# STATE OF CONNECTICUT

# Senate

General Assembly

File No. 569

January Session, 2023

Substitute Senate Bill No. 1198

*Senate, April 13, 2023* 

The Committee on Education reported through SEN. MCCRORY, D. of the 2nd Dist., Chairperson of the Committee on the part of the Senate, that the substitute bill ought to pass.

# AN ACT IMPLEMENTING THE RECOMMENDATIONS OF THE SCHOOL INDOOR AIR QUALITY WORKING GROUP.

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

- Section 1. Section 370 of public act 22-118 is repealed and the
- 2 following is substituted in lieu thereof (*Effective from passage*):
- 3 (a) There is established a working group to study and make
- 4 recommendations related to indoor air quality within school buildings.
- 5 Such recommendations shall include, but need not be limited to:
- (1) The optimal humidity and temperature ranges to ensure healthy
   air and promote student learning;
- 8 (2) Threshold school air quality emergency conditions warranting
- 9 temporary school closures based on the presence of insufficient heat, an
- 10 excessive combination of indoor temperature and humidity levels, or
- 11 some other thresholds;
- 12 (3) Criteria for rating the priority of heating, ventilation and air

conditioning repair and remediation needs, including the public health condition and needs of the students attending a school;

- 15 (4) Optimal heating, ventilation and air conditioning system 16 performance benchmarks for minimizing the spread of infectious 17 disease;
- 18 (5) Protocols to be used by school districts to receive, investigate and 19 address complaints or evidence of mold, pest infestation, hazardous 20 odors or chemicals and poor indoor air-quality;
- 21 (6) The frequency with which local and regional boards of education 22 should be providing for a uniform inspection and evaluation program 23 of the indoor air quality within school buildings, such as the 24 Environmental Protection Agency's Indoor Air Quality Tools for 25 Schools Program, and whether such program should be provided for at 26 all schools or only at those constructed before or after a certain date;
- 27 (7) Best practices for the proper maintenance of heating, ventilation 28 and air conditions systems in school buildings, including the frequency 29 and scope of such maintenance;
- 30 (8) A system of equitable distribution of funds, based on need, under 31 the heating, ventilation and air conditioning system grant program 32 pursuant to section 10-265r of the general statutes;
- [(8)] (9) Any other criteria affecting school indoor air quality; and
- 34 [(9)] (10) Proposals for legislation to carry out any of the 35 recommendations of the working group.
- 36 (b) The working group shall consist of the following members:
- 37 (1) Three appointed by the president pro tempore of the Senate, one 38 of whom is a representative of ConnectiCOSH, one of whom is a 39 representative of the Associated Sheet Metal and Roofing Contractors of 40 Connecticut, and one of whom is a member of the Senate;
- 41 (2) Three appointed by the speaker of the House of Representatives,

one of whom is a specialist in the field of children's health, one of whom

- 43 [shall] is a representative of the Connecticut State Building Trades
- 44 Council, and one of whom is a member of the House of Representatives;
- 45 (3) Two appointed by the majority leader of the Senate, one of whom
- 46 is a representative of the American Federation of Teachers-Connecticut
- 47 and one of whom is a representative of the Connecticut Association of
- 48 Public School Superintendents;
- 49 (4) Two appointed by the majority leader of the House of
- 50 Representatives, one of whom is a representative of the Connecticut
- 51 Education Association and one of whom is a representative of the
- 52 Connecticut Association of Boards of Education;
- 53 (5) Two appointed by the minority leader of the Senate, one of whom
- is a specialist in the field of medicine on respiratory health and one of
- 55 whom is a representative of the Council of Small Towns;
- 56 (6) Two appointed by the minority leader of the House, one of whom
- 57 is an industrial hygienist and one of whom is a representative of the
- 58 Mechanical Contractors of Connecticut;
- 59 (7) Two appointed by the Governor, one of whom is a school nurse
- and one of whom is a representative of the Connecticut Conference of
- 61 Municipalities;
- 62 (8) The Secretary of the Office of Policy and Management, or the
- 63 Secretary's designee;
- 64 (9) The Commissioner of Education, or the commissioner's designee;
- 65 (10) The Commissioner of Administrative Services, or the
- 66 commissioner's designee;
- 67 (11) The Labor Commissioner, or the commissioner's designee;
- 68 (12) The Commissioner of Public Health, or the commissioner's
- 69 designee;

