

HVAC & Lifecycle Update

*An overview current HVAC initiatives, challenges and solutions.
A summary of Lifecycle projects in construction, designed, and scheduled for future.*



WAKE COUNTY
PUBLIC SCHOOL SYSTEM

HVAC Update

Scope of Work

Statistics

- 200+ facilities, 500 boilers, 300 chillers, 5600 pieces of heating and air conditioning equipment

Emergency Work Orders

- Maintenance & Operations received 5800 emergency work orders in the last 12 months
- All emergency work orders are started and typically completed within 24 hours
- 50% of the emergency work orders are related to HVAC
- An additional 2300 work orders sent to the HVAC shop were urgent.

Maintenance & Operations Challenges

HVAC Shop Staffing

- HVAC shop continues to struggle to hire technicians
- Chiller technician has retired

Regional Maintenance Staffing

- School based personnel also experiencing staffing shortages

Contracted Services

- Based on our staffing difficulties, much of our work is sent to contractors

Facilities Under Repair

Chillers

- Southeast Raleigh High School - Parts on order
- Leesville Road Campus - Chiller under repair, temporary in place
- Middle Creek High School - Chiller awaiting replacement, temporary in place
- Alston Ridge Middle School - Two machines at operating at ½ capacity
- Herbert Akins Elementary School - Chiller awaiting replacement, temporary in place
- Carnage Middle School - Contractor scheduled to repair
- Northwoods Elementary School - Contractor scheduled to repair
- Heritage Middle School - Contractor repairing units

Plan of Action

Repairs and Operation

- Schedule contractors to schools with greatest need first
- Run facilities in occupied mode for additional hours when cooling plant is operating at reduced capacity
- Install temporary equipment when there is no capacity available
- Run all systems weeks ahead the start of school to address potential issues prior to the arrival of students

Communications and Updates

- M&O customer service has implemented new communications protocol for emergency work to update principals upon completion
- Creating a shared database of critical work orders that track repairs and updates for informed decision making at schools



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Lifecycle Update

Types of Lifecycle Projects

HVAC replacement

- Projects center around replacement of HVAC systems, but often include replacement of other building infrastructure such as Building Automation, Fire Alarm, Intercom, Lighting and Building Envelope repair and aesthetic improvements.

Single infrastructure system replacements

- Building Automation, Fire Alarm, Intercom, Lighting, Power, Plumbing, Pump Stations, Elevator and Lift replacements.

Athletic Facilities

- Track and associated events, Tennis Courts, and Gymnasium Floors

Envelope and General Construction

- Roof and Window replacement, EIFS repair, Sealant replacement
Ceiling and Flooring replacement.

HVAC Projects Under Construction

- East Garner ES - Boiler & Chiller Plant
- Timber Drive ES - HVAC Upgrade
- West Cary MS - Roof top Units
- Durant Road MS – HVAC Upgrade
- Farmington Woods - Boiler Plant
- Olive Chapel ES - HVAC Upgrades
- Leesville Campus - HVAC Upgrades
- Leesville Campus - Electrical Upgrades
- Broughton HS - Science wing HVAC and boiler plant
- Herbert Akins ES - Boiler and Chiller Plant
- Southeast Raleigh HS Locker Room HVAC



Upcoming HVAC Projects

- Weatherstone ES - HVAC Upgrade
- Middle Creek HS - Boiler and Chiller Plant
- Turner Creek ES Boilers
- Banks Rd ES Boilers
- Highcroft ES Boilers
- Southeast Raleigh Chiller replacement
- Willow Springs ES HVAC
- Olds ES HVAC
- Oak Grove ES HVAC



Single Infrastructure Projects Under Construction

- Reedy Creek Pump Station
- Cary HS Elevator
- Penny Rd Chairlift
- Rand Rd Chair Lift
- Lead Mine ES Chairlift
- Wake Forest ES Fire Alarm
- Combs ES Fire Alarm
- Pleasant Union ES Fire Alarm
- Willow Springs ES Fire Alarm



Upcoming Single Infrastructure Projects

- River Oaks MS Elevator
- Martin MS Elevator
- Rand Rd Fire Alarm
- Lead Mine ES Fire Alarm
- Lead Mine ES Fire Alarm
- Rand Road Elem Fire Alarm
- Panther Creek ES R2 conversion
- Penny Road ES R2 conversion
- Reedy Creek ES R2 conversion
- Salem ES R2 conversion
- Wildwood ES R2 conversion
- Yates Mill ES R2 conversion
- Fuquay ES Lift Station

Athletic Facilities and General Construction Underway

- Cary HS Partial Roof Replacement
- Sanderson HS Roof Replacement
- Laurel Park ES Roof Replacement
- Enloe HS Canopy Replacement
- Reedy Creek Pump Station
- Martin MS Track
- Wake Forest MS Track
- Carnage MS Track
- Heritage HS Track



Upcoming Athletic Facilities and General Construction

- Leesville Road MS Track
- West Lake MS Track
- Durant Road MS Track
- Sanderson HS Gym Renovation
- Wake Forest ES Retaining Wall Repairs
- Northwoods ES Roof Replacement
- Smith ES Partial Roof Replacement
- Hunter ES Partial Roof Replacement
- Willow Springs ES Roof Coating





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Questions and Answers
