SANDWICH PUBLIC SCHOOLS
SYSTEM-WIDE MASTER PLAN STUDY

TOWN OF SANDWICH
MASTER PLAN STUDY COMMITTEE
Sandwich, Massachusetts

July 26, 2012

Submitted by,

SMMA
Symmes Maini & McKee Associates
Cambridge, MA

SMMA No. 10087.00
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**SANDWICH SCHOOLS SYSTEM-WIDE MASTER PLAN**

**SMMA No. 10087**
INTRODUCTION

This report summarizes two studies conducted sequentially for the Sandwich school department. In the fall of 2010, Symmes Maini & McKee Associates (SMMA) were hired to conduct a feasibility study for the H.T. Wing School. The scope of the study included: educational visioning, educational programming, existing conditions analysis and a range of design options taking into account the shrinking enrollments within the school system; code required upgrades; differed maintenance and replacement of old and worn out building systems and components. The scope was limited to the Wing School.

At the conclusion of the study, both the school committee and the selectmen inquired how the Wing school factored into the other schools of the system. The Committee then expanded SMMA’s scope to conduct an educational Master Plan of the school system. The main body of this report will be the report of the Master Plan process and recommendations. The H.T. Wing Study is located in the Appendix of this report.

PROJECT TEAM

Master Plan Study Committee

Michelle Austin, School Business Administrator
Ruth Joseph, Principal (Forestdale)
Ellen Booras, Principal (High School)
Tom Daniels, Principal (Oak Ridge)
Dr. Richard Canfield Superintendent of Schools
John Juros, Capital Improvement Planning Committee
Andrea Killion, School Committee
Douglas Lapp, Assistant Town Manager
Sheila Lima, Principal (Wing School)
Jessica Linehan, School Committee
Jim Pierce, Board of Selectmen
Alan Hall, Head of Buildings and Grounds

Architect – Symmes, Maini & McKee Associates (SMMA)

Joel Seeley, Project Director
Philip J. Poinelli, Educational Planner
David Frieder, Project Architect
John Hart, Civil Engineer
Paul Livernois, Structural Engineer
Lana Prokupets, HVAC Engineer
David Pereira, Electrical Engineer - Garcia, Galuska, DeSousa
EXECUTIVE SUMMARY
SECTION 1.1 EXECUTIVE SUMMARY

INTRODUCTION

The goal of this study is to explore options for the efficient use of the existing school buildings in Sandwich that are consistent with the educational goals of the district, specifically maintain and improve the educational opportunities for students.

Sandwich School System has experienced a significant decline of student enrollment over the past ten years and is anticipated to further reduce in population based on recent projections by the New England Schools Development Council (NESDEC). School system population statistics:

- 2001 – 2002 K – 12 system wide population 4,056
- Current K – 12 system wide population 3,237
- Projected 2021 – 2022 K – 12 system wide population 2,592

This represents a loss of 1,464 students over a 20 year period. (36% decline over 20 years)

With this significant decline in student enrollment, are all of the existing schools needed? And if not, which might be closed and why? How might the schools be structured to deliver education to the students of the community in a configuration that could enhance educational opportunities?

This report documents both the process and the resulting recommendations arrived at by the committee. Numerous meetings of the committee were held to discuss the issues and options. In most cases through the process, unanimous or near unanimous agreement was reached on issues and direction.

Based on the educational, enrollment and infrastructure needs, conceptual planning options for renovation and addition, and new construction were developed. Each conceptual option was assessed against the project goals and needs, leading to the selection of the recommended option.

The study committee recommended Option (5), changes the Forestdale and Oak Ridge Schools from the existing PreK through grade 8 configuration to a PreK - grade 6 population; closes the Wing School and moves grades 7 and 8 into the high school building in a new academic
configuration of a **STEM Academy**. (Science Technology Engineering and Math)

**BACKGROUND**

The study of the H.T. Wing School showed the building has significant issues that need to be addressed. These include: many engineering systems at or beyond their expected useful life; building envelope issues; handicapped accessibility and others. At the same time, the building will soon be too large for the anticipated population.

Coupled with the high costs to renovate the Wing School that were developed during the earlier study, the School Committee requested SMMA to expand their services to develop an Educational Master Plan for the district.

Both the Forestdale and Oak Ridge Schools have six portable classrooms attached to the original buildings. The temporary portable classroom additions at the Forestdale and Oak Ridge Schools are beyond their useful life and are recommended to be removed.

**ENROLLMENT PROJECTIONS**

Through the course of this study, New England School Development Council (NESDEC) has provided enrollment projections for the Sandwich School District. The December 10, 2010 report was done when the Wing School was the sole subject of study. NESDEC provided a second report on January 12, 2012. This second report is what this Master Plan study is based.

The NESDEC Report shows Sandwich’s historical enrollments by grade from school year 2001-02 to 2011-12 through current (10 years). The Pre-K through Grade 12 enrollments have decreased by 819 students or 20.2% over that 10 year period.

The NESDEC Report shows the enrollment projections through the 2021 - 2022 school year. The Pre-K through Grade 12 enrollments are projected to further decrease by 645 students (19.9%) within the next 10 years.

**CLASS SIZES**

In accordance with the school department policy, we used the following criteria in the evaluation of the buildings and educational program:

- Kindergarten and Grade 1 - class size of 20 students
Grades 2 and 3 - class size of 22 students
Grades 4 – 8 class size of 25 students
Grades 9 through 12 class size of 25 students

EDUCATIONAL EVALUATION

ELEMENTARY SCHOOLS

SMMA met with the Principals of each of the elementary school to discuss the operations and educational process at the schools.

The elementary school programs have been set up around three schools to serve the K – 8 grade levels. The intent is to provide an equality of spaces in order to create parity within the age group.

How a building is used influences the student capacity of the school. Middle School grades (6 through 8) are structured around "teams" rather than individual grade classrooms as for grades K through 6. Additional, electives are introduced to students in the middle school years. These require specialty classrooms. The three current K - 8 schools individually lack the economy of scale to effectively deliver more diverse electives that can enhance a STEM approach.

The following points were developed by Dr. Canfield as positive reasons to change the school system elementary grade structure to K - 6:

- The Gift of Time to monitor enrollment changes
- Phase-In Plan for any proposed reconfiguration involving the current K-8 schools
- Address curriculum modifications through curriculum mapping to ensure proper sequence, and to address the Rigor, Relevance and Relationships of high quality teaching and learning

GRADES 7 / 8 STEM ACADEMY

The discussions in the paragraphs immediately above directly contributory to the concept of a grade 7 / 8 STEM Academy. The following points were developed by Dr. Canfield as positive reasons to change the school system grade structure to allow for a grades 7 / 8 STEM Academy:

- A plan that supports the best interest of students, and one that is fiscally responsible for the community.
- A plan that provides the “Gift of Time” to plan well.
- A plan that does not just move students from one building to another, but provides benefits for their educational experience
- Academy for Science, Technology, Engineering, and Mathematics (STEM)
- Smart Technology, Robotics, and 1 to 1 Computing
- Expanded opportunities in the visual and performing arts 7-12
- Sports (7-12), intramurals and club activities
- Eventual access to higher level course offerings

Methodology to provide Physical and Emotional Safety:
- The quality of our students provides a high level of assurance for appropriate conduct
- Operate a school within the school (A Wing)
- Provide for separate entrance
- Administration (3 existing high school administrators) and provide a Director for STEM
- Staggered schedule (7 or 8 period day, not block)

Included in Section 3 of this report is a "Summary of Spaces" for the STEM Academy. This is in the MSBA format required for capital projects.

HIGH SCHOOL

SMMA met with school administration, to develop the educational requirements based on the curriculum and enrollment for grades 9 - 12.

In order to develop a student capacity of the existing high school building, we have used standards of the MSBA, Massachusetts School Building Authority. These standards indicate the building has a design capacity of approximately 1,250 students assuming use for grades 9 - 12.

With the high school enrollment expected to drop from its' current 978 to under 700 students, classrooms will free up as well as excess capacity in non-core classrooms and public and support spaces.

The high school currently houses the School Districts' Central Administration, a function that the MSBA does not allow in proposed capital projects. Removal of the Central Administration from the high school building would free up 11 classrooms for educational use.

When the vacated areas of the Central Administration are combined with those spaces made available by the reduced high school population, the high school building will be able to accommodate the high school grades (9 - 12) and a grade 7 /8 STEM Academy by the school year 2017 - 1218.
The following points were developed by Dr. Canfield as beneficial impacts of this proposal on the high school:

- Evaluate current program and course offerings in relationship to the Core Values, Standards, and research-based programming represented by the *Partnership for 21st Century Skills*.
- Follow the curriculum principle of SSR, or what to Start Teaching, Stop Teaching, or Revise to ensure that offerings are rigorous and relevant to the 2020 Vision of the Sandwich Public Schools.

**OPTIONS EXPLORED**

SMMA developed five options for the Wing School during the initial single school study. For the Master Plan, these five options were consolidated to three options.

Two Master Plan options were added in the spring of 2012.

Order of Magnitude Costs are identified for each of the Options. A detailed discussion of the options can be found in Section Four of this report.

- **Option 1** – Renovation to Wing School Only (from Wing School Study) K – 8
  Cost: $28M - $30M Range

- **Option 2** – Renovations / Addition to Wing School Only (from Wing School Study - modified) K – 8
  Cost: $33M - $34M Range

- **Option 3** – New Wing School Only (from Wing School Study - modified) K – 8
  Cost: $32M - $33M Range

- **Option 4** – Retain K – 8 Elementary System, Consolidate to Two Schools
  Cost: $29M - $30M Range

- **Option 5** – Change School System from K – 8 to K – 6, + 7 / 8 STEM Academy
  Cost: $14M - $15M Range

A detailed spread sheet of the Options can be found in Section 4 of this report.
RECOMMENDED OPTION 5

The Committee voted to recommend Option 5. This option changes the Forestdale and Oak Ridge Schools from the existing PreK through grade 8 configuration to a PreK - grade 6 population. In this configuration, the two schools can accommodate the entire towns' PreK - 6 population within the two schools. This consolidation shows that the Wing School is then not needed as an elementary school.

This Option has Grades 7 and 8 moving into the high school building in a new academic configuration of a STEM Academy. (Science Technology Engineering and Math)

The high school currently houses the School Districts' Central Administration, a function that the MSBA does not allow in proposed capital projects. This Option has the Central Administration leaving the high school location. Once the Central Administration vacates the high school building, 11 classrooms are freed up for educational use. In addition, as the school further reduces its population due to declining enrollments, it will need fewer classrooms.

The high school building will be able to accommodate the high school grades (9 - 12) and a grade 7 /8 STEM Academy by the school year 2017 - 2018.

This option further proposes the high school science labs be upgraded as part of the STEM Academy project. Currently, there are eleven (11) science lecture / labs ranging from 1,005 sf to 1,090 sf. The current MSBA guidelines (recently revised) are for these rooms to be 1,440 sf.

HENRY T. WING SCHOOL EVALUATION

The original study focused on the H. T. Wing School only. The Appendix of this report includes the work conducted for that study. It includes:

- The PowerPoint report delivered to the Sandwich School Committee and Board of Selectmen on February 16 and 17, 2012 respectively (Appendix A)
- An Existing Conditions Report (Appendix B)
- A building stabilization report
- A report on Visioning summarizing a day long visioning session that included members of the administration, teachers, parents and community leaders. The session was lead by and report summarized by Frank Locker Educational Planning.
- Meeting report of interviews conducted with Wing School teachers and staff.
STATEMENT OF INTEREST

The Massachusetts School Building Authority (MSBA), has established the Statement of Interest form / process as the first step in the Application Process for capital projects. The purpose of the SOI is to ascertain from communities whether they believe they have any deficiencies in their school facility that meets one or more of the statutory priorities.

Development and submission of a **Statement of Interest** is the next step the Town needs to take for the MSBA to consider the consolidation of the Grade 7 - 8 STEM Academy at the high school. Acceptance of an SOI by the MSBA will put the community into a Feasibility Study / Schematic Design process.
EDUCATIONAL SPECIFICATION

2.1 Enrollment Projections Discussion

2.2 NESDEC – New England Schools Development Council Enrollment Report
SECTION 2.1  ENROLLMENT PROJECTIONS

Through the course of this study, New England School Development Council (NESDEC) has provided enrollment projections for the Sandwich School District. The December 10, 2010 report was done when the Wing School was the sole subject of study. NESDEC provided a second report on January 12, 2012. This second report is what this Master Plan study is based.

The following pages are a report from the New England School Development Council (NESDEC) that summarizes historical enrollments and projects future enrollments through the 2021-2022 school year.

HISTORICAL BACKGROUND

The NESDEC Report shows Sandwich’s historical enrollments by grade from school year 2001-02 to 2011-12 through current (10 years). The Pre-K through Grade 12 enrollments have decreased by 819 students or 20.2% over that 10 year period.

This significant population decrease is heavily influenced by two factors:

1. a significant decline in the number of births to Sandwich residents; and
2. a continuing lack of in-migration (likely due to the real estate slowdown).

TEN YEAR ENROLLMENT PROJECTIONS

The NESDEC Report shows the enrollment projections through the 2021 - 2022 school year. The Pre-K through Grade 12 enrollments are projected to further decrease by 645 students (19.9%) within the next 10 years.

CONCLUSIONS

The school system will experience an estimated 36% decline in student enrollment when combining that already experienced over the past 10 years plus the projected declines over the next 10 years. If the four current school buildings were all to remain on-line, all four buildings would be underutilized at some point during the next ten years. This issue is further explored with that of the building capacity analysis in Section 3 of this report.
ENROLLMENT PROJECTIONS

2.2 NESDEC – New England Schools Development Council Enrollment Report
TO: Dr. C. Richard Canfield, Superintendent of Schools, Sandwich, MA  
FROM: Donald G. Kennedy, Ed.D., Demographic Specialist  
DATE: January 12, 2012  
RE: Enrollment Projections

We are pleased to send you the enclosed documents displaying the past, present, and projected enrollments for the Sandwich School District. We have used the figures given to us by the district and we assume that the method of collecting the enrollment data has been consistent from year to year. In Grades 1, 9, and 10 the district lost enrollment from the previous grades at rates not previously experienced in over ten years...and the cause of NESDEC’s significant “over-projection” in each of these three grades. We have assumed that this is a one-time event that is unlikely to repeat. We have revised the projections in two respects: a. we added in the “Choiced-In” students and so indicated on the Tables; and b. we corrected the historical enrollments for the prior five years (in the small number of cases necessary) to reflect all of the Choiced-In students, thereby creating an identical match with the DESE enrollment numbers.

NESDEC’s enrollment projection totals from fall of 2010 came within 2.1% of the actual Grade K-12 enrollment total for fall, 2011 (3,306 projected v. only 3,237 actual). In Grades K-8, 2,275 pupils were projected v. 2,259 enrolled. At the high school level, 1,031 pupils were projected v. 978 enrolled.

The two factors at work which will have the greatest effect upon future enrollments are: a significant decline in the number of births to Sandwich residents and, to a lesser degree, b. a continuing lack of in-migration (due to the real estate slowdown). In the decade from 1996-2005, Sandwich averaged 215 births per year; more recently (and expected over the next 6-7 years) are about 163-208 births annually, about 43 fewer births per year.
The ever-changing relationship between Sandwich births and Kindergarten enrollments is displayed on the B-K graph. Sandwich, over the past seven years, has registered about 113 Kindergarteners for every 100 births (five years previous), a relationship which has been quite stable…this fall there were 110 Kindergarteners for every 100 births five-years-previous, the third-lowest in over a decade. Note on the graph, however, that there was one year (2008) in which there were only 97 Kindergarteners for every 100 births. Grade 1 is expected to continue to be about 6% larger than the previous year’s Kindergarten class.

Like many nearby communities Sandwich continues to experience enrollment fluctuations of in/out-migration in Grades 1-12. Over the past ten years, there were no years with net in-migration, one flat year, and nine years of 1-5% net out-migration (-4% in 2010 and -3% in 2011). K-12 enrollments are forecast to decline over the next two years by an average of 60 students per year in Grades K-8, and 67 pupils each year at the high school. Then in Years #3-10, the decreases would appear to be less (about 48 per year spread across Grades K-12), driven primarily by fewer Kindergarteners entering to replace the seniors who had graduated each June. However the cycles of employment and availability of real estate may be altered by that time, thereby affecting student enrollments.

Will these patterns really last for as long as ten years? Perhaps not. Also, as soon as the economy and real estate situation improve in the region, even more in-migration could return to Sandwich. Many communities in the region sold during 2007 through 2011-to-date only about 60-80% as many homes as in 2005-2007. Building permits have generally kept pace as well; see the “Additional Data” table below. The real estate slowdown may reverse itself in Sandwich before the 2017-18 school year, thus school enrollments may be much flatter, with less decline. See also the description on Page 4 below regarding “reliability of projections”.

As noted above, the number of births is an important variable in projecting future school enrollments, thus changing trends in births can be of special interest. U.S. births steadily increased from 2003 onward, reaching the highest peak in two decades, in 2007. However, U.S. births dropped 2% in 2008 (compared with 2007) and declined by an additional 2.6% in 2009 (compared with 2008). The Pew Research Center analyzed data from 25 states and found that the states hit hardest by the Recession (such as Michigan) had the greatest decline in births. Although additional factors may be involved, during times of substantial and prolonged economic difficulty, persons expecting to lose their employment and/or their homes, may postpone having children. The Pew Center estimates that 14% of Americans aged 18-34 postponed having a child because of the recent recession (2% with incomes above $75,000 postponed having a child, with higher rates of postponement in lower income brackets).
Among the six New England states, hard-hit Connecticut dropped by 8.6% over the two-year period from 41,684 births in 2007 to 38,083 in 2009; similarly, Rhode Island experienced an 8.1% decline from 12,503 births in 2007 to 11,494 births in 2009; mothers in Vermont gave birth to 6,492 children in 2007 and 6,118 babies in 2009, a 5.8% decline; Maine dropped by 4.7% from 14,177 children in 2007 to 13,506 babies in 2009; New Hampshire experienced a 4.4% decrease from 14,397 births in 2007 compared with only 13,764 children born in 2009; lastly, Massachusetts declined by only 3.9% from 77,731 births in 2007 to 74,643 children born in 2009. Overall, in the 275+ enrollment projections prepared by NESDEC during 2009-10, about 2/3 of districts were continuing to shrink in enrollment; whereas about 1/3 of districts appeared to be experiencing flat enrollments or some growth (of 0.5% or more per year) in the K-12 student population. Because of the higher median ages among the New England population, births in the region generally have been declining over the past several years; thus the Recession has accelerated an on-going trend. The rate of unemployment also indirectly affects the number of births and school enrollments. Although these rates may change monthly, recent rates of unemployment have been about 10.5% in RI; 8.9% in CT; 7.5% in ME; 7.3% in MA; 5.8% in VT; and 5.4% in NH.

If your district has need for further assistance in the area of long range facilities planning, we would urge you to call so that we might discuss our planning services which include our Demographic and Long-Range Enrollment Projection Studies.

We have enclosed suggestions for interpreting the printout and a brief description of the modified cohort survival methodology used in preparing the projections. As always, we would be delighted to hear from you regarding ways in which we might make the enrollment forecasts more useful to you. Please don’t hesitate to call or email us at ep@nesdec.org. Best wishes for the school year.
Historical Public Enrollments

1. After the "YEAR" column can be found the "BIRTHS" column. The number of births to residents for each of eleven years is displayed. Note any trends, e.g., have births been decreasing? increasing? leveling off? Kindergarten and Grade 1 enrollments are normally quite responsive to these fluctuations.

2. Look down the K and 1 columns and note the direction of the trend. This affords a comparison of these classes over a ten-year period. Add the K and Grade 1 enrollments of the first school year recorded, and compare them with the sum of the current K and Grade 1 enrollments.

3. Take the first K class and follow it diagonally to trace its movement to Grade 1, 2, etc. up to its current 10th grade status. This comparison (which can be accomplished for other classes also) gives some measure of the effects of migration in your school district. If a sixth grade class today is larger than it was as a K class six years ago, then in-migration has probably occurred; if it is smaller, then out-migration has probably occurred.

4. Compare each K class with the previous year's graduating class. Note which is larger and by what amount one surpasses the other. Larger graduating classes generally reflect declining enrollments; larger K classes generally indicate increasing enrollments.

5. In the "Grade Combinations" section, note the trends of elementary, middle school/junior high, and high school enrollments. A significant and consistent trend in these summaries usually results in the corresponding trend for projected enrollments. If enrollments are leveling off in the elementary grades after a period of decline, then the secondary enrollments might be expected to continue to decline for several years until the leveling off experience has had time to take hold at the secondary grades.

Enrollment Projections

1. Note the trends exhibited in the total K-12 (or 1-12) projection for the next five years as well as the
projections for various grade combinations. The trends on this page should generally exhibit a continuation of the trends mentioned above for historical enrollments, although the rate of change may be quite different.

2. Look at the births in the most recent years and note whether the trend is up, down, or level.

3. Make similar comparisons as appropriate on this page as were suggested for the "Historical Public Enrollments" page.

**PROJECTION METHODOLOGY**

The cohort survival technique is the most frequently used method of preparing enrollment forecasts. NESDEC uses that technique, but modifies it in order to move away from forecasts which are wholly computer or formula driven. Such modification permits the incorporation of important, current town-specific information into the generation of the enrollment forecasts. Basically, percentages are calculated from the historical enrollment data to determine a reliable percentage of increase or decrease in enrollment between any two grades. For example, if 100 students enrolled in Grade 1 in 2010-11, increased to 104 students in Grade 2 in 2011-12, the percentage of survival would have been 104% or a ratio of 1.04. Such ratios are calculated between each pair of grades or years in school over several recent years.

After study and analysis of the historical ratios and based upon a reasonable set of assumptions regarding births, migration rates, retention rates, etc., ratios most indicative of future growth patterns are determined for each pair of grades. The ratios thus selected are applied to the present enrollment statistics for a pre-determined number of years. The ratios used are the key factors in the reliability of the projections, given the validity of the data at the starting point. The strength of the ratios lies in the fact that each ratio encompasses collectively the variables that account for increases or decreases in the size of a grade enrollment as it moves on to the next grade. Each ratio represents the cumulative effect of the following factors:

1. Real estate turnover and new residential construction;

2. Migration, in or out, of the schools;

3. Drop-outs, transfers, etc.;

4. Births to residents;

5. Retention in the same grade.
RELIABILITY OF ENROLLMENT PROJECTIONS

Projections can serve as useful guides to school administrators for educational planning. In this regard, the projections are generally most reliable when they are closest in time to the current year. Projections six to ten years out may serve as a guide to future enrollments, and are useful for facility planning purposes. However, they should be viewed as subject to change given the possibility for change in the underlying assumptions/trends.

Projections based upon the children already in the district (the current K-12 population only) will be the most reliable; the second level of reliability will be for those children already born into the community but not yet old enough to be in school. The least reliable category is the group for which an estimate must be made to predict the number of births, thereby adding an additional variable. See these three multi-colored groupings on the “Projected Enrollment” slide/page.

How often do the actual enrollments closely match the NESDEC projections? The research literature reports the closest that enrollment forecasters are likely to come to actual enrollments is about 1% variance per year-from-the-known-data. That is, a 1% variance from projection-to-actual “one-year-out” into the future (2% variance “two-years-out” … 10% variance “ten-years-out”). NESDEC reaches this “highest possible” standard in about 90% of cases. When our NESDEC variance is greater, the reasons often are one of the following: a. imbedded/intervening “hidden” variables (examples: a parochial school closed or other students returned from non-public schools, a charter school opened, the Kindergarten program changed entrance age or to extended/full-day, the high school toughened its course credit/graduation requirements, the District set new attendance boundaries for elementary schools, or the District had well-publicized budget/referendum difficulties); b. the District size was below 500 students, thus subject to fluctuations; or c. the District has not done enrollment projections on an annual basis.

Annual updates allow for early identification of recent changes in historical trends. When the actual enrollment in a grade is significantly different (high or low) from the projected number, it is important (yet difficult) to determine whether this is a one-year aberration or whether a new trend may be starting. In light of this, NESDEC urges all school districts to have updated enrollment forecasts developed by NESDEC each October. This service is available at no cost to affiliated school districts.
If you would like to extract the information contained in this report for your own documents or presentations, you can use Adobe Acrobat reader to convert the desired information to a “snapshot,” which can be inserted into PowerPoint slides, Word documents, etc. Because the snapshot tool creates a graphic, the image is not editable.

Steps for Using The Snapshot Tool in Adobe Acrobat Reader 8.0:
1. Click on Tools Menu;
2. Choose “Select & Zoom;”
3. Choose “Snapshot Tool;”
4. Click and drag around the text, chart, and/or graphics that you would like to capture: your selection will be copied to the clipboard automatically;
5. Click in the document where you would like the information to appear;*

If you have an earlier version of Adobe Acrobat and these instructions don’t work for you, contact your tech support person, or NESDEC and we will try to assist you. Telephone (508)481-9444 or ep@nesdec.org. Ask for Peggy, Don, or Carol.

*You may paste your snapshot onto a PowerPoint slide, onto an Excel sheet, or even into a graphics program to save as a separate graphic file (in .jpg or other format), so that it is available for inserting into future documents.
### Historical Enrollment By Grade

<table>
<thead>
<tr>
<th>Birth Year</th>
<th>Births</th>
<th>School Year</th>
<th>PK</th>
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K-12 Change: -819 -20.2%
Sandwich, MA Historical Enrollment
PK-12, 2001-2011

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## Sandwich, MA Projected Enrollment

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*Projections should be updated on an annual basis. Based on an estimate of births
Based on children already born
Based on students already enrolled

### Projected Enrollment Projections By Grade*

#### Year PK-5 K-5 K-6 K-8 5-8 6-8 7-8 7-12 Years K-12 Diff. %

- **2011-12**: 1510 1451 1718 2259 1071 808 541 1519 978
- **2012-13**: 1460 1400 1665 2210 1074 810 545 1456 911
- **2013-14**: 1399 1338 1604 2138 1030 800 534 1376 842
- **2014-15**: 1369 1307 1539 2072 983 765 533 1374 841
- **2015-16**: 1370 1307 1527 2027 963 720 500 1329 829
- **2016-17**: 1341 1277 1522 1975 922 698 453 1283 630
- **2017-18**: 1328 1263 1489 1965 904 692 466 1261 795
- **2018-19**: 1326 1260 1473 1945 887 685 472 1229 757
- **2019-20**: 1335 1268 1471 1911 841 643 440 1182 742
- **2020-21**: 1350 1282 1481 1897 836 615 416 1127 711
- **2021-22**: 1341 1272 1495 1897 838 625 402 1097 695

### Projected Percentage Changes

#### Years K-12 Diff. %

- **2011-12**: 3237 0 0.0%
- **2012-13**: 3121 -116 -3.6%
- **2013-14**: 2980 -141 -4.5%
- **2014-15**: 2913 -67 -2.2%
- **2015-16**: 2856 -57 -2.0%
- **2016-17**: 2805 -51 -1.8%
- **2017-18**: 2750 -48 -2.0%
- **2018-19**: 2702 -45 -1.7%
- **2019-20**: 2653 -49 -1.8%
- **2020-21**: 2608 -48 -1.8%
- **2021-22**: 2592 -44 -1.7%

### Reliability of Enrollment Projections

Projections are more reliable for Years 1-5 in the future than for Years 6 and beyond.