70 (13) The Commissioner of Consumer Protection, or the 71 commissioner's designee; and

- 72 (14) The Commissioner of Energy and Environmental Protection, or 73 the commissioner's designee.
  - (c) All appointments to the working group shall be made not later than sixty days after the effective date of this section. Any vacancy shall be filled by the appointing authority.
  - (d) The member of the Senate appointed by the president pro tempore of the Senate pursuant to subdivision (1) of subsection (b) of this section and the member of the House of Representative appointed by the speaker of the House of Representatives pursuant to subdivision (2) of subsection (b) of this section shall serve as the chairpersons of the working group. Such chairpersons shall schedule the first meeting of the working group, which shall be held not later than sixty days after the effective date of this section.
  - (e) Not later than [January 4, 2023] <u>July 1, 2024</u>, the working group shall submit a report on its findings and recommendations to the Governor and the joint standing committees of the General Assembly having cognizance of matters relating to education, labor and public health, in accordance with the provisions of section 11-4a of the general statutes. The working group shall terminate on [January 4, 2023] <u>July 1, 2024</u>, or on the submission of the report, whichever is later.
  - Sec. 2. (NEW) (Effective July 1, 2023) (a) The Department of Administrative Services shall establish and maintain a single electronic portal available on the Internet and located on the department's Internet web site for the purpose of receiving and posting the report and results of an inspection and evaluation of the indoor air quality and the heating, ventilation and air conditioning system of a school building conducted pursuant to subsection (d) of section 10-220 of the general statutes, as amended by this act. Such electronic portal shall be known as the School Indoor Air Quality and HVAC Portal.

(b) The department shall prescribe the form and manner in which a local or regional board of education shall submit the report and results of an inspection and evaluation of the indoor air quality and the heating, ventilation and air conditioning system of a school building. The department may consult with representatives from the indoor air quality and heating, ventilation and air conditioning industry to develop a standard reporting form for the electronic portal.

- (c) The School Indoor Air Quality and HVAC Portal shall include, but need not be limited to: (1) The standard reporting form developed pursuant to subsection (b) of this section and instructions for the submission of such form and the report and results of an inspection and evaluation of the indoor air quality and the heating, ventilation and air conditioning system of a school building, (2) a searchable database of the reports and results of such inspections and evaluations, and (3) aggregated data of such results.
- Sec. 3. Subsection (d) of section 10-220 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1*, 2023):
  - (d) (1) As used in this subsection:

- (A) "Certified testing, adjusting and balancing technician" means a technician certified to perform testing, adjusting and balancing of heating, ventilation and air conditioning systems by the Associated Air Balance Council, the National Environmental Balancing Bureau or the Testing, Adjusting and Balancing Bureau, or an individual training under the supervision of a Testing, Adjusting and Balancing Bureau certified technician or a person certified to perform ventilation assessments of heating, ventilation and air conditioning systems through a certification body accredited by the American National Standards Institute;
  - (B) "Heating, ventilation and air conditioning system" means the equipment, distribution network, controls and terminals that provide, either collectively or individually, heating, ventilation or air

