MGT CONSULTING GROUP

CAPACITY/UTILIZATION REVIEW
MANCHESTER SCHOOL DISTRICT

Interim Report

DECEMBER 2020

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1.0 EXECUTIVE SUMMARY

In August of 2020, Manchester School District ("MSD" or "the district") contracted with MGT of America Consulting, LLC ("MGT") to conduct a facilities Audit to assess the utilization of space and develop a master plan to support the educational needs of MSD learners in coordination with the district's goals, vision, and promise. Using input from the community, the goal of a master plan is to create a blueprint or road map, based on best practice facility standards, that identifies and prioritizes facility needs, and presents strategies for effective and efficient facility improvement and usage over the planning period. For this project, the MGT team gathered facility and community data. This report provides findings and recommendations based on that information.

The project included the following tasks:

- Project initiation
- Policy, goals, and objectives formulation
- Comprehensive building inventory
- Facility assessments
- Community engagement
- Enrollment, capacity, and utilization projections
- Scenarios and prioritization
- Final facilities master plan
- Project management

This report consists of six sections. Sections 1 through 5 include a description of the methodology and the data gathered in that section. The final section includes the findings and recommendations. The report also includes appendices that contain an inventory of MSD schools as well as the *Educational Suitability Reference Guide* used for facility assessments.

The report sections are as follows:

Section 1.0 – Executive Summary
Section 2.0 – Background
Section 3.0 – Demographics, Enrollment, Capacity and Efficiency
Section 4.0 – Community Engagement
Section 5.0 – Facility Assessments
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1.1 BACKGROUND

Manchester School District is an urban school district encompassing downtown Manchester and the neighborhoods surrounding the city core. It is the largest and oldest district in the largest city in the state.

With a population of approximately 107,000, the city of Manchester is the largest city in Northern New England.

MSD serves more than 12,000 students, including approximately 1,500 students that are English Language Learners. The district consists of a developmental preschool program, 14 elementary schools, four middle schools, four high schools, including a Career and Technical Education Center, and a program for adult education.

MSD is governed by the Board of School Committee which is comprised of 15 members and chaired by the Mayor of the City of Manchester. The Board of School Committee adopted mission and promise statements to ensure a system-wide understanding of the district's goals. These statements guide the district and provide insight into the Board of School Committee's plans. The mission and promise statements are shown below:

MSD Mission

- Excellence and Equity: Every Classroom. Every Day.

MSD Promise

- Every Student in Manchester is known by name, served by strength and need, and graduates ready to lead in college, career, and community.

1.2 ENROLLMENT AND CAPACITY

The functional capacity of a school is defined as the number of students a building can support based on the program of studies offered there and educational standards. For this review, MGT set the district's functional capacity as the maximum capacity based upon New Hampshire State Department of Education minimum square foot per pupil requirements to identify the number of student seats in each school and district wide. The functional capacity is based on the number of full-size classrooms, including library, art and music rooms at the elementary schools, and space for students with special needs at all levels. The functional capacity was then multiplied by a utilization factor to calculate the MGT programmatic capacity for each school.

Grade Level	Utilization Factor
Elementary	.95
Middle	.85
High	.75

Additionally, at the request of MSD, MGT looked at school capacity with reduced class sizes as defined by the Board of School Committee in 2018.

In addition to the capacity number, MGT has created an "efficiency" score for each school. Using building capacity data and the 2020-21 enrollment, MGT defined the efficiency of each building, calculated by dividing enrollment by each building's programmatic capacity. The key, below, shows the building efficiency rates calculated using programmatic capacities and the current enrollment at each school. The building efficiency rates are color-coded to identify best practices for building use. Nationally recognized "best practices" indicate capacity rates that are either too high or too low are problematic: too high means there is **inadequate** space for the enrollment and program; too low means there is **inefficient** use of space for the enrollment and program.

EFFICIENCY RATE	DESCRIPTION
> 110	Inadequate Space
95 - 110	Approaching Inadequate Space
80 - 95	Adequate Space
70 - 80	Approaching Inefficient Use of Space
< 70	Inefficient Use of Space

In MSD, some schools have inefficient space, while other schools have inadequate space based on the analysis described above. There are ten schools based upon the MGT programmatic capacity, and eight schools based upon the MSD programmatic capacity, that have enrollment efficiency ratings of less than 70%. These schools are significantly under-utilized. They may have empty spaces or may have expanded people/programs to occupy the spaces. They may or may not have created spaces for all required programs – e.g., art and music – because they may not have staff to lead these programs.

There are also two schools based upon the MGT programmatic capacity, and one school based upon the MSD programmatic capacity, that have enrollment efficiency ratings of more than 110%. These schools are significantly over-utilized. They have no empty spaces and likely have expanded people/programs into every possible location in the building. The buildings with over-capacity likely lack core space – restrooms,

media center, cafeteria, hall spaces - to accommodate the enrollment. They may have to operate with multiple lunch periods and may be moving students at different times to reduce over-crowding in corridors.

The data in the table below is calculated using the MGT Programmatic Capacity:

School	MGT Programmatic Capacity	Enrollment	Efficiency Rate	Students Under/Over Capacity	2030 Projected Enrollment	2030 Projected Efficiency Rate
Memorial High	1,293	1,408	108.9%	+115	930	72%
West High	1,430	810	56.6%	-620	520	36.4%
Central High	1,714	1,268	74%	-446	806	47%
MST High	344	403	117.2%	+59	671	195.1%
High School Total	**4,781**	**3,889**	**81.3%**	**-892**	**2,927**	**61.2%**
Hillside Middle	848	811	95.6%	-37	633	74.6%
Southside Middle	751	700	93.2%	-51	535	71.2%
Parkside Middle	887	902	101.7%	+15	779	87.8%
McLaughlin Middle	661	723	109.4%	+62	709	107.3%
Middle School Total	**3,147**	**3,136**	**99.7%**	**-11**	**2,656**	**84.4%**
Bakersville Elementary	344	405	117.7%	+61	466	135%
Beech Street Elementary	636	498	78.3%	-138	548	86.2%
Gossler Park Elementary	555	342	61.6%	-213	381	68.6%
Green Acres Elementary	616	457	74.2%	-159	504	81.8%
Hallsville Elementary	393	244	62.1%	-149	264	67.2%
Highland-Goffe's Falls Elementary	735	394	53.6%	-341	429	58.4%
Jewett Elementary	529	348	65.8%	-181	376	71.1%
McDonough Elementary	733	419	57.2%	-314	456	62.2%
Northwest Elementary	774	507	65.5%	-267	551	71.2%
Parker-Varney Elementary	720	375	52.1%	-345	406	56.4%
Smyth Road Elementary	540	398	73.7%	-142	448	83%
Webster Elementary	630	348	55.2%	-282	371	58.9%
Weston Elementary	691	456	66%	-235	495	71.6%
Henry Wilson Elementary	467	426	91.2%	-41	491	105.1%
Elementary School Total	**8,363**	**5,617**	**67.2%**	**-2,746**	**6,186**	**74%**

The data in the below table is calculated using the MSD Programmatic Capacity:

School	MSD Programmatic Capacity	Enrollment	Efficiency Rate	Students Under/Over Capacity	2030 Projected Enrollment	2030 Projected Efficiency Rate
Memorial High	1,519	1,408	92.7%	-111	930	61.2%
West High	1,500	810	54%	-690	520	34.6%
Central High	2,071	1,268	61.2%	-803	806	39%
MST High	374	403	108%	+29	671	179%
High School Total	**5,464**	**3,889**	**71.2%**	**-1,575**	**2,927**	**53.6%**
Hillside Middle	1,147	811	70.7%	-336	633	55.2%
Southside Middle	1,032	700	67.8%	-332	535	51.8%
Parkside Middle	833	902	108.3%	+69	779	91.8%
McLaughlin Middle	848	723	85.3%	-125	709	83.6%
Middle School Total	**3,860**	**3,136**	**81.2%**	**-724**	**2,656**	**69%**
Bakersville Elementary	295	405	137.3%	+110	466	158%
Beech Street Elementary	579	498	86%	-81	548	94.6%
Gossler Park Elementary	536	342	63.8%	-194	381	71.1%
Green Acres Elementary	520	457	87.9%	-63	504	97%
Hallsville Elementary	317	244	77%	-73	264	83.3%
Highland-Goffe's Falls Elementary	554	394	71.1%	-160	429	77.4%
Jewett Elementary	520	348	66.9%	-172	376	72.3%
McDonough Elementary	639	419	65.6%	-220	456	71.4%
Northwest Elementary	603	507	84.1%	-96	551	91.4%
Parker-Varney Elementary	582	375	64.4%	-207	406	69.8%
Smyth Road Elementary	556	398	71.6%	-158	448	80.6%
Webster Elementary	509	348	68.4%	-161	371	72.9%
Weston Elementary	504	456	90.5%	-48	495	98.2%
Henry Wilson Elementary	412	426	103.4%	+14	491	119.2%
Elementary School Total	**7,126**	**5,617**	**78.8%**	**-1,509**	**6,186**	**86.8%**

Like many urban districts with declining enrollment, MSD has overall excess capacity. To better utilize space, MSD has executed a variety of moves and efforts over the last several years. MSD made the decision to move the 5th grade from elementary schools to middle schools and has started to implement this program. Along with moving 5th grade to middle schools, MSD moved their central offices to the third floor of West High School. The move of central offices to West High School has brought challenges associated with co-locating with a school as well as ADA compliance complaints due to the only access to

an elevator is through the high school portion of the building.

ENROLLMENT PROJECTIONS

An enrollment projection is an estimate of future activity based on the historical data and information provided. To prepare projections for each school, MGT looked at such factors as historical live birth data, kindergarten capture rate, live birth to kindergarten correlation coefficient, permit data, and student-age population rates as input. These factors helped to generate projections that are tailored to MSD. To identify trends and prepare for adequate spaces, teaching staff, materials, and supplies, educational leaders can use several methods of projecting enrollment.

MGT utilized four base models: Average Percentage Increase, Cohort Survival, Linear Regression, and Student-Age of Population. MGT generates a weighted average of these four "base" models to arrive at its enrollment projection. A weighted average allows the analysis to reflect all the trends observed in the historical data and the over-arching themes from the qualitative information gathered in this process. The weighted average also works to maximize the strengths of each of the base models.

AVERAGE PERCENTAGE INCREASE MODEL

This model calculates future school enrollment growth based on the historical average growth from year to year for each grade level. This simple model multiplies the historical average percentage increase (or decrease) by the prior year's enrollment to project future enrollment estimates. For example, if enrollment in the first grade decreased 5 percent from 2000 to 2001 and decreased 7 percent from 2001 to 2002, then the average percentage change would be a 6 percent decrease, and 6 percent would be the factor used to project future enrollment in this base model.

LINEAR REGRESSION MODEL

This model uses a statistical approach to estimate an unknown future value of a variable by performing calculations on known historical values. Once calculated, several future values for different future dates can then be plotted to provide a trend line or "regression line." MGT has chosen a "straight-line" model to estimate future enrollment values, a model that finds the best fit based on the historical data.

COHORT SURVIVAL MODEL

This model calculates the growth or decline in a grade level over a period of five years based on the ratio of students who attend each of the previous years, or the "survival rate." This ratio is then applied to the incoming class to calculate the trends in that class as it "moves" or graduates through the school system. For example, if history shows that between the first and second grades, the classes for the last ten years have grown by an average of 3.5 percent, then the size of incoming classes for the next ten years is calculated by multiplying them by 103.5 percent. If the history shows a declining trend, the multiplying factor would be 100 percent minus the declining trend number. The determination of future kindergarten enrollment estimates is critical, especially for projections exceeding five years. There are two methods of projecting kindergarten. The first model is based on the correlation between historical birth rates (natality rates) obtained from zip code birth data and household counts from Census, and historical kindergarten enrollment. The second model uses a linear regression line based on the historical kindergarten enrollment data.

STUDENT-AGE OF POPULATION MODEL

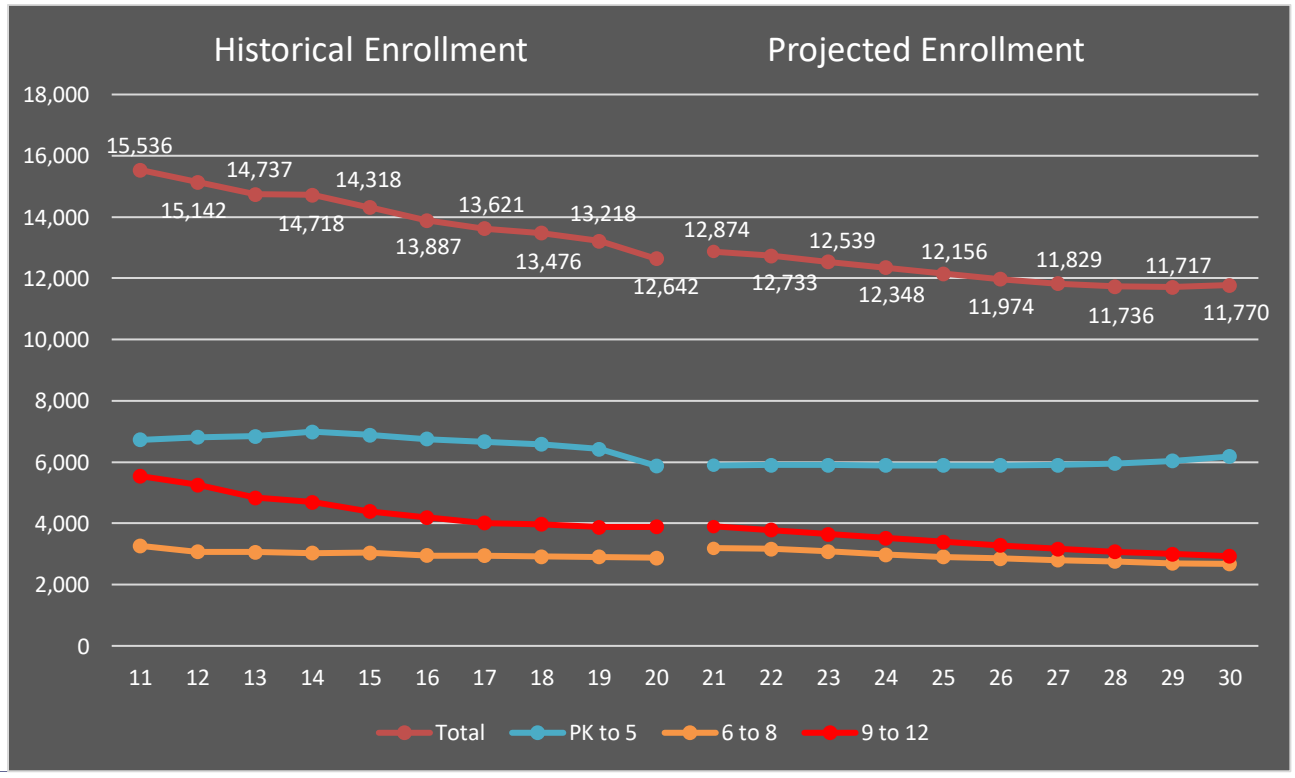
This last model utilizes age related population data as its base data. Using the student-age population data and historical enrollment data, MGT created a student generation factor (SGF) for each school level (Elementary, Middle, and High) based upon population of the age groups of those school levels. This factor indicates the number of students within each school level that can be expected based upon population projections. By using population projections and historical enrollment data, MGT projected future enrollment.

