REGIONAL SCHOOL DISTRICT 13
FACILITIES RESTACKING STUDY

BREWSTER ELEMENTARY SCHOOL

MEMORIAL MIDDLE SCHOOL

STRONG MIDDLE SCHOOL

COGINCHAUG HIGH SCHOOL

SILVER/PETRUCELLI + ASSOCIATES
Architects / Engineers/ Interior Designers

3190 Whitney Avenue, Hamden, CT 06518
Tel: 203 230 9007 Fax: 203 230 8247
www.silverpetrucelli.com

DRAFT 01.22.18

TABLE OF CONTENTS

SECTION I - INTRODUCTION

Acknowledgements

We would like to thank the Towns of Durham and Middlefield for the opportunity to serve the Regional School District 13 with the preparation of this study. We would also like to thank the members of the Board of Education (BOE), administrators, teachers, and staff for their enthusiasm, helpfulness, and input as well as any parents and concerned citizens who participated indirectly.

Report Overview and Purpose

RSD13 Board of Education retained Silver/Petrucelli + Associates, Inc. to conduct a facilities restacking study. This report is the result of a study to determine and assess the school facilities for their potential of reconfiguration of their grade structures. Specifically, the four schools; Brewster Elementary School, Memorial Middle School, Strong Middle School, and Coginchaug High School were reviewed for their capacity and adaptability. This report utilizes the Milone and MacBroom Comprehensive School Enrollment Analysis & Projections and their December 2016 Enrollment Projection Update Enrollment Highlights.

Executive Summary

Currently, there are 5 schools under operation. Brewster Elementary is a Prekindergarten through 3rd grade elementary school with the Contemporary Program in place. While John Lyman Elementary School serves the Kindergarten through 4th grade Integrated Day curriculum program and is also a HOT (Higher Order of Thinking) school. Memorial Middle School serves a hybrid of students and programs such as the 4th through 6th grade Contemporary Program and the 5th and 6th grade Integrated Day Program. Then Strong Middle School provides a Contemporary Program and Integrated Day Program to all the 7th and 8th grade students. Finally, Coginchaug High School streamlines into one curriculum program and serves the 9th through 12th grade population. While the two programs create some inefficiencies throughout the district it provides choice for its students.

Looking toward the future, the district is faced with the challenge of a declining enrollment and the continuing need to better serve their students. As a result, they have decided it would be in the best interest of the district, the programs, the community and a financially responsible decision to close a school and consolidate into four schools.

There are many factors in the decision-making process when undergoing a significant transformation to the organization of the district's schools. Providing the highest education and aligning curriculum is essential. It must have positive effects on the curriculum and behavioral aspects of the school experience. To determine the best course of action it must be economically feasible. Therefore, utilizing the existing space within the district is a key factor in this plan. Additionally, the community must be considered. How these choices effect the two towns is integral. These three woven threads; educational/school experience impact, financial impact and community impact, are considered and used as a value system when vetting ideas, concepts and making critical decisions.

As discussed, the first goal is to close a school, John Lyman Elementary, preferably following the 2018/19 or 2019/20 school year. This is the most financially responsible step to take as the enrollment begins to decline. John Lyman is a beloved school by the staff, students, and community alike and it is not the result of an easy decision. This 1966 building is in more need than other schools, is undersized and has numerous portable structures. It is not the most financial responsible building to invest in. The HOT school program doesn't have to go away. It can be recreated at any of the other buildings. One school must go, and John Lyman Elementary is the most logical choice.

Next, working with the remaining schools the reconfiguration begins to be evaluated. The most evident decision is to move the 6th grade into the Strong Middle School. The enrollment projections indicate that this population would fit well within the building. The 6th grade curriculum aligns with that of the middle school. These students will take advantage of more fitting academic options. This clearly is a positive solution to better align the curriculum and create an encouraging atmosphere for learning and behavior. It is also straightforward and inexpensive. Reconfiguring the Strong Middle School to a 6th - 8th grade school is a beneficial opportunity that should create a positive effect on the students, staff and community.

Memorial and Brewster are both to become elementary schools. The previous study evaluated the creation of an Integrated Day school at Memorial and a Contemporary School at Brewster. This option would require significant additions at both schools that would be costly and result in numerous inefficiencies such as classroom quantities and staffing needs. Additionally, the study reviewed building one new elementary school on the Korn site creating a RSD13 campus. This option was also costly. Economically these options are not feasible, but there is a clear answer. With limited to no expense, Memorial is well suited for Grades 3-5 with enough classrooms for the projected enrollment. Brewster is well suited for the PreK through Grade 2 community. However, this school is undersized and requires additional classrooms to support the new population. Fortunately, this school is eligible for reimbursement under the Office of School Construction Guidelines.

Creating an early elementary school and an intermediate school could be beneficial to the student's education and to the community.

Lastly, Coginchaug High School will see the largest decline in enrollment. This school will have additional classrooms, and many options for this "extra space" have been discussed. There is no clear answer here. The first option is to give it back to the school by expanding programs or even enlarging the undersized classrooms. The discussion of 8th grade relocating to the high school has also been considered. These students would fit, but other scheduling conflicts and a lack of separation is a concern. This option unfavorably creates a ripple effect of unconventional grade structures. It may be the most economical solution, but it does not meet the school experience and community standards. Additionally, there has been discussion on sharing the space with town functions, colleges, or businesses. These ideas are all feasible, except there is no easy separation. There is a lot of consideration and evaluation needed to determine the best course of action for this school.

As the district is part of two towns and for decades has offered two programs. This change is not taken lightly. Instead it should create a positive impact for the community. As in many Connecticut towns, this school configuration offers numerous benefits to the students and to their educators. There are many benefits and professional learning opportunities when bringing the grades together under one roof. It will also eliminate one school transition. Streamlining these two educational programs into one unified program will create efficiencies and continuity throughout the district. This is a meaningful solution that will not only help the problem at hand but will improve the overall educational experience throughout the district.

The following sections of this report evaluate each of the four-school's current program. Additionally, the Milone & MacBroom Comprehensive School Enrollment Analysis & Projections have been reviewed and evaluated into each of the potential grade configurations. The effect of these configurations on the four schools and their layouts or organizational structure are considered and evaluated. Finally, a variety of solutions and their associated costs are expressed and evaluated.

This report was prepared by the architectural and engineering firm of Silver/Petrucelli + Associates, Inc., (S/P+A) of Hamden Connecticut, a firm specializing in municipal and school programming, planning and design, feasibility analyses and building condition investigations.

Process

The Connecticut State Department of Education (CSDE) standard is generally referenced for this study as defined in CGA Statue Sec. 10-220. Duties of boards of education. "(a) *Each local or regional board of education shall maintain good public*

elementary and secondary schools... shall make a continuing study of the need for school facilities and of a long-term school building program and from time to time make recommendations based on such study to the town;" This study will fulfill this duty, once finalized, and approved by the RSD13 Board of Education. The ultimate results of this study and the professional services are to arrive at a Master Plan that closes a school and reconfigures the grade structures.

S/P+A gathered information in this report via meetings and interviews with school administrators, principals, and staff as well as the school facilities team for the school district and members from Central Office.

This data was organized and appears in sections of this report in the form of narratives, floor plans, and program spreadsheets. Next the potential new school configurations are vetted based on the projections and classroom utilization spreadsheets. Finally, these components help to determine solutions for conceptual design and the projected project costs. The report includes options and estimates for each of the four schools.

Report Services

The following services were provided to complete the facilities restacking analysis and on-going and long-term maintenance needs and capital and master planning:

1. The project was initiated with a kick-off meeting with the Architects and Superintendent of RSD13 Public Schools, to outline the goals and requirements.

2. Meetings and interviews were held with the Superintendent, Principals, and Central Office.

3. Tours of the building, its functions and uses were conducted with the Principals along with a review of the current program.

4. Developed programs of existing and future educational needs and classroom utilization.

5. Existing floor plan analysis in graphic and written format.

6. Proposed conceptual floor plan and site plan design options, where applicable.

7. Preparation of progress presentations & draft reports for review by the Committee.

8. Met with the RSD13 staff and BOE facilities committee to review the draft report to provide additional feedback and comments.

9. Preparation of the BOE draft report including revising the report including feedback and comments for final review.

10. Final editing and preparation of the final report for distribution to the BOE & Towns.

11. Will attended BOE and Town meetings to present the report and answer questions posed by the community.

Area Calculations

This report includes a tabulation of GROSS building areas (measured from outside face of exterior walls) for existing construction and new additions. These numbers were generated from the approved schematic design plans and the overall building plans included in the pages following this tabulation summary. The GROSS square feet are used by the State of Connecticut Office of School Construction Grants and review (OSCGR) to determine reimbursement calculations.

Grant Regulatory Requirements

The State 2017-2018 reimbursement percentage for School Construction in the Regional School District 13 is 52.50% and is 42.50% for new school construction. The applicability of the school grant process is a subject for the BOE and Towns to consider.

The OSCGR 5000 Compilation of Space worksheet is submitted with the grant applications for all New, Extensions, Alterations, and Renovation projects. The worksheet is used for "computing the maximum facility total square footage eligible for reimbursement for any State School Grant application." The worksheet uses the highest projected 8-year enrollment from a "current" demographic study or Enrollment Projection report provided by the School District. On the worksheet, the Allowable Square Footage per Pupil is stated based on the total projected school enrollment in the school. The allowable square footage for each grade level is then added for a total sum and then divided by the number of grades. This average is then multiplied by the highest enrollment projection. This total is the allowable or maximum square footage eligible for reimbursement.

If the proposed school area is calculated to be less than the allowable maximum gross square footage, then there is no grant reduction. If the district elects to exceed the allowable gross square footage, then the eligible cost will be reduced by the percentage that the allowable maximum area is exceeded. Any reduction in the eligible cost must be certified in writing by the Superintendent of Schools. There may be an option for special legislation and or to appeal the allowable gross square footage based on special circumstance, both of which are best determined in conjunction with the State School Facilities staff.

High Performance Building Checklist

On January 1, 2009, in the State of Connecticut, new legislation amended General Statute Section 16a-38k which requires new school building projects costing $5 million or more and receiving $2 million in state reimbursement or $2 million in renovation, to be designed in compliance with or exceed the High-Performance Standards and Guidelines which were issued by the CT Department of Administrative Services and the Office of School Construction Grants & Review (OSCG&R). These guidelines are structured like the Leadership in Energy and Environmental Design – LEED© – rating system, as established by the United States Green Building Council. The LEED process may be considered at any time; however, it is most affective when determined to be of value at the onset of a project. While opinions and experience vary in schools, the LEED rating system, when utilized, is an excellent tool for incorporating energy efficient design AND construction in the building process.

This new legislation requires that school construction projects seeking state reimbursement funds will be designed and constructed to meet energy conservation standards and 'green' building practices.

Other measures that contribute points to the rating system, in addition to energy efficiency, are the use of renewable energy, water conservation, environmentally sensitive site design, redevelopment of brownfields, and storm water management.

While these conceptual projects are not scheduled to be designed around a LEED standard, and if the project is large enough and seeks State funding, it will be designed using the "High Performance Building Standard" which meets the State of Connecticut's equivalent standard thus maintaining eligibility for State reimbursement.

Renovate as New Requirements

Silver Petrucelli and Associates is often requested to design the entire project to meet the "Renovate as New" or "Renovations" to modernize the school to meet the State Department of Education definition and requirement under State Statute 10-282. This process is referenced in this study; however, it is not specifically used in the recommendations and could be added or considered at any time.

• The State developed this concept to encourage Towns to renovate/update their aging, but well built, existing school structures in their entirety, rather than needlessly demolishing them and rebuilding new facilities at a higher cost and greater reimbursement rate from the State.

• A professional opinion on the renovated school MUST state to 'last' 20 years from construction, which includes all systems (HVAC, electrical, plumbing), structure, equipment, finishes, etc.

• Most of these repairs, replacements and updates are reimbursed by the State at the town's reimbursement rate.

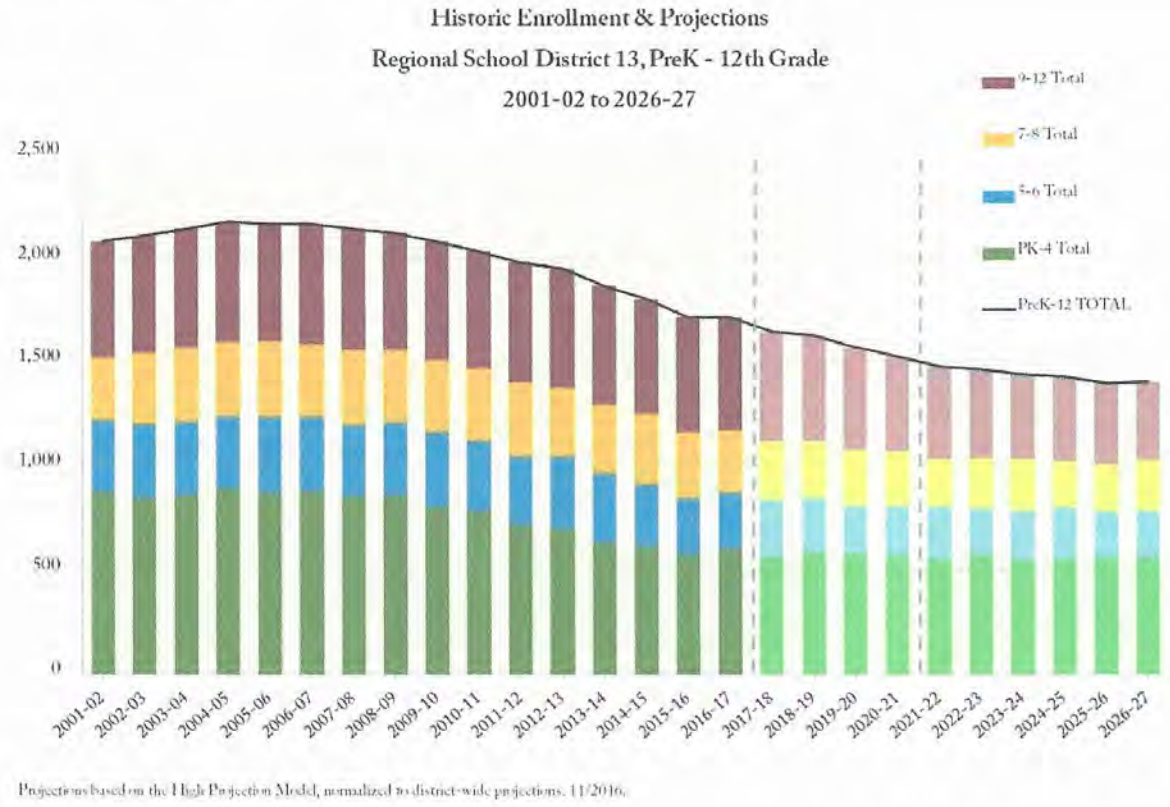
The first step in the evaluation of "Renovate as New" is the past "feasibility" study prepared by S/P+A. During that study and presumably continuing throughout the schematic design phase, the architectural team met with facilities and administrators that represented the four schools. Additionally, the architects and mechanical, electrical, and plumbing/fire protection engineers scoured the four existing school buildings to determine the condition of the existing systems. These meetings and field surveys were important to determine the existing and future needs of the school. Many of the space needs and system upgrades that are recommended in this report, have been determined to be essential to meet the needs of the student population and the aging school. Moving forward a significant amount of deliberation and study should be devoted by staff and the BOE to formulate recommendations with both the architects and engineers to make recommendations.

SECTION II – FOUR SCHOOLS ANALYSIS

Regional School District 13 Enrollment Projections

In October of 2015 Milone and MacBroom (MMI) completed the RSD13 Compressive School Enrollment Study. The demographers and planners studied the local demographics, births, housing, and private school enrollments to compose the school enrollment projections for the coming decade. In December of 2016, these projections were updated in a document called *Enrollment Projection Update Enrollment Highlights*. MMI recently reviewed the numbers in comparison with the October 2017 enrollment information and felt that their numbers were spot on with only a difference of three students. The December 2016 Projection numbers are used within this report to evaluate each potential school configuration.

The report states that after a long decline since 2008, the PreK through grade 4 enrollment has bounced back. The grades 4, 5 and 6 population at Memorial remains stable. The decline occurs at Strong and Coginchaug.



Projections based on the High Projection Model, normalized to district-wide projections. 11/2016.

MILONE & MACBROOM

Additionally, the report goes on to state that the elementary schools decline roughly at 8% in 5 years and then flattens. Memorial is expected to have a modest and unsteady decline. Strong will see significant declines over 5 years and then see a modest recovery. The Coginchaug enrollment declines. In the chart above, the effects of Coginchaug are evident but overall the PreK through grade 4 population remains somewhat steady.

Regional School District 13 Facilities Restacking Study

Projections with Potential Grade Configurations - Option A

School Year	Brewster				total	Memorial			total	Strong			total	Coginchaug				total	district total
	PK	K	1	2		3	4	5		6	7	8		9	10	11	12		
Oct. 2017	32	90	116	106		114	107	149		117	152	135		131	128	150	122	531	1649
2018-2019	35	119	88	119	361	111	115	107	333	152	119	147	418	109	136	132	104	481	1593
2019-2020	35	96	124	88	343	122	114	118	354	107	154	118	379	123	108	134	129	494	1570
2020-2021	35	96	100	124	355	90	125	117	332	118	109	152	379	99	122	106	131	458	1524
2021-2022	35	101	100	100	336	127	92	128	347	117	120	108	345	127	99	120	103	449	1477
2022-2023	35	99	105	100	339	102	131	94	327	128	119	119	366	90	126	98	117	431	1463
2023-2024	35	103	103	105	346	102	105	134	341	94	130	118	342	99	90	124	96	409	1438
2024-2025	35	99	107	103	344	107	105	108	320	134	95	128	357	99	99	89	121	408	1429
2025-2026	35	100	103	107	345	105	110	108	323	108	136	94	338	107	99	98	87	391	1397
2026-2027	35	100	104	103	342	109	108	113	330	108	110	134	352	79	106	98	96	379	1403

Highest projections

Lowest Projections

The chart above is created using the MMI projections and arranged in the potential grade configuration Option A to be analyzed. The review of the highest projections and the lowest projections help to understand the fluctuation of the student population and understand the effect it can have on each building, its layout, and its classroom quantities. In general, you can see the ebb and flow of the students in the Brewster and Memorial population, especially in Brewster with the high and the low years so close together. Strong has some fluctuation through the years, but in general it declines. Coginchaug steadily dips to a low at the end of this 10-year cycle. These numbers, the highest projections and the lowest projections will be used as reference in the following pages of the report for each specific school. They will be used as an evaluation tool to study the effect of classroom quantity and school size.

Additional variations are also explored. Specifically, with space in the High School Options B and C will explore and 8-12 high school and a 5-7 middle school with various configurations to the elementary schools. This will help to understand the best ways both Brewster and Memorial's space can be used most efficiently. The following charts are the additional variations of school configurations.

Option B was determined due to the space within Coginchaug and the ability to also house Grade 8. This configuration applies the same method of having each grade together, Keeping Brewster as the early elementary school, but now only until Grade 1. Memorial will house Grades 2-4 and Strong houses Grades 5-7.

Regional School District 13 Facilities Restacking Study

Projections with Potential Grade Configurations - Option B

School Year	Brewster			total	Memorial			total	Strong			total	Coginchaug					total	district total
	PK	K	1		2	3	4		5	6	7		8	9	10	11	12		
Oct. 2017	32	90	116		106	114	107		149	117	152		135	131	128	150	122		1649
2018-2019	35	119	88	242	119	111	115	345	107	152	119	378	147	109	136	132	104	628	1593
2019-2020	35	96	124	255	88	122	114	324	118	107	154	379	118	123	108	134	129	612	1570
2020-2021	35	96	100	231	124	90	125	339	117	118	109	344	152	99	122	106	131	610	1524
2021-2022	35	101	100	236	100	127	92	319	128	117	120	365	108	127	99	120	103	557	1477
2022-2023	35	99	105	239	100	102	131	333	94	128	119	341	119	90	126	98	117	550	1463
2023-2024	35	103	103	241	105	102	105	312	134	94	130	358	118	99	90	124	96	527	1438
2024-2025	35	99	107	241	103	107	105	315	108	134	95	337	128	99	99	89	121	536	1429
2025-2026	35	100	103	238	107	105	110	322	108	108	136	352	94	107	99	98	87	485	1397
2026-2027	35	100	104	239	103	109	108	320	113	108	110	331	134	79	106	98	96	513	1403

Highest projections

Lowest Projections

Option C has 4 variations included to vet any similar options as to how the space at both elementary schools can be utilized to their maximum ability. Strong and Coginchaug remain as shown in Option B.

Regional School District 13 Facilities Restacking Study

Projections with Potential Grade Configurations - Option C1*

School Year	Brewster						total	Memorial					total	Strong			total	Coginchaug					total	district total
	PK	K	1	2	3	4		K	1	2	3	4		5	6	7		8	9	10	11	12		
Oct. 2017	32	90	116	106	114	107								149	117	152		135	131	128	150	122		1649
2018-2019	35	66	49	66	62	64	342	53	39	53	49	51	245	107	152	119	378	147	109	136	132	104	628	1593
2019-2020	35	53	69	49	68	63	337	43	55	39	54	51	242	118	107	154	379	118	123	108	134	129	612	1570
2020-2021	35	53	55	68	50	69	330	43	45	56	40	56	240	117	118	109	344	152	99	122	106	131	610	1524
2021-2022	35	56	55	55	70	51	322	45	45	45	57	41	233	128	117	120	365	108	127	99	120	103	557	1477
2022-2023	35	55	58	55	57	73	333	44	47	45	45	58	239	94	128	119	341	119	90	126	98	117	550	1463
2023-2024	35	57	57	58	57	58	322	46	46	47	45	47	231	134	94	130	358	118	99	90	124	96	527	1438
2024-2025	35	55	59	57	59	58	323	44	48	46	48	47	233	108	134	95	337	128	99	99	89	121	536	1429
2025-2026	35	55	57	59	58	61	325	45	46	48	47	49	235	108	108	136	352	94	107	99	98	87	485	1397
2026-2027	35	55	58	57	60	60	325	45	46	46	49	48	234	113	108	110	331	134	79	106	98	96	513	1403

Highest projections

Lowest Projections

* Keeps 55% population of Contemporary at Brewster and 45% population ID at Memorial

Regional School District 13 Facilities Restacking Study

Projections with Potential Grade Configurations - Option C2*

School Year	Brewster						total	Memorial					total	Strong			total	Coginchaug					total	district total
	PK	K	1	2	3	4		K	1	2	3	4		5	6	7		8	9	10	11	12		
Oct. 2017	32	90	116	106	114	107								149	117	152		135	131	128	150	122		1649
2018-2019	35	59	44	59	55	57	309	60	44	60	56	58	278	107	152	119	378	147	109	136	132	104	628	1593
2019-2020	35	48	62	44	61	57	307	48	62	44	61	57	272	118	107	154	379	118	123	108	134	129	612	1570
2020-2021	35	48	50	62	45	62	302	48	50	62	45	63	268	117	118	109	344	152	99	122	106	131	610	1524
2021-2022	35	50	50	50	63	46	294	51	50	50	64	46	261	128	117	120	365	108	127	99	120	103	557	1477
2022-2023	35	49	52	50	51	65	302	50	53	50	51	66	270	94	128	119	341	119	90	126	98	117	550	1463
2023-2024	35	51	51	52	51	52	292	52	52	53	51	53	261	134	94	130	358	118	99	90	124	96	527	1438
2024-2025	35	49	53	51	53	52	293	50	54	52	54	53	263	108	134	95	337	128	99	99	89	121	536	1429
2025-2026	35	50	51	53	52	55	296	50	52	54	53	55	264	108	108	136	352	94	107	99	98	87	485	1397
2026-2027	35	50	52	51	54	54	296	50	52	52	55	54	263	113	108	110	331	134	79	106	98	96	513	1403

Highest projections

Lowest Projections

* Provide a 50% split between the 2 elementary schools

Regional School District 13 Facilities Restacking Study
Projections with Potential Grade Configurations - Option C3*

School Year	Brewster					total	Memorial						total	Strong			total	Coginchaug					total	district total
	K	1	2	3	4		PK	K	1	2	3	4		5	6	7		8	9	10	11	12		
Oct. 2017	90	116	106	114	107		32							149	117	152		135	131	128	150	122		1649
2018-2019	59	44	59	55	57	274	35	60	44	60	56	58	313	107	152	119	378	147	109	136	132	104	628	1593
2019-2020	48	62	44	61	57	272	35	48	62	44	61	57	307	118	107	154	379	118	123	108	134	129	612	1570
2020-2021	48	50	62	45	62	267	35	48	50	62	45	63	303	117	118	109	344	152	99	122	106	131	610	1524
2021-2022	50	50	50	63	46	259	35	51	50	50	64	46	296	128	117	120	365	108	127	99	120	103	557	1477
2022-2023	49	52	50	51	65	267	35	50	53	50	51	66	305	94	128	119	341	119	90	126	98	117	550	1463
2023-2024	51	51	52	51	52	257	35	52	52	53	51	53	296	134	94	130	358	118	99	90	124	96	527	1438
2024-2025	49	53	51	53	52	258	35	50	54	52	54	53	298	108	134	95	337	128	99	99	89	121	536	1429
2025-2026	50	51	53	52	55	261	35	50	52	54	53	55	299	108	108	136	352	94	107	99	98	87	485	1397
2026-2027	50	52	51	54	54	261	35	50	52	52	55	54	298	113	108	110	331	134	79	106	98	96	513	1403

Highest projections

Lowest Projections

* Provide a 50% split between the 2 elementary schools and moves PreK to Memorial

Regional School District 13 Facilities Restacking Study
Projections with Potential Grade Configurations - Option C4*

School Year	Brewster					total	Memorial					total	Strong			total	Coginchaug					total	district total
	PK	K	1	2	3		K	1	2	3	4		5	6	7		8	9	10	11	12		
Oct. 2017	32	90	116	106	114						107		149	117	152		135	131	128	150	122		1649
2018-2019	35	59	44	59	55	252	60	44	60	56	115	335	107	152	119	378	147	109	136	132	104	628	1593
2019-2020	35	48	62	44	61	250	48	62	44	61	114	329	118	107	154	379	118	123	108	134	129	612	1570
2020-2021	35	48	50	62	45	240	48	50	62	45	125	330	117	118	109	344	152	99	122	106	131	610	1524
2021-2022	35	50	50	50	63	248	51	50	50	64	92	307	128	117	120	365	108	127	99	120	103	557	1477
2022-2023	35	49	52	50	51	237	50	53	50	51	131	335	94	128	119	341	119	90	126	98	117	550	1463
2023-2024	35	51	51	52	51	240	52	52	53	51	105	313	134	94	130	358	118	99	90	124	96	527	1438
2024-2025	35	49	53	51	53	241	50	54	52	54	105	315	108	134	95	337	128	99	99	89	121	536	1429
2025-2026	35	50	51	53	52	241	50	52	54	53	110	319	108	108	136	352	94	107	99	98	87	485	1397
2026-2027	35	50	52	51	54	242	50	52	52	55	108	317	113	108	110	331	134	79	106	98	96	513	1403

Highest projections

Lowest Projections

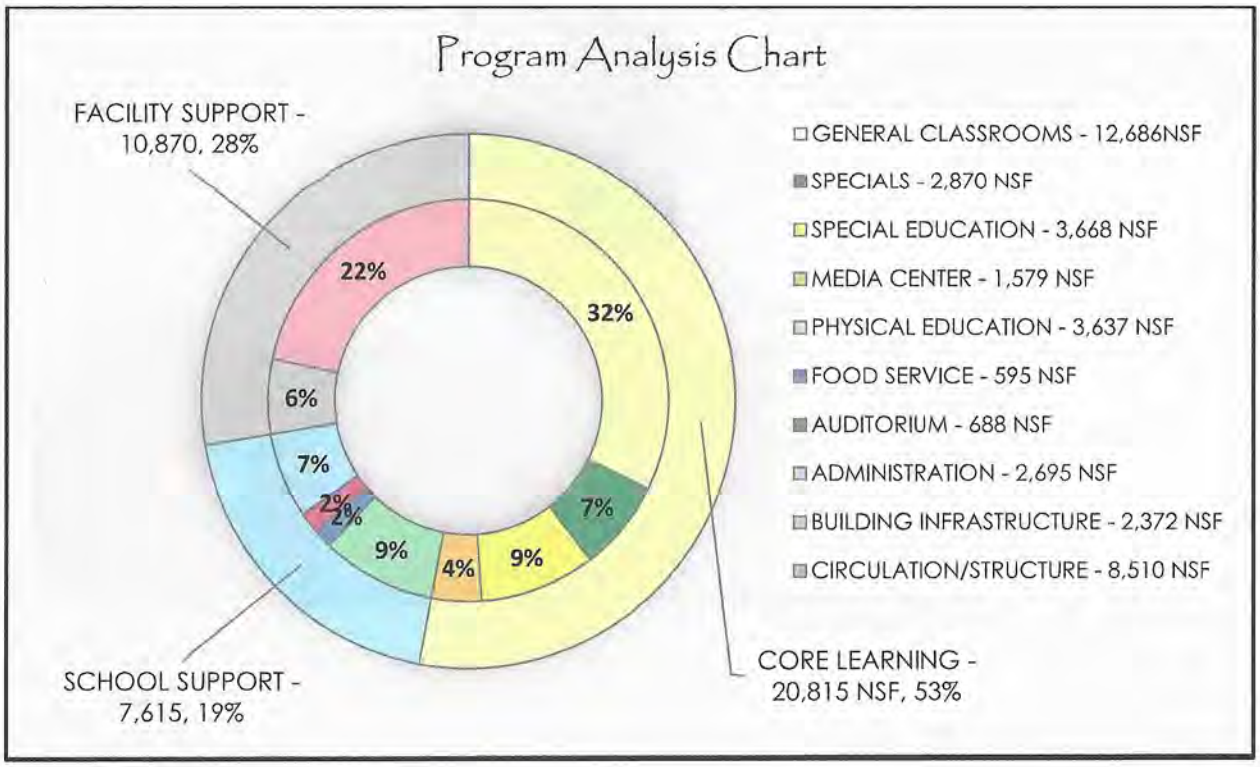
* Provide a 50% split between the 2 elementary schools with PreK remaining at Brewster & all of Grade 4 to Memorial

Brewster Elementary School

Brewster Elementary School was originally constructed in 1955. Additions were constructed to the East in 1990. The school building is approximately 37,565 net square feet. The two-classroom portable structure adds an additional 1,711 net square feet. In total the building is 39,300 net square feet and 40,774 gross square feet. Brewster Elementary School is home to Prekindergarten through 3rd grade with 264 currently enrolled students and serves the Contemporary Program.