conditioning to a building; and

- 134 (C) "Indoor air quality" has the same meaning as used by the United 135 States Department of Labor Occupational Safety and Health 136 Administration Standard Number 1910.1000 "OSHA Policy on Indoor 137 Air Quality".
- 138 (2) [Prior to January 1, 2008, and every three years] On and after 139 January 1, 2024, and annually thereafter, for every school building that 140 is or has been constructed, extended, renovated or replaced on or after 141 January 1, 2003, a local or regional board of education shall provide for 142 a uniform inspection and evaluation program of the indoor air quality 143 within such buildings [, such as] using the Environmental Protection 144 Agency's Indoor Air Quality Tools for Schools Program. The inspection 145 and evaluation program shall include, but not be limited to, a review, 146 inspection or evaluation of the following: (A) The heating, ventilation 147 and air conditioning systems; (B) radon levels in the air; (C) potential for 148 exposure to microbiological airborne particles, including, but not 149 limited to, fungi, mold and bacteria; (D) chemical compounds of concern 150 to indoor air quality including, but not limited to, volatile organic 151 compounds; (E) the degree of pest infestation, including, but not limited 152 to, insects and rodents; (F) the degree of pesticide usage; (G) the 153 presence of and the plans for removal of any hazardous substances that 154 are contained on the list prepared pursuant to Section 302 of the federal 155 Emergency Planning and Community Right-to-Know Act, 42 USC 9601 156 et seq.; (H) ventilation systems; (I) plumbing, including water 157 distribution systems, drainage systems and fixtures; (J) moisture 158 incursion; (K) the overall cleanliness of the facilities; (L) building 159 structural elements, including, but not limited to, roofing, basements or 160 slabs; (M) the use of space, particularly areas that were designed to be 161 unoccupied; and (N) the provision of indoor air quality maintenance 162 training for building staff. Local and regional boards of education 163 conducting evaluations pursuant to this subsection shall (i) make 164 available for public inspection the results of the inspection and 165 evaluation at a regularly scheduled board of education meeting and on 166 the board's or each individual school's web site, and (ii) submit the

report and results of such inspection and evaluation to the Department
of Administrative Services in accordance with the provisions of section
2 of this act.

170 (3) Prior to January 1, [2024] 2025, and every five years thereafter, a 171 local or regional board of education shall provide for a uniform inspection and evaluation of the heating, ventilation and air 172 173 conditioning system within each school building under its jurisdiction. 174 Such inspection and evaluation shall be performed by a certified testing, 175 adjusting and balancing technician, an industrial hygienist certified by 176 the American Board of Industrial Hygiene or the Board for Global EHS 177 Credentialing, or a mechanical engineer. Such heating, ventilation and 178 air conditioning systems inspection and evaluation shall include, but 179 need not be limited to: (A) Testing for maximum filter efficiency, (B) 180 physical measurements of outside air delivery rate, (C) verification of 181 the appropriate condition and operation of ventilation components, (D) 182 measurement of air distribution through all system inlets and outlets, 183 (E) verification of unit operation and that required maintenance has 184 been performed in accordance with the most recent indoor ventilation 185 standards promulgated by the American Society of Heating, 186 Refrigerating and Air-Conditioning Engineers, (F) verification of control sequences, (G) verification of carbon dioxide sensors and acceptable 187 188 carbon dioxide concentrations indoors, and (H) collection of field data for the installation of mechanical ventilation if none exist. The 189 190 ventilation systems inspection and evaluation shall identify to what 191 extent each school's current ventilation system components, including 192 any existing central or noncentral mechanical ventilation system, are 193 operating in such a manner as to provide appropriate ventilation to the 194 school building in accordance with most recent indoor ventilation 195 standards promulgated by the American Society of Heating, 196 Refrigerating and Air-Conditioning Engineers. The inspection and 197 evaluation shall result in a written report, and such report shall include 198 any corrective actions necessary to be performed to the mechanical 199 ventilation system or the heating, ventilation and air conditioning 200 infrastructure, including installation of filters meeting the most optimal 201 level of filtration available for a given heating, ventilation and air

conditioning system, installation of carbon dioxide sensors and 202 203 additional maintenance, repairs, upgrades or replacement. Any such 204 corrective actions shall be performed, where appropriate, by a 205 contractor, who is licensed in accordance with chapter 393. Any local or 206 regional board of education conducting an inspection and evaluations 207 pursuant to this subsection shall (i) make available for public inspection 208 the results of such inspection and evaluation at a regularly scheduled 209 meeting of such board and on the Internet web site of such board and 210 on the Internet web site, if any, of each individual school, and (ii) submit 211 the report and results of such inspection and evaluation to the 212 Department of Administrative Services in accordance with the 213 provisions of section 2 of this act. A local or regional board of education 214 shall not be required to provide for a uniform inspection and evaluation 215 under this subdivision for any school building that will cease to be used 216 as a school building within the three years from when such inspection 217 and evaluation is to be performed. The Department of Administrative Services may, upon request of a local or regional board of education, 218 219 grant a waiver of the January 1, 2025, deadline for the provision of a uniform inspection and evaluation under this subdivision if the 220 221 department finds that (I) there is an insufficient number of certified 222 testing, adjusting and balancing technicians, industrial hygienists 223 certified by the American Board of Industrial Hygiene or the Board for 224 Global EHS Credentialing or mechanical engineers to perform such 225 inspection and evaluation, (II) such board has provided for an 226 inspection that was performed in a different format, but is deemed equivalent by the department, or (III) such board has scheduled such 227 228 inspection and evaluation for a date after January 1, 2025.

