
SECTION 3.1 PROPOSED EDUCATIONAL PROGRAMS

ELEMENTARY SCHOOLS

This Master Plan explored retaining the Town's two elementary schools (Center and Pompositticut) and combining the schools into a single building. Since each building requires certain spaces such as gym, cafeteria, library, administrative spaces etc., the space programs vary depending on the number of buildings. A combined building does afford certain economies of space.

The following spread sheets summarize all of the necessary spaces that make up a school to meet Stows' elementary grades needs. This table includes the classroom spaces as well as the many spaces that are not classrooms. These include spaces such as: teachers work spaces, student support areas, storage room's conference rooms as well as spaces that serve the entire school community such as: school administration, gymnasium, library and cafeteria.

This spread sheet also compares the space needs with those provided by the existing building.

The summary of spaces are expressed in Net Educational Area. This is the usable space within the rooms. A 1.45 net to gross multiplier is applied to account for other areas of the building including: corridors, mechanical rooms, wall thicknesses, toilet rooms etc. This resulting figure is referred to as the gross building area.

For a single school solution, Scenario 3, this process has determined that Stow Elementary Schools needs approximately 70,740 square feet of net educational area compared to the current 50,605 net educational area. This results in the need for approximately 102,573 square feet of gross area compared to the current 72,775 gross area.

The two school solution, Scenario 1, for the reasons explained above would require approximately 86,160 square feet of net educational space and approximately 124,961 gross square feet. (This gross square foot number included retaining the existing café/gymnasium space at Center which was not calculated in the cost analysis in Section 4.2. There was much discussion about the proposed use for this space should it remain and it was finally determined that it would remain).

The Educational Program was developed in three charts. All assumed a PreK – 5 population of 660 students.

- **Single School at Center** shows the program requirements when all grades are consolidated under one roof. This has the efficiencies of a

single gym, cafeteria, library and administration. This program reflects Scenario 3.

- **Pompositticut School, Grades PreK – 2**, for a total population of 346 students. This program is for just the PreK – grade 2 students. This is similar to the current Pompositticut school with the addition of the PreK and upgraded for population increases and the appropriate educational spaces for contemporary education. This program reflects the Pompo portion of Scenario 1.
- **Center School, Grades 3 – 5**, for a total population of 321 students. This program is for just the grades 3 – 5 students. This program is similar to the current Center School, but upgraded for population increases and the appropriate educational spaces for contemporary education. This program reflects the Center portion of Scenario 1.

HALE MIDDLE SCHOOL

This Master Plan explored the educational needs for the Hale Middle School. The largest limiter on expansion of this building is the capacity of the core spaces. During the last renovation and addition, the cafeteria was made smaller, turning some space over to offices. Any expansion of the school will require the reversing of that space.

Similar to the elementary school populations, the projections vary depending on when they were done. The most recent in December of 2006, reflect the housing slow down as discussed for the elementary grades.

The current population for grades 6 through 8 is 252 students. This is expected to rise to 300 to 378 students in approximately five years. The ten year projections show an enrollment of 300 - 350 students. An increase from the current enrollment but a decline from the peak enrollment.

The most logical location for a classroom addition, if required, would be at the north end of the current classroom wing. This would require extending the corridor through the science room and recreating the proper sized science room. The addition would be 2 story and could be 2 or 4 classrooms per floor, based on the classroom need. This could result in an additional 4 or 8 classrooms.

The short term solution would be to relocate the 4 temporary classrooms from the Pompositticut School to the Middle School once the Center School project is completed. Following the completion of the Center School project, the Hale school population project should be revisited to determine the long term educational needs.

HIGH SCHOOL

This Master Plan did not explore the High School. The Town of Stow is a member of the Nashoba Regional School district and the high school is located in Bolton.

PROGRAM INADEQUACIES

We have compared the size of existing program spaces with the needs identified in the Summary of Spaces. All spaces that are under the program area requirements are colored on the floor plans, (attached within this section).

MSBA COMPLIANCE / VARIATION

In May of 2006, the MSBA published Draft Regulations and in early September final regulations were promulgated. The work of this study was developed adhering to the new regulations, where regulations exist.