Once each of these four base models has been calculated, MGT generated a weighted average of each of the models. A weighted average allows the analysis to reflect all the trends observed in the historical data and the over-arching themes from the qualitative information gathered in this process.

The weighted average also works to maximize the strengths of each of the base models. Two models, the Average Percentage Increase Model, and the Linear Regression Model, emphasize historical data. These models are quite effective predictors if there is no expectation of unusual community growth or decline and student population rates have minimal fluctuation.

The Cohort Survival Model also uses historical enrollment numbers but considers student-mobility patterns and the effects of the natality rates in prior years. The Cohort Survival Model is perhaps the best-known predictive tool using this type of data. However, like the Annual Percentage Annual Increase Model and the Linear Regression Model, the Cohort Survival Model loses its predictive capabilities in communities that experience, or are expecting to experience, more rapid growth or rapid decline.

The Student-Age of Population Model allows the planner to consider projections for population growth within the school district and surrounding area. This model looks forward and is based on local population data as well as housing planning information.



Given this information and data, MSD can reasonably expect enrollment to continue to decline before leveling off by 2030. The number of excess seats will continue to increase in middle schools and high schools and slightly decrease in elementary schools.
The enrollment shown for 2030-31 is a projection, based on MGT's methodologies. The capacity is left unchanged from 2020-21; hence, an increase in the total number and percent of excess seats district wide over the next 10-year period.

YEAR	Grade Level	ENROLLMENT / PROJECTION	MSD CAPACITY/MGT CAPACITY	EXCESS SEATS
2020/2021	Elementary	5,617	7,126/8,363	1,509/2,746
	Middle	3,136	3,860/3,147	724/11
	High	3,889	5,464/4,781	1,575/892
2030/2031	Elementary	6,186	7,126/8,363	940/2,177
	Middle	2,677	3,860/3,147	1,183/470
	High	2,927	5,464/4,781	2,537/1,854

The enrollment/capacity gap varies among the district's school grade levels. As shown in the table above, the elementary schools and high schools have the largest difference between enrollment and capacity with both the MGT and MSD calculated capacities. The middle schools currently operate with the smallest difference between enrollment and capacity.

It is important to note the district's average efficiency rating across all grade levels is approximately 77%, which is only slightly lower than adequate range of 80% - 95%. However, that percentage is an average, which obscures the real story. As described earlier, there are schools that are significantly over-enrolled/utilized as well as schools that are significantly under-enrolled/utilized.

As shown in the table above, there are currently 3,649 "empty seats" in district facilities when using the MGT calculated capacity and 3,808 "empty seats" when using the MSD calculated capacity. When capacity and enrollment are not balanced, the district is spending resources on empty spaces.

MGT created a cost estimate for empty seats with data from a national source. Using the American School and University magazine's annual review of Maintenance and Operations (M&O) costs[1], and a conservative conversion estimate of seats into students of 65% (since scheduling varies between elementary, middle, and high schools and thus seat conversion is not a one-to-one correlation). MGT conservatively estimates that MSD is spending $1,981,870.70 on empty seats in FY 2020-21 (3,701 empty seats x 65% x $823.84/student). Over the next ten-years, the district could spend more than $20,000,000 in M&O costs for empty seats if substantial efforts are not taken to reduce the excess capacity.

[1] *Maintenance and operations cost calculations were determined using the American University Study 2006-2007.* http://www.asumag.com/maintenance/36th-annual-maintenance-operations-cost-study-schools.

1.3 COMMUNITY ENGAGEMENT

Engaging the community is an important part of developing recommendations for long-range facility master planning. In MSD, the engagement plan for the Interim Report consisted of a community survey, with a goal of hearing input from the community about capacity and utilization issues.

On October 23, 2020, MGT engaged MSD stakeholders via an online Qualtrics survey that generated a significant number of responses. The survey was available to for two weeks and stakeholders were reminded to take the survey several times during the two-week period. The survey was offered in the following languages to ensure availability to as many stakeholders as possible:

- English
- Bosnian
- French
- Vietnamese
- Hindi
- Croatian
- Portuguese
- Romanian
- Russian
- Albanian
- Swahili
- Ukrainian
- Arabic
- Spanish
- Urdu
- Chinese

The survey had a total of 4,302 respondents. Respondents were not required to complete any survey question, which means that the total number of responses for each question can vary.

The race/ethnicity of 4,055 respondents was 88.34% White, 10.96% Hispanic/Latino of any race(s), 4.81% Other Races, 3.6% Black/African American, 2.44% Asian, 0.69% American Indiana/Alaskan Native, and 0.12% Native Hawaiian/Other Pacific Islander.

FINDINGS FROM INITIAL SURVEY

- Respondents represented every school, with Memorial High School having the most (545) and Bakersville Elementary School having the least (67)
- Respondents represented every grade level, with 11th grade having the most (406) and Pre-kindergarten having the least (71)
- Adjusting school attendance boundaries was listed as the preferred way to address schools that are over and under capacity
- Optimizing available school capacity to efficiently accommodate the future enrollment and anticipated shifts of population is the most important facility planning objective to respondents
- Gaining efficiencies by reducing the number of schools in MSD is the least important facility planning objective to respondents

1.4 FACILITY ASSESSMENTS

MSD schools were scored in three areas:

- Building/Site condition – physical condition of all building systems
- Educational suitability – ability of the facility to support and enhance educational program delivery
- Technology readiness – level to which the building infrastructure supports information technology

The building/site condition scores were determined by utilizing the deferred maintenance and renovation expense as outlined in the Manchester School District Facility Condition Assessment (March 2020). The educational suitability and technology readiness assessments were conducted by a trained educator who walked each site with the principal/designee. The three scores were weighted to create a Combined Score that makes it easier to develop priorities across all the assessments.

The weighting formula for the combined scores is shown below:

- Building/Site condition – 50%
- Educational suitability – 30%
- Technology readiness – 20%

Scores have been organized using a cut point criteria and color-coding, as shown below:

SCORES	DESCRIPTION
> 90	Excellent/Like New
80 - 89	Good
70 - 79	Fair
60 - 69	Poor
< 60	Unsatisfactory

MSD has many old schools, the average age is approximately 70 years, thus many buildings may have difficulty meeting the district's goal of offering schools that provide 21st Century learning opportunities and support the needs of diverse learners. Despite the age of district schools, the average building condition score of 76 is in the top half of the "Fair" category and indicates that many buildings have been well maintained. The highest average score is for technology readiness, which reflects how well the district's infrastructure supports the standards in place. The high technology readiness scores are likely due to the significant emphasis the district has placed on technology for both student and teacher support.

RANGE/AVERAGE	BUILDING/SITE CONDITION SCORE	EDUCATIONAL SUITABILITY SCORE	TECHNOLOGY READINESS SCORE	COMBINED SCORE
Range	58-93	50-82	71-100	58-88
Average	76	72	91	76

The lowest average score is for educational suitability, which reflects the degree to which the facility supports the educational program it houses. The educational suitability average score of 72 ("Fair") shows that many schools have spaces that do not meet the district's facility standards, or that the schools have inadequate spaces like science labs, music, or art rooms. It is interesting to note that the seven lowest educational suitability scoring schools were elementary schools.

School	Suitability Score	Tech Readiness Score	Building Condition Score	Combined Condition Score
West High	73	76	75	74
Northwest	76	71	81	77
Memorial	79	82	78	79
Jewett	70	84	81	79
Webster	66	93	76	76
Smyth Road	71	76	62	68
Hillside	81	90	82	83
McDonough	80	76	74	76
Bakersville	61	76	81	74
Beech Street	80	83	75	78
Highland-Goffe's Falls	82	83	93	88
Central	73	90	72	76
Wilson	65	74	74	71
MST	79	98	79	83
Southside	78	79	74	76
Green Acres	69	93	70	74
McLaughlin	80	100	78	83
Weston	65	95	86	81
Hallsville	50	67	58	58
Gossler Park	65	66	63	64
Parkside	73	100	78	81
Parker-Varney	70	88	75	76

1.5 FINDINGS AND RECOMMENDATIONS

This section presents the process utilized to determine priorities and prepare recommendations for master planning for the Board's review. This section is divided into the following components

- **Findings** – a description of issues that MGT identified through the study process that have facility implications for short- and long-range planning.
- **Recommendations** – a set of issues that the Board may want to consider for school facility planning, including possible program placement changes, facility improvements, and opportunities for repurposing.

FINDINGS

Any long-range study includes gathering information and documenting issues, conditions, ideas, and data. In MSD, as described in earlier sections, this information has come from interviews, community surveys, document reviews, and on-site assessments of each of the district's facilities.

MGT's recommendations are based on the following findings:

1. MSD HAS MORE CAPACITY THAN NEEDED TO SUPPORT CURRENT AND PROJECTED STUDENT ENROLLMENT

Using either the MGT or MSD method for calculating school capacity, there are many "empty seats" across the school district. Currently, there are nearly 4,000 empty seats and, without changes, the number is projected to grow to more than 4,500 over the next 10 years. Having "empty seats" carries several costs, including lost revenue and increased per student energy and operational costs. Without changes in the district's facility inventory, these costs are projected to increase over time.

MGT created a cost estimate for empty seats with data from a national source. Using the American School and University magazine's annual review of Maintenance and Operations (M&O) costs, and a conservative conversion estimate of seats into students of 65% (since scheduling varies between elementary, middle, and high schools and thus seat conversion is not a one-to-one correlation). MGT conservatively estimates that MSD is spending $1,981,870.70 on empty seats in FY 2020-21 (3,701 empty seats x 65% x $823.84/student). Over the next ten-years, the district could spend more than $20,000,000 in M&O costs for empty seats if substantial efforts are not taken to reduce the excess capacity.

2. MSD SCHOOLS ARE NOT EQUALLY ABLE TO PROVIDE 21ST CENTURY LEARNING ENVIRONMENTS THAT SUPPORT STUDENT PROJECTS, ENGAGEMENT, AND COLLABORATION

The average age of schools in MSD is 70 years. As buildings go, this is old. Most building systems – plumbing, lighting, heating, etc., – have "life-cycles." Few building life cycles extend beyond 50 years.

In addition to facility condition issues, MGT gathered information about the suitability of each space to support instruction. Buildings planned and built before 1980 did not include space for Title I, English Language Support, Special Education, or technology. Those schools typically had classrooms, but no flexible learning spaces to support differentiated learning with small groups or various learning styles.

Data gathered from assessments of MSD schools provide evidence of the impact of the age of the schools

on the learning environment. Data gathered included Building/Site Condition, Educational Suitability, and Technology Readiness. The data assessments show the following:

- The average **technology readiness** score is "Excellent," documenting the emphasis placed on student and faculty technology access over the last several years.
- The average **educational suitability** score is "Fair," indicating deficiencies in meeting educational program needs in many schools.
- The average **building/site condition** score is "Fair" and there is a wide variation of scores with some schools having significant facility deficits.

3. THE DISTRICT'S ESTIMATED COST TO IMPROVE ALL FACILITIES TO A COMBINED SCORE OF 85 IN ALL FOUR ASSESSMENT CATEGORIES IS $ $92,792,206.69

Using construction cost data from School Planning & Management Magazine Annual School Construction Report, MGT estimated the cost to renovate each school.

REGION 1 MEDIANS NEW SCHOOLS *(CT, ME, MA, NH, RI, VT)*

	Elementary	Middle	High
$/sq. ft.	$400.36	$371.59	$387.75
$/student	$86,619	$67,628	$80,474
Sq. ft./student	214.2	182.6	193
Students	629	1001	1118
Size (sq. ft.)	103,650	182,059	222,826
Total cost ($000)	$36,900	$67,800	$89,970

The median elementary school in Region 1 spent $400.36 per square foot or $86,619 for each of 629 students accommodated. Construction costs in Region 1 are higher than anywhere else ($/square foot) but reporting throughout the region is consistent.

