

## Capital Budget Request

Overview	
Biennium	2012-2014
Budget Round	Introduced Bill
Request Origin	Previously Submitted
Agency	208: Virginia Polytechnic Institute and State University
Project Title	Address Fire Alarm Systems and Access
Project Type	Improvements-Life Safety Code
Facility/Campus	Multiple
Project Location	Roanoke Area
Building Name	N/A
Building Name	
Building Function	Higher Education Academic -- 100% E&G
Contains significant energy costs?	No
Contains significant technology costs?	No
Infrastructure Element	Multi-Purpose

Supporting Documents				
File Name	File Size (Kb)	Uploaded By	Uploaded Date	Comment

Narrative	
Description	<p>This project has been on the University's plan since 2001, formerly titled Health, Safety, and Accessibility. The university's health, safety, and accessibility initiative for the campus is an ongoing effort. The university has made important progress toward improving the campus in this regard with prior funding authorizations that supported critical safety and accessibility improvements.</p> <p>This project request is for authorization and funding to continue progress on needed campus improvements in several educational and general facilities. The focus of this request is accessibility improvements, fire alarm systems, and way finding that are beyond the scope of the Maintenance Reserve program or E&amp;G operating budgets.</p>
Justification	<p><b>Program Description:</b> Virginia Tech is a land-grant university with a three-part mission: instruction, research, and outreach. Under this mission, activities occurring on campus should take place in a healthy, safe, and accessible environment and should ensure compliance with federal and state requirements. The campus is a daily meeting place for students, faculty, staff, alumni, and a vast array of visitors. Ensuring the safety, health, and accessibility of the campus environment is critical to the long-term success of the University.</p> <p>The University's health, safety, and accessibility initiative for the campus is an ongoing effort. This project request is for authorization and funding to continue progress on needed campus improvements in several educational and general facilities. The focus of this request is accessibility improvements, fire alarm systems, and updating needs assessment and planning.</p> <p><b>Accessibility Improvements:</b> This project envisions significant accessibility and safety improvements in various campus buildings and exterior campus facilities. The improvements include installation of accessible seating and routes, upgrades to physical access, and</p>

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lighting and other permanent infrastructure development to facilitate better opportunities for patrons with vision and hearing disabilities, upgrades to physical access, installation of accessible toilet facilities, replacement of non-accessible drinking fountains, installation of accessible signage, and, where applicable, accessible upgrades to existing elevator controls and existing stair handrails.

Exterior improvements across the campus include reconfiguration or installation of accessible stair handrails, installation of appropriate accessible stair markings, alteration of existing topography and installation of new accessible sidewalks or ramps at steep slopes, and installation of sidewalk curb cuts and crosswalks. Specific tasks for this portion of the project include heavily used sidewalks that are major pedestrian routes through the north zone of campus.

### Fire Alarms:

This project envisions fire alarm system installations in multiple campus buildings. The fire alarm systems include fire alarm control panels, accessible pull stations, smoke detection systems, and accessible audio-visual announcement devices. The installation of these systems in these buildings will make a significant contribution to the life and safety of the occupants.

The University's strategic plan includes three scholarship domains: Learning, Discovery, and Engagement; and three Foundational Strategies: Development of the Organization, Investment in the Campus Infrastructure, and Effective Resource Development, Allocation, and Management. This project supports the key foundational strategies of Investment in the Campus Infrastructure and Effective Resource Development, Allocation, and Management as listed below. This foundational strategy provides the structural underpinnings required for a successful academic program.

### Foundational Strategies:

Enhance health, safety, and security operations to support the University's discovery, learning, and engagement endeavors.

### Existing Facilities:

Accessibility Improvements: The following is a representative list of high priority needs in existing educational and general facility buildings based on physical assessments.

#### Building: Existing Needs

McBryde Hall An accessible ramp serving the auditorium, interior access to accessible toilets from the large auditorium, power-activated door openers throughout the facility, accessible way-finding signage, and automated door openers throughout the facility.

Sandy Hall The chair lift from the building entry to interior corridors is beyond repair and must be replaced.

War Memorial The chair lift from the building entry to interior classrooms is to be replaced with an accessible ramp.

Wallace, Whittemore and Derring Halls Provision of accessible toilets and accessible door hardware are needed throughout the facilities.

President's Quad Installation of accessible sidewalks in place of steep walks and/or exterior stairs, including accessible handrails.

Hancock Hall Power-activated door openers and accessible way-finding signage is needed throughout the facility.

Burruss Hall An accessible access route from the Drillfield into Burruss (A potential route at the west side of Burruss has been identified.)

Fire Alarms: The following is a representative list of high priority needs in existing educational and general facility

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buildings based on physical assessments.

### Building Existing Needs

Saunders Hall The alarm system requires replacement and expansion to cover extensive laboratory operations and a large assembly classroom.

Price Hall A building-wide alarm system is needed. Currently, only six detectors are provided in the entire facility.

Smyth/Hutcheson Halls The alarm and detection system requires replacement and expansion to cover multiple laboratory operations and large assembly-type classrooms.

Lane Hall A building-wide alarm system is needed.

