

# HVAC Updates

An overview current HVAC initiatives, challenges and solutions.

Nate Slavik – Senior Director, Maintenance & Operations

Lou Nelon – Director, Energy & Physical Plant

August 27, 2024

# Director of Energy & Physical Plant

## Lou Nelon

- Facilities Management Superintendent, UNC Pembroke
- Director of Maintenance & Transportation, Bladen County Schools
- Executive Director of Auxiliary Services, Sampson County Schools



# 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

## **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

- SE Raleigh HS – Supplementing system with temporary chiller until Life Cycle replacement in summer of '25
- Moore Square MS – Machine is undergoing repairs; a rental temporary chiller is in place. Added this machine to the Life Cycle list due to age and condition
- Lake Myra ES – Both machines are undergoing repairs, our temporary chiller is in place (operating at partial capacity). Added both machines to the Life Cycle list for replacement due to high expense to repair and age of machines
- Forest Pines ES – Both machines are undergoing repairs, parts are in-bound. Costs to repair units are significant and units are begin considered for replacement along with North Forest Pines ES
- Martin MS – WCPSS temporary chiller installed to support school while completing repairs on both existing chillers. Expensive repair with hard-to-find obsolete parts on facility's machines
- Carroll MS – Limited repairs planned due to Life Cycle replacement in Fall of '24
- Pine Hollow MS – Significant repairs completed, unit operating, additional parts on order
- Wendell MS – Operating at partial capacity, parts on order, site is ready for temporary unit if needed

# Facilities Under Repair

## Additional Areas of Concern

- Schools that can not dehumidify due to design, i.e., Lufkin MS, Powell ES and 20 dual temperature sites.
- Age of Chiller Fleet
- Aging and Obsolete Building Automation Systems

# 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 teachers
- Arranged standing contractor support for chiller repair/response
- Proactively monitoring schools with known deficiencies for prioritized response

## Communications and Updates

- Continual updates are being provided to school administration and district leadership as contractors report in and repairs are made on equipment that affects school operation
- Additional involvement with customer service department to provide better responses for updates as they are requested by callers.

# Questions and Comments