

Maynard Public Schools

Facility Study

Merrimack Education Center
Chelmsford, MA

June 2, 2008

MAYNARD PUBLIC SCHOOLS SPACE ANALYSIS

The focus of the Maynard School Facility Space Analysis was to determine, the space needs of the school district based on current enrollments and programmatic requirements for grades PreK – 12. We also sought to make recommendations to the School Facility Advisory Committee in terms of possible avenues of action to pursue in resolving issues relative to educational space in the Maynard Public Schools.

A walk-through of each building with a building administrator or their designee provided us with an understanding of how current space is being utilized as well as identifying and clarifying concerns regarding space needs for existing and proposed educational programs. We identified these concerns and developed a school space inventory profile that identifies the number and type of spaces that exist in each school. (Appendix 1)

In addition to reviewing the size and condition of each teaching space we have evaluated each space on the ability of the space to support the educational program it houses. We also look for programmatic space equity; i.e. equality of space for each program in each school to assure no child is deprived of educational opportunities because of a lack of facilities in one school that may be available to children attending other schools. This is not an issue in Maynard where there is only one school for each segment of the student population.

Educational space standards that we referenced throughout this document can be found in Educational Program Space Standards, Section 2.06 of CMR 963 Massachusetts School Building Authority. (Appendix 2)

Green Meadow Elementary School

The Green Meadow School was originally constructed in 1954. In 1974 a cafetorium and a gymnasium were added and in 1988 a semi-circular classroom wing was added connecting both ends of the previous building.

Presently there is an enrollment of 494 students in a PK – 3 configuration broken down as follows: PK, 61 students; Kindergarten, 108 students; Grade 1, 124 students; Grade 2, 110 students; Grade 3, 91 students.

There are two AM & PM sessions and one full-day session of Pre-K and seven full day kindergarten classes. Three classrooms are utilized for Pre-K and seven classrooms for Kindergarten. These classrooms do not have lavatory facilities to accommodate younger children, which a more modern facility might provide. Sixteen classrooms are used for general classes to accommodate the educational programs of grades 1 – 3.

Four regular classrooms used for the Excel/star program were unoccupied at the time of our visit. These "Excel/star" classrooms are used for a variety of purposes intermittently during the day. Also, one regular classroom plus a small office is used by the Case Collaborative. This configuration effectively removes five classrooms from use by the regular educational program, thus creating over-crowding in other portions of the building. The district should evaluate whether it can afford to dedicate these spaces to programs other than the regular educational program.

Four classrooms are presently used for special needs but additional space for special needs services are needed. Spaces for "Time Out", therapy or testing are very limited. Tutorial services are presently conducted in corridor areas that do not allow for either privacy or quiet. Also the OT/PT program utilizes one regular classroom. The ELL program is held in a small cramped room.

The building has very limited storage space and there are no dedicated spaces for computers. Conference space is limited.

The cafeteria (3700 sq. ft.) and the library/media center (3300 sq. ft.) are adequate. Space guidelines issued by the Massachusetts School Building Authority indicate that elementary schools with enrollments between 490 and 499 students should have a gross square foot allowance of 158 sq. ft. per student. This calculation yields a gross square foot requirement of 78,052. An analysis done by Tappe Associates in 2006, shows the present building contains 87,000 gross square feet. This puts the overall building size within allowable gross square foot limits that should theoretically accommodate its present student population.

An increase in the number of classrooms at the high school would allow the relocation of grade 3 from the Green Meadow School to the Fowler and grade 8 from the Fowler School to the high school. This would open up more educational space at the Green Meadow School and create more educational flexibility across the educational spectrum.

Fowler Middle School

The Fowler Middle School is a new well designed facility that opened in 2001. The school presently houses 491 (+/-) students in grades 4 – 8. The design of the school basically allows each grade to occupy its own wing thereby effectively separating elementary grades 4 and 5 from middle school grades 6, 7, and 8.

The building is airy, well lighted, with excellent educational facilities and dedicated spaces. The library/media center is a superior space for either individual or small group study.

The building is uncrowded and there is adequate space for all educational activities presently scheduled.

Maynard High School

The High School was opened in 1962 and the library was renovated in 1988. A fire necessitated the rebuilding of the cafeteria and auditorium in 1992.