*Source – School Planning & Management Magazine Annual School Construction Report

School	Suitability Score	Suitability Renovation Estimate	Condition Score	Condition Renovation Estimate	Technology Score	Technology Renovation Estimate	Total Renovation Estimate
West High	74	$2,381,153.53	75	$6,347,178.24	76	$145,756.63	$ 8,874,088.40
Northwest	77	$546,538.24	81	$875,862.57	71	$71,924.99	$ 1,494,325.80
Memorial	79	$1,151,995.96	78	$4,489,442.40	82	$50,365.93	$ 5,691,804.29
Jewett	79	$673,081.48	81	$558,593.00	84	$2,836.58	$ 1,234,511.06
Webster	76	$1,294,758.81	76	$1,958,668.02	93	$0	$ 3,253,426.83
Smyth Road	68	$737,338.51	62	$4,057,596.15	76	$40,637.70	$ 4,835,572.36
Hillside	83	$566,955.61	82	$1,512,748.54	90	$0	$ 2,079,704.15
McDonough	76	$411,985.24	74	$2,731,080.08	76	$58,686.06	$ 3,201,751.37
Bakersville	74	$1,306,505.90	81	$658,924.02	76	$40,929.87	$ 2,006,359.79
Beech Street	78	$447,457.17	75	$2,775,969.41	83	$12,036.09	$ 3,235,462.66
Highland-Goffe's Falls	88	$246,161.75	93	$0	83	$10,319.43	$ 256,481.18
Central	76	$3,628,428.13	73	$13,110,510.87	90	$0	$ 16,738,939.00
Wilson	71	$1,199,365.34	74	$2,268,417.34	74	$53,133.29	$ 3,520,915.97
MST	83	$781,820.33	79	$2,409,866.25	98	$0	$ 3,191,686.58
Southside	76	$908,949.48	74	$4,932,687.21	79	$60,771.28	$ 5,902,407.97
Green Acres	74	$1,050,692.20	70	$3,173,159.28	93	$0	$ 4,223,851.47
McLaughlin	83	$561,844.08	78	$2,703,874.64	100	$0	$ 3,265,718.72
Weston	81	$1,465,876.08	86	$0	95	$0	$ 1,465,876.08
Hallsville	58	$1,607,376.21	59	$4,073,371.90	67	$68,921.01	$ 5,749,669.12
Gossler Park	64	$957,923.37	63	$3,564,630.16	66	$75,767.41	$ 4,598,320.94
Parkside	81	$1,596,444.28	78	$2,960,294.03	100	$0	$ 4,556,738.31
Parker-Varney	76	$1,068,140.48	75	$2,346,454.15	88	$0	$ 3,414,594.63

Additional recommendations make clear that addressing the facility needs of each current building may not be the most efficient and effective way to address facility needs in the district, given the number of schools that are under- and over-utilized.

4. MSD'S HIGH SCHOOL COHORT SURVIVAL RATE IS VERY LOW

As shown in the table below, students entering high school choose not to stay in MSD. While analyzing the data, MGT noted there is a large drop in enrollment between the Freshman and Sophomore years and between the Junior and Senior years, although enrollment only decreases slightly between Sophomore and Junior Years. The survival percentage, or the percentage of incoming freshman that stay through their senior year, is consistently around 60% with the exception the 2017-2021 cohort.

When dissecting the 2017-2021 cohort data, it appears the decreases in enrollment follow the same pattern as the previous cohorts except there was not a significant drop between the Junior and Senior years. This may be due to the onset of remote instruction because of the Covid-19 pandemic.

Historical Enrollment

Grade	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
9th	1698	1746	1658	1361	1279	1248	1287	1123			
10th		1269	1293	1297	1170	1094	1047	1100	923		
11th			1260	1191	1235	1068	1011	973	1060	883	
12th				985	1004	980	846	818	774	816	868
Cohort Survival %				58%	57.5%	59%	62%	64%	62%	63%	77%

5. HIGH DEFERRED MAINTENANCE, LIFECYCLE, & CAPITAL IMPROVEMENT COSTS

According to Manchester School District Facilities Condition Assessment (March 2020), MSD has more than $158,000,000 of deferred maintenance, lifecycle, and capital improvement costs. Each of these are defined further below:

- Deferred Maintenance (DM) costs are defined as critical maintenance that has been delayed and will result in significant added costs, potential program curtailment or interruption, and/or liability issues. DM usually refers to critical components such as boilers, roofs, alarm panels, water heaters, etc.

- Lifecycle (LC) costs are defined as the investments necessary due to existing equipment or building components having worn out due to age. Replacements that are essential for the normal protection and preservation of the facilities' structural integrity and functional utility.

- Capital Improvement (CI) costs are defined as the investments that are recommended to install additional systems or improvement dedicated to raise the facility, electrical/mechanical systems, and/or architectural systems to currently acceptable standards.

RECOMMENDATIONS

Based on the findings described above, MGT recommends that the Manchester Board of School Committee develop a long-range plan that includes some of the options described below. Each option addresses issues found in the district during this project.

1. **Reduce capacity/number of facilities across the district to allow for reallocation of funds to support instruction.**

Schools should be re-purposed/closed based on identified criteria, including facilities that do not meet program standards, are high in operational or energy costs, do not have ADA access or air conditioning, have difficulty meeting student achievement standards, or have other issues.

Major Criteria for Repurposing/closure selection:

- Combined Score for facility assessments
- Distribution of schools aligned to distribution of students
- Deferred maintenance costs
- Utility costs
- Strategic land use planning
- Program considerations
- Access issues and transportation issues

Therefore, MGT is making the following recommendations:

Option 1:

Move the remaining 5th grade students to Middle school, close Hallsville elementary, Gossler Park elementary, Smyth Road elementary, Wilson elementary, Central High, and re-purpose or divest the sites. Closure of these five schools will decrease excess seats, and as illustrated in the table below, save the district approximately $47,300,000 in deferred maintenance, system upgrades, and capital improvements as well as almost $600,000 annually in utility costs. MSD would also realize cost efficiencies in administrative and operational staff.

School	Deferred Maintenance	System Life Cycle Improvements	Capital Improvements	Annual Utilities
Hallsville ES	$311,969	$445,641	$4,020,854	$55,349
Gossler Park ES	$1,934,995	$1,042,274	$1,517,459	$50,623
Smyth Road ES	$1,511,521	$811,030	$2,725,917	$42,567
Wilson ES	$18,845	$632,171	$3,308,918	$37,499
Central HS	$5,710,685	$9,899,665	$13,399,510	$400,703
Totals	$9,488,015	$12,830,781	$24,972,658	$586,741
Grand Total				$47,878,195

Option 2:

Move 5th grade students back to elementary school, close Hallsville elementary, Gossler Park elementary, Smyth Road elementary, Southside Middle, Central High, and re-purpose or divest the sites. Closure of these five schools will decrease excess seats, and as illustrated in the table below, save the district approximately $54,200,000 in deferred maintenance, system upgrades, and capital improvements as well as almost $685,000 annually in utility costs. MSD would also realize cost efficiencies in administrative and operational staff.

School	Deferred Maintenance	System Life Cycle Improvements	Capital Improvements	Annual Utilities
Hallsville ES	$311,969	$445,641	$4,020,854	$55,349
Gossler Park ES	$1,934,995	$1,042,274	$1,517,459	$50,623
Smyth Road ES	$1,511,521	$811,030	$2,725,917	$42,567
Southside MS	$320,215	$714,139	$9,814,945	$134,977
Central HS	$5,710,685	$9,899,665	$13,399,510	$400,703
Totals	$9,789,385	$12,912,749	$31,478,685	$684,219
Grand Total				$54,865,038

Review closure sites for re-purpose opportunities or divestiture. Re-purpose plans could include use by the district for another activity – e.g., office space or professional development or storage, instead of instructional space for students. Re-purpose plans could also include buildings offered wholly or in part to another organization. It could also mean closing and selling the building and removing it from the district's inventory. MGT recommends annual monitoring and adjustment of the list of "re-purpose buildings.

2. Build new facilities to address condition and 21st century educational suitability of schools.

Option 1:

Utilizing savings from the closure of the excess schools, MSD should consider updating their oldest elementary facilities by building new a 750-student 21st century elementary school, possibly on the current Smyth Road Elementary site. Once completed, MSD could combine Webster Elementary and McDonough Elementary into the new school, further reducing excess seats and saving funds that would otherwise be spent on deferred maintenance, lifecycle upgrades, and capital improvements. As funds are available, MSD should continue the process of building new elementary schools in the future to replace the oldest facilities. The estimated cost to build a 750-student elementary school is $65,000,000

Option 2:

Renovate Northwest and Highand-Goff's elementary schools. These are the two newest elementary schools and have the highest assessment scores.

Option 3:

Renovate Parkside, Hillside, and McLaughlin middle schools. These three middle schools each score above the 80 percentile on the combined assessment. The estimated renovation cost for these three schools is illustrated in the table below:

School	Estimated renovation cost
Parkside	$20,000,000
Hillside	$15,000,000
McLaughlin	$16,000,000
Total	$51,000,000

Option 4:

Build two new 21st century High schools to replace Central, West and Memorial High schools. MST would remain as a Career and Technical Center. The estimated cost per high school is $150,000,000.

Option 5:

Merge Memorial and MST to expand the project-based education concept currently offered at MST. Renovate Memorial and MST to improve both facility condition and education suitability. Design and renovate West as a traditional school but updated to current educational and athletic standards. The estimated cost of renovations is illustrated in the table below:

School	Estimated renovation cost
West	$30,000,000
Memorial	$25,000,000
Total	$55,000,000

3. Centralized early childhood education facility

MSD should consider establishing a stand-alone early childhood education facility. Having a centrally located early childhood education facility will allow MSD to concentrate resources in one location and design the facility specifically for early childhood education.

MSD should consider closed schools for the location of the early childhood education facility. Several schools are single story and could possibly be renovated specifically for early childhood education or all sites could be demolished, and a new facility erected.

4. Re-imagine what 21st century High School could look like in MSD.

As illustrated in this report, MSD high school enrollment has declined at a much higher rate than elementary and middle school enrollment indicating that high school students are choosing to leave the district. To retain and possibly recruit students from nearby communities, MSD should consider developing an educational program designed at capturing those high school students that are not completing their education with MSD. For example, remote and/or hybrid instruction, Performing arts, Visual Arts, Engineering, Cooperative on the job training opportunities, etc.

Once completed, MSD will have multiple educational opportunities to engage students in the learning style that is most appropriate for them, thus improving the high school cohort survival percentage, but

more importantly, helping more students reach their potential.

5. Conduct a boundary review

As noted earlier, while MSD has excess seats in the elementary level, other schools are over-enrolled. For example, Bakersville elementary is utilized at 124% of its designed capacity. Additionally, with the recommended closer of schools, the entire district should be reviewed to balance enrollment between the remaining schools.

A boundary review will re-design attendance boundaries to distribute enrollment more equally, so no school is over utilized.

2.0 BACKGROUND

2.1 DISTRICT INFORMATION

Manchester School District is an urban school district encompassing downtown Manchester and the neighborhoods surrounding the city core. It is the largest and oldest district in the largest city in the state.

With a population of approximately 107,000, the city of Manchester is the largest city in Northern New England.

MSD serves more than 12,000 students, including approximately 1,500 students that are English Language Learners. The district consists of a developmental preschool program, 14 elementary schools, four middle schools, four high schools, including a Career and Technical Education Center, and a program for adult education.

MSD is governed by the Board of School Committee which is comprised of 15 members and chaired by the Mayor of the City of Manchester. The Board of School Committee adopted mission and promise statements to ensure a system-wide understanding of the district's goals. These statements guide the district and provide insight into the Board of School Committee's plans. The mission and promise statements are shown below:

MSD Mission

- Excellence and Equity: Every Classroom. Every Day.

MSD Promise

- Every Student in Manchester is known by name, served by strength and need, and graduates ready to lead in college, career, and community.

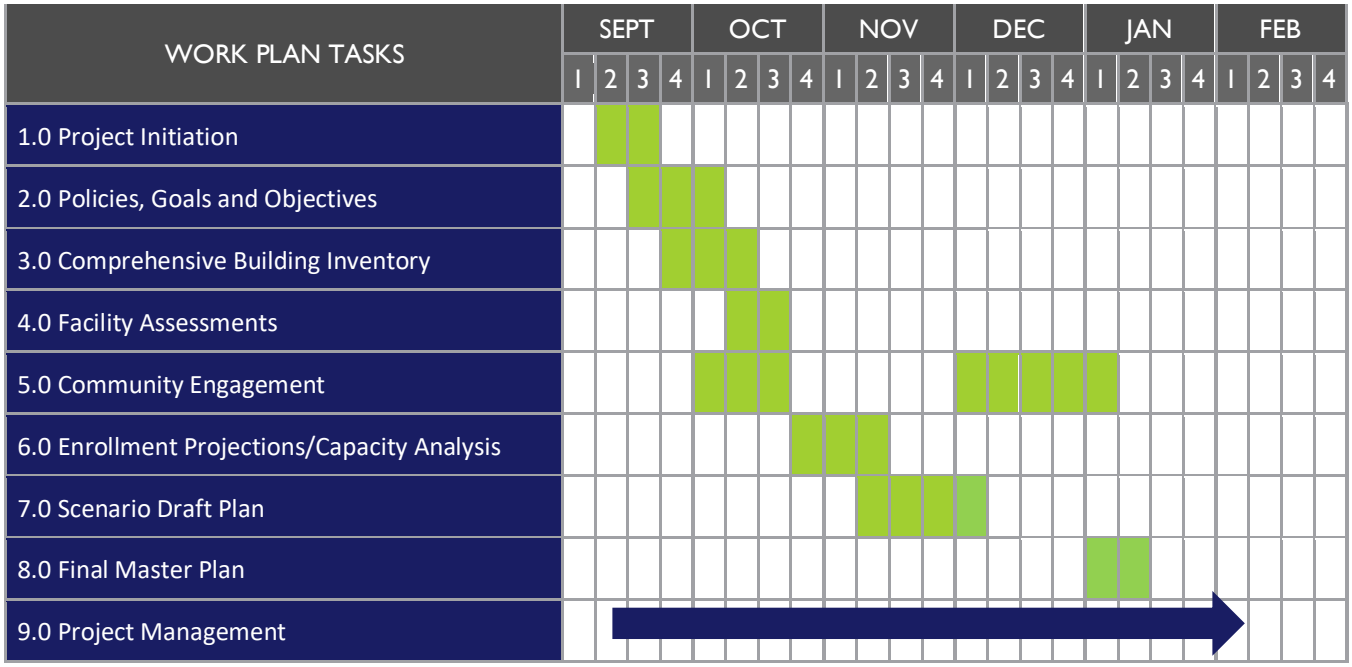
2.2 PROJECT BACKGROUND

In August of 2020, MSD contracted with MGT to conduct a facilities Audit to assess the utilization of space and develop a master plan to support the educational needs of MSD learners in coordination with the district's goals, vision, and promise. Using input from the community, the goal of a master plan is to create a blueprint or road map, based on best practice facility standards, that identifies and prioritizes facility needs, and presents strategies for effective and efficient facility improvement and usage over the planning period. For this project, the MGT team gathered facility and community data. This report provides findings and recommendations based on that information.

