



House of Representatives

General Assembly

File No. 296

February Session, 2002

Substitute House Bill No. 5707

House of Representatives, April 3, 2002

The Committee on Environment reported through REP. STRATTON of the 17th Dist., Chairperson of the Committee on the part of the House, that the substitute bill ought to pass.

AN ACT CONCERNING INDOOR ENVIRONMENTAL QUALITY IN SCHOOLS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

1 Section 1. (NEW) (*Effective July 1, 2002*) As used in this section,
2 sections 10-220, 10-282, 10-283 and 10-291 of the general statutes, as
3 amended by this act:

4 (1) "School" means a public school, as defined in section 10-183b of
5 the general statutes.

6 (2) "Indoor environmental quality" means the quality of facets of the
7 environment that affect the health of the occupants of school facilities
8 including, but not limited to, air quality, the presence of radon and
9 water quality.

10 (3) "HVAC system" means heating, ventilation and air conditioning
11 system.

12 (4) "Bioaerosols" mean microbiological airborne particles including,
13 but not limited to, fungi, mold and bacteria.

14 Sec. 2. Section 10-220 of the general statutes, as amended by section
15 19 of public act 01-173, is repealed and the following is substituted in
16 lieu thereof (*Effective July 1, 2002*):

17 (a) Each local or regional board of education shall maintain good
18 public elementary and secondary schools, implement the educational
19 interests of the state as defined in section 10-4a and provide such other
20 educational activities as in its judgment will best serve the interests of
21 the school district; provided any board of education may secure such
22 opportunities in another school district in accordance with provisions
23 of the general statutes and shall give all the children of the school
24 district as nearly equal advantages as may be practicable; shall provide
25 an appropriate learning environment for its students which includes
26 (1) adequate instructional books, supplies, materials, equipment,
27 staffing, facilities and technology, (2) equitable allocation of resources
28 among its schools, and (3) a safe school setting; shall have charge of the
29 schools of its respective school district; shall make a continuing study
30 of the need for school facilities, [and of] a long-term school building
31 program and any necessary maintenance of its facilities, including, but
32 not limited to, maintenance that is necessary to protect indoor
33 environmental quality and from time to time make recommendations
34 based on such study to the town; shall implement an ongoing
35 prevention program such as the Environmental Protection Agency's
36 Indoor Air Quality Tools for Schools program to protect the indoor
37 environmental quality of its facilities; shall report annually to the
38 Commissioner of Education on the condition of its facilities and the
39 action taken to implement its long-term school building program,
40 which report the commissioner shall use to prepare an annual report
41 that said commissioner shall submit in accordance with section 11-4a
42 to the joint standing committee of the General Assembly having
43 cognizance of matters relating to education; shall advise the
44 Commissioner of Education of the relationship between any individual
45 school building project pursuant to chapter 173 and such long-term

46 school building program; shall have the care, maintenance and
47 operation of buildings, lands, apparatus and other property used for
48 school purposes and at all times shall insure all such buildings and all
49 capital equipment contained therein against loss in an amount not less
50 than eighty per cent of replacement cost; shall determine the number,
51 age and qualifications of the pupils to be admitted into each school;
52 shall develop and implement a written plan for minority staff
53 recruitment for purposes of subdivision (3) of section 10-4a; shall
54 employ and dismiss the teachers of the schools of such district subject
55 to the provisions of sections 10-151 and 10-158a; shall designate the
56 schools which shall be attended by the various children within the
57 school district; shall make such provisions as will enable each child of
58 school age, residing in the district to attend some public day school for
59 the period required by law and provide for the transportation of
60 children wherever transportation is reasonable and desirable, and for
61 such purpose may make contracts covering periods of not more than
62 five years; may place in an alternative school program or other suitable
63 educational program a pupil enrolling in school who is nineteen years
64 of age or older and cannot acquire a sufficient number of credits for
65 graduation by age twenty-one; may arrange with the board of
66 education of an adjacent town for the instruction therein of such
67 children as can attend school in such adjacent town more conveniently;
68 shall cause each child five years of age and over and under eighteen
69 years of age who is not a high school graduate and is living in the
70 school district to attend school in accordance with the provisions of
71 section 10-184, and shall perform all acts required of it by the town or
72 necessary to carry into effect the powers and duties imposed by law.

