

MEMORANDUM

TO: Board of Directors, Massachusetts School Building Authority
FROM: Katherine P. Craven, Executive Director
DATE: January 27, 2010
RE: Space Standards and Guideline Proposed Revisions

Since 2007, the Massachusetts School Building Authority has been collaborating with over 140 Districts invited into the capital pipeline to find the most cost-effective solution which meets the educational program resulting in Board approval of over 65 project scope and budget agreements. Of these 65 project scope and budget agreements, 10 have been high schools. Throughout these collaborations, the MSBA has listened to the space needs identified by the Districts to support their existing educational programs as well as their goals for additional programs. The MSBA remains committed to right-sizing projects which provide the most benefit for the school children that can be financially supported by the District as well as the MSBA.

Based upon this feedback, the MSBA has reviewed the educational program space standards and guidelines as described in 963 CMR 2.06 and the space summary template for high schools. The MSBA has been able to work with Districts to meet educational programs in the majority of situations by establishing evaluation parameters which look at the District's overall needs in relationship to these standards. These current evaluation parameters include:

- Addition/Renovations - A broader interpretation of guidelines for an addition/renovation project than would be applied for a new school;
- SPED - The provision of special education space above that allowed by the guidelines based on the District's substantiation of existing or anticipated program needs;
- Collaboratives - The request for identification followed by the provision of special education space as may be needed for Collaborative Spaces to which the District may belong;
- Art/Music/Vocational Spaces - A balance of overall square footage between the Arts/Music Programs and the Vocational Technical Spaces – allowing lower space need in one category to offset the greater space needs in the other;
- Core Classrooms - Flexibility in the core academic spaces to allow for varying sizes of general classrooms, higher number of classrooms than allowed by the guidelines and additional science labs as justified by the educational program.

Although, to date, the MSBA has been able to successfully reach agreement with Districts utilizing these parameters, the MSBA has identified common requests across many of the reviews and discussions about educational spaces. After detailed review of existing guidelines and the input from the Science Lab Task Force committee, the MSBA has prepared a recommendation for revisions to its regulations targeted to include the common elements from the work done to date. There have been additional requests for spaces larger than the current regulations and/or even the regulations noted below but the MSBA proposes the following revisions as an attempt to provide the standard needs of all and minimize the overall impact to the gross square foot of the building.

This review and proposed recommendations are based on comments provided by the Districts, their design teams and Owner's Project Managers, and input solicited by the MSBA. The MSBA looks forward to working during the public process with the BSA, the Districts, superintendents, school committee

members, school business officials and other stakeholders as was done previously during the implementation of the 2006 regulations.

Highlights of the proposed revisions include the following changes in program areas as outlined below with the associated adjustment per category required :

Core Academic Spaces:

- Increase the minimum size of the science labs in accordance with National Science Teachers Association (NSTA) and as recommended by the MSBA's Science Lab Task Force;
 - Science classrooms would increase from 1200 nsf to 1440 nsf;
 - Science prep rooms will increase from 80 nsf per lab to 200 nsf per lab;
 - Central Chemical Storage Area will be added for 200 nsf;
- Change the range of the allowable net square footage for the general classrooms from 850 nsf - 950 nsf to 825 nsf - 950 nsf.
- The current Educational Space Template calculates allowable classroom space by using the upper bound of the classroom range (950 net square feet per classroom). We would propose changing the calculation to use 850 net square feet per classroom and allow the "extra" 100 nsf per classroom to be used as discretionary square footage within the core academic spaces to allow for teacher prep areas, storage, additional classrooms or work centers.

Art & Music:

- The current standards allow for one combination band/chorus room at 1500 net square feet.
- The proposed change would allow an additional 1500 nsf for a separate chorus room (as opposed to the current band & chorus combination).
- Add a 500 nsf music storage room.

Vocations & Technology:

- Reduce the number of technology classrooms / shop rooms (a reduction of one classroom and one shop per school). This saved space will be reallocated to the Core Academic Spaces category.

Health & Physical Education:

- Increase the size of the gymnasium from the current 10,000 nsf to a proposed 12,000 nsf.
- This will generally allow for a gym with three teaching stations and bleachers on one side of the main court.

Dining & Food Service:

- Add one 600 nsf scramble serving area to the dining & food service cafeteria area.

Based on a student enrollment of 1000 (typical high school student population), the following table shows the current MSBA total Gross Square Feet allowance and the MSBA proposed updates.

Proposed Gross Areas per Space Type for 1000 Student Enrollment HS

	Current Regulations	MSBA Proposal
Core Academic Spaces	65,805	73,815
Art & Music	7,050	10,050
Vocations & Technology	19,200	14,400
Health & Physical Education	29,700	32,700
Dining & Food Service	12,300	13,200

Based on a student enrollment of 1000 (a typical high school student population), the following table shows the current MSBA total Gross Square Feet allowance and the MSBA proposed updates.

