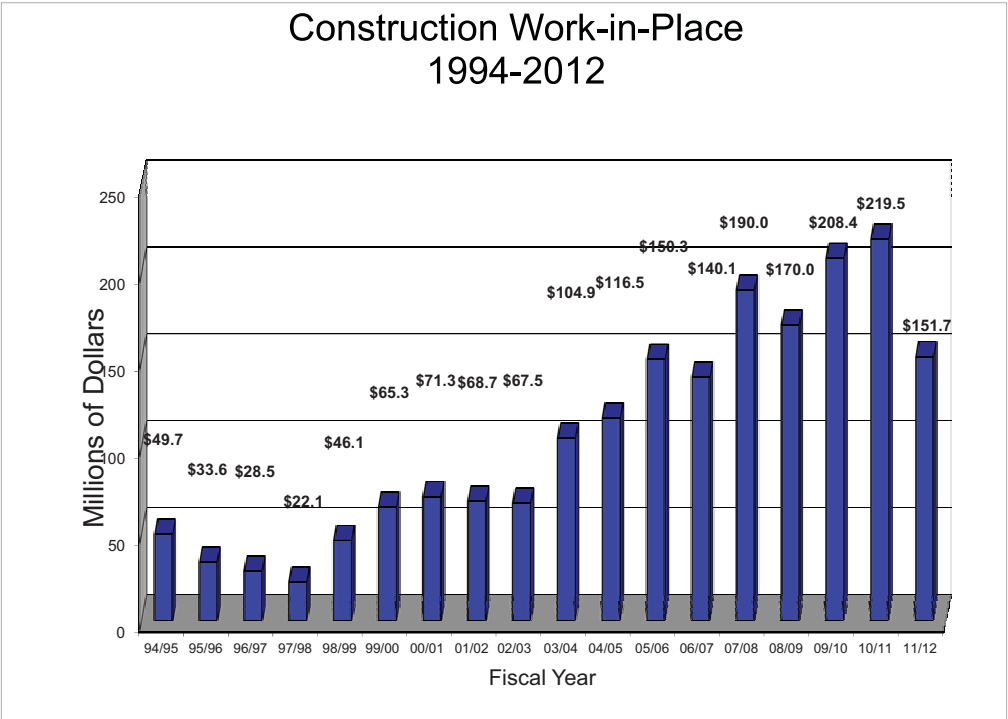
Facilities Planning and Construction  
July 1, 2011- June 30, 2012



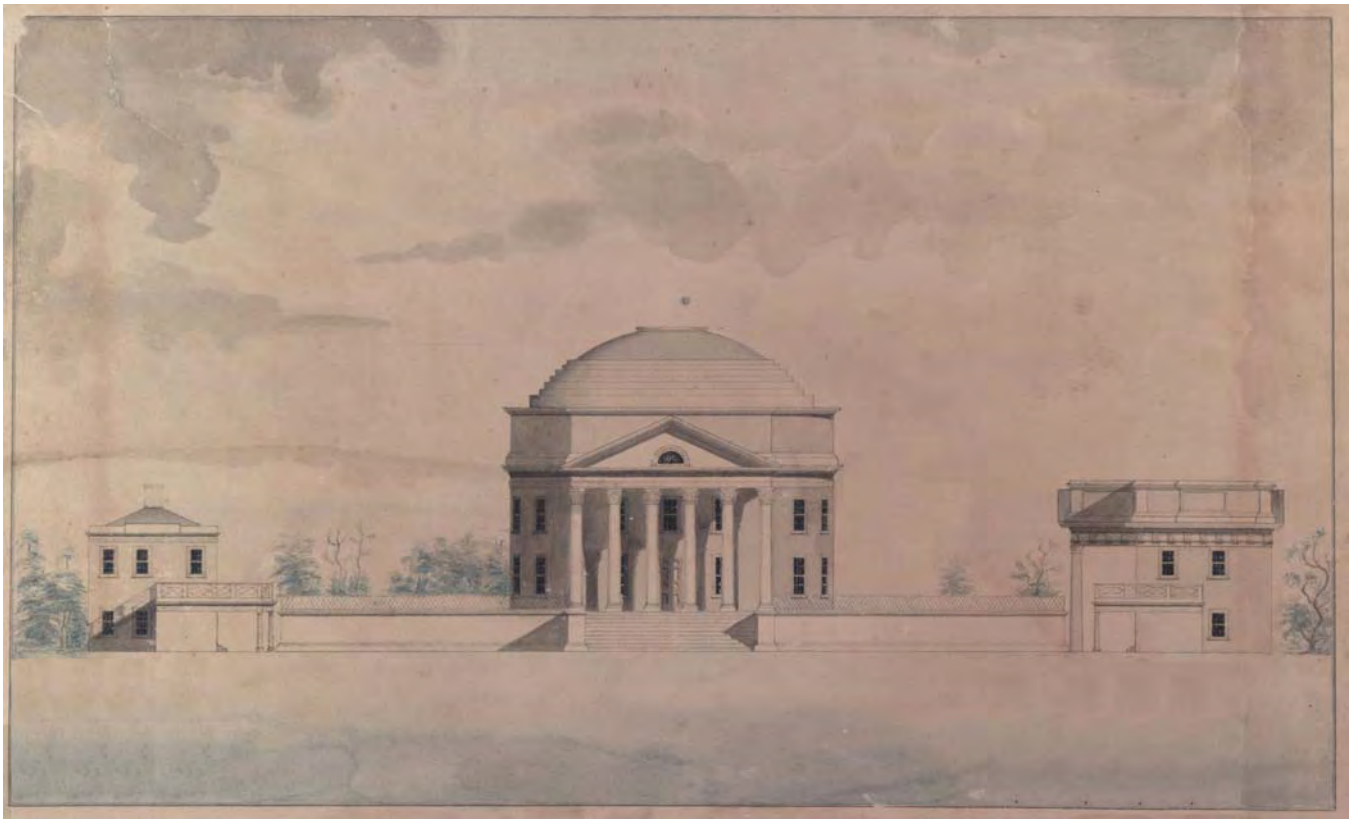


Appendix B

Facilities construction completed during the year represented a contract construction work in place volume of \$151.7 million.







Neilson's view of the Rotunda with Pavilions IX and X,  
Special Collections, University of Virginia Library

*We are about to establish a College near Charlottesville on the lands formerly Col. Monroe's, a mile above the town. we do not propose to erect a single grand building, but to form a square of perhaps 200 yards, and to arrange around that pavilions of about 24. by 36. f. [feet] one for every professorship & his school. they are to be of various forms, models of chaste architecture, as examples for the school of architecture to be formed on. we shall build one only in the latter end of this year, and go on with the others year after year,..."*

Thomas Jefferson  
Letter to John Dinsmore  
April 13, 1817