The project included the following tasks:

- Project initiation
- Policy, goals, and objectives formulation
- Comprehensive building inventory
- Facility assessments
- Community engagement
- Enrollment, capacity, and utilization projections
- Scenarios and prioritization
- Final facilities master plan
- Project management

The timeline for the project is shown below.



3.0 DEMOGRAPHICS, ENROLLMENT, SCHOOL CAPACITY, AND BUILDING EFFICIENCY

This section provides information about MSD demographics, enrollments, capacity, and efficiency. The data are presented in the following sections:

3.1 INTRODUCTION

MSD is a complex school district serving an urban and suburban area with many neighborhoods. Families in Manchester are afforded a wide array of choices for their child's education, including public schools, parochial schools, and charter schools. Manchester families can also choose to send their children to an adjoining school district.

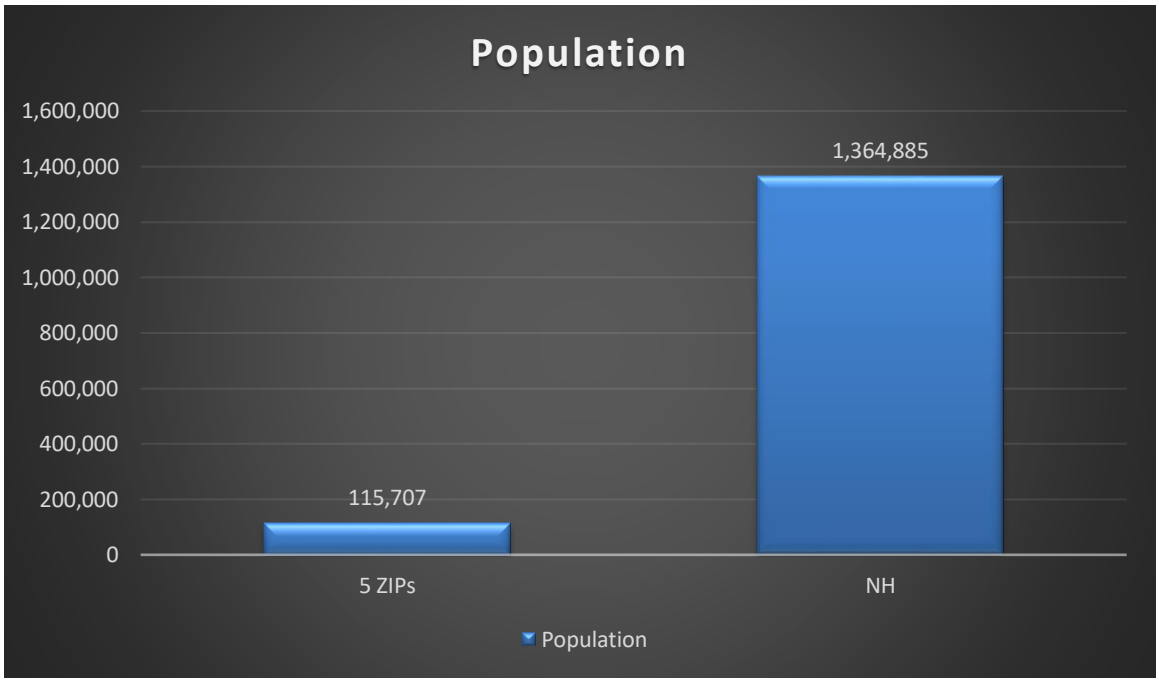
MGT prepared enrollment projections for the district by grade level. The forecast reflects local demographic and historical enrollment trends for the district. To analyze efficiency over the 10-year enrollment projection, MGT divided projected enrollment by the district's total capacity.

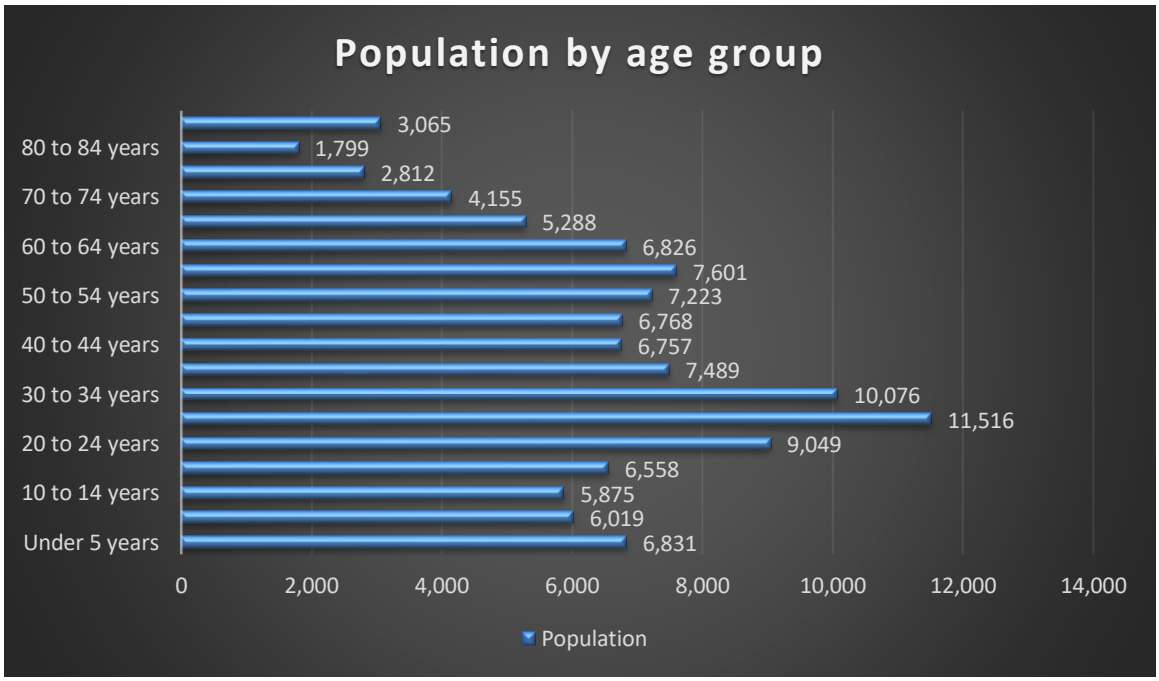
Based on the data gathered, MGT concludes that the enrollment will continue to decline before leveling off and MSD has too many buildings. The following subsections will provide the rationale behind this conclusion.

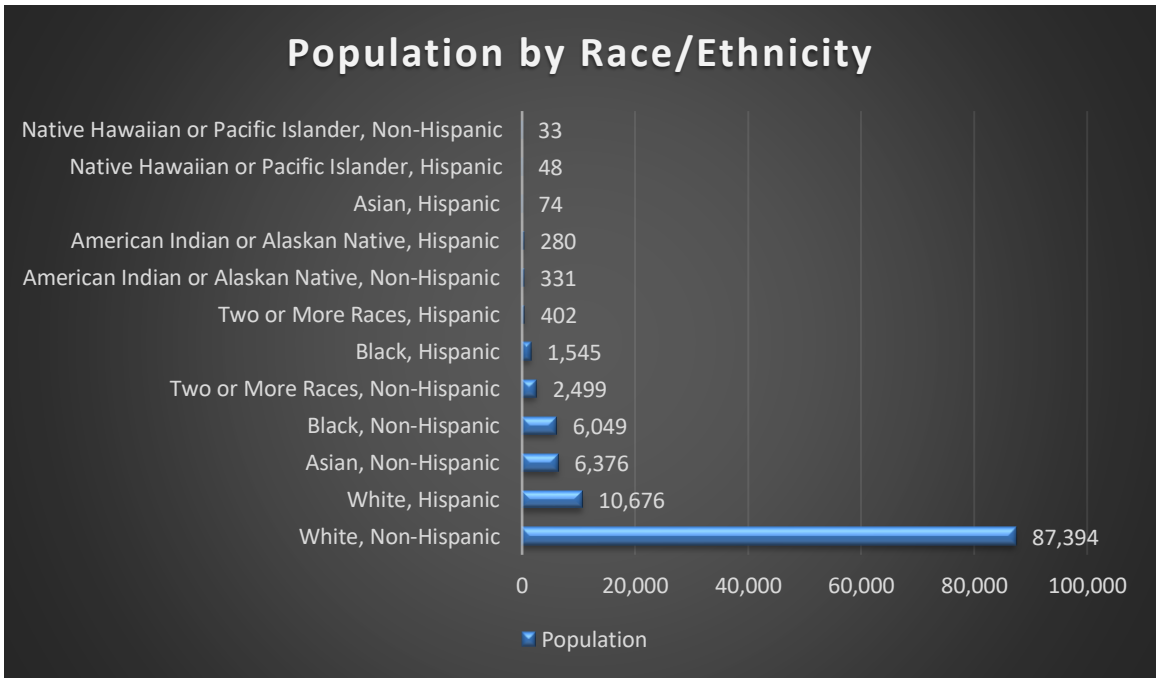
3.2 DEMOGRAPHICS

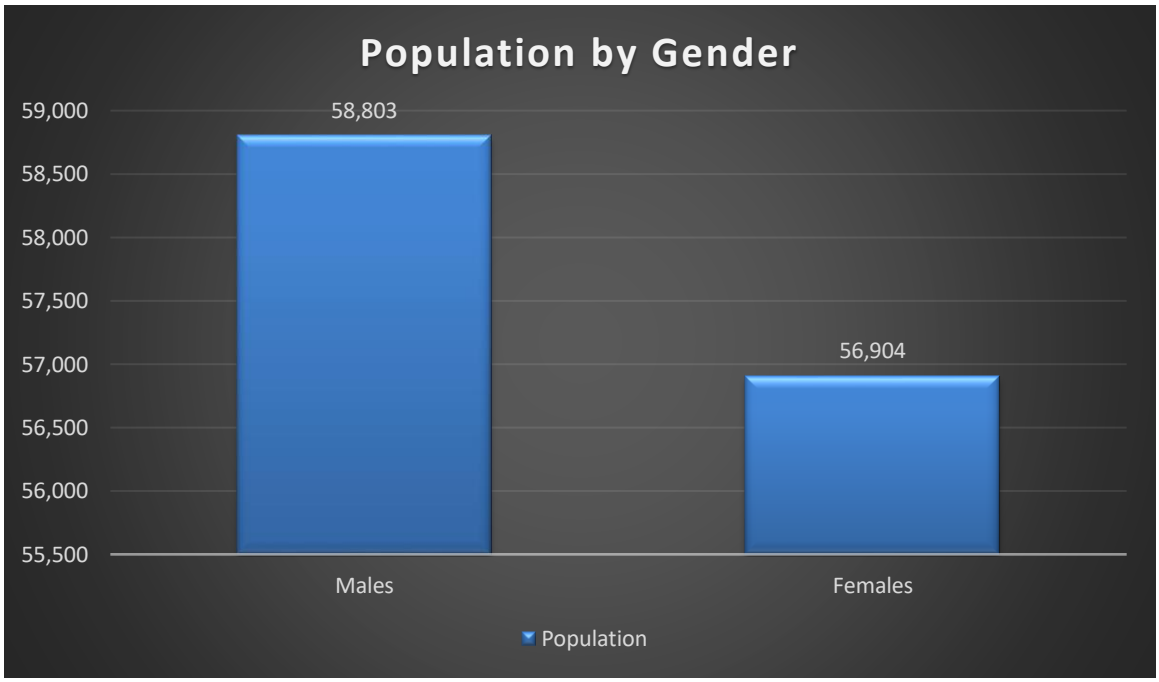
MGT gathers demographic information by zip code from a variety of public information sources including the U.S. Census. For the purposes of this report, the following zip codes were used:

- 03101
- 03102
- 03103
- 03104
- 03109






Population by Race/Ethnicity
Native Hawaiian or Pacific Islander, Non-Hispanic
Native Hawaiian or Pacific Islander, Hispanic
Asian, Hispanic
American Indian or Alaskan Native, Hispanic
American Indian or Alaskan Native, Non-Hispanic
Two or More Races, Hispanic
Black, Hispanic
Two or More Races, Non-Hispanic
Black, Non-Hispanic
Asian, Non-Hispanic
White, Hispanic
White, Non-Hispanic
33
48
74
280
331
402
1,545
2,499
6,049
6,376
10,676
87,394
0
20,000
40,000
60,000
80,000
100,000
Population


Population by Gender
59,000
58,500
58,000
57,500
57,000
56,500
56,000
55,500
58,803
56,904
Males
Females
Population

3.3 ENROLLMENT

Total PK-12 enrollment in MSD stood at 15,536 students in 2011-12. Since then, enrollment has decreased to 12,642 in 2020-21. Total enrollment has decreased by 18.6%, but it is important to look further into enrollment at school levels, particularly the high school level. In 2011-12, high school enrollment was 5,543 and has decreased to 3,889 in 2020-21. This is a decrease of 29.8%.

