SENATE BILL 835

F5, M3 3lr2337
CF HB 719

By: **Senator Brooks**
Introduced and read first time: February 6, 2023
Assigned to: Education, Energy, and the Environment

A BILL ENTITLED

AN ACT concerning

Public Schools – Heating, Ventilation, and Air–Conditioning Systems and Carbon Dioxide Monitors – Monitoring and Reporting Requirements

FOR the purpose of requiring the Interagency Commission on School Construction, on or before a certain date, to complete an initial statewide heating, ventilation, and air–conditioning systems assessment of all public school facilities in the State using certain assessment requirements; requiring the Commission to develop certain heating, ventilation, and air–conditioning standards and incorporate the standards into certain educational facilities sufficiency standards; requiring each local education agency to submit a certain plan to the Commission, implement the plan, and ensure that certain repairs, upgrades, replacements, and adjustments are made in a certain manner; requiring the State Department of Education to make certain assessments available to the public in a certain manner; requiring each county board of education to require that each public school classroom be equipped with a certain carbon dioxide monitor; requiring a local school system to record and maintain certain information in a certain manner; and generally relating to heating, ventilation, and air–conditioning systems and carbon dioxide monitors in public schools.

BY repealing and reenacting, with amendments,
Article – Education
Section 5–310
Annotated Code of Maryland
(2022 Replacement Volume)

BY adding to
Article – Education
Section 5–310.1 and 7–132
Annotated Code of Maryland
(2022 Replacement Volume)

EXPLANATION: **CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.**
[Brackets**]** indicate matter deleted from existing law.

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND, That the Laws of Maryland read as follows:

Article – Education

5–310.

(a) (1) In this section the following words have the meanings indicated.

(2) "Educational facilities sufficiency standards" means a uniform set of criteria and measures for evaluating the physical attributes and educational suitability of public elementary and secondary school facilities in the State.

(3) "Facility condition index" means a calculation to determine the relative physical condition of public school facilities by dividing the total repair cost of a facility by the total replacement cost of a facility.

(b) (1) (i) Each fiscal year, the Interagency Commission shall survey the condition of school buildings identified by the Department.

(ii) The Interagency Commission shall include in the inspections of individual school buildings:

1. A process for a local education agency to report any additional information relevant to the inspection, including a place in the Master Facility Asset Library System for the local education agency to:

A. Report each year to the Interagency Commission on any deficiencies in a school building, even if the school building was not inspected in accordance with paragraph (2) of this subsection in the prior year;

B. Identify spaces in a school building likely to have been painted with lead paint; and

C. Report certification of the Asbestos Hazard Emergency Response Act plan for the space; and

2. A process to incorporate maintenance data for individual school buildings.

(2) (i) The Interagency Commission shall conduct the inspections of individual school buildings that are necessary to complete the survey required in paragraph (1) of this subsection.

(ii) The inspections completed under paragraph (1) of this subsection shall include the following items for each school building:

1. Temperature;

2. Humidity;

3. Carbon dioxide level;

4. Acoustic levels;

5. Lead paint;

6. Asbestos;

7. Kitchen sanitary equipment;

8. Lighting;

9. Emergency communication system, with respect to remaining useful life;

10. Health room attributes;

11. Safety equipment in each laboratory space; and

12. The functionality of:

A. Heating, ventilation, and air–conditioning building systems;

B. Life safety building systems;

C. Roofs; and

D. Any additional critical building systems identified by the Interagency Commission.

(iii) During an inspection, if an item under subparagraph (ii)1 through 6 of this paragraph rises to such a severe level that requires the school to be closed, the local education agency shall submit a plan to the Interagency Commission on how to address the issue and the Interagency Commission shall work to prioritize funding to address the issue.

(3) The Interagency Commission shall report to the Governor and the General Assembly, on or before October 1 of each year, in accordance with § 2–1257 of the State Government Article, on the results of the survey for the prior fiscal year.

(c) On or before July 1, 2018, in consultation with local education agencies, the Interagency Commission on School Construction shall adopt educational facilities sufficiency standards and a facility condition index for Maryland public schools.

(d) (1) The purpose of the educational facilities sufficiency standards is to establish uniform standards for the assessment of the physical attributes, capacity, and educational suitability of public school facilities in Maryland.

(2) The standards shall include at least the following categories:

(i) Building condition related to life safety and health;

(ii) Building systems;

(iii) Building capacity and utilization, including the ability to house students in permanent space;

(iv) Academic space, including specialty classroom space; and

(v) Physical education and outdoor recreational space.