Following a review by the New England Association of Schools and Colleges it was voted to place the school on probation because of "significant deficiencies in its adherence to the Commission's standards for Accreditation on Curriculum, School Resources for Learning and Community Resources for Learning."

A letter from the Association to then principal John Lent details shortcomings found in the building. It is not the purpose of this report to detail these issues. However, our review of the school highlights the fact that this is a tired building that no longer meets the educational needs of Maynard students and cannot adequately support the educational program it is supposed to serve.

The school presently has 358 (+/-)students enrolled. Class sizes breakdown as follows: Grade 9 – 83; Grade 10 – 95; Grade 11 - 94; Grade 12 – 86.

Science laboratories are outdated and undersized without the basic safety equipment expected in a modern educational science facility such as emergency showers, eye washers and safety hoods to prevent noxious, and/or toxic vapors from permeating educational spaces. Water, gas outlets and lab space for individual students or working groups is either very limited or non-existent. Chemicals and other flammable products are stored in cabinets that do not meet safety codes for the storage of hazardous materials. This is a problem that is of immediate concern and should be remedied as quickly as possible.

Many educational spaces are undersized according to space standards established by the MSBA. The library/media center is inadequate and storage spaces are very limited. Our analysis of the high school class schedule indicates the basic educational program requires 14 regular classrooms. (See attached analysis) We have identified 17 regular classrooms to accommodate the existing educational program so the availability of classrooms does not appear to be the primary problem at the moment. However, the future addition of new programs or the expansion of existing programs could create a shortage of classroom space.

According to the 2006 facility study done by Tappe Assoc. there are 89,000 gross square feet available in the building. MSBA standards require 205 gsf/student in academic high schools. A population of 358 students @205 gsf/student yields a total requirement of 73,950 gross square feet. According to these figures the present school appears to be of adequate size to accommodate its students. However, the configuration of the facility limits the ability of many of these spaces to be used effectively.

The art department, art studio and art storage presently occupy the former auto and metal shop, (2280 sq. ft.) substantially more than required under MSBA guidelines. An adjoining space previously used for wood woodworking (approx.1500 sq. ft.) is utilized for a variety of activities, none of which use the space to full advantage. This area of almost 4000 sq. ft. existing within the footprint of the current building, were it totally renovated and reconfigured, could be turned into useful comprehensive educational space.

While the building is ostensibly handicapped accessible, with an elevator available to the second floor, other parts of the building are difficult to access and the auditorium stage has no handicapped accessibility.

Locker rooms are in a poor state of repair and shower rooms for physical education are not being used.

The building cannot adequately support the mandated curriculum and is in need of major renovations to bring it into compliance with current educational space and safety requirements.

Options

We analyzed the various options developed by the School Facility Advisory Committee in a draft report to the Maynard School Committee dated January 2008.

- 1) **Do nothing:** This cannot be considered a viable option. Allowing the high school to lose its accreditation would negatively impact the students of Maynard. Also having a non-accredited high school would have a long-term deleterious effect on the property values of the Town.
Presently, according to data from the Department of Education, as a participant in the school choice program, Maynard accepts 25 students from other districts bringing approximately \$145,535 into the Town. At the same time 41 Maynard students are opting to attend school in other communities costing Maynard \$204,786. It is highly likely that with a loss of accreditation at the High School fewer out of district students would opt to attend the Maynard Schools while more Maynard students would opt, under school choice, to attend an accredited high school in another community.
This would cost Maynard the per pupil expense of educating many more students in other school systems while losing revenue from prospective incoming school choice students. In other words the "do nothing" option could become a very expensive choice for the Town of Maynard.
- 2) **Regionalize:** Preliminary inquiries to likely partners for regionalization did not yield any positive responses. The likelihood of an existing regional system having space for Maynard's 350 students is highly unrealistic. Also it is questionable as to whether state funding for a project to expand an existing regional facility would be available. At present this does not appear to be a realistic option for Maynard.
- 3) **Tuition-out Students:** Once again the issue of space in other systems becomes an issue. How many could be accommodated? Where? For how long? How much money is Maynard willing to spend to educate its students elsewhere? Cost of transportation to the target school(s) is an issue. At best this is not a solution to the problem but simply a "finger in the dike", while the major problem is addressed.
- 4) **Do Repairs Only:** As noted in the draft report this does not address the issues of limited facilities, inadequate space and the inability of that space to support the educational program. This is an expensive option without resolving any of the problems that presently plague the high school. It requires substantial financial investment and still leaves the Town with an outdated inadequate building, unable to support a contemporary educational curriculum. Also extensive disruption to faculty, staff and students can be anticipated.