See "Reliability of Enrollment Projections" section of accompanying letter.

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Sandwich, MA Projected Enrollment

PK-12 TO 2021 Based On Data Through School Year 2011-12

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Sandwich, MA Birth-to-Kindergarten Relationship

Births 1996-2009

K Enrollment 2001-2011

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### Building Permits Issued

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<td>8</td>
</tr>
<tr>
<td>2008</td>
<td>25</td>
<td>0</td>
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<tr>
<td>2009</td>
<td>8</td>
<td>0</td>
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<tr>
<td>2010</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>2011</td>
<td>16 to date</td>
<td>0</td>
</tr>
</tbody>
</table>

### Enrollment History

<table>
<thead>
<tr>
<th>Year</th>
<th>Voc-Tech 9-12 Total</th>
<th>Non-Public K-12 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>2007-08</td>
<td>139</td>
<td>445</td>
</tr>
<tr>
<td>2008-09</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>2009-10</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>2010-11</td>
<td>124</td>
<td>314</td>
</tr>
<tr>
<td>2011-12</td>
<td>120</td>
<td>419</td>
</tr>
</tbody>
</table>

Source: HUD and Building Department

### Enrollments as of Oct. 1

<table>
<thead>
<tr>
<th>K-12 Home-Schooled Students</th>
<th>K-12 Residents Enrolled in Charter or Magnet Schools</th>
<th>K-12 SpEd Outplaced Students</th>
<th>K-12 Choiced-In, Tuitioned-In, &amp; Other Non-Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>23</td>
<td>2011</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2011</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2011</td>
<td>59</td>
</tr>
</tbody>
</table>

The above data were used to assist in the preparation of the enrollment projections. If additional demographic work is needed, please contact our office.
EDUCATIONAL EVALUATION

3.1 Capacity Analysis - Forestdale & Oakridge Schools & High School

3.2 Capacity Graphs

3.3 STEM Academy Summary of Spaces
SECTION 3.1  EDUCATIONAL EVALUATION

K-8 SCHOOLS

EXISTING BUILDING CAPACITY

It is reported that the (identical) Forestdale & Oakridge schools were designed for a capacity of 750 students. We find no reference for confirmation of this but that is not critical for this evaluation. It must be noted that there are a number of factors that contribute to a schools’ capacity. These factors change over time with school policies, class size, special education and curriculum offerings being the primary contributors. The following analysis assumes the following:

- Full day Kindergarten
- Kindergarten and Grade 1 - class size of 20 students
- Grades 2 & 3 - class size of 22 students
- Grades 4 – 8 class size of 25 students
- Dedicated teaching spaces for Foreign Language, Art, Music, Technology Education, computer lab, Special Education. (Note that the number of spaces for these programs vary depending on the analysis of K-6 or K-8 programs)
- The NESDEC report dated 1/12/2012 was used for the overall analysis.
- The temporary “portable classrooms” are not included in the capacity analysis
- Pre-K and Spinnaker Programs not accounted for in this initial analysis

This review is done around the current operational parameters of the Sandwich school system. At the same time, the MSBA space guidelines need to be considered. If a MSBA study or capital project were to be considered in the future, their guidelines would be used as a baseline.

How a building is used influences the student capacity of the school. Middle School grades (6 through 8) are structured around "teams" rather than individual grade classrooms as for grades K through 6. Additional, electives are introduced to students in the middle school years. These require specialty classrooms. We therefore analyzed the Forestdale and Oak Ridge Schools for use as both K - 8 schools and as K - 6 schools. The attached floor plans show how the school rooms might be used and the resultant capacities.

K - 8

<table>
<thead>
<tr>
<th>School Description</th>
<th>Student Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forestdale as a K - 8</td>
<td>677</td>
</tr>
<tr>
<td>Oak Ridge as a K - 8</td>
<td>677</td>
</tr>
<tr>
<td>Total as K - 8</td>
<td>1,354</td>
</tr>
</tbody>
</table>
K - 6
Forestdale as a K - 6 School  720 student capacity
Oak Ridge as a K - 6 School  720 student capacity
Total as K - 6  1,440

The Forestdale and Oak Ridge Schools have a larger capacity if used as k - 6 schools rather than as K - 8 schools.

HIGH SCHOOL

EXISTING BUILDING CAPACITY

In order to develop a student capacity of the existing high school building, we have used a standards of the MSBA, Massachusetts School Building Authority. These standards indicate the building has a design capacity of approximately 1,250 students assuming use for grades 9 - 12.

With the high school enrollment expected to drop from its' current 978 to under 700 students, classrooms will free up as well as excess capacity in non-core classrooms and public and support spaces.

The high school currently houses the School Districts' Central Administration, a function that the MSBA does not allow in proposed capital projects. Removal of the Central Administration from the high school building would free up 11 classrooms for educational use.

When the vacated areas of the Central Administration are combined with those spaces made available by the reduced high school population, the high school building will be able to accommodate the high school grades (9 - 12) and a grade 7 / 8 STEM Academy by the school year 2017 - 2018.

COMBINED GRADES 7 / 8 STEM ACADEMY + HIGH SCHOOL

Since the Grades 7 / 8 population will range from the current 541 students to a projected 402 students in ten years, this relatively small population suggest the possibility of sharing some non-core curricular and support spaces in the high school building. Here are some spaces that might be shared between grades 7 - 12. Administrative structuring such as period / bell scheduling can limit the mixing of populations.

- Tech Ed
- Music (band & chorus)
- Art
- Life Skills, OT/PT
- Cafeteria / Kitchen
- Library
- Auditorium
CONCLUSION

By the school year 2017 - 2018, the K-6 population will have declined to a point that the two newer schools, Forestdale and Oak Ridge will be able to accommodate the entire K-6 population. This would allow the H. T. Wing School to close.

By the school year 2017 - 2018 the grades 7 - 12 population will have declined to a point that the existing high school could accommodate both the high school and a grade 7 / 8 STEM Academy.

Following are charts that show the various school capacities and the projected enrollments:

- K-8 projected population compared to Forestdale and Oak Ridge capacities
- K-6 projected population compared to Forestdale and Oak Ridge capacities
- Grades 7 - 12 projected population compared to the high school building capacity
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>K-8 Population</td>
<td>2259</td>
<td>2210</td>
<td>2138</td>
<td>2072</td>
<td>2027</td>
<td>1975</td>
<td>1955</td>
<td>1945</td>
<td>1911</td>
<td>1897</td>
<td>1897</td>
</tr>
<tr>
<td>Capacity of Forestdale and Oak Ridge 677 x 2 = 1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
</tr>
<tr>
<td>Capacity Delta</td>
<td>905</td>
<td>856</td>
<td>784</td>
<td>718</td>
<td>673</td>
<td>621</td>
<td>601</td>
<td>591</td>
<td>557</td>
<td>543</td>
<td>543</td>
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<tr>
<td>----------------------</td>
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<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>K-6 Population</strong></td>
<td>1718</td>
<td>1665</td>
<td>1604</td>
<td>1539</td>
<td>1527</td>
<td>1522</td>
<td>1489</td>
<td>1473</td>
<td>1471</td>
<td>1481</td>
<td>1495</td>
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<tr>
<td><strong>Capacity of Forestdale and Oak Ridge</strong></td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
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<td>1440</td>
<td>1440</td>
<td>1440</td>
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</tr>
<tr>
<td></td>
<td>720 x 2 = 1440</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Capacity Delta</strong></td>
<td>278</td>
<td>225</td>
<td>164</td>
<td>99</td>
<td>87</td>
<td>82</td>
<td>49</td>
<td>33</td>
<td>31</td>
<td>41</td>
<td>55</td>
</tr>
</tbody>
</table>
### Population Trends

#### 7-12 Population
- 2011-2012: 1519
- 2012-2013: 1456
- 2013-2014: 1376
- 2014-2015: 1374
- 2015-2016: 1329
- 2016-2017: 1283
- 2017-2018: 1261
- 2018-2019: 1229
- 2019-2020: 1182
- 2020-2021: 1127
- 2021-2022: 1097

#### 7-8 Population
- 2011-2012: 541
- 2012-2013: 545
- 2013-2014: 534
- 2014-2015: 533
- 2015-2016: 500
- 2016-2017: 453
- 2017-2018: 466
- 2018-2019: 472
- 2019-2020: 440
- 2020-2021: 416
- 2021-2022: 402

#### 9-12 Population
- 2011-2012: 978
- 2012-2013: 911
- 2013-2014: 842
- 2014-2015: 841
- 2015-2016: 829
- 2016-2017: 830
- 2017-2018: 795
- 2018-2019: 757
- 2019-2020: 742
- 2020-2021: 711
- 2021-2022: 695

#### Existing HS Building Capacity
- 2011-2012: 1250
- 2012-2013: 1250
- 2013-2014: 1250
- 2014-2015: 1250
- 2015-2016: 1250
- 2016-2017: 1250
- 2017-2018: 1250
- 2018-2019: 1250
- 2019-2020: 1250
- 2020-2021: 1250
- 2021-2022: 1250
**Proposed Space Summary - Middle Schools**

### Grades 7 & 8 at High School

**ROOM TYPE** | **NFA** | **# OF RMS** | **area totals** |
--- | --- | --- | --- |
**CORE ACADEMIC SPACES** | | | |
Classroom - General | 950 | 18 | 17,100 |
Small Group Seminar 150-300 seats / Resource Room | 400 | 1 | 400 |
Science Classroom - Lab | 700 | 2 | 1,400 |
Shop Room | 60 | 1 | 60 |
**SPECIAL EDUCATION** | | | |
Self-Contained SPEF | 950 | 4 | 3,800 |
Self-Contained SPEF Toilet | 60 | 1 | 60 |
Resource Room | 500 | 1 | 500 |
Special Education - Resource | 60 | 1 | 60 |
**ART & MUSIC** | | | |
Art Classroom | 1,200 | 1 | 1,200 |
Art Workroom w/ Storage & kiln | 150 | 1 | 150 |
Band / Chorus - 100 seats | 1,500 | 1 | 1,500 |
Music Practice / Ensemble | 200 | 1 | 200 |
**VOCATIONS & TECHNOLOGY** | | | |
Tech Clrm. - (E.G. Drafting, Business) | 1,200 | 1 | 1,200 |
Tech Shop - (E.G. Consumer, Wood) | 2,000 | 1 | 2,000 |
**HEALTH & PHYSICAL EDUCATION** | | | |
Gymnasium | 6,000 | 1 | 6,000 |
Gym Storeroom | 150 | 1 | 150 |
Health Instructor's Office w/ Shower & Toilet | 250 | 1 | 250 |
Locker Rooms - Boys / Girls w/ Toilets | 1,000 | 2 | 2,000 |
**MEDIA CENTER** | | | |
Media Center / Reading Room | 3,255 | 1 | 3,255 |
**DINING & FOOD SERVICE** | | | |
Cafetorium / Dining | 3,750 | 1 | 3,750 |
Stage | 1,600 | 1 | 1,600 |
Chair / Table / Equipment Storage | 367 | 1 | 367 |
Kitchen | 1,800 | 1 | 1,800 |
**MEDICAL** | | | |
Medical Suite Toilet | 60 | 1 | 60 |
Nurses' Office / Waiting Room | 250 | 1 | 250 |
Examination Room / Resting | 100 | 1 | 100 |
**ADMINISTRATION & GUIDANCE** | | | |
General Office / Waiting Room / Toilet | 300 | 1 | 300 |
Teachers' Mail and Time Room | 100 | 1 | 100 |
Duplicating Room | 200 | 1 | 200 |
Records Room | 300 | 1 | 300 |
Principal's Office w/ Conference Area | 100 | 1 | 100 |
Guidance Office 150 seats | 150 | 1 | 150 |
Guidance Waiting Room | 100 | 1 | 100 |
Guidance Storeroom | 50 | 1 | 50 |
Teachers' Work Room | 300 | 1 | 300 |
**CUSTODIAL & MAINTENANCE** | | | |
Custodian's Office shared | 150 | 1 | 150 |
Custodian's Workshop shared | 250 | 1 | 250 |
Custodian's Storage shared | 375 | 1 | 375 |
Recycling Room / Trash shared | 400 | 1 | 400 |
Receiving and General Supply shared | 267 | 1 | 267 |
**OTHER** | | | |
Other | | | |
**Total Building Net Floor Area (NFA)** | 38,875 | 1 | 38,875 |
**Proposed Student Capacity / Enrollment** | | | |
**Total Building Gross Floor Area (GFA)** | 90,714 | 1 | 90,714 |

---

1. Individual Room Net Floor Area (NFA) includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilet rooms.

2. Total Building Gross Floor Area (GFA) includes the entire building gross square footage measured from the outside face of exterior walls.

---

**Architect Certification**

I hereby certify that all of the information provided in this “Proposed Space Summary” is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architect Firm:

Name of Principal Architect:

Signature of Principal Architect:

Date:

---

**Version**

11.24.2010

Middle School Space Summary
OPTIONS EXPLORED

4.1 Options Explored

4.2 Options Matrix

4.3 High School Building Floor Plans with 7/8 STEM Academy
SECTION 4.1 MASTER PLAN OPTIONS

BACKGROUND

The goal of this study is to explore options for the efficient use of the existing school buildings in Sandwich that are consistent with the educational goals of the district, specifically maintain and improve the educational opportunities for students.

Sandwich School System is anticipated to further reduce in population based on recent projections by NESDEC, The New England Schools Development Council. School system population statistics:

- 2001 – 2002 K – 12 system wide population 4,056
- Current K – 12 system wide population 3,237
- Projected 2021 – 2022 K – 12 system wide population 2,592
  (36% decline over 20 years)

The temporary portable classroom additions at the Forestdale and Oak Ridge Schools are beyond their useful life and are recommended to be removed.

The Henry T. Wing School is in a condition that will require a significant investment just to maintain in good working order. There are short comings of the school such as the lack of handicapped accessibility and building systems that are beyond their useful life. In addition, having served the community for over 80 years, the school is beloved by many members of the community.

It is clear that in the coming decade, the declining population will be reflected in all four systems schools under populated and academically and functionally inefficient. If left as is, the community will spent money heating and operation buildings where the money could be better spent on education.

The Options discussed in this Section, bring over from the Wing School Study, three options that deal with the Wing School only. All of those options perpetuate the growing inefficiency of the other three schools in the system. Closing the Wing School, the oldest and poorest condition, allow for academic options that make the buildings more efficient in their use of space.

The current K - 8 system requires some of the non-core academic teachers to travel between buildings. Additionally, some non-core academic offerings have been dropped from the "middle school" years curriculum, partially because of those inefficiencies spread across three K - 8 schools. Option 5 of this section addresses many of these issues.
CONCEPTUAL PROJECT COSTS

The costs included in this report are "conceptual" and should be considered orders of magnitude. They are intended for differentiating between Options and planning purposes only. The total Conceptual Project Costs are comprised of “hard” and “soft” costs. Hard costs include all direct construction costs, general contractor’s overhead and profit and contingencies. Soft costs include non direct construction costs such as furnishings and equipment; computers and other technology; design fees, Owners Project Manager fees and other related design and construction fees.

OPTIONS EXPLORED

OPTION 1

Renovation to Wing School Only (from Wing School Study) K–8

- Addresses Wing School only, status quo at all other schools
- As population further declines, the school system will have increased excess capacity; extra unused building area
- Upgrades Wing School building components and systems – see previous study for full scope
- No educational upgrades
- Phased construction, 24 – 30 months
- Keeps the 1927 wing on line
- High school building remains underutilized
- Central Administration and Community School remain at the high school building
- Use portables at Forestdale and Oak Ridge Schools for swing space, remove after

Assumptions

Use Option 1 from February 2011 report; all budget items: construction, FF&E; technology, fees and contingency have been escalated by 3%.

"Future” escalation has been removed.

Revised estimate = $27.8M + Portables removal, $140K Say $28 - $30M Range.
OPTION 2

Renovations / Addition to Wing School Only (from Wing School Study - modified) K– 8

- Addresses Wing School only, status quo at all other schools
- This revised Option 2 addresses a smaller population due to further projected population decreases. Assumes a Wing School population of 550 students
- Upgrades Wing School building components and systems – see previous study for full scope
- Educational upgrades
- Phased construction, 30 – 36 months
- Removes the 1927 wing from school use (turned over to the Town)
- High school building remains underutilized
- Central Administration and Community School remain at the high school building
- Maximize use of Forestdale and Oak Ridge Schools – re-district
- Use portables at Forestdale and Oak Ridge Schools for swing space, remove following

Assumptions

Use Option 2 from February 2011 report; all budget items: construction, FF&E; technology, fees and contingency have been escalated by 3%.

“Future” escalation has been removed.

Revised estimate = $33.1M + Portables removal, $140K Say $33 - $34M Range

OPTION 3

New Wing School Only (from Wing School Study - modified) K– 8

- Addresses Wing School only, status quo at all other schools
- This revised Option 2 addresses a smaller population due to further projected population decreases. Assumes a Wing School population of 550 students
- New construction, 20 – 24 months
- Turns the existing Wing School over to the Town for reuse or demolition
- If not partially or wholly demolished, would reduce the field space on the Wing School site
- High school building remains underutilized
- Central Administration and Community School remain at the high school building
- Maximize use of Forestdale and Oak Ridge Schools – re-district
- Remove portables at Forestdale and Oak Ridge Schools

**Assumptions**

Use Option 3 from February 2011 report; all budget items: FF&E; technology, fees and contingency have been escalated by 3%.

New construction cost has been reduced slightly to reflect current market. $290 /sf assumed.

Building size reduced to 90,000 sf

Total includes assumptions for FF&E, Technology, fees, contingencies etc.

“Future” escalation has been removed.

Revised estimate = $34M+ Portables removal, $140K  Say $34 - $35M Range

**OPTION 4**

Retain K- 8 Elementary System, Consolidate to Two Schools

- Turns the existing Wing School over to the Town for reuse or demolition
- Redistrict K – 8 populations to the Forestdale and Oak Ridge Schools
- Remove portables from Forestdale and Oak Ridge Schools
- Classroom additions required at each of Forestdale and Oak Ridge Schools
- Each school results in populations of 950 students +/-
- High school building remains underutilized
- Central Administration and Community School remain at the high school building

**Assumptions**

New construction cost has been reduced slightly to reflect current market. $290 /sf assumed.

12 classroom building additions at each of Forestdale and Oak Ridge Schools, assumes 17,000 gsf at each at $290 / sf; assumes $50 / sf renovation of existing buildings

Total includes assumptions for FF&E, Technology, fees, contingencies etc.

“Future” escalation has not been included

Estimated at $14.3M each school - Total = $28.6M + Portables removal, $140K  Say $29 - $30M Range
OPTION 5 (Committee Recommended Option)

Change School System from K– 8 to K– 6, +7 / 8 STEM Academy

- Turns the existing Wing School over to the Town for reuse or demolition
- Redistrict K – 6 populations to the Forestdale and Oak Ridge Schools
- Remove portables from Forestdale and Oak Ridge Schools
- Develop a Grades 7 and 8 STEM Academy in the 2000 classroom addition at the high school building. Renovations needed to accommodate STEM program and alternate grade population
- Some renovations within the high school building, specifically enlarge and renovate the science laboratory / classrooms
- Total includes assumptions for FF&E, Technology, fees, contingencies etc.
- Assumes all grade 7 & 8 academic classrooms are contained within the designated “classroom wing”
- Assumes some “shared spaces” with the high school including: gym, cafeteria, library, art, music, tech ed and other specialty spaces.
- Classroom wing is right sized for a 440 student, grades 7 & 8 population, 10 years out. Interim populations may be a bit tight.
- Central Administration and Community School move from the high school building – location and costs not included in this study

Assumptions

Renovation of classroom wing (46,200 sf) to STEM academy assumed at $150 /sf.

Renovation of all science labs to right sized lecture / labs. Assume 12,500 sf at $200/sf

Assume $1M of miscellaneous renovations

“Future” escalation has not been included

Total includes assumptions for FF&E, Technology, fees, contingencies etc.

Estimated total = $14.3M + Portables removal, $140K. Say $15 - $16M Range
# Sandwich Master Plan Options

<table>
<thead>
<tr>
<th>Options</th>
<th>Forestdale School Building</th>
<th>Forestdale Cost</th>
<th>Oakridge School Building</th>
<th>Oakridge Cost</th>
<th>Wing School Building</th>
<th>Wing Cost</th>
<th>High School Building</th>
<th>High School Cost</th>
<th>Total - Order of Magnitude Project Cost, 2012, No Escalation</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Option 1</td>
<td>K - 8</td>
<td>Status Quo, remove portables</td>
<td>$70K</td>
<td>K - 8</td>
<td>Status Quo, remove portables</td>
<td>$70K</td>
<td>Renovation Only</td>
<td>$27.8M</td>
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<td>$0</td>
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<td>Option 3 Modified</td>
<td>K - 8</td>
<td>Status Quo, remove portables</td>
<td>$70K</td>
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<td>Status Quo, remove portables</td>
<td>$70K</td>
<td>New School for 550 students</td>
<td>$31.3M</td>
<td>Status Quo</td>
<td>$0</td>
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<tr>
<td>Option 4</td>
<td>K - 8</td>
<td>Consolidate K - 8, Population to 2 schools, remove &quot;temporary classrooms&quot;, addition required</td>
<td>Redistrict</td>
<td>K - 8</td>
<td>$14.3M + $70K</td>
<td>$14.3M + $70K</td>
<td>Turn over to Town as surplus property</td>
<td>$0</td>
<td>Status quo, 9 - 12</td>
<td>$0</td>
</tr>
<tr>
<td>Option 5</td>
<td>K - 6</td>
<td>Remove &quot;temporary classrooms&quot;, Minor renovations Redistrict</td>
<td>$70K + $300K minor reno</td>
<td>K - 6</td>
<td>$70K + $300K minor reno</td>
<td>$70K + $300K minor reno</td>
<td>Turn over to Town as surplus property</td>
<td>Renovations required, possible addition</td>
<td>$13.4M - $15M Range</td>
<td>Say $14 - $15M Range. New Grades 7 / 8 STEM Academy, Central Administration and Community School to be relocated, no addition assumed in these figures.</td>
</tr>
</tbody>
</table>
Second Floor Plan

7 / 8 STEM Academy

Renovated High School Science

Options 5-7 / 8 STEM Academy, High School
COMMITTEE MEETING REPORTS
### Project: Henry T. Wing School Facilities Assessment  
### Project No.: 10087  
### Prepared by: Joel Seeley  
### Re: Project Kick-Off Meeting  
### Meeting Date: 10/4/2010  
### Meeting No: 1  
### Distribution: Attendees, F. Locker (MF)

**Attendees:** Douglas Lapp, Paul Spiro, Skip Tetreault, Michelle Austin, Sheila Lima, John Juros – Assessment Committee; Phil Poinelli, David Frieder, Joel Seeley - SMMA

<table>
<thead>
<tr>
<th>Item #</th>
<th>Action</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Record</td>
<td>All introduced themselves and described their role in the Assessment.</td>
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</tbody>
</table>
| 2.     | Record | The Study Goals were discussed. The Assessment is to be a stand-alone report, separate from the municipal building assessment performed earlier.  
The objective of the Assessment Report is to be a practical working document shaping the scope of a large capital project, based on educational, demographic and physical condition needs. It shall also define a prioritized listing of smaller repair projects to maintain the existing facility operation.  
The Assessment Report may be used as a basis to request repair appropriations from Town Meeting.  
The report may also be used to inform a Statement of Interest (SOI) for MSBA. |
| 3.     | SMMA   | The Assessment schedule was reviewed. The final date has flexibility if needed.  
The Field Review to be scheduled for October 19th.  
The Visioning Workshop to be scheduled for October 22nd. *Post script – workshop changed to October 21st after the meeting.*  
SMMA will monitor the schedule and adjust as needed. |
| 4.     | SMMA   | The Physical Assessment process was discussed. David reviewed the process of collecting information, evaluating the existing building, recording the findings in an overlay process on the CADD floor plans and assembling into a report. David distributed a plan overlay showing the dates of each building addition since 1927. SMMA will meet with Skip prior to touring the building to obtain known information on the systems.  
SMMA to send any questions prior to the meeting to Skip. |
<p>| 5.     | SMMA, S. Lima | The Visioning Workshop intent was reviewed. The room should be large enough for 20 – 25 participants, with the ability to break down into groups of |</p>
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<td><strong>4.</strong></td>
<td>4 – 5 around tables. The participants should be a mix of school administrators, teachers, students, and community members. SMMA will provide an agenda and outline of the workshop goals for review. Sheila will develop a preliminary list of invitees for review.</td>
</tr>
<tr>
<td><strong>6.</strong> S. Lima</td>
<td>Educational programming process was discussed. Phil reviewed the overlay process of defining space use, adjacencies and size. Sheila to forward any information not on the website related to the curriculum and curriculum goals.</td>
</tr>
<tr>
<td><strong>7.</strong> M. Austin</td>
<td>Community engagement was discussed. The Assessment should explore which areas of the facility are currently being used by the community, which could be used and what enhancements can be undertaken to increase community use. The school currently has heavy community use at night. Michelle will provide a calendar and list of current community use.</td>
</tr>
</tbody>
</table>
| **8.** SMMA | The evaluation criteria to be used in the review of the planning options was discussed. Some of the criteria discussed as follows:  
  - Support Educational Curriculum  
  - Upgrade building systems  
  - Parity with the other two schools  
  - Provide full accessibility  
  - Meet current life safety code  
  - Maximize sustainability  
  - Maximize technology use  
  - Increase natural light  
SMMA to summarize and distribute a listing for review. |
| **9.** Record | Next Committee Meeting is October 18, 2010 at 3:30 at the Wing School. |

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
Attendees: Douglas Lapp, Paul Spiro, Michelle Austin, Sheila Lima, John Juros – Assessment Committee; Phil Poinelli, David Frieder, Joel Seeley - SMMA

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<tr>
<th>Item #</th>
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</table>
| 1.     | SMMA   | Phil distributed and reviewed the draft Study Goals.  
The Assessment Process, Educational, Community, Building, Site and Construction Goals were reviewed and refined.  
The Educational Goals will be further refined based on the Visioning Workshop scheduled for 10/21/10.  
SMMA will provide an updated version of the Study Goals after the Visioning Workshop. |
| 2.     | SMMA   | Phil distributed and reviewed the Visioning Workshop agenda. The agenda is to be modified to reflect an end time of 2:30. The preliminary list of invitees was also reviewed as well as the draft invitation letter.  
SMMA will bring updated agendas for distribution at the Visioning Workshop. |
| 3.     | Record | Next Committee Meeting is November 1, 2010 at 3:30 at the Wing School. |

