### BUILDING DEFICIENCY EXAMPLES



**Above:** Single-paned windows cause heat loss in winter and heat gain in summer. Many are cracked. Blinds, screens and balances are broken on many windows.



**Above:** "Daylight" showing beneath single-paned exterior doors where huge air gaps allow for drafts and energy loss.

**Right:** Window air conditioning units cause excessive heat loss in winter and are inefficient in summer.

**Below Right:** Cosmetic issues such as paint and lighting distract from learning and impact recruitment.

**Below:** Outdated fluorescent fixtures should be replaced with brighter, more energy-efficient LEDs, which require less maintenance.









Appalachian. SANFORD HALL

Capital Renewal Project Request

# EXECUTIVE SUMMARY

Sanford Hall was well constructed 49 years ago and is still structurally sound at its core; however, this crowded building lacks fire suppression and other life safety features. Its 1960's HVAC and Electrical systems have outlived their predicted life spans and are unable to support air conditioning, dehumidification, and the increased electrical loads required for laptops, computer labs, and personal electronics.

Appalachian State University is requesting \$12,025,000 in legislative funds to address Life Safety, Critical Building System, ADA and Code Issues. The University will fund an additional \$2,500,000 and proposes to act swiftly to renovate the building when swing space becomes available in 2018 after the new College of Health Sciences building opens.

\$ 12,025,000 Targeted Renewal Funds Requested
\$ 2,500,000 Additional Funding by Appalachian State
\$ 14,525,000 Total for Renovations

The proposed renovation will extend the useful life of this workhorse building by 30 to 50 years.



## FAST FACTS

Year Built: 1968

**Gross Square Feet (GSF):** 73,913

Assignable Square Feet: 43,241 (5 Floors)

**Capital Replacement Value:** \$24,021,725 (@ \$325 / GSF)

**Student Use per Day:** 4,600 students per day; 23,000 students per week

**Departments Using:** English and Languages; Literature and Culture; Psychology; ITS

Every student at Appalachian State University takes at least one general education class in Sanford Hall.

## BACKGROUND

- Sanford Hall has not been renovated since its construction in 1968.
- An average of 4,600 students per day attend classes in the building.
- The building lacks any fire suppression system, which is of particular note given its high use.
- Sanford lacks air conditioning.
- Major building systems (HVAC, Electrical, Windows/Doors, Elevator) are failing.
- Parts are delayed or unavailable due to age.
- If any system fails completely, back-up systems do not exist and the building will have to be closed until a replacement system can be installed.
- Installment of any major system will require asbestos abatement, which will necessitate the shutdown / evacuation of the building.

#### **REQUIRED INVESTMENT**

- Renovation can be achieved for roughly 60% of the cost of new construction.
- An independent inspection by the State Property Office estimates \$15,600,000 in renovations are needed in Sanford Hall prior to 2019. Appalachian estimates that timely action will reduce this figure by approximately \$1,000,000.
- The FCAP Report states "Life Safety, ADA access, and HVAC systems" as the most critical issues.
- Because HVAC, Mechanical, and Electrical systems are routed through the ceilings, and asbestos abatement is required, the most cost-effective and efficient renovation will address all systems at one time, while the building is offline and the ceilings are removed.

### TIMELINESS WILL ENGENDER SAVINGS

- Planning for a renovation, rather than reacting to emergency failures, will allow for appropriate budgeting and will be the least disruptive process for students.
- Swing space to house displaced classes and offices will be temporarily available when the new College of Health Sciences building opens in 2018 and faculty/staff vacate their current locations on campus.
- Renovation will result in less "down time" than new construction, providing additional efficiency.

### PROJECT SCOPE

- Installing a fire sprinkler system
- Gutting and replacing the interior mechanical, electrical and plumbing systems
- Installing an energy-efficient HVAC system
- Adding air conditioning
- Adding two elevators for reliable ADA access
- Renovating bathrooms
- Replacing windows and a portion of the window curtain wall
- Replacing the roof
- Removing and replacing interior partitions to improve utilization of space
- Abating all asbestos
- Repairing exterior site work
- Improving Information Technology infrastructure

# CONCLUSION

A \$2,500,000 investment by the University with \$12,025,000 in Repair and Renovation Renewal Funding by the state has the opportunity to breathe another 30 to 50 years of life into a principal building. A timely renovation will avoid new construction costs of over \$24,000,000 to replace the building if it is allowed to deteriorate further. Without this investment, Sanford Hall will continue to weaken at an accelerating pace and will fail to meet the needs of the academic programs located in the building.





Above: Obsolete and overloaded electrical panel with added subpanels.

Right: Outlet where arcing occurred.

Far Right: Ceiling tiles are stained, missing, or deteriorated to the point that they fall during classes.

Below: Stair treads are crumbling, taking chunks of stairs with them. This creates slip and trip hazards.











Above and Left: Covered entrance is slippery in winter (ice) and summer (rain). Nonslip surface coating is required.

Far Left: Crumbling walls and buckling sidewalks need to be rebuilt and repoured.