(3) **THE EDUCATIONAL FACILITIES SUFFICIENCY STANDARDS FOR HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS AND STANDARDS DEVELOPED UNDER § 5–310.1 OF THIS SUBTITLE.**

(4) The Interagency Commission shall periodically review and update the educational facilities sufficiency standards.

(e) (1) On or before July 1, 2019, the Interagency Commission shall complete an initial statewide facilities assessment using the educational facilities sufficiency standards adopted under subsections (c) and (d) of this section.

(2) In completing the assessment the Interagency Commission shall:

(i) Incorporate the facility condition index adopted under subsection (c) of this section;

(ii) Contract with an independent third–party vendor to conduct data collection and assessment;

(iii) Utilize, to the extent possible, existing data sources, including the Educational Facilities Master Plan and the Maryland Association of Boards of Education; and

(iv) Coordinate with local education agencies to identify data elements to be used in the facility assessment.

(f) (1) Following the completion of the initial statewide facilities assessment, the Interagency Commission shall develop standards and procedures to comprehensively update the facilities assessment such that facility assessment data is not older than 4 years.

(2) Local education agencies shall:

(i) Cooperate with the Interagency Commission to update the facility assessment; and

(ii) Contribute data as requested to update the assessment.

(3) (i) The Interagency Commission shall enter the facility assessment data into an integrated data system, which shall be known as the Integrated Master Facility Asset Library.

(ii) The Interagency Commission shall manage the Integrated Master Facility Asset Library and shall provide access to the Library for all local education agencies using a cloud–based system.

(4) The Integrated Master Facility Asset Library shall include preventive maintenance schedules accessible to each local education agency.

(g) (1) (i) Except as provided in paragraph (2) of this subsection, the Interagency Commission may not use any facility assessment data until the Interagency Commission establishes the Integrated Master Facility Asset Library.

(ii) After the Interagency Commission has established the Integrated Master Facility Asset Library, and on or after May 1, 2026, the Interagency Commission shall adopt regulations establishing the use of the facility assessment results in annual school construction funding decisions beginning not sooner than fiscal year 2027.

(2) Before the Integrated Master Facility Asset Library is established, the Interagency Commission may use facility assessment data to:

(i) Provide context to programs the Interagency Commission administers;

(ii) Work with local education agencies;

(iii) Fulfill legislative requests;

(iv) Complete any Interagency Commission analysis or report; and

(v) Assist with any external reports.

(h) (1) Except as provided in § 5–314(e) of this subtitle, each county board shall develop and adopt preventative maintenance schedules based on industry standards for the public school facilities within the jurisdiction of the county board.

(2) On or before July 1 each year, each county board shall report to the Interagency Commission on the board's compliance with the preventative maintenance schedules adopted under this subsection.

(3) The information reported in accordance with paragraph (2) of this subsection shall be entered into the Integrated Master Facility Asset Library.

5–310.1.

(A) (1) IN THIS SECTION THE FOLLOWING WORDS HAVE THE MEANINGS INDICATED.

(2) "CERTIFIED TAB TECHNICIAN" MEANS A PERSON WHO IS CERTIFIED AS A TESTING AND BALANCING TECHNICIAN BY:

(I) THE ASSOCIATED AIR BALANCE COUNCIL;

(II) THE NATIONAL ENVIRONMENTAL BALANCING BUREAU; OR

(III) THE TESTING, ADJUSTING AND BALANCING BUREAU.

(3) "MECHANICAL ENGINEER" MEANS A PERSON:

(I) LICENSED AS A MECHANICAL ENGINEER BY THE STATE BOARD OF PROFESSIONAL ENGINEERS; AND

(II) WHO HAS PROFESSIONAL EXPERIENCE WORKING ON HEATING, VENTILATION, AND AIR–CONDITIONING BUILDING SYSTEMS.

(4) (I) "MECHANICAL VENTILATION SYSTEM" MEANS A BUILDING VENTILATION SYSTEM THAT:

1. USES MECHANICALLY POWERED PERMANENT EQUIPMENT, SUCH AS MOTOR–DRIVEN FANS AND BLOWERS; AND

2. MONITORS CARBON DIOXIDE.

(II) "MECHANICAL VENTILATION SYSTEM" DOES NOT INCLUDE DEVICES SUCH AS:

1. WIND–DRIVEN TURBINE VENTILATORS;

2. PORTABLE AIR CLEANING AND FILTRATION DEVICES; AND

3. MECHANICALLY OPERATED WINDOWS.

(B) (1) (I) ON OR BEFORE JULY 1, 2025, THE INTERAGENCY COMMISSION SHALL COMPLETE AN INITIAL STATEWIDE HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEMS ASSESSMENT OF ALL PUBLIC SCHOOL FACILITIES IN MARYLAND USING THE ASSESSMENT REQUIREMENTS ESTABLISHED UNDER THIS SECTION.