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
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<tbody>
<tr>
<td>1.</td>
<td>SMMA</td>
<td>David distributed and reviewed the draft Physical Assessment Report. The review of the modulars and the exterior of the 1927 building have not been completed. Doug will provide SMMA a contact to schedule the review of the modulars. David indicated that the code review is in process and will be completed for next meeting.</td>
</tr>
<tr>
<td>2.</td>
<td>Skip T.</td>
<td>Skip will forward past AHERA asbestos reports to SMMA for review.</td>
</tr>
<tr>
<td>3.</td>
<td>Skip T.</td>
<td>Skip will review if any reports exist on lead paint and forward to SMMA. If no reports exist, the Town will determine if a consultant to determine the extent of lead paint is to be retained.</td>
</tr>
<tr>
<td>4.</td>
<td>Skip T.</td>
<td>Skip will review if any information exists on the roof systems, age, or past maintenance/repair work and forward to SMMA.</td>
</tr>
<tr>
<td>5.</td>
<td>Record</td>
<td>David asked if the Wing School is an emergency shelter. The Wing School is not an emergency shelter.</td>
</tr>
<tr>
<td>6.</td>
<td>Record</td>
<td>Joel reviewed the Project Goals, dated 10/29/10. The updated Project Goals were approved.</td>
</tr>
<tr>
<td>7.</td>
<td>Record</td>
<td>Providing for full air conditioning should be one of the design options.</td>
</tr>
<tr>
<td>8.</td>
<td>Record</td>
<td>Next Committee Meeting is November 15, 2010 at 3:30 at the Wing School.</td>
</tr>
</tbody>
</table>

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
### Project Minutes

**Project:** Henry T. Wing School Facilities Assessment  
**Project No.:** 10087  
**Prepared by:** Phil Poinelli  
**Meeting Date:** 11/15/2010  
**Meeting No:** 4  
**Distribution:** Attendees, Skip Tetreault, Frank Locker, John Juros, David Frieder, Joel Seeley (MF)

**Attendees:** Douglas Lapp, Michelle Austin, Paul Spiro, Sheila Lima, Assessment Committee; Phil Poinelli - SMMA

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<tbody>
<tr>
<td>1.</td>
<td>Committee</td>
<td>PJP delivered hard copies of the Educational Vision report prepared by Frank Locker. This report summarizes discussions, visions, concepts from the October 21st Visioning Conference held at the Wing School. Committee members to review prior to release of the document.</td>
</tr>
<tr>
<td>2.</td>
<td>SMMA</td>
<td>Interior Spaces – PJP reviewed plans developed by SMMA showing interior (windowless) teaching spaces. SMMA to review and finalize prior to incorporating into the Educational Assessment section of the report.</td>
</tr>
<tr>
<td>3.</td>
<td>SMMA</td>
<td>Undersized Program Spaces - PJP reviewed plans developed by SMMA showing teaching spaces that are more than 10% less in net area below MSBA’s guidelines for new construction. PJP identified that the MSBA does not have standards for minimum sizes for existing buildings. SMMA to review and finalize prior to incorporating into the Educational Assessment section of the report.</td>
</tr>
<tr>
<td>4.</td>
<td>SMMA</td>
<td>Floor Level Changes - PJP reviewed plans developed by SMMA showing floor level changes in the school. There are approximately 18 different occupied floor levels in the school (to be confirmed). Numerous stairs and ramps connect the different levels. Many of these are non-code conforming, though some of them maybe grandfathered, with respect to today’s code. The 1927 original building contains 8 different occupied levels. The many level changes, will present significant obstacles in developing design alternatives involving educational reconfigurations.</td>
</tr>
<tr>
<td>5.</td>
<td>Open</td>
<td>1927 Wing – There was a general discussion about the 1927 wing. The building contains some undersized classrooms and has the 8 levels discussed above. The level changes would likely require (2) 5 stop elevators or an elevator and multiple stair climber lifts. The committee agreed that inclusion of the 1927 wing in design alternatives involving educational reconfigurations would be costly and likely not result in the types of spaces desired. There was no conclusion to this discussion.</td>
</tr>
</tbody>
</table>
6. **Committee**

**Demographic Projections** - Michelle Austin identified that the NESDEC renewal is in process. She will follow up to make sure this happens. PJP noted that the next steps would likely be:

- Town request a 10 year demographic projection from NESDEC
- NESDEC will likely request the October 1 numbers for this year and those missing since the last filing
- The projections would likely take 2-3 weeks following submission of all enrollment data.

7. **SMMA**

**Options** – There was a discussion of the approach to the options to be developed.

Option 1 – Stabilization – these items will be able to be added to the anticipated stabilization request for other town buildings anticipated for the winter or spring TM. These might include items such as: new boiler; some or all new roofs; H&V controls; minimum handicapped access; stairs and overlooks that might present dangerous conditions; life safety issues; failed windows; other code items?; Haz Mat; other items identified by the school department, etc. To the extent possible, these items would be useable in the next option.

Option 2 – Code and Educational Renovations – this will work towards the goals identified during the educational visioning.

Option 3 – Option 2 plus selected building removal and additions to better achieve the educational goals.

Option 4 – Building replacement.

It was agreed that items should be “grouped” so the a la carte options are limited.

8. **Open**

**Forestdale and Oakridge Schools** – PJP noted that SMMA does not have a firm understanding of the educational adequacy and capacity of the two schools. (not in SMMA scope) Committee members noted that they would be able to speak to the issue. For purposes of this study, it was agreed that the two schools would be assumed to accommodate their original design size of 750 students each. The Wing School will be anticipated to accommodate the remainder. The committee noted that they believe there will always be a need for the Wing School but at an undetermined size and configuration.

9. **Record**

**Next Committee Meeting** is Wednesday, December 8, 2010 at 3:00 at the Wing School.

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
### Project: Henry T. Wing School Facilities Assessment
### Project No.: 10087
### Prepared by: Joel Seeley
### Meeting Date: 12/8/2010
### Re: Project Meeting
### Meeting No: 5
### Distribution: Attendees, Frank Locker, Michelle Austin (MF)

#### Attendees: Douglas Lapp, Skip Tetreault, John Juros, Paul Spiro, Sheila Lima – Assessment Committee; Phil Poinelli, David Frieder, Joel Seeley - SMMA

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<tbody>
<tr>
<td>1. SMMA</td>
<td>The draft Educational Vision report, distributed last meeting was discussed. The Committee accepts the draft report with no comments. SMMA to issue as final. SMMA to post the video of the workshop on SMMA’s FTP site for download by the committee.</td>
<td></td>
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<tr>
<td>2. SMMA</td>
<td>PJP distributed and reviewed a memorandum, dated 12/8/10 describing the Planning Options 1 – 4, summarized as follows: <strong>Option 1 – Stabilization (for 5 – 7 years)</strong> – comprised of: A. Exterior windows and roof replacement, masonry re-pointing B. Accessibility upgrades to code minimum, not including the 1927 wing C. Hazardous materials abatement not requiring demolition to access D. Life safety including fire alarm and detection upgrades and stairs/railings upgrades E. HVAC system repairs to existing systems and components F. Electrical system repairs to existing systems and components with the exception of a new emergency generator and master clock system. Note: this option has no educational reconfiguration included</td>
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<td></td>
<td><strong>Option 2 – Code and Educational Renovations</strong> – comprised of: A. Educational renovations identified at the Visioning Workshop that can be accomplished within a renovation only project B. Option 1 items, if not accomplished prior C. Accessibility throughout the school including the 1927 wing D. Energy code upgrades E. Add fire sprinkler system F. Replace HVAC system G. Replace electrical system</td>
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</table>
### Option 3 – Renovation and Additions – comprised of:

A. Option 2 plus selected building removal and additions to better achieve the educational goals. Proposed life expectancy equal to new construction. Abandon the 1927 wing and turn back to the Town

### Option 4 – Building Replacement – comprised of:

A. New building located on the site and demolition of the existing.

The following comments were discussed on the above:

#### Option 1 and 2 – SMMA to combine Option 1 and 2 to include applicable system replacements and repairs that would provide for a longer investment life, say approximately 10 – 15 years. SMMA to develop the HVAC scope with Skip.

#### Option 3 – Option 3 to become Option 2. SMMA to refine the option once the enrollment projections are completed.

#### Option 4 – Option 4 to become Option 3. SMMA to refine the option once the enrollment projections are completed.

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<tr>
<th>3. Committee</th>
<th><strong>Demographic Projections</strong> - The projections are expected within the next 2 - 3 weeks.</th>
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<tbody>
<tr>
<td>4. SMMA</td>
<td><strong>Draft Educational Space Template</strong> - PJP distributed and reviewed the draft space template. SMMA to update the space template once the demographic projections are finalized.</td>
</tr>
<tr>
<td>5. Committee</td>
<td><strong>Hazardous materials</strong> – Committee to investigate contracting directly with a hazardous material consultant (via State Contract) to better define the scope of material to be abated. It was noted that the AHERA process does not necessarily note all materials due to the age of the program (+/- 1980).</td>
</tr>
<tr>
<td>6. Record</td>
<td><strong>Schedule</strong> – Town Meeting is in early May. Discussion of finalizing the options by mid-January, then estimating and wrapping up the Study by the end of February, allows sufficient time for needed community updating prior to Town Meeting.</td>
</tr>
<tr>
<td>7. Record</td>
<td><strong>Next Committee Meeting</strong> is Monday, January 10, 2011 at 3:00 at the Wing School.</td>
</tr>
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The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
### Project Minutes

**Project:** Henry T. Wing School Facilities Assessment  
**Project No.:** 10087  
**Prepared by:** Joel Seeley  
**Meeting Date:** 1/10/2011  
**Meeting No:** 6

**Distribution:** Attendees, Frank Locker, John Juros (MF)

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**Attendees:** Douglas Lapp, Skip Tetreault, Michelle Austin, Paul Spiro, Sheila Lima – Assessment Committee; Phil Poinelli, David Frieder, Joel Seeley - SMMA

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<tr>
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<tr>
<td>1. D. Lapp</td>
<td>Demographic Projections</td>
<td>Phil distributed and reviewed a memorandum, dated 1/7/11 describing the results of the demographic projections developed by NESDEC, dated 12/9/10. The projections indicate a continuous decline in K-8 enrollment over the next ten years. Phil described how the projections influence each of the 3 Planning Options. Doug to provide SMMA second home data. SMMA to forward to NESDEC to incorporate into the projections.</td>
</tr>
<tr>
<td>2. Record</td>
<td>Educational Space Template</td>
<td>Phil distributed and reviewed the space template updated to reflect the demographic projections developed by NESDEC, dated 12/9/10.</td>
</tr>
</tbody>
</table>
| 3. SMMA | | Phil distributed and reviewed a memorandum, dated 1/14/11 describing the Planning Options 1 – 3, summarized as follows: **Option 1 – Renovation Only** – comprised of:  
   A. Exterior windows and roof replacement, selected masonry re-pointing  
   B. Accessibility upgrades including the 1927 wing  
   C. Hazardous materials abatement not requiring demolition to access  
   D. Life safety including fire alarm and detection upgrades and stairs/railings upgrades  
   E. Energy code upgrades  
   F. Add fire sprinkler system  
   G. Replace HVAC system  
   H. Replace electrical system  

*Note: this option has no educational reconfiguration included*  

**Option 2 – Renovation and Additions** – comprised of:  
A. Option 2 plus selected building removal and additions and renovations to better achieve the educational goals. Proposed life
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<td>expectancy equal to new construction. Abandon the 1927 wing and turn back to the Town</td>
</tr>
<tr>
<td><strong>Option 3 – Building Replacement</strong></td>
<td>comprised of:</td>
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<tr>
<td></td>
<td><strong>A.</strong> New building located on the site and demolition of the existing.</td>
</tr>
<tr>
<td>The committee approves the scope of each Option. SMMA to develop cost estimates for each Option and present at the next meeting.</td>
<td></td>
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<tr>
<td>4. SMMA</td>
<td>David distributed and reviewed a floor plan of the existing building indicating the extent of air conditioning to be incorporated into Option 1 and 2. The same proportion of air conditioning is to be provided in Option 3. SMMA to develop cost estimates for the air conditioning.</td>
</tr>
<tr>
<td>5. Record</td>
<td><strong>Schedule</strong> – Town Meeting is in early May. Discussion of finalizing the costs on the options by end of January, then wrapping up the Study to begin presentations by mid-February.</td>
</tr>
<tr>
<td>6. Record</td>
<td><strong>Next Committee Meeting</strong> is Monday, January 31, 2011 at 3:00 at the Wing School.</td>
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The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
### Project Minutes

**Project:** East Sandwich Public Schools  
**Prepared by:** David Frieder  
**Re:** District Wide Study  
**Meeting Date:** 5/24/2011  
**Meeting No:** 7  
**Distribution:** (MF)

**Attendees:** Doug Lapp, Sheila Lima, John Juros, Skip Tetreault, Lenihan ?  
Phil Poinelli, David Frieder

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<td>1</td>
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<td>Doug Lapp introduces participants and describes revised direction of this study: to move from focus on Wing School to consideration of District-wide facilities and enrollment issues. Doug indicated his willingness to assist in this study, but made clear that the process is now being driven by the School Committee.</td>
</tr>
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</table>
| 2      |        | Jim Pierce expresses his opinion that the discussion boils down to four options regarding the Wing School:  
1. Do nothing  
2. Implement one of the three renovation/addition options presented by SMMA in their presentation of February 2011  
3. Close the Wing School  
4. Invest in the Wing School |
| 3      |        | Phil Poinelli provides a brief summary of SMMA’s findings at the Wing School, that the building has 18 different floor levels, that there is excess building area but insufficient teaching area, and reviews the options developed and presented in February 2011. |
| 4      |        | Phil Poinelli distributes copies of the NESDEC projections for the Town of Sandwich. The numbers indicate a gradually declining enrollment. By 2020 there are projected to be 328 fewer K-8 students in the system, a decrease of approximately 3 students per homo room. 108 Home Room teachers in K-8.  
There are said to be citizens in the Town who dispute these numbers, and in the event of a construction application to the Massachusetts School Building Authority (MSBA), the Authority would make their own population projections. That being said, the NESDEC projections are fairly reliable since they are based on the number of live births in the town. |
| 5      |        | Given the demographic facts, this group needs to consider the needs of the entire district for the K-8 population. Among the possibilities:  
a. Keep 3 K-8 schools  
b. Keep 2 K-8 schools, re-district, and build additions at the remaining two.  
c. Change from K-8 to K-6 and go to a Middle School model  
d. Go to a K-7 model and house the eighth graders at the High School |
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<td>6</td>
<td>Parents in the district support the K-8 model. Teachers are better acquainted with the kids and parents tend to be more involved. There are fewer transitions in the K-8 model.</td>
</tr>
<tr>
<td>7</td>
<td>Planning process is likely to have a greater impact on K-8 than on High School. Losses in grades 8 and 9 occur from private school enrollments, regional Vo-Tech enrollments and Sturgis Charter School. Projected decrease of 220 in High School will have only a marginal effect on that facility.</td>
</tr>
<tr>
<td>8</td>
<td>Need the following to get study process moving: 1. Schedule meetings with Principals 2. Obtain course listings 3. Obtain room utilization rates 4. Obtain master schedules</td>
</tr>
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<td>9</td>
<td>Discussion regarding maximum class size; why is 24 the maximum? Local School committees generally set the class size, although 24 is also the standard set by MSBA. To set a particular size would limit District flexibility in negotiations.</td>
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<tr>
<td>10</td>
<td>Special Education population seems to be increasing.</td>
</tr>
<tr>
<td>11</td>
<td>Discussion on whether to possibly include parents and additional School Committee members in this process. Consensus was that this body has been empowered to investigate alternatives and present to larger constituencies for discussion and action.</td>
</tr>
<tr>
<td>12</td>
<td>Discussion on the Community School included the following points:  - The School is a 501(c)(3). It operates as a business and uses school district facilities  - The School Committee governs the Community School  - The original concept behind the Community School was to maximize use of public school facilities by offering after hours programs  - The Community School currently operates the pre-K program in portables behind the Wing School. The portables have exceeded their useful life and should not figure into this study.  - A representative of the Community School should be included in these discussions.</td>
</tr>
<tr>
<td>13</td>
<td>Discussion on pre-k and kindergarten included the following points:  - Full day kindergarten is likely, but study should use the current situation as a baseline. Study to evaluate both half and full day kindergarten  - Does pre-k continue in District-owned facilities or should these programs be turned over to private operators.  - Consider locating pre-k and kindergarten in High School as part of training for high school students.  - Consider keeping k,1,2 in the same facility to increase the chances that all children in the District will be able to read by grade 3.</td>
</tr>
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</table>
**Spinnaker Program will continue**

**No portables will be included in the District’s square footage capacity**

**Issues affecting the High School (1400 capacity) included:**
- Consider alternate uses of “A” wing for kindergarten
- Providing sufficient P.E. space in High School
- Consider using “A” wing for additional Community School functions

**The Committee raised the question of goals for this study, and the consensus reached was that stated goals are not required immediately, but that they need to be established soon so that we can measure how well the various options satisfy those goals.**

**Phil Poinelli will schedule visits to the High School, Oakridge and Forestdale to assess the capacity and layouts of the facilities.**

**Some of the issues to be considered, District-wide are:**
- Where should we locate the pre-k and kindergarten?
- Assuming we are able to arrive at the right size for the Sandwich system, what implications does this have for the next step at the Wing School?

**Next Meeting will be Tuesday, June 14 at 4:30 PM**

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
### Project Minutes

**Project:** Sandwich Public Schools  
**Prepared by:** Philip Poinelli  
**Re:** District Wide Master Plan  
**Meeting Date:** 6/14/2011  
**Meeting No:** Rev #8  
**Distribution:** Committee, J. Seeley, D. Frieder (MF)

**Attendees:** Doug Lapp, Sheila Lima, Skip Tetreault, Ellin Booras, Tom Daniels, Mary Ellen Johnson, Jim Pierce, Andrea Killion, Jessica Linehan, John Juros  
Phil Poinelli - SMMA

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<tbody>
<tr>
<td>1</td>
<td>Record</td>
<td>Andrea Killion and Jessica Linehan were elected co-chairs of the study committee. Doug Lapp will continue to facilitate dates and distribution for the committee.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>P. Poinelli reported on meetings with the Principals of the High School, Forestdale and Oak Ridge schools</td>
</tr>
</tbody>
</table>
| 3 | Open | P. Poinelli provided a preliminary Ed Spec for the high school. The Ed Spec identifies each curriculum offering, the projected number of students anticipated to attend each and the resulting number of classrooms required by department to fulfill the program.  
The space requirements for the anticipated reduced population results in a surplus of classrooms for the 2020-2021 school year. Refinements to this document will be needed. |
| 4 | Open | HS Curriculum – It was noted that the high school has 139 curriculum offerings. This is lower than many schools of similar size.  
Ellin Booras identified that the target is to have approximately 160 offerings as it has had in the past. This would provide many more electives for students and might contribute to student retention. Ellin gave a brief history to the loss of offerings, many due to budget cuts, retiring specialty teachers who were not replaced etc.  
Ellen also gave a brief history of the K-8 system.  
P. Poinelli requested the committee think about planning for additional curriculum offering for the long term planning process. This would affect the Ed Spec discussed in item #3.  
There was a discussion of the likely expansion of the Virtual High School |
| 5 | Open | Members of the committee questioned a few points of the NESDEC enrollment projections that were distributed at the previous meeting. Specifically, do the projections take into account: |
### Town
- Dropouts
- Loss of Students to Sturgis Charter School
- 10% loss to Upper Cape Regional HS

Question was also raised over the discrepancy between birth records from NESDEC and town records. This was previously responded to by Don Kennedy / NESDEC. PJP to forward.

### Record
- PreK discussion – the committee discussed the current state mandated PreK program that includes both special needs and matching numbers of regular Ed students. It was agreed that for this study, only program space for the required program would be included.

### Committee
- The topic of developing Project Goals for the Master Plan was not discussed. This discussion is anticipated for a future meeting.

### Next Meeting
- Next Meeting will be Thursday, July 21 at 4:30 PM

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
Item #  Action  Discussion

1  Open  P. Poinelli provided a preliminary Ed Spec for the high school. The Ed Spec identifies each curriculum offering, the projected number of students anticipated to attend each and the resulting number of classrooms required by department to fulfill the program.

The space requirements for the anticipated reduced population results in a surplus of classrooms for the 2020-2021 school year. Refinements to this document will be needed.

Discussed – Topic remains open

2  Open  HS Curriculum – It was noted that the high school has 139 curriculum offerings. This is lower than many schools of similar size.

Ellin Booras identified that the target is to have approximately 160 offerings as it has had in the past. This would provide many more electives for students and might contribute to student retention. Ellin gave a brief history to the loss of offerings, many due to budget cuts, retiring specialty teachers who were not replaced etc.

Ellin also gave a brief history of the K-8 system.

P. Poinelli requested the committee think about planning for additional curriculum offering for the long term planning process. This would affect the Ed Spec discussed in item #3 (previous report).

There was a discussion of the likely expansion of the Virtual High School

The majority of this meeting (#9) was spent discussing the topics of items 1 & 2 of this report, the anticipated curriculum for the future of the District. It was agreed that the Superintendent and his management team needs to discuss the future goals for curriculum in the district at all grade levels. P. Poinelli will meet with the Superintendent’s group to facilitate the discussion.
### Project: Sandwich Public Schools

**Meeting Date:** 7/29/2011  
**Meeting No.:** 8

|   |   | Members of the committee had previously questioned a few points of the NESDEC enrollment projections that were distributed at the previous meeting.  
|   |   | **P. Poinelli provided correspondence from Don Kennedy / NESDEC, on the accuracy of NESDEC projections as it relates to local and census data. Also provided was detail on the NESDEC methodology for developing projections. There was a lengthy discussion on this topic.**  
|   |   | **J. Pierce recommended the committee accept the NESDEC projections to the year 2020 and to use them as the basis for the study moving forward. The committee reached consensus on this subject.**  
|   |   | It was agreed that continued membership in NESDEC would be beneficial to the school department. Annual updates based on October numbers improve the accuracy of projections over time.  
|   |   | **PreK discussion – the committee discussed the current state mandated PreK program that includes both special needs and matching numbers of regular Ed students. It was agreed that for this study, only program space for the required program would be included.**  
|   |   | The topic of developing Project Goals for the Master Plan was not discussed. This discussion is anticipated for a future meeting.  
|   |   | No next meeting was scheduled. One will be scheduled following meetings with the school department.  

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
**PROJECT MINUTES**

<table>
<thead>
<tr>
<th>Item #</th>
<th>Action</th>
<th>Discussion</th>
</tr>
</thead>
</table>
| 1      | Open   | P. Poinelli provided a preliminary Ed Spec for the high school. The Ed Spec identifies each curriculum offering, the projected number of students anticipated to attend each and the resulting number of classrooms required by department to fulfill the program. The **preliminary investigation suggests** the space requirements for the anticipated reduced population results in a surplus of classrooms for the 2020-2021 school year. **The committee requested that this be refined to indicate when (year +/-) a surplus of classrooms may be anticipated. This exercise will be done when new population projections and a definition of the projected curriculum requirements are provided.**  

**Meeting Report #9 was approved with the above “bolded” revisions.**  

Dr Canfield is in the process of developing a “Program and Staff Use Report”. This document will assist in the development of future school budgets. It will address previously cut programs and comment on if they may be restored in the short or long term and the Superintendent’s vision on how the system is envisioned moving forward.  

**It is anticipated that the report will be complete in approximately two weeks.**  

This document and discussion will be the basis of the next committee meeting and will presumably set direction for the Master Plan.  

| 2      | Open   | HS Curriculum – It was noted that the high school has 139 curriculum offerings. This is lower than many schools of similar size. Ellin Booras identified that the target is to have approximately 160 offerings as it has had in the past. This would provide many more electives for students and might contribute to student retention. Ellin gave a brief history to the loss of offerings, many due to budget cuts, retiring specialty teachers who were not |
replaced etc.
Ellin also gave a brief history of the K-8 system.
P. Poinelli requested the committee think about planning for additional curriculum offering for the long term planning process. This would affect the Ed Spec discussed in item #3 (previous report).
There was a discussion of the likely expansion of the Virtual High School
The majority of this meeting (#9) was spent discussing the topics of items 1 & 2 of this report, the anticipated curriculum for the future of the District. It was agreed that the Superintendent and his management team needs to discuss the future goals for curriculum in the district at all grade levels. P. Poinelli will meet with the Superintendent’s group to facilitate the discussion.

See discussion #1 above.

<table>
<thead>
<tr>
<th></th>
<th>Open</th>
<th>Wing School Boiler Issue:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Open</td>
<td>SMMA presented and discussed a memo outlining the issues of the Wing School Boiler including: a Description of the System; Issues / Questions; three options and a copy of the Heating and Ventilating Report conducted a year ago.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A detailed discussion took place. The committee requested SMMA provide a fee proposal for option #1, developing an Action Plan.</td>
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<tr>
<td></td>
<td></td>
<td>Committee Comments included:</td>
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<tr>
<td></td>
<td></td>
<td>J. Pierce – can’t support something for the 2011 fall Town Meeting</td>
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<tr>
<td></td>
<td></td>
<td>To do nothing is not an option</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Need a study of option 1</td>
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</tbody>
</table>

|   | Record | NESDEC renewal is in motion. The School Department will request a population projection report based on October 1, 2011 enrollment figures. |

<table>
<thead>
<tr>
<th></th>
<th>Open</th>
<th>General Discussion:</th>
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<tbody>
<tr>
<td>5</td>
<td>Open</td>
<td>Do grades K and 1 need to be on the first floor?</td>
</tr>
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<td>In the future will the school system fit into 3 buildings vs the current 4?</td>
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<tr>
<td></td>
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<td>What is the upper limit of class sizes?</td>
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<tr>
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<td></td>
<td>Need to determine the specialized rooms requirements to determine the rooms remaining for general classroom use.</td>
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<tr>
<td></td>
<td></td>
<td>There is a strong emotional connection to the Wing School</td>
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<tr>
<td></td>
<td></td>
<td>What is the best use of school building resources across the system?</td>
</tr>
</tbody>
</table>

|   | Committee | The topic of developing Project Goals for the Master Plan was not discussed. This discussion is anticipated for a future meeting. |

|   | Next Meeting scheduled for Thursday 11/16/11 at 4:30 |

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
**PROJECT MINUTES**

<table>
<thead>
<tr>
<th>Item</th>
<th>Action</th>
<th>Discussion</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Record</td>
<td>Meeting Minutes for meeting #10 approved</td>
</tr>
</tbody>
</table>
| 2    | Record  | Alan Hall was introduced as the new Director of Facilities for the school department. Allen spoke to:  
- Currently getting to know the facilities  
- Ongoing maintenance of the school buildings  
- Need for facilities staff training  
- Clean up of clutter in the Wing School boiler room |
| 3    | Hold    | A. Hall identified that the Wing School boiler (1) is newer than originally identified. (2001) |
| 4    | Record  | J. Juros reviewed the Wing School study conducted in 2010 for the context of the Master Plan process |
| 5    | Open    | Dr Canfield is in the process of developing a “Program and Staff Use Report”. This document will assist in the development of future school budgets. It will address previously cut programs and comment on if they may be restored in the short or long term and the Superintendents vision on how the system is envisioned moving forward.  
It is anticipated that the report will be complete in approximately two weeks.  
This document and discussion will be the basis of the next committee meeting and will presumably set direction for the Master Plan.  
**Dr. Canfield discussed the recent Program and Staff Use Report.**  
- Almost a school’s worth of Sandwich students attending schools outside the district  
- Discussed the need for more electives at the high school  
- Discussed the interest in exploring a STEM academy model for grades 7 & 8 |
| 6    | Open    | P. Poinelli provided a preliminary Ed Spec for the high school. The Ed Spec |
identifies each curriculum offering, the projected number of students anticipated to attend each and the resulting number of classrooms required by department to fulfill the program.

