



ANDOVER PUBLIC SCHOOLS

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SCHOOL COMMITTEE

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Superintendent of Schools

August 24, 2020

By Email Only

Julian DiGloria, AEA Negotiating Team Chair
Matt Bach, AEA President

Dear Julian and Matt:

Below are responses to the AEA's August 13, 2020 correspondence. I have copied the AEA's numbered positions below and inserted the District's responses in blue following each numbered position.

Sincerely,

Sheldon Berman

Overall Response: Andover's HVAC systems are designed to meet the ASHRAE (American Society of Heating, Refrigerating, Air Conditioning Engineers) Standards. Classrooms have individual unit ventilators, which bring outdoor air into the space. The quantity of outdoor air is controlled by the measure of CO2 in the space and is monitored by the Town of Andover Building Management System (BMS). Common areas, offices, and the classrooms in new buildings have centralized systems which provide HVAC to a group of spaces. These units are also controlled by our BMS.

The Town of Andover employs a complete full-time staff dedicated to HVAC maintenance in all town and school buildings. Among these experts is a mechanical engineer with over eight years of prior experience as a private HVAC designer in healthcare facilities, with expertise in the design of negative pressure isolation rooms for infectious patients. Her experience has been particularly helpful in evaluation of school HVAC during COVID-19.

- (1) The person in charge of the day to day operation of the heating, ventilating and air conditioning (HVAC) system in a building, (usually the Building or Facilities Manager, the Building Mechanic, or the Service Manager) shall be available to discuss the operating status of the HVAC system upon the request of the Association. For example: If an employee has a problem, the problem will be assessed and the problem will be fixed. The affected employee will receive an update in writing. Information provided will include what service is needed, are parts clean, does anything need to be done to make the system work more effectively, are the Plans and Specifications available for review, and when were the filters last changed?

Response: Our standard operating procedure is that an employee reports the problem to the main office for the custodian on duty to investigate and determine if he/she is able to remedy the problem. If the custodian cannot remedy the problem, the custodian calls Work Control, or puts in a work order. Depending on the severity of the problem, a member of the Town's HVAC team may be deployed. Once the problem is fixed both the principal and the senior custodian can see the repair documentation on their SchoolDude dashboard. The employee may check with the principal if the employee wants information about the repair.

- (2) The HVAC system shall be running whenever someone is present in the building and prior to, and after the building is occupied as a pre and post occupancy purge sequence. Fresh air and exhaust shall be operating 24/7 in the bathrooms, the nurses' office, the isolation rooms and other areas subject to reduce SARS-COV-2

About APS: The mission of the Andover Public Schools, in partnership with the entire Andover community, is to educate by engaging and inspiring students to develop as self-reliant, responsible citizens who are thinkers, problem solvers, and contributors prepared to participate in an evolving global society.

transmission.

Response: Andover custodial staff will operate the system a minimum of 2 hours prior to occupancy and 2 hours post occupancy. For more information on ventilation see the description of [existing conditions and procedures](#) developed by the engineer for the Town of Andover.

- (3) Carbon dioxide levels shall be maintained at no higher than 800 ppm when the space is occupied at normal capacity.

Response: The district will program its HVAC systems to maintain carbon dioxide levels in school buildings in accordance with ASHRAE standards during the school day.

- (4) The demand-controlled ventilation (DCV) device shall be disabled as recommended by ASHRAE.

Response: The district will disable the DCV devices.

- (5) At all times people are present and during the pre and post purging sequences, as much as possible the fans shall be on and air being moved through the HVAC system (even when the thermostats are not calling for heating or cooling). Purging requires supplying 100% outdoor air equal to three air changes (when combining both pre-occupancy and post-occupancy periods).

Response: The district will set outdoor air intakes or controls to the maximum level of fresh outdoor air when the building is occupied.

- (6) The systems fans shall be set to "On" or "Circulate" at the thermostat if the HVAC system does not provide a constant airflow at all times people are present and during the purge sequence.

Response: The district will set HVAC systems fans to "On" or "Circulate" at the thermostat when the HVAC system does not provide a constant airflow at all times during the school day.

- (7) Thermostats shall be operating accurately and properly and set to the correct temperatures. Typical indoor temperatures are 68-74°F in the winter, and about 75-80°F in the summer.

Response: The district will set HVAC systems fans to "On" or "Circulate" at the thermostat when the HVAC system does not provide a constant airflow at all times during the school day. The District will strive to maintain comfortable temperatures, but temperatures are also affected by the number of people in the room, the equipment operating, time of day, outdoor temperatures, and sun.

- (8) All supply and return grilles and registers shall be open, and operating properly so that fresh air is flowing through them when the system's fan is on.