- 5) **Renovate/Expand:** We address this option further in our recommendations
- 6) **Build New:** Would provide a state of the art facility for the Town for the next 40+ years. No disruption to existing education programs or students while construction is underway. See our further comments on this option in the recommendation section.
- 7) **Two School Option: (close the high school; build additions to the Green Meadow and Fowler schools) and Reconfigure Grades:**
 - a) Despite some shortcomings at the Green Meadow School, both it and the Fowler MS are presently viable school buildings maintaining good educational programs.
 - b) Extensive alterations would have to be made to the Fowler MS, which is only seven years old to make it workable as a high school. Also extensive additions and renovations, including classroom areas and core facilities would have to be made to the Green Meadow School to accommodate a significantly larger school population.
 - c) Flip-flopping the high school and the middle schools does not address the primary problem of a high school that can no longer fulfill its educational mission. As noted above, the Fowler Middle School which is only seven years old and was built to support a middle school/elementary educational program would require extensive alterations to make it work as a high school.
 - d) There are no lockers on the first floor to accommodate the needs of students. Athletic locker rooms are small and limited since they were not designed to accommodate older students. Also there are no shower facilities available for athletic teams. Science facilities were designed for a middle school program rather than a senior high school. As a result facilities for chemistry, physics, biology, life sciences, etc. are either limited or non-existent. The art room is under-sized for a high school art program and there are no lecture halls.
 - e) Major repairs and alterations would still have to be made to the high school building to make it attractive, safe and habitable for a middle school program.
- 8) **Purchase/Renovate other properties in town, e.g. Parker St:** What would the cost be? How would these properties be utilized? What problems would this solve? Would MSBA reimburse the town? Is this simply avoiding the basic problem?

RECOMMENDATIONS

While it is healthy and productive to brainstorm a problem, it is necessary to identify where the actual problem exists and move in a comprehensive manner to resolve it in the best interests of the Town of Maynard and its students.

Addressing the needs of an outdated high school building that is unable to support a contemporary educational program resulting in the threatened loss of accreditation is the primary problem facing the school department. The Fowler is a new, excellent educational facility and the Green Meadow Elementary School, although somewhat crowded because of the way its space is presently utilized, is an adequate elementary facility.

By addressing the needs of the high school it also becomes possible to alleviate other educational needs in the system through the reconfiguration of grades. The creation of additional classrooms at the high school would enable grade 8 (90) students to move from the middle school to the high school and grade 3 (91 students) at Green Meadow to move to the Fowler Middle School. This would eliminate crowding at the Green Meadow School and provides educational flexibility among all three buildings.

Two courses of action should be undertaken by the School Facility Advisory Committee. The first is to commission an architectural study that would look at the overall cost and feasibility of building a new high school. As noted above, this would provide a state of the art facility for the next 40(+/-) years and would not disrupt the educational program while construction is underway. The second is to commission an architectural study of the cost of a total renovation, expansion and redesign of the present facility. Until these studies are completed it will not be known which of these two avenues will be most cost effective for the Town.

Renovation and expansion of the current building should include:

- 1) **Construction of a new and separate state of the art science wing** that would contain science classrooms, chemistry, biology and earth and life science laboratories along with lecture rooms.
- 2) This would open up four current science classrooms/labs and create **four additional regular classrooms**.
- 3) The former **metal shop (presently the art facility) and the old woodworking area** are not being adequately used nor are they presently conducive to the general education program. These areas, within the present building footprint, contain approx. 4000 sq. ft. and could be reconstructed to accommodate either existing or additional educational programs.
- 4) The **library/media center** which is presently undersized and inadequate could be reconfigured and possibly expanded into a portion of the existing courtyard area.
- 5) **HVAC and other systems** would have to be updated including electrical systems to accommodate heavier use and additional loads. Other systems such as roof, fenestration, lighting, etc. would also have to be addressed.
- 6) **Construction would necessarily have to be phased** with the construction of the new science wing being of first priority. There would be some disruption of existing programs which might of necessity have to be **housed in temporary (portable) classrooms** during the periods of construction.