No additional comment on this issue at this meeting

7 Record

NESDEC renewal is in motion. The School Department will request a population projection report based on October 1, 2011 enrollment figures.

Expected Late December

8 Open

General Discussion:
Do grades K and 1 need to be on the first floor? No requirement in Massachusetts
In the future will the school system fit into 3 buildings vs the current 4? Ongoing
What is the upper limit of class sizes? No official limit but 24 max is a goal
Need to determine the specialized rooms requirements to determine the rooms remaining for general classroom use. Ongoing
There is a strong emotional connection to the Wing School
What is the best use of school building resources across the system?

9 Committee

The topic of developing Project Goals for the Master Plan was not discussed. This discussion is anticipated for a future meeting.

10 Open

J. Pierce discussed the need to know when the Wing School could be closed due to the anticipated population decline. This will be SMMA’s focus for the next meeting.

J. Juros discussed the need to make the best informed decision.

11

Next Meeting was not scheduled. P. Poinelli to meet with Dr. Canfield to review program issues. Next committee meeting will be scheduled following that meeting.

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
### PROJECT MINUTES

**Project:** Sandwich Public Schools  
**Prepared by:** Philip Poinelli  
**Re:** District Wide Master Plan  
**Distribution:** Committee, J. Seeley, D. Frieder (MF)

#### Attendees:
Doug Lapp, Sheila Lima, Jim Pierce, John Juros, Dr. Canfield, Ellin Booras, Jessica Linehan, Alan Hall

Phil Poinelli - SMMA

<table>
<thead>
<tr>
<th>Item #</th>
<th>Action</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Record</td>
<td>Meeting Minutes for meeting #11 approved</td>
</tr>
<tr>
<td>2</td>
<td>Open</td>
<td>P. Poinelli presented graphs representing current and projected populations and shown in relation to building capacities (see attached. These will be revised once new NESDEC projections are received.</td>
</tr>
<tr>
<td>3</td>
<td>Record</td>
<td>P. Poinelli presented floor plans of the Forestdale &amp; Oakridge Schools showing capacity if used for K – 8 and K – 6. The capacities assumed the removal of the portable classrooms. They also assume space for the return of certain curriculum for the middle school grades.</td>
</tr>
</tbody>
</table>
| 4      | Open   | P. Poinelli presented 5 Options for discussion (see attached)  
The committee eliminated Option 4.  
SMMA was asked to include the Options presented for the Wing School and correlate them with these options. There are similarities and redundancies on some.  
The committee requested ball park costs be identified for the various options.  
The committee was favorable towards Option 5 which identified consolidating the K – 6 grades at the Forestdale and Oak Ridge Schools and establishing a Grades 7 - 8 at the High School building. Dr. Canfield spoke about the academic advantages of creating a grades 7 – 8 STEM Academy.  
SMMA to develop modest graphics around the options. |
| 5      | Open   | Discussion over if the town should explore NEASC or Blur Ribbon status for the K – 8 grades. |
| 6      |        | Next Meeting is scheduled for February 14 at 4:00 PM |

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

1000 Massachusetts Avenue  
Cambridge, Massachusetts 02138  
1000 Massachusetts Avenue  
400 Westminster Street  
Cambridge, Massachusetts 02138  
Providence, Rhode Island 02903  
1 617.547.5400  f 800.648.4920  
1 401.421.0447  f 800.648.4920  
www.smma.com
### Project Minutes

**Project:** Sandwich Public Schools  
**Project No.:** 10087  
**Prepared by:** Philip Poinelli  
**Meeting Date:** 2/14/2012  
**Re:** District Wide Master Plan  
**Meeting No:** 13  
**Distribution:** Committee, J. Seeley, D. Frieder (MF)

**Attendees:** Doug Lapp, Sheila Lima, Jim Pierce, John Juros, Dr. Canfield, Ellin Booras, Alan Hall, Andrea Killion, Ruth Joseph  
Phil Poinelli - SMMA

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<thead>
<tr>
<th>Item #</th>
<th>Action</th>
<th>Discussion</th>
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<tbody>
<tr>
<td>1</td>
<td>Record</td>
<td>Meeting Minutes for meeting #12 approved</td>
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</tbody>
</table>
| 2      | Record | P. Poinelli presented a PowerPoint that outlined a Master Plan for the School System. The plan included:  
- An overview of population reductions to date and further estimated reductions  
- K - 8 Population graph  
- K - 6 Population graph  
- 7 - 12 Population graph  
- Option 1 - Renovation to the Wing School Only (from Wing School Study)  
- Option 2 - Renovations / Addition to the Wing School Only (from Wing School Study - modified)  
- Option 3 - New Wing School Only (from the Wing School - modified)  
- Option 4 - Retain K - 8 Elementary System, Consolidate to Two Schools  
- Option 5 - Change School System from K - 8 to K - 6, + 7 / 8 STEM Academy  
Dr Canfield spoke about the significant academic advantages of a 7 / 8 STEM Academy.  
An in depth discussion followed. |
| 3      | Record | A motion was made to recommend Option 5 to the School Committee and Board of Selectmen (with a strong recommendation from the committee)  
Motion was approved unanimously |
| 4      |        | Next Steps: P. Poinelli Dr. Canfield to develop a presentation to a joint meeting of the School Committee and Board of Selectmen tentatively scheduled for March 21. |

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.
SECTION SIX

MASTER PLAN PRESENTATIONS

6.1 Master Plan Presentation to the Sandwich School Committee and Sandwich Board of Selectmen – April 4, 2012

6.2 Dr. Richard Canfield Presentation – April 4, 2012

6.3 February 14, 2012 Presentation
Sandwich District-Wide Master Plan

Presented to
Sandwich School Committee
Sandwich Board of Selectman

Presenters
Dr. Richard Canfield,
Superintendent

Philip J. Poinelli, FAIA
Symmes Maini & McKee Associates

April 4, 2012
- Hired September, 2010 to study the H.T. Wing School
- February 2011 Reports to the Sandwich School Committee and Board of Selectmen
  - 5 Options Ranging from $27M to $56M (2011 $)
- June 2011, SMMA scope expanded to develop an Educational Facilities Master Plan
  - Summer 2011 New District Administration
Study Goal

- Is to explore options for the efficient use of the existing school buildings in Sandwich that are consistent with the educational goals of the district, specifically maintain and improve the educational opportunities for students.

Population Changes

- The Sandwich School System is anticipated to further reduce in population based on recent projections by NESDEC, The New England Schools Development Council. School system population statistics:
  - 2001 – 2002 K-12 system-wide population: 4,056
  - Current K-12 system-wide population: 3,237 (819)
  - Projected 2021 – 2022 K-12 system-wide population: 2,592 (645)
    (36% decline over 20 years)
Is there a need for Three K – 8 Schools?

- **Oak Ridge / Forestdale as a K-8 Population**
  - 677 students each x 2 = 1,354 combined capacity

- **Oak Ridge / Forestdale as a K-6 Population**
  - 720 students each x 2 = 1,440 combined capacity

- **Assumptions:**
  - Existing portable classrooms are removed from Oak Ridge and Forestdale
  - Some program restoration for Grades 7 and 8
  - Classroom capacity: (20) for grades K,1 (full day K); (22) for grades 2,3; (25) for grades 4 - 8

- **High School:** 1,250 students
Sandwich District-Wide Master Plan

K-8 Population

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</thead>
<tbody>
<tr>
<td>K-8 Population</td>
<td>2259</td>
<td>2210</td>
<td>2138</td>
<td>2072</td>
<td>2027</td>
<td>1975</td>
<td>1955</td>
<td>1945</td>
<td>1911</td>
<td>1897</td>
<td>1897</td>
</tr>
<tr>
<td>Capacity of Forestdale and Oak Ridge</td>
<td>677 x 2 = 1354</td>
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<td></td>
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<tr>
<td>Capacity Delta</td>
<td>905</td>
<td>856</td>
<td>784</td>
<td>718</td>
<td>673</td>
<td>621</td>
<td>601</td>
<td>591</td>
<td>557</td>
<td>543</td>
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</table>
### K-6 Population

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</thead>
<tbody>
<tr>
<td>K-6 Population</td>
<td>1718</td>
<td>1665</td>
<td>1604</td>
<td>1539</td>
<td>1527</td>
<td>1522</td>
<td>1489</td>
<td>1473</td>
<td>1471</td>
<td>1481</td>
<td>1495</td>
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<tr>
<td>Capacity of Forestdale and Oak Ridge 720 x 2 = 1440</td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
<td>1440</td>
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<td>1440</td>
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<tr>
<td>Capacity Delta</td>
<td>278</td>
<td>225</td>
<td>164</td>
<td>99</td>
<td>87</td>
<td>82</td>
<td>49</td>
<td>33</td>
<td>31</td>
<td>41</td>
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<tr>
<td>7 - 12 Population</td>
<td>1519</td>
<td>1456</td>
<td>1376</td>
<td>1374</td>
<td>1329</td>
<td>1283</td>
<td>1261</td>
<td>1229</td>
<td>1182</td>
<td>1127</td>
<td>1097</td>
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<tr>
<td>7 – 8 Population</td>
<td>541</td>
<td>545</td>
<td>534</td>
<td>533</td>
<td>500</td>
<td>453</td>
<td>466</td>
<td>472</td>
<td>440</td>
<td>416</td>
<td>402</td>
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<tr>
<td>9 – 12 Population</td>
<td>978</td>
<td>911</td>
<td>842</td>
<td>841</td>
<td>829</td>
<td>830</td>
<td>795</td>
<td>757</td>
<td>742</td>
<td>711</td>
<td>695</td>
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<tr>
<td>Existing HS Building Capacity</td>
<td>1250</td>
<td>1250</td>
<td>1250</td>
<td>1250</td>
<td>1250</td>
<td>1250</td>
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</tbody>
</table>

**Sandwich District-Wide Master Plan**

*7-12 Population*
Option 1: Renovation to Wing School Only
(from Wing School study)

- Addresses Wing School only, status quo at all other schools
- As population further declines, the school system will have increased excess capacity; extra unused building area
- Upgrades Wing School building components and systems – see previous study for full scope
- No educational upgrades
- Phased construction, 24 – 30 months
- Keeps the 1927 wing on line
- High school building remains underutilized
- Central Administration and Community School remain at the high school building
- Use portables at Forestdale and Oak Ridge Schools for swing space, remove following
Option 2: Renovations/Additions to Wing School
(from Wing School Study, modified)

- Addresses Wing School only, status quo at all other schools
- This revised Option 2 addresses a smaller population due to further projected population decreases. Assumes a Wing School population of 550 students
- Upgrades Wing School building components and systems – see previous study for full scope
- Educational upgrades
- Phased construction, 30 – 36 months
- Removes the 1927 wing from school use (turned over to the Town)
- High school building remains underutilized
- Central Administration and Community School remain at the high school building
- Maximize the use of Forestdale and Oak Ridge Schools - re-district
- Use portables at Forestdale and Oak Ridge Schools for swing space, remove following
- Addresses Wing School only, status quo at all other schools
- This revised Option 3 addresses a smaller population due to further projected population decreases. Assumes a Wing School population of 550 students
- New construction, 20 – 24 months
- Turns the existing Wing School over to the Town for reuse or demolition
- If not partially or wholly demolished, would reduce the field space on the Wing School site
- High school building remains underutilized
- Central Administration and Community School remain at the high school building
- Maximize the use of Forestdale and Oak Ridge Schools - re-district
- Remove portables from Forestdale and Oak Ridge Schools

Option 3: New Wing School Only
(from Wing School Study, modified)
- Turns the existing Wing School over to the Town for reuse or demolition
- Redistrict K-8 populations to the Forestdale and Oak Ridge Schools
- Remove portables from Forestdale and Oak Ridge Schools
- Classroom additions required at each of Forestdale and Oak Ridge Schools
- Each school results in populations of 950 students +/-
- High school building remains under utilized
- Central Administration and Community School remain at the high school building

**Option 4: Retain K-8 Elementary System, Consolidate to 2 Schools**
- Turns the existing Wing School over to the Town for reuse or demolition
- Redistrict K-6 populations to the Forestdale and Oak Ridge Schools
- Remove portables from Forestdale and Oak Ridge Schools
- Develop a Grades 7 and 8 STEM Academy in the 2000 classroom addition (Wing A) at the high school building. Renovations (possible small addition) needed to accommodate STEM program and alternate grade population
- Some renovations within the high school, specifically enlarge and renovate the science laboratory/classrooms
- Central Administration and Community School move from the high school building – location and costs not included in this study

Option 5: Change School System from K-8 to K-6, + 7/8 STEM Academy + HS
## Sandwich Master Plan Options

<table>
<thead>
<tr>
<th>Options</th>
<th>Forestdale School Building</th>
<th>Forestdale Cost</th>
<th>Oakridge School Building</th>
<th>Oakridge Cost</th>
<th>Wing School Building</th>
<th>Wing Cost</th>
<th>High School Building</th>
<th>High School Cost</th>
<th>Total - Order of Magnitude Project Cost, 2012, No Escalation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Option 1</strong></td>
<td>K - 8</td>
<td>K - 8</td>
<td>K - 8</td>
<td>K - 8</td>
<td>Renovation Only</td>
<td>$27.6M</td>
<td>Status Quo</td>
<td>$30</td>
<td>Say $28 - $30M Range</td>
<td>Covers deferred maintenance, life safety and code issues. Covers initial educational upgrades. Lowest cost option for Wing School only.</td>
</tr>
<tr>
<td><strong>Option 4</strong></td>
<td>K - 8</td>
<td>K - 8</td>
<td>K - 8</td>
<td>K - 8</td>
<td>Turn over to Town as surplus property</td>
<td>$0</td>
<td>Status Quo, 0 - 12</td>
<td>$30</td>
<td>Say $29 - $30M Range</td>
<td>Each K - 8 school = 550 students. 11G building remains undefined. Central Administration and Community School remain.</td>
</tr>
<tr>
<td><strong>New Options</strong></td>
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<td><strong>Option 5</strong></td>
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**Sandwich District-wide Master Plan Options Matrix**
Third Floor Plan

7 / 8 STEM Academy

Renovated High School Science
## Option 5

### With MSBA Participation:
- **Construction Cost**: $10,000,000
- **Other Project Costs**: $5,000,000
- **Total Costs**: $15,000,000
- **Cost to Sandwich (55.31%)**: $8,296,500
  (Assumes approximately 44.69% Reimbursement)

### Without MSBA Participation:
- **Construction Cost**: $10,000,000
- **Other Project Costs**: $5,000,000
- **Total Costs (all to Town)**: $15,000,000

All figures exclude borrowing costs.
- **Option 5 Schedule:** Follow MSBA Process

  - File Statement of Interest w/ MSBA Fall 2012 (Module 1)
  
  - Assume Positive response from the MSBA within 1 Year = Fall 2013 (Module 2)
  
  - MSBA Feasibility Study Process (9 Months) = Summer 2014 (Module 3)
    - Say Fall 2014 Town Meeting Vote & Prop 2 ½ DE
  
  - Project Design – 8 Months
  
  - Start Construction – Summer 2015
  
  - School Opens – September 2016
Outstanding Issues

- Location for Pre-K
- Location for Spinnaker Program
- Location for Central Administration
- Disposition of Wing School
Next Steps

- Prepare SOI for the MSBA
- Form a Building Committee
- Request MSBA Population Projections
Questions / Discussions

Thank You
Sandwich District Wide Master Plan

February 14, 2012
Overview:

The goal of this study is to explore options for the efficient use of the existing school buildings in Sandwich that are consistent with the educational goals of the district, specifically maintain and improve the educational opportunities for students.

Sandwich School System is anticipated to further reduce in population based on recent projections by NESDEC, The New England Schools Development Council. School system population statistics:

• 2001 – 2002 K – 12 system wide population 4,056
• Current K – 12 system wide population 3,237
• Projected 2021 – 2022 K – 12 system wide population 2,592
  (36% decline over 20 years)

The temporary portable classroom additions at the Forestdale and Oak Ridge Schools are beyond their useful life and are recommended to be removed.

Wing School has numerous issues related to aging building systems, deferred maintenance, handicapped accessibility etc.
# K-8 Population

![Graph showing K-8 Population trend](image)

### Capacity of Forestdale and Oakridge

\[677 \times 2 = 1354\]

<table>
<thead>
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<tbody>
<tr>
<td>K-8 Population</td>
<td>2259</td>
<td>2210</td>
<td>2138</td>
<td>2072</td>
<td>2027</td>
<td>1975</td>
<td>1955</td>
<td>1945</td>
<td>1911</td>
<td>1897</td>
<td>1897</td>
</tr>
<tr>
<td>Capacity Delta</td>
<td>905</td>
<td>856</td>
<td>784</td>
<td>718</td>
<td>673</td>
<td>621</td>
<td>601</td>
<td>591</td>
<td>557</td>
<td>543</td>
<td>543</td>
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</thead>
<tbody>
<tr>
<td>Capacity of Forestdale and Oakridge (677 \times 2 = 1354)</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
<td>1354</td>
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</table>
### K-6 Population

**Capacity of Forestdale and Oakridge**: $720 \times 2 = 1440$

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>K-6 Population</td>
<td>1718</td>
<td>1665</td>
<td>1604</td>
<td>1539</td>
<td>1527</td>
<td>1522</td>
<td>1489</td>
<td>1473</td>
<td>1471</td>
<td>1481</td>
<td>1495</td>
</tr>
<tr>
<td>Capacity Delta</td>
<td>278</td>
<td>225</td>
<td>164</td>
<td>99</td>
<td>87</td>
<td>82</td>
<td>49</td>
<td>33</td>
<td>31</td>
<td>41</td>
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7-12 Population

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<td>7-12 Pop.</td>
<td>1519</td>
<td>1456</td>
<td>1376</td>
<td>1374</td>
<td>1329</td>
<td>1283</td>
<td>1261</td>
<td>1229</td>
<td>1182</td>
<td>1127</td>
<td>1097</td>
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<tr>
<td>7-8 Pop.</td>
<td>541</td>
<td>545</td>
<td>534</td>
<td>533</td>
<td>500</td>
<td>453</td>
<td>466</td>
<td>472</td>
<td>440</td>
<td>416</td>
<td>402</td>
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<tr>
<td>9-12 Pop.</td>
<td>978</td>
<td>911</td>
<td>842</td>
<td>841</td>
<td>829</td>
<td>830</td>
<td>795</td>
<td>757</td>
<td>742</td>
<td>711</td>
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<td>HS Cap.</td>
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<td>1250</td>
<td>1250</td>
<td>1250</td>
<td>1250</td>
<td>1250</td>
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</table>
Option 1 – Renovation to Wing School Only (from Wing School Study)

- Addresses Wing School only, status quo at all other schools
- As population further declines, the school system will have increased excess capacity; extra unused building area
- Upgrades Wing School building components and systems – see previous study for full scope
- No educational upgrades
- Phased construction, 24 – 30 months
- Keeps the 1927 wing on line
- High school building remains underutilized
- Central Administration and Community School remain at the high school building
- Use portables at Forestdale and Oak Ridge Schools for swing space, remove following

Sandwich District Wide Master Plan
Option 2 – Renovations / Addition to Wing School Only (from Wing School Study - modified)

- Addresses Wing School only, status quo at all other schools
- This revised Option 2 addresses a smaller population due to further projected population decreases. Assumes a Wing School population of 550 students
- Upgrades Wing School building components and systems – see previous study for full scope
- Educational upgrades
- Phased construction, 30 – 36 months
- Removes the 1927 wing from school use (turned over to the Town)
- High school building remains underutilized
- Central Administration and Community School remain at the high school building
- Maximize the use of Forestdale and Oak Ridge Schools - re-district
- Use portables at Forestdale and Oak Ridge Schools for swing space, remove following

Sandwich District Wide Master Plan
Option 3 – New Wing School Only (from Wing School Study - modified)

- Addresses Wing School only, status quo at all other schools
- This revised Option 3 addresses a smaller population due to further projected population decreases. Assumes a Wing School population of 550 students
- New construction, 20 – 24 months
- Turns the existing Wing School over to the Town for reuse or demolition
- If not partially or wholly demolished, would reduce the field space on the Wing School site
- High school building remains underutilized
- Central Administration and Community School remain at the high school building
- Maximize the use of Forestdale and Oak Ridge Schools - re-district
- Remove portables from Forestdale and Oak Ridge Schools

Sandwich District Wide Master Plan
Option 4 - Retain K – 8 Elementary System, Consolidate to Two Schools

• Turns the existing Wing School over to the Town for reuse or demolition
• Redistrict K – 8 populations to the Forestdale and Oak Ridge Schools
• Remove portables from Forestdale and Oak Ridge Schools
• Classroom additions required at each of Forestdale and Oak Ridge Schools
• Each school results in populations of 950 students +/-
• High school building remains underutilized
• Central Administration and Community School remain at the high school building

Sandwich District Wide Master Plan
Option 5 – Change School System from K – 8 to K – 6, + 7 / 8 STEM Academy

• Turns the existing Wing School over to the Town for reuse or demolition
• Redistrict K – 6 populations to the Forestdale and Oak Ridge Schools
• Remove portables from Forestdale and Oak Ridge Schools
• Develop a Grades 7 and 8 STEM Academy in the 2000 classroom addition at the high school building. Renovations (possible small addition) needed to accommodate STEM program and alternate grade population
• Some renovations within the high school building, specifically enlarge and renovate the science laboratory / classrooms

Central Administration and Community School move from the high school building – location and costs not included in this study

Sandwich District Wide Master Plan
Option 5 – 7 / 8 STEM Academy, High School
Option 5 – 7 / 8 STEM Academy, High School
What plan would the Superintendent support?

- A plan that supports the best interest of students, and one that is fiscally responsible for the community.
- A plan that provides the “Gift of Time” to plan well.
- A plan that does not just move students from one building to another, but provides benefits for their educational experience.
MOVE GRADE 7/8 TO SHS

2 Concerns Parents will have:

- The physical and emotional safety of their children.
- The benefits of leaving the K-8 school.
Physical and Emotional Safety

• The quality of our students provides a high level of assurance for appropriate conduct
• Operate a school within the school (A Wing)
• Provide for separate entrance
• Administration (3 existing high school administrators) and provide a Director for STEM
• Staggered schedule (7 or 8 period day, not block)
Benefits

- Academy for Science, Technology, Engineering, and Mathematics (STEM)
- Smart Technology, Robotics, and 1 to 1 Computing
- Expanded opportunities in the visual and performing arts 7-12
- Sports (7-12), intramurals and club activities
- Eventual access to higher level course offerings
Cost/Benefit

- Provide middle school STEM programming in 1 location for consolidation of resources that would be too expensive to spread across 3 schools.
- Access to state and federal STEM grants
- Partnerships with higher education, and regional STEM related research and training organizations.
What Next?

- **BUILDING USE**
- **COST**
- **EDUCATIONAL PROGRAM**
Grades K-6

- The Gift of Time to monitor enrollment changes
- Phase-In Plan for any proposed reconfiguration involving the current K-8 schools
- Address curriculum modifications through curriculum mapping to ensure proper sequence, and to address the Rigor, Relevance and Relationships of high quality teaching and learning
Grades 9-12

- Evaluate current program and course offerings in relationship to the Core Values, Standards, and research-based programming represented by the *Partnership for 21st Century Skills*.

