

Authorization of New Capital Improvements Project – East Carolina University

The Board of Trustees of East Carolina University has requested the authority to establish a new capital improvements project.

The project would improve campus safety by replacing 300 resident room doors and 10 entry doors of Aycock Residence Hall. The doors and hardware, installed when it was built in 1960, are in poor condition. Work would include the installation of new hinges, new door closers, and new ADA code-compliant hardware that meet current housing system standards. The project, expected to cost \$564,000, would be funded from housing receipts (available fund balance of \$8,482,000). The project would be completed by the start of the 2010 fall semester.

Additional project information as requested by the Committee on Budget and Finance is attached.

It is recommended that the request of the Board of Trustees of East Carolina University be approved.

ECU Aycock Residence Hall Door Upgrade Project

1. Confirmation of work to be completed:

It was confirmed that the door upgrade project does not include frame replacement but, as shared in the architect's project narrative (attached), an unusual amount of fitting of the doors will be needed because many of the frames are out of square.

Not mentioned in the item write-up but included as part of the original project cost estimate are the following: 1) cost of design (\$32,945), 2) installation of ADA compliant signage for interior spaces (\$24,500), 3) construction of four, two-hour fire rated, four-story high shaftways that enclose the existing restroom exhaust ductwork to improve fire safety (\$15,916), and 4) cost of the performance and payment bond that is required on all projects exceeding \$300,000 (\$7,000).

2. What materials were specified and the estimated cost of each material:

In addition to lobby doors (2), bathroom doors (24), and shower doors (16), there are 289 student room entry door replacements as shown in Table 1.

Table 1						
Number of Rooms	Door Type		Material	Manufacturer	Model	Unit Cost
289	Student Rooms - Type A					
	1.5	pr.	Hinges	Hager	FBB191	\$45
	1	ea.	Closer	*LCN	4011 series	\$178
	1	ea.	Lockset	*Best Lock	45H	\$269
	1	ea.	Door Viewer	Hager	1756	\$10
	1	ea.	Kickplate	Hager	194S-10"H	\$18
	1	ea.	Door 20-min.	VT Industries	3070 RCNB	\$240
	1	ea.	Transom	VT Industries	Match Door	\$50
			Total			\$810
				*Campus standard		

3. Justification for specified materials over the less expensive materials:

The materials specified have met the test of time and are proven to withstand the long term wear and tear received in university student residence halls, to meet current code requirements that improve safety and accessibility, and to further the efficiency in the operation, maintenance and upkeep of these facilities. ECU's maintenance history shows that residence hall doors must withstand slamming, kicking and general horse play by residents; that they should have a door closer that resists leaking even with heavy use, and that they should have a lockset that matches the system used in their 15 residence halls and 7 dining facilities. The #1 goal in Campus Living is to provide their residents with the safest possible environment in which to live and the #1 goal in Campus Operations is to keep the cost of maintenance low through the proper balance of initial construction costs and on-going repair and maintenance costs.

East Carolina University
Aycock Dormitory Door Replacement

Code: 40736 Item: 311

PROJECT NARRATIVE

9/27/2009

Completed in 1960, East Carolina University's Aycock Dormitory is a five story building which provides approximately 90,000 gross square feet of space. The building has undergone numerous renovations and alterations since the 1960's. The primary purpose of this project is to replace non-rated doors with new code compliant 20-minute fire-rated solid wood core doors. Until the doors are replaced, this dormitory will not meet state life safety requirements as defined by the current North Carolina Building Code.

While no work is occurring in the recently renovated basement level, all of the other floors are being addressed. With the exception of the stair doors and approximately 6-8 internal office/suite doors, all of the other interior doors on floors 1-4 are being addressed. Follow a previous precedent, the State Construction Office is allowing the existing hollow metal frames to remain in place.

A significant part of what makes this project challenging is that many of the existing door frames are not square. Since no door manufacturer produces trapezoidal doors, maintaining the recommended 1/8" spacing between the new doors and existing frames requires careful field measuring in multiple locations. (During design, field measurement alone required 2 people approximately 4 days.)

The project can be thought of in terms of doors, transoms, door frames, and hardware. The solid wood core (SWC) doors are specified to match the needs as defined by university housing. Most of the 328 doors in the scope of the project are dormitory room doors. Each of these dormitory room doors is scheduled to receive new hardware and signage matching ECU's standards. A majority of the existing door frames extend to 8'-0" above finish floor such that a transom is located above the door. Existing transom panels will be replaced with fixed SWC panels matching the new doors below. (The material and labor cost associated with each transom panel should add approximately \$120 to each door/frame location where it is required.)

The existing hardware is antiquated and no longer meets accessibility standards. Many of the existing closers have bent arms or have been removed by students. As hardware is replaced, the project goal is to maintain strike locations relative to finish floor. Only two door frames (from the hall to the first floor entry lobbies) are scheduled to be replaced. Any other frames unsuitable for reuse will be replaced on a unit cost basis. Existing frames will require scraping in preparation for new paint. The preparation and painting of existing frames will be complicated by a new acoustic ceiling which has been installed

at 7'-0" above finished floor (AFF). Since a high percentage of the door frames extend to 8'-0" AFF, painters will have to move ceiling tile on the corridor side to prepare and paint door frames. (Because the new ceiling intersects transoms mid-panel, areas above the new ceiling will be visible at the transoms.)

A small number of doors are fixed panels with no hardware. These door panels will be installed in frames where operation is no longer required.

In addition to addressing the doors, two other code deficiencies are being addressed. 1) The wood paneling in the lobbies does not appear to be installed in a code compliant manner and is being replaced with painted 5/8" gypsum board. 2) Four restroom exhaust vents currently extend from the first floor to the roof in a non-compliant manner. These will be enclosed with a 2-hour rated block assembly and fusible link louvers to separate floors appropriately.

Although it is difficult to judge the work force that will be dedicated to the project, we would estimate the approximate full-time positions dedicated to the job to include: 2 general contractor (superintendent & project manager), 5-8 painters, 5-8 door installers, 2-4 misc. & demolition. The speed of labor will be impacted by ECU's plan to have multiple independent projects occurring in the building during the same summer.

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