(II) BEFORE STARTING THE INITIAL ASSESSMENT, THE INTERAGENCY COMMISSION SHALL COORDINATE WITH LOCAL EDUCATION AGENCIES TO IDENTIFY DATA ELEMENTS TO BE USED IN THE HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEMS ASSESSMENT.

(2) FOLLOWING THE COMPLETION OF THE INITIAL ASSESSMENT, THE INTERAGENCY COMMISSION SHALL:

(I) DEVELOP UNIFORM HEATING, VENTILATION, AND AIR–CONDITIONING STANDARDS THAT MEET THE REQUIREMENTS OF THIS SECTION; AND

(II) INCORPORATE THOSE STANDARDS INTO THE EDUCATIONAL FACILITIES SUFFICIENCY STANDARDS UNDER § 5–310(D) OF THIS SUBTITLE.

(C) (1) THE ASSESSMENT OF THE FUNCTIONALITY OF A HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEM CONDUCTED UNDER THIS SECTION SHALL INCLUDE:

(I) IDENTIFYING AND DOCUMENTING THE HEATING, VENTILATION, AND AIR–CONDITIONING EQUIPMENT IN THE SCHOOL BUILDING, INCLUDING MOTOR NAMEPLATE DATA FOR THE EQUIPMENT;

(II) TESTING THE HEATING, VENTILATION, AND AIR–CONDITIONING EQUIPMENT IN THE SCHOOL BUILDING FOR MAXIMUM FILTER EFFICIENCY;

(III) CALCULATING AND DOCUMENTING THE ESTIMATED MINIMUM OUTSIDE AIR VENTILATION RATES FOR EACH OCCUPIED AREA IN THE SCHOOL BUILDING BASED ON:

1. THE ANTICIPATED MAXIMUM OCCUPANCY RATES; AND

2. THE MINIMUM REQUIRED VENTILATION RATE PER OCCUPANT;

(IV) PHYSICAL MEASUREMENTS OF THE OUTSIDE AIR RATE;

(V) VERIFYING THAT ALL VENTILATION COMPONENTS ARE IN PROPER WORKING CONDITION;

(VI) MEASURING ALL AIR DISTRIBUTION INLETS AND OUTLETS;

(VII) VERIFYING THAT THE HEATING, VENTILATION, AND AIR–CONDITIONING EQUIPMENT HAS BEEN OPERATED AND MAINTAINED IN ACCORDANCE WITH THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR–CONDITIONING ENGINEERS STANDARD 62.1–2019;

(VIII) VERIFYING CONTROL SEQUENCES;

(IX) VERIFYING EXISTING CARBON DIOXIDE SENSORS IN ACCORDANCE WITH § 7–132 OF THIS ARTICLE; AND

(X) IF A SCHOOL BUILDING DOES NOT CURRENTLY HAVE MECHANICAL VENTILATION, COLLECTING ANY FIELD DATA NECESSARY FOR THE POTENTIAL INSTALLATION OF MECHANICAL VENTILATION IN THE SCHOOL BUILDING.

(2) (I) THE ASSESSMENT UNDER PARAGRAPH (1) OF THIS SUBSECTION SHALL BE:

1. COMPLETED BY A CERTIFIED TAB TECHNICIAN; AND

2. REVIEWED BY A MECHANICAL ENGINEER IN ACCORDANCE WITH SUBPARAGRAPH (II) OF THIS PARAGRAPH.

(II) IN REVIEWING THE ASSESSMENT UNDER PARAGRAPH (1) OF THIS SUBSECTION, A MECHANICAL ENGINEER SHALL:

1. VERIFY AND, IF NECESSARY, ADJUST THE ESTIMATED MINIMUM OUTSIDE AIR VENTILATION RATES;

2. DETERMINE WHAT, IF ANY, ADDITIONAL ADJUSTMENTS, REPAIRS, UPGRADES, OR REPLACEMENTS ARE NECESSARY TO MEET:

A. THE MINIMUM STATE AND LOCAL BUILDING CODE VENTILATION AND FILTRATION SYSTEM REQUIREMENTS; AND

B. THE MOST RECENT EDITION OF AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR–CONDITIONING ENGINEERS STANDARD 62.1; AND

3. PROVIDE A COST ESTIMATE FOR ANY ADDITIONAL ADJUSTMENTS, REPAIRS, UPGRADES, OR REPLACEMENTS IDENTIFIED UNDER ITEM 2 OF THIS SUBPARAGRAPH.