Patton Hall A building-wide alarm system is needed. Currently, only five detectors are provided in the entire facility.

Holden Hall A building-wide alarm system is needed. Currently, only five detectors are provided in the entire facility.

Seitz Hall A building-wide alarm system is needed. Currently, only six detectors are provided in the entire facility.

Sandy Hall The alarm and detection systems require a complete replacement.

Norris Hall The alarm and detection system requires replacement and expansion to cover laboratory operations and large assembly-type classrooms.

### Funding Plan:

The scope of this project is for Educational and General facilities; thus, the funding plan calls for 100 percent General Fund support.

### Alternatives considered

Delaying this project to a future biennium is not a favorable option because of the backlog of current campus safety and accessibility projects. These projects are normally addressed ad hoc as operating finances permit. Without capital funding, the accumulation of backlog of requests for improvements related to access, fire alarm systems, and code compliance will grow.

## Funding Request

Phase	Year	Subsubject	Fund	Amount
Pre-Planning	FY 2013	2322 - Construction, Buildings	0100 - GENERAL FUND	\$150,000
Detail Planning	FY 2013	2322 - Construction, Buildings	0100 - GENERAL FUND	\$900,000
Construction	FY 2014	2322 - Construction, Buildings	0100 - GENERAL FUND	\$13,950,000
				\$15,000,000

## Methodology

### Methodology

The costs are based on internal estimates developed by University staff based on historical comparables of on-campus work and prior Six-Year Plan submittals with escalation applied. The costing analysis utilized past and current compliance projects, to include electrical, ADA, egress, etc. upgrades around campus. The project is planned to utilize the traditional Design, Bid, Build delivery method. Project costs are estimated to the mid-point of construction using three percent escalation in accordance with the instructions for developing the Six-Year Capital Outlay Plan.

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Project Costs		
Cost Type	Total Project Costs	Requested Funding
Acquisition Cost	\$0	\$0
Building & Built-in Equipment	\$11,420,000	\$11,420,000
Sitework & Utility Construction	\$0	\$0
Construction Cost	\$11,420,000	\$11,420,000
Design & related Services	\$1,857,000	\$1,857,000
Inspection & Testing Services	\$308,000	\$308,000
Project Management & Other Costs	\$957,500	\$957,500
Furnishings & Movable Equipment	\$0	\$0
Construction Contingency	\$457,500	\$457,500
Total Project Cost	\$15,000,000	\$15,000,000

Capacity			
Cost Type	Unit of Measure	Units	Cost Per Unit
Acquisition Cost			
Construction Cost	square feet		
Total Project Cost	square feet		

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Other Costs		
Cost Type	Total Project Costs	Requested Funding
Design & Related Service Items		
A/E Basic Services	\$1,678,000	\$1,678,000
A/E Reimbursables	\$12,000	\$12,000
Specialty Consultants (Food Service, Acoustics, etc.)	\$0	\$0
CM Design Phase Services	\$0	\$0
Subsurface Investigations (Geotech, Soil Borings)	\$0	\$0
Land Survey	\$0	\$0
Archeological Survey	\$0	\$0
Hazmat Survey & Design	\$0	\$0
Value Engineering Services	\$79,000	\$79,000
Cost Estimating Services	\$24,000	\$24,000
Other Design & Related Services	\$64,000	\$64,000
Design & Related Services	\$1,857,000	\$1,857,000
Inspection & Testing Service Items		
Project Inspection Services (inhouse or consultant)	\$272,000	\$272,000
Project Testing Services (conc., steel, roofing, etc.)	\$36,000	\$36,000
Inspection & Testing Services	\$308,000	\$308,000
Project Management & Other Cost Items		
Project Management (inhouse or consultant)	\$193,000	\$193,000
Work By Owner	\$17,000	\$17,000
BCOM Services	\$17,000	\$17,000
Advertisements	\$3,000	\$3,000
Printing & Reproduction	\$4,000	\$4,000
Moving & Relocation Expenses	\$111,000	\$111,000
Data & Voice Communications	\$0	\$0
Signage	\$134,000	\$134,000
Demolition	\$0	\$0
Hazardous Material Abatement	\$154,000	\$154,000
Utility Connection Fees	\$0	\$0
Utility Relocations	\$0	\$0
Commissioning	\$114,000	\$114,000
Miscellaneous Other Costs	\$210,500	\$210,500
Project Management & Other Costs	\$957,500	\$957,500

O & M Costs						
Cost Type	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018

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GF Dollars	\$0	\$39,500	\$40,700	\$41,900	\$43,000	\$44,500
NGF Dollars	\$0	\$0	\$0	\$0	\$0	\$0
GF Positions	0.00	0.00	0.00	0.00	0.00	0.00
NGF Positions	0.00	0.00	0.00	0.00	0.00	0.00
GF Transfer	\$0	\$0	\$0	\$0	\$0	\$0
GF Revenue	\$0	\$0	\$0	\$0	\$0	\$0
Layoffs	0	0	0	0	0	0

O & M Costs

Planned start date of new O&M costs (if different than the beginning of the fiscal year)

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