The previous study looked at all the items the school was lacking and generated a wish list of improvements to spaces, new spaces, new programs and building upgrades. It is still clear today that many of those items are still wished for however the basis of this report is to evaluate the current program and the general classrooms; their quantity and ability to serve the potential population and grade structure. This process is focused on simple alterations and reusing and maximizing the existing space to accommodate the population.

The analysis represented in the pie chart below breaks out the program into 3 sections: Core Learning Spaces, School Support Spaces, and Facility Support. These sections are broken into program categories: General Classrooms, Special Education, Specials (Art, Music, TechEd), Media Center, Physical Education, Cafeteria, Auditorium, Administration, Building Infrastructure, and Circulation. Each category is represented in a different color and depicted on the floor plans, spreadsheets and charts that follow.



Brewster is efficiently laid out and making use of all its space. The area most notably lacking is a cafeteria and kitchen of adequate size. It is an unfortunate circumstance at this school, but staff is making the most of what they have. Additionally, the gym (shared with the cafetorium) is undersized, another reason to support the PreK- Grade 2 configuration.

There are currently 15 general classrooms within Brewster and two are older portables serving the PreK population. Standard classrooms at this school consist of a variety of sizes ranging from 689 to 910 net square feet. Unfortunately, the classrooms in the 600 and 700 square foot range are undersized. However, this is typical of older buildings including many of the RSD13 schools. Today the standard classroom size is in the 800-900 net square foot range with Kindergarten and Pre-K usually between 1000 to 1200 net square feet. While the 910-square foot Kindergarten and 1st grade classrooms are adequate, the layout of these rooms is broken up with casework and partitions that make the space feel smaller and limit flexibility that is strongly desired in today's classroom. Some simple alterations to the cabinetry could resolve these issues.

PROGRAM LEGEND	
CLASSROOMS	12,686 NSF
SPECIALS	2,870 NSF
SPECIAL ED	3,668 NSF
MEDIA CENTER	1,579 NSF
PHYSICAL ED.	3,637 NSF
FOOD SERVICE	595 NSF
AUDITORIUM	688 NSF
ADMINISTRATION	2,695 NSF
BUILDING INFRA.	2,372 NSF
CIRCULATION	8,510 NSF
TOTAL	39,300 NSF

NET SQUARE FEET	
MAIN BUILDING	37,589 GSF
PORTABLES	1,711 GSF
TOTAL	39,300 GSF

GROSS SQUARE FEET	
MAIN BUILDING	38,974 GSF
PORTABLES	1,800 GSF
TOTAL	40,774 GSF

BREWSTER FLOOR PLAN

SCALE: NTS

Regional School District 13

Facilities Restacking Study

BREWSTER ELEMENTARY SCHOOL

PROGRAM ANALYSIS PLAN

SILVER/PETRUCELLI + ASSOCIATES

Brewster: Configuration Option A

Brewster once was a Pre-K through grade 2 building so returning to that will have a positive effect. However, the population change will alter from the current 264 students to 336-361 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Brewster Elementary School General Classroom Utilization - Option A						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	35	18	1.94	2.00	17.5
Kindergarten	55	119	18	6.61	7.00	17.0
Grade 1	60	88	18	4.89	5.00	17.6
Grade 2	51	119	20	5.95	6.00	19.8
Grade 3	66	0	20	0.00	0.00	0.0
TOTAL	**264**	**361**		**19**	**20**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2021-2022 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	35	18	1.94	2.00	17.5
Kindergarten	55	101	18	5.61	6.00	16.8
Grade 1	60	100	18	5.56	6.00	16.7
Grade 2	51	100	20	5.00	5.00	20.0
Grade 3	66	0	20	0.00	0.00	0.0
TOTAL	**264**	**336**		**18**	**19**	

The review of the General Classroom Utilization Chart indicates the need for additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 15 classrooms. However, this quantity includes the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. Looking at the highest projections and the lowest projections there is a need for 19 to 20 classrooms. The difference of the high and the low projections only nets one classroom. As noted this enrollment is projected to remain stable so the need for classrooms is anticipated to remain.

The next step is to evaluate the potential for state reimbursement in accordance with the Connecticut School Construction Standards and Guidelines. The first step is to take the highest projected enrollment, 361 students in 2019-2020 school year. When applied to the State's School Construction Grants formula for determining the reimbursable square footage of a school Brewster is permitted at 45,125 GROSS square feet. If portables are removed Brewster is 38,974 gross square feet, accepting

an addition of 6,151 gross square feet. This would likely accommodate 5 to 6 classrooms. This would be at the RSD 13 reimbursement rate of 52.5% if an application and educational specifications are submitted and accepted prior to the June 30th, 2018 deadline.

Brewster: Configuration Option B

Brewster as a PreK through Grade 1 school will work well. The population change will alter from the current 264 students to 255 - 231. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Brewster Elementary School General Classroom Utilization - Option B						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2019-2020 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	35	18	1.94	2.00	17.5
Kindergarten	55	96	18	5.33	6.00	16.0
Grade 1	60	124	18	6.89	7.00	17.7
Grade 2	51	0	20	0.00	0.00	0.0
Grade 3	66	0	22	0.00	0.00	0.0
TOTAL	**264**	**255**		**14**	**15**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2020-2021 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	35	18	1.94	2.00	17.5
Kindergarten	55	96	18	5.33	6.00	16.0
Grade 1	60	100	18	5.56	6.00	16.7
Grade 2	51	0	20	0.00	0.00	0.0
Grade 3	66	0	22	0.00	0.00	0.0
TOTAL	**264**	**231**		**13**	**14**	

The review of the General Classroom Utilization Chart indicates no need for additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 15 classrooms. However, this quantity includes the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. Looking at the highest projections and the lowest projections there is a need for 14 to 15 classrooms.

The next step is to evaluate the potential for state reimbursement in accordance with the Connecticut School Construction Standards and Guidelines. The first step is to take the highest projected enrollment, 255 students in 2019-2020 school year. When applied to the State's School Construction Grants formula for determining the reimbursable square footage of a school Brewster is permitted at 31,875 GROSS square feet. If portables are removed Brewster is 38,974 gross square feet, which would not allow for an addition. Perhaps keeping the portables for the time being is the best approach for this configuration.

Brewster: Configuration Option C1

Brewster as a PreK through Grade 4 Contemporary School can work well. However, the population will alter from 264 to 322-342 students. The chart below is an analysis of the effect these projections will have on the quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Brewster Elementary School General Classroom Utilization - Option C1						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	35	18	1.94	2.00	17.5
Kindergarten	55	66	18	3.67	4.00	16.5
Grade 1	60	49	18	2.72	3.00	16.3
Grade 2	51	66	20	3.30	4.00	16.5
Grade 3	66	62	22	2.82	3.00	20.7
Grade 4	0	64	22	2.91	3.00	21.3
TOTAL	**264**	**342**		**17**	**19**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2021-2022 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	35	18	1.94	2.00	17.5
Kindergarten	55	56	18	3.11	4.00	14.0
Grade 1	60	55	18	3.06	4.00	13.8
Grade 2	51	55	20	2.75	3.00	18.3
Grade 3	66	70	22	3.18	4.00	17.5
Grade 4	0	51	22	2.32	3.00	17.0
TOTAL	**264**	**322**		**16**	**20**	

The review of the General Classroom Utilization Chart indicates the need for additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 15 classrooms. However, this quantity includes the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. Looking at the highest projections and the lowest projections there is a need for 19 to 20 classrooms.

The next step is to evaluate the potential for state reimbursement in accordance with the Connecticut School Construction Standards and Guidelines. The first step is to take the highest projected enrollment, 342 students in 2018-2019 school year. When applied to the State's School Construction Grants formula for determining the reimbursable square footage of a school Brewster is permitted at 42,750 GROSS square feet. If portables are removed Brewster is 38,974 gross square feet, accepting an addition of 3,776 gross square feet. The slightly smaller population than Option A reduces the reimbursable size of the school. This would likely accommodate only 3 to 4 classrooms while more are needed. This would be at the RSD 13 reimbursement rate of 52.5% if an application and educational specifications are submitted and accepted prior to the June 30th, 2018 deadline.

Brewster: Configuration Option C2

Brewster as a PreK through Grade 4 school can also work. The population change will alter from 264 to 292-309 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Brewster Elementary School General Classroom Utilization - Option C2						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	35	18	1.94	2.00	17.5
Kindergarten	55	59	18	3.28	4.00	14.8
Grade 1	60	44	18	2.44	3.00	14.7
Grade 2	51	59	20	2.95	3.00	19.7
Grade 3	66	55	22	2.50	3.00	18.3
Grade 4	0	57	22	2.59	3.00	19.0
TOTAL	**264**	**309**		**16**	**18**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2023-2024 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	35	18	1.94	2.00	17.5
Kindergarten	55	51	18	2.83	3.00	17.0
Grade 1	60	51	18	2.83	3.00	17.0
Grade 2	51	52	20	2.60	3.00	17.3
Grade 3	66	51	22	2.32	3.00	17.0
Grade 4	66	52	22	2.36	3.00	17.3
TOTAL	**330**	**292**		**15**	**17**	

The review of the General Classroom Utilization Chart indicates the need for a few additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 15 classrooms. , including the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. Looking at the highest projections and the lowest projections there is a need for 17 to 18 classrooms.

The next step is to evaluate the potential for state reimbursement in accordance with the Connecticut School Construction Standards and Guidelines. The first step is to take the highest projected enrollment, 309 students in 2018-2019 school year. When applied to the State's School Construction Grants formula for determining the reimbursable square footage of a school Brewster is permitted at 38,625 GROSS square feet. If portables are removed Brewster is 38,974 gross square feet, not allowing for a reimbursable addition. Under this concept additional classrooms or portables would need to be added at the full cost of the district.

Brewster: Configuration Option C3

Brewster as a PreK through Grade 4 school can also work. The population change will alter from 264 to 257 - 274 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Brewster Elementary School General Classroom Utilization - Option C3						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	0	18	0.00	0.00	0.0
Kindergarten	55	59	18	3.28	4.00	14.8
Grade 1	60	44	18	2.44	3.00	14.7
Grade 2	51	59	20	2.95	3.00	19.7
Grade 3	66	55	22	2.50	3.00	18.3
Grade 4	0	57	22	2.59	3.00	19.0
TOTAL	**264**	**274**		**14**	**16**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2023-2024 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	0	18	0.00	0.00	0.0
Kindergarten	55	51	18	2.83	3.00	17.0
Grade 1	60	51	18	2.83	3.00	17.0
Grade 2	51	52	20	2.60	3.00	17.3
Grade 3	66	51	22	2.32	3.00	17.0
Grade 4	66	52	22	2.36	3.00	17.3
TOTAL	**330**	**257**		**13**	**15**	

The review of the General Classroom Utilization Chart indicates a limited need for additional classrooms. This analysis was done using the maximum class size policy therefore it shows the minimum needs. Currently there are 15 classrooms, including the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. Looking at the highest projections and the lowest projections there is a need for 15 to 16 classrooms.

The next step is to evaluate the potential for state reimbursement in accordance with the Connecticut School Construction Standards and Guidelines. The first step is to take the highest projected enrollment, 274 students in 2019-2020 school year. When applied to the State's School Construction Grants formula for determining the reimbursable square footage of a school Brewster is permitted at 34,250 GROSS square feet. If portables are removed Brewster is 38,974 gross square feet, which would not allow for an addition. Any additions would be at the full cost of the district. Perhaps keeping the portables and modifying the current layout to accommodate for an additional 16th classroom is the best approach for this configuration for the time being.

Brewster: Configuration Option C4

Brewster as a PreK through Grade 3 school can work. The population change will alter from 264 to 237 - 252 students. The chart below is an analysis of the effect these projections will have on the quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Brewster Elementary School General Classroom Utilization - Option C4						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	35	18	1.94	2.00	0.0
Kindergarten	55	59	18	3.28	4.00	14.8
Grade 1	60	44	18	2.44	3.00	14.7
Grade 2	51	59	20	2.95	3.00	19.7
Grade 3	66	55	22	2.50	3.00	18.3
TOTAL	**264**	**252**		**13**	**15**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2022-2023 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	32	35	18	1.94	2.00	0.0
Kindergarten	55	49	18	2.72	3.00	16.3
Grade 1	60	52	18	2.89	3.00	17.3
Grade 2	51	50	20	2.50	3.00	16.7
Grade 3	66	51	22	2.32	3.00	17.0
TOTAL	**264**	**237**		**12**	**14**	

The review of the General Classroom Utilization Chart indicates no need for additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 15 classrooms. However, this quantity includes the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. Looking at the highest projections and the lowest projections there is a need for 14 to 15 classrooms.

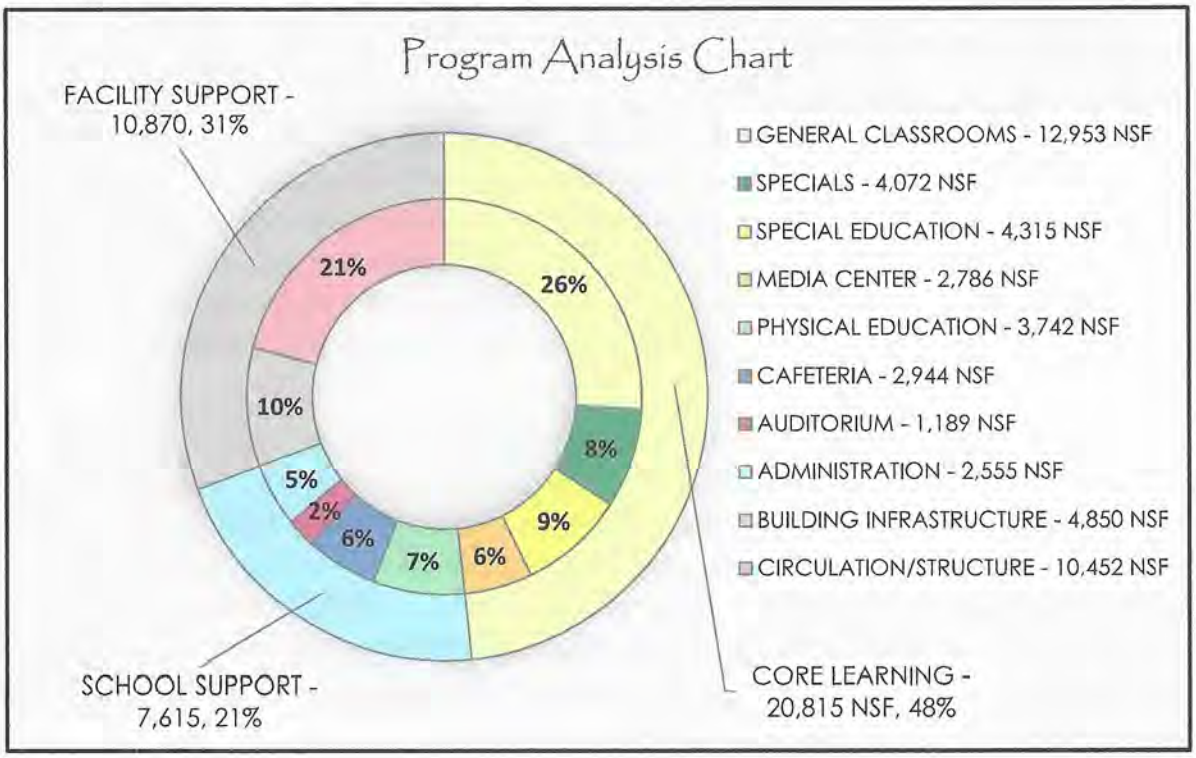
The next step is to evaluate the potential for state reimbursement in accordance with the Connecticut School Construction Standards and Guidelines. The first step is to take the highest projected enrollment, 252 students in 2018-2019 school year. When applied to the State's School Construction Grants formula for determining the reimbursable square footage of a school Brewster is permitted at 31,500 GROSS square feet. If portables are removed Brewster is 38,974 gross square feet, which would not allow for an addition. Perhaps keeping the portables for the time being is the best approach for this configuration.

Memorial Middle School

Memorial Middle School was originally constructed in 1954. Additions were constructed to the north and east in 1960. Later in 1993 two additional rooms were added along with the Media Center. The school building is approximately 47,775 net square feet. The two-classroom portable structure at the north adds an additional 1,711 net square feet. The total gross square feet is 51,296. Memorial Middle School is currently home to 4th grade through 6th grade with 330 currently enrolled students with a mix of Contemporary and Integrative Day programs.

The previous study looked at all the items the school was lacking and generated a wish list of improvements to spaces, new spaces, new programs and building upgrades. It is still clear today that many of those items are still wished for however the basis of this report is to evaluate the current program and the general classrooms; their quantity and ability to serve the potential population and grade structure. This process is focused on simple alterations and reusing and maximizing the existing space to accommodate the population.

The analysis represented in the pie chart below breaks out the program into 3 sections: Core Learning Spaces, School Support spaces and Facility Support. These sections are broken into program categories: General Classrooms, Special Education, Specials (Art, Music, Tech Ed), Media Center, Physical Education, Cafeteria, Auditorium, Administration, Building Infrastructure, and Circulation. Each category is represented in a different color and depicted on the floor plans, spreadsheets and charts that follow.



Memorial is well laid out and making use of most of its space. This school has a dedicated cafeteria with kitchen. The gymnasium is a little small but a much more appropriate size for the age group. This school would work well as a Grade 3 to 5 school. Consolidating to one program will also relieve many inefficiencies.

There are currently 17 classrooms within Memorial and two are older portables that are serving the Grade 4 Contemporary population. Many of the existing classrooms at Memorial are undersized. The classroom wing on the east side of the building are smaller than those on the west side. The classrooms fall short of 700 net square feet while today the standard classroom size is in the 800-900 net square foot range with Kindergarten between 1000 to 1200 to net square feet.

Memorial: Configuration Option A

Memorial currently serves grades 4 – 6. Converting to a 3 through 5 will be a simple change and would serve this age group well. The population will alter from 330 to 320-354 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Memorial Middle School General Classroom Utilization - Option A						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2019-2020 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 3	0	122	22	5.55	6.00	20.3
Grade 4	64	114	24	4.75	5.00	22.8
Grade 5	149	118	25	4.72	5.00	23.6
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**354**		**15**	**16**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2024-2025 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 3	0	107	22	4.86	5.00	21.4
Grade 4	64	105	24	4.38	5.00	21.0
Grade 5	149	108	25	4.32	5.00	21.6
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**320**		**14**	**15**	

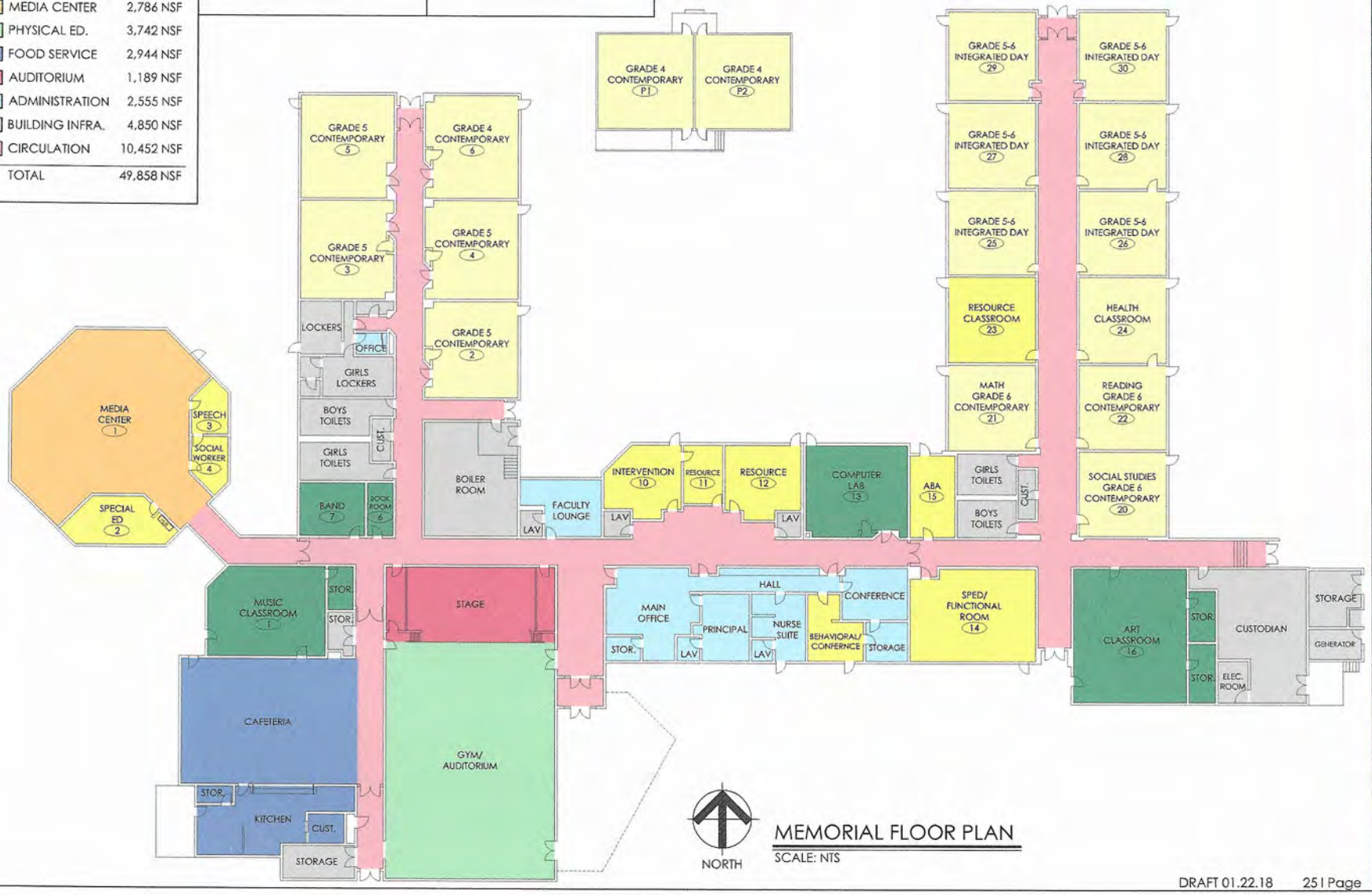
The review of the General Classroom Utilization Chart indicates a possible need for additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 17 classrooms. However, this quantity includes two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. Looking at the highest projections and the lowest projections there is a need for 15 to 16 classrooms. The difference of projections nets one classroom. As noted this enrollment will remain stable so the need for classrooms is anticipated to remain.

The good news with this scenario is that the needed classrooms exist. When reviewing the high projections, if the portables are eliminated the building may be short one classroom. However, there is one underutilized existing space next to classroom 1. It is an old unused locker room that has become a storage room. It is recommended to renovate this space into a classroom to gain 16 total classrooms within the building. According to the Connecticut School Construction Standards and Guidelines this school would not be eligible for any reimbursement. When applied to the State's School Construction Grants formula for determining the reimbursable square footage of a school Memorial is permitted at 44,250 GROSS square feet. This school exceeds the allowable reimbursable square footage.

PROGRAM LEGEND	
CLASSROOMS	12,953 NSF
SPECIALS	4,072 NSF
SPECIAL ED	4,315 NSF
MEDIA CENTER	2,786 NSF
PHYSICAL ED.	3,742 NSF
FOOD SERVICE	2,944 NSF
AUDITORIUM	1,189 NSF
ADMINISTRATION	2,555 NSF
BUILDING INFRA.	4,850 NSF
CIRCULATION	10,452 NSF
TOTAL	49,858 NSF

NET SQUARE FEET	
MAIN BUILDING	48,147 NSF
PORTABLES	1,711 NSF
TOTAL	49,858 NSF

GROSS SQUARE FEET	
MAIN BUILDING	49,496 GSF
PORTABLES	1,800 GSF
TOTAL	51,296 GSF



MEMORIAL FLOOR PLAN

SCALE: NTS

Regional School District 13

Facilities Restacking Study

MEMORIAL MIDDLE SCHOOL

PROGRAM ANALYSIS PLAN

SILVER/PETRUCELLI + ASSOCIATES

Memorial: Configuration Option B

Memorial will work well as a grade 2-4 school. The building would serve this age group well. However, the population will alter from 330 students to 312-345 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Memorial Middle School General Classroom Utilization - Option B						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 2	0	119	20	5.95	6.00	19.8
Grade 3	0	111	22	5.05	6.00	18.5
Grade 4	64	115	24	4.79	5.00	23.0
Grade 5	149	0	25	0.00	0.00	0.0
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**345**		**10**	**17**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2023-2024 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 2	0	105	20	5.25	6.00	17.5
Grade 3	0	102	22	4.64	5.00	20.4
Grade 4	64	105	24	4.38	5.00	21.0
Grade 5	149	0	25	0.00	0.00	0.0
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**312**		**9**	**16**	

The review of the General Classroom Utilization Chart indicates a possible need for additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 17 classrooms. However, this quantity includes the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. Looking at the highest projections and the lowest projections there is a need for 16 to 17 classrooms.

According to the Connecticut School Construction Standards and Guidelines this school would not be eligible for any reimbursement. When applied to the Construction Grants formula for determining the reimbursable square footage of a school Memorial is permitted at 43,125 GROSS square feet. This school exceeds the allowable reimbursable square footage. For the most the needed classrooms exist. However, if the portables are eliminated the building may be short one classroom. Like Option A, it is recommended to renovate the old locker room into a classroom to gain 16 total classrooms within the building. Additionally, if 17 are needed perhaps consolidating some Special Education will allow for an additional classroom.

Memorial: Configuration Option C1

Memorial will need some modifications to work well as a Kindergarten – grade 4 school. The population will alter from 330 students to 231-245 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Memorial Middle School General Classroom Utilization - Option C1						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Kindergarter	0	53	18	2.94	3.00	17.7
Grade 1	0	39	18	2.17	3.00	13.0
Grade 2	0	53	20	2.65	3.00	17.7
Grade 3	0	49	22	2.23	3.00	16.3
Grade 4	64	51	24	2.13	3.00	0.0
Grade 5	149	0	25	0.00	0.00	0.0
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**245**		**12**	**15**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2023-2024 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Kindergarter	0	46	18	2.56	3.00	15.3
Grade 1	0	46	18	2.56	3.00	15.3
Grade 2	0	47	20	2.35	3.00	15.7
Grade 3	0	45	22	2.05	3.00	15.0
Grade 4	64	47	24	1.96	2.00	0.0
Grade 5	149	0	25	0.00	0.00	0.0
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**231**		**11**	**14**	

The review of the General Classroom Utilization Chart indicates no need for additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 17 classrooms, including the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. Looking at the highest projections and the lowest projections there is a need for 14 to 15 classrooms.

According to the Connecticut School Construction Standards and Guidelines this school would not be eligible for reimbursement. When applied to the Construction Grants formula for determining reimbursable square footage of a school Memorial is permitted at 30,625 GROSS square feet. Luckily, the classrooms exist. The drawback here is there are no Kindergarten classrooms and they are required to have restrooms within each classroom, therefore some renovations will need to take place to at least 3 of the classrooms. Additionally, these rooms are undersized to serve Kindergarten.

Memorial: Configuration Option C2

Memorial will need some modifications to work well as a Kindergarten – grade 4 school. The population will alter from 330 to 261-278 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Memorial Middle School General Classroom Utilization - Option C2						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Kindergarter	0	60	18	3.33	4.00	15.0
Grade 1	0	44	18	2.44	3.00	14.7
Grade 2	0	60	20	3.00	3.00	20.0
Grade 3	0	56	22	2.55	3.00	18.7
Grade 4	64	58	24	2.42	3.00	0.0
Grade 5	149	0	25	0.00	0.00	0.0
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**278**		**14**	**16**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2023-2024 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Kindergarter	0	52	18	2.89	3.00	17.3
Grade 1	0	52	18	2.89	3.00	17.3
Grade 2	0	53	20	2.65	3.00	17.7
Grade 3	0	51	22	2.32	3.00	17.0
Grade 4	64	53	24	2.21	3.00	0.0
Grade 5	149	0	25	0.00	0.00	0.0
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**261**		**13**	**15**	

The review of the General Classroom Utilization Chart indicates no real need for additional classrooms. This analysis was done using the maximum class size policy therefore it shows the minimum needs. Currently there are 17 classrooms, including the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. Looking at the highest projections and the lowest projections there is a need for 15 to 16 classrooms.

According to the Connecticut School Construction Standards and Guidelines this school would not be eligible for reimbursement. When applied to the Construction Grants formula for determining reimbursable square footage Memorial is permitted at 34,750 GROSS square feet. Luckily, the classrooms exist. Like Option A & B, it is recommended to renovate the locker room into a classroom to gain 16 classrooms within the building. Like Option C1, the drawback is there are no Kindergarten sized classrooms and they are required to have restrooms within each classroom, therefore some renovations will need to take place to at least 3 of the classrooms.

Memorial: Configuration Option C3

Memorial will need some modifications to work well as a PreK/Kindergarten – grade 4 school. The population will alter from 330 to 296-313 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Memorial Middle School General Classroom Utilization - Option C3						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	0	35	18	1.94	2.00	17.5
Kindergarten	0	60	18	3.33	4.00	15.0
Grade 1	0	44	18	2.44	3.00	14.7
Grade 2	0	60	20	3.00	3.00	20.0
Grade 3	0	56	22	2.55	3.00	18.7
Grade 4	64	58	24	2.42	3.00	0.0
Grade 5	149	0	25	0.00	0.00	0.0
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**313**		**14**	**18**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2023-2024 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
PreK	0	35	18	1.94	2.00	17.5
Kindergarten	0	52	18	2.89	3.00	17.3
Grade 1	0	52	18	2.89	3.00	17.3
Grade 2	0	53	20	2.65	3.00	17.7
Grade 3	0	51	22	2.32	3.00	17.0
Grade 4	64	53	24	2.21	3.00	0.0
Grade 5	149	0	25	0.00	0.00	0.0
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**296**		**13**	**17**	

The review of the General Classroom Utilization Chart indicates a possible need for additional classrooms. This analysis was done using the maximum class size policy therefore it shows the minimum needs. Currently there are 17 classrooms, including the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. However. looking at the highest projections and the lowest projections there is a need for 17 to 18 classrooms.