Response: The district will keep all supply and return grilles and registers open to the maximum extent possible so fresh air flows through them when the HVAC system's fan is on when the building is occupied.

- (9) Outdoor air (OA) intakes or controls shall be set to the maximum level of fresh outdoor air the system is capable of handling or providing. (Provided the system has sufficient cooling, dehumidification heating and humidification capacity)

Response: The district will set outdoor air intakes or controls to the maximum level of fresh outdoor

air the system when the building is occupied.

- (10) OA intakes shall be clean, open and not blocked by bushes, defective louvers, etc.

Response: Cleaning and ensuring that louvers are open and not blocked is a regular part of the district's maintenance program.

- (11) Filters shall be clean and rated at the highest efficiency the system is capable of handling or a minimum of MERV 13. Filtration methods such as bipolar Ionization, Ultraviolet Energy (UV-C) shall be considered and installed by a professional. Portable room air cleaners with HEPA or High MERV filters will be provided if upgrading existing filters to a MERVE 13 or greater is not feasible.

Response: The district will use filters rated at the highest efficiency the system is capable of handling. Filters will be changed every three months.

- (12) For Variable Air Volume (VAV) systems, the minimum airflow shall be set to the highest possible setting.

Response: For Variable Air Volume (VAV) systems, the district will set the minimum airflow to the highest possible setting.

- (13) Humidifiers shall be kept clean, operating properly. In-room relative humidity shall be maintained at 40-60%.

Response: Air-conditioned spaces normally run within this range. The systems do not have humidifiers and the district cannot guarantee humidity levels will remain between these percentages in rooms, especially where systems will be set to bring in the maximum amount of outdoor air.

- (14) When using free-standing fan (e.g., pedestal fans, floor fans, wall fans, desk fans) to cool a person or to help mix the air in the space, the fan will not blow from one person directly past to another.

Response: There are no free-standing fans as part of the ventilation system.

- (15) There shall be no water leaks or standing water in the building or HVAC system, e.g., in OA inlet plenums and return air plenums above ceilings. If leaks are discovered they will be repaired immediately or that day if possible.

Response: Leaks are repaired as quickly as reasonably possible.

- (16) The HVAC system shall comply with local and state codes, standards and guidelines.

Response: The HVAC system in each school building is compliant with and will be maintained to remain in compliance with local and state laws, regulations, and codes.

- (17) Exhaust fans in all spaces shall be operating one hour prior to occupation of the building and continuously while the building is occupied. In restrooms, nurses offices, isolation rooms, changing rooms, and other areas where transmission of SARS-CoV-2 aerosols are likely, exhaust and supply fans shall operate 24/7. Airflow shall be exhausted to the outside of the building. Make up conditioned fresh air shall be supplied to these areas. The intake and exhaust source shall be inspected to insure that exhausted air is not leaking into the outdoor airstream.

Response: Andover custodial staff will operate the system for a minimum of 2 hours prior to occupancy and 2 hours post occupancy. For more information on ventilation see the description of [existing conditions and procedures](#) developed by the engineer for the Town of Andover. Air provided to all bathrooms is exhausted to the outside and is not recirculated. Nurse's offices have an air supply designed to provide fresh air. Nursing isolation rooms designated to provide an isolated environment for students who become ill with coronavirus-like symptoms have exhaust systems that create a negative pressure environment in which the exhaust exits to the outside and is not recirculated.

- (18) Kitchen exhaust hood ventilation systems shall be operating properly and exhausting air to the outside. (There may be air recirculation in some kitchen exhaust systems that will require a minimum MERV 13 filters)

Response: We do not have recirculating kitchen hoods. All kitchen ventilation systems exhaust to the outside.

- (19) If odors are present in a space or in the building as a whole, facility management or a consultant shall check into it. Typical odor sources might include: garbage or trash, rodents or insect nests, stagnant water collected somewhere (e.g., in a wet carpet), rotting plants, spoiled food, mold growths in carpets or walls, dirty ductwork, and dirty kitchens or break rooms. Remove the sources of the odors.

Response: Odors that are reported will be checked and addressed.

- (20) If odors are detected in, or coming from a space or room where chemicals are stored, the odor source shall be identified (e.g., a leaking storage container) and the problem corrected.

Response: Odors that are reported will be checked and addressed.

- (21) In the first few weeks after opening, facilities management shall regularly check with occupants of the space to see if they feel comfortable with the environment and are not feeling ill in any way. They shall follow up on any complaints or reported feelings of being ill or irritated while present in the building in writing to the employee with a copy to the Association.

Response: If individuals have problems, they should follow the procedure of notifying the main office for custodial response.