- Follow the curriculum principle of SSR, or what to Start Teaching, Stop Teaching, or Revise to ensure that offerings are rigorous and relevant to the 2020 Vision of the Sandwich Public Schools.
STEM PLANNING

• Curriculum Mapping
• K-6 Component (trickle-down)
• 9-12 Component (splash-up)
• Leadership Framework & Planning Committee
• Partnerships
  ✓ Community
  ✓ Higher Education (STEM K-16)
  ✓ Scientific, Engineering and Technology Partners
APPENDICES

A Report to the Sandwich School Committee and Board of Selectmen – February 16, 2011 and February 17, 2011 respectively

B Henry T. Wing School Existing Conditions Report

C Henry T. Wing School Stabilization Report

D Visioning Conference – Frank Locker Educational Planning

E Henry T. Wing School Teacher Meetings Report
APPENDIX A

REPORT TO THE SANDWICH SCHOOL COMMITTEE AND BOARD OF SELECTMEN – FEBRUARY 16, 2011 AND FEBRUARY 17, 2011 RESPECTIVELY
Henry T. Wing School
Sandwich, Massachusetts

Report to the
Sandwich School Committee

February 16, 2011
Project Team

- School Facilities Assessment Committee
  - Douglas Lapp, Assistant Town Manager
  - Michelle Austin, School Business Administrator
  - John Juros, Capital Improvement Planning Committee
  - Sheila Lima, Wing School Interim Principal
  - Paul Spiro, Building Inspector
  - Skip Tetreault, School Department, Head of Buildings and Grounds
Project Team

• Consultants
  ➢ Symmes Maini & McKee Associates, Inc.
    ▪ Joel G. Seeley, AIA, Principal-In-Charge
    ▪ David Frieder, AIA, Project Architect
    ▪ Philip J. Poinelli, AIA, Educational Programmer
  ➢ Frank Locker Educational Planning
    ▪ Frank Locker, Ph.D, AIA
  ➢ Garcia • Galuska • Desousa, Electrical Engineers
• Symmes Maini & McKee Associates, Inc. (SMMA) was retained by the Town of Sandwich to:
  ➢ Facility Condition Assessment: Building envelope; major building components and systems
  ➢ Evaluate educational need of the school building
  ➢ Evaluate educational need in context of population changes
  ➢ Conduct educational visioning
  ➢ Develop alternatives to meet needs
Project Goals

- Committee Objective
- Process
- Educational
- Community
- Building
- Site
- Construction
• **Evaluation focused on:**
  - Condition of Building Components / Systems
  - Repair / Replace Building Components / Systems
  - Warm, safe and dry
  - Accessibility
  - How well school fulfills educational program needs
  - Range of alternatives
Town Growth

• Population increases already experienced

- 1995 to 2009 Total population increase 4,658 = 25%.
- 1995 to 2009 Student population increase 26 = <1% of the 25%.
- Student population as a % of total population 19.93% to 16.03%
- 1995 to 2011 Increase of total housing units 1,852 Added units; Decrease in % of second home units
Enrollment

- New England School Development Council (NESDEC) Report
  - Historical
    - 2000 to 2003: Stable K-8 population
    - 2004 to Present: 548 student (drop 19%)
    - Current K-8 Enrollment: 2,341 students
  - Projected
    - 2010 – 2020: Declining population, further reduction of 328 students
    - 2020: Projected enrollment K-8 = 2,013 + 80 PreK
    - Slow and steady decline
Despite past and expected future decline of enrollment, three K-8 schools required

<table>
<thead>
<tr>
<th>School</th>
<th>Current Population</th>
<th>PreK</th>
<th>Total Population</th>
<th>Design Capacity</th>
<th>Current Over Capacity</th>
<th>Comments</th>
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<tr>
<td>Forestdale</td>
<td>767</td>
<td>0</td>
<td>767</td>
<td>750</td>
<td>17</td>
<td></td>
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<tr>
<td>Oakridge</td>
<td>801</td>
<td>0</td>
<td>801</td>
<td>750</td>
<td>51</td>
<td></td>
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<tr>
<td>H.T. Wing</td>
<td>773*</td>
<td>70</td>
<td>843</td>
<td>816</td>
<td>27</td>
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</table>

3 Equal Size Schools, 2020 K-8 Population = 2,093

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<th>Propose K-* Population</th>
<th>PreK</th>
<th>Total Population</th>
<th>Design Capacity</th>
<th>Under Capacity</th>
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<tbody>
<tr>
<td>Forestdale</td>
<td>671</td>
<td>0</td>
<td>671</td>
<td>750</td>
<td>(79)</td>
<td></td>
</tr>
<tr>
<td>Oakridge</td>
<td>671</td>
<td>0</td>
<td>671</td>
<td>750</td>
<td>(79)</td>
<td></td>
</tr>
<tr>
<td>H.T. Wing</td>
<td>671</td>
<td>80</td>
<td>751</td>
<td>751</td>
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</table>

Maximize Forestdale and Oakridge

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<td>Forestdale</td>
<td>750</td>
<td>0</td>
<td>Redistrict</td>
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<tr>
<td>Oakridge</td>
<td>750</td>
<td>0</td>
<td>Redistrict</td>
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<tr>
<td>H.T. Wing</td>
<td>593</td>
<td>0</td>
<td>Redistrict, design for smaller school</td>
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</table>
Visioning

EDUCATIONAL VISION

Henry T Wing School
Sandwich Public Schools
Sandwich, MA

October 2010
Frank Locker Educational Planning
• Acknowledgements

- **Town**
  - Bud Dunham
  - John Juros
  - Douglas Lapp
  - John Vibberts
  - Jim Pierce

- **School Committee**
  - Sherry Marshall

- **Central Office**
  - Mary Ellen Johnson
  - Skip Tetreault

- **Parents & Community Members**
  - Courtney Bridge
  - Melinda Ellis
  - Walter Lesiak

- **Wing School**
  - Michele Dunham
  - Laura Dunn
  - Joanna Hughes
  - Sheila Lima
  - Paul Soltis
  - Donna Tuohy
  - Janet Vallee

- **Architect (SMMA)**
  - David Frieder
  - Phil Poinelli
  - Lee Morrisette
  - Kathryn Hovis

- **Educational Planner**
  - Frank Locker Educational Planning

• Discussion Topics

- Wing School successes
- Needs improvement
- Potential grade configurations
- Facility Concepts
- Wing School organizational diagram
Educational Programming

- Teacher Meetings – Understand how school functions; How school would like to function Spinnaker, PreK, all grade levels, academic coaches

- Existing Building Size, 141, 595 SF
  - Larger than MSBA standards for population
  - Less net educational teaching area than MSBA standards
  - Numerous undersized classrooms
  - Inadequate Spinnaker program area
  - Does not include 21st Century configurations discussed in visioning
### Summary of Spaces (Portion of)

#### ELEMENTARY SCHOOL

<table>
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<tr>
<th>ROOM TYPE</th>
<th>ROOM NFA</th>
<th># OF RMS</th>
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<td><strong>CORE ACADEMIC SPACES</strong></td>
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<td></td>
<td><strong>MSBA Guidelines</strong></td>
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<td></td>
<td></td>
<td></td>
<td>(refer to MSBA Educational Program &amp; Space Standard Guidelines)</td>
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<tr>
<td><strong>List classrooms of different sizes separately</strong></td>
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<tr>
<td>Pre-Kindergarten w/ toilet</td>
<td>varies 2</td>
<td>2,000</td>
<td>4,200</td>
<td>3,800</td>
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<tr>
<td>Kindergarten w/ toilet</td>
<td>varies 3</td>
<td>4,846</td>
<td>7,200</td>
<td>6,450</td>
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<td>General Classrooms - Grades 1-5</td>
<td>varies 20</td>
<td>17,131</td>
<td>34,262</td>
<td>32,260</td>
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<td>General Classrooms - Grades 6-8 (includes Foreign Language)</td>
<td>varies 13</td>
<td>11,857</td>
<td>16,440</td>
<td>14,200</td>
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<td>Science Classroom / Lab</td>
<td>varies 2</td>
<td>2,001</td>
<td>3,000</td>
<td>2,400</td>
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<td>Science prep room</td>
<td>varies 2</td>
<td>291</td>
<td>576</td>
<td>476</td>
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<td><strong>13</strong></td>
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<tr>
<td><strong>List rooms of different sizes separately</strong></td>
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<tr>
<td>(Intervention)</td>
<td>528</td>
<td>1</td>
<td>528</td>
<td>528</td>
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<tr>
<td>(Intervention)</td>
<td>varies 2</td>
<td>1,564</td>
<td>3,128</td>
<td>2,700</td>
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<td>Self-Contained SPED - Grades 1-5 toilet</td>
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<tr>
<td>Self-Contained SPED - Grades 6-8 toilet</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>Resource Room - Grades 6-8 (Literacy)</td>
<td>516</td>
<td>1</td>
<td>516</td>
<td>516</td>
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<tr>
<td>Resource Room - Grades 1-5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Small Group Room / Reading (Reading Recovery)</td>
<td>varies 2</td>
<td>660</td>
<td>1,320</td>
<td>1,080</td>
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<td><strong>ART &amp; MUSIC</strong></td>
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<td></td>
<td><strong>6,850</strong></td>
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<tr>
<td>Art Classroom - Grades 1-5 (all grades)</td>
<td>1,434</td>
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<td>1,434</td>
<td>1,434</td>
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<tr>
<td>Art Classroom - Grades 6-8</td>
<td>0</td>
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<tr>
<td>Art Workshop / Storage &amp; kiln</td>
<td>202</td>
<td>1</td>
<td>202</td>
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<tr>
<td>Band / Chorus - 100 seats</td>
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<td>1</td>
<td>895</td>
<td>895</td>
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<td>Music Classroom / Large Group - 25-50 seats</td>
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<td>1</td>
<td>1,273</td>
<td>1,273</td>
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<tr>
<td>Music Practice / Ensemble - Grades 1-5</td>
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<td>1</td>
<td>210</td>
<td>210</td>
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<tr>
<td>Music Practice / Ensemble - Grades 6-8</td>
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### Existing Conditions

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<td>SPECIAL EDUCATION</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>ART &amp; MUSIC</td>
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### New

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<td>SPECIAL EDUCATION</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ART &amp; MUSIC</td>
<td></td>
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</tbody>
</table>
Interior Teaching Spaces

Second Floor

Third Floor
Undersized Teaching/Program Spaces

First Floor
History of Building Additions

1927
History of Building Additions

1927

1958

1927
History of Building Additions

- 1927
- 1958
- 1963
History of Building Additions

1927
1963
1963
1963
1974
1958
1927
Existing Building and Site Condition

• Building Envelope
  ➢ Largely single glazed windows
  ➢ Where insulated glass – numerous failures
  ➢ 1927 Windows not operable
  ➢ Roof membrane – beyond expected life
  ➢ Masonry wall repointing, repair required

• Site
  ➢ Lacks accessible routes
  ➢ Surfaces in need of upgrading
Existing Building Condition

• Fire Sprinklers – None

• Plumbing
  ➢ Toilet rooms not accessible
  ➢ Hot water boiler – beyond expected life
  ➢ Valves, fittings and equipment – beyond expected life

• Mechanical
  ➢ Only one heating boiler
  ➢ Hot water distribution – beyond expected life
  ➢ Thermal Units – beyond expected life
  ➢ Limited / Non Functioning Air Conditioning
Existing Building Conditions

• Electrical
  - Switchgear, panels, wiring – beyond expected life
  - Non Functioning / Obsolete Systems: Clock, paging, telephone, security, fire alarm

• Hazardous Materials
  - Asbestos containing materials (non-friable)
  - Lead paint – many locations: handrails, other
Accessibility

- The school is largely inaccessible
  - Lacks accessible toilet rooms
  - Portions of building are inaccessible, i.e. 1927 wing
  - Some ramps too steep (exterior & interior)
  - Stair handrails and details non conforming
  - Doors, hardware, signage, drinking fountains, clearances, etc.
Accessibility Floor Level Changes

Toilet Rooms

Stairs/Ramps that require modifications
Non Accessible Toilet Rooms

First Floor
Accessibility Floor Level Changes/Toilet Rooms

- Stairs/Ramps that require modifications
- Non Accessible Toilet Rooms

Second Floor

Third Floor
School for Early Learning – Modular Structure

- Interior / Exterior Visual Inspection
- Fit to inhabit bit well beyond their useful life
- Will require continuous repair
- Were/Area temporary, should not be considered as part of a long range plan
Options Explored

• **Option 1 – Renovation Only**
  - Building Components and Systems
  - No Educational Changes
  - Phased Construction, 24-30 months

• **Option 2A – Renovations / Additions**
  - 853 Students (with Partial Removal)
  - Building and Educational Improvements
  - Phased Construction, 30-36 months

• **Option 2B – Renovations / Additions**
  - 692 Students (with Partial Removal)
  - Building and Educational Improvements
  - Phased Construction, 30-36 months
Options Explored

• Option 3A – All New Construction
  ➢ 853 Students
  ➢ On same site
  ➢ New Construction, 20-24 months

• Option 3B – Replacement School
  ➢ 692 Students
  ➢ On same site
  ➢ New Construction, 20-24 months
Option 1: Renovations Only

• No Educational Renovations

• Building Envelope
  ➢ Roof replacement; Window replacement; Masonry wall repair

• Handicapped Accessibility
  ➢ Access to all areas (less 1927 wing)
  ➢ Upgrade stairs, ramps, handrails
  ➢ Provide accessible toilet rooms
  ➢ Provide accessibility signage
Option 1: Renovations Only (continued)

- Hazardous Materials Abatement
  - Asbestos; Lead Paint
- Add Fire Protection System (sprinklers) – none exist
- Replace Plumbing System
- Replace Mechanical System
- Replace Electrical System
- Assumes MSBA / SOI Process
Option 2A: Renovations/Additions – 853 Students

• Building Renovation/Addition (with partial removal)
  - Abandon 1927 Wing – turn over to Town
  - Remove portions of building
  - Building addition with 21st century teaching spaces (per vision)
  - Educational renovations with 21st century teaching spaces (per vision)
  - Comprehensive renovation of building envelope and systems
  - School population/size to be determined
  - Assumes MSBA / SOI process
Option 2B: Renovations/Additions – 692 Students

• Building Renovation/Addition (with partial removal)
  - Abandon 1927 Wing – turn over to Town
  - Remove portions of building
  - Building addition with 21st century teaching spaces (per vision) – smaller building addition
  - Educational renovations with 21st century teaching spaces (per vision)
  - Comprehensive renovation of building envelope and systems
  - School population/size to be determined
  - Assumes MSBA / SOI process
Option 2: Renovations/Additions

Partial Demolition
Option 2: Renovations/Additions

First Floor
Option 2: Renovations/Additions

Second Floor
Option 3A – All New Construction – 853 Students

• Building Replacement
  - Assume MSBA compliant new K-8 school somewhere on Wing School site
  - School population / size to be determined
  - Removal of existing school building (partial?)
  - Assumes MSBA / SOI process
Option 3B – All New Construction – 692 Students

• Building Replacement
  - Assume MSBA compliant new K-8 school somewhere on Wing School site
  - School population / size to be determined
  - Removal of existing school building (partial?)
  - Assumes MSBA / SOI process
• Option 1 – Renovations Only

- Construction $21.4 MM
- FFE and Technology $0.0 MM
- OPM, Fees, Moving, Testing & Expenses $3.4 MM
- Contingency $2.2 MM

Total $27.0 MM

- Escalation to 2014 Construction Start $3.1 MM

Total $30.1 MM
Option Costs (In 2011 Dollars)

- Option 2A – Additions / Renovations, 853
  - Construction $28.0 MM
  - FFE and Technology $ 2.8 MM
  - OPM, Fees, Moving, Testing & Expenses $ 4.4 MM
  - Contingency $ 2.6 MM

  TOTAL $37.8 MM

- Escalation to 2014 Construction Start $ 4.6 MM

  TOTAL $42.7 MM
Option Costs (In 2011 Dollars)

• Option 2B – Renovations / Additions, 692

- Construction $26.4 MM
- FFE and Technology $2.3 MM
- OPM, Fees, Moving, Testing & Expenses $4.1 MM
- Contingency $2.4 MM

  TOTAL $35.2 MM

- Escalation to 2014 Construction Start $4.3 MM

  TOTAL $39.5 MM
Option Costs (In 2011 Dollars)

- **Option 3A – All New Construction, 853**
  - Construction: $39.2 MM
  - FFE and Technology: $2.8 MM
  - OPM, Fees, Moving, Testing & Expenses: $5.7 MM
  - Contingency: $2.8 MM
  - **TOTAL**: $50.5 MM

- Escalation to 2014 Construction Start: $6.1 MM
  - **TOTAL**: $56.6 MM
• Option 3B – All New Construction, 692
  - Construction $36.2 MM
  - FFE and Technology $ 2.3 MM
  - OPM, Fees, Moving, Testing & Expenses $ 5.4 MM
  - Contingency $ 2.6 MM
  TOTAL $46.5 MM

  - Escalation to 2014 Construction Start $ 5.6 MM
  TOTAL $52.1 MM
<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Project Cost</th>
<th>Project Cost with Escalation to 2014</th>
<th>Construction Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Renovations Only</td>
<td>$27 M</td>
<td>$30.1 M</td>
<td>24 - 30 months</td>
</tr>
<tr>
<td>2A</td>
<td>Renovations / Addition, 853 Students</td>
<td>$37.8 M</td>
<td>$42.7 M</td>
<td>30 - 36 months</td>
</tr>
<tr>
<td>2B</td>
<td>Renovations / Addition, 692 Students</td>
<td>$35.2 M</td>
<td>$39.5 M</td>
<td>30 - 36 months</td>
</tr>
<tr>
<td>3A</td>
<td>Building Replacement (new construction) 853 Students</td>
<td>$50.5 M</td>
<td>$56.6 M</td>
<td>20 - 24 months</td>
</tr>
<tr>
<td>3B</td>
<td>Building Replacement (new construction) 692 Students</td>
<td>$46.5 M</td>
<td>$52.1 M</td>
<td>20 - 24 months</td>
</tr>
</tbody>
</table>

MSBA Reimbursement Rate for Sandwich Approximately 49%
MSBA Process

- **Spring/Summer 2011**
  - Submit Statement of Interest (SOI) to MSBA

- **Fall 2011**
  - MSBA Reviews and Selects Town for Feasibility/Schematic Stage

- **Spring 2012**
  - Town Appropriates Owner’s Project Manager (OPM) and Architect Fees for Feasibility / Schematic Stage
• Winter 2012
  ➢ MSBA and Town agree on Preferred Feasibility / Schematic Scope and Cost

• Spring 2013
  ➢ Town Appropriates Full Project Amount

• Winter 2013
  ➢ Architect Completes Bidding Documents

• Summer 2014
  ➢ Construction Commences
Questions / Discussion

Thank You
APPENDIX B

HENRY T. WING SCHOOL
EXISTING CONDITIONS REPORT
SCHOOL
EVALUATION REPORT

GENERAL INFORMATION
HENRY T. WING SCHOOL

Name of School: HENRY T. WING SCHOOL
Address: 33 Water Street
          Sandwich, MA  02563

Name of Owner: Town of Sandwich
Grade Levels Served: Pre-K-8
Student Population: 843
Years in Service: 83 years
Year Constructed: 1927, 1979 Reno
Additions: 1958
           1963
           1974
Renovations-1989

Existing Drawings:
1927 – 1979 Reno only
1958 - No
1963 – Yes
1974 - Yes
1989 - Yes

Designer: Alger & Gunn
Designer: Alger & Gunn
Designer: Alger & Gunn
Designer: Drummey Rosane Anderson
Designer: HMFH
### Construction Classification Data:

<table>
<thead>
<tr>
<th>Construction Type: (from State Building Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Original Building:</strong> 1927 III-A, Brick Bearing Walls, Wood Floor Joists, Protected</td>
</tr>
<tr>
<td><strong>Addition 1:</strong> 1958 II-B (Cafetorium, Gymnasium, D-Wing)</td>
</tr>
<tr>
<td><strong>Addition 2:</strong> 1963 II-B (Kindergarten, A,C-Wing)</td>
</tr>
<tr>
<td><strong>Addition 3:</strong> 1974 II-A (Library, B-Wing, Kitchen, Boiler room)</td>
</tr>
<tr>
<td><strong>1989 Code Upgrades, Partitions Replacement</strong></td>
</tr>
</tbody>
</table>

| Occupancy Group: | E |
| Area Sub-Basement: | N/A |
| Basement: | 3,927 |
| Ground Floor: | 97,281 |
| Upper Floors – 2nd: | 36,576 |
| Upper Floors – 3rd: | 7,200 |
| Total: | 144,984 |

<table>
<thead>
<tr>
<th>Height</th>
<th># of Stories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Building:</strong> 46’</td>
<td>3</td>
</tr>
<tr>
<td><strong>Gymnasium:</strong> 28’</td>
<td>1</td>
</tr>
<tr>
<td><strong>Addition 1:</strong> 28’ (Gym), 21’ (Cafetorium)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Addition 2:</strong> 26’</td>
<td>2</td>
</tr>
<tr>
<td><strong>Addition 3:</strong> 28’</td>
<td>2</td>
</tr>
</tbody>
</table>
## EVALUATION REPORT

### Condition Key Criteria:
- 1 – Worst Condition
- 7 – Or Below, Items To Be Replaced
- 8 – Or Above, Items To Retain
- 10 – Best Condition

Compliant - Items that meet codes and/or are compliant
Not Compliant – Items that do not meet codes and/or are not compliant.
N/A – Not applicable/Not available
M – Missing

## SITE DATA:

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land Used:</strong></td>
</tr>
<tr>
<td>The site is bounded by Water Street (Route 130) to the east, Beale Street to the north and Morse Road to the south and east. The majority of the site is developed consisting of the original Wing School building and several building additions, an early childhood center, parking, bus drop-off, play grounds, ball fields and tennis courts. There is a wooded, undeveloped section of the property to the north along Morse Road.</td>
</tr>
<tr>
<td><strong>Lot Area:</strong> 22 Acres</td>
</tr>
<tr>
<td><strong>Topography:</strong></td>
</tr>
<tr>
<td>The grade around the building varies in elevation by approximately 10 feet. The remainder of the site including parking and ball fields is relatively flat.</td>
</tr>
<tr>
<td><strong>Wetlands:</strong></td>
</tr>
<tr>
<td>There did not appear to be any wetlands located on the site.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Utilities – Sanitary</th>
<th>Size:</th>
<th>Material:</th>
<th>Source of info:</th>
<th>Date Installed</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Utilities – Sanitary:</strong></td>
<td></td>
<td><strong>Size:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water:</strong> 6&quot;</td>
<td></td>
<td><strong>Material:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Electricity:</strong> Transformer located at south side of building. Underground</td>
<td></td>
<td><strong>Source of info:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>System:</strong></td>
<td></td>
<td><strong>Date Installed:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Conditions:</strong></td>
<td></td>
<td><strong>System appears to be functioning well with exception of accumulating stormwater over tank area that seeps into tanks, according to School Facilities Director</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Title V Nitrogen reduced system (recirculating sand filter) designed for 2,000 Gallons per day. There does not appear to be Town-Owned Buildings adjacent to the property that would be subject to aggregation.</strong></td>
<td></td>
<td><strong>Wastewater System Upgrade Plans by Horsley Witten Group 10/23/03</strong></td>
<td>Approx 2004 - 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Septic Tank (two-compartment)</strong></td>
<td></td>
<td><strong>Final Pump Station with Soil Dispersion System</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recirculation tank</strong></td>
<td></td>
<td><strong>Soil Dispersion System</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recirculating Sand Filter</strong></td>
<td></td>
<td><strong>Unknown</strong></td>
<td>Field Observation</td>
<td>Unkno wn</td>
<td>Unknown</td>
</tr>
<tr>
<td><strong>Soil Dispersion System</strong></td>
<td></td>
<td><strong>Unknown</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Henry T. Wing School**
SMMA No. 10087.00
# EVALUATION REPORT

## Condition Key Criteria:

1 – Worst Condition

7 – Or Below, Items To Be Replaced

8 – Or Above, Items To Retain

10 – Best Condition

Compliant - Items that meet codes and/or are compliant

Not Compliant – Items that do not meet codes and/or are not compliant.

N/A – Not applicable/Not available

M – Missing

<table>
<thead>
<tr>
<th>Gas:</th>
<th>Field review</th>
<th>Unknown</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>primary from Water Street</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas Service painted in field</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>from Water Street to Boiler</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Room</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil Tank:</td>
<td>Unknown</td>
<td>Facilities Director</td>
<td>1973</td>
</tr>
<tr>
<td>8,000 gallon UST</td>
<td></td>
<td>DRA record Plan</td>
<td></td>
</tr>
<tr>
<td>510 gallon UST</td>
<td></td>
<td>1973</td>
<td>Unknown</td>
</tr>
<tr>
<td>Storm Water Management:</td>
<td>RCP CL IV</td>
<td>DRA record Plan</td>
<td>1973</td>
</tr>
<tr>
<td>Athletic Fields – Field 1:</td>
<td></td>
<td>1973</td>
<td>Unknown</td>
</tr>
<tr>
<td>Field 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field 3:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tennis Courts:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play Courts:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playground/Total Lot:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type:</th>
<th>Source</th>
<th>Date Installed</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Lighting:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire Hydrant:</td>
<td>2 hydrants located along Water Street</td>
<td>Field Review</td>
<td>Unknown</td>
</tr>
</tbody>
</table>
## EVALUATION REPORT

**Condition Key Criteria:**
1 – Worst Condition  
7 – Or Below, Items To Be Replaced  
8 – Or Above, Items To Retain  
10 – Best Condition  
Compliant - Items that meet codes and/or are compliant  
Not Compliant – Items that do not meet codes and/or are not compliant.  
N/A – Not applicable/Not available  
M – Missing

<table>
<thead>
<tr>
<th># Spacing</th>
<th>Material</th>
<th>Date Installed</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking – Lot 1/2/3:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57 west lot</td>
<td>Bituminous</td>
<td>Unknown</td>
<td>Fair/good</td>
</tr>
<tr>
<td>13 adjacent to south entrance</td>
<td>Bituminous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>180 southeast lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus Drop/Pick-Up Area:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus drop-off at east side of building</td>
<td>Bituminous</td>
<td>1973</td>
<td>Fair, puddling at north end</td>
</tr>
<tr>
<td>Parent Drop/Pick-Up Area:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Located at west side by main entrance</td>
<td>Bituminous</td>
<td>Unknown</td>
<td>Fair</td>
</tr>
<tr>
<td>Loading &amp; Service</td>
<td>Located at north side for kitchen and additional dumpster at south side by boiler room</td>
<td></td>
<td>Good, Fair</td>
</tr>
<tr>
<td>Signage:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trash Management Area:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dumpster at north loading and at south boiler room area.</td>
<td>Concrete pads</td>
<td>1973</td>
<td>Fair, Poor</td>
</tr>
</tbody>
</table>

## PROVISIONS FOR ACCESSIBILITY:

<table>
<thead>
<tr>
<th>Exterior – Accessible Route:</th>
<th>Width</th>
<th>Material</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb Cuts:</td>
<td>West lot Main Entrance, South Entrance</td>
<td>Bituminous</td>
<td></td>
</tr>
<tr>
<td>Walkways:</td>
<td>Appear compliant although poor to fair condition</td>
<td>Bituminous</td>
<td>Poor to fair</td>
</tr>
<tr>
<td>Ramps:</td>
<td>West lot to Main Office</td>
<td>Concrete, Non-Compliant</td>
<td>Poor, Cracked Concrete, Non-compliant slope, Railings</td>
</tr>
<tr>
<td>Parking:</td>
<td>2 HP spaces at Main Entrance to Office, 1 HP space at South entrance, 4 HP spaces at west parking area</td>
<td>Bituminous</td>
<td></td>
</tr>
</tbody>
</table>
EVALUATION REPORT

Condition Key Criteria:
1 – Worst Condition
7 – Or Below, Items To Be Replaced
8 – Or Above, Items To Retain
10 – Best Condition
Compliant - Items that meet codes and/or are compliant
Not Compliant – Items that do not meet codes and/or are not compliant.
N/A – Not applicable/Not available
M – Missing

1 - HP Ramp to Main Entrance

2 - HP Spaces at Main Entrance to Office

3 - Hydrant at South Driveway to Water Street
4 - Water Gate Valve in South Drive to Water Street

5 - Transformer on Pad

6 - Dumpster on Fuel Storage Tank Pad at Boiler Room
Condition Key Criteria:
1 – Worst Condition
7 – Or Below, Items To Be Replaced
8 – Or Above, Items To Retain
10 – Best Condition
Compliant - Items that meet codes and/or are compliant
Not Compliant – Items that do not meet codes and/or are not compliant.
N/A – Not applicable/Not available
M – Missing

7 - Kindergarten Entrance South Side of School

8 - Natural Gas Service at South Building Entrance
## EVALUATION REPORT

### Condition Key Criteria:

- **1** – Worst Condition
- **7** – Or Below, Items To Be Replaced
- **8** – Or Above, Items To Retain
- **10** – Best Condition

Compliant - Items that meet codes and/or are compliant  
Not Compliant – Items that do not meet codes and/or are not compliant.  
N/A – Not applicable/Not available  
M – Missing

## BUILDING SYSTEMS & ASSEMBLIES OF 1927 BUILDING:

<table>
<thead>
<tr>
<th>Structure</th>
<th>Material</th>
<th>Remarks</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation System</td>
<td>Concrete spread footings</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Vertical Support Systems</td>
<td>Brick bearing walls, Steel columns, steel framing (?)</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Floor Framing System</td>
<td>Wood joists, protected</td>
<td>1979 upgrades</td>
<td>7</td>
</tr>
<tr>
<td>Ground</td>
<td>Concrete over steel frame</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Upper Floors</td>
<td>Wood joists, protected</td>
<td>1979 upgrades</td>
<td>7</td>
</tr>
<tr>
<td>Roof Framing System</td>
<td>Heavy timber, wood rafter framing with steel beams</td>
<td>Combustible materials</td>
<td>5</td>
</tr>
<tr>
<td>Lateral Force Resisting System</td>
<td>Unknown</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## BUILDING SYSTEMS & ASSEMBLIES OF 1958, 1963 BUILDINGS:

<table>
<thead>
<tr>
<th>Structure</th>
<th>Material</th>
<th>Remarks</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation System</td>
<td>Concrete spread footings</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Vertical Support Systems</td>
<td>Steel tubes, concrete block</td>
<td>Exposed steel, unprotected</td>
<td>6</td>
</tr>
<tr>
<td>Floor Framing System</td>
<td>Steel frame, exposed</td>
<td>Exposed steel, unprotected</td>
<td>6</td>
</tr>
<tr>
<td>Ground</td>
<td>Concrete</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Upper Floors</td>
<td>Metal deck, concrete topping</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Roof Framing System</td>
<td>Exposed steel beams, metal deck</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Lateral Force Resisting System</td>
<td>Unknown</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## BUILDING SYSTEMS & ASSEMBLIES OF 1974 BUILDING:

<table>
<thead>
<tr>
<th>Structure</th>
<th>Material</th>
<th>Remarks</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation System</td>
<td>Concrete spread footings</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Vertical Support Systems</td>
<td>Steel tubes</td>
<td>Exposed Steel, Unprotected</td>
<td>7</td>
</tr>
<tr>
<td>Floor Framing System</td>
<td>Steel beams, sprayed</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Ground</td>
<td>Concrete</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Upper Floors</td>
<td>Metal deck, concrete topping</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Roof Framing System</td>
<td>Steel beams, open web joists, metal deck</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Lateral Force Resisting System</td>
<td>Unknown</td>
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</table>

## STRUCTURE NOTES:

1. notes here
### EVALUATION REPORT

#### Condition Key Criteria:
- 1 – Worst Condition
- 7 – Or Below, Items To Be Replaced
- 8 – Or Above, Items To Retain
- 10 – Best Condition
- Compliant - Items that meet codes and/or are compliant
- Not Compliant – Items that do not meet codes and/or are not compliant.
- N/A – Not applicable/Not available
- M – Missing

### EXTERIOR ENVELOPE NOTES 1927 BUILDING:

<table>
<thead>
<tr>
<th>Exterior Envelope</th>
<th>Material</th>
<th>Remarks</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior Wall Assembly</td>
<td>Brick</td>
<td>Clean and Re-Point, leak at north, Inspect chimney</td>
<td>5</td>
</tr>
<tr>
<td>Exterior Trim/Fascia</td>
<td>Painted Wood Trim, Sills</td>
<td>Re-Paint, Repair, detailed inspection required</td>
<td>4</td>
</tr>
<tr>
<td>Sloped Roof Assembly</td>
<td>Asphalt Shingles</td>
<td>Leaks, requires replacement</td>
<td>2</td>
</tr>
<tr>
<td>Flat Roof Assembly</td>
<td>EPDM</td>
<td>New</td>
<td>9</td>
</tr>
<tr>
<td>Windows</td>
<td>Original double hung w/ fixed plexiglas panels</td>
<td>Repair, not operable, some clouding apparent</td>
<td>4</td>
</tr>
<tr>
<td>Clerestory Windows</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glazed C-Wall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doors – Exterior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-Corridor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td></td>
<td></td>
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### EXTERIOR ENVELOPE NOTES 1953, 1963 BUILDINGS:

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<th>Material</th>
<th>Remarks</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior Wall Assembly</td>
<td>Brick, Stucco, Painted Wood</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Exterior Trim/Fascia</td>
<td>Painted wood, steel, tectum</td>
<td>Test for lead</td>
<td>3</td>
</tr>
<tr>
<td>Sloped Roof Assembly</td>
<td>Built up roof, ballasted</td>
<td>Age unknown, Gym roof requires replacement, flashing suspect</td>
<td>2-5</td>
</tr>
<tr>
<td>Flat Roof Assembly</td>
<td>Built up room, ballasted</td>
<td>Age unknown, flashing suspect</td>
<td>5</td>
</tr>
<tr>
<td>Windows</td>
<td>Single glazed, wood frames</td>
<td>Test for lead, re-paint or replace</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No tempered glass at floor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerestory Windows</td>
<td>Single glazed, wood frame</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Corrugated Glass panels?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glazed C-Wall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doors – Exterior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-Corridor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

### EXTERIOR ENVELOPE NOTES 1974 BUILDING

<table>
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<th>Material</th>
<th>Remarks</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior Wall Assembly</td>
<td>Brick veneer</td>
<td>Cracking, water penetration</td>
<td>4</td>
</tr>
<tr>
<td>Exterior Trim/Fascia</td>
<td>Anodized aluminum</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Sloped Roof Assembly</td>
<td>Membrane Roof</td>
<td>Age unknown, inspect flashing</td>
<td>6</td>
</tr>
<tr>
<td>Flat Roof Assembly</td>
<td>Built up roof, ballasted</td>
<td>Age unknown</td>
<td>6</td>
</tr>
<tr>
<td>Windows</td>
<td>Thermal glazing, aluminum</td>
<td>Seal failure throughout, re-</td>
<td>2</td>
</tr>
</tbody>
</table>
EVALUATION REPORT  

Condition Key Criteria:
1 – Worst Condition
7 – Or Below, Items To Be Replaced
8 – Or Above, Items To Retain
10 – Best Condition
Compliant - Items that meet codes and/or are compliant
Not Compliant – Items that do not meet codes and/or are not compliant.
N/A – Not applicable/Not available
M – Missing

<table>
<thead>
<tr>
<th>Frames</th>
<th>glazing required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal glazing</td>
<td>Seal failure</td>
</tr>
<tr>
<td>Thermal glazing</td>
<td>Seal failure</td>
</tr>
</tbody>
</table>

EXTERIOR ENVELOPE NOTES:

1. Brick cavity walls of the 1974 addition appear to be taking on water in numerous locations. There should be a thorough inspection to determine extent and causes, including failed flashing, clogged weepholes or failed sealant joints.

2. Built-up roof appears in generally good condition, but no information on the age of the roof. There appears to be ponding developing in several locations, and this must be closely monitored to prevent moisture from getting into the underlying tectum roof deck. Note: When tectum gets wet, it loses rigidity, and ponding worsens. If undetected, this can provide an environment for mold.

3. With the exception of the 1974 building, all glazing is single pane in wood frames. These frames should be tested for lead paint. In addition, many of the windows within 18” of the floor are not tempered glass. The 1974 insulated windows have extensive seal failures and are no longer transparent.

4. Wood, double-hung windows in the 1927 building were re-furbished in 1979 and fitted with plexiglas panels bolted outside (upper lite) and inside (lower lite). They are extremely difficult to operate. In addition, there appears to be condensation in some of these units.

5. There are several failures of roof drain hubs leading exposed roof leaders. The resulting leaks have damaged the tectum soffits and it would appear as if mold is developing. These require repair.

6. There are numerous cracks in exterior stucco and brickwork. These need to be completely surveyed and repaired.
# Evaluation Report

## Henry T. Wing School

**SMMA No. 10087.00**

### Condition Key Criteria:
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- N/A – Not applicable/Not available
- M – Missing

<table>
<thead>
<tr>
<th>Interior</th>
<th>Materials – Walls, Floor &amp; Ceiling</th>
<th>Condition</th>
<th>Materials – Walls, Floor &amp; Ceiling</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Walls</td>
<td>Floor</td>
<td>Ceiling</td>
<td>Walls</td>
</tr>
<tr>
<td>Typical Classrooms:</td>
<td>CMU/</td>
<td>VCT/</td>
<td>Tectum</td>
<td>CMU/</td>
</tr>
<tr>
<td></td>
<td>GWB</td>
<td>VAT</td>
<td>ACT</td>
<td>GWB</td>
</tr>
<tr>
<td>Offices:</td>
<td>CMU</td>
<td>VCT</td>
<td>Tectum</td>
<td>GWB</td>
</tr>
<tr>
<td>Gym:</td>
<td>CMU</td>
<td>WD</td>
<td>Tectum</td>
<td></td>
</tr>
<tr>
<td>Cafeteria:</td>
<td>CMU</td>
<td>VCT</td>
<td>Tectum</td>
<td>CMU/</td>
</tr>
<tr>
<td>Library:</td>
<td></td>
<td></td>
<td></td>
<td>GWB</td>
</tr>
<tr>
<td>Auditorium:</td>
<td>CMU</td>
<td>VCT</td>
<td>Tectum</td>
<td>ACT</td>
</tr>
<tr>
<td>Corridors:</td>
<td>CMU</td>
<td>VCT</td>
<td>Tectum</td>
<td>ACT</td>
</tr>
<tr>
<td>Stairs:</td>
<td>CMU</td>
<td>RBR</td>
<td>ACT</td>
<td>GWB</td>
</tr>
<tr>
<td>Toilets:</td>
<td>CMU</td>
<td>CT</td>
<td>Tectum</td>
<td>CMU</td>
</tr>
<tr>
<td>Kitchen:</td>
<td>CMU</td>
<td></td>
<td></td>
<td>CMU</td>
</tr>
<tr>
<td>Service/Mechanical:</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

### Interior Finishes Notes:

1. Carpet flooring

### Abbreviations:

- BRK – Brick Masonry
- CMU – Concrete Masonry Unit, or Concrete Block
- WD – Wood
- CONC – Concrete
- ACT – Suspended Acoustic Tile Ceiling
- CSAT – Suspended Concealed Spline Acoustic Tile
- PLAS – Plaster
- GWB – Gypsum Wallboard
- VCT – Vinyl Composition Tile
- VAT – Vinyl Asbestos Tile
- CPT – Carpet
- VB – Vinyl Base
- RBR – Rubber Treads & Risers/Tile
- CT – Ceramic Tile
- QT – Quarry Tile
- * – Suspected Asbestos Containing Material.
## PLUMBING SYSTEM:

<table>
<thead>
<tr>
<th>Service</th>
<th>Pipe Size</th>
<th>Meter Size</th>
<th>Pressure Regulator</th>
<th>Oper. Pressure</th>
<th>Pipe Material</th>
<th>Source</th>
<th>Age</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>C</td>
<td>6&quot;</td>
<td>N/A</td>
<td>N/A</td>
<td>Copper</td>
<td>Municipal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td>C</td>
<td>6&quot;</td>
<td>Yes</td>
<td>Sch 40</td>
<td>Gas co</td>
<td></td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>System</th>
<th>Pipe Material / Condition</th>
<th>Type Insulation / Condition</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Cold Water</td>
<td>Copper / 8</td>
<td>Fiberglass / 6</td>
<td></td>
</tr>
<tr>
<td>Domestic Hot Water</td>
<td>Copper / 8</td>
<td>Fiberglass / 6</td>
<td></td>
</tr>
<tr>
<td>Sanitary Waste &amp; Vent</td>
<td>CI / 8</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Storm Drainage</td>
<td>CI and PVC / 8</td>
<td>Fiberglass / 6</td>
<td>Asbestos covered with new insulation</td>
</tr>
<tr>
<td>Gas</td>
<td>Schedule 40 steel / 8</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Non-Potable (Lab) CW</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Non-Potable (Lab) HW</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Acid (Lab) Waste &amp; Vent</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Kitchen Waste</td>
<td>CI / 8</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Tempered Water</td>
<td>N/A</td>
<td>N/A</td>
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<table>
<thead>
<tr>
<th>Equipment</th>
<th>Type / Fuel</th>
<th>Age</th>
<th>Condition</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Water Heater</td>
<td>Storage tank w/ heat exchanger</td>
<td>20</td>
<td>6</td>
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<tr>
<td>Domestic Water Heater</td>
<td>Local electric</td>
<td>5</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Storm Ejector Pump</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic Water Booster Pump</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Kitchen Grease Trap</td>
<td>Recessed</td>
<td>8</td>
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<table>
<thead>
<tr>
<th>Plumbing Fixtures</th>
<th>Type / Installation</th>
<th>Low Consum / Metering</th>
<th>Accessible</th>
<th>Condition</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Closet</td>
<td>Floor mount</td>
<td>1.6gpf</td>
<td>Y</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Urinal</td>
<td>Wall mount</td>
<td>1.0gpf</td>
<td>Y</td>
<td>6</td>
<td></td>
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<tr>
<td>Lavatory</td>
<td>Wall mount</td>
<td>No</td>
<td>Y</td>
<td>7</td>
<td></td>
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<tr>
<td>Drinking Fountain / Water Cooler</td>
<td>Single level</td>
<td>No</td>
<td>No</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Classroom Sink</td>
<td>Casework</td>
<td>No</td>
<td>Yes</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>
### Condition Key Criteria:
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M – Missing

| Classroom Bubbler / Drinking Fountain | Mounted | Bubbler | | |
|--------------------------------------|---------|---------| | |
| Mop Sink:                            | Wall mount | No | N/A | 8 |
| Showers:                             | Wall mount | No | Yes | 8 |

<table>
<thead>
<tr>
<th>Miscellaneous Fixtures</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hose Bibb:</td>
<td>7 Missing in restrooms</td>
</tr>
<tr>
<td>Missing in restrooms:</td>
<td>7</td>
</tr>
<tr>
<td>Floor Drain:</td>
<td>7</td>
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<tr>
<td>Emergency Shower / Eyewash:</td>
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<tr>
<td>Emergency Eyewash:</td>
<td>N/A</td>
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<td>Lab Faucets:</td>
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<tr>
<td>Lab Gas Cocks:</td>
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## Automatic Fire Suppression System: N/A

<table>
<thead>
<tr>
<th>Size</th>
<th>Material</th>
<th>Location</th>
<th>Flow/Pressure</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Service Entrance #1:</td>
<td>N/A</td>
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<td></td>
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<tr>
<td>Water Service Entrance #2:</td>
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<tr>
<td>Backflow Prevention:</td>
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<table>
<thead>
<tr>
<th>Size/Pressure</th>
<th>Manufacturer</th>
<th>Energy Source</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Pump:</td>
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<table>
<thead>
<tr>
<th>Type of Head</th>
<th>Zone</th>
<th>Date of Installation</th>
<th>Conditions</th>
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<tbody>
<tr>
<td>Suppression System:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Typical Classrooms:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large Spaces:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitchen:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stairs:</td>
<td></td>
<td></td>
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<tr>
<td>Fire Department Connections:</td>
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<tr>
<td>Exterior:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Interior:</td>
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<tr>
<td>Shut-Off Valves:</td>
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<tr>
<td>Pre-Action Controls:</td>
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HEATING & VENTILATING SYSTEMS:

<table>
<thead>
<tr>
<th>Centralized Systems</th>
<th>Energy Source</th>
<th>Type</th>
<th>Manufacturer</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating Equipment #1:</td>
<td>(2) Dual Fuel</td>
<td>Steam</td>
<td>Weil McLain</td>
<td>1963/1973</td>
<td>7 only one boiler is serving school, 1 second boiler is not operable</td>
</tr>
<tr>
<td></td>
<td>Boilers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fuel gas is used currently. Underground fuel tank is leaking.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling Equipment #1:</td>
<td>Air cooled</td>
<td></td>
<td>Carrier</td>
<td>1973</td>
<td>2-7 Poor</td>
</tr>
<tr>
<td></td>
<td>Roof Top Air</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>condensers;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roof Top Air Conditioning Units at 1963 Addition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaust Equipment #1:</td>
<td>Exhaust Fans</td>
<td>Roof Top; In-Line</td>
<td>Greenheck, Cook, Penn</td>
<td>1973 through 1989</td>
<td>2-7 Poor</td>
</tr>
</tbody>
</table>

Distribution Systems

<table>
<thead>
<tr>
<th>Distribution Systems</th>
<th>Size</th>
<th>Type</th>
<th>Manufacturer</th>
<th>Energy Source</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating Distribution Equipment:</td>
<td>3”</td>
<td>Steam piping; Hot Water piping</td>
<td>-</td>
<td>Steam Boiler</td>
<td>1963-1979</td>
<td>1 Poor, 6 Fair/poor</td>
</tr>
<tr>
<td></td>
<td>6”</td>
<td></td>
<td>Bell &amp; Gossett Hot water pumps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling Distribution Equipment:</td>
<td>Local roof top air condensers</td>
<td>Local refrigerant piping, serving different portions of school buildings</td>
<td>Carrier</td>
<td>Air cooled</td>
<td>1973-1989</td>
<td>2-3 Poor</td>
</tr>
<tr>
<td>Air Distribution Equipment:</td>
<td>Varies</td>
<td>Metal Ductwork</td>
<td>-</td>
<td>Air Handling Units</td>
<td>1963-1989</td>
<td>4-7 Fair/ poor</td>
</tr>
</tbody>
</table>

Condition Key Criteria:
1 – Worst Condition
7 – Or Below, Items To Be Replaced
8 – Or Above, Items To Retain
10 – Best Condition
Compliant - Items that meet codes and/or are compliant
Not Compliant – Items that do not meet codes and/or are not compliant.
N/A – Not applicable/Not available
M – Missing
### Terminal Equipment

<table>
<thead>
<tr>
<th>Terminal Equipment</th>
<th>Type</th>
<th>Manufacturer</th>
<th>Controls</th>
<th>Data of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Classrooms:</td>
<td>Unit Vents, Fan Coil Units</td>
<td>Herman Nelson; Nesbitt</td>
<td>Pneumatic</td>
<td>1963-1973</td>
<td>1-4 Poor</td>
</tr>
<tr>
<td></td>
<td>at 1974 building</td>
<td>Carrier</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offices:</td>
<td>Unit Vents, Air handling Units</td>
<td>Nesbitt McQuay</td>
<td>Pneumatic</td>
<td>1963-1973</td>
<td>1 Poor</td>
</tr>
<tr>
<td>Library:</td>
<td>Air handling/ Air Conditioning units</td>
<td>McQuay/Carrier</td>
<td>Pneumatic</td>
<td>1973</td>
<td>7 Fair</td>
</tr>
<tr>
<td>Auditorium:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cafeteria:</td>
<td>Air Handling Unit</td>
<td>McQuay</td>
<td>Pneumatic</td>
<td>1973</td>
<td>7 Fair/ Poor</td>
</tr>
<tr>
<td>Gym:</td>
<td>(2) Heating &amp; Ventilating Units</td>
<td></td>
<td>Pneumatic</td>
<td>1973</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>One (1) Heating and Ventilating unit failed, 3- Second Heating &amp; Ventilating Unit serves gym Poor</td>
</tr>
<tr>
<td>Kitchen:</td>
<td>Air Handling Unit</td>
<td>McQuay</td>
<td>Pneumatic</td>
<td>1973</td>
<td>7</td>
</tr>
<tr>
<td>Corridors:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fair/poor</td>
</tr>
<tr>
<td>Toilets:</td>
<td>Exhaust Fans</td>
<td>Cook, Barry, Penn</td>
<td>Pneumatic</td>
<td>1963-1989</td>
<td>4-8</td>
</tr>
</tbody>
</table>

### Ventilating Equipment

<table>
<thead>
<tr>
<th>Ventilating Equipment</th>
<th>Type</th>
<th>Type</th>
<th>Manufacturer</th>
<th>Controls</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
</table>

---

**Condition Key Criteria:**

1 – Worst Condition
7 – Or Below, Items To Be Replaced
8 – Or Above, Items To Retain
10 – Best Condition

Compliant - Items that meet codes and/or are compliant
Not Compliant – Items that do not meet codes and/or are not compliant.
N/A – Not applicable/Not available
M – Missing
<table>
<thead>
<tr>
<th>Ventilating Equipment – Typical Classrooms:</th>
<th>Type</th>
<th>Manufacturer</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Ventilator, Air handling unit</td>
<td>Steam, Hot Water</td>
<td>Herman Nelson, Nesbitt</td>
<td>1963-1973</td>
<td>Poor</td>
</tr>
<tr>
<td>Offices</td>
<td>Unit Ventilator, Air Handling Unit</td>
<td>Hot Water</td>
<td>Nesbitt McQuay</td>
<td>1963-1973</td>
</tr>
<tr>
<td>Library:</td>
<td>Air handling Unit</td>
<td>Hot water</td>
<td>McQuay</td>
<td>1973</td>
</tr>
<tr>
<td>Auditorium:</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cafeteria:</td>
<td>Air Handling Unit</td>
<td>Hot water</td>
<td>McQuay</td>
<td>1973</td>
</tr>
<tr>
<td>Gym:</td>
<td>Two (2) Heating &amp; Ventilating Units</td>
<td>Pneumatic</td>
<td>1973</td>
<td>1- Poor, One Heating and Ventilating Unit failed, 4- Fair/Poor, Second Heating &amp; Ventilating Unit serving Gym</td>
</tr>
<tr>
<td>Kitchen:</td>
<td>Air Handling Unit</td>
<td>Hot Water</td>
<td>McQuay</td>
<td>1973</td>
</tr>
<tr>
<td>Corridors:</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other HVAC Equipment</td>
<td>Type</td>
<td>Type</td>
<td>Manufacturer</td>
<td>Controls</td>
</tr>
<tr>
<td>Combustion:</td>
<td>Combustion air wall mounted louver, damper operated</td>
<td>-</td>
<td>-</td>
<td>Pneumatic</td>
</tr>
<tr>
<td>Heat Exchange:</td>
<td>Steam to hot water</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Energy Recovery:</td>
<td>N/A</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HVAC Controls</td>
<td>Type</td>
<td>Manufacturer</td>
<td>Date of Installation</td>
<td>Conditions</td>
</tr>
</tbody>
</table>
### Condition Key Criteria:

1 – Worst Condition  
7 – Or Below, Items To Be Replaced  
8 – Or Above, Items To Retain  
10 – Best Condition  
Compliant - Items that meet codes and/or are compliant  
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<table>
<thead>
<tr>
<th>Controls</th>
<th>Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Management – Controls:</td>
<td>-</td>
</tr>
<tr>
<td>General:</td>
<td>-</td>
</tr>
<tr>
<td>Local:</td>
<td>Local pneumatic controls</td>
</tr>
<tr>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>
HVAC NOTES:

All HVAC equipment is beyond the recommended age of use as defined by ASHRAE.

Multiple locations in the building are not receiving any heat. Hydronic system condition is very poor. Hydronic piping was installed in 1963-1973 in tunnels. The hot water and steam piping in the tunnels is not possible to reach.

The valves on hot water and steam distribution piping are not operable. The valves at the terminal unit coils and finned tube radiation are not operable.

The terminal units (unit vents, finned tube, cabinet unit heaters, etc.) are covered with rust, in poor to failing condition.

The fans in many unit ventilators are either not operating properly, or not working.

There are no central controls in the building. The local controls throughout the school building are not operating properly, or not operating at all.

The underground oil tank is leaking (statement by school maintenance personnel)

School heating is provided by only one boiler, the other boiler is not operable.

The combustion air damper and combustion air fan is not in operating condition, the damper is open manually by school maintenance personnel when the heating season starts and is closed, also, manually, when the heating season ends.

The Kitchen ventilation exhaust and ventilation of Cafeteria control sequences are not working.

In Gym: one out of two heating and ventilating units is not operable, the finned tube radiation is not working.

The air condensers in the air conditioning units serving 1963 building are not working.

The split system air conditioners serving 1974 building need to be checked for the operating condition – 1989 installation.

The Air Cooled Condenser serving Library needs to be checked for the operating conditions – original installation in 1973.

Ductwork in multiple locations is below the average condition.

Recirculating fan coil units at 1974 building are not operating properly, or not operating.