According to the Connecticut School Construction Standards and Guidelines this school would not be eligible for any reimbursement. When applied to the Construction Grants formula for determining reimbursable square footage Memorial is permitted at 39,125 GROSS square feet. Using the low projections, the needed classrooms exist if portables remain, but the high projections indicate they may be

one classroom short. Additionally, the larger drawback is that there are no Kindergarten or PreK classrooms and they are required to have restrooms within each classroom, therefore some renovations will need to take place to at least 5-6 of the classrooms. Additionally, these rooms are small to support the PreK and Kindergarten needs. This may make sense to put on an addition for the PreK population and renovate the Kindergarten classrooms.

Memorial: Configuration Option C4

Memorial will need some modifications to work well as a Kindergarten – Grade 4 school. The population will alter from 330 to 307-335 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Memorial Middle School General Classroom Utilization - Option C4						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Kindergarten	0	60	18	3.33	4.00	15.0
Grade 1	0	44	18	2.44	3.00	14.7
Grade 2	0	60	20	3.00	3.00	20.0
Grade 3	0	56	22	2.55	3.00	18.7
Grade 4	64	115	24	4.79	5.00	0.0
Grade 5	149	0	25	0.00	0.00	0.0
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**335**		**16**	**18**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2021-2022 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Kindergarten	0	51	18	2.83	3.00	17.0
Grade 1	0	50	18	2.78	3.00	16.7
Grade 2	0	50	20	2.50	3.00	16.7
Grade 3	0	64	22	2.91	3.00	21.3
Grade 4	64	92	24	3.83	4.00	0.0
Grade 5	149	0	25	0.00	0.00	0.0
Grade 6	117	0	25	0.00	0.00	0.0
TOTAL	**330**	**307**		**15**	**16**	

The review of the General Classroom Utilization Chart indicates a possible need for additional classrooms. This analysis was done using the maximum class size policy therefore it shows the minimum needs. Currently there are 17 classrooms, including the two portable classrooms. Portables are not recommended as a permanent solution and therefore should not be included in the count. However. looking at the highest projections and the lowest projections there is a need for 16 to 18 classrooms.

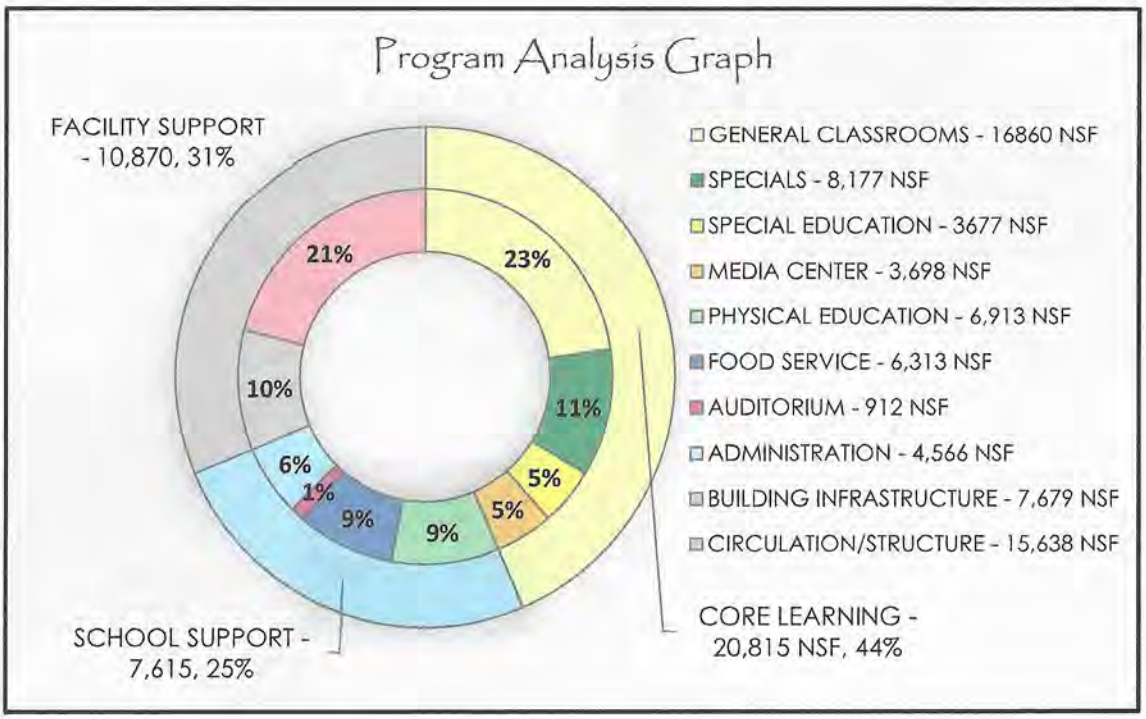
According to the Connecticut School Construction Standards and Guidelines this school would not be eligible for any reimbursement. When applied to the Construction Grants formula for determining reimbursable square footage Memorial is permitted at 41,875 GROSS square feet. It is recommended to renovate the old locker room into a classroom to gain 16 total classrooms within the building. The district could keep the portables active to maintain the 18 classrooms or build a two-classroom addition. Like the previous options, classrooms will also need renovations to incorporate a restroom for the Kindergarten population.

Strong Middle School

Frank Ward Strong Middle School was originally constructed in 1923. The original building sits to the front facing Main Street at the south of the property. The building has been expanded and added on to over the decades, most notably in 1960 and in 2002. The 2002 two-story 30,250 square foot addition was added and included a full renovation to the remaining 47,500 square feet. The school building is approximately 74,793 net square feet and 77,582 gross square feet. Strong Middle School offers both Contemporary and Integrated Day programs and is currently home to 7th grade and 8th grade with 287 currently enrolled students.

The previous study looked at all the items the school was lacking and generated a wish list of improvements to spaces, new spaces, new programs and building upgrades. It is still clear today that many of those items are still wished for however the basis of this report is to evaluate the current program and the general classrooms; their quantity and ability to serve the potential population and grade structure. This process is focused on simple alterations and reusing and maximizing the existing space to accommodate the population.

The analysis represented in the pie chart below breaks out the program into 3 sections: Core Learning Spaces, School Support spaces and Facility Support. These sections are broken into program categories: General Classrooms, Special Education, Specials (Art, Music, Tech Ed), Media Center, Physical Education, Cafeteria, Auditorium, Administration, Building Infrastructure, and Circulation. Each



category is represented in a different color and depicted on the floor plans, spreadsheets and charts that follow.

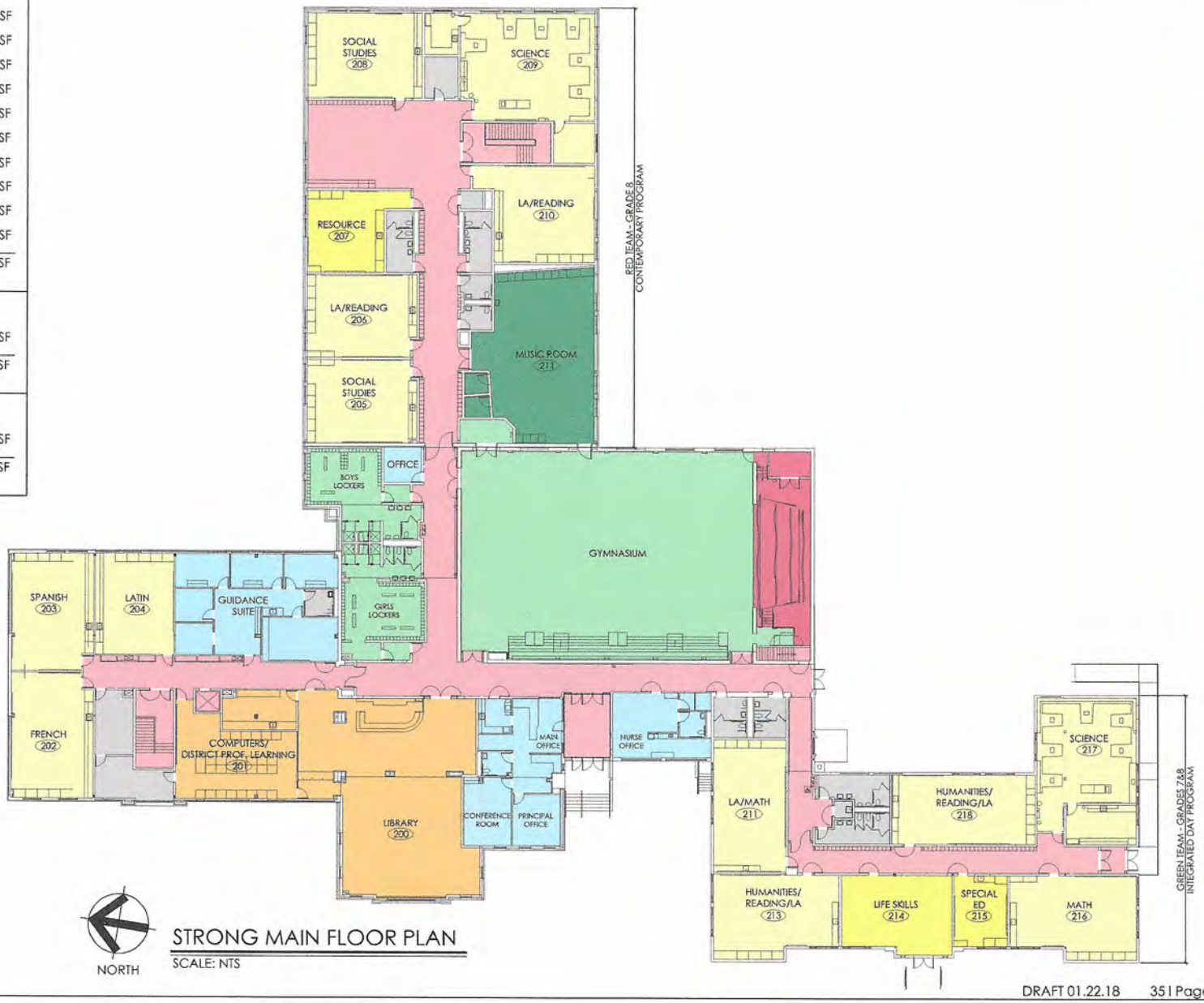
Strong is well laid out and making use of most of its space. The school is laid out to support the three grade levels. Currently 7th is in one wing, 8th is in another and then the Integrated Day program in the other. Administration and Specials are clustered together along the upper and lower main spine of the building. This layout will adapt well with the addition of Grade 6. Each grade can be housed in their own wing and specials can remain as is.

There are currently 18 general classrooms being used within Strong. Classrooms are a vast variety of sizes. They range between 714 to 1252 square feet. This is due to the variety of age of each addition and the overall layout of the building. Additionally, the larger classrooms are the dedicated Science Labs. The needs of classrooms are changing and many desire small group working spaces. Additionally, the current furniture, especially the connected desk chair combo, within the classrooms are dated and completely inflexible for today's classroom. Instead moveable, flexible furniture which can be setup in various arrangements is strongly desired.

PROGRAM LEGEND	
CLASSROOMS	16,860 NSF
SPECIALS	8,177NSF
SPECIAL ED	3,677 NSF
MEDIA CENTER	3,698 NSF
PHYSICAL ED.	6,913 NSF
FOOD SERVICE	6,313 NSF
AUDITORIUM	912 NSF
ADMINISTRATION	4,566 NSF
BUILDING INFRA.	7,679 NSF
CIRCULATION	15,638 NSF
TOTAL	74,433 NSF

NET SQUARE FEET	
MAIN BUILDING	74,433 NSF
TOTAL	74,433 NSF

GROSS SQUARE FEET	
MAIN BUILDING	77,582 GSF
TOTAL	77,582 GSF



STRONG MAIN FLOOR PLAN

SCALE: NTS

Regional School District 13

Facilities Restacking Study

STRONG MIDDLE SCHOOL

PROGRAM ANALYSIS PLAN

SILVER/PETRUCELLI + ASSOCIATES

PROGRAM LEGEND	
CLASSROOMS	16,860 NSF
SPECIALS	8,177NSF
SPECIAL ED	3,677 NSF
MEDIA CENTER	3,698 NSF
PHYSICAL ED.	6,913 NSF
FOOD SERVICE	6,313 NSF
AUDITORIUM	912 NSF
ADMINISTRATION	4,566 NSF
BUILDING INFRA.	7,679 NSF
CIRCULATION	15,638 NSF
TOTAL	74,433 NSF

NET SQUARE FEET	
MAIN BUILDING	74,433 NSF
TOTAL	74,433 NSF

GROSS SQUARE FEET	
MAIN BUILDING	77,582 GSF
TOTAL	77,582 GSF

STRONG LOWER FLOOR PLAN

SCALE: NTS

Regional School District 13

Facilities Restacking Study

STRONG MIDDLE SCHOOL

PROGRAM ANALYSIS PLAN

SILVER/PETRUCELLI + ASSOCIATES

Strong: Configuration Option A

Strong is currently set up as a middle school and should have no issue accepting the additional students. As previously mentioned the layout will be accommodating to this grade structure. The population change will alter from the current 287 students to 338-418 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Strong Middle School General Classroom Utilization - Option A						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2018-2019 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 6	0	152	25	6.08	7.00	21.7
Grade 7	152	119	25	4.76	5.00	23.8
Grade 8	135	147	25	5.88	6.00	24.5
TOTAL	**287**	**418**		**17**	**18**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2025-2026 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 6	0	108	25	4.32	5.00	21.6
Grade 7	152	136	25	5.44	6.00	22.7
Grade 8	135	94	25	3.76	4.00	23.5
TOTAL	**287**	**338**		**14**	**15**	

The review of the General Classroom Utilization Chart indicates no need for additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 18 classrooms. This includes the world language room which would not likely serve specifically to each grade organization. In discussions with the school Principal, additional rooms can be converted to general classrooms if needed. Looking at the highest projections and the lowest projections there is a need for 15 to 18 classrooms. The difference of projections nets three classrooms. As noted the enrollment here has a greater decline.

The good news with this scenario is that the needed classrooms exist and there is also some additional flexibility built into the floor plan. According to the Connecticut School Construction Standards and Guidelines this school would not be eligible for any reimbursement. When applied to the Construction Grants formula for determining reimbursable square footage Strong is permitted at 63,118 GROSS square feet. This school exceeds the allowable reimbursable square footage. Fortunately, this is not a course of action needed to be explored.

Strong: Configurations Option B&C

Strong is currently set up as a middle school and should have no issue accepting the additional students. Like option A, this school can accept additional students and organize the three grade structures well. The population change will alter from the current 287 students to 331-379 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Strong Middle School General Classroom Utilization - Option B&C						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2019-2020 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 5	0	118	25	4.72	5.00	23.6
Grade 6	0	107	25	4.28	5.00	21.4
Grade 7	152	154	25	6.16	7.00	22.0
Grade 8	135	0	25	0.00	0.00	0.0
TOTAL	**287**	**379**		**15**	**17**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2026-2027 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 5	0	113	25	4.52	5.00	22.6
Grade 6	0	108	25	4.32	5.00	21.6
Grade 7	152	110	25	4.40	5.00	22.0
Grade 8	135	0	25	0.00	0.00	0.0
TOTAL	**287**	**331**		**13**	**15**	

Again, like Option A, the review of the General Classroom Utilization Chart indicates no need for additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 18 classrooms. This includes the world language room which would not likely serve specifically to each grade world language room which would not likely serve specifically to each grade organization. In discussions with the school Principal, additional rooms can be converted to general classrooms if needed. Looking at the highest projections and the lowest projections there is a need for 15 to 17 classrooms. The difference of projections nets two classrooms.

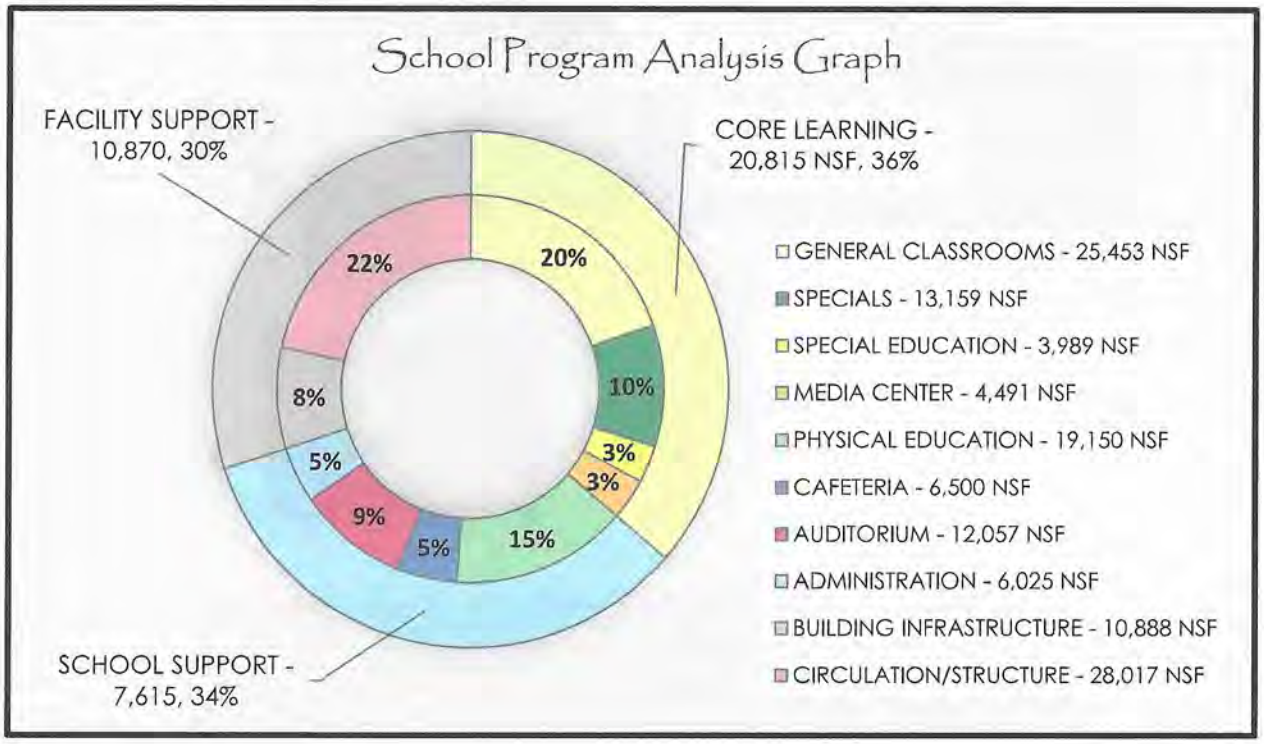
The needed classrooms exist and there is also some additional flexibility built into the floor plan. According to the Connecticut School Construction Standards and Guidelines this school would not be eligible for any reimbursement. When applied to the Construction Grants formula for determining reimbursable square footage Strong is permitted at 54,161 GROSS square feet. This school exceeds the allowable reimbursable square footage. Fortunately, this is not a course of action needed to be explored.

Coginchaug High School

Coginchaug High School was originally constructed in 1969. Additions and extensive renovations were completed in 2002. The school building is 135,987 net square feet and 142,179 gross square feet. Coginchaug High School is currently home to 9th grade through 12th grade with 531 currently enrolled students.

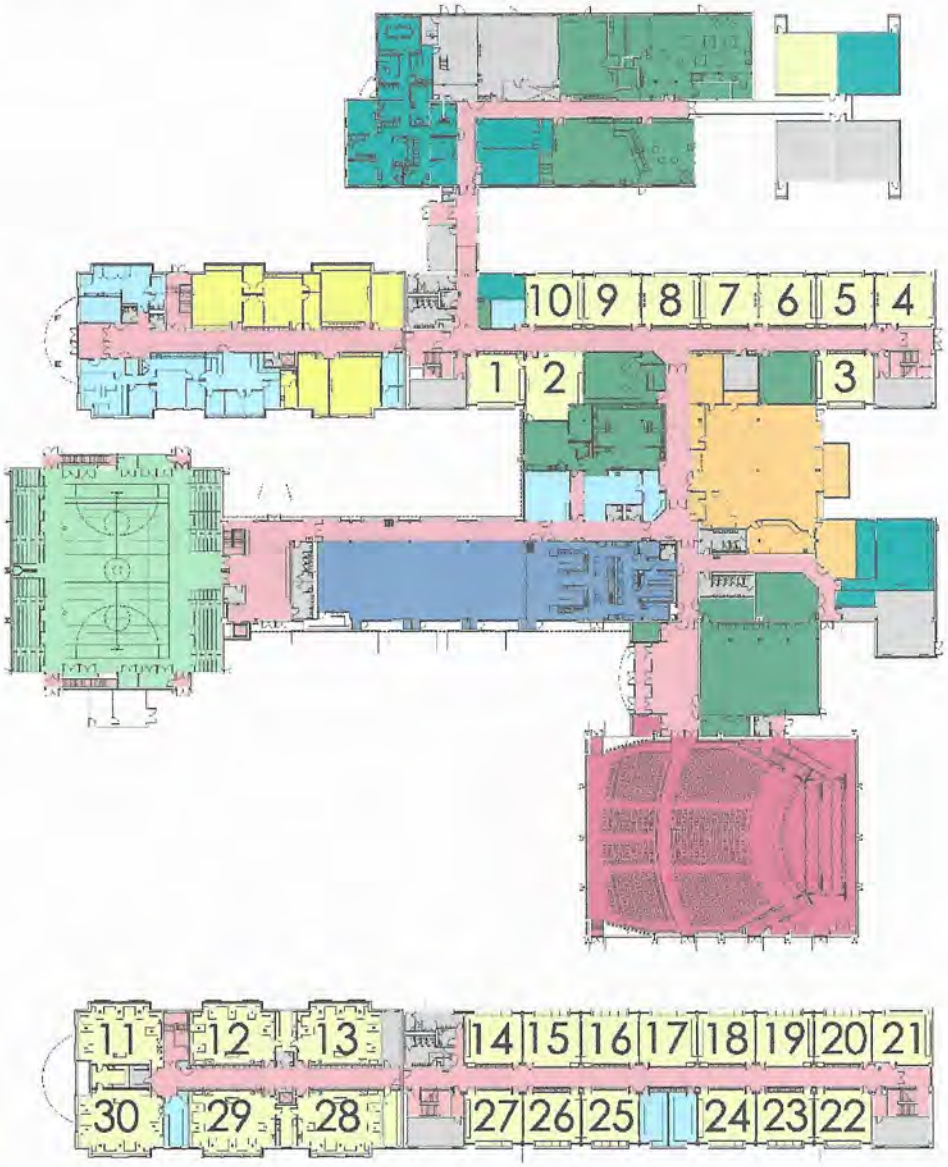
The basis of this report is to evaluate the current program and the general classrooms; their quantity and ability to serve the potential population and grade structure. The process is focused on simple alterations and reusing and maximizing the existing space to accommodate the population. However, as there is more space in this school it may be an opportunity to increase, improve or expand programs and find ways to better utilize the existing space. Many needs were suggested when discussing options with school administration. Perhaps there are opportunities for expanding the educational program such as an innovation lab, robotics lab, coding library, common area for 120 students, meeting areas, and space for interdisciplinary studies.

The analysis represented in the pie chart below breaks out the program into 3 sections: Core Learning Spaces, School Support spaces and Facility Support. These sections are broken into program categories: General Classrooms, Special Education, Specials (Art, Music, TechEd), Media Center, Physical Education, Cafeteria, Auditorium, Administration, Building Infrastructure, and Circulation. Each category is represented in a different color and depicted on the floor plans, spreadsheets and charts that follow.



Coginchaug is a well-organized school with the main building consisting of administration and general classrooms. The technical education and art wing is separate along with the Central Office component. The remaining wing holds the media center, cafeteria, gymnasium, and auditorium/music. The general classroom wing is a two-story component. The layout serves as a high school very well.

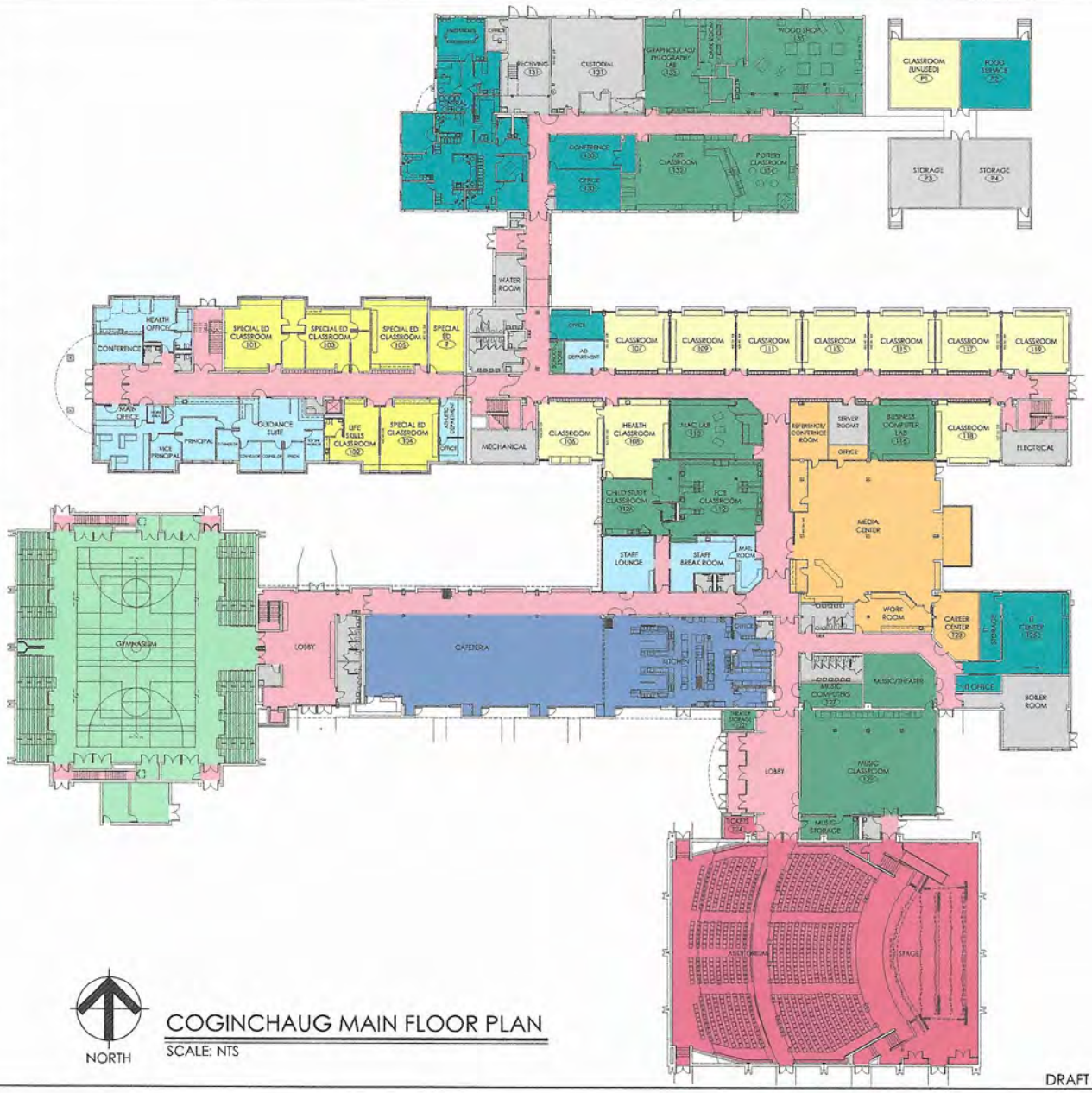
There are currently 30 general classrooms at Coginchaug. Six of these classrooms are dedicated science labs. The remaining classrooms are original to the building and small. Most are around 685 net square feet while today the standard classroom size is in the 800-900 net square foot range. These small classrooms also have thin walls, likely just a few layers of sheetrock on a track. These small classrooms are challenging when it comes to group work and collaboration. Additionally, the current furniture, especially the connected desk chair combo, are dated and inflexible for today's classroom. Instead flexible furniture which can be setup in various arrangements is desired.



PROGRAM LEGEND	
CLASSROOMS	25,453 NSF
SPECIALS	13,159 NSF
SPECIAL ED	3,989 NSF
MEDIA CENTER	4,491 NSF
PHYSICAL ED.	19,150 NSF
FOOD SERVICE	6,500 NSF
AUDITORIUM	12,057 NSF
ADMINISTRATION	6,025 NSF
CENTRAL OFFICE	6,258 NSF
BUILDING INFRA.	10,888 NSF
CIRCULATION	28,017 NSF
TOTAL	135,987 NSF

NET SQUARE FEET	
MAIN BUILDING	132,565 NSF
PORTABLES	3,422 NSF
TOTAL	135,987 NSF

GROSS SQUARE FEET	
MAIN BUILDING	138,579 GSF
PORTABLES	3,600 GSF
TOTAL	142,179 GSF



COGINCHAUG MAIN FLOOR PLAN

SCALE: NTS

Regional School District 13
Facilities Restacking Study

COGINCHAUG HIGH SCHOOL
PROGRAM ANALYSIS PLAN

SILVER/PETRUCELLI + ASSOCIATES

PROGRAM LEGEND	
CLASSROOMS	25,453 NSF
SPECIALS	13,159 NSF
SPECIAL ED	3,989 NSF
MEDIA CENTER	4,491 NSF
PHYSICAL ED.	19,150 NSF
FOOD SERVICE	6,500 NSF
AUDITORIUM	12,057 NSF
ADMINISTRATION	6,025 NSF
CENTRAL OFFICE	6,258 NSF
BUILDING INFRA.	10,888 NSF
CIRCULATION	28,017 NSF
TOTAL	135,987 NSF

NET SQUARE FEET	
MAIN BUILDING	132,565 NSF
PORTABLES	3,422 NSF
TOTAL	135,987 NSF

GROSS SQUARE FEET	
MAIN BUILDING	138,579 GSF
PORTABLES	3,600 GSF
TOTAL	142,179 GSF

Regional School District 13
Facilities Restacking Study

COGINCHAUG HIGH SCHOOL
PROGRAM ANALYSIS PLAN

SILVER / PETRUCELLI + ASSOCIATES

Coginchaug: Configuration Option A

Given the circumstance of the declining enrollment there are some decisions to be made along with opportunities. The population change will alter from the current 531 students to 379-494 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study Coginchaug High School General Classroom Utilization - Option A						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2019-2020 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 9	131	123	25	4.92	5.00	24.6
Grade 10	129	108	25	4.32	5.00	21.6
Grade 11	149	134	25	5.36	6.00	22.3
Grade 12	122	129	25	5.16	6.00	21.5
TOTAL	**531**	**494**		**20**	**22**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2026-2027 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 9	131	79	25	3.16	4.00	19.8
Grade 10	129	106	25	4.24	5.00	21.2
Grade 11	149	98	25	3.92	4.00	24.5
Grade 12	122	96	25	3.84	4.00	24.0
TOTAL	**531**	**379**		**15**	**17**	

The review of the General Classroom Utilization Chart indicates no need for additional classrooms. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 30 classrooms while 17-22 appear to be needed in the future. Of these rooms 6 are dedicated to Science and the 24 remaining are undersized. A simple solution could be to expand some of the smaller classrooms into larger classrooms, to allow for better collaboration. Additionally other school programs can be added to support greater educational needs. The addition of other community programs or businesses can also be explored within this option.

