

Capital Budget Request

Improvements for Campus Fire Alarms and Accessibility

Overview

Agency	Virginia Polytechnic Institute and State University (208)
Project Code	none
Project Type	Improvements-Life Safety Code
Biennium	2016-2018
Budget Round	Initial Bill
Request Origin	Previously Submitted
Project Location	Roanoke Area
Facility/Campus	Blacksburg Main Campus
Source of Request	Agency Request
Infrastructure Element	Multi-Purpose

Contains significant technology costs? No

Contains significant energy costs? No

Agency Narrative

Agency Description

Project Description:

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.

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, public health improvements, and updating needs assessment and planning that are beyond the scope of the Maintenance Reserve program.

Justification

Program Description:

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.

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.

Accessibility Improvements:

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 lighting and other permanent infrastructure development to facilitate equal opportunities for patrons with vision and hearing disabilities, 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, sprinkler systems, emergency egress lighting, fire dampers, and fire rated wall assemblies. 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 a principle strategy of pursuing quality of life initiatives in support of the university as a vibrant, dynamic, and sustainable workplace. This project will increase the safety, security, and accessibility of the institution for students and employees.

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 -- (with existing needs):

- * McBryde Hall -- Power-activated door openers throughout the facility, accessible way-finding signage, and automated door openers throughout the facility.
- * Wallace -- Provision of accessible toilets and accessible door hardware are needed throughout the facilities. Accessible sidewalks and route improvements are needed.
- * Whittemore -- Provision of accessible toilets and accessible door hardware are needed throughout the facilities. Accessible sidewalks and route improvements are needed.
- * Derring Hall -- Provision of accessible toilets and accessible door hardware are needed throughout the facilities. Accessible sidewalks and route improvements are needed.
- * Pamplin Hall -- Power-activated door openers throughout the facility, accessible way-finding signage, and automated door openers throughout the facility. Provision of accessible toilets and accessible door hardware are needed throughout the facilities.
- * Hutcheson/Smythe Hall -- Provide an elevator for access to general assignment classrooms on upper floors.
- * Whittemore/Durham Pathway -- Provide an accessible pathway across the upper level academic precinct, along the north side of Durham Hall.
- * 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.

Fire Alarms: The following is a representative but not all inclusive list of high priority needs in existing educational and general facility buildings based on physical assessments. The inclusive scope of work for Fire Alarms is described in more detail under the Program Description section. The listing below provides some basic short falls within the list of high priority buildings.

Building -- (with existing needs):

- * Newman Library -- The alarm and detection system requires replacement and expansion to cover large assembly-type spaces, classrooms, meeting rooms and study areas. Beyond alarms, this building has deteriorated building systems affecting life safety and health will also be replaced throughout the facility.
- * Holden Hall -- A building-wide alarm system is needed. Currently, only five detectors are provided in the entire facility.
- * Hutcheson -- A networked building-wide alarm system and sprinkler system are needed. This building is not protected by detection devices.
- * Smyth -- A networked building-wide alarm system and sprinkler system are needed. This building is not protected by detection devices.
- * Price -- A networked building-wide alarm system and sprinkler system are needed. This building is not protected by detection devices.
- * Seitz -- A networked building-wide alarm system and sprinkler system are needed. This building is not protected by detection devices.
- * War Memorial Chapel -- A networked building-wide alarm system is needed. This building is not protected by detection devices.
- * Old Security Building -- A networked building-wide alarm system is needed. This building is not protected by detection devices.
- * Media Building -- A networked building-wide alarm system is needed. This building is not protected by detection devices.
- * Health and Safety Building -- A networked building-wide alarm system is needed. This building is not protected by detection devices.

Funding Plan:

The scope of this project is for only Educational and General facilities: thus, the funding plan calls for 100 percent general fund support.

Options 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 hock as operating finances permit. Without capital funding, the accumulation of backlog of requests for improvements related to access, fire alarm systems, stormwater and code compliance will grow.

Alternatives Considered

Costing Methodology

The costs are based on internal estimates developed by university staff based on historical comparables of on-campus work. 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.