Historical Enrollment

Grade	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PK	279	275	325	358	360	359	351	400	388	259
K	989	1103	1033	1069	1014	1036	1013	968	999	728
1st	1208	1154	1229	1171	1158	1049	1105	1041	1028	988
2nd	1117	1119	1098	1167	1123	1089	1019	1090	1006	962
3rd	1039	1079	1101	1087	1119	1100	1060	979	1054	973
4th	1099	1005	1066	1075	1068	1058	1063	1039	974	1025
5th	996	1082	990	1067	1045	1055	1052	1064	976	943
6th	1047	1007	1081	956	1028	1000	975	985	985	936
7th	1071	1044	1000	1091	961	1012	992	977	971	975
8th	1148	1022	980	989	1052	938	977	959	955	964
9th	1746	1658	1361	1279	1248	1287	1123	1217	1184	927
10th	1269	1293	1297	1170	1094	1047	1100	923	999	1096
11th	1369	1260	1191	1235	1068	1011	973	1060	883	998
12th	1159	1041	985	1004	980	846	818	774	816	868
PK to 5	6727	6817	6842	6994	6887	6746	6663	6581	6425	5878
6 to 8	3266	3073	3061	3036	3041	2950	2944	2921	2911	2875
9 to 12	5543	5252	4834	4688	4390	4191	4014	3974	3882	3889
Grand Total	15536	15142	14737	14718	14318	13887	13621	13476	13218	12642

An enrollment projection is an estimate of future activity based on the historical data and information provided. To prepare projections for each school, MGT looked at such factors as historical live birth data, kindergarten capture rate, live birth to kindergarten correlation coefficient, permit data, and student-age population rates as input. These factors helped to generate projections that are tailored to MSD. To identify trends and prepare for adequate spaces, teaching staff, materials, and supplies, educational leaders can use several methods of projecting enrollment.

MGT utilized four base models: Average Percentage Increase, Cohort Survival, Linear Regression, and Student-Age of Population. MGT generates a weighted average of these four "base" models to arrive at its enrollment projection. A weighted average allows the analysis to reflect all the trends observed in the historical data and the over-arching themes from the qualitative information gathered in this process. The weighted average also works to maximize the strengths of each of the base models.

AVERAGE PERCENTAGE INCREASE MODEL

This model calculates future school enrollment growth based on the historical average growth from year to year for each grade level. This simple model multiplies the historical average percentage increase (or decrease) by the prior year's enrollment to project future enrollment estimates. For example, if enrollment in the first grade decreased 5 percent from 2000 to 2001 and decreased 7 percent from 2001 to 2002, then the average percentage change would be a 6 percent decrease, and 6 percent would be the factor used to project future enrollment in this base model.

LINEAR REGRESSION MODEL

This model uses a statistical approach to estimate an unknown future value of a variable by performing calculations on known historical values. Once calculated, several future values for different future dates can then be plotted to provide a trend line or "regression line." MGT has chosen a "straight-line" model to estimate future enrollment values, a model that finds the best fit based on the historical data.

COHORT SURVIVAL MODEL

This model calculates the growth or decline in a grade level over a period of five years based on the ratio of students who attend each of the previous years, or the "survival rate." This ratio is then applied to the incoming class to calculate the trends in that class as it "moves" or graduates through the school system. For example, if history shows that between the first and second grades, the classes for the last ten years have grown by an average of 3.5 percent, then the size of incoming classes for the next ten years is calculated by multiplying them by 103.5 percent. If the history shows a declining trend, the multiplying factor would be 100 percent minus the declining trend number. The determination of future kindergarten enrollment estimates is critical, especially for projections exceeding five years. There are two methods of projecting kindergarten. The first model is based on the correlation between historical birth rates (natality rates) obtained from zip code birth data and household counts from Census, and historical kindergarten enrollment. The second model uses a linear regression line based on the historical kindergarten enrollment data.

STUDENT-AGE OF POPULATION MODEL

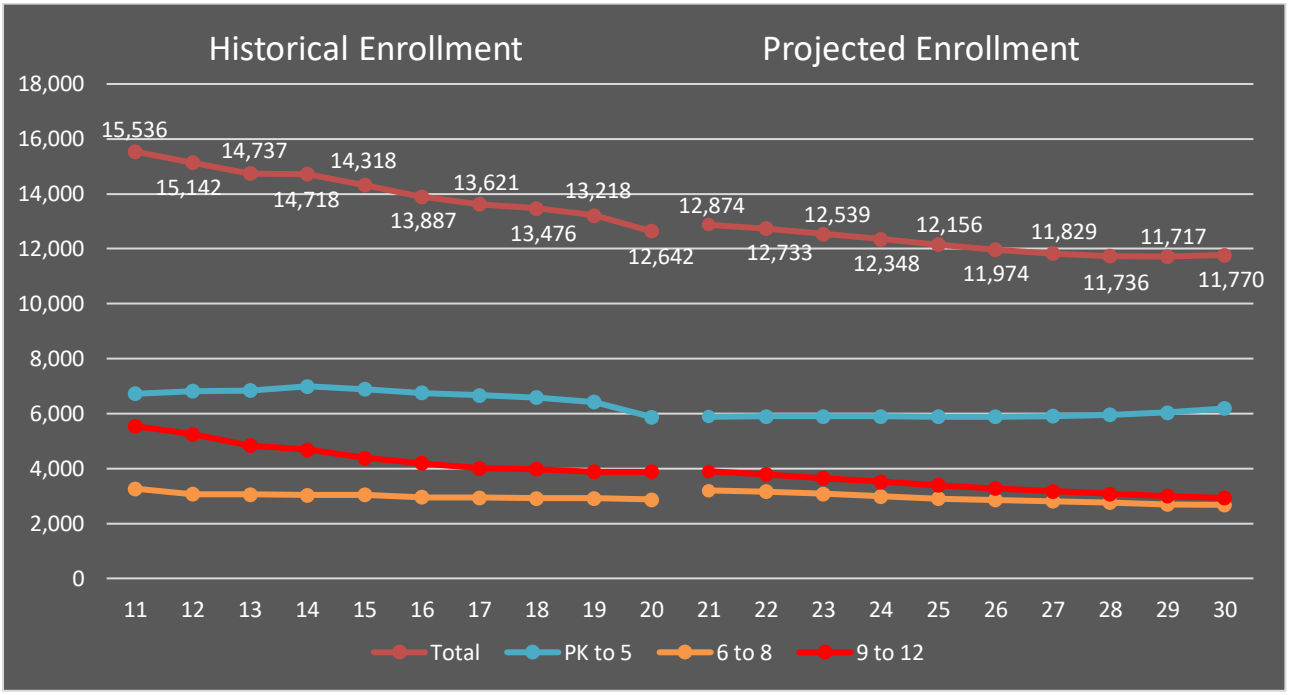
This last model utilizes age related population data as its base data. Using the student-age population data and historical enrollment data, MGT created a student generation factor (SGF) for each school level (Elementary, Middle, and High) based upon population of the age groups of those school levels. This factor indicates the number of students within each school level that can be expected based upon population projections. By using population projections and historical enrollment data, MGT projected future enrollment.

Once each of these four base models has been calculated, MGT generated a weighted average of each of the models. A weighted average allows the analysis to reflect all the trends observed in the historical data and the over-arching themes from the qualitative information gathered in this process.

The weighted average also works to maximize the strengths of each of the base models. Two models, the Average Percentage Increase Model, and the Linear Regression Model, emphasize historical data. These models are quite effective predictors if there is no expectation of unusual community growth or decline and student population rates have minimal fluctuation.

The Cohort Survival Model also uses historical enrollment numbers but considers student-mobility patterns and the effects of the natality rates in prior years. The Cohort Survival Model is perhaps the best-known predictive tool using this type of data. However, like the Annual Percentage Annual Increase Model and the Linear Regression Model, the Cohort Survival Model loses its predictive capabilities in communities that experience, or are expecting to experience, more rapid growth or rapid decline.

The Student-Age of Population Model allows the planner to consider projections for population growth within the school district and surrounding area. This model looks forward and is based on local population data as well as housing planning information.



Given this information and data, MSD can reasonably expect enrollment to continue to decline before leveling off by 2030.

3.4 SCHOOL CAPACITY

The functional capacity of a school is defined as the number of students a building can support based on the program of studies offered there and educational standards. For this review, MGT set the district's functional capacity as the maximum capacity based upon New Hampshire State Department of Education minimum square foot per pupil requirements to identify the number of student seats in each school and district wide. The functional capacity is based on the number of full-size classrooms, including library, art and music rooms at the elementary schools, and space for students with special needs at all levels. The functional capacity was then multiplied by a utilization factor to calculate the programmatic capacity for each school.

Grade Level	Utilization Factor
Elementary	.95
Middle	.85
High	.75

The following table identifies the capacity of each MSD school based on the structure shown above.

School	Functional Capcity	Utilization Factor	Programmatic Capacity
Memorial High	1,724	.75	1,293
West High	1,906	.75	1,430
Central High	2,288	.75	1,714
MST High	458	.75	344
High School Total	**6,376**		**4,781**
Hillside Middle	998	.85	848
Southside Middle	883	.85	751
Parkside Middle	1,044	.85	939
McLaughlin Middle	778	.85	661
Middle School Total	**3,703**		**3,199**
Bakersville Elementary	363	.95	344
Beech Street Elementary	670	.95	636
Gossler Park Elementary	584	.95	555
Green Acres Elementary	649	.95	616
Hallsville Elementary	414	.95	393
Highland-Goffe's Falls Elementary	774	.95	735
Jewett Elementary	557	.95	529
McDonough Elementary	772		733
Northwest Elementary	815	.95	774

Parker-Varney Elementary	758	.95	720
Smyth Road Elementary	569	.95	540
Webster Elementary	664	.95	630
Weston Elementary	728	.95	691
Henry Wilson Elementary	492	.95	467
Elementary School Total	**8,809**		**8,363**

3.5 BUILDING EFFICIENCY

The effective management of school facilities requires a school's capacity and enrollment to be aligned. When capacity exceeds enrollment, operational costs are higher than necessary, and facilities may need to be repurposed or the facilities may need to be removed from inventory. When enrollment exceeds capacity, the schools may be overcrowded and may require capital expenditures or redistricting (adjustment to attendance boundaries) to alleviate the crowding.

MGT has created an "efficiency" score for each school. Using building capacity data and the 2020-21 enrollment, MGT defined the efficiency of each building, calculated by dividing enrollment by each building's programmatic capacity. The key, below, shows the building efficiency rates calculated using programmatic capacities and the current enrollment at each school. The building efficiency rates are color-coded to identify best practices for building use. Nationally recognized "best practices" indicate capacity rates that are either too high or too low are problematic: too high means there is inadequate space for the enrollment and program; too low means there is inefficient use of space for the enrollment and program.

EFFICIENCY RATE	DESCRIPTION
> 110	Inadequate Space
95 - 110	Approaching Inadequate Space
80 - 95	Adequate Space
70 - 80	Approaching Inefficient Use of Space
< 70	Inefficient Use of Space

In MSD, some schools have inefficient space, while other schools have inadequate space based on the analysis described above. There are ten schools that have enrollment efficiency ratings of less than 70%. These schools are significantly under-utilized. They may have empty spaces or may have expanded people/programs to occupy the spaces. They may or may not have created spaces for all required programs – e.g., art and music – because they may not have staff to lead these programs.

There are also two schools that have enrollment efficiency ratings of more than 110%. These schools are significantly over-utilized. They have no empty spaces and likely have expanded people/programs into every possible location in the building. The buildings with over-capacity likely lack core space – restrooms, media center, cafeteria, hall spaces - to accommodate the enrollment. They may have to operate with multiple lunch periods and may be moving students at different times to reduce over-crowding in corridors.

School	Programmatic Capacity	Enrollment	Efficiency Rate	Students Under/Over Capacity	2030 Projected Enrollment	2030 Projected Efficiency Rate
Memorial High	1,293	1,408	108.9%	+115	930	72%
West High	1,430	810	56.6%	-620	520	36.4%
Central High	1,714	1,268	74%	-446	806	47%
MST High	344	403	117.2%	+59	671	195.1%
High School Total	**4,781**	**3,889**	**81.3%**	**-892**	**2,927**	**61.2%**
Hillside Middle	848	811	95.6%	-37	633	74.6%
Southside Middle	751	700	93.2%	-51	535	71.2%
Parkside Middle	939	902	96.1%	-37	779	83%
McLaughlin Middle	661	723	109.4%	+62	709	107.3%
Middle School Total	**3,199**	**3,136**	**98%**	**-63**	**2,656**	**83%**
Bakersville Elementary	344	405	117.7%	+61	466	135%
Beech Street Elementary	636	498	78.3%	-138	548	86.2%
Gossler Park Elementary	555	342	61.6%	-213	381	68.6%
Green Acres Elementary	616	457	74.2%	-159	504	81.8%
Hallsville Elementary	393	244	62.1%	-149	264	67.2%
Highland-Goffe's Falls Elementary	735	394	53.6%	-341	429	58.4%
Jewett Elementary	529	348	65.8%	-181	376	71.1%
McDonough Elementary	733	419	57.2%	-314	456	62.2%
Northwest Elementary	774	507	65.5%	-267	551	71.2%
Parker-Varney Elementary	720	375	52.1%	-345	406	56.4%
Smyth Road Elementary	540	398	73.7%	-142	448	83%
Webster Elementary	630	348	55.2%	-282	371	58.9%
Weston Elementary	691	456	66%	-235	495	71.6%
Henry Wilson Elementary	467	426	91.2%	-41	491	105.1%
Elementary School Total	**8,363**	**5,617**	**67.2%**	**-2,746**	**6,186**	**74%**

Like many urban districts with declining enrollment, MSD has overall excess capacity. To better utilize space, MSD has executed a variety of moves and efforts over the last several years. MSD made the decision to move the 5th grade from elementary schools to middle schools and has started to implement this program. Along with moving 5th grade to middle schools, MSD moved their central offices to the third floor of West High School. The move of central offices to West High School has brought challenges associated with co-locating with a school as well as ADA compliance complaints due to the only access to an elevator is through the high school portion of the building.