Space standards – The MSBA has not yet developed space standards for renovation projects. At the time we conducted educational programming for the schools, the space standards were not available. As agreed with the Committee, SMMA used the standards for New Construction as a guide for developing the educational program. Prior to moving forward with proposed projects, it will be necessary to work with the MSBA to determine that the space requirements are acceptable.

In areas where the existing rooms identified a minor deviation above or below the regulations, it was determined that those spaces would remain unchanged allowing the existing partitions to remain in place and minimize costs.

SINGLE SCHOOL AT CENTER

Room Type	MSBA Prototype 660	Assume 660 Students			Existing Combined Schools			Delta	Comments
		Room Sq.Ft.	Number of Rooms	Area Totals	Room Sq.Ft.	Number of Rooms	Area Totals		
PRE - KINDERGARTEN w/toilet		1,200	2	2,400	0	0	0		
Total Pre K	0			2,400			0	-2,400	
CORE ACADEMIC SPACES									
Typical Classrooms - Grade K full day (w/toilet)		1,200	6	7,200	varies	5	5,175	-2,025	(2) at 900, (1) at 1,025, (2) at 1,175
Typical Classrooms - Grades 1-5, (including cubbies within the classrooms)		1,000	26	26,000	varies	24	22,653	-3,347	(1) at 680, (1) at 690, (2) at 900, (1) at 1,133, (1) at 1,222, (1) at 1,415, (4) at 1,550, (1) at 1,883
Primary, Intermediate Book Storage		300	2	600	0	0	0	-600	
Science Classroom (Grades 3 - 5)		1,200	1	1,200	1,020	1	1,020	180	serves grades 3 - 5
Science Office					85	1	85	85	
Remedial Reading Rooms		500	2	1,000	570	1	570	-430	
Total Core Academic	27,600			36,000			29,503	-6,497	
SPECIAL EDUCATION									
Reg SPED - Resource Room		1,000	2	2,000		2	385	-1,615	
Book Storage		150	1	150	0	0	0	-150	in lieu of classrooms
OT / PT Classroom		950	1	950		2	795	-155	in lieu of classrooms
ESL - English as a Second Language		300	1	300	0	0	0	-300	in lieu of small group
School Psychologist Office / Testing		200	1	200	0	0	0	-200	in lieu of small group
Speech Room		300	1	300	0	0	0	-300	in lieu of small group
	7,040			3,900			1,180	-2,720	
SPECIAL EDUCATION - PASS PROGRAM									
Classrooms		900	1	900	0	0	0	-900	average 8 students each
Time Out Room		100	1	100	0	0	0	-100	
Small Group Room		300	1	300	0	0	0	-300	
Adjustment Counselors Office		120	1	120	0	0	0	-120	
Total SPED	0			1,420			0	-1,420	
PASS Program Included in this Combined School Only									
ART & MUSIC									
Music Classroom		1,000	1	1,000	varies	2	1,670	670	1 class in a 6 day rotation
Music Storage		200	1	200	0	0	0	-200	
Band Room (2nd music room)		0	0	0	0	0	0	0	see Dining (Platform)
Band Storage		300	1	300	0	0	0	-300	Adjacent to Dining / Platform
Art Classroom		1,000	2	2,000		2	1,460	-540	1 class in a 6 day rotation
Kiln		100	1	100	165	1	165	65	
Storage		100	1	100	0	0	0	-100	
Total Music & Art	5,000			3,700			3,295	-405	
HEALTH & PHYSICAL EDUCATION									
Gymnasium		6,000	1	6,000		2	6,610	610	6000 SF Min Size, 2 classes in a 6 day rotation
Gym Storage		300	1	300		2	185	-115	includes gymnastic equipment
PE / Health Instructor's Off. w/shower and tlt		150	2	300	200	1	200	-100	2nd office
Health Teacher Office		120	1	120	0	0	0	-120	
Total PE	6,300			6,720			6,995	275	
LIBRARY / MEDIA CENTER									
Media Center/ Reading Room		3,500	1	3,500		2	1,672		inclusive of office, workroom
Computer Lab		1,200	1	1,200		2	1,460		
Total Library / Media	3,500			4,700			3,132	-1,568	
DINING & FOOD SERVICE									
Cafetorium (212 seat café) (3 seatings)		3,180	1	3,180	1,400	1	1,400	-1,780	15/Occ SF Dining x 212 students
Platform / Band Classroom		1,000	1	1,000	0	0	0	-1,000	Operable wall
Table, Chair Equipment Storage		300	1	300	0	2	210	-90	
Kitchen		1,900	1	1,900	0	2	895	-1,005	
Staff Lunch Room		0	0	0	0	2	690	690	also used as teachers work room
Total Dining	6,680			6,380			3,195	-3,185	
MEDICAL									
Medical Suite									near outdoor play area
Nurse Toilet		60	1	60		2	65	5	
Nurse Office		120	1	120		2	390	270	
Waiting room		130	1	130					
Resting Area		125	1	125	0	0	0	-125	
Examination Room		100	1	100					
Total Medical Suite	510			535			455	-80	