Agency Funding Request

Phase	Year	Fund	Subject	Requested Amount
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Construction	2018	0100 - General Fund	2322 - Construction, Buildings	\$12,000,000
Total				\$12,000,000

Project Costs

Cost Type	Total Project Costs	Requested Funding	DGS Rec
Acquisition Cost	\$0	\$0	
Building & Built-in Equipment	\$6,500,000	\$6,500,000	
Sitework & Utility Construction	\$0	\$0	
Construction Cost Total	\$6,500,000	\$6,500,000	
DESIGN & RELATED SERVICE ITEMS			
A/E Basic Services	\$1,385,000	\$1,385,000	
A/E Reimbursables	\$0	\$0	
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	\$380,000	\$380,000	
Value Engineering Services	\$0	\$0	
Cost Estimating Services	\$80,000	\$80,000	
Other Design & Related Services	\$150,000	\$150,000	
Design & Related Services Total	\$1,995,000	\$1,995,000	
INSPECTION & TESTING SERVICE ITEMS			
Project Inspection Services (inhouse or consultant)	\$390,000	\$390,000	
Project Testing Services (conc., steel, roofing, etc.)	\$100,000	\$100,000	
Inspection & Testing Services Total	\$490,000	\$490,000	
PROJECT MANAGEMENT & OTHER COST ITEMS			
Project Management (inhouse or consultant)	\$1,500,000	\$1,500,000	
Work By Owner	\$80,000	\$80,000	
BCOM Services	\$0	\$0	
Advertisements	\$0	\$0	
Printing & Reproduction	\$0	\$0	
Moving & Relocation Expenses	\$0	\$0	
Non Built-In Data and Voice Communications	\$0	\$0	
Signage	\$5,000	\$5,000	
Demolition	\$0	\$0	
Hazardous Material Abatement	\$500,000	\$500,000	
Utility Connection Fees	\$0	\$0	
Utility Relocations	\$0	\$0	
Commissioning	\$300,000	\$300,000	
Miscellaneous Other Costs	\$500,000	\$500,000	
Project Management & Other Costs Total	\$2,885,000	\$2,885,000	
Furnishings & Movable Equipment	\$0	\$0	
Construction Contingency	\$130,000	\$130,000	
TOTAL PROJECT COST	\$12,000,000	\$12,000,000	

Capacity

Cost Type	Unit of Measure	Units	Cost Per Unit
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Acquisition Cost			0	\$0
Construction Cost			0	\$0
Total Project Cost			0	\$0

Operating and Maintenance Costs (Agency)

Cost Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
GF Dollars	\$0	\$0	\$50,000	\$51,500	\$53,045	\$54,636
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

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

Supporting Documents

No supporting documents for this adjustment

Workflow History

User Name	Claimed	Submitted	Step Name
Rob Mann	05/18/2015 11:43 PM	05/18/2015 11:43 PM	Enter Capital Budget Request
Rob Mann	05/18/2015 11:43 PM	05/18/2015 11:43 PM	Continue Drafting
Rob Mann	05/18/2015 11:43 PM	05/18/2015 11:44 PM	Continue Drafting
Jennifer Hundley	06/12/2015 05:28 PM	06/12/2015 05:40 PM	Continue Drafting
Jennifer Hundley	06/13/2015 06:31 AM	06/13/2015 06:31 AM	Continue Drafting
Rob Mann	06/13/2015 01:17 PM	06/13/2015 01:17 PM	Agency Review Step 1
Rob Mann	06/13/2015 01:47 PM	06/13/2015 01:59 PM	Agency Review Step 1
Rob Mann	06/13/2015 07:56 PM	06/13/2015 08:00 PM	Agency Review Step 1
Rob Mann	06/14/2015 09:50 AM	06/14/2015 09:56 AM	Ready for DPB Submission
Rob Mann	06/14/2015 02:06 PM	06/14/2015 02:13 PM	Ready for DPB Submission
Bob Broyden	06/14/2015 02:18 PM	06/14/2015 02:18 PM	Ready for DPB Submission
Ruth Anderson	06/15/2015 01:10 PM	06/15/2015 01:11 PM	DPB Review
Ruth Anderson	06/15/2015 01:11 PM	06/15/2015 01:12 PM	DPB Review
Ruth Anderson	06/18/2015 11:00 AM	06/18/2015 11:00 AM	DPB Review
Anne Smith	06/19/2015 02:51 PM	06/19/2015 02:52 PM	DPB Review
Rob Mann	06/19/2015 03:22 PM	06/19/2015 03:22 PM	Agency Review Step 1
Bob Broyden	06/19/2015 03:51 PM	06/19/2015 03:51 PM	Ready for DPB Submission
			DPB Review