Coginchaug: Configurations Option B&C

Given the extra space in the school the idea of moving 8th grade to the High School may be desirable. The population change will alter from the current 531 students to 513-628 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed.

Regional School District 13 Facilities Restacking Study
Coginchaug High School with 8th Grade
General Classroom Utilization - Option B &C

Grade Level	Oct. 2017 Enrollment Total	Projected 2018-2019 Enrollment (High)	Maximum Class Size Policy	Projected Minimum Sections	Projected Minimum Classroom Quantity	Projected Students Per Classroom
Grade 8	135	147	25	5.88	6.00	24.5
Grade 9	131	109	25	4.36	5.00	21.8
Grade 10	129	136	25	5.44	6.00	22.7
Grade 11	149	132	25	5.28	6.00	22.0
Grade 12	122	104	25	4.16	6.00	17.3
TOTAL	**531**	**628**			**29**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2026-2027 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 8	135	134	25	5.36	6.00	22.3
Grade 9	131	79	25	3.16	4.00	19.8
Grade 10	129	106	25	4.24	5.00	21.2
Grade 11	149	98	25	3.92	4.00	24.5
Grade 12	122	96	25	3.84	4.00	24.0
TOTAL	**531**	**513**			**23**	

Space	Square footage	min sq ft per student	students per wave	population	population /max	lunch waves
Cafeteria	3,725	15	248.33	628	2.53	3
Cafeteria	3,725	15	248.33	513	2.07	3

The review of the General Classroom Utilization Chart indicates no need for additional classrooms if 8th grade relocates to the high school. This analysis was done using the maximum class size policy therefore it only shows the minimum needs. Currently there are 30 classrooms while 23-29 will be needed in the future. In review of the high projections, it does begin to push close to maximum capacity. Both projections will require adding a new lunch wave and may have other effects on scheduling specials and physical education. It also should be noted there is not a way to house these students separately from the rest of the high school.

Coginchaug: Configuration Option B1

Again, given the extra space in the school the idea of moving 7th & 8th grade to the High School may be desirable. The population change will alter from the current 531 students to 623-766 students. The chart below is an analysis of the effect these projections will have on the required quantity of classrooms needed

Regional School District 13 Facilities Restacking Study Coginchaug High School with 7th & 8th Grade General Classroom Utilization - Option B1						
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2019-2020 Enrollment (High)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 7	152	154	25	6.16	7.00	22.0
Grade 8	135	118	25	4.72	5.00	23.6
Grade 9	131	123	25	4.92	5.00	24.6
Grade 10	129	108	25	4.32	5.00	21.6
Grade 11	149	134	25	5.36	6.00	22.3
Grade 12	122	129	25	5.16	6.00	21.5
TOTAL	**531**	**766**			**34**	
Grade Level	**Oct. 2017 Enrollment Total**	**Projected 2026-2027 Enrollment (Low)**	**Maximum Class Size Policy**	**Projected Minimum Sections**	**Projected Minimum Classroom Quantity**	**Projected Students Per Classroom**
Grade 7	152	110	25	4.40	5.00	22.0
Grade 8	135	134	25	5.36	6.00	22.3
Grade 9	131	79	25	3.16	4.00	19.8
Grade 10	129	106	25	4.24	5.00	21.2
Grade 11	149	98	25	3.92	4.00	24.5
Grade 12	122	96	25	3.84	4.00	24.0
TOTAL	**531**	**623**			**28**	

Space	Square footage	min sq ft per student	students per wave	population	population /max	lunch waves
Cafeteria	3,725	15	248.33	766	3.08	4
Cafeteria	3,725	15	248.33	623	2.51	3

The review of the General Classroom Utilization Chart indicates a need for additional classrooms if 7th and 8th relocate to the high school. This analysis was done using the maximum class size policy therefore it truly shows the minimum needs. Currently there are 30 classrooms while 28-34 will be needed in the future. In review of the high and low projections, it exceeds or comes too close to capacity. Both projections will require adding a new lunch wave and may have other effects on scheduling specials and physical education. It also should be noted there is not a way to house these students separately from the rest of the high school. This option will not be reviewed further in the Reconfiguration Design Options Section.

SECTION III – RECONFIGURATION DESIGN OPTIONS

Introduction

As the district is determining the best approach for the future of their school structure, they have focused on the concept of Brewster as PreK-2, Memorial as 3-5, Strong as 6-8 and Coginchaug to remain as 9-12. This approach is conventional, and it appears to make sense in many ways. Not only is this reconfiguration beneficial to the education, but it should create a positive impact on the community and should prove to be an economically justifiable solution. However, maybe this solution is not the most cost effective and other options are explored to validate and vet these decisions.

The following section begins to address the individual needs of each of the four schools. As they are evaluated for their conversion, suggested recommendations for the fundamental needs are presented. Where applicable, multiple options are presented, and associated estimates are included.

These options should be evaluated with the value system in mind. The education should be at the forefront of this decision. The economic impact needs to be as responsibly feasible as possible. The impact to the community must also be considered. To make a comprehensive decision the review of all plausible options and vetting the educational, economic, and community impacts are integral to its success. The following options should begin to provide the tools to do so.

Brewster Elementary School Options

The study is evaluating the concept of Brewster becoming a PreK through Grade 2 School, Option A, with additional configurations analyzed. Many towns in Connecticut operate their schools in the PreK - Grade 2 model such as Weston, Wilton, East Granby, Windsor, Wallingford, Oxford, Coventry, Suffield, Hebron, Cromwell, New Hartford, Portland, Stonington, Enfield, Colchester, Watertown, New Fairfield and more. This is a configuration previously adopted at Brewster, so it should not be a major change for the staff or community. The change will entail that all District 13 PreK - Grade 2 students and staff will now be under one roof operating under one program together.

Brewster Elementary School as the early childhood elementary school for the district will serve the community well. Many of the classrooms are set up to serve the PreK and Kindergarten students with restrooms within the classroom. The gymnasium is small which will be beneficial to these younger students. The school layout is quite accommodating and easy to understand for "little ones" to find their way around. Specials are organized in the center of the two wings making it easily accessible from both groups of classrooms. This overall feeling and atmosphere of this building caters to the youngsters more than any other of the RSD 13 schools.

Brewster currently has 264 students while the projection indicates 336 - 361 students under this configuration. As reviewed, there is a need for additional classrooms. The review of the highest and lowest projections only gains one classroom. The MMI projections also indicate that this age group will stabilize within the community, indicating these 19 classrooms will likely be needed at this school for years to follow. Therefore, a permanent solution is needed to address the population at this school.

According to the Connecticut School Construction Standards and Guidelines, Brewster can be 45,125 GROSS square feet based on the highest projected enrollment, 361 students in 2019-2020 school year. If the portables are removed it would allow for a 6,151 gross square feet addition. The needed 6 classrooms are a challenge to achieve under this square footage requirement, but not impossible if well planned. If the maximum square footage requirement is not exceeded the RSD 13 reimbursement rate of 52.5% would be applied and reimbursed to the district. The state process must be followed, an application and educational specification must be submitted prior to the June 30th deadline of this year. Then the district would need to submit their local funding authorization or a certified resolution of referendum to the state prior to the release of the Office of School Construction Grants and Review (OSCGR) Priority List on December 15. Numerous meetings need to transpire for approvals before funding is released. The funding becomes available the following June: however, the district can choose to proceed at their own risk if the project has been reviewed and approved by the OSCGR. It would be extremely beneficial for the project to start discussions early. The superintendent and/or committee chair

should schedule a preliminary meeting as soon as the Board accepts a concept to begin discussions with the OSCGR.

The evaluation of the site and building has revealed three options for additions, 2 of which are graphically explored within the report. The 2 options explored are additions at the rear or west wing of the building. A third option was discussed at the front or east classroom wing in the location of the existing portables. Keeping the master plan in mind when making decisions, this option was eliminated because it is the best place for a cafeteria addition in the future. It also keeps the portables in operation during construction. Economically it makes the most sense to add to the rear addition to make use of the existing single loaded corridor. If we build on the opposite side of the corridor, a new corridor is not required limiting the size of the addition and allowing for all the square footage to be used in the classrooms, where it really counts. Additionally, options for portables are also explored. There is a concern that additions may be too costly or that these classrooms may not be needed if enrollment continues to decline. With Brewster, its best to look at all the possible options, understand their educational and economic impact and compare them to make comprehensive decisions.

Additionally the review considers other options such as a PreK- Grade 1 school. This too would work well especially since the school can accommodate that population without a significant project or addition. The only drawback is transitioning students out of the building a little too soon. Many prefer the PreK-Grade 2 model as a more beneficial configuration. This configuration has financial benefits.

Other variations to Brewster are considered such as a PreK or Kindergarten – Grade 4 and a PreK – Grade 3 configurations. These all can work too. However this school is more fitting to younger students, no less accommodations can be made. Many of these configurations reveal additional classroom needs, but do not have as much if any of a reimbursement. Therefore some options leave the portables in place in order to reduce costs. Some also reveal less needs. For instance, Brewster as a PreK through Grade 3 School with a split population at Memorial, has far less needs. There are some educational drawbacks such as forcing this population to go to Memorial for one year in 4th grade, adding a transition and only for a year. However all of the additional concepts are being explored to understand if this option is the best solution for the district.

Configuration A: Brewster Option 1 - Addition

This six-classroom addition is located to the north of the west wing. This allows the single loaded corridor at the south to remain open as is and to only utilize the north end. The addition is clustered together in one location, which contractors usually favor and find more economical. This concept does not affect the parking lot but does require some modifications to the hardscape. This location is more secure and private. The classrooms are also held off from the existing building so that egress and windows from existing classrooms can remain. In this concept, the corridor is extended to accommodate some of the additional classrooms. Adding group restrooms was originally explored, but upon further analysis it would be best to keep restrooms within each classroom. This will create flexibility so that Kindergarten can be accommodated since there is fluctuation of room quantity requirements from year to year. The restrooms are paired back to back for economic efficiencies. While 900-net square foot classrooms are always desired, these classrooms are 807-net square feet, to limit the addition size, staying in proximity to state requirements. While 807 net square feet is sufficient they are smaller than the existing classrooms in the west wing and larger than those in the east wing. Furniture is shown to provide scale and spatial characteristics. This addition only exceeds the CT square footage requirement by 35 gross square feet.

BREWSTER ELEMENTARY SCHOOL - OPTION A-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
6 CLASSROOM ADDITION					
6 classroom addition	6,186	$ 500		**$ 3,093,000**	
Anticipated Reimbursement			52.5%	$ 1,623,825	
* reduction - exceed standards 35 GSF			99.92%	$ (1,259)	
Anticipated RSD 13 Share				$ 1,470,434	$ 1,470,434
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1,800	$ 30		$ 54,000	
2 Classroom expansions	415	$ 350		$ 145,250	
1 Classroom modification - 2/3 spaces	1,303	$ 350		$ 456,050	
4 New classroom doors & wall demo	4	$6,500		$ 26,000	$ 681,300
OPTION TOTAL					**$ 2,151,734**

Configuration A: Brewster Option 2 - Addition

This option creates 2 three-classroom additions along the west wing. This allows for full utilization of the single loaded corridor, eliminating the need to add any circulation. It does not affect the parking lot or the hardscape. However, some of the hardscape is close to the building and it may be beneficial to cut it back and create a sound buffer for the adjacent classrooms. The classrooms are also held off from the existing building so that egress and windows from existing classrooms can remain as is. The same concept with classroom restrooms are held here. While a 900-net square foot classrooms are always desired; these classrooms are 850 net square feet to stay in proximity to state requirements. This square footage is sufficient. They are smaller than the existing classrooms in the west wing and larger than those in the east wing. Furniture is shown to provide scale and spatial characteristics. This addition is under the CT square footage requirement by 93 gross square feet.

BREWSTER ELEMENTARY SCHOOL - OPTION A-2					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
6 CLASSROOM ADDITION					
6 classroom addition	6,122	$ 500		**$ 3,061,000**	
Anticipated Reimbursement			52.5%	$ 1,607,025	
Anticipated RSD 13 Share				$ 1,453,975	$ 1,453,975
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1,800	$ 30		$ 54,000	
2 Classroom expansions	415	$ 350		$ 145,250	
1 Classroom modification - 2/3 spaces	1,303	$ 350		$ 456,050	
4 New classroom doors & wall demo	4	$ 6,500		$ 26,000	$ 681,300
OPTION TOTAL					**$ 2,135,275**

PROGRAM LEGEND	
CLASSROOMS	16,874 NSF
SPECIALS	2,658 NSF
SPECIAL ED	2,895 NSF
MEDIA CENTER	1,579 NSF
PHYSICAL ED.	3,637 NSF
FOOD SERVICE	595 NSF
AUDITORIUM	688 NSF
ADMINISTRATION	3,058 NSF
BUILDING INFRA.	2,717 NSF
CIRCULATION	8,677 NSF
TOTAL	43,378 NSF

NET SQUARE FEET	
MAIN BUILDING	37,589 NSF
ADDITION	5,789 NSF
TOTAL	43,378 NSF

GROSS SQUARE FEET	
MAIN BUILDING	38,974 GSF
ADDITION 1	6,186 GSF
TOTAL	45,160 GSF

STATE REIMBURSABLE	45,125 GSF
REDUCED TO 99.92%	+35 GSF

NORTH

BREWSTER OPTION A-1 FLOOR PLAN

SCALE: NTS

DRAFT 01.22.18

Regional School District 13
Facilities Restacking Study

BREWSTER ELEMENTARY SCHOOL
OPTION A-1

SILVER PETRUCELLI + ASSOCIATES

BREWSTER OPTION A-1 SITE PLAN

SCALE: NTS

Regional School District 13

Facilities Restacking Study

BREWSTER ELEMENTARY SCHOOL

OPTION A-1

SILVER/PETRUCELLI + ASSOCIATES

PROGRAM LEGEND	
CLASSROOMS	17,184 NSF
SPECIALS	2,658 NSF
SPECIAL ED	2,895 NSF
MEDIA CENTER	1,579 NSF
PHYSICAL ED.	3,637 NSF
FOOD SERVICE	595 NSF
AUDITORIUM	688 NSF
ADMINISTRATION	3,058 NSF
BUILDING INFRA.	2,717 NSF
CIRCULATION	8,349 NSF
TOTAL	43,360 NSF

NET SQUARE FEET	
MAIN BUILDING	37,589 NSF
ADDITION	5,771 NSF
TOTAL	43,360 NSF

GROSS SQUARE FEET	
MAIN BUILDING	38,974 GSF
ADDITION 1	6,122 GSF
TOTAL	45,096 GSF

STATE REIMBURSABLE	45,125 GSF -29 GSF

NORTH

BREWSTER OPTION A-2 FLOOR PLAN

SCALE: NTS

DRAFT 01.22.18

Regional School District 13
Facilities Restacking Study

BREWSTER ELEMENTARY SCHOOL
OPTION A-2

SILVER/PETRUCELLI + ASSOCIATES

BREWSTER OPTION A-2 SITE PLAN

SCALE: NTS

Regional School District 13

Facilities Restacking Study

BREWSTER ELEMENTARY SCHOOL

OPTION A-2

SILVER/PETRUCELLI + ASSOCIATES

Configuration A: Brewster Option 3 – New Portables

This concept keeps the existing two portables. They would remain as PreK classrooms. Instead of a permanent building addition, a temporary four-classroom portable structure is added to the north of the west wing. This concept includes an enclosed ramp addition. It attaches to the existing building allowing the four first grade classrooms to remain connected to the school and close to the other two classrooms. This addition is an example of a recent installation done at another Connecticut elementary school on which this cost is based. This option has group restrooms while others could have single in-classroom restrooms. A platform picks up all exterior doors and brings them to a stair and ramp. Some site work modifications will need to occur to except these portables. It is possible to obtain state reimbursement working with OSCGR however there are more stringent requirements. The reimbursement rate will be altered by 10%, creating a 42.5% rate. Additionally, the state will only fund portables if they are a temporary solution and a permanent long-term plan is in place. They limit the use to 5-years or reimbursement is nonrefundable. Additionally, it must be mentioned that adding portables in this location could limit where a permanent addition is located. Additionally, the energy efficiency of portables is low and come with high energy costs and more frequent maintenance needs. For these reasons this option becomes less and less economical.

BREWSTER ELEMENTARY SCHOOL - OPTION A-3					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
4 CLASSROOM PORTABLES					
4 classroom portables with ramp connector	4,819	$ 280		**$ 1,349,320**	
Anticipated Reimbursement - if used temporarily for 5 years			42.5%	$ 573,461	
* reduction - exceed standards 486 GSF			98.97%	$ (5,886)	
Anticipated RSD 13 Share				$ 781,745	$ 781,745
EXISTING CLASSROOM MODIFICATIONS					
2 Classroom expansions	415	$ 350		$ 145,250	
1 Classroom modification - 2/3 spaces	1,303	$ 350		$ 456,050	
4 New classroom doors & wall demo	4	$ 6,500		$ 26,000	$ 627,300
OPTION TOTAL WITH REIMBERSMENT					**$ 1,409,045**
OPTION TOTAL WITH NO REIMBERSMENT					**$ 1,976,620**

Configuration A: Brewster Option 4 – Relocated Portables

This option keeps the existing two portables as PreK classrooms. Instead of a permanent building addition, a RSD13 owned temporary four-classroom portable structure is added to the north of the west wing. The existing portables within the district were reviewed for their potential reuse. The two structures at Lyman seem well suited for this cause. The portables at Memorial and at the High School are eliminated for their lack of restrooms. The other remaining potable is at Korn. They're roughly the same age. Lyman seems to make the most sense due to the sheer quantity needed and that this will be the school to close. However, they are 16 years old, reaching the end of their useful life. It must be noted that these are likely not up to today's code. Their structure was also not reviewed at the time and it was noted some of the exterior skin may need replacement. If the option is to reuse existing ones, Lyman's should be selected for their potential reuse. It must be noted that this is still a costly solution. First, is the removal and relocation of the structure itself. Second, is the placement on a newly designed foundation on the new site. Third, is the connection to utilities including the expansion of the septic system or the design of its own system. Lastly, a new platform would need to be designed and constructed. The following cost is based on a similar project at another school in Connecticut. This project was completed in 2012 so the costs are inflated 6 years out.

BREWSTER ELEMENTARY SCHOOL - OPTION A-4					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
4 CLASSROOM PORTABLES					
Existing 4 classroom portables relocated with new ramp connector	2	$ 520,000		$ 1,040,000	$ 1,040,000
EXISTING CLASSROOM MODIFICATIONS					
2 Classroom expansions	415	$ 350		$ 145,250	
1 Classroom modification - 2/3 spaces	1,303	$ 350		$ 456,050	
4 New classroom doors & wall demo	4	$ 6,500		$ 26,000	$ 627,300
OPTION TOTAL					**$ 1,667,300**

PROGRAM LEGEND	
CLASSROOMS	16,828 NSF
SPECIALS	2,658 NSF
SPECIAL ED	2,895 NSF
MEDIA CENTER	1,579 NSF
PHYSICAL ED.	3,637 NSF
FOOD SERVICE	595 NSF
AUDITORIUM	688 NSF
ADMINISTRATION	3,058 NSF
BUILDING INFRA.	2,957 NSF
CIRCULATION	9,058 NSF
TOTAL	43,953 NSF

NET SQUARE FEET	
MAIN BUILDING	37,589 NSF
EXG. PORTABLE	1,697 NSF
ADDITION	4,667 NSF
TOTAL	43,953 NSF

GROSS SQUARE FEET	
MAIN BUILDING	38,974 GSF
EXG. PORTABLE	1,800 GSF
NEW PORTABLE	4,819 GSF
TOTAL	45,593 GSF

STATE REIMBURSABLE	45,125 GSF
*REDUCED TO 98.97%	+486 GSF

BREWSTER OPTION A-3 FLOOR PLAN

SCALE: NTS

DRAFT 01.22.18

Regional School District 13
Facilities Restacking Study

BREWSTER ELEMENTARY SCHOOL
OPTION A-3

SILVER/PETRUCELLI + ASSOCIATES

BREWSTER OPTION A-3 SITE PLAN

SCALE: NTS

Regional School District 13

Facilities Restacking Study

BREWSTER ELEMENTARY SCHOOL

OPTION A-3

SILVER/PETRUCELLI + ASSOCIATES

Architects · Engineers · Interior Designers

1100 Stillwater Avenue, Bridgeport, CT 06610-2143

Tel. 203 334-9097 Fax. 203 334-5217

silverpetrucelli.com

PROGRAM LEGEND	
CLASSROOMS	17,030 NSF
SPECIALS	2,658 NSF
SPECIAL ED	2,895 NSF
MEDIA CENTER	1,579 NSF
PHYSICAL ED.	3,637 NSF
FOOD SERVICE	595 NSF
AUDITORIUM	688 NSF
ADMINISTRATION	3,058 NSF
BUILDING INFRA.	2,528 NSF
CIRCULATION	8,128 NSF
TOTAL	42,796 NSF

NET SQUARE FEET	
MAIN BUILDING	37,589 NSF
EXG. PORTABLE	1,697 NSF
PORTABLES	3,510 NSF
TOTAL	42,796 NSF

GROSS SQUARE FEET	
MAIN BUILDING	38,974 GSF
EXG. PORTABLE	1,800 GSF
"NEW" PORTABLES	3,696 GSF
TOTAL	44,470 GSF

BREWSTER OPTION A-4 FLOOR PLAN

SCALE: NTS

DRAFT 01.22.18

Regional School District 13
Facilities Restacking Study

BREWSTER ELEMENTARY SCHOOL
OPTION A-4

SILVER/PETRUCELLI + ASSOCIATES

BREWSTER OPTION A-4 SITE PLAN

SCALE: NTS

Regional School District 13

Facilities Restacking Study

BREWSTER ELEMENTARY SCHOOL

OPTION A-4

SILVER/PETRUCELLI + ASSOCIATES

Architects Engineers Planners/Designers

3100 Main St., Stamford, CT 06705-3540

Tel 203.359.0007 Fax 203.324.5237

info@spa-ae.com

DRAFT 01.22.18

Configuration B: Brewster Option 1- Plan Modifications

This option eliminates the portables and makes all the changes to the floor plan as in all the Option A schemes. The rework of the floor plan nets one classroom and makes accommodations to some of the other programs. However, the drawback with this plan is that if the high population occurs the school will be one classroom short. Although not desirable due to the small size of the Media Center, the computer room could be converted into the space. Refer drawing A1 on page 50 to review the proposed changes to the existing plan, but eliminate the addition.

BREWSTER ELEMENTARY SCHOOL - OPTION B-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1,800	$ 30		$ 54,000	
2 Classroom expansions	415	$ 350		$ 145,250	
1 Classroom modification - 2/3 spaces	1,303	$ 350		$ 456,050	
4 New classroom doors & wall demo	4	$ 6,500		$ 26,000	$ 681,300
OPTION TOTAL					$ 681,300

Configuration B: Brewster Option 2– Status quo

With no reimbursing on this project this option looks at staying the way it is to reduce cost. The building could remain as is and work. The portables would remain as the PreK classrooms and the building can function as is. This could occur at no cost.

Configuration C1: Brewster Option 1- Addition

This concept will refer to those in Option A-2. The needs are the same, but the classroom designations have changed to accommodate the change in grade configuration. The drawback with this concept is that the needs do not accommodate with the state reimbursable allowable square footage, creating less of reimbursement to the town. Refer to the floor plan on page 53 for a similar concept, however room labels would change to coordinate with the associated grades.

BREWSTER ELEMENTARY SCHOOL - OPTION C1-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
6 CLASSROOM ADDITION					
6 classroom addition	6,122	$ 500		**$ 3,061,000**	
Anticipated Reimbursement			52.5%	$ 1,607,025	
* reduction - exceed standards 2346 GSF			94.66%	$ (85,760)	
Anticipated RSD 13 Share				$ 1,539,735	$ 1,539,735
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1,800	$ 30		$ 54,000	
2 Classroom expansions	415	$ 350		$ 145,250	
1 Classroom modification - 2/3 spaces	1,303	$ 350		$ 456,050	
4 New classroom doors & wall demo	4	$6,500		$ 26,000	$ 681,300
OPTION TOTAL					**$ 2,221,035**

Configuration C2: Brewster Option 1 – Full Addition

Like Option C1, additional classrooms are needed. However, this configuration is not eligible for any state reimbursable due to the allowable square footage. However the best solution would be to remove the portables and add the 5 classrooms that are needed. This would achieve the quantity at a permanent quality but at full cost to the town. Refer to Option A-2 addition on page 53, but eliminate 1 classroom and existing floor plan modifications.

BREWSTER ELEMENTARY SCHOOL - OPTION C2-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
6 CLASSROOM ADDITION					
6 classroom addition	6,122	$ 500		$ 3,061,000	
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1,800	$ 30		$ 54,000	
OPTION TOTAL					$ 3,115,000

Configuration C2: Brewster Option 2 – 3 Class Addition

This option scales back the addition to reduce cost. The portables would remain to reduce the quantity of classrooms needed. No other interior modifications are made to reduce costs. Again, refer to the addition on Option A-2, page 53 and assume one bank of the three-classroom addition would be applied here.

BREWSTER ELEMENTARY SCHOOL - OPTION C2-2					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
3 CLASSROOM ADDITION					
3 classroom addition	3,061	$ 500		$ 1,530,500	$ 1,530,500
OPTION TOTAL					$ 1,530,500

Configuration C2: Brewster Option 3 – Relocate Portables

To reduce costs further, the district could relocate 2 portable classrooms on site and make the interior modifications to the floor plan to gain the 3rd classroom. This would accommodate the 18 classrooms.

BREWSTER ELEMENTARY SCHOOL - OPTION C2-3					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
2 CLASSROOM PORTABLES					
Existing 2 classroom portables relocated with new ramp connector	1	$ 520,000		$ 520,000	$ 520,000
EXISTING CLASSROOM MODIFICATIONS					
2 Classroom expansions	415	$ 350		$ 145,250	
1 Classroom modification - 2/3 spaces	1,303	$ 350		$ 456,050	
4 New classroom doors & wall demo	4	$ 6,500		$ 26,000	$ 627,300
OPTION TOTAL					$ 1,147,300

Configuration C3: Brewster Option 1 - 3 Classroom Addition

This option needs leaves the existing plan as is, removes the portables and adds 3 new classrooms. This is the same in option C2-2. Again refer to the addition on Option A-2, page 53 and assume one bank of the three classroom additions would be applied here. This configuration is not eligible for any state reimbursable allowable square footage, keeping it at full cost to the town.

BREWSTER ELEMENTARY SCHOOL - OPTION C3-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
3 CLASSROOM ADDITION					
3 classroom addition	3,061	$ 500		$ 1,530,500	
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1,800	$ 30		$ 54,000	
OPTION TOTAL					$ 1,584,500

Configuration C3: Brewster Option 2 - Keep Portables & Modifications

This option needs one additional classroom, so the portables remain and interior rework of the floor plan as in other options is recommended. It will gain one classroom to meet the needs and accommodate other programs more efficiently. Refer drawing A1 on page 50 to review the proposed changes to the existing plan, but eliminate the addition. This configuration is not eligible for any state reimbursable allowable square footage, creating a higher cost to the town.

BREWSTER ELEMENTARY SCHOOL - OPTION C3-2					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
EXISTING CLASSROOM MODIFICATIONS					
2 Classroom expansions	415	$ 350		$ 145,250	
1 Classroom modification - 2/3 spaces	1,303	$ 350		$ 456,050	
4 New classroom doors & wall demo	4	$ 6,500		$ 26,000	$ 627,300
OPTION TOTAL					$ 627,300

Configuration C4: Brewster Option 1 - Keep Portables & Renovate

This option still recommends reworking the existing floor plan modifications, as it will gain one classroom to meet the needs and accommodate other programs more efficiently. The portables remain until a time when they may not be needed. Refer drawing A1 on page 50 to review the proposed changes to the existing plan, but eliminate the addition.

BREWSTER ELEMENTARY SCHOOL - OPTION C4-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
EXISTING CLASSROOM MODIFICATIONS					
2 Classroom expansions	415	$ 350		$ 145,250	
1 Classroom modification - 2/3 spaces	1,303	$ 350		$ 456,050	
4 New classroom doors & wall demo	4	$ 6,500		$ 26,000	$ 627,300
OPTION TOTAL					$ 627,300

Configuration C4: Brewster Option 1 – Status quo

This option leaves the existing floor plan as is.

Memorial School Options

The study is evaluating the concept of Memorial becoming a Grade 3 - 5 school along with variations of Kindergarten-4 configurations. As discussed with Brewster, many towns that operate in this type of configuration (PreK-2 and 3-5). It is similar to the structure at Memorial with the elimination of sixth grade and addition of third grade. Again, the more significant change is that all the RSD 13 grade 3-5 students and staff will now be under one roof operating under one program together.

Memorial will serve the district well as the Intermediate school. The school is arranged in a traditional manner. The original east wing has larger classrooms and student cubbies within the room, making it a good transition for youngsters. The west wing set up with lockers, better for the older students. The gymnasium is larger which will accommodate this age group well. The school layout works well with classroom wings and the "main street wing" containing all the specials and shared resources. Memorial is a highly suitable fit for the Grade 3 – Grade 5 Intermediate School.