YEAR	Grade Level	ENROLLMENT / PROJECTION	CAPACITY	EXCESS SEATS / %
2020/2021	Elementary	5,617	8,363	2,746/33%
	Middle	3,136	3,199	63/2%
	High	3,889	4,781	892/19%
2030/2031	Elementary	6,186	8,363	2,177/26%
	Middle	2,677	3,199	522/16%
	High	2,927	4,781	1,854/39%

Source: District data and MGT of America Consulting, LLC projections, 2020.

The enrollment/capacity gap varies among the district's school grade levels. As shown in the table above, the elementary schools and high schools have the largest difference between enrollment and capacity both now and with projected enrollment. The middle schools currently operate with the smallest difference between enrollment and capacity.

It is important to note the district's average efficiency rating across all grade levels is 77.3%, which is only slightly lower than adequate range of 80% - 95%. However, that percentage is an average, which obscures the real story. As described earlier, there are schools that are significantly over-enrolled/utilized as well as schools that are significantly under-enrolled/utilized. As shown in the table above, there are currently 3,701 "empty seats" in district facilities. When capacity and enrollment are not balanced, the district is spending resources on empty spaces.

MGT created a cost estimate for empty seats with data from a national source. Using the American School and University magazine's annual review of Maintenance and Operations (M&O) costs, and a conservative conversion estimate of seats into students of 65% (since scheduling varies between elementary, middle and high schools and thus seat conversion is not a one-to-one correlation). MGT conservatively estimates that MSD is spending $1,981,870.70 on empty seats in FY 2020-21 (3,701 empty seats x 65% x $823.84/student). Over the next ten-years, the district could spend more than $20,000,000 in M&O costs for empty seats if substantial efforts are not taken to reduce the excess capacity.

3.6 CONCLUSION

The data are clear: MSD has too many buildings for the number of students it serves. Absent changes in student recruitment and retention, enrollment will continue to decline over the next ten years. MSD simply does not need to maintain the number of buildings in its current inventory to effectively serve the children of Manchester New Hampshire.

4.0 COMMUNITY ENGAGEMENT

On October 23, 2020, MGT engaged MSD stakeholders via an online Qualtrics survey that generated a significant number of responses. The survey was available to for two weeks and stakeholders were reminded to take the survey several times during the two-week period. The survey was offered in the following languages to ensure availability to as many stakeholders as possible:

- English
- Bosnian
- French
- Vietnamese
- Hindi
- Croatian
- Portuguese
- Romanian
- Russian
- Albanian
- Swahili
- Ukrainian
- Arabic
- Spanish
- Urdu
- Chinese

4.1 PARTICIPATION

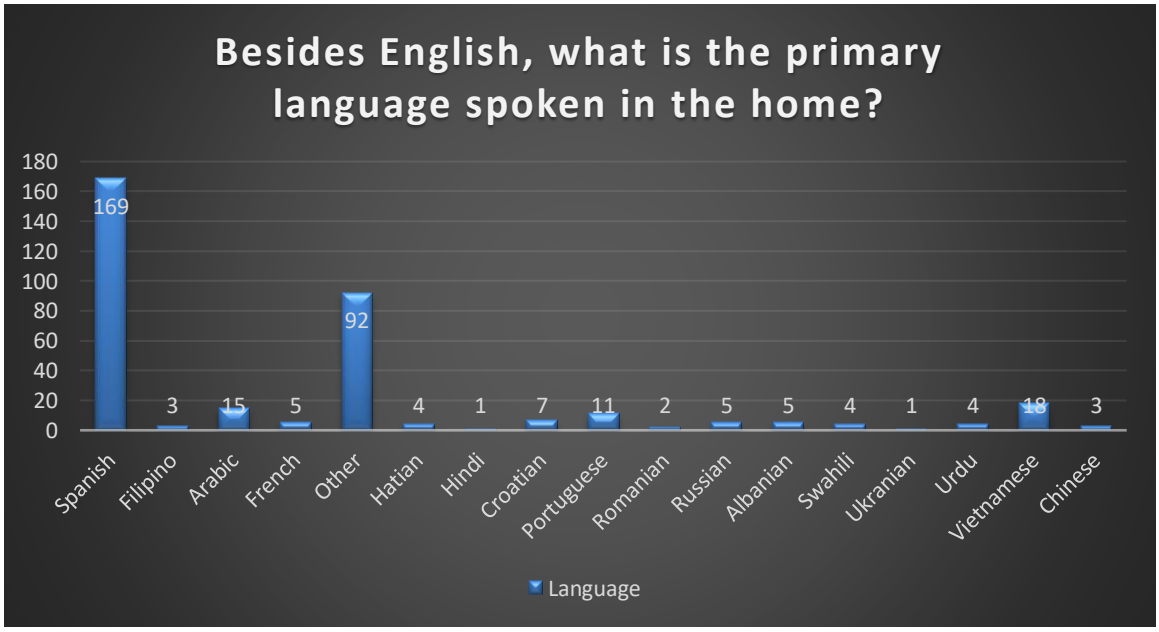
The survey had a total of 4,302 respondents. Respondents were not required to complete any survey question, which means that the total number of responses for each question can vary.

The race/ethnicity of 4,055 respondents was 88.34% White, 10.96% Hispanic/Latino of any race(s), 4.81% Other Races, 3.6% Black/African American, 2.44% Asian, 0.69% American Indiana/Alaskan Native, and 0.12% Native Hawaiian/Other Pacific Islander.

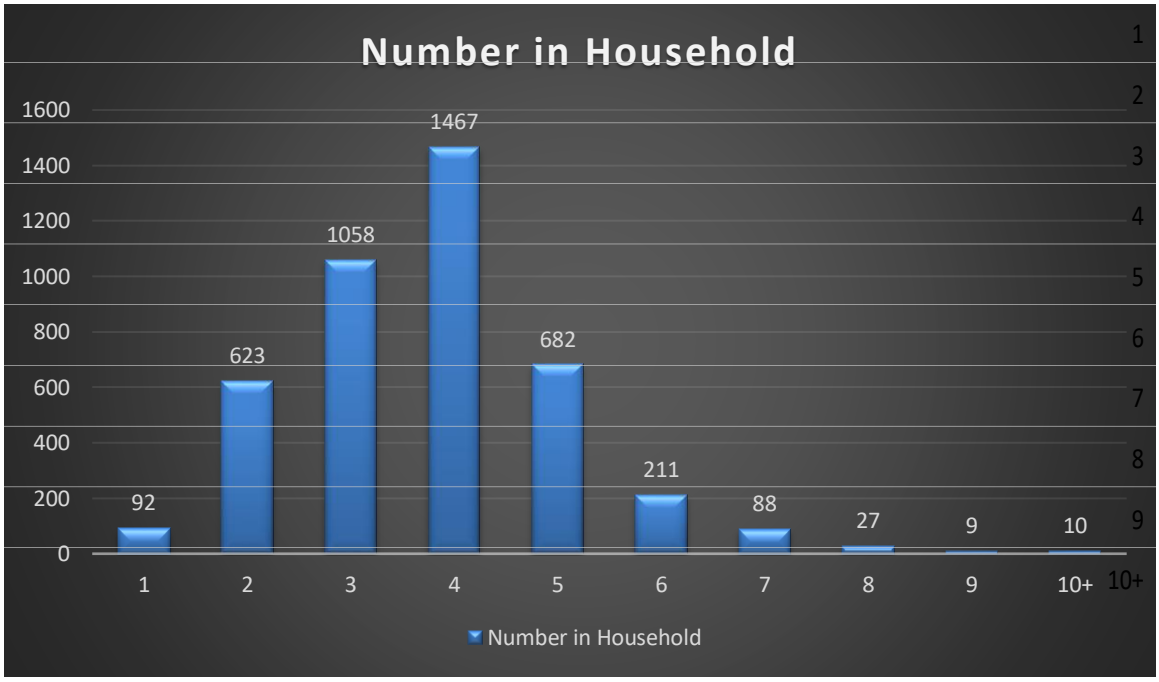
Respondents reported having students attending every school and every grade level.

4.2 ONLINE SURVEY - DATA

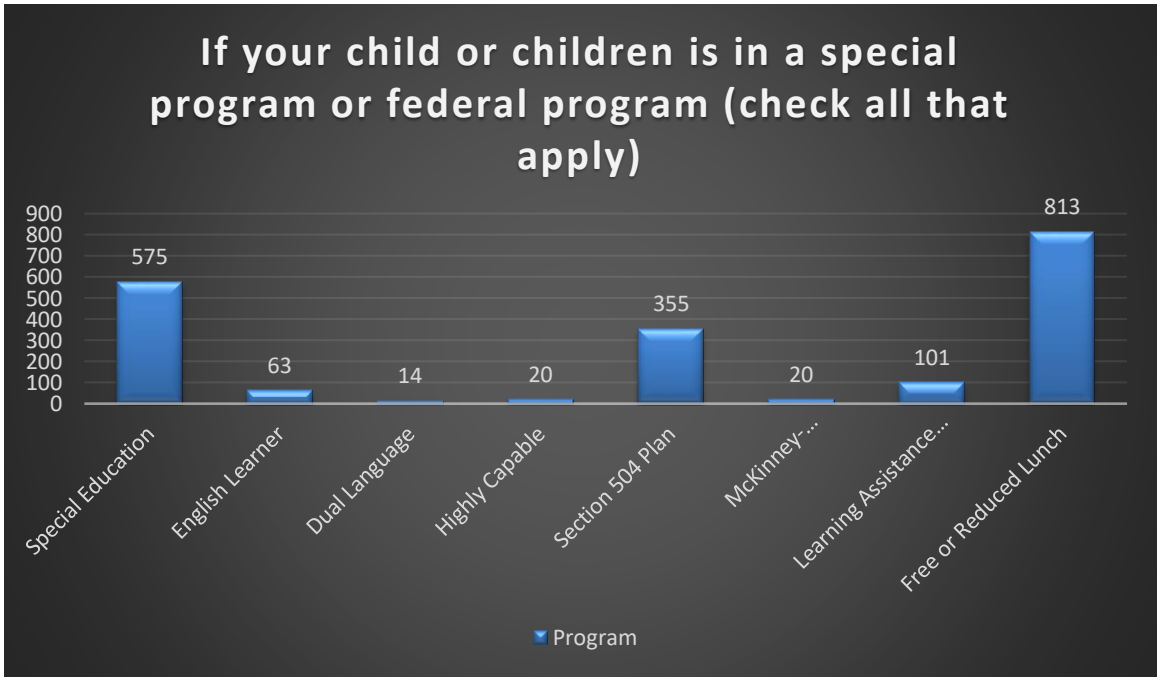
Besides English, what is the primary language spoken in the home?



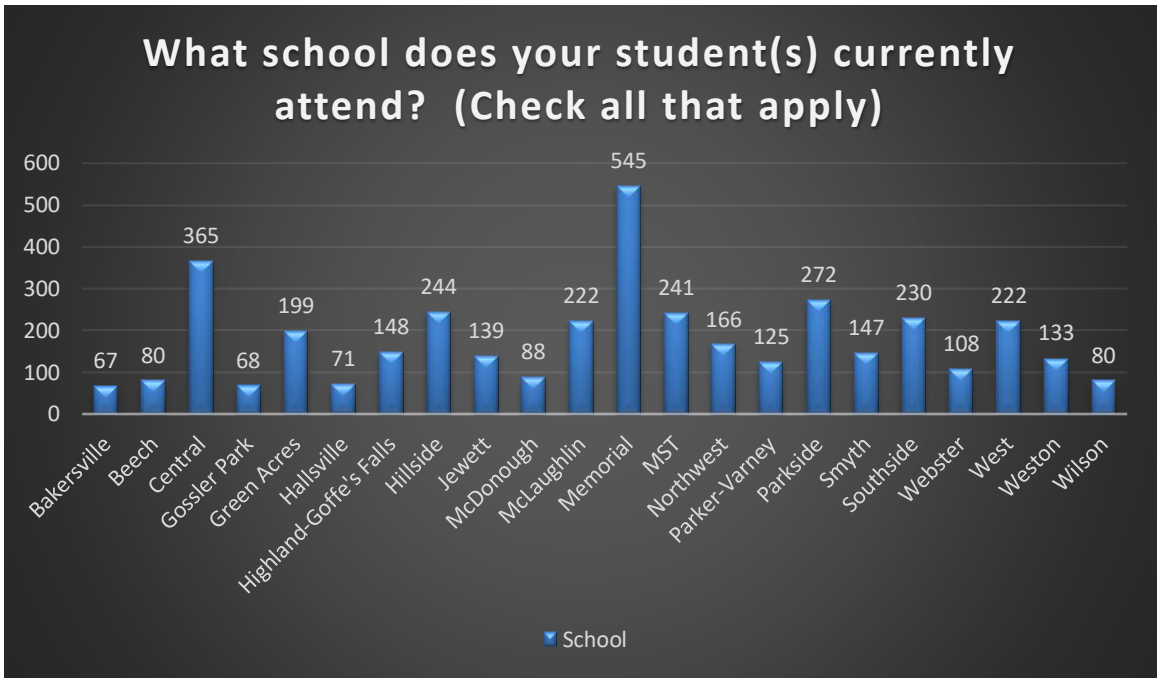
How many people are in your household?