MULTIPLE CABINET UNIT HEATERS ARE NOT OPERATING
**Condition Key Criteria:**
1 – Worst Condition
7 – Or Below, Items To Be Replaced
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Not Compliant – Items that do not meet codes and/or are not compliant.
N/A – Not applicable/Not available
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### ELECTRICAL:

<table>
<thead>
<tr>
<th>Service</th>
<th>Voltage</th>
<th>Metering</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Location</td>
<td>Conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transformer:</td>
<td>Pad Mounted</td>
<td>120/208V, 3Ø</td>
<td>Outside Boiler Room</td>
<td>1975</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Energy Source</th>
<th>Manufacturer</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Generator:</td>
<td>50KW</td>
<td>Diesel</td>
<td>Consolidated Power</td>
<td>1975</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution System:</td>
<td>See Note 1</td>
<td>120/208V, 3Ø</td>
</tr>
</tbody>
</table>

### Devices

<table>
<thead>
<tr>
<th>Devices</th>
<th>Grounded/Non Grounded</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Classrooms:</td>
<td>Typically (2) per room</td>
<td>Grounded</td>
<td>See Note 2</td>
</tr>
<tr>
<td>Offices:</td>
<td>Typically (1) per wall</td>
<td>Grounded</td>
<td>See Note 2</td>
</tr>
<tr>
<td>Gym/Cafeteria:</td>
<td>(12) Receps in gym</td>
<td>Grounded</td>
<td>See Note 3</td>
</tr>
<tr>
<td>Lobby/Corridor:</td>
<td>(1) per corridor</td>
<td>Grounded</td>
<td>See Note 3</td>
</tr>
<tr>
<td>Toilets:</td>
<td>None</td>
<td></td>
<td></td>
</tr>
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</table>

### Lighting

<table>
<thead>
<tr>
<th>Lighting</th>
<th>Lamp Type</th>
<th>Mounting</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Classrooms:</td>
<td>Wraparound-T8 (1’x4’)</td>
<td>Surface mtd</td>
<td>2007 +/-</td>
<td>8</td>
</tr>
<tr>
<td>Offices:</td>
<td>Wraparound-T8 (1’x4’)</td>
<td>Surface mtd</td>
<td>2007 +/-</td>
<td>8</td>
</tr>
<tr>
<td>Library:</td>
<td>Wraparound-T8</td>
<td>Pendant mtd</td>
<td>2007 +/-</td>
<td>8</td>
</tr>
<tr>
<td>Gym/Cafeteria:</td>
<td>T5 HO Industrial</td>
<td>Pendant mtd</td>
<td>2007 +/-</td>
<td>10</td>
</tr>
<tr>
<td>Lobby/Corridor:</td>
<td>2X2 Surface Fluorescent</td>
<td>Surface mtd</td>
<td>2007 +/-</td>
<td>8</td>
</tr>
<tr>
<td>Toilets:</td>
<td>Wraparound T-8</td>
<td>Surface mtd</td>
<td>2007 +/-</td>
<td>8</td>
</tr>
<tr>
<td>Lighting Controls:</td>
<td>Local Switches</td>
<td>Recessed mtd</td>
<td>Varies</td>
<td>3</td>
</tr>
<tr>
<td>Theatre Lighting System:</td>
<td>Only (1) Dimming and (3) Floods at stage</td>
<td>1 ½” dia. pipe</td>
<td>1958</td>
<td>1</td>
</tr>
</tbody>
</table>
**Condition Key Criteria:**
1 – Worst Condition
7 – Or Below, Items To Be Replaced
8 – Or Above, Items To Retain
10 – Best Condition
Compliant - Items that meet codes and/or are compliant
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N/A – Not applicable/Not available
M – Missing

<table>
<thead>
<tr>
<th>Site Lighting</th>
<th>Lamp Type</th>
<th>Mounting</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sports Fields</td>
<td>Musco 1500 watt</td>
<td>Pole</td>
<td>2000 +/-</td>
<td>See Note 4</td>
</tr>
<tr>
<td>Parking</td>
<td>Wall packs</td>
<td>Building</td>
<td>Varies</td>
<td>7</td>
</tr>
<tr>
<td>Walkways</td>
<td>Cooley Hat</td>
<td>Pole</td>
<td>1975</td>
<td>2</td>
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</table>

<table>
<thead>
<tr>
<th>Security System</th>
<th>Type</th>
<th>Manufacturer</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTV</td>
<td>Local</td>
<td>AIPhone</td>
<td>See Note 5</td>
<td>2005 +/-</td>
</tr>
<tr>
<td>Door Access Controls</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detection Devices</td>
<td>Zoned</td>
<td>Gemini</td>
<td>See Note 6</td>
<td>2000 +/-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communications System</th>
<th>Type</th>
<th>Manufacturer</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Clock / Program</td>
<td>Digital (not functional)</td>
<td>Standard Model 1460</td>
<td>Surface mtd</td>
<td>1995</td>
</tr>
<tr>
<td>Typical Classrooms</td>
<td>Centrex</td>
<td>N/A</td>
<td>Analog phones</td>
<td>2000 +/-</td>
</tr>
<tr>
<td>Offices</td>
<td>Centrex</td>
<td>N/A</td>
<td>Analog phones</td>
<td>2000 +/-</td>
</tr>
<tr>
<td>Public Areas</td>
<td>Paging</td>
<td>Mitel</td>
<td>See Note 7</td>
<td>1975</td>
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</table>

<table>
<thead>
<tr>
<th>Tele/Data/Video System</th>
<th>Type</th>
<th>Manufacturer</th>
<th>CCTV</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Classrooms</td>
<td>(1) CAT 5 per room</td>
<td>Varies</td>
<td>See Note 8</td>
<td>2000 +/-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offices</td>
<td>(1) CAT 5 per desk</td>
<td>Varies</td>
<td>See Note 8</td>
<td>2000 +/-</td>
<td>2</td>
</tr>
<tr>
<td>Library</td>
<td>(1) CAT 5 per desk</td>
<td>Varies</td>
<td>See Note 8</td>
<td>2000 +/-</td>
<td>2</td>
</tr>
<tr>
<td>Library</td>
<td>(1) Cat 5 per group</td>
<td>Varies</td>
<td>See Note 9</td>
<td>2005 +/-</td>
<td>2</td>
</tr>
<tr>
<td>Gym/Cafeteria</td>
<td>None</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local Sound Systems</th>
<th>Type</th>
<th>Manufacturer</th>
<th>Controls</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gym/Cafeteria</td>
<td>In-wall amp</td>
<td>Unknown</td>
<td>Mic Inputs</td>
<td>1963</td>
<td>1</td>
</tr>
<tr>
<td>Type</td>
<td>Manufacturer</td>
<td>Controls</td>
<td>Date of Installation</td>
<td>Conditions</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
<td>----------------</td>
<td>----------------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Emergency Lighting</td>
<td>Cylinder/surface</td>
<td>Unknown</td>
<td>See Note 10</td>
<td>Original</td>
<td>1</td>
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<tr>
<td>Exit Lighting</td>
<td>Illuminated</td>
<td>Lithonia</td>
<td>Constant on</td>
<td>Years</td>
<td>8</td>
</tr>
<tr>
<td>Fire Alarm System</td>
<td>Addressable</td>
<td>Simplex Model 4100</td>
<td>Hour/Strobes</td>
<td>2000 +/-</td>
<td>7</td>
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### Fire Alarm Devices

<table>
<thead>
<tr>
<th>Location</th>
<th>Detector Type</th>
<th>Alarm Signal Type</th>
<th>Pull Station</th>
<th>Date of Installation</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Classrooms:</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offices:</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auditorium/Stage:</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gym/Cafeteria:</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lobby/Corridor:</td>
<td>HS</td>
<td></td>
<td>Yes</td>
<td>2000 +/-</td>
<td>8</td>
</tr>
<tr>
<td>Kitchen:</td>
<td>HS</td>
<td></td>
<td></td>
<td>2000 +/-</td>
<td></td>
</tr>
<tr>
<td>Storage/Service:</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilets:</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Condition Key Criteria:**

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8 – Or Above, Items To Retain  
10 – Best Condition  
Compliant - Items that meet codes and/or are compliant  
Not Compliant – Items that do not meet codes and/or are not compliant.  
N/A – Not applicable/Not available  
M – Missing

**HS – Horn/Strobe, SD – Smoke Detector, HD – Heat Detector, HID – High Intensity Discharge**

**ELECTRICAL NOTES:**

1. All remote panel boards are circuit breaker type. They are original to respective construction period with the exception of the 1927 building. The oldest equipment is 1958/1963 period.
2. The quantity of receptacles is lacking. Extension cords are being used throughout classrooms and office areas.
3. Corridor receptacles should be added so that no more than a 25 foot extension cord is used.
4. The sports field lighting is in good condition. The fields are not part of the school itself and have their own electrical service with pole mounted transformers.
5. The present door entry system includes an AIPhone intercom with camera and door release. There is a maglock on one leaf of main entrance doors. The camera is not recording to a DVR.
6. The intrusion alarm detection system only has motion sensors in the corridors and lobby area.
7. The original Mitel classroom communications system has been replaced with Centrex service. The original amplifiers are still used for paging.
8. Generally, there are a lack of data drops per computer locations. Local network switch for workgroups have been provided. The system should be upgraded.
9. Computer labs have multiple computers connected to a local switch at each table. The link between the local switch and the IDF is point to point without patch panels or wall jacks.
10. The emergency lighting system has had a catastrophic failure with the original area protection relays. Contactors have been installed but only activate during a total power failure.
## Condition Key Criteria:

1 – Worst Condition
7 – Or Below, Items To Be Replaced
8 – Or Above, Items To Retain
10 – Best Condition

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Not Compliant – Items that do not meet codes and/or are not compliant.
N/A – Not applicable/Not available
M – Missing

## PROVISIONS FOR ACCESSIBILITY:

<table>
<thead>
<tr>
<th>Exterior Accessible Route</th>
<th>Width</th>
<th>Material</th>
<th>Hardware</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessible Route:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Entrance:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exterior/Egress Doors:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signage:</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Interior Accessible Route</th>
<th>Width</th>
<th>Material</th>
<th>Hardware</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
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<td>Accessible Route:</td>
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Condition Key Criteria:
1 – Worst Condition
7 – Or Below, Items To Be Replaced
8 – Or Above, Items To Retain
10 – Best Condition
Compliant - Items that meet codes and/or are compliant
Not Compliant – Items that do not meet codes and/or are not compliant.
N/A – Not applicable/Not available
M – Missing
APPENDIX C

HENRY T. WING SCHOOL STABILIZATION REPORT
Option 1 - Building Stabilization

This Option is designed to preserve the physical fabric of the Wing School in its current state with the minimum possible intervention. In the case of the Wing School, the exterior envelope is of concern.

The primary purpose of any building envelope is to provide a reliable barrier between the indoor environment and exterior weather conditions. Our field observations of the Wing School indicate that the exterior envelope components, including roof, walls, and windows are showing signs of stress.

**Roof**

**E-Wing (1927 Building)**

The uppermost flat portion of the building has recently been re-roofed with a single ply membrane, however the sloped asphalt shingled portion, by far the majority of the roof, will require re-roofing in the next two years. (see photo) In addition, portions of the chimney appear to be unstable and should be inspected to insure that pieces will not fall off.

![1927 Chimney, possible lose masonry](image1)

![Damaged asphalt shingles](image2)

**A-Wing, C-Wing, D-Wing, Central Commons, Kindergarten (1958, 1963 Buildings)**

The 1958 and 1963 Buildings have gently sloping roofs with built-up roofing applied over 3” Tectum decking. Tectum is a treated wood fiber product that has moderate insulating properties and performs reasonably well when dry. However, when it gets wet, the material sags losing structural strength and holding moisture. There are several locations (see photos) where this has already happened and from ponding seen in photographs taken during a recent rainstorm it would appear that several areas of flat roof are at risk.
The district has been unable to find records indicating the age of roofs. Accordingly, we recommend a forensic investigation to determine the age of the various roofs and an infra-red survey to determine the extent of roof deck saturation.

Top Row: Note ponding at flat roofs.  
Bottom Row: Sample of Tectum decking and damaged Tectum soffit.
B-Wing, Kitchen, Library, Misc. Connectors  
(1974 Building)

The majority of the 1974 construction took place in the media center and the formerly open classroom areas, but also occurred throughout the school in a series of small connector buildings. It would appear that the majority of the roof is flat, built-up ballasted with areas of sloping membrane roof. There appears to be some ponding (see photos) and as with the other buildings, we recommend forensic investigation and an infra-red survey to determine the extent of saturation. In addition, there are areas of wall that are saturated, indicating a flashing failure or an obstruction of wall drainage. (see photos)
Walls

E-Wing (1927 Building)

The exterior walls of the classroom wing of this building appear to be bearing, un-insulated solid wall construction with no cavity between the brick veneer and concrete block. During the 1979 renovations the gymnasium wing walls appear to have been partially insulated. There are areas that need re-pointing and several sills require removal and replacement (see photos). If we assume that it has been thirty years since this building has been thoroughly examined, we recommend a complete exterior review of this historic structure.

In addition, there is a chronic leak at the north wall of the 1927 classroom wing (see photo). The suspected source is from the roof, but the leak has most likely penetrated the wall and is finding daylight at a joint between roof and wall and causing damage to the tectum roof decking.
A-Wing, C-Wing, D-Wing, Central Commons, Kindergarten  (1958, 1963 Building)

The exterior wall construction of these additions appears to be solid concrete block faced with either brick veneer or stucco over metal lath. None of these walls are insulated. There appears to be some movement cracks in these walls, but they seem in generally good condition.

1963 Building: Note cracked plaster veneer

The exterior wall construction of these additions is insulated cavity wall with brick veneer and concrete block back-up. There are numerous locations where water has collected behind the brick veneer and is unable to drain out (see photos). This could be due to flashing failures at the joint between roof and wall, blockage in the drainage cavity, or a combination. These areas should be investigated immediately since trapped moisture creates conditions favorable to the growth of mold.

In addition to areas of wet brick, there are several sealant failures. The exterior wall should be completely surveyed to identify areas in need of repair.
**Windows**

**E-Wing (1927 Building)**

The original seven foot tall double-hung wood windows of the 1927 building were re-furbished in 1979, a well-intentioned project that made the windows almost impossible to operate. In an effort to reduce heat loss, large sheets of plexiglas were screwed to the exterior of the lower half and to the interior of the upper half. The additional weight of the plexiglas requires that most teachers require a custodian to open and close the windows and over the years the plexiglas has clouded.

*1927 Building: Clouded plexiglas panel*
A-Wing, C-Wing, D-Wing, Central Commons, Kindergarten  (1958, 1963 Building)

These buildings were constructed with single pane windows glazed into painted wood frames. This system requires constant maintenance and allows excessive heat loss. In addition, there appear to be locations where un-tempered glass is within 18” of the floor, a building code violation.

1963 Building: Wood frame with single pane

1963 Building: Wood frame with single pane  Above: Steel Rafter-radiators with Tectum soffit

In addition to the heat loss from solid wall construction and single pane glazing, the 1958 and 1963 buildings have a series of steel rafters that are thermally unbroken from inside to outside. These steel rafters are radiators that transfer heat from the inside to the outside.
B-Wing, Kitchen, Library, Misc. Connectors  

(1974 Building)

Although the most recent construction, the 1974 additions have the least reliable windows. A large number of seals on the insulated glazing units have failed, allowing moisture to infiltrate and making vision impossible. In addition, light control at the classrooms with sloped glazing is difficult and can interfere with the teaching environment (see photo).
APPENDIX D

VISIONING CONFERENCE –
FRANK LOCKER EDUCATIONAL PLANNING
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Appendices
5.1 Futures Team Workshop Notes
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5.3 Places for Learning
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Sherry Marshall  School Committee

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Laura Dunn  Teacher
Joanna Hughes  Assistant Principal
Walter Lesiak  School Safety Counselor
Sheila Lima  Principal
Paul Soltis  Teacher
Donna Tuohy  Teacher
Janet Vallee  Librarian/Teacher

Parents + Community Members
Courtney Bridge  Parent
Melinda Ellis  Co-VP PTA/Parent

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INTRODUCTION
This Vision was developed in a full day facilitated workshop. Participants included Wing School teachers, administrators, and parents, and Town of Sandwich administrators and elected officials. This Educational Vision recognizes many of the successes and achievements of the Wing School, but it also proposes changes to educational delivery and facilities design that will improve the school and make it a more effective place of learning for the future. The Vision is outlined here in several parts.

EDUCATIONAL VISION
The Educational Vision outlines current changes in education, concepts most relevant to the Wing School, current school successes and areas of needed improvement, and most appropriate grade grouping concepts.

Key Words
Futures Team identified the following key words to characterize educational practices that are most relevant for the Wing School. These are:

- Natural light/windows (cited eight times)
- Cluster rooms (cited five times)
  - Suite of rooms (for learning instead of rows of isolated classrooms)
  - Neighborhoods of classrooms
  - Common space vs classrooms in line
- Collaboration (cited four times)
- Common space (cited three times)
- 21st Century Skills
  - 21st Century themes
  - Life + career skills
  - Global awareness integration (cited three times)
- Multiple Intelligences (cited twice)
- Integrated arts with core curriculum (cited twice)
- Teamwork (cited twice)
- Communication (cited twice)
Wing School Successes

The Wing School is a successful school. The Futures Team outlined current programs, relationships, and some equipment and spaces that are important to maintain. Items selected from the group discussion include:

- PK serves 70 kids
  - 14 kids with special needs
  - Other kids as peer role models
  - Demand is greater than we can meet
- Kindergarten is full + ½ day
- Library is at the middle of building
- The MS has high student participation in extra-curricular activities
- MS offers students lots of opportunities for leadership and sports
- Special needs:
  - Inclusion, with “pull over”, to a central location
  - SPED rates going down
- Differentiated instruction is used throughout the school
- We continue ramping up technology

Spinnaker Program
- 16 kids with autism - PK-1
  - Kids are mainstreamed as much as possible
- Extended Day Program
  - After school
    - Crafts
    - Enrichment
    - Outdoor
    - Gym use + Café use - get bumped
- Wing School considers itself a family
- Community Support has been great:
  - Monet Garden
  - Spinnaker Program

Needs Improvement

Items selected from the group discussion include:

- Physical environment limits the success of technology
- Wireless: now only 3 COWs
  - Multiple floor levels makes COW management difficult
- The MS needs flexibility in staffing. Right now specialist staff is shared among all Sandwich schools
- MS has no places for applied learning, no place as a focused home
- MS spaces have no elbow room
  - Corridors too small
- MS has no active learning spaces:
  - Places to make things is needed
    - Tech
    - Family/consumer
- MS Science Labs are old and overcrowded
- ES Science is not well served
- Spinnaker Program
  - Spinnaker Program poorly housed
    - Served through tiny spaces intended for other uses
    - Toilets problematic
- Heating/cooling is really poor
- Operable windows are desired
- Need secure drop-off

Grade Groupings/Relationship Building

Appropriate grade groupings are critical to the long term Vision of school, as they are the foundation for establishing relationships among students, teachers, and students and teachers, and for facility planning. The Futures Team worked in Table Teams to identify the most appropriate groupings. Considerations included:

- Minimum and maximum grouping sizes to foster:
  - Teacher collaboration
  - Easy communication
  - Student safety and comfort
Executive Summary

- Access to shared support functions
  - Developmental ages of students

**Table Team 1:**
Four groupings
PK / K,1,2 / 3,4,5 / 6,7,8

**Table Team 2:**
Four groupings
PK-K / 1,2,3 / 4,5 / 6,7,8

**Table Team 3:**
Five groupings
PK / K,1,2 / 3,4 / 5,6 / 7,8

These are not conclusive; additional work needs to be done to determine any single best approach. A flexible building design, with grade grouping clusters segueing into each other, would offer long term possibilities for revising groupings.

**FACILITIES CONCEPTS**
Participants cited several schools as good role models for the Wing School. These include:
- Forest Avenue School (cited five times), an example of teachers working together as a team in a suite of spaces that offers a variety of learning places
  - Teachers working together, synchronously, with shared responsibilities for 80+ students at once
    - 4 core teachers
    - 2 SPED teachers
  - K-2 multi-age learning center
  - Barn doors between classrooms
- Ipswich Middle School (cited five times), a building designed in clusters, with each cluster centered on a presentation/gathering space
- Westwoods Upper Elementary School (cited twice). This design featured Classrooms arranged in clusters, and widened corridors at the center of each cluster fostering student presentations and other group activities
- Springfield Literacy Center, which has small spaces between Classrooms as auxiliary spaces for specialists and students working in small groups, was highly favored as a role model for Wing

A full listing of the issues identified as relevant is in appendix Ch 5.1 Futures Team Workshop Notes. All of the role model schools are in Appendix Ch 5.3 Places for Learning.

**Places for Learning**
The Futures Team desires that classrooms and related support spaces serve 21st century learning by offering flexibility, functionality, and strategic relationships to support multiple professionals serving students in multiple learning modalities.

The desired qualities of the ideal Wing School places for learning include:
- Suites of spaces arranged in clusters
- Separate identities for clusters
- Small spaces adjacent to Classrooms for breakout, specialist professionals working with small groups of students, tutorials, RtI’s, and student projects
- Use of circulation for learning
- Connections between Classrooms to allow easy student flow, teacher observation of students, and specialist

More details, including planning diagrams, are in Ch 4, Facilities Concepts.

**Diagram**
An overall school organizational diagram for the future Wing School was developed in a whole group discussion session. The diagram on the next page captures the essential qualities of the concept.
Executive Summary

Educational Visioning

Henry T Wing School

Sandwich Public Schools

Sandwich, MA

October 2010
INTRODUCTION
The Educational Vision consists of four parts:
- 21st Century Schools presentation from the Futures Team workshop
- Futures Team response to the presentation
- Wing School successes
- Areas needing improvement
- Futures team thoughts regarding appropriate grade groupings

EDUCATIONAL VISION
21st Century Schools
This presentation outlined the changing values, goals, and deliveries that characterize the most progressive thinking about schools in the United States, and worldwide, today. Concepts presented included:
- 20th vs 21st century schools:
  - The 20th century was a century of creating efficient schools; the 21st century has been a century of looking for effectiveness in schools
  - 20th century was the century of the teacher; 21st century is the century of the learner
  - The teacher used to hold all the information; now the teacher is the guide
- Research in learning informs us of many effective educational practices
  - Some are gaining popularity
  - Others are not yet in general practice
- Learning is more effective when students apply their learning immediately
- The Multiple Intelligence Theory (MI) explains why different students learn best in different ways. This theory, now 25 years old, and steadily gaining support among educators across the country, explains that the traditional bases of intelligence, mathematics and linguistics, miss many dimensions of intelligence. IQ testing therefore misses the intelligence of many people. MI identifies at least eight intelligences, including spatial, musical, and introspective.
The 21st Century Skills Framework has been adopted by the Massachusetts Department of Education. The framework was developed by the Partnership for 21st Century Skills (www.p21.org), a national/international “think tank” of concerned international businesses and leading American educational organizations, to focus on the skills and attributes our students need today in order to be successful in the rapidly changing world. It establishes that:

- Core, subject-based learning is not sufficient any more
- Learning relevant 21st century survival skills is just as important, perhaps more important. These include:
  - Learning and innovation skills
  - Life and career skills
  - Information, media, and technology skills
- Learning should be interdisciplinary, bridging the gaps between subject areas
- Learning should be infused with 21st Century Themes. These include:
  - Global awareness
  - Financial, economic, business and entrepreneurial literacy
  - Civic literacy
  - Health literacy
- Students learn better, and score higher in standardized tests, when they are engaged in Project-Based Learning
- Learning is a social activity. Students learn better when they are in strong, relationships with teachers and peers
- The Relevance and Rigor Framework of the International Center for Leadership in Education (www.leadered.com) correlated Bloom’s Taxonomy (education’s traditional measure of knowledge, expressed as a range) with application, offering a concise understanding of effective learning
- Teachers’ work is supported through strong relationships with other professionals
- Schools are looking for more community connections to improve student learning
- Flexible furniture is needed to bring the student the support to learn in a variety of modalities

Key Words
Futures Team identified the following key words to characterize points that are most relevant for the Wing School. These are:

- Natural light/windows (cited eight times)
  - Windows are important – connect to the outside world
  - More light
  - Windowless - 20% less learning
- Cluster rooms (cited five times)
  - Suite of rooms (for learning instead of rows of isolated classrooms)
  - Neighborhoods of classrooms
  - Open plan vs classrooms in line
- Collaboration (cited four times)
- Common space (cited three times)
- 21st Century Skills
  - 21st Century themes
  - Life + career skills
  - Global awareness integration (cited three times)
- Multiple Intelligences (cited twice)
- Integrated arts (cited twice)
- Teamwork (cited twice)
- Communication (cited twice)
- Teacher Planning Center (cited twice)
- Flexible furniture (cited twice)
- Empower students (cited twice)

Participants cited several of the schools presented. These include:
- Forest Avenue School (cited five times) (an example of teachers working together as a team in a suite of spaces that offers a variety of learning places)
  - Teachers working together, synchronously, with shared responsibilities for 80+ students at once
    - 4 core teachers
    - 2 SPED teachers
    - K-2 multi-age learning center
    - Barn doors between classrooms
- Ipswich MS (cited five times)
- Westwoods, Farmington, CT (cited twice)
Educational Vision

- East Site - K-5 (spaces between classrooms for specialists)

A full listing of the issues identified as relevant is in appendix Ch 5.1 Futures Team Workshop Notes. All of the role model schools are in Appendix Ch 5.3 Places for Learning.

Wing School Successes

The Wing School is a successful school. The outline below captures current programs, relationships, and some equipment and spaces that are important to maintain. Items identified in the group discussion include:

- We keep 7 + 8 “pretty pure”, separated from the other grades, with assigned teachers
- Teacher teams for grades 8, 7, and 6
- Full day K
  - Formerly had a separate entrance
- Library is at the middle of building
- The MS can field chorus, drama, sorts
  - High student participation
- MS offers students lots of opportunities
  - Leadership, sports
- MS has teacher professional development for 6, 7 + 8
- Busing is in two runs: 5-8, K-4
  - Therefore extra-curriculars are organized as 5-8: chorus, etc
- Smartboards are installed in 5-8 classrooms
- Elmos are in grades 1-4 classrooms
- Special needs:
  - Inclusion, with “pull over”, to a central location
  - SPED rates going down
    - Early intervention
  - Literacy teachers, per school in Sandwich
    - K-2
    - 3-5
    - 6-8
    - Language and math teachers
- Coaching + PD
  - Guided reading, 2 adults
  - Math, 2 adults
- Differentiated instruction
- We continue ramping up technology
- Spinnaker Program
  - 16 kids with autism - PK-1
  - Kids are mainstreamed as much as possible
- OT/PT has a new Sensory Room
- PK serves 70 kids
  - 14 kids with special needs
  - Other kids as peer role models
  - ½ day - varied days per week
  - Demand is greater than we can meet
  - Maybe we should locate PK at all three schools
- Kindergarten is full + ½ day
  - Full is a tuition program
  - Language arts are taught to all
  - If ½ day, students miss science and socialization time
- Extended Day Program
  - After school
    - Crafts
    - Enrichment
    - Outdoor
    - Gym use + Café use - get bumped
- Wing School considers itself a family
- Community Support has been great:
  - Monet Garden
  - Spinnaker Program

Needs Improvement

Items identified in the group discussion include:

- Physical environment limits the success of technology
- Guided Reading Room
  - Wrong place - wrong size
  - Hallway rooms are too small
- Wireless: now only 3 COWs (computer carts to store a classroom’s worth of computers)
Multiple floor levels makes COW management difficult
- The MS needs flexibility in staffing. Right now specialist staff is shared among all Sandwich schools
- MS is 7 + 8 now, maybe could be 6-7-8
- MS has no places for applied learning, no place as a focused home
- MS spaces have no elbow room
  - Corridors too small
- MS has no active learning spaces:
  - Places to make things is needed
    - Tech
    - Family/consumer
- MS Science Labs are old and overcrowded
- ES Science is not well served
  - Text books are from 1984
- Copy Room too far from many classrooms
- Spinnaker Program
  - 16 kids with autism - PK-1
  - Kids are mainstreamed
  - Spinnaker Program poorly housed
    - Served through tiny spaces intended for other uses
    - Screeching behaviors cause disruption to others
    - Toilets problematic
- Heating/cooling is really poor
- Operable windows are desired
- Need secure drop-off
- Guided Reading Rooms
  - Perhaps 2 not 1: K-3 and 4-6
  - But current single room keeps literacy teachers together, and they can share and learn from each other
- Only one Conference Room
  - Need more

Grade Groupings/Relationship Building
Appropriate grade groupings are critical to the long term Vision of school, as they are the foundation for establishing relationships among students, teachers, and students and teachers, and for facility planning. The Futures Team worked in Table Teams to identify the most appropriate groupings. Considerations included:
- Minimum and maximum grouping sizes to foster:
  - Teacher collaboration
  - Easy communication
  - Student safety and comfort
  - Access to shared support functions
  - Developmental ages of students

| Table Team 1: | Four groupings |
| PK / K,1,2 / 3,4,5 / 6,7,8 |
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These are not conclusive; additional work needs to be done to determine any single best approach. A flexible building design, with grade grouping clusters segueing into each other, would offer long term possibilities for revising groupings.
INTRODUCTION
The Futures Team developed concepts for the future Wing School facility. This was done at the end of the workshop; it incorporates the educational values and concepts discussed earlier in the workshop. Facilities make learning visible. The concepts outlined here express many desired educational ideas. These include:

- Organizing students in groupings that contribute to a sense of comfort and well-being, that are not too big and not too small, and that contribute to forming relationships with peers and teachers
  - Developmental ages of students needs to be considered
  - Physical size of students needs to be considered
- Fostering teacher collaboration and communication through strategic placement of classrooms and support functions
  - Proximity is a significant factor in collaboration
  - Learning is supported by teachers and specialists; with students often flowing from one professional to another
- Recognition that classrooms alone are no longer the most effective space planning concept for schools
  - Varied spaces support varied learning group sizes
- Community uses, including parent volunteering, can be supported by the strategic planning of entries, flow, and location of functions
- The Library/media center is still the educational heart of learning, and is desired as the heard of the school building. While the role and spatial needs of a K-8 Library/Media Center is changing with the integration of technology in learning and the rapid obsolescence of print media, the concept of a central Library/Media Center reinforces the Wing School family concept, and supports continued high academic values

Spaces Essentials
Many spaces were identified as critical to the future building. This listing, although not complete, represents some essentials:

- Classrooms should be arranged to foster educationally appropriate relationships
- A single Gym is not sufficient. Plan for:
  - Two Gyms or
  - A Gym and a Multi-Purpose Room
- Cafeteria planning:
  - Cafeteria with multiple servings to speed student flow
  - Multiple smaller cafeterias could be better than a single large one
  - Community extended day needs access to the Cafeteria
- Laptop computers are more versatile than Computer Labs. Plan for laptops serving all students
- A large Conference Room centrally located, for many user groups is needed
- Literacy Room should be easily accessible to all teachers
- Monet’s Garden needs to be preserved
- Copy Rooms should be distributed for easy access
- Assembly in the Gym is acceptable
- Music:
  - Now 1, but perhaps:
    - 1 vocal
    - 1 instrumental
- Art:
  - Art now is used for eight classes per day
  - Two rooms are desired
    - 1 = Art
    - 1 = Messy Project Room
- Professional Development Room for district-wide use
  - Teacher Planning Room
- Performance space with bathrooms
- Spaces for three foreign language teachers
  - Part-time
  - Serving grades 5-8
- MS has no active learning spaces:
  - Places to make things is needed
    - Tech
    - Family/consumer
- MS Science Labs are old and overcrowded
- ES Science is not well served
- Copy Room too far from many classrooms
- Spinnaker Program poorly housed
  - Served through tiny spaces intended for other uses
  - Screeching behaviors cause disruption to others
  - Toilets problematic
- Heating/cooling is really poor
- Operable windows are desired
- Need secure drop-off
- The Guided Reading Room is in the wrong place and the wrong size
  - Perhaps 2 not 1: K-3 and 4-6
  - But current single room keeps literacy teachers together, and they can share and learn from each other
- Have only one Conference Room
  - Need more

PLACES FOR LEARNING

The Futures Team desires that classrooms and related support spaces serve 21st century learning by offering flexibility, functionality, and strategic relationships to support multiple professionals serving students in multiple learning modalities.