Memorial currently has 330 students while the projection indicates 320-354 students under this configuration. There is not a true need for classrooms here as the population change is not drastic. The review of the highest and lowest projections only gains one classroom. The MMI projections also indicate that this age group will stabilize within the community. Working off the 16-classroom requirement the recommendation would be to remove the portables and renovate the old unused locker room as the permanent solution.

According to the Connecticut School Construction Standards and Guidelines, Memorial is oversized and therefore would not be eligible for any reimbursement. A simple modification such as this is not reimbursable regardless of school size. If the district choses to do any modifications to this school, it would be at full cost. However, renovating one classroom to better utilize existing space and eliminate the need to maintain and provide utilities to the older 2 portable classrooms may prove to be more a more economical and better solution for all.

Additional concepts are being explored to understand if this option is the best solution for the district. Option B explores a shift in grade structure, creating a Grades 2-4 Intermediate School. Option C1 explores the concept of the originals studies goal of and Integrated Day elementary school, which would require work to accommodate Kindergarten. Option C2 creates an equal split between the two elementary schools, however this does not maximize the use a Memorial and creates a need for additional classrooms. Therefore, C3 studies the concept of PreK moving to Memorial. This creates an issue as does Kindergarten with the undersized classrooms and lack of restrooms. Finally, C4 looks to maximize the space by still approaching an equal split between the K-3 grades at each school but relocating the entirety of grade 4 to Memorial.

Configuration A: Memorial Option 1 – Renovate Room

This concept is a rather simple conversion limiting the options to be explored. First, the district could choose to do nothing and operate as is. With 17 classrooms in place and only 16 needed the school could be converted to this new configuration tomorrow. However, the recommendation, Option 1, is to demolish the portables and renovate the unused locker room. The locker room located in the west wing and as previously mentioned this wing would serve the third-grade population well. Six classrooms clustered together would be ideal. If in the future this classroom is not needed as a third-grade room it could be used as a multitude of classrooms such as the Health room, a Science room, a Music room, or a Special Education room. Utilizing existing space is a key factor within this study and Memorial is a prime example of a school not utilizing its existing space.

MEMORIAL SCHOOL - OPTION A-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
1 CLASSROOM RENOVATION					
Convert locker room into classroom	834	$ 350		$ 291,900	
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1800	$ 30		$ 54,000	
OPTION TOTAL					$ 345,900

Configuration A: Memorial Option 2 – Status quo

This option leaves the existing floor plan as is.

Configuration B: Memorial Option 1 - Renovate Room, Consolidate SPED

This option explores maximizing the existing space to accommodate the population. Here we recommend eliminating the portables and recreating the two rooms within the existing building. The first is the old locker underutilized locker room in the east wing and additionally if the Special Ed class 14 is split then the Sped room 23 could share the space creating an additional classroom in the east wing. Now the building could support the required general classrooms.

MEMORIAL SCHOOL - OPTION B-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
1 CLASSROOM RENOVATION					
Convert locker room into classroom	834	$ 350		$ 291,900	
Convert large Sped into 2	1,067	$ 350		$ 373,450	
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1800	$ 30		$ 54,000	
OPTION TOTAL					$ 427,450

Configuration B: Memorial Option 2 - Status Quo

The current configuration with the portables could be left as is to support this concept.

PROGRAM LEGEND	
CLASSROOMS	12,078 NSF
SPECIALS	4,072 NSF
SPECIAL ED	4,315 NSF
MEDIA CENTER	2,786 NSF
PHYSICAL ED.	3,742 NSF
FOOD SERVICE	2,944 NSF
AUDITORIUM	1,189 NSF
ADMINISTRATION	2,555 NSF
BUILDING INFRA.	4,014 NSF
CIRCULATION	10,452 NSF
TOTAL	48,147 NSF

NET SQUARE FEET	
MAIN BUILDING	48,147 NSF
TOTAL	48,147 NSF

GROSS SQUARE FEET	
MAIN BUILDING	49,496 GSF
TOTAL	49,496 GSF

MEMORIAL OPTION A-1 FLOOR PLAN

SCALE: NTS

DRAFT 01.22.18

Regional School District 13
Facilities Restacking Study

MEMORIAL MIDDLE SCHOOL
OPTION A-1

SILVER/PETRUCELLI + ASSOCIATES

PROGRAM LEGEND	
CLASSROOMS	12,780 NSF
SPECIALS	4,072 NSF
SPECIAL ED	3,613 NSF
MEDIA CENTER	2,786 NSF
PHYSICAL ED.	3,742 NSF
FOOD SERVICE	2,944 NSF
AUDITORIUM	1,189 NSF
ADMINISTRATION	2,555 NSF
BUILDING INFRA.	4,014 NSF
CIRCULATION	10,452 NSF
TOTAL	48,147 NSF

NET SQUARE FEET	
MAIN BUILDING	48,147 NSF
TOTAL	48,147 NSF

GROSS SQUARE FEET	
MAIN BUILDING	49,496 GSF
TOTAL	49,496 GSF

MEMORIAL OPTION B-1 FLOOR PLAN

SCALE: NTS

DRAFT 01.22.18

Regional School District 13
Facilities Restacking Study

MEMORIAL MIDDLE SCHOOL
OPTION B-1

SILVER / PETRUCELLI + ASSOCIATES

Configuration C1: Memorial Option 1- Remove Portables & K toilets

The new population under this concept requires 15 general classrooms to support the educational needs. The current configuration is using 17 classrooms and there are 15 classrooms within the existing building. The recommendation would be to eliminate the portables as there will no longer be a need for them. Furthermore with the addition of Kindergarten at this school restrooms need to be added into each of the three Kindergarten classrooms. It must be noted that these rooms are already undersized for Kindergarten classroom needs and the restroom square footage will continue to reduce this size.

MEMORIAL SCHOOL - OPTION C-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1800	$ 30		$ 54,000	
KINDERGARTEN ACCOMODATIONS					
Add toilets to 3 classrooms	3	$ 50,000		$ 150,000	
OPTION TOTAL					$ 204,000

Configuration C2: Memorial Option 1 - Remove Portables, Renovate Room, & Add Kindergarten toilets

This concept is like A-1. The portables are not required if the old locker room is renovated. This would bring everyone into the building eliminating the need for the portables. However with the addition of Kindergarten at this school restrooms need to be added into each of the three Kindergarten classrooms. It must be noted that these rooms are already undersized for Kindergarten classroom needs and the restroom square footage will continue to reduce this size. See Option C1-1 floor plan on page 72 for these restroom configurations. See Option A1-1floor plan on page 68 for locker room to classroom renovation.

MEMORIAL SCHOOL - OPTION C2-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
1 CLASSROOM RENOVATION					
Convert locker room into classroom	834	$ 350		$ 291,900	
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1800	$ 30		$ 54,000	
KINDERGARTEN ACCOMODATIONS					
Add toilets to 3 classrooms	3	$ 50,000		$ 150,000	
OPTION TOTAL					$ 495,900

PROGRAM LEGEND	
CLASSROOMS	11,017 NSF
SPECIALS	4,072 NSF
SPECIAL ED	4,315 NSF
MEDIA CENTER	2,786 NSF
PHYSICAL ED.	3,742 NSF
FOOD SERVICE	2,944 NSF
AUDITORIUM	1,189 NSF
ADMINISTRATION	2,555 NSF
BUILDING INFRA.	5,075 NSF
CIRCULATION	10,452 NSF
TOTAL	48,147 NSF

NET SQUARE FEET	
MAIN BUILDING	48,147 NSF
TOTAL	48,147 NSF

GROSS SQUARE FEET	
MAIN BUILDING	49,496 GSF
TOTAL	49,496 GSF

MEMORIAL OPTION C1-1 FLOOR PLAN

SCALE: NTS

Regional School District 13
Facilities Restacking Study

MEMORIAL MIDDLE SCHOOL
OPTION C1-1

SILVER PETRUCELLI + ASSOCIATES

Configuration C3: Memorial Option 1 - Renovate Room, Add PreK & Kindergarten toilets

This concept keeps the portables and renovates the old locker room to gain the 18 classrooms. With the addition of both PreK and kindergarten classrooms, 5 toilets must be added to the existing classrooms. It must be noted that these rooms are already undersized for Kindergarten classroom needs and the restroom square footage will continue to reduce this size. See Option C1-1 floor plan on page 72 for these restroom configurations. See Option A1-1floor plan on page 68 for locker room to classroom renovation.

MEMORIAL SCHOOL - OPTION C3-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
1 CLASSROOM RENOVATION					
Convert locker room into classroom	834	$ 350		$ 291,900	
PREK & KINDERGARTEN ACCOMODATIONS					
Add toilets to 6 classrooms	6	$ 50,000		$ 300,000	
OPTION TOTAL					$ 591,900

Configuration C3: Memorial Option 2 - Renovate Room, Kindergarten toilets, Demo portables & Add 2 PreK classrooms

This concept r renovates the old locker room. Instead of keeping the 2 classroom portables a permanent 2-classroom addition to support the PreK population is introduced. These rooms are configured at a more fitting size and include the restrooms.

MEMORIAL SCHOOL - OPTION C3-2					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
1 CLASSROOM RENOVATION					
Convert locker room into classroom	834	$ 350		$ 291,900	
EXISTING CLASSROOM MODIFICATIONS					
Portable demolition	1800	$ 30		$ 54,000	
KINDERGARTEN ACCOMODATIONS					
Add toilets to 4 classrooms	4	$ 50,000		$ 200,000	
PREK ADDITION					
2 PreK classroom addition	2,707	$ 500		$ 1,353,500	
OPTION TOTAL					$ 1,899,400

Configuration C4: Memorial Option 1 – Reno room keep portables

This concept requires keeping the portables and renovating the locker room to accommodate 18 classrooms. Additionally, with the Kindergarten at this school restrooms need to be added into each of the three Kindergarten classrooms. It must be noted that these rooms are already undersized for Kindergarten classroom needs and the restroom square footage will continue to reduce this size. See Option C1-1 floor plan on page 72 for these restroom configurations. See Option A1-1floor plan on page 68 for locker room to classroom renovation.

MEMORIAL SCHOOL - OPTION C4-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
1 CLASSROOM RENOVATION					
Convert locker room into classroom	834	$ 350		$ 291,900	
KINDERGARTEN ACCOMODATIONS					
Add toilets to 3 classrooms	3	$ 50,000		$ 150,000	
OPTION TOTAL					$ 441,900

PROGRAM LEGEND	
CLASSROOMS	13,869 NSF
SPECIALS	4,072 NSF
SPECIAL ED	4,315 NSF
MEDIA CENTER	2,786 NSF
PHYSICAL ED.	3,742 NSF
FOOD SERVICE	2,944 NSF
AUDITORIUM	1,189 NSF
ADMINISTRATION	2,555 NSF
BUILDING INFRA.	4,014 NSF
CIRCULATION	11,281 NSF
TOTAL	50,767 NSF

NET SQUARE FEET	
MAIN BUILDING	48,147 NSF
ADDITON	2,620 NSF
TOTAL	50,767 NSF

GROSS SQUARE FEET	
MAIN BUILDING	49,496 GSF
ADDITON	2,707 GSF
TOTAL	52,203 GSF

MEMORIAL OPTION C3-2 FLOOR PLAN

SCALE: NTS

DRAFT 01.22.18

Regional School District 13

Facilities Restacking Study

MEMORIAL MIDDLE SCHOOL

OPTION C3-2

SILVER/PETRUCELLI + ASSOCIATES

Strong Middle School Options

This study is evaluating the concept of Strong becoming a Grade 6 through Grade 8 Middle School. This concept has been discussed over the years. Many believe 6th grade is a better fit in the middle school, aligning curriculum and providing more appropriate academic opportunities. With the potential shift to one district wide program, moving 6th grade makes even more sense. With the declining enrollment of the middle school population the space in Strong allows for an easy transition.

Strong Middle School will serve the community well as a traditionally configured middle school. The school is set up incredibly well to support the addition of the sixth grade. Currently there are three wings; one for Grade 7, one for Grade 8 and one for the Integrated Day program. With this shift the three wings can be organized per grade. Additionally, there are dedicated science labs in each wing. The sixth grade will now have access to a modern media center, technology labs, more appropriate art and music spaces, world language opportunities and a full-size gymnasium with locker rooms. Strong is the perfect fit for the district's Middle School.

Strong currently has 287 students while the projections indicate 338-418 students under this configuration. Here the review of the highest and lowest projections nets three classrooms. However, there are enough classrooms at this school to accommodate the population. As discussed, each wing will be set up to serve each grade. Additionally, an overflow of students can be accommodated in the world language rooms. Additional flexibility is available with the adjacent Media Center classroom and lower level computer lab. If the population does grow and the need arises the corridor alcove could also be converted into classrooms. Based on the projections there is adequate space at this school.

According to the Connecticut School Construction Standards and Guidelines, Strong is oversized and therefore would not be eligible for any reimbursement. Any simple modifications are typically not reimbursable regardless of the school size. If the district choses to do any modifications to this school, it would be at their cost.

Additionally, the concept of Strong becoming a grade 5-7 middle school is evaluated. With the space in the High School being sufficient to accommodate the 8th grade population, Strong can accommodate the 5th -7th population. This permits both Brewster and Memorial to make use of their existing space. This configuration isn't typical however it can operate well.

Configuration A: Strong Option 1 - Life Skills Renovation

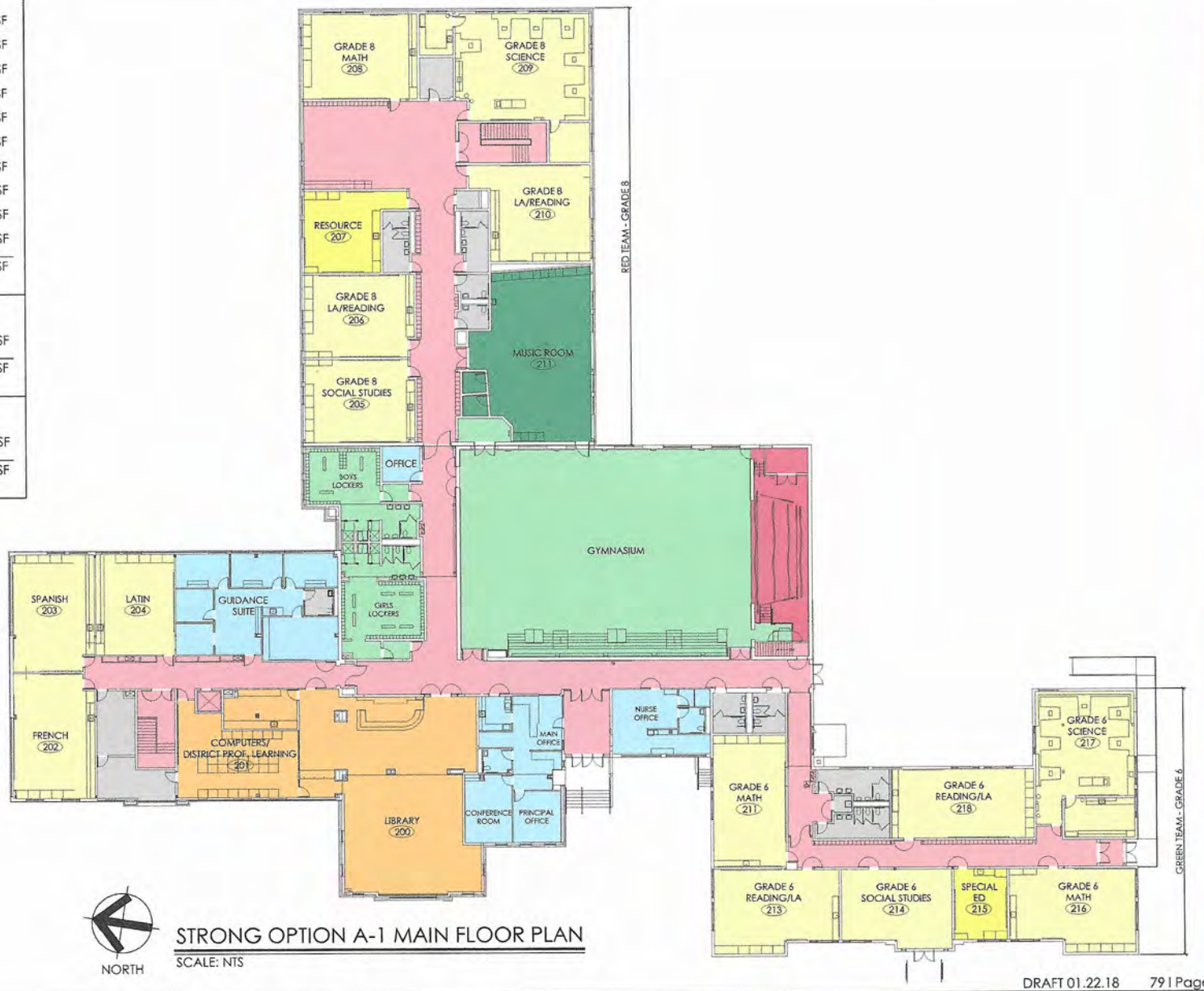
The classrooms exist, and no work is truly needed to make this shift, however there are always opportunities to expand programs or re-purpose classrooms. The main recommendation is to find a more permanent location for Life Skills. This year Strong has seen a larger population. It is our experience that most middle schools have a life skills room with a full kitchen and laundry and often an attached restroom. Many also have a bed, dresser, and couch setup. The idea is to create a studio apartment set up with enough space to accommodate a small class size. The Health/FSC Room 103 has an attached room with 4 kitchens and laundry set up which is underutilized and would serve the school well as a life skills room. This concept of adding Grade 6 is a simple conversion with the relabeling of classrooms. The following layout is a representation of how the organization could be modified and how the wings can accommodate each grade level population along with the potential fit out of the recommended life skills room.

STRONG MIDDLE SCHOOL - OPTION A-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
1 CLASSROOM RENOVATION					
Convert FSC kitchen space into life skills classroom	487	$ 350		$ 170,450	
OPTION TOTAL					$ 170,450

PROGRAM LEGEND	
CLASSROOMS	17,454 NSF
SPECIALS	8,177NSF
SPECIAL ED	3,421 NSF
MEDIA CENTER	3,698 NSF
PHYSICAL ED.	6,913 NSF
FOOD SERVICE	6,313 NSF
AUDITORIUM	912 NSF
ADMINISTRATION	4,566 NSF
BUILDING INFRA.	7,679 NSF
CIRCULATION	15,638 NSF
TOTAL	74,433 NSF

NET SQUARE FEET	
MAIN BUILDING	74,433 NSF
TOTAL	74,433 NSF

GROSS SQUARE FEET	
MAIN BUILDING	77,582 GSF
TOTAL	77,582 GSF



STRONG OPTION A-1 MAIN FLOOR PLAN

SCALE: NTS

Regional School District 13
Facilities Restacking Study

STRONG MIDDLE SCHOOL
OPTION A-1

SILVER / PETRUCELLI + ASSOCIATES

Configuration B&C: Option 1 - Life Skills Renovation

The same concept is recommended regardless of 5th or 8th in the building. The population and needs remain comparable. The life skills room would still be an assets to this school. However it can be eliminated and this can be done at no cost if desired. Refer to Option A-1 floor plan and assume the classroom labels would change from 8th to 5th grade.

STRONG MIDDLE SCHOOL - OPTION B&C					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
1 CLASSROOM RENOVATION					
Convert FSC kitchen space into life skills classroom	487	$ 350		$ 170,450	
OPTION TOTAL					$ 170,450

Coginchaug High School Options

This study is evaluating numerous concepts on how Coginchaug can utilize its space as the enrollment declines. There have been many suggestions and options discussed by committees and administration alike. There is no clear direction or option to follow at this school. At a recent tour of the building, the school seemed well utilized, but with the diminishing student population it appears there will be some spare space available. The building could remain status quo and continue to operate as is or something can be done to address this additional space. The question remains how can the school and community utilize this space best?

The first question is, should the space remain and serve the high school? There are numerous ways that the space can continue to be utilized for educational purposes.

The next question is, if it doesn't go to the school itself what else could the extra space be converted to? There have been many suggestions made below.

- Senior Center
- Develop a community wing over the next 5-7 years
- Provide alternative education program, bring kids back into the district
- Create an international partnership
- Create a relationship with a local business – sublease space and create a partnership to benefit student education
- Provide Health Services
- Offer new programs like magnet schools to keep children in the district
- Work with local community colleges or universities
- Create a regional suspension center
- Provide a childcare program
- Provide a program to help with anxiety and school avoidance, etc.

Some options may benefit the town while others may benefit the school. All are viable, but all are difficult to separate from the remainder of the school. There are two options to do so, allocating over 3,500-net square feet for these potential uses. This would likely come at a higher expense to achieve the necessary separation and accommodations.

Configuration A: Coginchaug Option 1 – Expand Programs & Classrooms

One option discussed is the potential of enlarging some of the existing classrooms. The existing classrooms are in the 680-net square foot range when 900-net square feet is desired. As traditional lecture style learning is shifting to a more collaborative style, larger classrooms that allow for flexible furniture to be shifted and placed in multiple layouts is preferred. Since some of these classrooms won't be needed it could create the opportunity to expand some and even create some smaller break out spaces. These classrooms are only separated with thin walls, likely constructed out of three layers of sheetrock on tracks. The removal maybe simple and not too costly. Additionally, available space creates opportunities to provide educational programs. Again, the evolving education creates new needs and the school is interested in creating additional opportunities for students to achieve greater experiences. Advanced programs such as an innovation lab, a coding library and a robotics lab have been discussed. Additionally, there are requests for a lecture hall for 120 students, smaller meeting areas and opportunities for interdisciplinary studies. Some of these examples are implemented into the following floor plan.

COGINCHAUG SCHOOL - OPTION A-1					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
PROGRAM & CLASSROOM EXPANSION					
Innovation Lab	2,112	$ 350		$ 739,200	
2 classroom expansion and meeting space	2,763	$ 250		$ 690,750	
Coding Library	691	$ 150		$ 103,650	**$ 1,533,600**
OPTION TOTAL					$ 1,533,600

Configuration A: Coginchaug Option 2 – Extra space converts to other use

This option takes over the Tech Ed/wood shop and photo lab. This location is best for creating separation and providing existing parking access. However, giving up these classrooms will be a significant loss to the school. These spaces have specialty infrastructure such as mechanical, plumbing, and electrical systems, along with high ceilings and equipment that will be a challenge and a cost to replace elsewhere.

COGINCHAUG SCHOOL - OPTION A-2					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
REPURPOSE & RELOCATE WOODSHOP/PHOTO					
Town Space Conversion	3,670	$ 350		$ 1,284,500	
Classrooms to Photo Lab	1,392	$ 350		$ 487,200	
Classrooms to Tech/Wood Shop	2,114	$ 350		$ 739,900	**$ 2,511,600**
OPTION TOTAL					$ 2,511,600

Configuration A: Coginchaug Option 3 – Extra space converts to other use

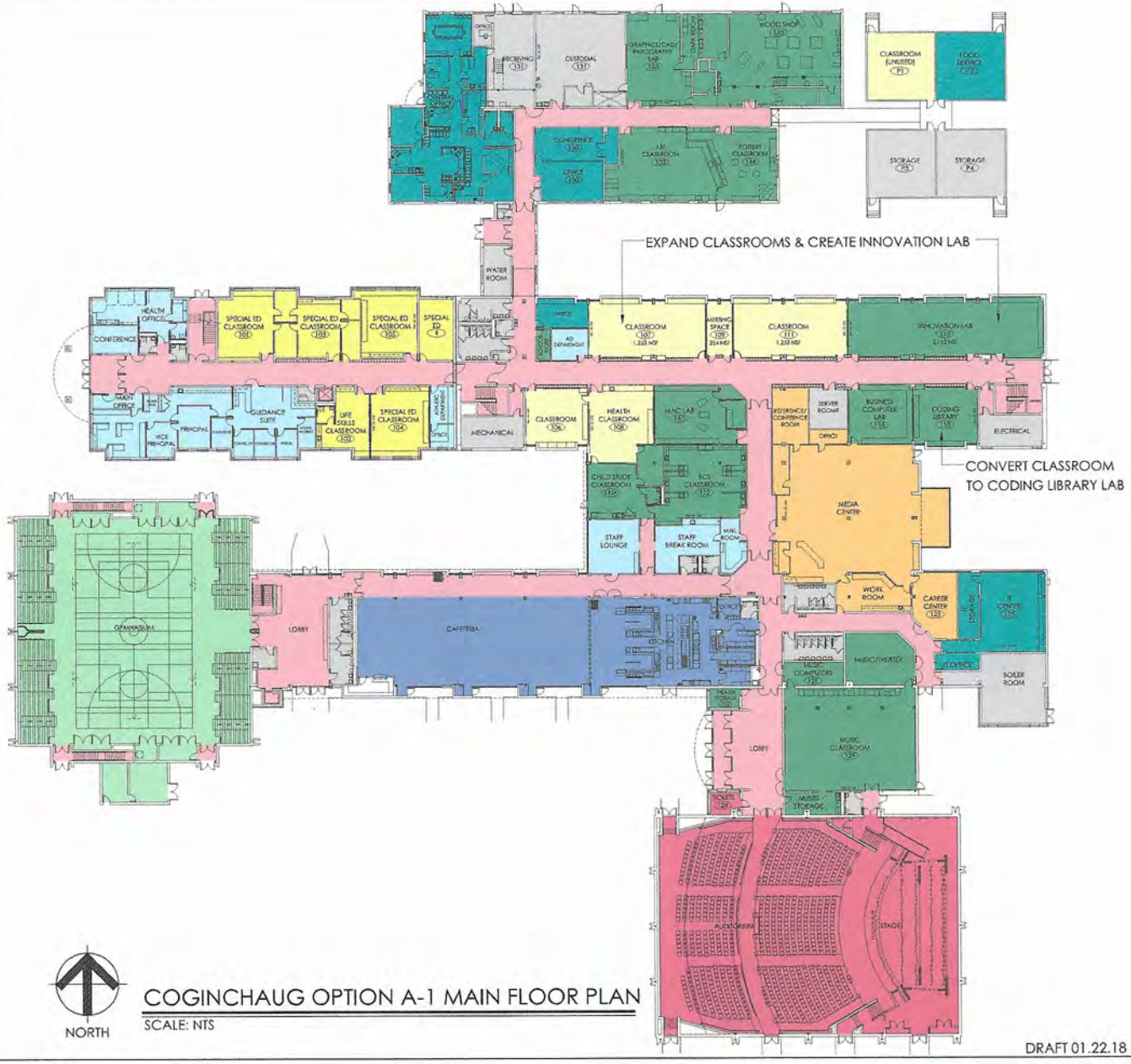
This option takes over a bank of classrooms on the main level at the rear of the building. The doors to the corridor can be infilled to remove school access for safety and separation. If a school affiliate program is introduced in this location, some school access can be incorporated. Under the current plan shown, only exterior doors allow for access to the space. To make accommodations the portables would be demolished, and a parking area would need to be created.