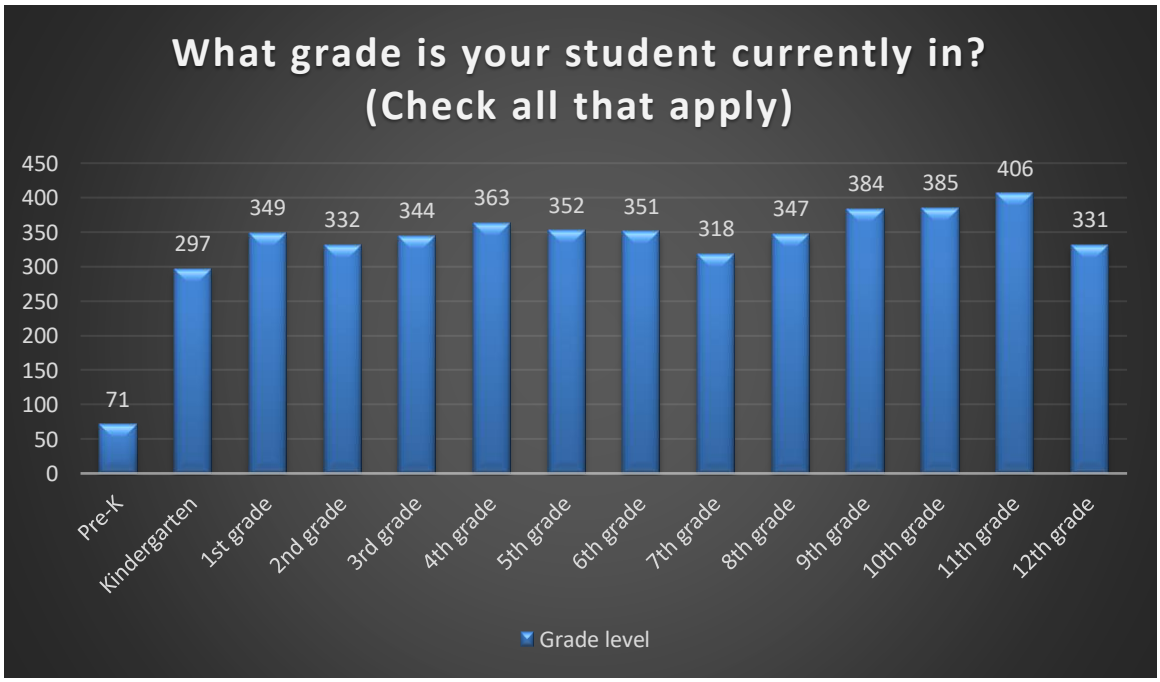
If your child or children is in a special or federal program (Check all that apply)



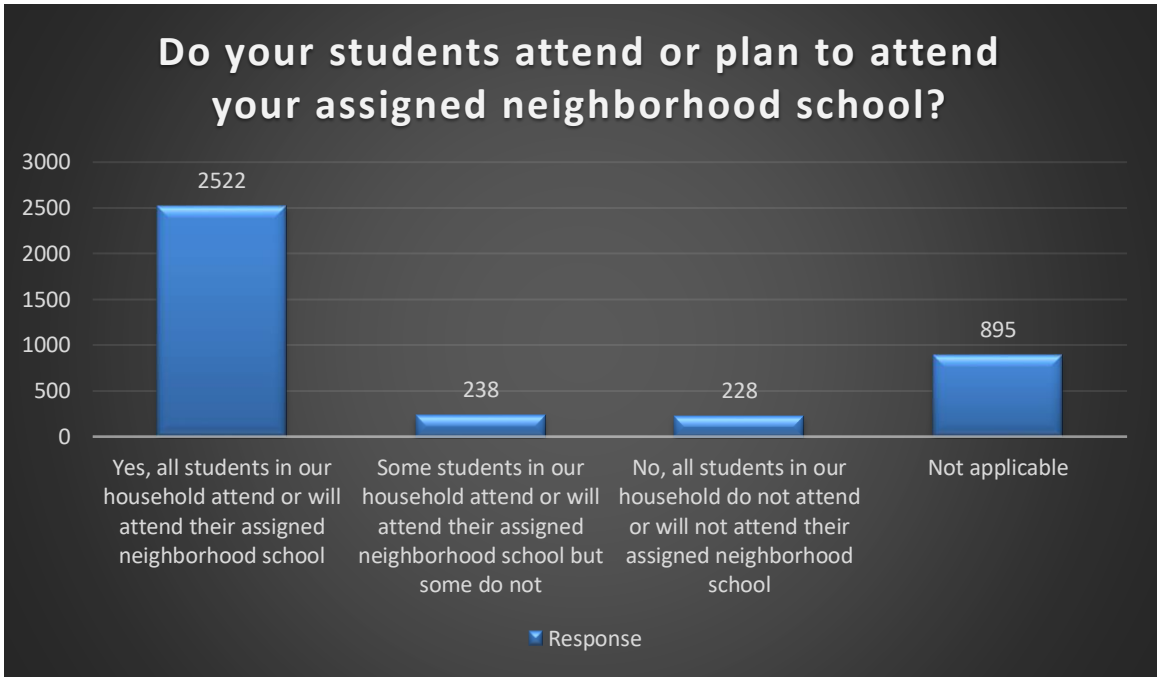
What school does your student(s) currently attend? (Check all that apply)



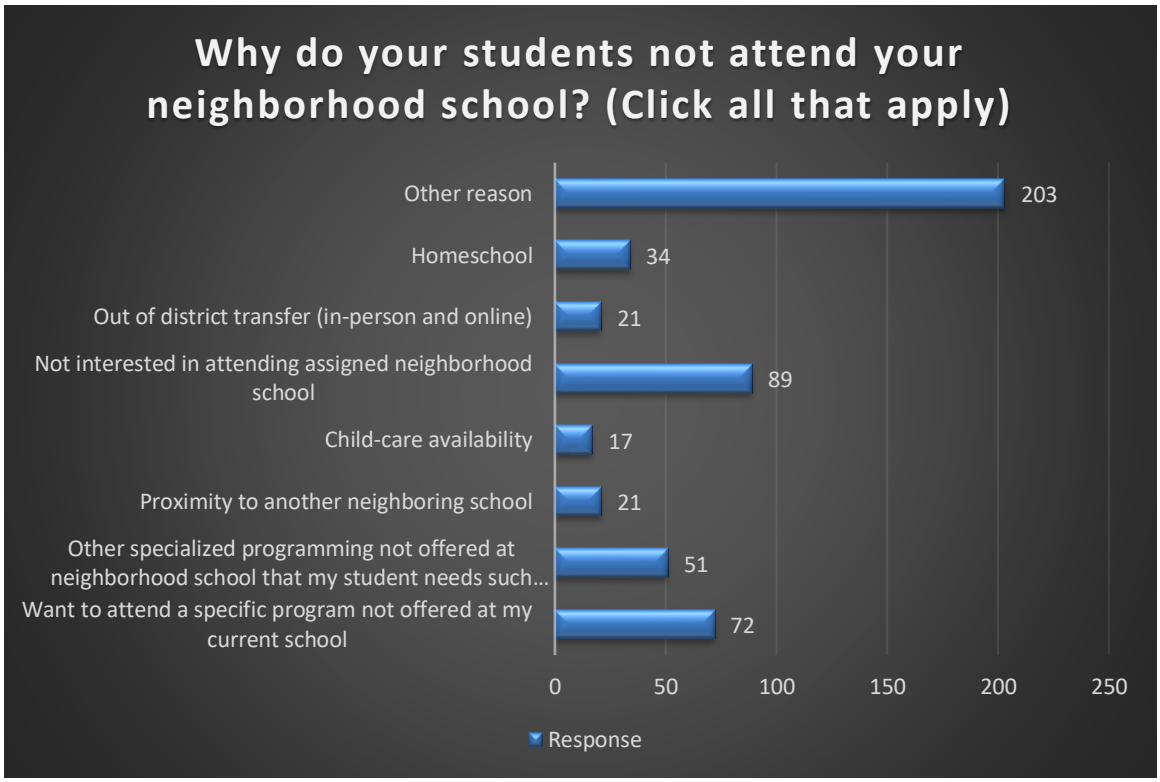
What grade is your student currently in? (Check all that apply)



Do your students attend or plan to attend your assigned neighborhood school?



Why do your students not attend your neighborhood school? (Check all that apply)



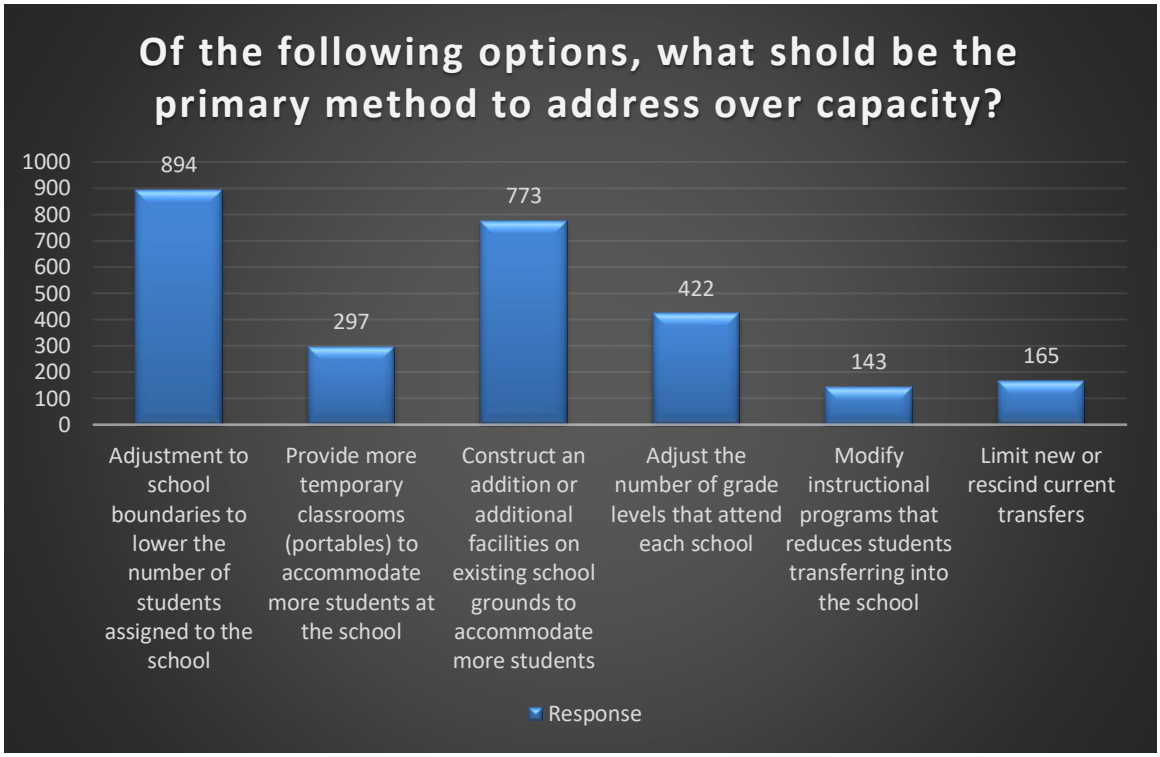
Rank order why you choose to live in your current residence?

Rank Order	1	2	3	4	5	6	7	8
To attend MSD (in general)	577	443	440	455	458	500	574	264
To attend a specific neighborhood school	418	714	547	522	504	483	428	95
Affordability	1068	682	823	552	292	176	86	32
Proximity to employment	435	768	635	850	548	286	148	41
Community resource such as place of worship, community center, athletic facility, etc.	76	178	312	425	1024	815	717	164
Character of neighborhood	733	593	506	374	323	788	321	73
Natural features	99	260	381	475	502	563	1235	196
Other Reason	305	73	67	58	60	100	202	2846

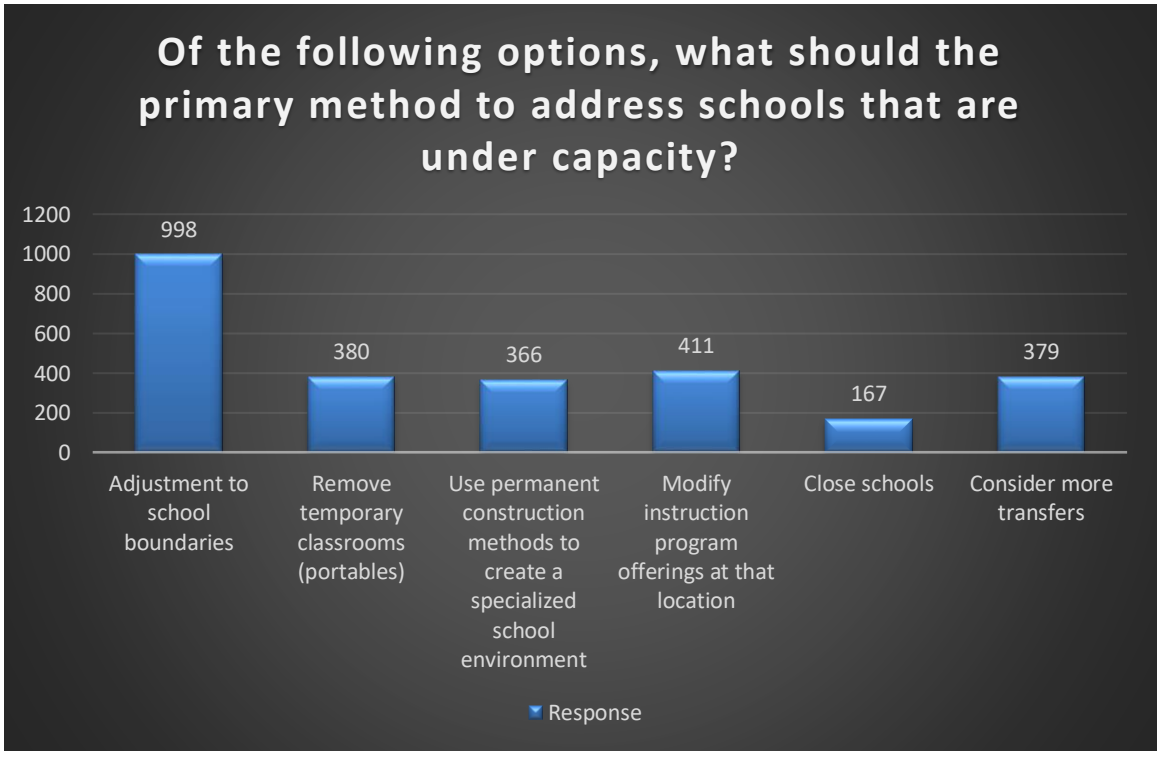
Rank order the most important factors to consider for this capacity/utilization review?