- 7) **A renovation of interior spaces** to bring it up to contemporary educational standards.

Presently, with the educational limitations of the high school and crowding being an issue at the elementary school, the administration has few options available to it in resolving these problems. We believe our recommended course of action i.e. studying the feasibility of building a new Maynard High School and, at the same time, determining the cost of renovating and expanding the current building, is prudent.

Resolving the problems at the high school would remove the "cork from the bottle," opening up the possibility of grade reconfiguration and opening up educational space in other school facilities.

By moving in this direction the school department can show positive steps toward resolving the issues that created the accreditation problem at the high school as well as creating more educational flexibility throughout the system. This would alleviate educational space needs in the Maynard Schools well into the foreseeable future.

APPENDIX 1

Merrimack Education Center
School Building Assistance Services

School Space Inventory Guide

School	Age	# of Students	Grades	Acreage
	Original 1954			
	Add 1974			
Green Meadow	Add 1988	494 (+/-)	Pk - 3	

Educational Spaces	No.	Comments
Pre-K	3	
Kindergarten	7	
General Classroom	16	
Art	1	
Music	1	
Computer	-	
Science	-	
Library/Media	1	
Gym	1	
Special Needs	4	
OT / PT	1	Utilizes regular classroom
Remedial / Tutorial	2	
Kitchen / Cafetorium	✓	
Guidance / Counseling	1	
Health Room	✓	
Kitchen / Cafetorium	✓	
Admin Suite	✓	
Conference Room	✓	
Planning / Teacher's Room	1	
Star / Excel	4	4 regular classrooms and 1 small room
ELL	1	Very small, inadequate
Case Collaborative	1	1 regular class plus small office

APPENDIX 1 (CONT'D)

Merrimack Education Center
School Building Assistance Services

School Space Inventory Guide

School	Age	# of Students	Grades	Acreage
Fowler Middle School	2001	491 (+/-)	4 - 8	

Educational Spaces	No.	Comments
Pre-K	-	
Kindergarten	-	
General Classroom	26	
Art	2	
Music	2	Plus Band room, 6 Practice rooms
Computer	3	
Home Economics	1	
Science	4	
Library / Media Center	1	Excellent space
Gym	1	Plus Weight room
Special Needs	6	Regular classrooms
Remedial / Tutorial	2	Speech - OT/PT
Cafeteria / Kitchen	1	Plus Teacher Dining and Lounge
Auditorium / Assembly Hall	1	650 capacity
Guidance Suite	1	3 spaces
Health Suite	1	
Admin Suite	1	
Conference Room	2	1 Admin Suite, 1 Guidance
Planning Room	1	
Teacher's Room	2	
Time Out	1	
Team Room	3	
Tech Ed Room	2	

APPENDIX 1 (CONT'D)
Merrimack Education Center
School Building Assistance Services

School Space Inventory Guide

School	Age	# of Students	Grades	Acreage
High School	Original	1962		
	Renov Library	1988		
	Rebuild Café &			
	Auditorium	1992	358 (+/-)	9 - 12

Educational Spaces	No.	Comments
Pre-K	-	
Kindergarten	-	
General Classroom	17	
Art	1	Former Metal shop
Music	1	Plus 2 Practice rooms
Computer	2	
Science	4	
Library	1	Undersized, inadequate
Gym	1	
Special Needs	3	Regular classrooms
Remedial / Tutorial	1	Very poor area
Cafeteria / Kitchen	1	Plus Teachers Dining area
Auditorium	1	
Guidance Suite	1	2 spaces
Health Suite	1	
Admin Suite	1	
Conference Room	1	
Planning Room	1	Small Copy / Work room
Teacher's Room	1	
Cable TV Space (COMCAST)		
WAVM		
CAD Lab	1	In old Woodworking area

APPENDIX 2

963 CMR: MASSACHUSETTS SCHOOL BUILDING AUTHORITY

2.06: Educational Program Space Standards

(1) **General Provisions.** The approved Design and Educational Program and the Project Scope and Budget Agreement shall be the basis for the design of an Approved Project, and the Approved Project shall not diverge from said Project Scope and Budget Agreement without the written consent of the Authority.