COGINCHAUG SCHOOL - OPTION A-3					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
CONVERT CLASSROOMS TO TOWN					
Town Space Conversion	3,505	$ 350		$ 1,226,750	
Demolish Portables	3,600	$ 30		$ 108,000	
Create Parking & side walks				$ 86,000	**$ 1,420,750**
OPTION TOTAL					$ 1,420,750

PROGRAM LEGEND	
CLASSROOMS	22,650 NSF
SPECIALS	15,962 NSF
SPECIAL ED	3,989 NSF
MEDIA CENTER	4,491 NSF
PHYSICAL ED.	19,150 NSF
FOOD SERVICE	6,500 NSF
AUDITORIUM	12,057 NSF
ADMINISTRATION	6,025 NSF
CENTRAL OFFICE	6,258 NSF
BUILDING INFRA.	10,888 NSF
CIRCULATION	28,017 NSF
TOTAL	135,987 NSF

NET SQUARE FEET	
MAIN BUILDING	132,565 NSF
PORTABLES	3,422 NSF
TOTAL	135,987 NSF

GROSS SQUARE FEET	
MAIN BUILDING	138,579 GSF
PORTABLES	3,600 GSF
TOTAL	142,179 GSF



COGINCHAUG OPTION A-1 MAIN FLOOR PLAN

SCALE: NTS

DRAFT 01.22.18

Regional School District 13
Facilities Restacking Study

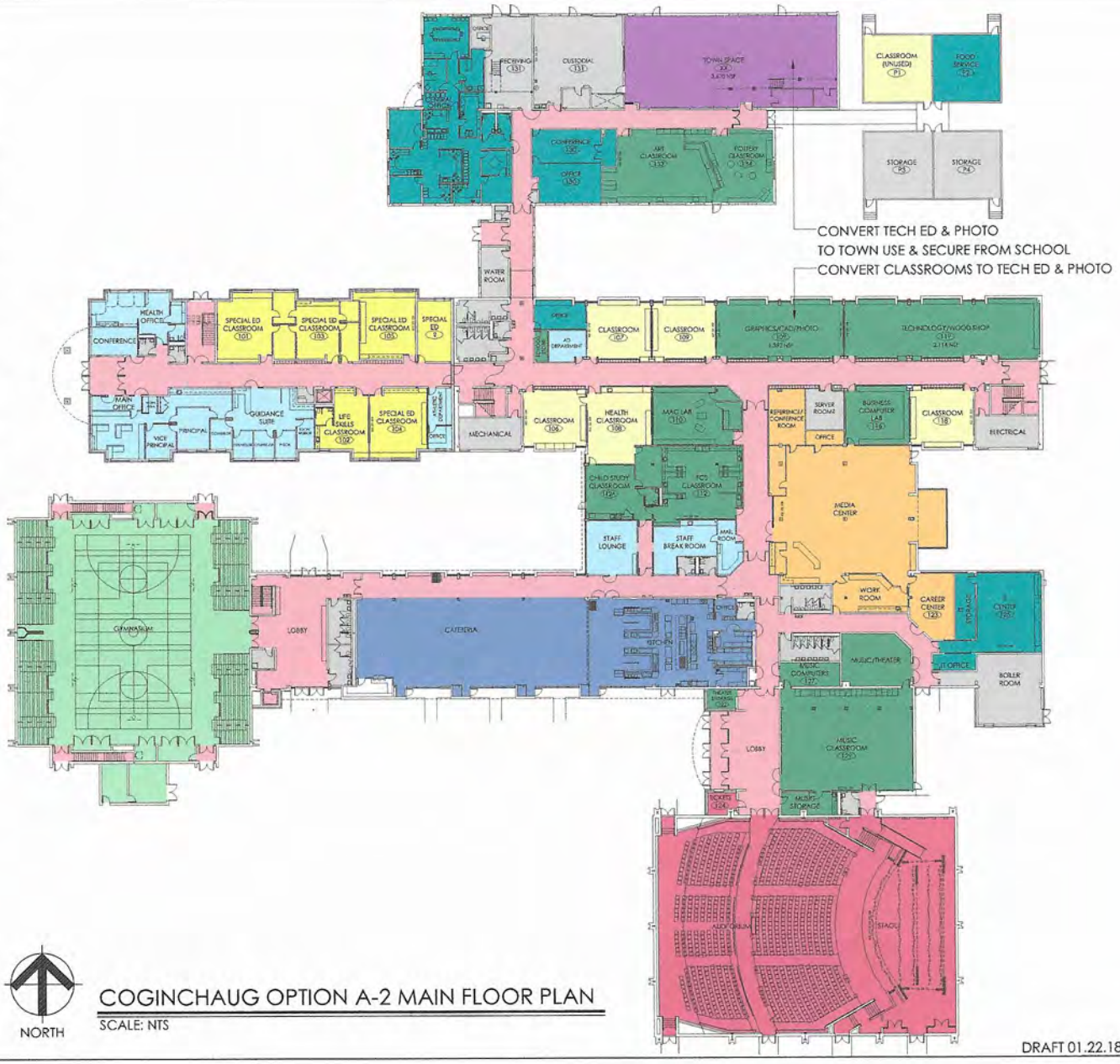
COGINCHAUG HIGH SCHOOL
OPTION A-1

SILVER / PETRUCELLI + ASSOCIATES

PROGRAM LEGEND	
CLASSROOMS	21,947 NSF
SPECIALS	12,995 NSF
SPECIAL ED	3,989 NSF
MEDIA CENTER	4,491 NSF
PHYSICAL ED.	19,150 NSF
FOOD SERVICE	6,500 NSF
AUDITORIUM	12,057 NSF
ADMINISTRATION	6,025 NSF
CENTRAL OFFICE	6,258 NSF
BUILDING INFRA.	10,888 NSF
CIRCULATION	28,017 NSF
TOWN/OTHER	3,670 NSF
TOTAL	135,987 NSF

NET SQUARE FEET	
MAIN BUILDING	132,565 NSF
PORTABLES	3,422 NSF
TOTAL	135,987 NSF

GROSS SQUARE FEET	
MAIN BUILDING	138,579 GSF
PORTABLES	3,600 GSF
TOTAL	142,179 GSF



NORTH

COGINCHAUG OPTION A-2 MAIN FLOOR PLAN

SCALE: NTS

Regional School District 13
Facilities Restacking Study

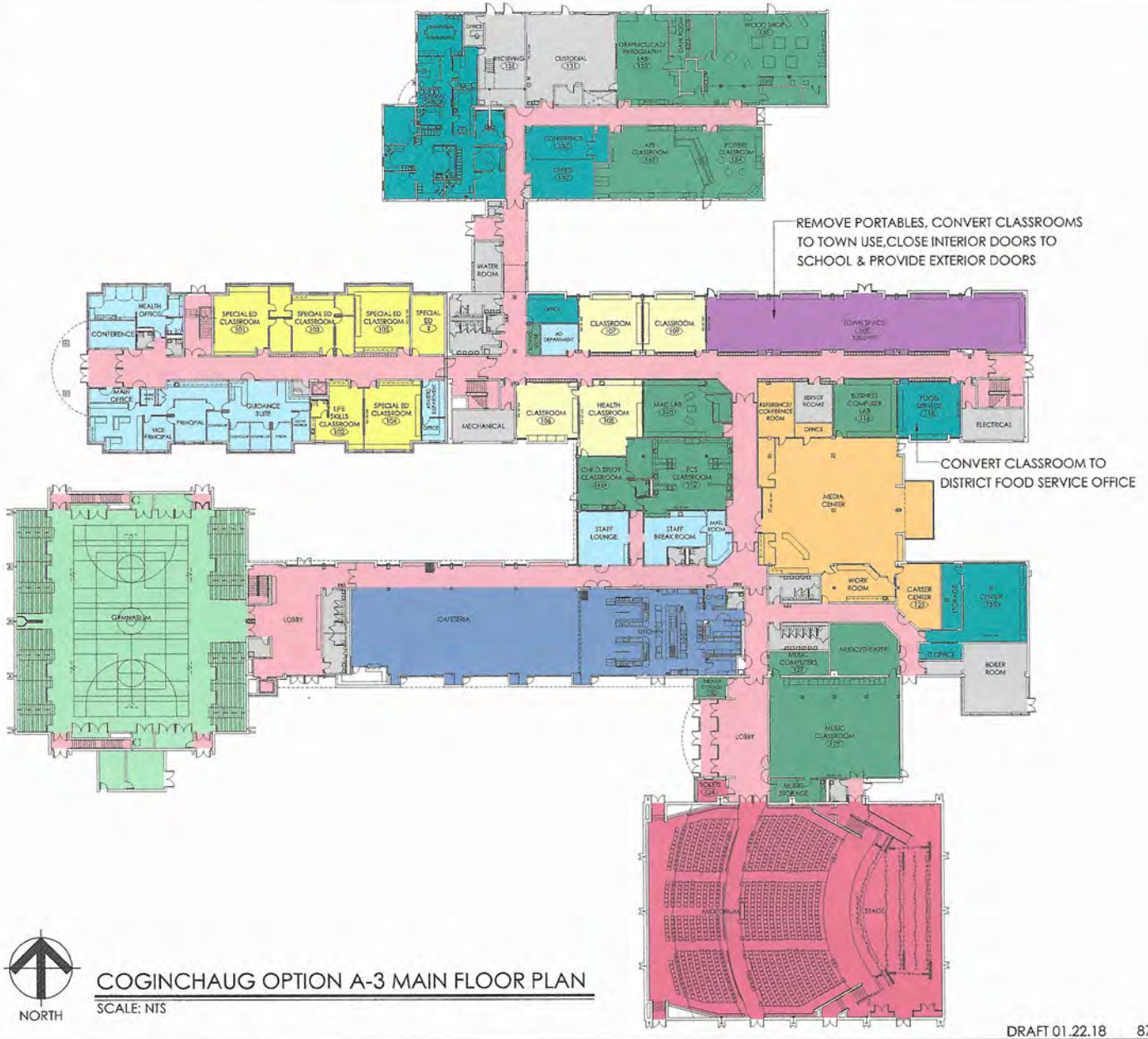
COGINCHAUG HIGH SCHOOL
OPTION A-2

SILVER/PETRUCELLI + ASSOCIATES

PROGRAM LEGEND	
CLASSROOMS	21,092 NSF
SPECIALS	13,159 NSF
SPECIAL ED	3,989 NSF
MEDIA CENTER	4,491 NSF
PHYSICAL ED.	19,150 NSF
FOOD SERVICE	6,500 NSF
AUDITORIUM	12,057 NSF
ADMINISTRATION	6,025 NSF
CENTRAL OFFICE	6,094 NSF
BUILDING INFRA.	9,177 NSF
CIRCULATION	28,017 NSF
TOWN/OTHER	3,506 NSF
TOTAL	132,565 NSF

NET SQUARE FEET	
MAIN BUILDING	132,565 NSF
TOTAL	132,565 NSF

GROSS SQUARE FEET	
MAIN BUILDING	138,579 GSF
TOTAL	138,579 GSF



NORTH

COGINCHAUG OPTION A-3 MAIN FLOOR PLAN

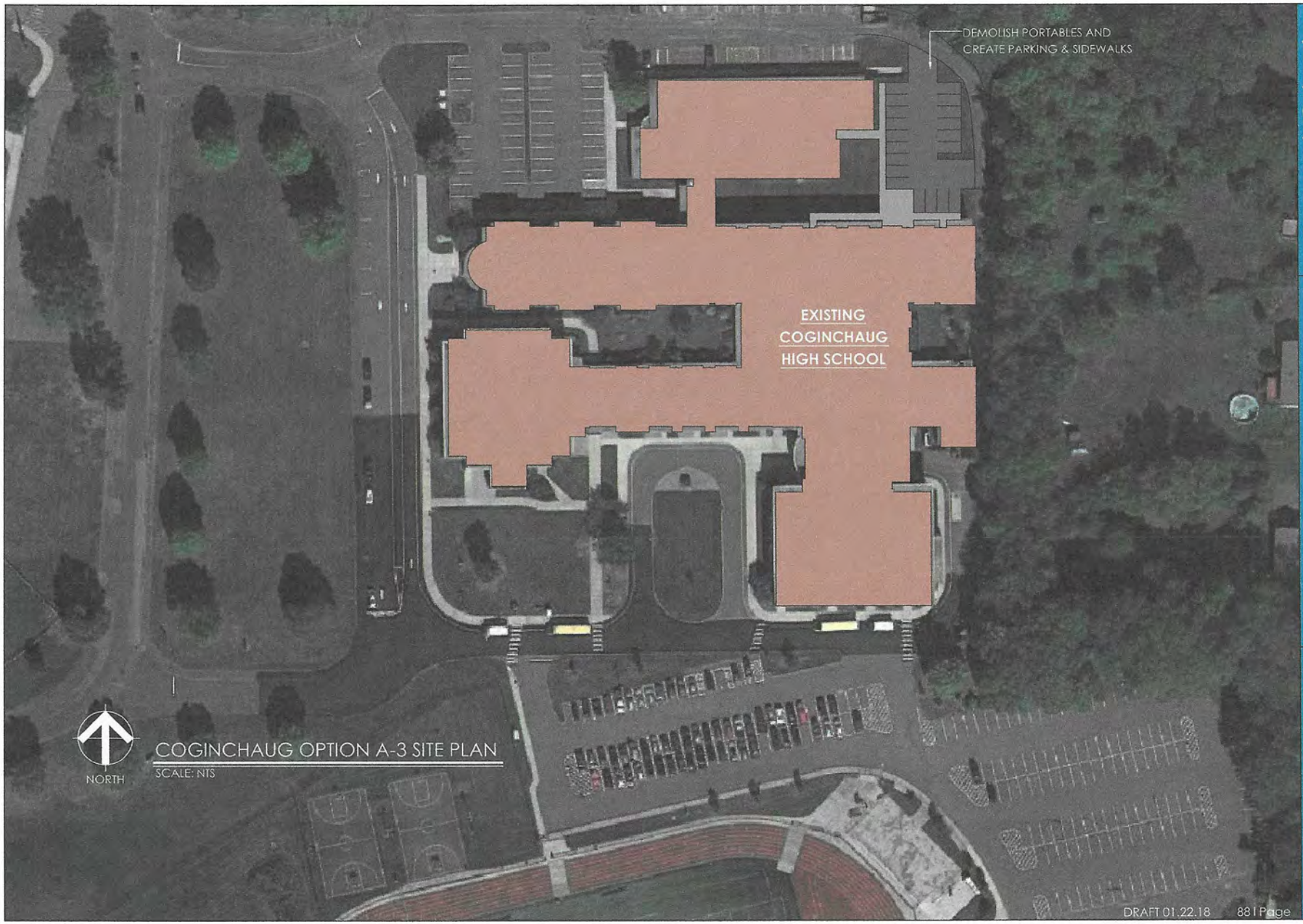
SCALE: NTS

DRAFT 01.22.18

Regional School District 13
Facilities Restacking Study

COGINCHAUG HIGH SCHOOL
OPTION A-3

SILVER PETRUCELLI + ASSOCIATES



COGINCHAUG OPTION A-3 SITE PLAN

SCALE: NTS

Regional School District 13

Facilities Restacking Study

COGINCHAUG HIGH SCHOOL

OPTION A-3

SILVER · PETRUCELLI + ASSOCIATES

Architects · Engineers · Interior Designers

Configuration B&C: Coginchaug Option 1 – 8th Grade

The second question is, what if Grade 8 transitioned into the high school? Section II of this report, evaluated the classroom count and it indicates there are technically enough classrooms to house all the students. However, it does not address any other scheduling criteria aside from adding an additional lunch wave to accommodate these students. These students cannot be separated and would not have a separate house. This option unfavorably creates a ripple effect of unconventional grade structures throughout the district and likely would not benefit the students, staff and community; Brewster as a PreK- Grade 1, Memorial as a Grade 2-4 and Strong as a Grade 5-7. This is not typical nor is it ideal for the grade organizations, it does not promote the best educational platform. However, this option is the most economically beneficial therefore worth the review and analysis. The following floor plan shows classrooms on the lower level that could be dedicated to Grade 8. However, the science labs are on the second floor and specials are located throughout the school. They would not be separated. School scheduling would also need to be vetted by the school administration to understand the cause and effect this added grade will have on scheduling specials, physical education, and other necessary accommodations. In short, the students would fit into the high school and if each grade is then restructured to follow, it would eliminate the need to add on to Brewster, eliminating cost. However, the only positive aspect of this solution is the low cost. The school experience and community aspects appear not to favor this option.

COGINCHAUG SCHOOL - OPTION B&C					
Design Option Projects	Area or Quantity	Cost Per Sq ft	Percent	Subtotal	Totals
8TH GRADE RELOCATION					
6 Classroom designation	4,134	$ 25		$ 103,350	
OPTION TOTAL					$ 103,350

Regional School District 13 Facilities Restacking Study Financial Comparison of Options											
Configuration		Brewster				Memorial		Strong	Coginchaug		
Option A	B=pk-2 M=3-5 S=6-8 C=9-12	A-1	A-2	A-3	A-4	A-1	A-2	A-1	A-1	A-2	A-3
		$2,151,734	$2,135,275	$1,976,620	$1,667,300	$345,900	$0	$170,450	$1,533,600	$2,511,600	$1,420,750
Option B	B=pk-1 M=2-4 S=5-7 C=8-12	B-1	B-2			B-1	B-2	B-1	B-1		
		$681,300	$0			$427,450	$0	$170,450	$103,350		
Option C1	B=C pk-4 M=ID k-4 S=5-7 C=8-12	C1-1	C1-2			C1-1	C1-2	C1-1	C1-1		
		$2,221,035				$204,000		$170,450	$103,350		
Option C2	B=pk-4 M=k-4 S=5-7 C=8-12	C2-1	C2-2	C2-3		C2-1		C2-1	C2-1		
		$3,115,000	$1,530,500	$1,147,300		$495,900		$170,450	$103,350		
Option C3	B=k-4 M=pk-4 S=5-7 C=8-12	C3-1	C3-2			C3-1	C3-2	C3-1	C3-1		
		$1,584,500	$627,300			$591,900	$1,899,400	$170,450	$103,350		
Option C4	B=pk-3 M=k-4 S=5-7 C=8-12	C4-1	C4-2			C4-1		C4-1	C4-1		
		$627,300	$0			$441,900		$170,450	$103,350		

Option Conclusions

The reconfiguration of the districts school system is the first essential decision to be made. Once the district concurs on the approach, the remaining decisions will likely fall into place. Each of the four schools have viable options. Most of the schools have simple solutions while others such as Coginchaug are much more complex.

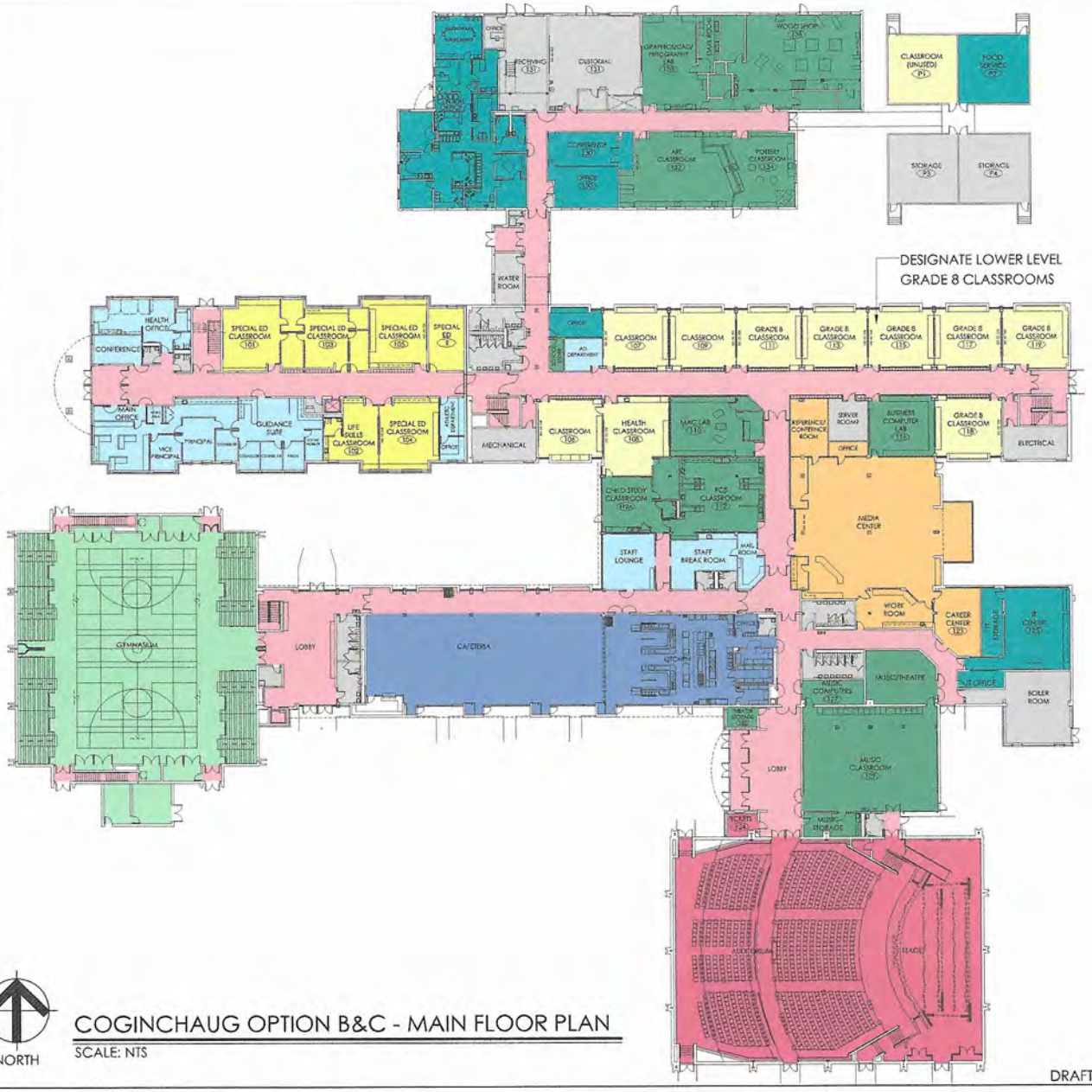
As the district vets these solutions using the value system, the appropriate answer should arise. The design options should provide the necessary understanding of what each school needs to support the education moving forward. The estimates should provide the financial evaluations of each of these options. Then the community should be considered and even involved as decisions begin to progress.

As discussed throughout the report Memorial, Strong, and Coginchaug can potentially remain status quo to support many of the Configuration Options although suggestions are encouraged. However, Memorial may require additional work with some of these configurations especially if Kindergarten is included. The main project at hand appears to be with Brewster Elementary School. The need for classrooms to support this early learning education are not going to fade away. This option is fortunate to be subject to state reimbursement at such a welcoming rate of 52.5%. This creates such an opportunity for the district to produce a consequential solution that addresses the districtwide educational needs and will benefit the community from an economic standpoint. An addition at Brewster will be well-received and it is highly recommended to apply for an extension project with OSCGR by the June 30th, 2018 deadline to secure funding.

PROGRAM LEGEND	
CLASSROOMS	25,453 NSF
SPECIALS	13,159 NSF
SPECIAL ED	3,989 NSF
MEDIA CENTER	4,491 NSF
PHYSICAL ED.	19,150 NSF
FOOD SERVICE	6,500 NSF
AUDITORIUM	12,057 NSF
ADMINISTRATION	6,025 NSF
CENTRAL OFFICE	6,258 NSF
BUILDING INFRA.	10,888 NSF
CIRCULATION	28,017 NSF
TOTAL	135,987 NSF

NET SQUARE FEET	
MAIN BUILDING	132,565 NSF
PORTABLES	3,422 NSF
TOTAL	135,987 NSF

GROSS SQUARE FEET	
MAIN BUILDING	138,579 GSF
PORTABLES	3,600 GSF
TOTAL	142,179 GSF



COGINCHAUG OPTION B&C - MAIN FLOOR PLAN

SCALE: NTS

DRAFT 01.22.18

Regional School District 13
Facilities Restacking Study

COGINCHAUG HIGH SCHOOL
OPTION B&C

SILVER PETRUCELLI & ASSOCIATES

State Project Number:
Local Educational Agency: Regional School District 13
School Name: Brewster Elementary School - Option A
Date: November

Grade Configuration: PK-2

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	35	1.40	Grade 6		0.00
Kindergarten	119	4.76	Grade 7		0.00
Grade 1	88	3.52	Grade 8		0.00
Grade 2	119	4.76	Grade 9		0.00
Grade 3		0.00	Grade 10		0.00
Grade 4		0.00	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				361	14.44

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	361	125.00	45,125	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			**45,125**	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	5,248	12,877	18,125	0
Special Education	0	3,700	3,700	
Administration	0	2,075	2,075	
Media Center	0	1,580	1,580	
Visual Arts	0	971	971	0
Music	0	988	988	0
Performing Arts / Auditorium	0	688	688	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	3,639	3,639	0
Student Dining	0	621	621	
Food Service	0	594	594	
Custodial	0	170	170	
Subtotal - Net Square Feet	**5,248**	**27,903**	**33,151**	**0**
Building Services	0	7,502	7,502	
Subtotal - Net SF including Building Service	**5,248**	**35,405**	**40,653**	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	**5,825**	**39,300**	**45,125**	

Difference Between Max. Reimb. Gross SF and Gross SF Programmed (0)

Facility Gross Square Footage [Funded + Unfunded]
Total Gross SF Programmed - Funded 45,125
Total Gross SF of Facility **45,125**

NOTES

Note 1: Cell F17 indicates the minimum number of total instructional areas to be provided. Value shall be rounded up.

Note 2: Values shown in cells F20-22 indicated the range of square foot per student based on the number of total students. Schools with larger enrollments will have fewer square feet per student.

Note 3: Cell D23 indicates the total gross square footage of the new or renovated building.

Note 4: The minimum number of instructional areas within the Academic Core area for Elementary School: will be 100% of total.
The min. number of instructional areas Middle & High school Academic Core areas should be >= 67% of total

Note 5: Cell D46 indicates the difference between the Maximum Reimbursable Gross Square Footage and the Total Gross Square Feet Programmed. A negative number indicates additional SF can be added to the program. A positive number is SF that is not state funded.

State Project Number: Brewster - Option B
Local Educational Agency:
School Name:
Date:

Grade Configuration: PK - 1

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	35	1.40	Grade 6		0.00
Kindergarten	96	3.84	Grade 7		0.00
Grade 1	124	4.96	Grade 8		0.00
Grade 2		0.00	Grade 9		0.00
Grade 3		0.00	Grade 10		0.00
Grade 4		0.00	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				255	10.20

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	255	125.00	31,875	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			31,875	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	0	0	0
Special Education	0	0	0	
Administration	0	0	0	
Media Center	0	0	0	
Visual Arts	0	0	0	0
Music	0	0	0	0
Performing Arts / Auditorium	0	0	0	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	0	0	0
Student Dining	0	0	0	
Food Service	0	0	0	
Custodial	0	0	0	
Subtotal - Net Square Feet	**0**	**0**	**0**	**0**
Building Services	0	0	0	
Subtotal - Net SF including Building Service	**0**	**0**	**0**	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	**0**	**0**	**38,974**	

Difference Between Max. Reimb. Gross SF and Gross SF Program 7,099

Facility Gross Square Footage [Funded + Unfunded]

Total Gross SF Programmed - Funded	38,974
Auditorium - Unfunded SF	0
Natatorium - Unfunded SF	0
Other - Unfunded SF	0
Total Gross SF of Facility	**38,974**

State Project Number: Brewster - Option C1
Local Educational Agency:
School Name:
Date:

Grade Configuration: PK - 4

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	35	1.40	Grade 6		0.00
Kindergarten	66	2.64	Grade 7		0.00
Grade 1	49	1.96	Grade 8		0.00
Grade 2	66	2.64	Grade 9		0.00
Grade 3	62	2.48	Grade 10		0.00
Grade 4	64	2.56	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				342	13.68

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	342	125.00	42,750	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			**42,750**	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	0	0	0
Special Education	0	0	0	
Administration	0	0	0	
Media Center	0	0	0	
Visual Arts	0	0	0	0
Music	0	0	0	0
Performing Arts / Auditorium	0	0	0	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	0	0	0
Student Dining	0	0	0	
Food Service	0	0	0	
Custodial	0	0	0	
Subtotal - Net Square Feet	**0**	**0**	**0**	**0**
Building Services	0	0	0	
Subtotal - Net SF including Building Service	**0**	**0**	**0**	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	**0**	**0**	**38,974**	

Difference Between Max. Reimb. Gross SF and Gross SF Programı (3,776)

Facility Gross Square Footage [Funded + Unfunded]	
Total Gross SF Programmed - Funded	38,974
Auditorium - Unfunded SF	0
Natatorium - Unfunded SF	0
Other - Unfunded SF	0
Total Gross SF of Facility	**38,974**

State Project Number: Brewster - Option C2
Local Educational Agency:
School Name:
Date:

Grade Configuration: PK - 4

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	35	1.40	Grade 6		0.00
Kindergarten	59	2.36	Grade 7		0.00
Grade 1	44	1.76	Grade 8		0.00
Grade 2	59	2.36	Grade 9		0.00
Grade 3	55	2.20	Grade 10		0.00
Grade 4	57	2.28	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				309	12.36

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	309	125.00	38,625	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			**38,625**	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	0	0	0
Special Education	0	0	0	
Administration	0	0	0	
Media Center	0	0	0	
Visual Arts	0	0	0	0
Music	0	0	0	0
Performing Arts / Auditorium	0	0	0	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	0	0	0
Student Dining	0	0	0	
Food Service	0	0	0	
Custodial	0	0	0	
Subtotal - Net Square Feet	**0**	**0**	**0**	**0**
Building Services	0	0	0	
Subtotal - Net SF including Building Service	**0**	**0**	**0**	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	**0**	**0**	**38,974**	

Difference Between Max. Reimb. Gross SF and Gross SF Programı 349

Facility Gross Square Footage [Funded + Unfunded]

Total Gross SF Programmed - Funded	38,974
Auditorium - Unfunded SF	0
Natatorium - Unfunded SF	0
Other - Unfunded SF	0
Total Gross SF of Facility	**38,974**

State Project Number: Brewster - Option C3
Local Educational Agency:
School Name:
Date:

Grade Configuration: K - 4

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	0	0.00	Grade 6		0.00
Kindergarten	59	2.36	Grade 7		0.00
Grade 1	44	1.76	Grade 8		0.00
Grade 2	59	2.36	Grade 9		0.00
Grade 3	55	2.20	Grade 10		0.00
Grade 4	57	2.28	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				274	10.96

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	274	125.00	34,250	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			**34,250**	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	0	0	0
Special Education	0	0	0	
Administration	0	0	0	
Media Center	0	0	0	
Visual Arts	0	0	0	0
Music	0	0	0	0
Performing Arts / Auditorium	0	0	0	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	0	0	0
Student Dining	0	0	0	
Food Service	0	0	0	
Custodial	0	0	0	
Subtotal - Net Square Feet	**0**	**0**	**0**	**0**
Building Services	0	0	0	
Subtotal - Net SF including Building Service	**0**	**0**	**0**	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	**0**	**0**	**38,974**	

Difference Between Max. Reimb. Gross SF and Gross SF Programı **4,724**

Facility Gross Square Footage [Funded + Unfunded]

Total Gross SF Programmed - Funded	38,974
Auditorium - Unfunded SF	0
Natatorium - Unfunded SF	0
Other - Unfunded SF	0
Total Gross SF of Facility	**38,974**

State Project Number: Brewster - Option C4
Local Educational Agency:
School Name:
Date:

Grade Configuration: PK - 3

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	35	1.40	Grade 6		0.00
Kindergarten	59	2.36	Grade 7		0.00
Grade 1	44	1.76	Grade 8		0.00
Grade 2	59	2.36	Grade 9		0.00
Grade 3	55	2.20	Grade 10		0.00
Grade 4		0.00	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				252	10.08

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	252	125.00	31,500	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			**31,500**	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	0	0	0
Special Education	0	0	0	
Administration	0	0	0	
Media Center	0	0	0	
Visual Arts	0	0	0	0
Music	0	0	0	0
Performing Arts / Auditorium	0	0	0	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	0	0	0
Student Dining	0	0	0	
Food Service	0	0	0	
Custodial	0	0	0	
Subtotal - Net Square Feet	**0**	**0**	**0**	**0**
Building Services	0	0	0	
Subtotal - Net SF including Building Service	**0**	**0**	**0**	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	**0**	**0**	**38,974**	

Difference Between Max. Reimb. Gross SF and Gross SF Programı **7,474**

Facility Gross Square Footage [Funded + Unfunded]

Total Gross SF Programmed - Funded	38,974
Auditorium - Unfunded SF	0
Natatorium - Unfunded SF	0
Other - Unfunded SF	0
Total Gross SF of Facility	**38,974**

State Project Number:
Local Educational Agency: Regional School District 13
School Name: Memorial Middle School - Option A
Date: November

Grade Configuration: 3-5

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten		0.00	Grade 6		0.00
Kindergarten		0.00	Grade 7		0.00
Grade 1		0.00	Grade 8		0.00
Grade 2		0.00	Grade 9		0.00
Grade 3	122	4.88	Grade 10		0.00
Grade 4	114	4.56	Grade 11		0.00
Grade 5	118	4.72	Grade 12		0.00
Total Student Enrollment				354	14.16

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	354	125.00	44,250	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			44,250	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	12,953	12,953	0
Special Education	0	4,315	4,315	
Administration	0	2,555	2,555	
Media Center	0	2,786	2,786	
Visual Arts	0	1,692	1,692	0
Music	0	1,520	1,520	0
Performing Arts / Auditorium	0	1,189	1,189	0
Life Skills/Tech/Bus Education	0	861	861	0
Physical Education	0	3,373	3,373	0
Student Dining	0	2,069	2,069	
Food Service	0	875	875	
Custodial	0	1,026	1,026	
Subtotal - Net Square Feet	0	35,214	35,214	0
Building Services	0	9,703	9,703	
Subtotal - Net SF including Building Service	0	44,917	44,917	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	0	49,858	49,858	49496

Difference Between Max. Reimb. Gross SF and Gross SF Programmed 5,608

Facility Gross Square Footage [Funded + Unfunded]
Total Gross SF Programmed - Funded 49,858
Total Gross SF of Facility 49,858

NOTES

Note 1: Cell F17 indicates the minimum number of total instructional areas to be provided. Value shall be rounded up.