(D) (1) AT THE CONCLUSION OF AN ASSESSMENT OF THE FUNCTIONALITY OF A HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEM, THE LOCAL EDUCATION AGENCY FOR A SCHOOL SHALL:

(I) SUBMIT A PLAN TO THE INTERAGENCY COMMISSION ON HOW TO ADDRESS THE APPROPRIATE CORRECTIVE ACTIONS IDENTIFIED IN THE ASSESSMENT AND REQUIRED UNDER PARAGRAPH (2) OF THIS SUBSECTION; AND

(II) IMPLEMENT THE PLAN.

(2) A LOCAL EDUCATION AGENCY SHALL ADDRESS THE FOLLOWING CORRECTIVE MEASURES:

(I) TESTING, ADJUSTING, AND BALANCING THE PUBLIC SCHOOL'S MECHANICAL VENTILATION SYSTEM; AND

(II) IF NECESSARY OR COST EFFECTIVE:

1. REPAIRS, UPGRADES, OR REPLACEMENT OF THE EXISTING HEATING, VENTILATION, AND AIR–CONDITIONING BUILDING SYSTEM; OR

2. INSTALLATION OF A STAND–ALONE MECHANICAL VENTILATION SYSTEM.

(3) A LOCAL EDUCATION AGENCY MAY ADDRESS THE FOLLOWING CORRECTIVE MEASURES:

(I) GENERAL MAINTENANCE;

(II) READING AND ADJUSTING OF VENTILATION RATES; AND

(III) FILTER REPLACEMENT TO MEET A MINIMUM EFFICIENCY REPORTING VALUE OF 13.

(4) A LOCAL EDUCATION AGENCY MAY NOT USE PORTABLE FILTRATION AND AIR CLEANERS TO ADDRESS ANY CORRECTIVE MEASURES UNLESS:

(I) THE CURRENT HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEM CANNOT MEET MINIMUM FILTRATION AND VENTILATION REQUIREMENTS;

(II) A MECHANICAL ENGINEER HAS RECOMMENDED THE EQUIPMENT AS A SUPPLEMENTAL ENHANCEMENT TO THE PERMANENT HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEM WHEN THE DESIRED INDOOR AIR QUALITY CANNOT BE MAINTAINED BY THAT SYSTEM; OR

(III) THERE ARE CONCERNS WITH OUTDOOR AIR CONTAMINANTS INCLUDING CONTAMINANTS CREATED BY WILDFIRES AND POLLUTION.

(E) EACH LOCAL EDUCATION AGENCY SHALL ENSURE THAT:

(1) ANY REPAIRS, UPGRADES, OR REPLACEMENTS MADE TO A HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEM TO ADDRESS A CORRECTIVE MEASURE UNDER SUBSECTION (D) OF THIS SECTION ARE COMPLETED BY A MECHANICAL ENGINEER; AND

(2) ANY ADJUSTMENTS MADE TO A HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEM TO ADDRESS A CORRECTIVE MEASURE UNDER SUBSECTION (D) OF THIS SECTION ARE COMPLETED BY:

(I) A CERTIFIED TAB TECHNICIAN;

(II) AN INDIVIDUAL AUTHORIZED TO WORK UNDER THE SUPERVISION OF A CERTIFIED TAB TECHNICIAN; OR

(III) A MECHANICAL ENGINEER.

(F) (1) THE DEPARTMENT SHALL:

(I) ENTER HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEM ASSESSMENT DATA INTO THE INTEGRATED MASTER FACILITY ASSET LIBRARY IN ACCORDANCE WITH § 5–310(F)(3) OF THIS SUBTITLE; AND

(II) MAKE EACH ASSESSMENT CONDUCTED IN ACCORDANCE WITH THIS SECTION AVAILABLE TO THE PUBLIC AS A STAND–ALONE REPORT.

(2) THE REPORT REQUIRED UNDER PARAGRAPH (1) OF THIS SUBSECTION SHALL INCLUDE:

(I) THE NAME AND ADDRESS OF THE PUBLIC SCHOOL AND THE PERSON PREPARING AND CERTIFYING THE REPORT;

(II) FOR EACH CERTIFIED TAB TECHNICIAN OR MECHANICAL ENGINEER WHO PERFORMED ASSESSMENTS OR ADJUSTMENTS TO A HEATING, VENTILATION, AND AIR–CONDITIONING SYSTEM IN ACCORDANCE WITH THIS SECTION:

1. THE NAME AND ADDRESS OF THE CERTIFIED TAB TECHNICIAN OR MECHANICAL ENGINEER; AND

2. COPIES OF THE CERTIFIED TAB TECHNICIAN OR MECHANICAL ENGINEER'S APPLICABLE CERTIFICATIONS AND LICENSES; AND

(III) DATA FOR ALL TESTS CONDUCTED UNDER SUBSECTION (C) OF THIS SECTION.