(2) **Planned Enrollment.** The Enrollment Projection, as determined by the Authority.

(3) **Prototypical Gross Square Foot Per Pupil Standards.** The Authority may annually review the set of educational program space standards contained in the MSBA Educational Program Space Standards and Guidelines, which provide the basis for gross square foot per pupil allowances promulgated under 963 CMR 2.00. Pursuant to M.G.L. c. 70B, § 9(b), the MSBA Educational Program Space Standards and Guidelines may define prototype school design and space recommendations for each specified program activity eligible for funding from the Authority for new construction and said guidelines may also include space recommendations for reconstruction or renovations.

(4) **Per Student Space Allowance.**

(a) The Authority shall not authorize design plans that exceed gross square foot per student allocations based upon the Enrollment Projection of the Proposed Project and the limitations in gross square footage established in 963 CMR 2.06: *Tables 1, 2 and 3*, except as provided in 963 CMR 2.00. These standards are reflective of realistic, future-oriented, and contemporary educational program goals and are based on the summation of square foot allocations for each itemized educational space. The gross square footage per student allowances promulgated herein are based upon the MSBA Educational Program Space Standards and Guidelines which are based upon model educational programs for facilities of smaller and larger enrollments in order to develop a variable gross square foot per student allowance that accommodates the differing needs and economies of scale in facilities of smaller and larger enrollments.

(b) The space standards contained in 963 CMR 2.00 and in the MSBA Educational Program Space Standards and Guidelines may not necessarily be applicable to reconstruction, renovation or repair projects. These standards and guidelines were developed by the Authority for determining maximum size and costs related to new construction and should not be used for assessing safety standards or educational adequacy of existing facilities that were constructed in accordance with the standards and guidelines that prevailed at the time of construction. The Authority shall consider Proposed Projects on a case-by-case basis and in some cases different square footages may be determined at the discretion of the Authority.

Table 1: Gross Square Feet per Student – Elementary Schools

Less than 300	180	Between 450 and 459	163
Between 300 and 309	180	Between 460 and 469	161
Between 310 and 319	179	Between 470 and 479	160
Between 320 and 329	178	Between 480 and 489	159
Between 330 and 339	177	Between 490 and 499	158
Between 340 and 349	175	Between 500 and 509	157
Between 350 and 359	174	Between 510 and 519	156
Between 360 and 369	173	Between 520 and 529	154
Between 370 and 379	172	Between 530 and 539	153
Between 380 and 389	171	Between 540 and 549	152
Between 390 and 399	170	Between 550 and 559	151
Between 400 and 409	168	Between 560 and 569	150
Between 410 and 419	167	Between 570 and 579	149
Between 420 and 429	166	Between 580 and 589	147
Between 430 and 439	165	Between 590 and 599	146
Between 440 and 449	164	600 and greater	145

APPENDIX 2 (CONT'D)

963 CMR: MASSACHUSETTS SCHOOL BUILDING AUTHORITY

2.06: continued

Table 2: Gross Square Feet per Student – Middle and Junior High Schools

Less than 400	190	Between 580 and 589	175
Between 400 and 409	190	Between 590 and 599	174
Between 410 and 419	189	Between 600 and 609	173
Between 420 and 429	188	Between 610 and 619	172
Between 430 and 439	187	Between 620 and 629	171
Between 440 and 449	187	Between 630 and 639	170
Between 450 and 459	186	Between 640 and 649	169
Between 460 and 469	185	Between 650 and 659	169
Between 470 and 479	184	Between 660 and 669	168
Between 480 and 489	183	Between 670 and 679	167
Between 490 and 499	182	Between 680 and 689	166
Between 500 and 509	181	Between 690 and 699	165
Between 510 and 519	181	Between 700 and 709	164
Between 520 and 529	180	Between 710 and 719	163
Between 530 and 539	179	Between 720 and 729	163
Between 540 and 549	178	Between 730 and 739	162
Between 550 and 559	177	Between 740 and 749	161
Between 560 and 569	176	750 and greater	160
Between 570 and 579	175		