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	MSBA Prototype 660	Assume 660 Students			Existing Combined Schools				
Room Type		Room Sq.Ft.	Number of Rooms	Area Totals	Room Sq.Ft.	Number of Rooms	Area Totals	Delta	Comments
ADMINISTRATION & GUIDANCE									
Administrative Suite									
General Office / Waiting / Secretary		400	1	400		2	370	-30	
Teachers' Mail and time room		100	1	100		2	220	120	
Copy Room / Work Room		150	1	150		2	190	40	
Records Room		110	1	110	0	0	0	-110	
Principal's Office w/conference		375	1	375		2	385	10	
Assistant Principal's Office		150	1	150	95	1	95	-55	
Conference Room		250	1	250	0	2	260	10	
Admin. Toilet		75	1	75	0	0	0	-75	
Total Administration	1,750			1,610			1,520	-90	
Guidance Suite									
Guidance Office / Small Group		180	1	180		2	485	305	
Guidance Storeroom		0	0	0	0	0	0	0	
Total Guidance	335			180			485	305	
Teachers' Workroom/ Lounge w/toilets	450	800	1	800	0	0	0	-800	2 rms., lounge and work
				800			0		
MAINTENANCE & CUSTODIAL									
Custodian's Office		120	1	120	110	1	110	-10	
Maintenance Workshop		375	1	375	300	1	300	-75	
Outdoor Storage		300	1	300	0	0	0	-300	
Recycling Room/ Trash		300	1	300	400	1	400	100	
Receiving and General School Supply / Storage		900	1	900	35	1	35	-865	
Total Custodial	2,400			1,995			845	-1,150	
TECHNOLOGY									
Tele/Data Termination / Head End Room		200	1	200	0	0	0	-200	
Tech Storage / Repair		200	1	200	0	0	0	-200	
Total Technology	0			400			0	-400	
Net Square Feet	61,565			70,740			50,605		
Net to Gross Multiplier use 1.45 (1.5 for MSBA)									
Gross Square Footage	92,348			102,573			72,775	actual	
SF/Pupil Total Capacity	146	171							
Center Program for 321 Gross Area		63,452							
POMPO Program for 346 Gross Area		61,509							
Total 2 schools		124,961							
MSBA assumes 4 Kindergarten classrooms for a 600 student school		+ 1		1	1,200	1.45	1,740		
MSBA assumes 21 general classrooms for a 600 student school		+ 5		5	1,000	1.45	7,250		
Pre-K				2,400					
PASS Program				1,420					
				3,820	x	1.45	5,539		
							14,529		
Indicates space not specifically in the new MSBA guideline EdSpecs, some often included in many Elem Schools				Net area equals		7,315	X	1.45	10,607
MSBA Guidelines for an Elementary School for 660 students:			660	x	145	=	95,700		