Note 2: Values shown in cells F20-22 indicated the range of square foot per student based on the number of total students. Schools with larger enrollments will have fewer square feet per student.

Note 3: Cell D23 indicates the total gross square footage of the new or renovated building.

Note 4: The minimum number of instructional areas within the Academic Core area for Elementary Schools will be 100% of total.
The min. number of instructional areas Middle & High school Academic Core areas should be >= 67% of total.

Note 5: Cell D46 indicates the difference between the Maximum Reimbursable Gross Square Footage and the Total Gross Square Feet Programmed. A negative number indicates additional SF can be added to the program. A positive number is SF that is not state funded.

State Project Number: Memorial option B
Local Educational Agency:
School Name:
Date:

Grade Configuration: 2-5

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten		0.00	Grade 6		0.00
Kindergarten		0.00	Grade 7		0.00
Grade 1		0.00	Grade 8		0.00
Grade 2	119	4.76	Grade 9		0.00
Grade 3	111	4.44	Grade 10		0.00
Grade 4	115	4.60	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				345	13.80

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	345	125.00	43,125	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			43,125	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	0	0	0
Special Education	0	0	0	
Administration	0	0	0	
Media Center	0	0	0	
Visual Arts	0	0	0	0
Music	0	0	0	0
Performing Arts / Auditorium	0	0	0	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	0	0	0
Student Dining	0	0	0	
Food Service	0	0	0	
Custodial	0	0	0	
Subtotal - Net Square Feet	0	0	0	0
Building Services	0	0	0	
Subtotal - Net SF including Building Service	0	0	0	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	0	0	49,496	

Difference Between Max. Reimb. Gross SF and Gross SF Programı	6,371

Facility Gross Square Footage [Funded + Unfunded]	
Total Gross SF Programmed - Funded	49,496
Auditorium - Unfunded SF	0
Natatorium - Unfunded SF	0
Other - Unfunded SF	0
Total Gross SF of Facility	49,496

State Project Number: Memorial Option C1
Local Educational Agency:
School Name:
Date:

Grade Configuration: K-4

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten		0.00	Grade 6		0.00
Kindergarten	53	2.12	Grade 7		0.00
Grade 1	39	1.56	Grade 8		0.00
Grade 2	53	2.12	Grade 9		0.00
Grade 3	49	1.96	Grade 10		0.00
Grade 4	51	2.04	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				245	9.80

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	245	125.00	30,625	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			**30,625**	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	0	0	0
Special Education	0	0	0	
Administration	0	0	0	
Media Center	0	0	0	
Visual Arts	0	0	0	0
Music	0	0	0	0
Performing Arts / Auditorium	0	0	0	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	0	0	0
Student Dining	0	0	0	
Food Service	0	0	0	
Custodial	0	0	0	
Subtotal - Net Square Feet	**0**	**0**	**0**	**0**
Building Services	0	0	0	
Subtotal - Net SF including Building Service	**0**	**0**	**0**	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	**0**	**0**	**49,496**	

Difference Between Max. Reimb. Gross SF and Gross SF Program **18,871**

Facility Gross Square Footage [Funded + Unfunded]

Total Gross SF Programmed - Funded	49,496
Auditorium - Unfunded SF	0
Natatorium - Unfunded SF	0
Other - Unfunded SF	0
Total Gross SF of Facility	**49,496**

NOTES

State Project Number: Memorial Option C2
Local Educational Agency:
School Name:
Date:

Grade Configuration: K-4

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	0	0.00	Grade 6		0.00
Kindergarten	60	2.40	Grade 7		0.00
Grade 1	44	1.76	Grade 8		0.00
Grade 2	60	2.40	Grade 9		0.00
Grade 3	56	2.24	Grade 10		0.00
Grade 4	58	2.32	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				278	11.12

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	278	125.00	34,750	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			34,750	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	0	0	0
Special Education	0	0	0	
Administration	0	0	0	
Media Center	0	0	0	
Visual Arts	0	0	0	0
Music	0	0	0	0
Performing Arts / Auditorium	0	0	0	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	0	0	0
Student Dining	0	0	0	
Food Service	0	0	0	
Custodial	0	0	0	
Subtotal - Net Square Feet	**0**	**0**	**0**	**0**
Building Services	0	0	0	
Subtotal - Net SF including Building Service	**0**	**0**	**0**	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	**0**	**0**	**49,496**	

Difference Between Max. Reimb. Gross SF and Gross SF Programı 14,746

Facility Gross Square Footage [Funded + Unfunded]

Total Gross SF Programmed - Funded	49,496
Auditorium - Unfunded SF	0
Natatorium - Unfunded SF	0
Other - Unfunded SF	0
Total Gross SF of Facility	**49,496**

State Project Number: Memorial Option C3
Local Educational Agency:
School Name:
Date:

Grade Configuration: PK - 4

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	35	1.40	Grade 6		0.00
Kindergarten	60	2.40	Grade 7		0.00
Grade 1	44	1.76	Grade 8		0.00
Grade 2	60	2.40	Grade 9		0.00
Grade 3	56	2.24	Grade 10		0.00
Grade 4	58	2.32	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				313	12.52

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	313	125.00	39,125	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			**39,125**	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	0	0	0
Special Education	0	0	0	
Administration	0	0	0	
Media Center	0	0	0	
Visual Arts	0	0	0	0
Music	0	0	0	0
Performing Arts / Auditorium	0	0	0	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	0	0	0
Student Dining	0	0	0	
Food Service	0	0	0	
Custodial	0	0	0	
Subtotal - Net Square Feet	**0**	**0**	**0**	**0**
Building Services	0	0	0	
Subtotal - Net SF including Building Service	**0**	**0**	**0**	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	**0**	**0**	**49,496**	

Difference Between Max. Reimb. Gross SF and Gross SF Programı **10,371**

Facility Gross Square Footage [Funded + Unfunded]

Total Gross SF Programmed - Funded	49,496
Auditorium - Unfunded SF	0
Natatorium - Unfunded SF	0
Other - Unfunded SF	0
Total Gross SF of Facility	**49,496**

State Project Number: Memorial Option C4
Local Educational Agency:
School Name:
Date:

Grade Configuration: K - 4

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten		0.00	Grade 6		0.00
Kindergarten	60	2.40	Grade 7		0.00
Grade 1	44	1.76	Grade 8		0.00
Grade 2	60	2.40	Grade 9		0.00
Grade 3	56	2.24	Grade 10		0.00
Grade 4	115	4.60	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				335	13.40

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	335	125.00	41,875	104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			**41,875**	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	0	0	0
Special Education	0	0	0	
Administration	0	0	0	
Media Center	0	0	0	
Visual Arts	0	0	0	0
Music	0	0	0	0
Performing Arts / Auditorium	0	0	0	0
Life Skills/Tech/Bus Education	0	0	0	0
Physical Education	0	0	0	0
Student Dining	0	0	0	
Food Service	0	0	0	
Custodial	0	0	0	
Subtotal - Net Square Feet	**0**	**0**	**0**	**0**
Building Services	0	0	0	
Subtotal - Net SF including Building Service	**0**	**0**	**0**	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	**0**	**0**	**49,496**	

Difference Between Max. Reimb. Gross SF and Gross SF Programı **7,621**

Facility Gross Square Footage [Funded + Unfunded]

Total Gross SF Programmed - Funded	49,496
Auditorium - Unfunded SF	0
Natatorium - Unfunded SF	0
Other - Unfunded SF	0
Total Gross SF of Facility	**49,496**

State Project Number:
Local Educational Agency: Regional School District 13
School Name: Strong Middle School - Option A
Date: November

Grade Configuration: 6-8

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten		0.00	Grade 6	152	6.99
Kindergarten		0.00	Grade 7	119	5.47
Grade 1		0.00	Grade 8	147	6.76
Grade 2		0.00	Grade 9		0.00
Grade 3		0.00	Grade 10		0.00
Grade 4		0.00	Grade 11		0.00
Grade 5		0.00	Grade 12		0.00
Total Student Enrollment				418	19.23

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	0			104-125
SF/Student - Middle School	418	151.00	63,118	119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			63,118	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	16,860	16,860	0
Special Education	0	3,677	3,677	
Administration	0	4,566	4,566	
Media Center	0	3,698	3,698	
Visual Arts	0	1,584	1,584	0
Music	0	1,582	1,582	0
Performing Arts / Auditorium	0	912	912	0
Life Skills/Tech/Bus Education	0	4,947	4,947	0
Physical Education	0	6,913	6,913	0
Student Dining	0	4,289	4,289	
Food Service	0	6,313	6,313	
Custodial	0	7,679	7,679	
Subtotal - Net Square Feet	0	63,020	63,020	0
Building Services	0	6,874	6,874	
Subtotal - Net SF including Building Service	0	69,894	69,894	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	0	77,582	77,582	

Difference Between Max. Reimb. Gross SF and Gross SF Programmed 14,464

Facility Gross Square Footage [Funded + Unfunded]
Total Gross SF Programmed - Funded 77,582
Total Gross SF of Facility 77,582

NOTES

Note 1: Cell F17 indicates the minimum number of total instructional areas to be provided. Value shall be rounded up.

Note 2: Values shown in cells F20-22 indicated the range of square foot per student based on the number of total students. Schools with larger enrollments will have fewer square feet per student.

Note 3: Cell D23 indicates the total gross square footage of the new or renovated building.

Note 4: The minimum number of instructional areas within the Academic Core area for Elementary School: will be 100% of total.
The min. number of instructional areas Middle & High school Academic Core areas should be >= 67% of total

Note 5: Cell D46 indicates the difference between the Maximum Reimbursable Gross Square Footage and the Total Gross Square Feet Programmed. A negative number indicates additional SF can be added to the program. A positive number is SF that is not state funded.

State Project Number:
Local Educational Agency: Regional School District 13
School Name: Strong Middle School - Option B&C
Date: November

Grade Configuration: 5-7

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten		0.00	Grade 6	107	4.92
Kindergarten		0.00	Grade 7	154	7.08
Grade 1		0.00	Grade 8		0.00
Grade 2		0.00	Grade 9		0.00
Grade 3		0.00	Grade 10		0.00
Grade 4		0.00	Grade 11		0.00
Grade 5	118	4.72	Grade 12		0.00
Total Student Enrollment				379	16.73

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	118	125.00	14,750	104-125
SF/Student - Middle School	261	151.00	39,411	119-151
SF/ Student - High School	0			163-187
Maximum Reimbursable Gross Square Feet			**54,161**	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	16,860	16,860	0
Special Education	0	3,677	3,677	
Administration	0	4,566	4,566	
Media Center	0	3,698	3,698	
Visual Arts	0	1,584	1,584	0
Music	0	1,582	1,582	0
Performing Arts / Auditorium	0	912	912	0
Life Skills/Tech/Bus Education	0	4,947	4,947	0
Physical Education	0	6,913	6,913	0
Student Dining	0	4,289	4,289	
Food Service	0	6,313	6,313	
Custodial	0	7,679	7,679	
Subtotal - Net Square Feet	0	63,020	63,020	0
Building Services	0	6,874	6,874	
Subtotal - Net SF including Building Service	0	69,894	69,894	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	0	77,582	77,582	

Difference Between Max. Reimb. Gross SF and Gross SF Programmed 23,421

Facility Gross Square Footage [Funded + Unfunded]
Total Gross SF Programmed - Funded 77,582
Total Gross SF of Facility 77,582

NOTES
Note 1: Cell F17 indicates the minimum number of total instructional areas to be provided. Value shall be rounded up.
Note 2: Values shown in cells F20-22 indicated the range of square foot per student based on the number of total students. Schools with larger enrollments will have fewer square feet per student.
Note 3: Cell D23 indicates the total gross square footage of the new or renovated building.
Note 4: The minimum number of instructional areas within the Academic Core area for Elementary Schools will be 100% of total.
The min. number of instructional areas Middle & High school Academic Core areas should be >= 67% of total.
Note 5: Cell D46 indicates the difference between the Maximum Reimbursable Gross Square Footage and the Total Gross Square Feet Programmed. A negative number indicates additional SF can be added to the program. A positive number is SF that is not state funded.

State Project Number:
Local Educational Agency: Regional School District 13
School Name: Coginchaug High School - Option A
Date: November

Grade Configuration: 9-12

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten		0.00	Grade 6		0.00
Kindergarten		0.00	Grade 7		0.00
Grade 1		0.00	Grade 8		0.00
Grade 2		0.00	Grade 9	123	5.66
Grade 3		0.00	Grade 10	108	4.97
Grade 4		0.00	Grade 11	134	6.16
Grade 5		0.00	Grade 12	129	5.93
Total Student Enrollment				494	22.72

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	0			104-125
SF/Student - Middle School	0			119-151
SF/ Student - High School	494	177.65	87,758	163-187
Maximum Reimbursable Gross Square Feet			87,758	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	25,453	25,453	0
Special Education	0	3,989	3,989	
Administration	0	12,283	12,283	
Media Center	0	4,491	4,491	
Visual Arts	0	3,394	3,394	0
Music	0	3,801	3,801	0
Performing Arts / Auditorium	0	12,057	12,057	0
Life Skills/Tech/Bus Education	0	5,964	5,964	0
Physical Education	0	19,150	19,150	0
Student Dining	0	4,000	4,000	
Food Service	0	2,500	2,500	
Custodial	0	10,888	10,888	
Subtotal - Net Square Feet	0	107,970	107,970	0
Building Services	0	20,119	20,119	
Subtotal - Net SF including Building Service	0	128,089	128,089	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	0	142,179	142,179	

Difference Between Max. Reimb. Gross SF and Gross SF Programmed 54,421

Facility Gross Square Footage [Funded + Unfunded]
Total Gross SF Programmed - Funded 142,179
Total Gross SF of Facility 142,179

NOTES

Note 1: Cell F17 indicates the minimum number of total instructional areas to be provided. Value shall be rounded up.

Note 2: Values shown in cells F20-22 indicated the range of square foot per student based on the number of total students. Schools with larger enrollments will have fewer square feet per student.

Note 3: Cell D23 indicates the total gross square footage of the new or renovated building.

Note 4: The minimum number of instructional areas within the Academic Core area for Elementary School: will be 100% of total.
The min. number of instructional areas Middle & High school Academic Core areas should be >= 67% of total.

Note 5: Cell D46 indicates the difference between the Maximum Reimbursable Gross Square Footage and the Total Gross Square Feet Programmed. A negative number indicates additional SF can be added to the program. A positive number is SF that is not state funded.

State Project Number:
Local Educational Agency: Regional School District 13
School Name: Coginchaug High School - Option B&C
Date: November

Grade Configuration: 9-12

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten		0.00	Grade 6		0.00
Kindergarten		0.00	Grade 7		0.00
Grade 1		0.00	Grade 8	147	6.76
Grade 2		0.00	Grade 9	109	5.01
Grade 3		0.00	Grade 10	136	6.26
Grade 4		0.00	Grade 11	132	6.07
Grade 5		0.00	Grade 12	104	4.78
Total Student Enrollment				628	28.89

REIMBURSEABLE SQUARE FOOTAGE	Students	SF/student	Total	SF/Student Range
SF/Student - Elementary School	0			104-125
SF/Student - Middle School	147	151.00	22,197	119-151
SF/ Student - High School	481	180.23	86,692	163-187
Maximum Reimbursable Gross Square Feet			108,889	

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	25,453	25,453	0
Special Education	0	3,989	3,989	
Administration	0	12,283	12,283	
Media Center	0	4,491	4,491	
Visual Arts	0	3,394	3,394	0
Music	0	3,801	3,801	0
Performing Arts / Auditorium	0	12,057	12,057	0
Life Skills/Tech/Bus Education	0	5,964	5,964	0
Physical Education	0	19,150	19,150	0
Student Dining	0	4,000	4,000	
Food Service	0	2,500	2,500	
Custodial	0	10,888	10,888	
Subtotal - Net Square Feet	0	107,970	107,970	0
Building Services	0	20,119	20,119	
Subtotal - Net SF including Building Service	0	128,089	128,089	
Construction Factor	0.11	0.11	0.11	
Total Gross SF Programmed - Funded	0	142,179	142,179	

Difference Between Max. Reimb. Gross SF and Gross SF Programmed 33,290

Facility Gross Square Footage [Funded + Unfunded]

Total Gross SF Programmed - Funded	142,179
Total Gross SF of Facility	142,179

NOTES

Note 1: Cell F17 indicates the minimum number of total instructional areas to be provided. Value shall be rounded up.

Note 2: Values shown in cells F20-22 indicated the range of square foot per student based on the number of total students. Schools with larger enrollments will have fewer square feet per student.

Note 3: Cell D23 indicates the total gross square footage of the new or renovated building.

Note 4: The minimum number of instructional areas within the Academic Core area for Elementary Schools will be 100% of total.
The min. number of instructional areas Middle & High school Academic Core areas should be >= 67% of total.

Note 5: Cell D46 indicates the difference between the Maximum Reimbursable Gross Square Footage and the Total Gross Square Feet Programmed. A negative number indicates additional SF can be added to the program. A positive number is SF that is not state funded.

Regional School District 13 Facilities Restacking Study

Existing Brewster Elementary School Program

Existing Enrollment: 264 Students

Space Division	Room Number	Quantity	Square Footage	Net Sq Ft Subtotal	Percentage
GENERAL CLASSROOMS					
PreK	Portables	2	848	1,696	
Kindergarten	17	1	910	910	
Kindergarten	18	1	910	910	
Kindergarten	19	1	910	910	
Grade 1	11	1	910	910	
Grade 1	12	1	910	910	
Grade 1	13	1	918	918	
Grade 1	14	1	918	918	
Grade 2	1	1	828	828	
Grade 2	9	1	738	738	
Grade 2	10	1	828	828	
Grade 3	4	1	742	742	
Grade 3	5	1	698	698	
Grade 3	6	1	738	738	
TOTAL		15	689-910	**12,654**	31%
SPECIALS					
Art		1	869	869	
Storage		1	51	51	
Kiln		1	51	51	
Music		1	900	900	
Storage		1	88	88	
Computer Classroom	16	1	910	910	
TOTAL		2	848-900	**2,869**	7%
SPECIAL EDUCATION					
Intervention Classroom	2	1	742	742	
Book Nook/Math Literacy	3	1	552	552	
Resource Classroom	6	1	698	698	
OT/PT		1	206	206	
ABA		1	222	222	
Special Ed Class		1	299	299	
Speech		1	232	232	
ABA Classroom	15	1	718	718	
TOTAL		8	206-742	**3,669**	9%

Existing Brewster Elementary School Program

Existing Enrollment: 264 Students

Space Division	Room Number	Quantity	Square Footage	Net Sq Ft Subtotal	Percentage
MEDIA CENTER					
Main Area		1	1235	1,235	
Reading Ampitheather		1	199	199	
Work Room		1	146	146	
TOTAL				**1,579**	4%
PHYSICAL EDUCATION					
Gymnasium		1	3373	3,373	
Office		1	69	69	
Storage		1	74	74	
Storage		2	60	120	
TOTAL				**3,637**	9%
FOOD SERVICE		1			
Kitchen		1	402	402	
Servery		1	83	83	
Storage		1	42	42	
Office		1	68	68	
TOTAL		1		**595**	1%
AUDITORIUM		1			
Stage		1	553	553	
Stair/Storage		1	67	67	
Storage		1	68	68	
TOTAL		1		**688**	2%
ADMINISTRATION					
Main Office		1	468	468	
Storage		1	45	45	
Principal Office		1	286	286	
Nurse Suite		1	336	336	
Faculty Lounge		1	621	621	
Conference Room		1	552	552	
Work Room		1	171	171	
Physc. & Social Office		1	217	217	
TOTAL		8	286-621	**2,696**	7%

Existing Brewster Elementary School Program

Existing Enrollment: 264 Students

Space Division	Room Number	Quantity	Square Footage	Net Sq Ft Subtotal	Percentage
BUILDING INFRASTRUCTURE					
Student Restrooms		2	263	526	
Classroom Restrooms		8	28	224	
Classroom Restrooms		1	32	32	
Classroom Restroom		1	107	107	
Staff Restrooms		2	39	78	
Staff Restrooms		1	51	51	
Boiler Room		1	409	409	
Custodian		2	84	168	
Custodian		1	43	43	
Storage		1	90	90	
Storage		1	54	54	
Storage		1	69	69	
Storage		1	107	107	
Storage - Water Room		1	267	267	
Storage- Electrical Room		1	37	37	
Storage		1	37	37	
Storage		1	10	10	
TOTAL				**3,060**	8%
CIRCULATION				**7,034**	17%
STRUCTURE/GROSS FACTOR				**2,293**	6%
TOTAL GROSS SQUARE FEET				**40,774**	100%

SILVER/PETRUCELLI – ASSOCIATES
Architects / Engineers/ Interior Designers

3190 Whitney Avenue, Hamden, CT 06518
Tel: 203 230 9007 Fax: 203 230 8247
www.silverpetrucelli.com

Enrollment Projection Update

Enrollment Highlights

Regional School District 13

December 2016

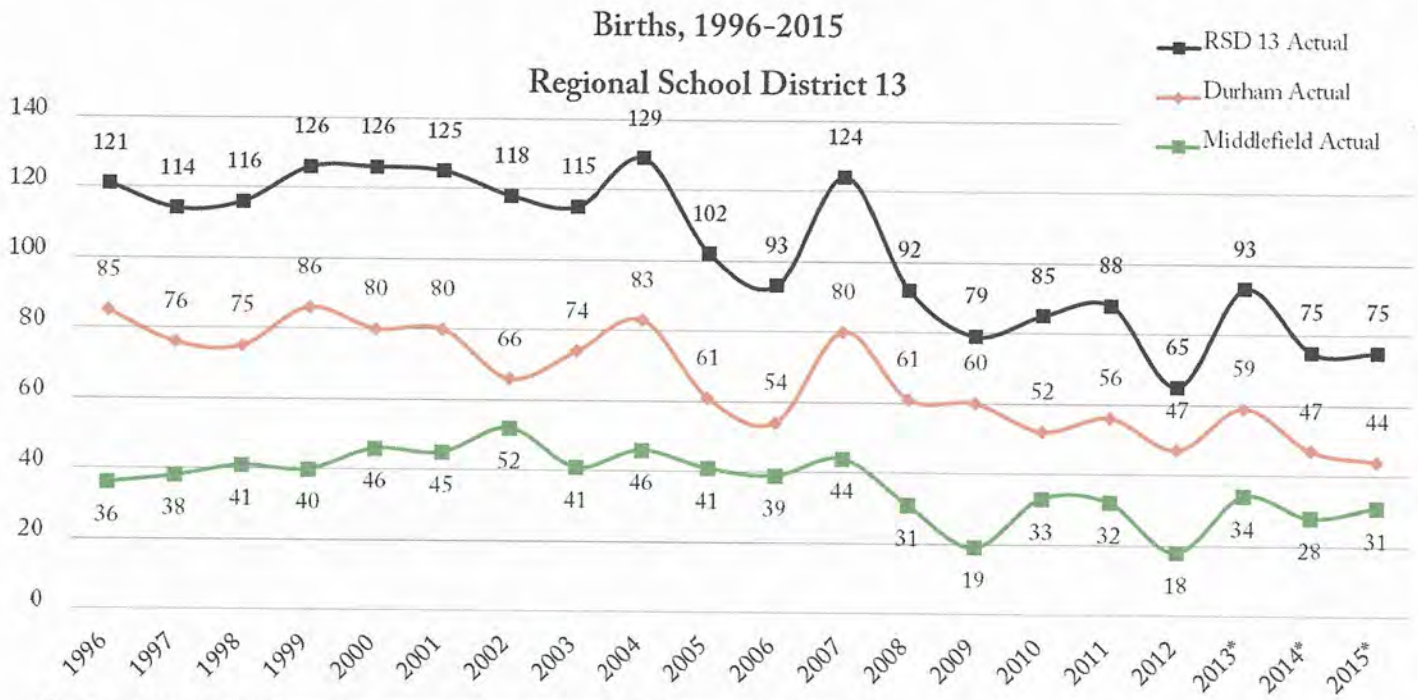
MILONE & MACBROOM

Introduction

- Key Demographic & Housing Trends
- Enrollment Trends
- Enrollment Projections

Birth Trends & Forecast

- Annual births average 122/yr during early 2000's
  - For the last 5-yrs average of 81/yr, trending downwards
  - MMI projects <80 births/year on average through 2021



Note: Reported births for 2014 are still preliminary and may be subject to final adjustment by the CTDPH.

Sources: CT Dept. of Public Health, 11/2016.

Year	Projected & Actual Births
2010	85
2011	88
2012	65
2013*	93
2014*	75
2015*	75
2016	79
2017	77
2018	80
2019	77
2020	78
2021	78

MILONE & MACBROOM

Housing Sales

Note: 2016 data is estimate, according to the info from the previous years.

Source: The Warren Group.

- RSD sales have steadily increased since 2011 trough, with 2016 estimate from year to date near 140
- Uptick in sales likely a driving force in student in-migration

MILONE & MACBROOM

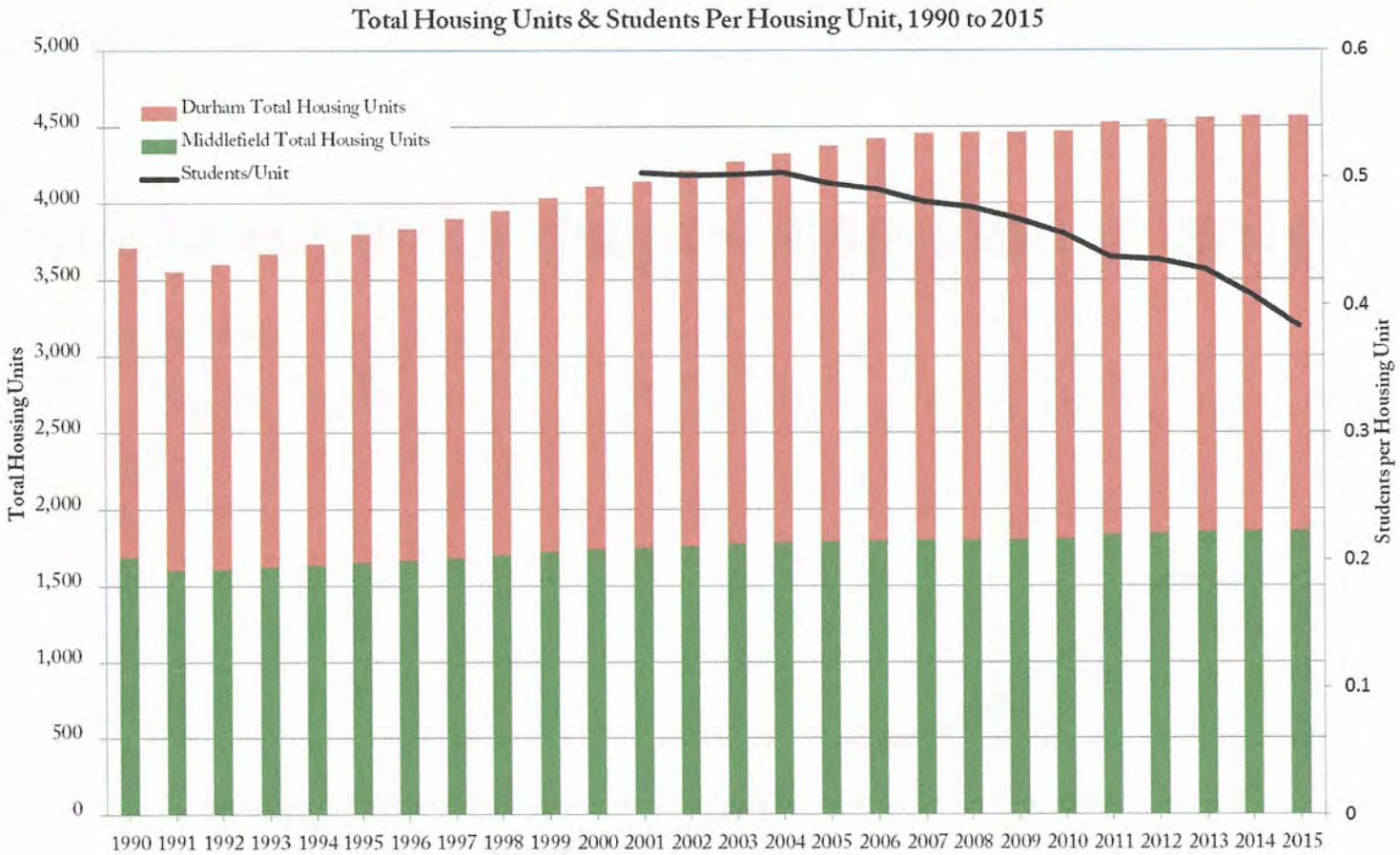
Housing Permits

*Notes: *Reporting monthly permit data beginning in 2015; due to Census revised sampling method.*

Source: CT DECD Annual Housing Permit Data, 11/2016

- Permitting has not recovered near pre-Recession conditions, although a slow pace of new development has been sustained
- Expect little impact from new construction on enrollment levels in this planning horizon

Housing Units & Students/Unit

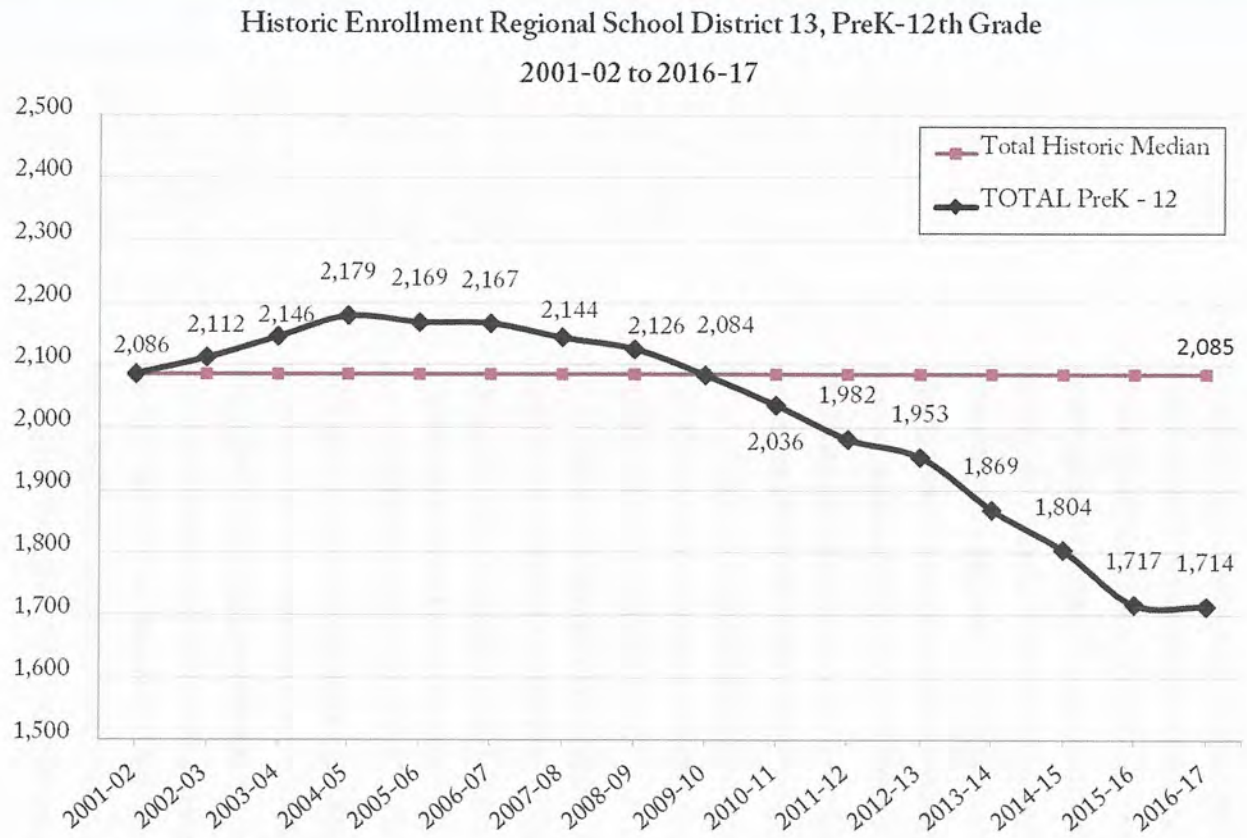


Source: DECD, CeDAR, 11/2016.