73 (b) The board of education of each local or regional school district
74 shall, with the participation of parents, students, school administrators,
75 teachers, citizens, local elected officials and any other individuals or
76 groups such board shall deem appropriate, prepare a statement of
77 educational goals for such local or regional school district. The
78 statement of goals shall be consistent with state-wide goals pursuant to
79 subsection (c) of section 10-4. Each local or regional board of education
80 shall develop student objectives which relate directly to the statement

81 of educational goals prepared pursuant to this subsection and which
82 identify specific expectations for students in terms of skills, knowledge
83 and competence.

84 (c) Annually, each local and regional board of education shall
85 submit to the Commissioner of Education a strategic school profile
86 report for each school under its jurisdiction and for the school district
87 as a whole. The superintendent of each local and regional school
88 district shall present the profile report at the next regularly scheduled
89 public meeting of the board of education after each November first.
90 The profile report shall provide information on measures of (1) student
91 needs, (2) school resources, including technological resources and
92 utilization of such resources and infrastructure, (3) student and school
93 performance, (4) equitable allocation of resources among its schools,
94 (5) reduction of racial, ethnic and economic isolation, and (6) special
95 education. For purposes of this subsection, measures of special
96 education include (A) special education identification rates by
97 disability, (B) rates at which special education students are exempted
98 from mastery testing pursuant to section 10-14q, (C) expenditures for
99 special education, including such expenditures as a percentage of total
100 expenditures, (D) achievement data for special education students, (E)
101 rates at which students identified as requiring special education are no
102 longer identified as requiring special education, (F) the availability of
103 supplemental educational services for students lacking basic
104 educational skills, (G) the amount of special education student
105 instructional time with nondisabled peers, (H) the number of students
106 placed out-of-district, and (I) the actions taken by the school district to
107 improve special education programs, as indicated by analyses of the
108 local data provided in subparagraphs (A) to (H), inclusive, of this
109 subdivision.

110 (d) Prior to January 1, 2004, and annually thereafter, qualified
111 personnel or qualified contractors of a local or regional board of
112 education shall conduct, utilizing the Environmental Protection
113 Agency's Indoor Air Quality Tools for Schools publications as
114 guidance, a uniform inspection and evaluation program of the indoor

115 environmental quality of its schools. The inspection and evaluation
116 program shall include, but not be limited to, a review, inspection or
117 evaluation of the following: (1) The HVAC systems; (2) radon levels in
118 the water and the air; (3) potential for exposure to bioaerosols; (4)
119 chemical compounds of concern to indoor air quality including, but
120 not limited to, volatile organic compounds; (5) the degree of pest
121 infestation, including, but not limited to, insect and rodents; (6) the
122 degree of pesticide usage; (7) the presence of and the plans for removal
123 of any hazardous substances that are contained on the list prepared
124 pursuant to Section 302 of the federal Emergency Planning and
125 Community Right-to-Know Act, 42 USC 9601 et seq.; (8) ventilation
126 systems; (9) plumbing, including water distribution systems, drainage
127 systems and fixtures; (10) building structural elements, including, but
128 not limited to, roofing, basements or slabs; and (11) the use of space,
129 particularly areas that were designed to be unoccupied. Any
130 communication between the state Department of Education and a
131 superintendent of a local or regional board of education regarding
132 compliance with the law shall include the requirements of this
133 subsection.

134 Sec. 3. Subdivision (18) of section 10-282 of the general statutes is
135 repealed and the following is substituted in lieu thereof (*Effective July*
136 *1, 2002*):

137 (18) "Renovation" means a school building project to totally
138 refurbish an existing building which results in the renovated facility
139 taking on a useful life comparable to that of a new facility and which
140 will cost less than building a new facility as determined by the
141 department, provided the school district may submit a feasibility study
142 and cost analysis of the project prepared by an independent licensed
143 architect to the department prior to final plan approval.
144 Notwithstanding this subdivision, for the purpose of a school building
145 project to improve the indoor environmental quality of a facility, as
146 specified in subparagraph (D) of subdivision (2) of subsection (a) of
147 section 10-283, as amended by this act, "renovation" means a school
148 building project that exceeds the day-to-day maintenance of such

149 facility, the total project costs of which exceed fifty thousand dollars.

