

DRAFT MSBA Indoor Air Quality Guidelines

May 22, 2006

An Eligible Applicant should adhere to the MSBA Indoor Air Quality Guidelines, to the extent that the following indoor air quality requirements apply to an Approved Project.

New heating, ventilating and air conditioning systems should meet the minimum ventilation rate requirements of current American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standard 62.1, Ventilation for Acceptable Indoor Air Quality.

New heating, ventilating and air conditioning systems should comply with current ASHRAE standard 55 for thermal comfort within established ranges per climate zone except that winter humidification and summer dehumidification should not be required.

Eligible Applicants should implement containment procedures for dusts, gases, fumes, and other pollutants created during construction of an Approved Project if the building is occupied by students, teachers or school department staff while such renovation and construction is occurring. Such containment procedures should be consistent with the current edition of the "IAQ Guidelines for Occupied Buildings Under Construction" published by the Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA). All bids received for an Approved Project should include the cost of planning and execution of containment of construction/renovation pollutants consistent with such SMACNA guidelines.

On all Approved Projects involving the installation of new ductwork, HVAC supply and the return openings should be sealed to protect them from dust infiltration during construction. Procedures should be consistent with the current edition of the "Duct Cleanliness for New Construction Guidelines" published by the Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) relative to advanced levels of cleanliness which provide in part that ductwork should be sealed when transported to the construction site; ductwork should be stored in clean, dry conditions and kept sealed while stored; internal surfaces of ductwork should be wiped-down immediately prior to installation to remove dust; open ends on completed ductwork and overnight work-in-progress should be sealed; and uninstalled ductwork should be protected from construction dust using surface wrapping.

Filtration media in ventilation equipment should be replaced with new media immediately prior to occupancy. Filtration media should have a Minimum Efficiency Reporting Value (MERV) such that mold spores and similarly sized particles are excluded from supply air intakes.

In spaces where chemical use will occur, including housekeeping areas, chemical mixing areas, copying/print rooms, and vocational spaces, use partitions should extend from the top of finished floor to the underside of the floor or roof deck above and should be provided with a dedicated outside exhaust at a rate of at least 0.50 cubic feet per minute per square foot, no air recirculation, and adequate make up air. These spaces should have negative air pressure, providing an outside exhaust at a rate of at least 0.50 cubic feet per minute per square foot. The spaces should maintain a negative pressure of at least 5 Pa (0.02 inches of water gauge) to a minimum of 1 Pa (0.004 inches of water) compared to their immediate environment, when their doors are closed.

Each new building entrance should be provided with a two-part walk-off mat system to capture dirt, particulates and moisture. Part one of the system should include a drop through mat within the vestibule. Part two should include a walk-off mat in the entranceway of a minimum length of 15 feet. The Eligible Applicant should not install drain pans or traps in the vestibule.

Electric ignitions should be provided for the all gas-fired equipment including water heaters, boilers, air-handling units, and cooking stoves.

Outside air intake openings should be located a minimum of 25 feet from any hazard or noxious contaminants such as chimneys, plumbing vents, cooling towers, streets, alleys, parking lots and loading docks. The distance between exhaust air or vent outlets and air intakes should be the greater of 25 feet or the distance as determined by the current Massachusetts State Building Code equation 2801.2.2.2. When locating an air intake within 25 feet of a contaminant source is unavoidable, such opening should be a minimum of 2 feet below the contaminant source and 10 feet horizontally from the nearest edge of the air intake to the nearest edge of the contaminant source. All intakes should be 6 feet above landscaped grade including soil, lawn, shrubs, or any plant life within 1.5 ft. horizontally of intake.

During construction of an Approved Project, building materials, especially gypsum wallboard, wood, porous insulation, paper, and fabric, should be kept dry to prevent the growth of mold and bacteria. Stored materials should be covered to prevent rain damage, and if resting on the ground, spacers should be employed as necessary to allow air to circulate between the ground and the materials. Water damaged materials should be dried within 24 hours. Materials that are damp or wet for more than 24 hours should be removed from the site. Materials showing signs of mold and mildew should be immediately removed from the site and properly dispose of materials, including any with moisture stains. Moldy materials should be replaced with new, undamaged materials.

Eligible Applicants should furnish permanent signage on the school site discouraging the idling of vehicles beyond a period of five minutes, in accordance with the statute governing stopped motor vehicles, M.G.L. c. 90, § 16A.