- Ratio of students to housing units continues to drop (<4 students per 10 homes in 2015) despite flat inventory

MILONE & MACBROOM

PreK-12 Enrollment Trends

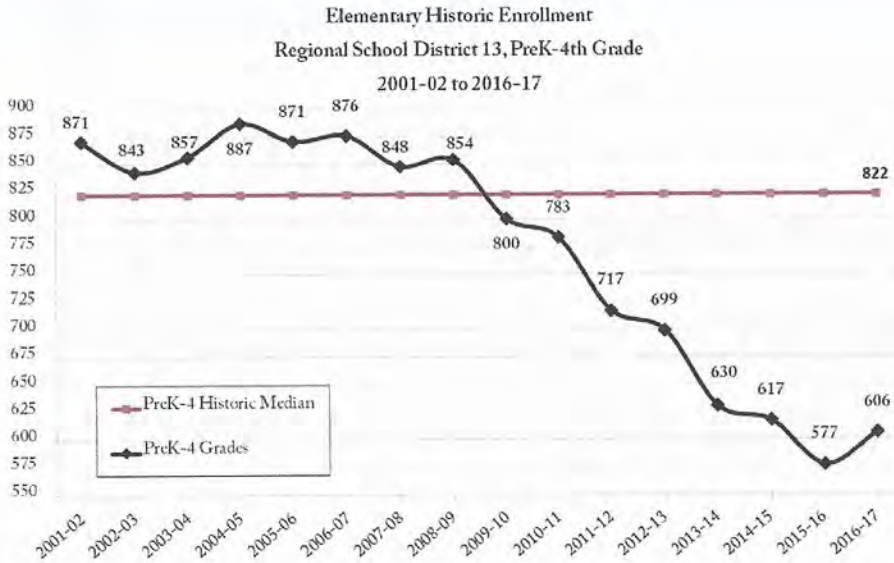


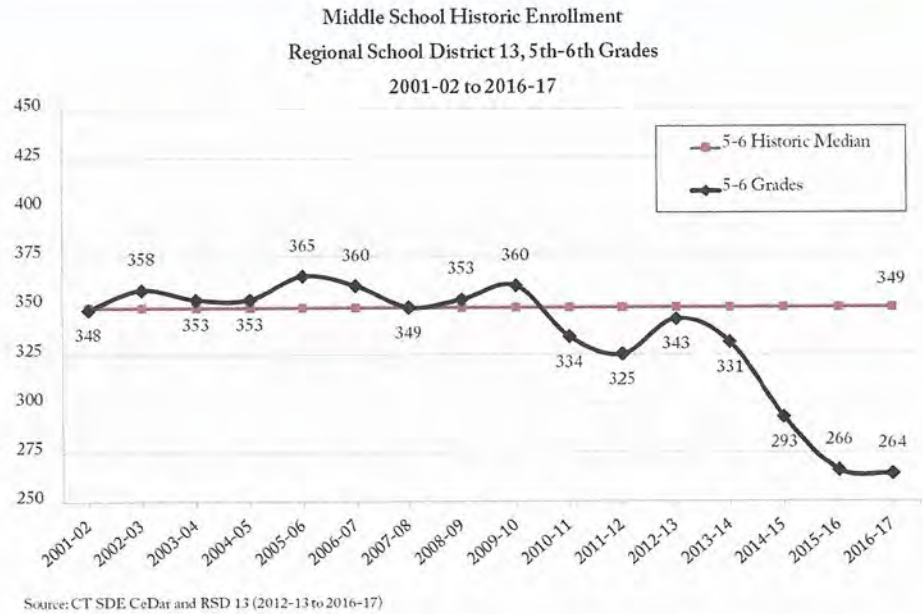
Source: CT SDE and RSD 13 (2012-13 to 2016-17)

- Steady enrollment decline stabilized in 2016-17

MILONE & MACBROOM

PK-4 & 5-6 Enrollment Trends

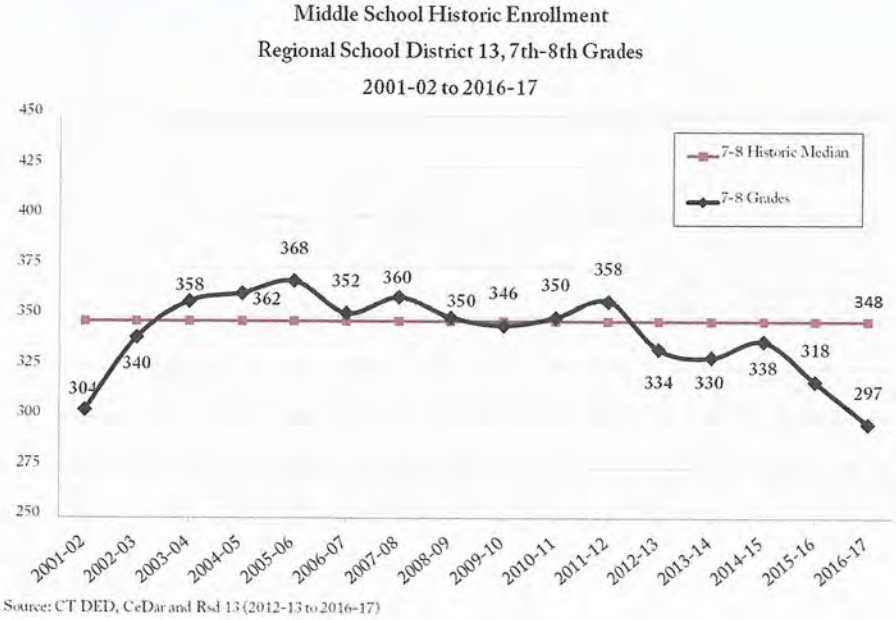


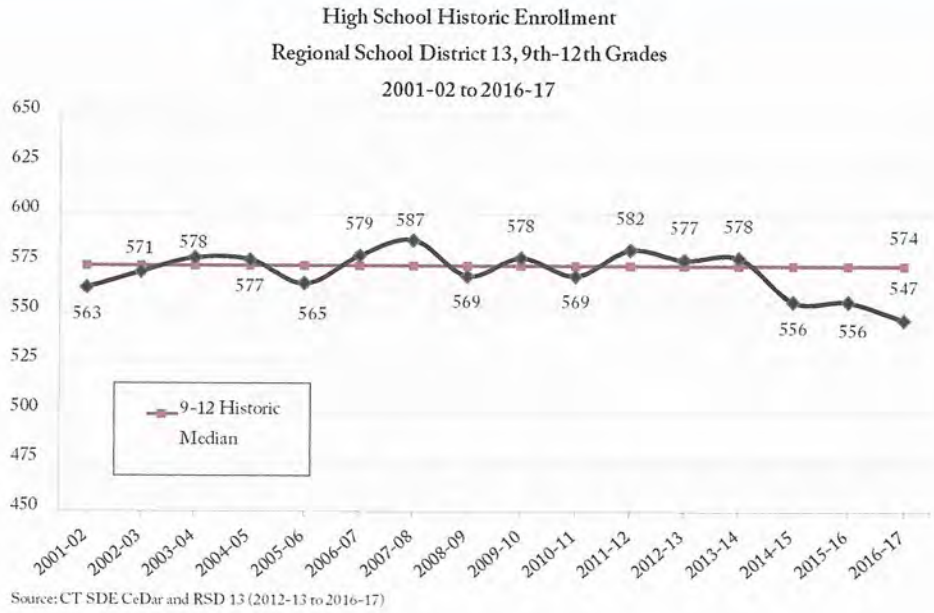


- After long decline since 2008-09, PK-4 enrollment has bounced back (gain of ~30 students)
  - Gains seen in larger K cohort, but also across the board in-migration at grades 1-4
- Memorial remains stable from 2015-16

MILONE & MACBROOM

7-8 & 9-12 Enrollment Trends





- 2016-17 sees first year of much smaller cohorts at Strong Middle (trend likely to continue)
- Enrollment Decline not felt at Coginchaug High School yet…

MILONE & MACBROOM

PreK-12 Enrollment Trends

RSD 13 Enrollments 2001-02 to 2016-17																	
School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PreK	Total PreK-12
2001-02	1996	121	148	177	166	170	192	171	177	153	151	155	159	126	123	18	2,086
2002-03	1997	114	148	165	183	164	170	192	166	187	153	144	146	153	128	13	2,112
2003-04	1998	116	146	168	162	182	170	169	184	170	188	143	138	144	153	29	2,146
2004-05	1999	126	160	156	179	164	192	177	176	189	173	162	134	134	147	36	2,179
2005-06	2000	126	141	183	162	178	170	192	173	177	191	145	162	127	131	37	2,169
2006-07	2001	125	152	152	188	169	181	173	187	176	176	164	134	160	121	34	2,167
2007-08	2002	118	131	169	152	186	174	183	166	182	178	146	159	134	148	36	2,144
2008-09	2003	115	149	153	173	154	187	174	179	166	184	143	145	157	124	38	2,126
2009-10	2004	129	118	168	158	178	153	187	173	180	166	150	138	142	148	25	2,084
2010-11	2005	102	125	131	162	161	183	149	185	172	178	141	153	143	132	21	2,036
2011-12	2006	93	101	134	130	171	160	182	143	184	174	150	136	155	141	21	1,982
2012-13	2007	124	123	115	136	128	171	160	183	147	187	143	149	134	151	26	1,953
2013-14	2008	92	89	138	112	139	126	171	160	180	150	159	139	146	134	26	1,869
2014-15	2009	79	105	95	134	112	136	127	166	161	177	126	151	140	139	35	1,804
2015-16	2010	85	103	105	95	135	113	141	125	162	156	142	127	146	141	26	1,717
2016-17	2011	88	115	108	109	101	148	117	147	133	164	135	146	125	141	25	1,714

Sources: CT Dept. of Ed. CeDar and RSD 13 (2012-13 to 2016-17).

Projection Methodology

- The cohort survival methodology relies on observed data from the recent past in order to project the near future
- Persistency Ratios calculated from historic enrollment data to determine growth or loss in a class as it progresses through school system
- Persistency Ratios account for the various external factors affecting enrollments: housing characteristics, residential development, economic conditions, student transfers in and out of system, and student mobility
- Changes in population, housing stock and tenure, and economic conditions help explain persistency ratios
- Recent instability in economic climate adds variability to enrollments, births, and residential mobility

Cohort Trends

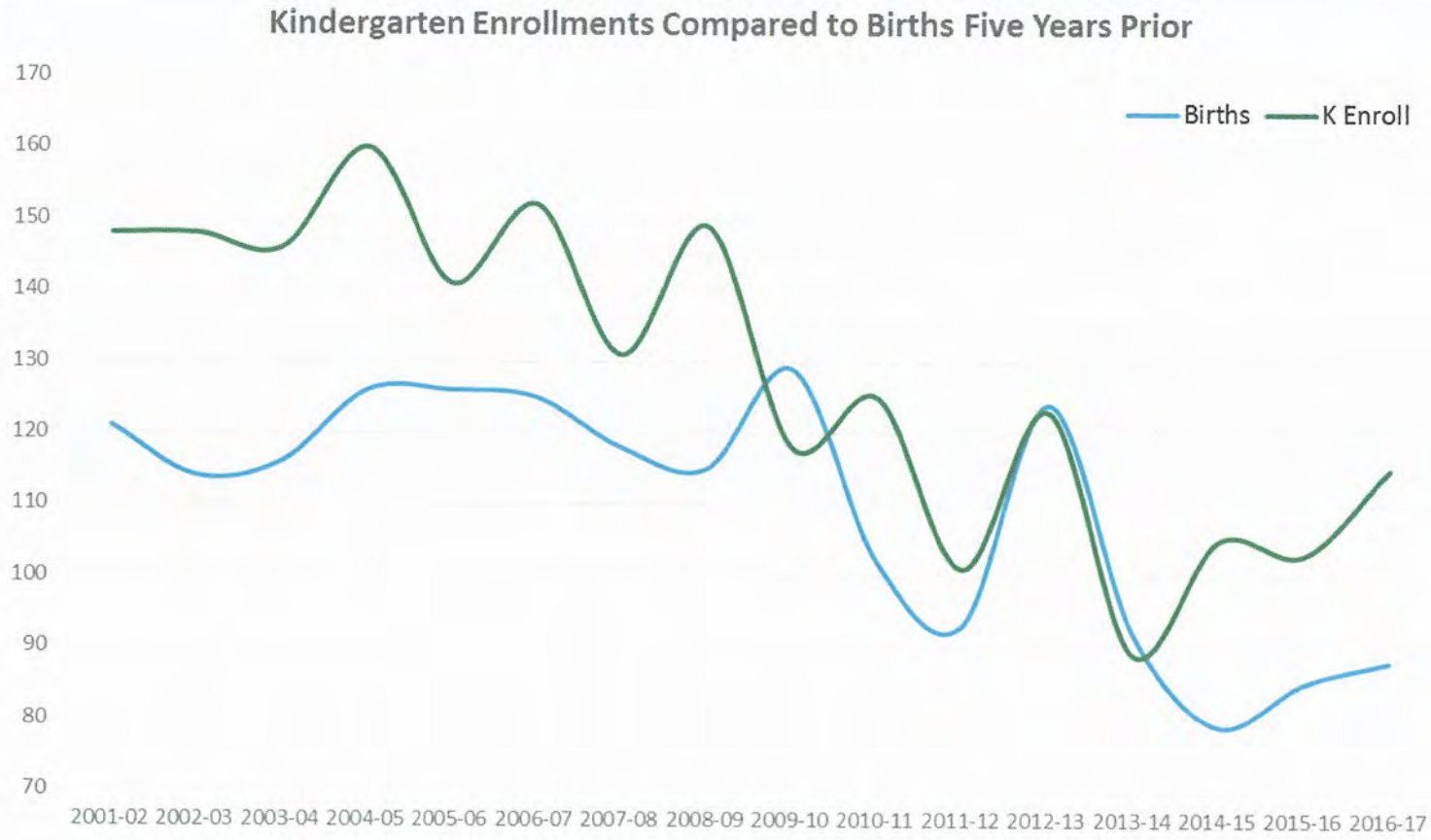
Kindergarten through 12th Grade Persistency Ratios by School Year, 2002-03 to 2016-17

Year	Birth-K	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	Estimated Migration[1]
2002-03	1.298	1.115	1.034	0.988	1.000	1.000	0.971	1.056	1.000	0.954	0.942	0.962	1.016	0.29%
2003-04	1.259	1.135	0.982	0.995	1.037	0.994	0.958	1.024	1.005	0.935	0.958	0.986	1.000	0.09%
2004-05	1.270	1.068	1.065	1.012	1.055	1.041	1.041	1.027	1.018	0.862	0.937	0.971	1.021	3.28%
2005-06	1.119	1.144	1.038	0.994	1.037	1.000	0.977	1.006	1.011	0.838	1.000	0.948	0.978	0.37%
2006-07	1.216	1.078	1.027	1.043	1.017	1.018	0.974	1.017	0.994	0.859	0.924	0.988	0.953	0.95%
2007-08	1.110	1.112	1.000	0.989	1.030	1.011	0.960	0.973	1.011	0.830	0.970	1.000	0.925	-0.47%
2008-09	1.296	1.168	1.024	1.013	1.005	1.000	0.978	1.000	1.011	0.803	0.993	0.987	0.925	0.10%
2009-10	0.915	1.128	1.033	1.029	0.994	1.000	0.994	1.006	1.000	0.815	0.965	0.979	0.943	0.39%
2010-11	1.225	1.110	0.964	1.019	1.028	0.974	0.989	0.994	0.989	0.849	1.020	1.036	0.930	-0.10%
2011-12	1.086	1.072	0.992	1.056	0.994	0.995	0.960	0.995	1.012	0.843	0.965	1.013	0.986	0.20%
2012-13	0.992	1.139	1.015	0.985	1.000	1.000	1.005	1.028	1.016	0.822	0.993	0.985	0.974	0.62%
2013-14	0.967	1.122	0.974	1.022	0.984	1.000	1.000	0.984	1.020	0.850	0.972	0.980	1.000	0.11%
2014-15	1.329	1.067	0.971	1.000	0.978	1.008	0.971	1.006	0.983	0.840	0.950	1.007	0.952	-1.01%
2015-16	1.212	1.000	1.000	1.007	1.009	1.037	0.984	0.976	0.969	0.802	1.008	0.967	1.007	-0.48%
2016-17	1.307	1.049	1.038	1.063	1.096	1.035	1.043	1.064	1.012	0.865	1.028	0.984	0.966	5.06%
Long Term Average	**1.1734**	**1.1005**	**1.0105**	**1.0143**	**1.0176**	**1.0075**	**0.9870**	**1.0104**	**1.0034**	**0.8511**	**0.9750**	**0.9862**	**0.9717**	
Last 5-Yr Average	**1.1614**	**1.0754**	**0.9996**	**1.0154**	**1.0134**	**1.0160**	**1.0006**	**1.0116**	**1.0000**	**0.8358**	**0.9902**	**0.9846**	**0.9798**	
Last 3-Yr Average	**1.2827**	**1.0387**	**1.0030**	**1.0233**	**1.0277**	**1.0267**	**0.9993**	**1.0153**	**0.9880**	**0.8357**	**0.9953**	**0.9860**	**0.9750**	
Last 3-Yr Wgt. Average	**1.2790**	**1.0357**	**1.0142**	**1.0338**	**1.0473**	**1.0312**	**1.0113**	**1.0250**	**0.9928**	**0.8398**	**1.0083**	**0.9822**	**0.9773**	

Note: Incorporated 2016-17 Birth-K persistency ration 1.307 in 2016-17 projection of Kindergarteners.

- Continued rise in Birth-K ratio with last 3-yrs yielding ~1.28.
- 2015/16 to 2016/17 saw historically high in-migration – next highest was 2004/05.

Birth-Kindergarten Ratios

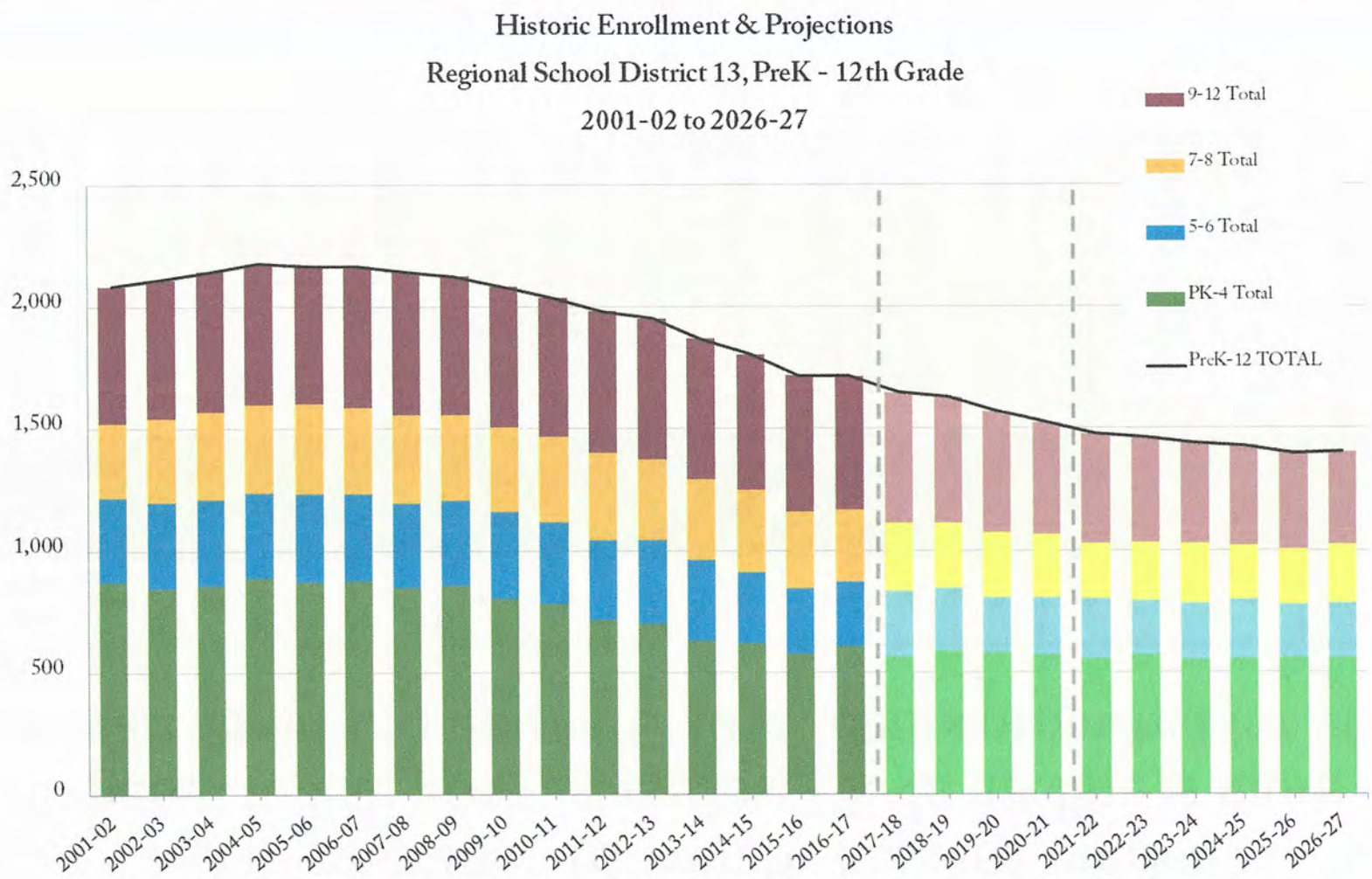


Source: CT DED, CeDar and Rsd 13 (2012-13 to 2016-17)

- Last 3 years Birth-K very similar to pre-recession pattern, confirming trend spotted in prior year projection

MILONE & MACBROOM

District Projections



Projections based on the High Projection Model, normalized to district-wide projections. 11/2016.

MILONE & MACBROOM

District Projections

- Projected enrollment adjusted upwards based on climbing Birth-K ratio and abrupt increase in elementary/middle-school age in-migration (driven by housing market)
- Compared to Fall 2015 scenarios, PK-12 decline is more gradual: about 140 more PK-12 students projected for 2025-26

School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	PK-12 Total
2013-14	2008	92	89	138	112	139	126	171	160	180	150	159	139	146	134	26	1,869
2014-15	2009	79	105	95	134	112	136	127	166	161	177	126	151	140	139	35	1,804
2015-16	2010	85	103	105	95	135	113	141	125	162	156	142	127	146	141	26	1,717
2016-17	2011	88	115	108	109	101	148	117	147	133	164	135	146	125	141	25	1,714
2017-18	2012	65	85	119	108	112	104	152	117	149	131	137	134	144	122	35	1,649
2018-19	2013	93	119	88	119	111	115	107	152	119	147	109	136	132	140	35	1,629
2019-20	2014	75	96	124	88	122	114	118	107	154	118	123	108	134	129	35	1,570
2020-21	2015	75	96	100	124	90	125	117	118	109	152	99	122	106	131	35	1,524
2021-22	2016	79	101	100	100	127	92	128	117	120	108	127	99	120	103	35	1,477
2022-23	2017	77	99	105	100	102	131	94	128	119	119	90	126	98	117	35	1,463
2023-24	2018	80	103	103	105	102	105	134	94	130	118	99	90	124	96	35	1,438
2024-25	2019	77	99	107	103	107	105	108	134	95	128	99	99	89	121	35	1,429
2025-26	2020	78	100	103	107	105	110	108	108	136	94	107	99	98	87	35	1,397
2026-27	2021	78	100	104	103	109	108	113	108	110	134	79	106	98	96	35	1,403

Sources: RSD 13, CT DPH. Projections prepared by MMI (11/2016)

District Projections

School Year	PreK-12th		PreK-4th		5th-6th		7th-8th		9th-12	
	TOTAL	% Change	PreK-4 Total	% Change	5-6 Total	% Change	7-8 Total	% Change	9-12 Total	% Change
2016-17	1,714	-0.17%	606	5.03%	264	-0.75%	297	-6.60%	547	-1.62%
2017-18	1,649	-3.79%	563	-7.10%	269	1.89%	280	-5.72%	537	-1.83%
2018-19	1,629	-1.21%	587	4.26%	259	-3.72%	266	-5.00%	517	-3.72%
2019-20	1,570	-3.62%	579	-1.36%	225	-13.13%	272	2.26%	494	-4.45%
2020-21	1,524	-2.93%	570	-1.55%	235	4.44%	261	-4.04%	458	-7.29%
2021-22	1,477	-3.08%	555	-2.63%	245	4.26%	228	-12.64%	449	-1.97%
2022-23	1,463	-0.95%	572	3.06%	222	-9.39%	238	4.39%	431	-4.01%
2023-24	1,438	-1.71%	553	-3.32%	228	2.70%	248	4.20%	409	-5.10%
2024-25	1,429	-0.63%	556	0.54%	242	6.14%	223	-10.08%	408	-0.24%
2025-26	1,397	-2.24%	560	0.72%	216	-10.74%	230	3.14%	391	-4.17%
2026-27	1,403	0.43%	559	-0.18%	221	2.31%	244	6.09%	379	-3.07%
1st 5-YR Percent Change	-13.83%		-8.42%		-7.20%		-23.23%		-17.92%	
2nd 5-YR Percent Change	-5.01%		0.72%		-9.80%		7.02%		-15.59%	
10-YR Percent Change	-18.14%		-7.76%		-16.29%		-17.85%		-30.71%	

Sources: RSD 13, CT DPH. Projections prepared by MMI (11/2016)

- Increasing in-migration expected to attenuate, not reverse, enrollment decline districtwide (from approx. 25% to 18% decline over 10 years)
- Based on known births and cohorts, elementary and middle grades remain likely to see large declines in individual years
- High school grade levels decline throughout based on known cohorts

PK-4 Individual Projections

Elementary K-4th by School Ten-Year Enrollment Projections

Elementary School	2017-18		2018-19		2019-20		2020-21		2021-22		1st Five Year	
	Total	% Change	Total	% Change	Total	% Change	Total	% Change	Total	% Change	Total	% Change
Lyman	242	2.5%	259	7.0%	256	-1.2%	244	-4.7%	229	-6.1%	-13	-5.4%
Brewster/Memorial	286	-15.6%	293	2.4%	288	-1.7%	291	1.0%	291	0.0%	5	1.7%

Elementary School	2022-23		2023-24		2024-25		2025-26		2026-27		2nd Five Year	
	Total	% Change	Total	% Change	Total	% Change	Total	% Change	Total	% Change	Total	% Change
Lyman	237	3.5%	230	-3.0%	230	0.0%	232	0.9%	233	0.4%	-4	-1.7%
Brewster/Memorial	300	3.1%	288	-4.0%	291	1.0%	293	0.7%	291	-0.7%	-9	-3.0%

- Brewster enrolls a higher share of regional births relative to Lyman, but has experienced less net in-migration at upper grades
- Brewster/Memorial (K-4) projected to dip more from lower births (2012) for 17-18 followed by stability
- Lyman anticipated to fluctuate in coming years, eventually settling in to ~230 students

Elementary Historic and Projected Enrollment
RSD 13, K-4th Grade
2003-04 to 2026-27

Source: Prepared by MMI, 11/2016.

5-Year Average	Birth-K	K-1	1-2	2-3	3-4
Lyman	0.4962	1.1102	1.0016	1.0286	1.0324
Brewster/Memorial	0.6650	1.0478	0.9990	1.0074	1.0010

MILONE & MACBROOM

District Projection - Summary

- ~18% decline for the system over the next decade
- Elementary Schools projected to decline ~8% in next 5 years before flattening
- Expect a modest and unsteady decline at Memorial for both the 5 and 10 year horizons
- Expect significant declines at Strong over next 5 years followed by modest recovery
- Expect significant declines at Coginchaug HS across the projection horizon
- With stagnant housing construction, turnover of existing stock will be a driver for in-migration. The State's housing market remains unsettled, however, RSD 13's sales have been steadily strengthening over the last 4 years.