- Sec. 4. Section 10-265t of the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2023*):
  - (a) For the purposes described in subsection (b) of this section, the State Bond Commission shall have the power from time to time to authorize the issuance of bonds of the state in one or more series and in principal amounts not exceeding in the aggregate [seventy-five million dollars] three hundred seventy-five million dollars, one hundred fifty

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236 <u>million dollars of which shall be effective July 1, 2024</u>.

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(b) The proceeds of the sale of said bonds, to the extent of the amount stated in subsection (a) of this section, shall be used by the Department of Administrative Services for the purpose of providing grants-in-aid for school air quality improvements [including, but not limited to, upgrades to, replacement of or installation of heating, ventilation and air conditioning equipment] under the heating, ventilation and air conditioning system grant program pursuant to section 10-265r, provided not more than fifty million dollars of such proceeds may be used to provide reimbursements for such improvements that were completed not earlier than March 1, 2020, and not later than July 1, 2022.

(c) All provisions of section 3-20, or the exercise of any right or power granted thereby, which are not inconsistent with the provisions of this section are hereby adopted and shall apply to all bonds authorized by the State Bond Commission pursuant to this section, and temporary notes in anticipation of the money to be derived from the sale of any such bonds so authorized may be issued in accordance with said section 3-20 and from time to time renewed. Such bonds shall mature at such time or times not exceeding twenty years from their respective dates as may be provided in or pursuant to the resolution or resolutions of the State Bond Commission authorizing such bonds. None of said bonds shall be authorized except upon a finding by the State Bond Commission that there has been filed with it a request for such authorization which is signed by or on behalf of the Secretary of the Office of Policy and Management and states such terms and conditions as said commission, in its discretion, may require. Said bonds issued pursuant to this section shall be general obligations of the state and the full faith and credit of the state of Connecticut are pledged for the payment of the principal of and interest on said bonds as the same become due, and accordingly and as part of the contract of the state with the holders of said bonds, appropriation of all amounts necessary for punctual payment of such principal and interest is hereby made, and the State Treasurer shall pay such principal and interest as the same become due.

Sec. 5. (NEW) (*Effective July 1, 2023*) On or before July 1, 2024, the Commissioner of Public Health shall develop guidelines regarding the establishment of an optimal thermal comfort range of sixty-five to eighty degrees Fahrenheit for school buildings and facilities, except that gymnasiums and natatoriums may have a larger optimal thermal comfort range.

This act shall take effect as follows and shall amend the following sections:					
Section 1	from passage	PA 22-118, Sec. 370			
Sec. 2	July 1, 2023	New section			
Sec. 3	July 1, 2023	10-220(d)			
Sec. 4	July 1, 2023	10-265t			
Sec. 5	July 1, 2023	New section			

# Statement of Legislative Commissioners:

In Section 4(a), "provided one hundred fifty million dollars of said authorization" was changed to "one hundred fifty million dollars of which", for proper form.

## **ED** Joint Favorable Subst.

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The following Fiscal Impact Statement and Bill Analysis are prepared for the benefit of the members of the General Assembly, solely for purposes of information, summarization and explanation and do not represent the intent of the General Assembly or either chamber thereof for any purpose. In general, fiscal impacts are based upon a variety of informational sources, including the analyst's professional knowledge. Whenever applicable, agency data is consulted as part of the analysis, however final products do not necessarily reflect an assessment from any specific department.

