

**City of Newton  
Public Schools  
HVAC Evaluation**

NEWTON



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# PROJECT GOALS

- The goal of the project is to provide a technical evaluation of the existing HVAC systems at the 23 public school facilities in order to determine the adequacy of the ventilation systems.
- Verify and document that the systems are providing the required ventilation.
- Provide recommendations to improve systems as applicable.

# PROJECT TASKS

- Conduct an on site inspection at each school.
- Review existing documentation relating to the HVAC systems.
- Provide a technical report that documents the existing conditions, identifies problematic spaces, and provides recommendations for improvements.
- Prepare documents outlining the ventilation requirements.
- Coordinate efforts of the testing and balancing contractors to ensure proper ventilation is provided.

# DESIGN GUIDELINES

Ventilation requirements are governed by the International Mechanical Code (IMC) in conjunction with the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE).

In addition, ASHRAE also has established additional recommendations specifically related to COVID. These recommendations include system operation changes, improved filtration, UV lights and air purification. These recommendations can be applied as needed to particular spaces.

# TYPICAL CLASSROOM

Most classrooms are served by unit ventilators, packaged rooftop units or central air handling systems. Each system supplies a mixture of outdoor air and return to the space. The amount of outdoor air is controlled by a motorized damper located in the unit.

A typical 800 sq-ft, occupied classroom requires between 300 – 400 cubic feet per minute (CFM) of outdoor air.

Air is also exhausted from the classroom and discharged directly to the outdoors.

# INITIAL OBSERVATIONS

- In general, classrooms appear to be operating correctly or have the ability to operate correctly with some restoration. Any problem areas are identified and appropriate corrective recommendations are being developed.
- Some of the support and administration areas appear to have some deficiencies and alternative options are being reviewed.
- Testing and balancing reports are starting to come in and any problem areas are being identified and a corrective plan is being developed for each specific issue.
- The final testing and balancing reports will be uploaded to the school department's website.

# CLOSING

- Thank you for time
- Questions
- Presenters:
  - Marty Vickey, P.E., LEED AP
  - David Bennett III, P.E.

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