POMPOSITTICUT SCHOOL

GRADES PREK-2, 346 STUDENTS

Room Type	MSBA Prototype 346	Assume 346 Students			Existing Pompo School			Delta	Comments
		Room Sq.Ft.	Number of Rooms	Area Totals	Room Sq.Ft.	Number of Rooms	Area Totals		
PRE - KINDERGARTEN w/toilet		1,200	2	2,400	0	0	0		
Total Pre K	0			2,400			0	-2,400	
CORE ACADEMIC SPACES									
Typical Classrooms - Grade K full day (w/toilet)		1,200	5	6,000	varies	5	5,175	-825	(2) at 900, (1) at 1,025, (2) at 1,175
Typical Classrooms - Grades 1-2		1,000	11	11,000	varies	12	11,923	923	(1) at 680, (1) at 690, (2) at 900, (1) at 1,133, (1) at 1,222, (1) at 1,415, (4) at 1,550, (1) at 1,883
Grade Level Storage		300	1	300	0	0	0	-300	
Remedial Reading Rooms		500	1	500	570	1	570	70	
Total Core Academic	14,750			17,800			17,668	-132	
SPECIAL EDUCATION									
Reg SPED - Resource Room		1,000	1	1,000	285	1	285	-715	confirm quantity
Book Storage		150	1	150	0	0	0	-150	in lieu of classrooms
OT / PT Classroom		950	1	950	345	1	345	-605	in lieu of classrooms
ESL - English as a Second Language		300	1	300	0	0	0	-300	in lieu of classrooms
School Psychologist Office / Testing		200	1	200	0	0	0	-200	in lieu of classrooms
Speech Room		300	1	300	0	0	0	-300	in lieu of classrooms
Total SPED	3,520			2,900			630	-2,270	
NOTE - No PASS Program in this Calc.									
ART & MUSIC									
Music Classroom		1,000	1	1,000	780	1	780	-220	1 class in a 6 day rotation
Music Storage		200	1	200	0	0	0	-200	
Art Classroom		1,000	1	1,000	570	1	570	-430	1 class in a 6 day rotation
Kiln		100	1	100	0	0	0	-100	
Storage		100	1	100	0	0	0	-100	
Total Music & Art	2,500			2,400			1,350	-1,050	
NOTE: K-2 = 321 students, PK 25 students = 346 students for classroom planning									
HEALTH & PHYSICAL EDUCATION									
Gymnasium		4,000	1	4,000	3,110	1	3,110	-890	6000 SF Min Size, 2 classes in a 6 day rotation
Gym Storage		200	1	200	40	1	40	-160	
PE / Health Instructor's Off. w/shower and tit		150	1	150	0	0	0	-150	
Health Teacher Office		120	1	120	0	0	0	-120	
Total PE	6,300			4,350			3,150	-1,200	
LIBRARY / MEDIA CENTER									
Media Center/ Reading Room		2,020	1	2,020	782	1	782		inclusive of office, workroom
Computer Lab		1,200	1	1,200	570	1	570		
Total Library / Media	2,020			3,220			1,352	-1,868	
DINING & FOOD SERVICE									
Cafetorium (150 seat café) (2 seatings)		2,250	1	2,250	0	0	0	-2,250	15/Occ SF Dining
Platform		1,000	1	1,000	0	0	0	-1,000	
Table, Chair Equipment Storage		200	1	200	40	1	40	-160	
Kitchen		400	1	400	300	1	300	-100	Warming kitchen only
Staff Lunch Room		0	0	0	345	1	345	345	also used as teachers work room
Total Dining	4,500			3,850			685	-3,165	
MEDICAL									
Medical Suite									near outdoor play area
Nurse Toilet		60	1	60	20	1	20	-40	
Nurse Office		120	1	120	170	1	170	50	
Waiting room		130	1	130	0	0	0	-130	
Resting Area		125	1	125	0	0	0	-125	
Examination Room		100	1	100	0	0	0	-100	
Total Medical Suite	510			535			190	-345	