#### **OFA Fiscal Note**

## State Impact:

Agency Affected	Fund-Effect	FY 24 \$	FY 25 \$	Out Years \$
Treasurer, Debt	GF - Cost	See Below	See Below	465.4
Serv.				million total
Department of	GF - Cost	See Below	See Below	See Below
Administrative				
Services				

Note: GF=General Fund

# Municipal Impact:

Municipalities	Effect	FY 24 \$	FY 25 \$
Local and Regional School	STATE	See Below	See Below
Districts	MANDATE <sup>1</sup>		
	- Cost		

## Explanation

The bill, which makes changes to various school air quality-related programs, results in the following impacts to the state and municipalities:

**Section 1** makes changes to the school indoor air quality working group and has no fiscal impact.

**Section 2** results in costs to the Department of Administrative Services (DAS) to create the School Indoor Air Quality and HVAC

<sup>&</sup>lt;sup>1</sup> State mandate is defined in Sec. 2-32b(2) of the Connecticut General Statutes, "state mandate" means any state initiated constitutional, statutory or executive action that requires a local government to establish, expand or modify its activities in such a way as to necessitate additional expenditures from local revenues.

Portal. The estimated costs include initial startup costs to create the portal and ongoing costs including software licensing and maintenance of the portal. The costs may be reduced to the extent DAS is able to complete and maintain the portal leveraging existing resources within DAS.

**Section 3** results in an annual cost beginning in FY 24 to local and regional school districts to test indoor air quality in certain schools annually, rather than every three years. Such costs are anticipated to be no more than \$2,500 per inspection per school. The bill will triple each district's current inspection costs (unless the district is testing more frequently than currently required). Additionally, should the inspection results call for corrective actions, then there are potential costs to districts, which may in some cases be significant depending on the corrective actions needed. The costs are anticipated to vary widely among districts.

The bill also delays, from FY 24 to FY 25, the first year in which districts are required to test the HVAC system in each school, and allows districts to receive a waiver from the FY 25 deadline in certain circumstances. These provisions potentially change the timing in which districts will incur costs to test and upgrade their HVAC systems, but do not change the overall cost of doing so.

**Section 4** authorizes \$300 million in General Obligation bonds (\$150 million in each of FY 24 and FY 25) for the school air quality grant program, to be administered by the Department of Administrative Services. To the extent bonds are fully allocated and expended, total debt service is expected to be approximately \$465.4 million over the 20-year duration of the bonds.

**Section 5**, which requires the Department of Public Health to develop guidelines on optimal thermal comfort for school buildings and facilities, does not result in a fiscal impact to the agency.

# The Out Years

The annualized ongoing fiscal impact identified above would continue into the future subject to inflation and the terms of any bonds issued.

# OLR Bill Analysis sSB 1198

# AN ACT IMPLEMENTING THE RECOMMENDATIONS OF THE SCHOOL INDOOR AIR QUALITY WORKING GROUP.

#### SUMMARY

This bill requires school districts to do more frequent inspections and evaluations of public-school indoor air quality and to submit the inspection results to the Department of Administrative Services (DAS), which must post them on a new air quality inspection portal the bill requires DAS to create. Under current law, these inspections must be done every three years for any school constructed, extended, renovated, or replaced on or after January 1, 2003. The bill instead requires they be done annually beginning January 1, 2024.

It also gives school districts more time to do a less frequent heating, ventilation, and air conditioning system (HVAC) inspection that must be done by a certified technician, certified industrial hygienist, or a mechanical engineer. Current law requires these inspections to be done prior to January 1, 2024, and every five years after that. The bill moves the deadline to January 1, 2025, and creates a waiver process for certain situations.

The bill also makes various other changes related to school indoor air quality, including the following:

- 1. authorizes an additional \$300 million in state bonding to be used for the school HVAC system grant program (§ 4);
- 2. requires the Department of Public Health (DPH) to develop guidelines for an optimal temperature comfort range of 65 to 80 degrees Fahrenheit in school buildings and facilities, but allows gymnasiums and natatoriums to have a larger range (§ 5); and

3. expands the charge of the School Indoor Air Quality Working Group created under PA 22-118 and extends, from January 4, 2023, to July 1, 2024, the deadline by which it must report to the Education, Labor and Public Employees, and Public Health committees (§ 1).

EFFECTIVE DATE: July 1, 2023, except that the working group provisions take effect upon passage.

# § 3 — AIR QUALITY INSPECTIONS

# Submitting Results to DAS

Under the bill, school districts must submit reports and results from each of the following types of inspections to DAS in accordance with the bill (see § 2 below).