Proposed Gross Square Feet Totals for 1000 Student Enrollment HS

	Current Regulations	MSBA Proposal
Total Gross Square Feet	185,000	195,110
Proposed Additional Gross Square Feet	-	10,110
Total Gross Square Feet per Student	185	195.1
Proposed Additional Gross Square Feet per Student	-	10.1

Revisions to Table 3 Gross Square Feet per Student – Academic High Schools

In order to address the space efficiencies inherent to larger high school buildings, Attachment A *Proposed Table 3 – Gross Square Feet per Student – Academic High Schools* shows revisions to the Academic High School table in the current regulations. The current table shows enrollments from 600 to 1000 students and does not include an associated maximum grossing factor. The proposal is to extend the range of the table from 600 to 2000 students and to include a maximum grossing factor limit associated with each enrollment. The proposed revisions include providing a higher gross square footage allowance for smaller high schools with enrollments as low as 600 students, and lowering gross square feet per student as enrollment increases to 2000 students. This attachment shows current and proposed regulations, and includes the proposed space modifications listed above.

Attachment A - Guidelines Proposed Revisions Memo Jan 2010
Proposed Table 3 - Gross Square Feet per Student - Academic High Schools

Projected Enrollment	Current GSF per Student	Proposed GSF per Student	Maximum Grossing Factor
Less than 600	To be determined based on curriculum		1.50
Between 600 and 619	205	226	1.50
Between 620 and 639	204	226	1.50
Between 640 and 659	203	222	1.50
Between 660 and 679	202	219	1.50
Between 680 and 699	201	216	1.50
Between 700 and 719	200	214	1.50
Between 720 and 739	199	212	1.50
Between 740 and 759	198	210	1.50
Between 760 and 779	197	209	1.50
Between 780 and 799	196	207	1.50
Between 800 and 819	195	206	1.50
Between 820 and 839	194	205	1.50
Between 840 and 859	193	204	1.50
Between 860 and 879	192	202	1.50
Between 880 and 899	191	201	1.50
Between 900 and 919	190	200	1.50
Between 920 and 939	189	200	1.50
Between 940 and 959	188	198	1.50
Between 960 and 979	187	197	1.50
Between 980 and 999	186	195	1.50
Between 1000 and 1019	185	195	1.50
Between 1020 and 1039	(1000 and greater)	194	1.50
Between 1040 and 1059		193	1.49
Between 1060 and 1079		192	1.49
Between 1080 and 1099		190	1.48
Between 1100 and 1119		189	1.48
Between 1120 and 1139		188	1.48
Between 1140 and 1159		186	1.47
Between 1160 and 1179		185	1.47
Between 1180 and 1199		183	1.46
Between 1200 and 1219		182	1.46
Between 1220 and 1239		181	1.46
Between 1240 and 1259		180	1.45
Between 1260 and 1279		178	1.45
Between 1280 and 1299		177	1.44
Between 1300 and 1319		175	1.44
Between 1320 and 1339		174	1.44
Between 1340 and 1359		173	1.43
Between 1360 and 1379		172	1.43
Between 1380 and 1399		171	1.42
Between 1400 and 1419		171	1.42
Between 1420 and 1439	170	1.42	
Between 1440 and 1459	169	1.41	
Between 1460 and 1479	167	1.41	
Between 1480 and 1499	166	1.40	

Projected Enrollment	Current GSF per Student	Proposed GSF per Student	Maximum Grossing Factor
Between 1500 and 1519	185 (1000 and greater)	165	1.40
Between 1520 and 1539		165	1.40
Between 1540 and 1559		165	1.40
Between 1560 and 1579		164	1.40
Between 1580 and 1599		163	1.40
Between 1600 and 1619		162	1.40
Between 1620 and 1639		162	1.40
Between 1640 and 1659		162	1.40
Between 1660 and 1679		163	1.40
Between 1680 and 1699		162	1.40
Between 1700 and 1719		161	1.40
Between 1720 and 1739		160	1.40
Between 1740 and 1759		160	1.40
Between 1760 and 1779		160	1.40
Between 1780 and 1799		160	1.40
Between 1800 and 1819		160	1.40
Between 1820 and 1839		160	1.40
Between 1840 and 1859		159	1.40
Between 1860 and 1879		159	1.40
Between 1880 and 1899		159	1.40
Between 1900 and 1919	158	1.40	
Between 1920 and 1939	158	1.40	
Between 1940 and 1959	158	1.40	
Between 1960 and 1979	158	1.40	
Between 1980 and 2000	157	1.40	
Greater than 2000	To be determined based on curriculum		1.40