The desired qualities of the ideal Wing School places for learning include:

- Suites of spaces arranged in clusters
- Separate identities for clusters
- Small spaces adjacent to Classrooms for breakout, specialist professionals working with small groups of students, tutorials, RtI’s (Response to Intervention, a program of frequent
evaluations of individual student learning progress, followed by highly personalized learning strategies targeted to each student’s individual needs, often carried out by learning specialists), and student projects
- Use of circulation for learning
- Connections between Classrooms to allow easy student flow, teacher observation of students, and specialist

**Favored Planning Concepts**
These concepts are best exemplified by two schools. They are:

**Ipswich Middle School, Ipswich, MA**
Featuring:
- Double doors between related Classrooms
- Non-rectangular rooms that foster small groupings of students
- Central commons area with built-in technology for presentations
- Small rooms adjacent to Classrooms for Teacher Planning and Special Education

Springfield Literacy Center, Springfield, PA
Featuring:
- Support Spaces between Classrooms for RtI’s, tutorials, parent meetings, small group instruction, student project learning teams
- Breakout spaces in the Corridor, visible from Classroom with full glass wall
- Barn doors between Classrooms and Support Spaces

Springfield Literacy Center was also highly valued, chosen by all Table Teams. They liked:
- How naturally this space concept supported pull-out and pull-over learning activities led by specialists
- That spaces like this could be created through remodeling of the existing building

Ipswich Middle School was preferred by all Table Teams. Participants reported they liked:
- Arrangement of related classrooms in clusters
- Central common space that acts as circulation, but also supports varied learning group sizes and presentations by students and visitors
- How appropriately this type of space planning would support the Wing middle school model

Non-bearing walls between existing Classrooms in the Wing School can be relocated to create support Spaces, similar to the Springfield Literacy Center.
Other schools which drew considerable interest, but not as much vote, included:

Forest Avenue K-2 Center, Middletown, RI
Designed for a team of four classroom teachers, plus specialists, working synchronously with a multi-age group of 80+ students, this Center was remodeled in a 1960s building. It features a group Activity Area and a Teacher Office as a home base.

Westwoods Upper Elementary School, Farmington, CT
This design features Classrooms arranged in clusters, each centered on a simple but effective widening of the corridor, creating places for presentations, group activities, and tutorials.

East Site 5-6 school, Rock Springs, WY
Inspired by the Springfield school noted above, this design features furniture on wheels for easy rearrangement by teachers and students to serve different learning needs.

Least Favored Planning Concepts
Futures Team members universally agreed that the least appropriate planning concept for the future of the Wing School was the most traditional of the plans reviewed, Minges Brook Elementary School.

Minges Brook Elementary School, Battle Creek, MI
This building, like most mid-20th century school buildings, has:
- Self-contained Classrooms with no flow from one to another
- Corridors that are almost impossible to use as auxiliary learning spaces
- No support spaces near classrooms
- Specials (Art, Music, Gym) located far from Classrooms, making it hard to integrate curriculums
OVERALL SCHOOL ORGANIZATIONAL DIAGRAM

An overall school organizational diagram for the future Wing School was developed in a whole group discussion session. The diagram below captures the essential qualities of the concept. These include:

- Library/Media Center at the heart of the school
  - Locate Literacy room within
  - Locate network/Hub Room within
- Specialist learning places also at the center, easily accessible from all classrooms. These include:
  - Art
  - Music
  - Physical Education
- Classrooms in clusters, with circulation/common area in each cluster
- Each cluster would:
  - Have classrooms supporting the grade groupings determined to be developmentally appropriate for students

- Be not too small and not too large, so as to support strong relationships of teachers with a common focus, and student relationship-building
- Have Project Rooms in each cluster
- Have COWS (Computers on Wheels carts) in lieu of Computer Labs
- Have a Copy Center
- Foreign Language in 5-8 Clusters
- Spaces for most likely community use located at the Community Drop-off/Pick-up and Parking
  - Multi-Purpose room
  - Volunteer/PTA Office
  - Cafeteria
  - Main Office
- Locate Monet’s Garden adjacent to the Library/Media Center and the Main Office
- Two places for Pick-up/Drop-off
  - One for the Early Child Center, PK and K
  - One for Community and Grades 1-8
AGENDA
The Futures Team workshop was held on 21st October 2010. Notes of all activities follow:
- 21st Century Schools: Overview of Schools for Changing Times
  - Relevant Issues for Wing School
- Wing School Successes
  - Needs Improvement
- Grade Groupings/Relationship Building
- Places for Learning
- Overall School Organizational Diagram

21st CENTURY SCHOOLS: OVERVIEW OF SCHOOLS FOR CHANGING TIMES
Presentation
Frank Locker gave a presentation that outlined the changing values, goals, and deliveries that characterize the most progressive thinking about schools in the United States, and worldwide, today. Key points included:
- 20th vs 21st century schools:
  - The 20th century was a century of creating efficient schools; the 21st century has been a century of looking for effectiveness in schools
  - 20th century was the century of the teacher; 21st century is the century of the learner
  - The teacher used to hold all the information; now the teacher is the guide
- Research in learning informs us of many effective educational practices
- Some are gaining popularity
- Others are not yet in general practice
- Learning is more effective when students apply their learning immediately
- The Multiple Intelligence theory explain why different students learn best in different ways
The 21st Century Skills has been adopted by the Massachusetts Department of Education. It establishes:

- Core, subject-based learning is not sufficient any more
- Learning relevant 21st century survival skills is just as important, perhaps more important. These include:
  - Learning and innovation skills
  - Life and career skills
  - Information, media, and technology skills
- Learning should be interdisciplinary, bridging the gaps between subject areas
- Learning should be infused with 21st Century Themes. These include:
  - Global awareness
  - Financial, economic, business and entrepreneurial literacy
  - Civic literacy
  - Health literacy

Students learn better, and score higher in standardized tests, when they are engaged in Project-Based Learning.

Learning is a social activity. Students learn better when they are in strong, relationships with teachers and peers.

The Relevance and Rigor Framework of the International Center for Leadership in Education correlated Bloome's Taxonomy with application, offering a concise understanding of effective learning.

Teachers' work is supported through strong relationships with other professionals.

Schools are looking for more community connections to improve student learning.

Flexible furniture is needed to bring the student the support to learn in a variety of modalities.

Relevant Issues
As the Futures Team listened to the presentation, they identified key words to characterize which of the points raised are most relevant for the Wing School. These are:

- Natural light/windows (cited eight times)
  - Windows are important – connect to the outside world
- More light
- Windowless - 20% less learning

- Cluster rooms (cited five times)
  - Suite of rooms (for learning instead of rows of isolated classrooms)
  - Neighborhoods of classrooms
  - Open plan vs classrooms in line

- Collaboration (cited four times)
- Common space (cited three times)
- Multiple Intelligences (cited twice)
- Integrated arts (cited twice)
- Teamwork (cited twice)
- Communication (cited twice)
- Teacher Planning Center (cited twice)
- Flexible furniture (cited twice)
- Stand up desks
- Soft seating in common areas
- Knowledge discovery
- Personalized learning
- Maximized visibility
- (The limitations of standardized ) testing vs 21st Century learning
- Community connections
- Community service
- Effect of space on behavior
- Project-based learning
- Core subjects
- Classroom space
- Teacher as the guide
- Apply knowledge
- Work ethic
- Science Labs
- Sound system/Theater
- Specials
  - Ex - Art Room location
- Social/emotional learning
- Empowering students
- Take control of own learning
- Corridors separate classrooms?
Secured areas
Differentiated instruction
  - More than one teacher
Not rectangular rooms
Focus of Interventions
  - What group determines the philosophical model for learning in school?
    - Child (teacher)
      - Teacher (Education) Lab schools
      - Administrative freedom
      - Systems/organization
        - Policies - time
        - Curriculum - program
        - Philosophy
  - Physical design + safety factors
    - Windows - grade level
Empower kids (cited twice)
Technology
Non-traditional environments
Differentiated instruction
Rigor & Relevance
  - High knowledge (quadrant D)
  - High application (quadrant D)
  - Adaptation (quadrant D, cited twice)
  - How to prepare for D (adaptation) in very near future?!
21st Century Skills
  - 21st Century themes
  - Life + career skills
  - Global awareness integration (cited three times)
Role model collaboration
Multiple learning styles/environment
Engage environment
  - Interior/exterior
Eventful corridors
Universal HVAC system
Geometry + Corners (as exemplified in the Ipswich MS floor plan)
Employer’s views of what is important in school does not match what we are doing
Change/evaluate training?
Funding/grants to intro?
Presentations
Borrowed light
Middle school – debate teams club
Project tutorial area
More variety
Teacher visibility
Creative economy
Art on a cart as a positive concept to get art everywhere
Critical thinking
Use floor
Mission
Efficient vs effective
Building evolves
Center stage
Century of learner
Learning Pyramid
Learning spaces
Participants cited several of the schools presented. These include:
  - Forest Avenue School (cited five times) (an example of teachers working together as a team in a suite of spaces that offers a variety of learning places)
    - Teachers working together, synchronously, with shared responsibilities for 80+ students at once
      - 4 core teachers
      - 2 SPED teachers
    - K-2 multi-age learning center
    - Barn doors between classrooms
  - Ipswich MS (cited five times)
  - Westwoods, Farmington, CT (cited twice)
  - Blue Point - Scarborough, ME (as an example of interconnected classrooms)
  - East Site - K-5 (spaces between classrooms for specialists)
  - West Hill Primary
  - Wooranna Park
  - Old Town, ME
Helsinki primary schools:
- direct access (to the outdoors from clusters of classrooms)

WING SCHOOL SUCCESSES
The whole group brainstormed to identify what is working now at Wing School. As a by-product they identified some aspects of the school that need improvement. Here are the results:

Successes
- We keep 7 + 8 “pretty pure”, separated from the other grades, with assigned teachers
- Teacher teams for grades 8, 7, and 6
- Full day K
  - Formerly had a separate entrance
- Library is at the middle of building
- The MS can field chorus, drama, sorts
  - High student participation
- MS offers students lots of opportunities
  - Leadership, sports
- MS has teacher professional development for 6, 7 + 8
- Busing is in two runs: 5-8, K-4
  - Therefore extra-curriculars are organized as 5-8: chorus, etc
- Smartboards are installed in 5-8 classrooms
- Elmos are in grades 1-4 classrooms
- Special needs:
  - Inclusion, with “pull over”, to a central location
  - SPED rates going down
    - Early intervention
  - Literacy teachers, per school in Sandwich
    - K-2
    - 3-5
    - 6-8
    - Language and math teachers
    - Coaching + PD
  - Guided reading, 2 adults
- Math, 2 adults
- Differentiated instruction
- We continue ramping up technology
- Spinnaker Program
  - 16 kids with autism - PK-1
  - Kids are mainstreamed as much as possible
- OT/PT has a new Sensory Room
- PK serves 70 kids
  - 14 kids with special needs
  - Other kids as peer role models
  - ½ day - varied days per week
  - Demand is greater than we can meet
  - Maybe we should locate PK at all three schools
- Kindergarten is full + ½ day
  - Full is a tuition program
  - Language arts are taught to all
  - If ½ day, students miss science and socialization time
- Extended Day Program
  - After school
    - Crafts
    - Enrichment
    - Outdoor
      - Gym use + Café use - get bumped
  - Wing School considers itself a family
  - Community Support has been great:
    - Monet Garden
    - Spinnaker Program

Needs Improvement
- Physical environment limits the success of technology
- Guided Reading Room
  - Wrong place - wrong size
  - Hallway rooms are too small
- Wireless: now only 3 COWs
  - Multiple floor levels makes COW management difficult
- The MS needs flexibility in staffing. Right now specialist staff is shared among all Sandwich schools
- MS is 7 + 8 now, maybe could be 6-7-8
- MS has no tools, no place as a focused home
• MS spaces have no elbow room
  o Corridors too small
• MS has no active learning spaces:
  o Places to make things is needed
    ▪ Tech
    ▪ Family/consumer
• MS Science Labs are old and overcrowded
  o Text books are from 1984
• Copy Room too far from many classrooms
• Spinnaker Program
  o 16 kids with autism - PK-1
  o Kids are mainstreamed
  o Spinnaker Program poorly housed
    ▪ Served through tiny spaces intended for other uses
    ▪ Screeching behaviors cause disruption to others
    ▪ Toilets problematic
• Heating/cooling is really poor
• Operable windows are desired
• Need secure drop-off
• Guided Reading Rooms
  o Perhaps 2 not 1: K-3 and 4-6
  o But current single room keeps literacy teachers together, and they can share and learn from each other
• Only one Conference Room
  o Need more

GRADE GROUPINGS/RELATIONSHIP BUILDING
The Futures Team worked in small groups to identify the most appropriate groupings of students. Their work responded to this challenge:

ANALYSIS:
Assuming all grades K-8 was placed in a continuum:
A. What opportunities would this create for students?
B. What liabilities does this create for students?
C. What opportunities would this create for teachers/administration?
D. What liabilities does this create for teachers/administration?
E. What hopes would the parents/community have?
F. What concerns would the parents/community have?

SYNTHESIS:
A. What are the ideal grade groupings, considering:
   o Developmental age of students
   o Safety
   o School programs
   o Length of time needed to foster relationships
B. What are the ideal connections between grade groupings?
C. What are the ideal separations between grade groupings?
PLACES FOR LEARNING

The Futures Team, working as table Teams, analyzed places for learning and established preferences for the future Wing School. The Options were reviewed by ranked and evaluated by Table Teams. The most preferred for the future Wing School were Ipswich MS, followed by the Springfield Literacy Center. The least preferred was Minges Brook Elementary School.

The focus on places for learning in this challenge is proxy for educational delivery. Each of the exemplars reviewed by the Futures Team (see Appendix 5.3 for the complete sequence) supports a range of learning modalities, and can best support different teacher deliveries and student activities. No single exemplar supports every possible delivery and activity. While reviewing these physical places, participants were actually projecting the future of learning, and how to best support it.

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- Central common space that acts as circulation, but also supports varied learning group sizes and presentations by students and visitors
- How appropriately this type of space planning would support the Wing middle school model

Springfield Literacy Center was also highly valued, chosen by all Table Teams. They liked:

- How naturally this space concept supported pull-out and pull-over learning activities led by specialists
- That spaces like this could be created through remodeling of the existing building
Most Favored

Ipswich Middle School

Least Favored

Minges Brook Elementary School

Table Team 1
An overall school organizational diagram for the future Wing School was developed in a whole group discussion session. The diagram below captures the essential qualities of the concept. These include:

- **Library/Media Center at the heart of the school**
  - Locate Literacy room within
  - Locate network/Hub Room within
- **Specialist learning places also at the center, easily accessible from all classrooms.** These include:
  - Art
  - Music
  - Physical Education
- **Locate Social Worker and Psychologist spaces as close to Classrooms as possible, shown adjacent to the Library/Media Center**
- **Classrooms in clusters, with circulation/common area in each cluster**
  - Each cluster would:
    - Have classrooms supporting the grade groupings determined to be developmentally appropriate for students
    - Be not too small and not too large, so as to support strong relationships of teachers with a common focus, and student relationship-building
    - Have Project Rooms in each cluster
    - Have COWS (Computers on Wheels carts) in lieu of Computer Labs
    - Have a Copy Center
    - Have Foreign Language in 5-8 Clusters
- **Spaces for most likely community use located near the Community Drop-off/Pick-up and Parking**
  - Multi-Purpose room
  - Volunteer/PTA Office
  - Cafeteria
  - Main Office
- **Locate Monet’s Garden adjacent to the Library/Media Center and the Main Office**
5.1 Futures Team Workshop Notes

- Two places for Pick-up/Drop-off
  - One for the Early Child Center, PK and K
  - One for Community and Grades 1-8
APPENDIX E

HENRY T. WING SCHOOL
TEACHER MEETINGS REPORT
This memo is a summary of comments from a series of discussions between Phil Poinelli and representative teachers at the Wing School on November 4, 2010. The intent was to obtain a better understanding of how the school functions and requirements of specific programs.

9:00 Patty Ellis and Melissa Williamson (Spinnaker - autism)
9:45 Maureen Wiklund (Literacy Coach - grades 3-5)
10:30 Jim Cote (Sped, grade 6)
11:45 Paula Chambers (Science, grade 7), Brandy Clifford (Math coach)
1:00 Trisha Allietta (preK)
2:00 Maryellen MacDonald (art) & Karen Tofteroo (music)
3:00 Sheila Lima

General Comments:
Town-wide equity across grade levels is expected – a feeling that the Wing physical plant is not equitable was expressed.

Flexibility of physical plant is a contributor to creativity

In general, classrooms lack the necessary power/outlets and built-in storage

Based on the bus schedule, the school schedule is: Grades 5 – 8, 8:10am – 2:40pm and Grades K-4, 8:50am – 3:20pm. It would be preferred to have the 5th graders on the elementary schedule and therefore elementary busses.

Specialists don’t have laptops

The school day consists of eight periods (pertains mostly to the middle school grades) There is no passing time.

The school changed from K-6 to K-8 in 1990 when the two new schools were built.
Teachers have 7 prep periods per week
There are 7 periods per day but because of the overlapping schedules there are 8 classes per day for specialists. (Early start, late finish)
There are no bells for the change of classes
The 8th grade day consists of: Math, English, Social Studies, Science, Foreign Language and specialty classes of art, music, library and 2 periods of gym spread throughout the week
Gym – 2 gym teachers serve the school. Students take gym 2 times per week. Grades 7 & 8 change their clothes for gym but do not shower.
Extended day uses the schools’ cafeteria and gym. It is provided by the community school which also runs before school programs

9:00 am, Patty Ellis, Melissa Williamson-Spinnaker

The Spinnaker Program is a pre-K program serving a variety of ages children with cognitive issues. It includes some children with Downs Syndrome. The program occupies a collection of small rooms on two sides of the corridor in D wing. This is a town wide program.

The program currently includes (13) Pre-K & K children and (1) 1st grader. There are morning and afternoon sessions. Some children spend the entire day in the program and some divide their time between the program and kindergarten or 1st grade.

There is a 1 to 1 relationship of children to teachers or aids
There currently is a maximum of 10 student maximum in any of the rooms. There are group activities but also the need for individual work space. This is accomplished with movable or semi-movable ¾ height acoustical partitions. These individualized spaces are needed because of the difficulty in the childrens’ attention span. There are current 10 of these individualized spaces. This needs to grow to 15.

Elements that affect the children include: lighting (preference for natural), visual distractions, ventilation (quality of air), students’ medical – food allergies, Crohn’s disease, several food issues

Common space is needed within the suite. Activities, experiences could include: sensory experience, social interaction, jumping, play on scooters, fine motor activity, bouncing on ball, crawling, access to dark area, lunch

OT/PT is provided by pull

Need for dedicated toilet rooms (multiple) with changing table (multiples)

Most students from this program remain in the school and matriculate into the school population after Grade 1.

There is a related program at Forestdale for children in Grade 3 – 6 or 7 (CSD Program) – Vision is to combine the two programs at the Wing School. Need to define the CSD program requirements. The CSD current population is 11 children. The child to adult relationship is not necessarily 1:1.

Wood floor and area carpets (that can be cleaned or replaced) are desired.
10+ adults are present in the space at any time. 16 total staff, (3) in first grade class. There is a need for an area of privacy for parent conversation. 1 or 2 teachers desks needed in the space. Teachers spend very little time at desks. (Hands on all of the time)

A fenced-in outdoor play area is needed for the program. An interior small/scaled down gym or play area is needed for winter.

There was a discussion of separate entry but no conclusion. Some arrive by special needs buses, but most arrive by parent drop off / pick up.

There are three literacy coaches in the school serving grades K-2; 3-5; 6-8. The below comments generally affect all grade levels. The coaches follow a Push In model (not pullout) – the coach is added to a classroom to teach or with the subject teacher or tutor individually, one-on-one. Each literacy coach spends a half day teaching and a half day coaching individual students.

There was a discussion of including a 10 x 10 breakout room located between each of two classrooms to serve both. The rooms would be glazed for easy observation.

There was a discussion of the typical teacher’s desk – the desire for a light weight (physically and visually) lightweight – take away the symbolism of the static desk.

This teacher prefers a projector on cart to allow use of multiple walls (flexibility) vs the ceiling hung or interactive markerboard mounted unit.

The school maintains a Literacy Library located in room B110 –the room is a professional development area where guided reading books are kept on multiple book shelves. The space includes desks for each of the literacy coaches.

The school has a Reading Recovery Program that serves grades K-1.

LLI program serves grades 1-3 in a small group instruction format for up to 3 students. It has its’ own specific materials. (This needs to be clarified and rooms used)
Every classroom has an extensive library. Students not working out of text books but rather from collections of books available to them in the classrooms and the literacy library.

Each classroom needs a gathering place

(COW’s) Computers on Wheels are used extensively throughout the school

Literacy Room

**10:30 am, Jim Cote  SPED 6th Grade**, is one of four intervention teachers

Work with most children with both inclusion and pullout

Intervention serves children in grade groupings: K-1, 3-4-5, 6 and few 7, 7 and 8

Most intervention (small group instruction) is in small groups, rarely individual, most often in groups of 2 - 3 with some as large as 6

Differentiated learning takes place throughout the school

“Digital backpack” - iPads or a similar next generation is seen as a student’s primary source book in the future.

There is a need for project rooms or areas throughout the schools organized by grade levels. If properly sized, use of corridors could work.

Intervention practices include: Pull out; Push in and Pull over, depending on the student – most work is done within the room, often done in a slightly different way

The 5th grade is not seen as part of Middle School though the 5th grade students likely think of themselves as middle schoolers.

The 6th grade is seen as part of Middle School. The grade is organized with ELA, English Language Arts teachers; science/social studies teacher, math teachers and 1 SPED teacher. Kids are moving from class to class. It is seen as a transition year.

In 7th and 8th grades the structure changes to 5 core subject teachers.
11:45 am, Paula Chambers, Science 7th grade; Brandy Clifford, Math coach

There are (2) math coaches serving the K – 8 population
Pull out and Pull over are practiced based on the student
Although there is a discussion of project based learning, there is very little being practiced at the middle school level. Would like to have team teaching for 2 classes at a time. In general math and science teachers don’t collaborate on curriculum.

There is a need for an outdoor learning center needed for middle school science program. The courtyard outside the science rooms could work well for this activity.

There was a discussion of including a 10 x 10 breakout room located between each of two classrooms to serve both. The rooms would be glazed for easy observation.

There are teacher team meetings that typically take place every day cross grade levels.

Science would like to conduct class as lecture / labs, being able to conduct both within the same period. Typically there are a minimum or two lab activities per week.

Math is cross curricular in elementary grades but not in middle school years

There is no technology component in program the middle school The T is missing from STEM.

Plumbing doesn’t work in some of the science rooms

Math is rather regimented– a lesson a day – described “everyday math”

Most teachers prefer a fixed projector at the ceiling or preferably bracketed off the board – not on a cart

In grades 3 and up, many teachers in the math and science use the program “study island” that goes through lessons and when children do well in the lesion, They are rewarded by letting them go into game (teaching) mode

COW’s, Computers on Wheels are preferred at middle school years over going to a computer room. Computer rooms work better at elementary grades.

1:00 pm, Trisha Allietta Pre-K

The Wing School contains the district-wide Pre-K program. The program consists of three programs:

- Morning program 8:50am – 11:35am on 4 mornings;
- Afternoon program 12:35pm – 3:20pm M-W-F;
- Afternoon program 12:35pm – 3:20pm T/T

Currently there are 7 students identified SPED (special needs bus) and 8 “typical peers” (dropped off) these students are tuition students.

Parents pick up kids at the main lobby or go into classroom currently
To: Wing School Facilities Assessment Committee  
Date: 11/10/2010  

Pre-K classes are staffed with a teacher and full time aid; some parent volunteer but not often. Spinnaker students bring with them a full time aid when in the Pre-K classroom.

There is no relationship between the Pre-K school program and the community school

Non special needs students are admitted to the Pre-K program by “Present Family children” and through screening

There is minimal contact between stand alone PreK and Kindergarten. They are not thought of as a combined early childhood program.

The adjacency of the current pre-k classrooms to playground not an issue. PreK and K share same playground and equipment but use it at different times of the day.

The school includes two Pre-K classrooms. One is thought of as appropriately sized. The second classroom is significantly undersized.

The ideal classroom should contain: Large windows; toilet in classroom with changing room (the current toilet room could be heard outside of the room); adult sink; storage (locked); gross motor area, sensory activity area; appropriate number of power outlets (the current room contains only 2 outlets)

A combination of hard and carpet floors appropriately

No smart board needed

MB/TB

2:00 pm, Mary Ellen MacDonald (Art), Karen Tofterio (Music)

The music is supposed to use the stage in cafeteria. There is no ventilation on stage, There have been problems with multiple kids passed out during a performance due to overheating.

The band room is adequate in size but is loud due to the maintenance room located below the room. The space is reported to have an unpleasant odor. The music room is interior and is reported to have poor indoor air quality. The music room includes the MIDI equipment and program.

All children have one period of each of art, music and library per week and two periods of gym.

There is an Art History program for grades 1-6. This is a grant program and is staffed by volunteers. The program takes place in the individual classrooms, not the art room.

There is a good deal of cross curriculum with classroom teachers, for example the Literacy program does involve visual art

The art rooms serve a broad range of programs from finger paints for small children to knives and printing ink for older grades. Safety is an important issue in this room.

Because the art room is a dedicated room, there is more teaching time.
The band teacher is roving between the 3 K-8 schools.
Kiwanis provided grants for Monet garden, the MIDI equipment, and Gym improvements.

Art Room