150 Sec. 4. Subdivision (2) of subsection (a) of section 10-283 of the
151 general statutes is repealed and the following is substituted in lieu
152 thereof (*Effective July 1, 2002*):

153 (2) Each school building project shall be assigned to a category on
154 the basis of whether such project is primarily required to: (A) Create
155 new facilities or alter existing facilities to provide for mandatory
156 instructional programs pursuant to this chapter, for physical education
157 facilities in compliance with Title IX of the Elementary and Secondary
158 Education Act of 1972 where such programs or such compliance
159 cannot be provided within existing facilities or for the correction of
160 code violations which cannot be reasonably addressed within existing
161 program space; (B) create new facilities or alter existing facilities to
162 enhance mandatory instructional programs pursuant to this chapter or
163 provide comparable facilities among schools to all students at the same
164 grade level or levels within the school district unless such project is
165 otherwise explicitly included in another category pursuant to this
166 section; [and] (C) create new facilities or alter existing facilities to
167 provide supportive services, provided in no event shall such
168 supportive services include swimming pools, auditoriums, outdoor
169 athletic facilities, tennis courts, elementary school playgrounds, site
170 improvement or garages or storage, parking or general recreation
171 areas; and (D) address a documented indoor air quality problem in a
172 facility such as, but not limited to, the upgrading of a HVAC system to
173 meet the American Society of Heating, Ventilating and Air
174 Conditioning Engineers ("ASHRAE") Standard 62, Ventilation for
175 Acceptable Indoor Air Quality, as incorporated by the State Building
176 Code adopted under section 29-252; the resolution of a documented
177 moisture incursion, whether such incursion originates from a roof, a
178 window, a wall or a floor; or the remediation of sources of bioaerosols
179 or the reduction of radon in the air or water in a facility. All
180 applications submitted prior to the first day of July in any year shall be
181 reviewed promptly by the commissioner and the amount of the grant
182 for which such project is eligible shall be estimated. The commissioner

183 shall annually prepare a listing of all such eligible school building
184 projects listed by category together with the amount of the estimated
185 grants therefor and shall submit the same to the Governor and the
186 General Assembly on or before the fifteenth day of December, except
187 as provided in section 10-283a, with a request for authorization to
188 enter into grant commitments. Each such listing submitted after
189 December 1995 shall include a separate schedule of authorized projects
190 which have changed in scope or cost to a degree determined by the
191 commissioner. The percentage determined pursuant to section 10-285a
192 at the time a school building project on such schedule was originally
193 authorized shall be used for purposes of the grant for such project. The
194 General Assembly shall annually authorize the commissioner to enter
195 into grant commitments on behalf of the state in accordance with the
196 commissioner's categorized listing for such projects as the General
197 Assembly shall determine. The commissioner may not enter into any
198 such grant commitments except pursuant to such legislative
199 authorization. Any regional school district which assumes the
200 responsibility for completion of a public school building project shall
201 be eligible for a grant pursuant to subdivision (5) or (6), as the case
202 may be, of subsection (a) of section 10-286, when such project is
203 completed and accepted by such regional school district.

204 Sec. 5. Section 10-291 of the general statutes is repealed and the
205 following is substituted in lieu thereof (*Effective July 1, 2002*):

206 (a) No school building project for which state assistance is sought
207 shall be undertaken except according to a plan and on a site approved
208 by the state Department of Education, the town or regional board of
209 education and by the building committee of such town or district. [No
210 such school building project shall be undertaken at an expense
211 exceeding the sum which the town or regional district may
212 appropriate for the project. In the case of a school building project
213 financed in whole or in part by an energy conservation lease purchase
214 agreement, the expense of the project shall not exceed the sum which
215 the town or regional school district approved for the project.] Prior to
216 approving a school building project, the state Department of

217 Education, the town or regional board of education and the building
218 committee of such town or district shall require (1) in the case of a
219 school building project which is a construction, extension or
220 replacement of a building to be used for public school purposes, a
221 Phase I environmental site assessment in accordance with the
222 American Society for Testing and Materials Standard E1527, Standard
223 Practice for Environmental Site Assessments: Phase I Environmental
224 Site Assessment Process, or similar subsequent standards, (2) a report
225 of how the school building project will affect indoor environmental
226 health in the facility, and (3) a demonstration that the project
227 incorporates any Environmental Protection Agency guidelines for new
228 school construction. A copy of final plans and specifications for each
229 phase of site development and construction of all school building
230 projects and for each phase thereof including site development shall be
231 filed with the Commissioner of Education subject to the provisions of
232 section 10-292 before the start of such phase of development or
233 construction shall be begun. A town or regional school district may
234 commence a phase of development or construction before completion
235 of final plans and specifications for the whole project provided a copy
236 of the latest preliminary plan and cost estimate for such project which
237 has been approved by the town or regional board of education and by
238 the building committee shall be submitted with the final plans and
239 specifications for such phase. Any board of education which, prior to
240 the approval of a grant commitment by the General Assembly,
241 commences any portion of a school construction project or causes any
242 such project to be let out for bid, shall not be eligible for a school
243 construction grant until a grant commitment is so approved.