## Annual Air Quality Inspection or Evaluation

Current law requires school districts to do uniform indoor air quality inspections and evaluations every three years for any school built or renovated on or after January 1, 2003, and may do so using the federal Environmental Protection Agency's (EPA) Indoor Air Quality Tools for School Program (see BACKGROUND). The bill instead makes the inspections annual and requires, rather than allows, the inspections to use Tools for Schools.

Under existing law, unchanged by the bill, the inspection or evaluation must include the following, among other things: HVAC systems; radon levels; potential for exposure to microbiological airborne particles, including fungi, mold, and bacteria; chemical compounds of concern to indoor air quality, including volatile organic compounds; pest infestation, including insects and rodents; the degree of pesticide usage; plumbing, including water distribution and drainage systems, and indoor air quality maintenance training for staff.

By law, the inspection results must be made public at a school board meeting and posted online.

# HVAC Inspection by Certified Technician or Hygienist or Mechanical Engineer

The bill extends, from January 1, 2024, to January 1, 2025, the deadline by which school districts must start having HVAC inspections every five years that are done by a certified testing, adjusting, and balancing technician, industrial hygienist certified by the American Board of Industrial Hygiene or the Board for Global EHS Credentialing, or a mechanical engineer.

By law, a "certified testing, adjusting and balancing technician" is (1) a technician certified to do testing, adjusting, and balancing of HVAC systems by the Associated Air Balance Council, the National Environmental Balancing Bureau, or the Testing, Adjusting and Balancing Bureau (TABB) or (2) someone training under the supervision of a (a) TABB-certified technician or (b) person certified to do ventilation assessments of HVAC systems through a certification body accredited by the American National Standards Institute.

#### Waiver

The bill creates a process for DAS to grant waivers of the January 1, 2025, inspection and evaluation deadline. (It does not include a deadline to submit the waiver request or specify for how long the waiver is granted.)

Upon a school board's request, DAS may waive the deadline if it finds one of the following:

- 1. there are not enough certified testing, adjusting and balancing technicians, certified industrial hygienists or mechanical engineers to do the inspection and evaluation;
- 2. the board had an inspection that was done in a different format that DAS deems is equivalent; or
- 3. the board scheduled the inspection and evaluation for a date after January 1, 2025.

# § 2 — SCHOOL INDOOR AIR QUALITY AND HVAC PORTAL

The bill requires DAS to establish and maintain an online School Indoor Air Quality and HVAC portal to collect and make available reports and results of inspections and evaluations of school indoor air quality and HVAC systems the bill requires.

The department must prescribe how school boards submit the reports and results and may consult with HVAC and indoor air quality industry representatives to help develop a standard reporting form for the portal.

The portal must include (1) the standard reporting form and instructions on how to submit the form with the inspection results, (2) a searchable database of the inspection results, and (3) aggregated data of the results.

# § 4 — BONDING FOR SCHOOL INDOOR AIR QUALITY IMPROVEMENTS

The bill increases, from \$75 million to \$375 million, the bond authorization for funding under the HVAC system grant program. It also requires that \$150 million of this authorization take effect July 1, 2024.

Current law requires DAS to use the bond proceeds to provide grants-in-aid for school air quality improvements including upgrading, replacing, or installing HVAC equipment. The bill instead specifies the improvements include those authorized under the HVAC grant program (PA 22-118, § 367, codified at CGS § 10-265r).

# § 1 — INDOOR AIR QUALITY WORKING GROUP

PA 22-118 created a 23-member working group on school indoor air quality to study and make recommendations on various related issues, such as (1) optimal temperature ranges to ensure healthy air and promote student learning, (2) emergency air quality conditions that warrant temporary school closures, and (3) best practices for properly maintaining school HVAC systems. For the latter, the bill specifies that its recommendations must also include the frequency and scope of the maintenance.

The bill also requires the working group to study and recommend a needs-based system for equitably distributing funds under the HVAC system grant program for schools.

#### **BACKGROUND**

#### **Tools for Schools**

The EPA's Tools for Schools program helps schools identify and address indoor air quality issues, including using its action kit, which has guidance for existing school staff to do practical inspections and take other steps at little or no cost.

## **COMMITTEE ACTION**

**Education Committee** 

Joint Favorable Substitute Yea 41 Nay 3 (03/24/2023)