Table 3: Gross Square Feet per Student – Academic High Schools

Less than 600	205	Between 800 and 809	195
Between 600 and 609	205	Between 810 and 819	195
Between 610 and 619	205	Between 820 and 829	194
Between 620 and 629	204	Between 830 and 839	194
Between 630 and 639	204	Between 840 and 849	193
Between 640 and 649	203	Between 850 and 859	193
Between 650 and 659	203	Between 860 and 869	192
Between 660 and 669	202	Between 870 and 879	192
Between 670 and 679	202	Between 880 and 889	191
Between 680 and 689	201	Between 890 and 899	191
Between 690 and 699	201	Between 900 and 909	190
Between 700 and 709	200	Between 910 and 919	190
Between 710 and 719	200	Between 920 and 929	189
Between 720 and 729	199	Between 930 and 939	189
Between 730 and 739	199		

APPENDIX 2 (CONT'D)

963 CMR: MASSACHUSETTS SCHOOL BUILDING AUTHORITY

		Between 940 and 949	188
Between 740 and 749	198	Between 950 and 959	188
Between 750 and 759	198	Between 960 and 969	187
Between 760 and 769	197	Between 970 and 979	187
Between 770 and 779	197	Between 980 and 989	186
Between 780 and 789	196	Between 990 and 999	186
Between 790 and 799	196	1000 and greater	185

2.06: continued

(5) Vocational Technical Schools. Vocational Technical Schools and the Vocational Educational Space components of Comprehensive High Schools shall not exceed 225 gross square feet per pupil and any additional programmatic requirements may be considered on a case-by-case basis by the Authority in conformity with M.G.L. c. 74 requirements and a comparison of existing school facilities with similar vocational program requirements.

(6) Special Education Spaces. Spaces for special education classes/programs may receive special consideration at the discretion of the Authority. The gross square feet per student defined herein includes a baseline assumption that 8% of the total planned enrollment will be enrolled in separate special education programs. Notwithstanding the gross square footage maximum standards established herein, additional space consideration may be given, at the sole discretion of the Authority, if the Eligible Applicant documents and certifies to the Authority why there is a need to exceed the maximum gross square footage allowances.

(7) Space Allowance by Program Activity. The approved Design and Educational Program and Project Scope and Budget Agreement shall be within the limitations as set forth in 963 CMR 2.06: *Table 4*:

Table 4

Pre-Kindergarten and Kindergarten classrooms contained lavatories	700 - 1400 net square feet
Core Classrooms	850 - 1000 net square feet
Science/lecture Laboratories	600 - 1200 net square feet

For all other spaces, the MSBA Educational Program Space Standards and Guidelines shall be followed in planning school facilities. Said Guidelines may also provide school designers and school building committees with prototype building programs for elementary, middle, and high schools, and other grade configurations as determined by the Authority. The Eligible Applicant may make reasonable departures from the MSBA Educational Program Space Standards and Guidelines with a prior written determination of the Authority, at their sole discretion, that such departures are consistent with the intent of 963 CMR 2.00 to provide adequate, safe, cost effective and programmatically sound school facilities.