244 (b) The state Department of Education, the town or regional board
245 of education and the building committee of such town or district may
246 not approve a school building project plan or site, as applicable, if:

247 (1) The expense exceeds the sum which the town or regional district
248 may appropriate for the project, provided in the case of a school
249 building project financed in whole or in part by an energy
250 conservation lease purchase agreement, the expense of the project does

251 not exceed the sum which the town or regional school district
252 approved for the project.

253 (2) In the case of a school building project that is a construction,
254 extension or replacement of a building to be used for public school
255 purposes, the Phase I environmental site assessment indicates that the
256 site does not meet the criteria for residential properties in the
257 regulations adopted pursuant to section 22a-133k.

258 (3) The site is in an area of moderate or high radon potential, as
259 indicated in the Department of Environmental Protection's Radon
260 Potential Map, or similar subsequent publications, except where the
261 school building project plan incorporates construction techniques to
262 mitigate radon levels in the air of the facility.

263 (4) The plans incorporate flat-roof construction that does not have
264 adequate pitch towards drains in order to prevent the pooling of
265 water.

266 (5) In the case of a renovation of a building to be used for public
267 school purposes, the plans do not incorporate the standards provided
268 in the Sheet Metal and Air Conditioning Contractors National
269 Association's publication entitled "Indoor Air Quality Guidelines for
270 Occupied Buildings Under Construction" or similar subsequent
271 publications.

272 (6) In the case of a renovation of a building to be used for public
273 school purposes in order to remediate sources of bioaerosols, the plans
274 do not incorporate appropriate safeguards for the occupants of the
275 facility and the workers performing the renovation, as outlined in the
276 American Conference of Governmental Industrial Hygienists'
277 publication entitled "Bioaerosols: Assessment and Control" or similar
278 subsequent publications.

This act shall take effect as follows:	
Section 1	July 1, 2002
Sec. 2	July 1, 2002

Sec. 3	<i>July 1, 2002</i>
Sec. 4	<i>July 1, 2002</i>
Sec. 5	<i>July 1, 2002</i>

ENV *Joint Favorable Subst.*

The following fiscal impact statement and bill analysis are prepared for the benefit of members of the General Assembly, solely for the purpose of information, summarization, and explanation, and do not represent the intent of the General Assembly or either House thereof for any purpose:

OFA Fiscal Note

State Impact:

Fund-Type	Agency Affected
GF; BF - Significant Cost	State Department of Education

Note: GF=General Fund; BF=Bond Funds

Municipal Impact:

Effect	Municipalities
Revenue Gain, Cost	Local and Regional School Districts

Explanation

The expansion of the definition of code violations, which are reimbursable by the state, results in a significant cost to the state. This in turn is a revenue gain to local and regional school districts. The number and scope of such projects will determine the eventual cost of this change. It is estimated that such projects will result in a cost as high as \$5.0 million per year over the next seven years. It is expected that once school districts have had these problems rectified that proper maintenance will result in far fewer projects of this type after seven years.

There are currently approximately 1,000 public school buildings in 166 local and regional school districts in the state that would fall under the requirements of the bill, as would the 17 state-operated vocational-technical schools. It is estimated that the evaluation and monitoring of the environmental quality in schools would cost as much as \$4,000 per school. The evaluations are to be carried out prior to January 1, 2004 and every year thereafter. Based on the estimated maximum cost of evaluations the cost to local and regional school districts in the period up until January 1, 2004 may be as high as \$4.0 million. The cost to the state's vocational-technical school system would be approximately

\$70,000 and could be spread through the next few fiscal years thus limiting any need for additional funds.

The results of the yearly assessments could result in additional increased costs to local and regional school districts, as various forms of remediation may be required based on the assessments. A portion of the remediation may be reimbursable by the state. The costs of remediation and the ongoing maintenance of the facilities could be offset by decreased costs in terms of health care, workers' compensation claims and the potential of averting higher costs of renovation that could occur if the problems were not rectified for an extended period of time.

OLR Bill Analysis

sHB 5707

AN ACT CONCERNING INDOOR ENVIRONMENTAL QUALITY IN SCHOOLS

SUMMARY:

This bill establishes measures to improve the indoor environmental quality of public schools. It defines indoor environmental quality as the quality of parts of the environment that affect the health of school occupants, including air and water quality, and the presence of radon.