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Room Type	MSBA Prototype 346	Assume 346 Students			Existing Pompo School			Delta	Comments
		Room Sq.Ft.	Number of Rooms	Area Totals	Room Sq.Ft.	Number of Rooms	Area Totals		
ADMINISTRATION & GUIDANCE									
Administrative Suite									
General Office / Waiting / Secretary		300	1	300	270	1	270	-30	
Teachers' Mail and time room		100	1	100	155	1	155	55	
Copy Room / work room		150	1	150	100	1	100	-50	
Records Room		110	1	110	0	0	0	-110	
Principal's Office w/conference		375	1	375	180	1	180	-195	
Assistant Principal's Office		150	1	150	95	1	95	-55	
Conference Room		250	1	250	135	1	135	-115	
Admin. Toilet		75	1	75	0	0	0	-75	
Total Adminisration	1,530			1,510			935	-575	
Guidance Suite									
Guidance Office / Small Group		180	2	360	285	1	285	-75	
Guidance Storeroom		0	0	0	0	0	0	0	
Total Guidance	185			360			285	-75	
Teachers' Workroom/ Lounge w/toilets	300	800	1	800	0	0	0	-800	2 rms., lounge and work
	300			800			0	-800	
CUSTODIAL & MAINTENANCE									
Custodial/ Maintenance Suite									
Custodian's Office		120	1	120	110	1	110	-10	
Maintenance Workshop		375	1	375	1,010	1	1,010	635	
Outdoor Storage		300	1	300	0	0	0	-300	
Recycling Room/ Trash		300	1	300	0	0	0	-300	
Receiving and General School Supply / Storage		800	1	800	0	0	0	-800	
Total Custodial	2,100			1,895			1,120	-775	
TECHNOLOGY									
Tele/DataTermination / Head End Room		200	1	200	0	0	0	-200	
Tech Storage / Repair		200	1	200	0	0	0	-200	
Total Technology	0			400			0	-400	
Net Square Feet	38,215			42,420			27,365		
Net to Gross Multiplier use 1.45 (1.5 for MSBA)									
Gross Square Footage	57,323			61,509			36,415	actual	
SF/Pupil Total Capacity	182	205							
Indicates space not specifically in the new MSBA guideline EdSpecs, some often included in many Elem Schools				Net area equals		4,245	X	1.45	6,155
MSBA Guidelines for an Elementary School for 300 students:			300	x	180	=	54,000		

CENTER SCHOOL

GRADES 3-5, 321 STUDENTS

	MSBA Prototype 321	Assume 321 Students			Existing Center School				
Room Type		Room Sq.Ft.	Number of Rooms	Area Totals	Room Sq.Ft.	Number of Rooms	Area Totals	Delta	Comments
CORE ACADEMIC SPACES									
Typical Classrooms - Grades 3-5		1,000	15	15,000	varies	12	10,730	-4,270	(7) at 890, (5) at 900
Grade Level Storage		300	1	300	0	0	0	-300	
Science Classroom		1,200	1	1,200	1,020	1	1,020	180	
Science Office		0	0	0	85	1	85	85	
Remedial Reading Rooms		500	1	500	0	1	0	-500	
Total Core Academic	12,850			17,000			11,835	-5,165	
SPECIAL EDUCATION									
Reg SPED - Resource Room		1,000	2	2,000	100	1	100	-1,900	confirm quantity
Book Storage		150	1	150	0	0	0	-150	in lieu of classrooms
OT / PT Classroom		950	1	950	450	1	450	-500	in lieu of classrooms
ESL - English as a Second Language		300	1	300	0	0	0	-300	in lieu of classrooms
School Psychologist Office / Testing		200	1	200	0	0	0	-200	in lieu of classrooms
Speech Room		300	1	300	0	0	0	-300	
Total SPED	3,520			3,900			550	-3,350	
NOTE - No PASS Program in this Calc.									
ART & MUSIC									
Music Classroom		1,000	1	1,000	890	1	890	-110	1 class in a 6 day rotation
Music Storage		200	1	200	0	1	0	-200	
Band Room		0	1	0	0	0	0	0	see Dining (Platform)
Band Storage		300	1	300	0	0	0	-300	adjacent to platform
Art Classroom		1,000	1	1,000	890	1	890	-110	1 class in a 6 day rotation
Kiln		100	1	100	165	1	165	65	
Storage		100	1	100	0	0	0	-100	
Total Music & Art	2,500			2,700			1,945	-755	
NOTE: 3-5 = 321 students for classroom planning									
HEALTH & PHYSICAL EDUCATION									
Gymnasium		6,000	1	6,000	3,500	1	3,500	-2,500	6000 SF Min Size, 2 classes in a 6 day rotation
Gym Storage		300	1	300	145	1	145	-155	includes gymnastic equipment
PE / Health Instructor's Off. w/shower and tit		150	1	150	200	1	200	50	
Health Teacher Office		120	1	120	0	0	0	-120	
Total PE	6,300			6,570			3,845	-2,725	
LIBRARY / MEDIA CENTER									
Media Center/ Reading Room		2,020	1	2,020	890	1	890	-1,130	inclusive of office, workroom
Computer Lab		1,200	1	1,200	890	1	890	-310	
Total Library / Media	2,020			3,220			1,780	-1,440	
DINING & FOOD SERVICE									
Cafetorium (150 seat café) (2 seatings)		2,250	1	2,250	1,400	1	1,400	-850	15/Occ SF Dining x 300 students
Platform / Band Classroom		1,000	1	1,000	0	0	0	-1,000	operable wall
Table, Chair Equipment Storage		200	1	200	170	1	170	-30	
Kitchen		1,600	1	1,600	595	1	595	-1,005	1600 SF for first 300 + 1 SF add.
Staff Lunch Room		0	0	0	345	1	345	345	
Total Dining	4,500			5,050			2,510	-2,540	
MEDICAL									
Medical Suite									near outdoor play area
Nurse Toilet		60	1	60	45	1	45	-15	
Nurse Office		120	1	120	220	1	220	100	
Waiting room		130	1	130	0	1	0	-130	
Resting Area		125	1	125	0	0	0	-125	
Examination Room		100	1	100	0	0	0	-100	
Total Medical Suite	510			535			265	-270	