7–132.

(A) EACH COUNTY BOARD SHALL REQUIRE THAT EACH PUBLIC SCHOOL CLASSROOM BE EQUIPPED WITH A CARBON DIOXIDE MONITOR.

(B) EACH CARBON DIOXIDE MONITOR SHALL:

(1) BE A HARDWIRED, PLUG–IN, OR BATTERY–OPERATED DEVICE;

(2) BE MOUNTED ON A WALL:

(I) AT A HEIGHT OF 3 FEET TO 6 FEET ABOVE THE FLOOR; AND

(II) AT LEAST 5 FEET AWAY FROM ANY OPERABLE DOORS AND WINDOWS;

(3) DISPLAY THE CARBON DIOXIDE READINGS TO THE TEACHER THROUGH A DISPLAY ON THE DEVICE OR THROUGH OTHER MEANS, SUCH AS A WEB–BASED APPLICATION OR CELL PHONE APPLICATION;

(4) NOTIFY THE TEACHER, THROUGH A VISUAL INDICATOR ON THE DEVICE OR THROUGH OTHER MEANS INCLUDING E–MAIL, TEXT, OR MOBILE APPLICATION, WHEN THE CARBON DIOXIDE LEVELS IN THE CLASSROOM HAVE EXCEEDED 1,100 PARTS PER MILLION;

(5) MAINTAIN A RECORD OF PREVIOUS DATA THAT INCLUDES THE MAXIMUM CARBON DIOXIDE CONCENTRATION MEASURED IN THE CLASSROOM;

(6) BE ABLE TO MEASURE CARBON DIOXIDE LEVELS BETWEEN 400 PARTS PER MILLION AND 5,000 PARTS PER MILLION OR HIGHER;

(7) BE CERTIFIED BY THE MANUFACTURER TO BE ACCURATE WITHIN 75 PARTS PER MILLION AT 1,000 PARTS PER MILLION CARBON DIOXIDE CONCENTRATION; AND

(8) BE CERTIFIED BY THE MANUFACTURER TO REQUIRE CALIBRATION NOT MORE THAN ONCE EVERY 5 YEARS.

(C) (1) TO ENSURE THAT PEAK CARBON DIOXIDE CONCENTRATIONS IN A CLASSROOM REMAIN BELOW THE CONCENTRATION ALARM SET POINT, THE FOLLOWING ACTIONS SHALL BE TAKEN IF A CARBON DIOXIDE MONITOR EXCEEDS THE CONCENTRATION ALARM SET POINT FOR MORE THAN 15 MINUTES FIVE TIMES OR MORE IN A MONTH:

(I) ADJUSTMENT OF THE CLASSROOM VENTILATION RATES; OR

(II) INSTALLATION OF A DIRECT OUTSIDE AIRFLOW INTAKE FLOW MEASUREMENT DEVICE.

(2) ANY ADJUSTMENTS MADE TO A CLASSROOM CARBON DIOXIDE MONITOR SHALL BE DONE BY:

(I) A CERTIFIED TAB TECHNICIAN; OR

(II) AN INDIVIDUAL AUTHORIZED TO WORK UNDER THE SUPERVISION OF A CERTIFIED TAB TECHNICIAN.

(3) A LOCAL SCHOOL SYSTEM SHALL:

(I) RECORD EACH INSTANCE THAT A CONCENTRATION ALARM SET POINT IS EXCEEDED;

(II) MAINTAIN THE RECORDS ACCUMULATED UNDER ITEM (I) OF THIS PARAGRAPH FOR AT LEAST 5 YEARS; AND

(III) MAKE THE RECORDS ACCUMULATED UNDER ITEM (I) OF THIS PARAGRAPH, DISAGGREGATED BY CLASSROOM, AVAILABLE TO THE PUBLIC ON REQUEST.

(D) THE DEPARTMENT MAY ALTER THE REQUIREMENTS IN SUBSECTION (B) OF THIS SECTION TO REFLECT AVAILABLE TECHNOLOGY AND TO ACHIEVE THE INTENT OF SUBSECTION (B) OF THIS SECTION.

SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect July 1, 2023.