It requires school boards to inspect and evaluate their schools' indoor air quality annually, and makes certain indoor air quality projects eligible for state school building project grants.

The bill requires the state Department of Education (SDE), school boards, and town building committees to determine how a school building project will affect indoor air quality before approving it, and requires such projects to incorporate U.S. Environmental Protection Agency (EPA) guidelines for new construction. In certain cases, it requires SDE, school boards, and building committees to require environmental site assessments. It lists specific reasons that SDE, school boards, and town building committees cannot approve school building project plans and sites.

It requires school boards to conduct continuing studies of the maintenance necessary to protect indoor environmental quality, and to protect it through such programs as the EPA's "Tools for Schools" program.

EFFECTIVE DATE: July 1, 2002

INSPECTION AND EVALUATION OF INDOOR ENVIRONMENTAL QUALITY

The bill requires school boards, before January 1, 2004 and annually thereafter, to inspect and evaluate their schools' indoor environmental quality. Using "Tools for Schools," or similar publications, qualified school personnel or contractors must inspect and evaluate at least the

following:

1. the heating, ventilation, and air conditioning (HVAC) systems;
2. radon levels in the water and air;
3. potential exposure to airborne microbiological particles, including fungi, mold, and bacteria (bioaerosols);
4. chemical compounds that may affect air quality, including volatile organic compounds;
5. pest infestation, including that of rodents and insects;
6. the degree of pesticide usage;
7. the presence and plans for removal of any hazardous substances, as listed according to the federal Emergency Planning and Community Right-to-Know Act (including chlorine, formaldehyde, ammonia, and sulfuric acid);
8. ventilation systems;
9. plumbing;
10. building structural elements, including roofing and basements; and
11. the use of space, particularly unoccupied areas.

Any communication between a school board superintendent and SDE regarding compliance must include this information.

SCHOOL BUILDING PROJECTS

The bill makes school building projects that address a documented indoor air quality problem eligible for state funding. Such projects may include:

1. upgrading HVAC systems to meet the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Standard 62, Ventilation for Acceptable Indoor Air Quality, as incorporated by the state Building Code;
2. fixing leaking roofs, windows, walls or floors;
3. correcting sources of bioaerosols; and
4. reducing radon in the air or water.

(Some of these conditions may already qualify for grant funding if they constitute a code violation.)

Renovations to Improve Indoor Environmental Quality

The bill expands the definition of renovation for the purposes of school

building projects to include a project that (1) improves indoor environmental quality, (2) exceeds the costs of day-to-day maintenance at the school, and (3) costs a total of at least \$50,000.

Approval of Plans

Before approving a school building project that is (a) a new building, (b) an addition, or (c) a replacement of an existing building, SDE, the school board, and the town building committee must conduct a Phase 1 environmental site assessment in accordance with the American Society for Testing and Materials Standard E1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, or similar standards. Such an assessment examines a building for various contaminants.

SDE, school boards, and building committees must require that all projects include a report on how the project will affect indoor environmental health and incorporate EPA guidelines for new school construction.

Grounds for Disapproval

By law, SDE, schools boards, and town buildings committees cannot undertake a school building project if it costs more than the school board may appropriate. For a project financed in whole or in part by an energy conservation lease purchase agreement, the cost cannot exceed the amount the board approved for the project.

Under the bill, SDE, schools boards, and town buildings committees also cannot approve a project plan or site if:

1. the Phase 1 environmental assessment for a new building, addition, or replacement building indicate the site does not meet the regulatory criteria the Department of Environmental Protection (DEP) has adopted for residential properties;
2. the site is an area of moderate or high radon potential as indicated on DEP maps, unless appropriate steps are taken to reduce radon levels in the air;
3. the plans call for a flat roof, without adequate pitch to prevent the collection of water;
4. renovation plans do not incorporate the Sheet Metal and Air Conditioning Contractors National Association's "Indoor Air

- Quality Guidelines for Occupied Buildings Under Construction," or similar publications;
5. renovation plans for the remediation of bioaerosols do not incorporate appropriate safeguards for occupants and workers doing the renovation, according to the American Conference of Government Industrial Hygienists' "Bioaerosols: Assessment and Control," or similar publications.

However, the bill also may be read to give SDE, school boards and town building committees discretion to approve such projects. It also is unclear if the grounds for disapproval apply only to projects for which state assistance is sought.

COMMITTEE ACTION

Environment Committee

Joint Favorable Substitute
Yea 28 Nay 0