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	MSBA Prototype 321	Assume 321 Students			Existing Center School				
Room Type		Room Sq.Ft.	Number of Rooms	Area Totals	Room Sq.Ft.	Number of Rooms	Area Totals	Delta	Comments
ADMINISTRATION & GUIDANCE									
Administrative Suite									
General Office / Waiting / Secretary		300	1	300	100	1	100	-200	
Teachers' Mail and time room		100	1	100	65	1	65	-35	
Copy Room / Work Room		150	1	150	90	1	90	-60	
Records Room		110	1	110	0	0	0	-110	
Principal's Office w/conference		375	1	375	205	1	205	-170	
Assistant Principal's Office		150	1	150	0	1	0	-150	
Conference Room		250	1	250	125	1	125	-125	
Admin. Toilet		75	1	75	0	0	0	-75	
Total Administration	1,530			1,510			585	-925	
Guidance Suite									
Guidance Office / Small Group		180	1	180	200	1	200	20	
Guidance Storeroom		0	0	0	0	0	0	0	
Total Guidance	185			180			200	20	
Teachers' Workroom/ Lounge w/toilets		800	1	800	0	0	0	-800	2 rms., lounge and work
	300			800			0	-800	
CUSTODIAL & MAINTENANCE									
Custodial/ Maintenance Suite									
Custodian's Office		120	1	120	0	0	0	-120	
Maintenance Workshop		375	1	375	0	0	0	-375	
Outdoor Storage		300	1	300	400	1	400	100	
Recycling Room/ Trash		300	1	300	0	0	0	-300	
Receiving and General School Supply / Storage		800	1	800	35	1	35	-765	
Total Custodial	2,100			1,895			435	-1,460	
TECHNOLOGY									
Tele/Data Termination / Head End Room		200	1	200	0	0	0	-200	
Tech Storage / Repair		200	1	200	0	0	0	-200	
Total Technology	0			400			0	-400	
Net Square Feet	36,315			43,760			23,950		
Net to Gross Multiplier use 1.45 (1.5 for MSBA)	18,158			19,692					
Gross Square Footage	54,473			63,452			36,360	actual	
SF/Pupil Total Capacity	182	212							
Indicates space not specifically in the new MSBA guideline EdSpecs, some often included in many Elem Schools				Net area equals	3,345	x	1.45	4,850	
MSBA Guidelines for an Elementary School for 300 students:			300	x	180	=	54,000		



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