APPENDIX 3

MAYNARD HIGH SCHOOL CLASS SCHEDULE AND ROOM REQUIREMENTS

Dept.	Course	Sections	Days/Wk	Session/Wk	Periods/Day	Periods/Wk	Rms. Rq'd.
Math	Alg I	2	5	10	7	35	0.286
	Geom.	3	5,6,5	16	7	35	0.457
	Hon. Geom	1	5	5	7	35	0.143
	Topics-Math	3/sem	1,2,2	5	7	35	0.143
	Alg II	3	5,5,6	16	7	35	0.457
	Hon. Alg.II	1	6	6	7	35	0.171
	Adv. Fundamentals	2	5	10	7	35	0.286
	Pre Calc	2	5,6	11	7	35	0.314
	Coll. Math-Stat.	2	5	10	7	35	0.286
	Calculus	1	5	5	7	35	0.143
	Account VII	2	5	10	7	35	0.286
	VHS	1	5	5	7	35	0.143
	Total Math Rooms Req'd.				109		
English	English 9	3	5	15	7	35	0.429
	Honors English 9	1	5	5	7	35	0.143
	Topics-English	3/sem	1,2,2	5	7	35	0.143
	English 10	4	5	20	7	35	0.571
	Honors English 10	1	5	5	7	35	0.143
	English 11	3	5	15	7	35	0.429
	Honors English 11	1	5	5	7	35	0.143
	AP English 11	1	5	5	7	35	0.143
	English 12	3	5	15	7	35	0.429
	Honors English 12	1	6	6	7	35	0.171
	AP English 12	1	5	5	7	35	0.143
	Creative Writing	1	5	5	7	35	0.143
	Total English Rooms Req'd.				106		
Science	Intro to Physics	3	5,6,5	16	7	35	0.457
	Honors Intro to Physics	1	5	5	7	35	0.143
	MCAS Science	1	3	3	7	35	0.086
	Survey of Biology	3	5	15	7	35	0.429
	Biology	2	5	10	7	35	0.286
	Survey of Chemistry	2	5	10	7	35	0.286

APPENDIX 3 - cont'd.

Dept.	Course	Sections	Days/Wk	Session/Wk	Periods/Day	Periods/Wk	Rms. Req'd.
	Chemistry	2	5	10	7	35	0.286
	Advanced Chemistry	1	5	5	7	35	0.143
	Environ. Science	1	5	5	7	35	0.143
	Human Anat. & Physiol	1	5	5	7	35	0.143
	Adv. Anat. & Physiol	1	5	5	7	35	0.143
	AP Biology	1	5	5	7	35	0.143
	Physics	1	5	5	7	35	0.143
Total Science Rooms Req'd.				99			2.829
Social Studs	US History 9	3	5,5,6	16	7	35	0.457
	Honors US History 9	1	5	5	7	35	0.143
	US History 10	4	5,5,6,5	21	7	35	0.600
	Honors US History 10	1	5	5	7	35	0.143
	Modern World	2	5	10	7	35	0.286
	Honors Modern World	1	6	6	7	35	0.171
	AP Modern History	1	5	5	7	35	0.143
	AP US History	1	5	5	7	35	0.143
	Community Service	1	5	5	7	35	0.143
	Exploration in Soc. Stud	2	5	10	7	35	0.286
	Economics	1	5	5	7	35	0.143
Total Soc.Studies Rooms Req'd.				93			2.657
Foreign Lang.	Spanish I	3	5,5,6	16	7	35	0.457
	Convers. Spanish I	1	5	5	7	35	0.143
	Convers. Spanish II	1	5	5	7	35	0.143
	French I	1	5	5	7	35	0.143
	French II	1	5	5	7	35	0.143
	Spanish II	3	5,6,5	16	7	35	0.457
	Spanish III	3	5	15	7	35	0.429
	Spanish IV	1	5	5	7	35	0.143
	Spanish V	1	6	6	7	35	0.171
	AP Spanish	1	6	6	7	35	0.171
Total For. Lang. Rooms Req'd.				84			2.400
						Total Classrooms Req'd.	14.029

APPENDIX 3 - cont'd.

Dept.	Course	Sections	Days/Wk	Session/Wk	Periods/Day	Periods/Wk	Rms. Req'd.
Rooms for other programs	Band	1	5	5	7	35	0.143
	Music Theory	1	5	5	7	35	0.143
	AP Music Theory	1	5	5	7	35	0.143
	Chorus	1	5	5	7	35	0.143
	Art I	3	5	15	7	35	0.429
	Art II	2	5	10	7	35	0.286
	Art III	1	5	5	7	35	0.143
	Portfolio	1	5	5	7	35	0.143
	Computer Applications	4	5	20	7	35	0.571
	Adv. Comp. Apps.	1	6	6	7	35	0.171
	CAD	1	5	5	7	35	0.143
	Radio/TV	1	6	6	7	35	0.171
	PE 9	3	2,2,1	5	7	35	0.143
	Health/PA	5	5,5,5,5,6	26	7	35	0.743
Total Other Rooms Req'd.				123			3.514
SPED		21		108	7	35	3.086
Total Rooms Req'd.							20.629
							21