Rank Order	1	2	3	4	5	6	7	8	9
Free up space in Manchester's elementary schools	315	313	323	386	490	419	325	212	46
Reduce elementary school class sizes	343	581	430	367	356	326	259	137	30
Address the challenge of declining enrollment and align space accordingly	92	146	397	420	416	519	506	305	28
Identify more efficient and effective utilization of our buildings	105	170	290	522	510	492	473	243	24
Strengthen our elementary, middle, and high schools (e.g., increase student engagement, improve the educational experience for students and families)	800	610	403	281	337	227	118	44	9
Enhanced educational program opportunities	195	568	570	381	276	389	305	130	15
Neighborhood and community traditions	29	78	98	168	220	303	652	1172	109
Safety and security	891	331	297	290	204	142	141	470	63
Something else	59	32	21	14	20	12	50	116	2505

Of the following options, what should be the primary method to address over capacity?

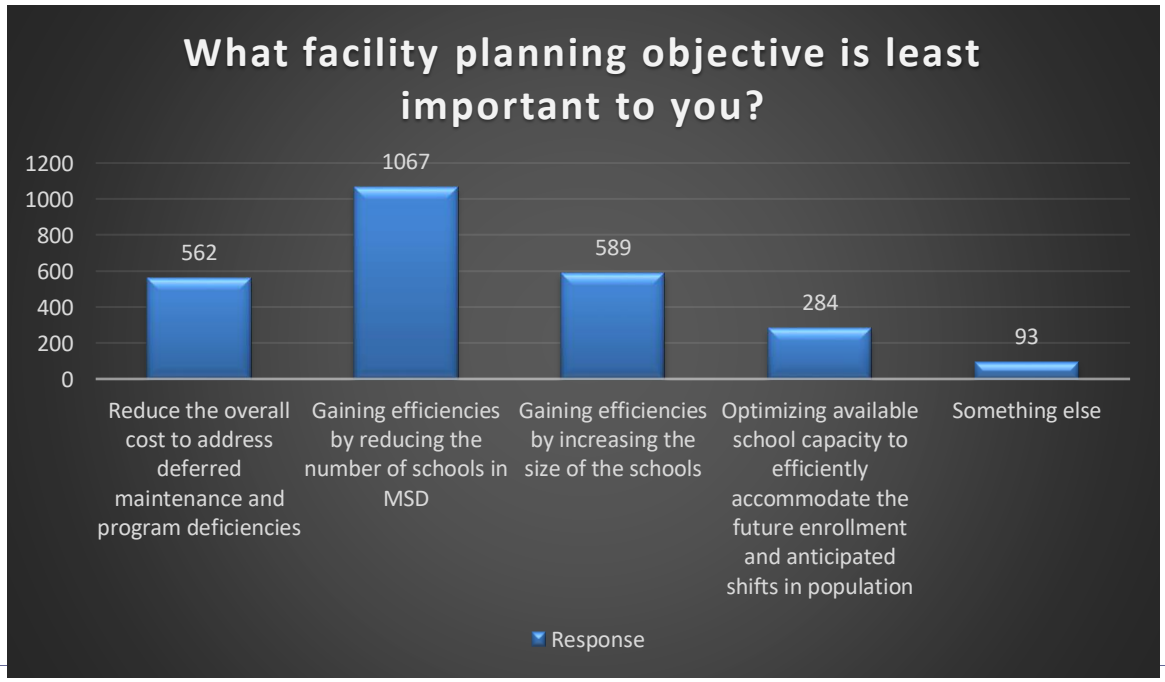


Of the following options, what should be the primary method to address schools that are under capacity?

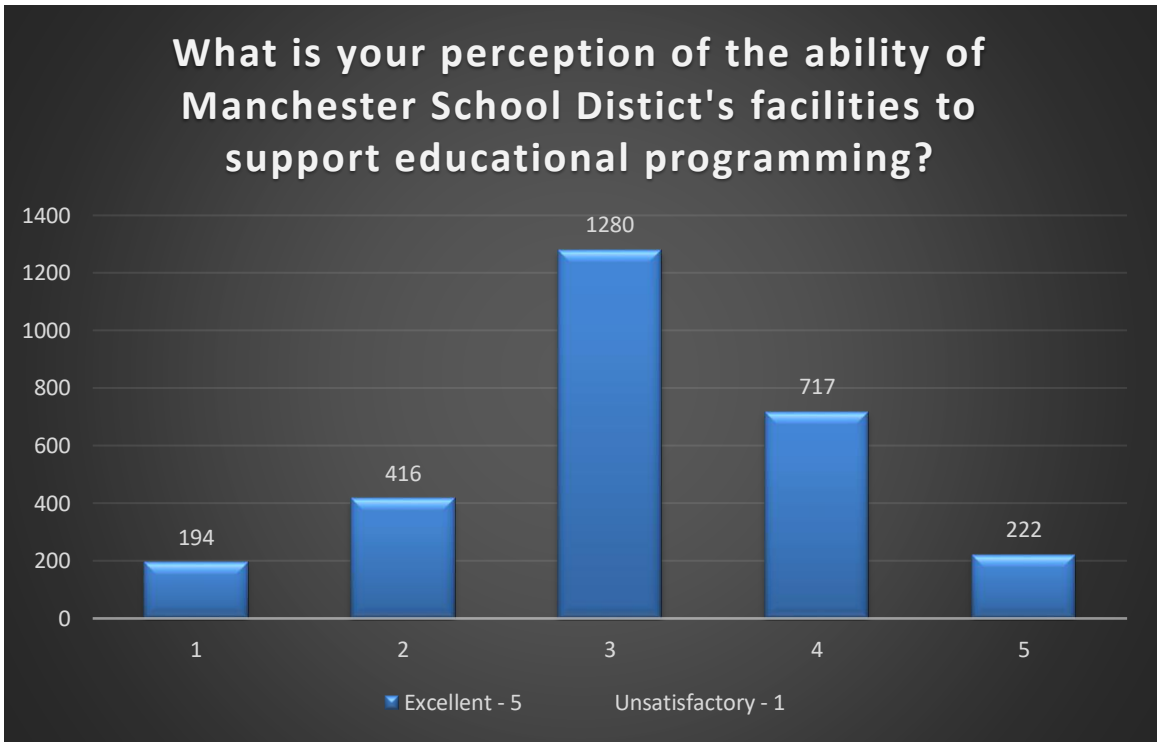


What facility planning objective is most important to you?

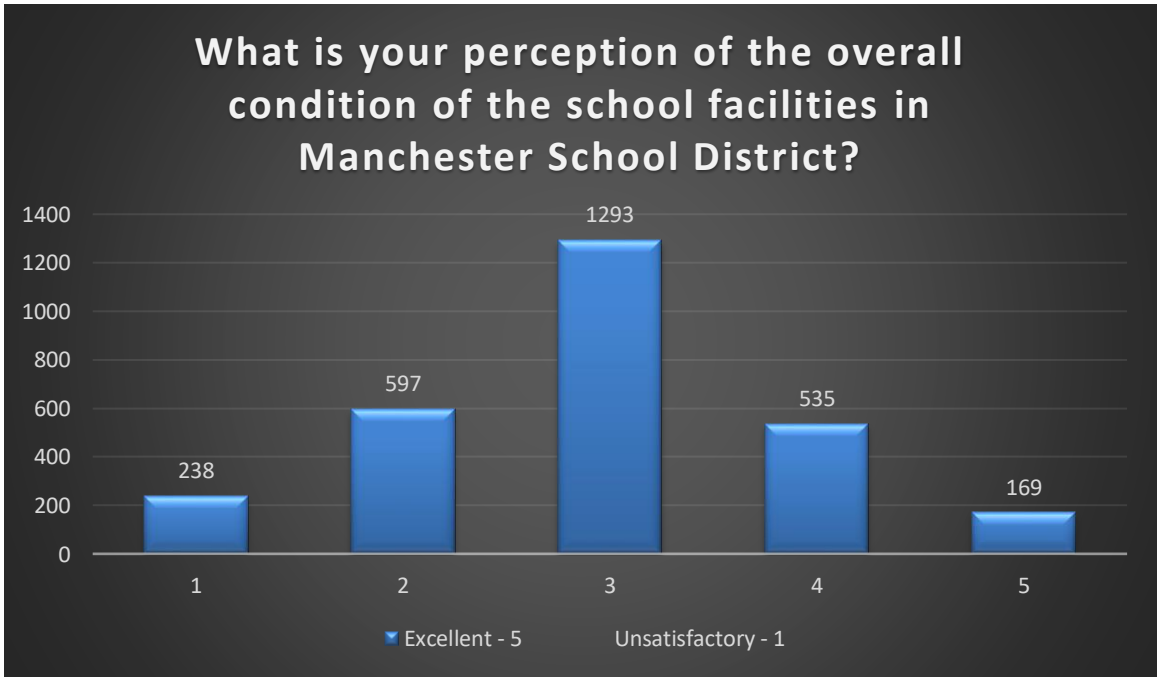
What facility planning objective is least important to you?



What is your perception of the ability of Manchester School District's facilities to support educational programming?



What is your perception of the overall condition of the school facilities in Manchester School District?



FINDINGS FROM INITIAL SURVEY

- Respondents represented every school with Memorial High School having the most (545) and Bakersville Elementary School having the least (67)
- Respondents represented every grade level, with 11th grade having the most (406) and Pre-kindergarten having the least (71
- Adjusting school attendance boundaries was listed as the preferred way to address schools that are over and under capacity
- Optimizing available school capacity to efficiently accommodate the future enrollment and anticipated shifts of population is the most important facility planning objective to respondents
- Gaining efficiencies by reducing the number of schools in MSD is the least important facility planning objective to respondents

5.0 FACILITY ASSESSMENTS

This section presents the results of the facility assessments that were conducted by the MGT project team.

MSD schools were scored in three areas:

- Building/Site condition – physical condition of all building systems
- Educational suitability – ability of the facility to support and enhance educational program delivery
- Technology readiness – level to which the building infrastructure supports information technology

The building/site condition scores were determined by utilizing the deferred maintenance and renovation expense as outlined in the Manchester School District Facility Condition Assessment (March 2020). The educational suitability and technology readiness assessments were conducted by a trained educator who walked each site with the principal/designee. The three scores were weighted to create a Combined Score that makes it easier to develop priorities across all the assessments.

The weighting formula for the combined scores is shown below:

- Building/Site condition – 50%
- Educational suitability – 30%
- Technology readiness – 20%

Each area scored based on a 100-point scale. Scores are interpreted as shown on the following chart.

NUMERICAL SCORE	INTERPRETATION
90 – 100	New or like new, Excellent
80 – 89	Good
70 – 79	Fair
60 – 69	Poor
Below 60	Unsatisfactory

The scoring is structured to measure the level of deficiencies as related to the total value of the building. Consequently, scores can be used to calculate the budgets required to remediate the deficiencies identified in the assessments. The BASYS® software produces a detailed report for each facility assessment which includes each deficiency identified.

The results of the assessments were reviewed with district staff to ensure accuracy and completeness.

5.1 BUILDING/SITE CONDITION ASSESSMENT

The building/site condition score measures the amount of deferred maintenance in the building's major systems. The building/site condition scores were determined by utilizing the deferred maintenance and renovation expense as outlined in the Manchester School District Facility Condition Assessment (March 2020). The scores are interpreted as follows:

90+	**New or Like New:** The building and/or a majority of its systems are in good condition, less than three years old, and only require preventive maintenance.
80-89	**Good:** The building and/or a majority of its systems are in good condition and only require routine maintenance.
70-79	**Fair:** The building and/or some of its systems are in fair condition and require minor to moderate repair.
60-69	**Poor:** The building and/or a significant number of its systems are in poor condition and require major repair, renovation, or replacement.
BELOW 60	**Unsatisfactory:** The building and/or a majority of its systems should be replaced.

The condition score rates each building as "New", "Good", "Fair", "Poor", or "Unsatisfactory" based on a detailed description of each rating. The possible score for each building is based on that building's contribution to the overall cost of building construction. The condition score and resulting calculations do not include the costs of any additions to increase the size or capacity of a school, site improvements, improvements for educational suitability, or technology readiness improvement.

The table below presents the range of the facility condition scores by site type. As shown, there is a range of condition scores, from 58 to 93 with the average condition scores in the "Fair" range.

SITE TYPE	FACILITY CONDITION SCORE RANGE		AVERAGE CONDITION SCORE
	LOW	HIGH	
Elementary Schools	58	93	75
Middle Schools	74	82	78
High Schools	72	79	76

5.2 EDUCATIONAL SUITABILITY ASSESSMENT

The educational suitability assessment evaluates how well the facility supports the educational program that it houses. Each site receives one suitability score which applies to all the buildings at the facility. The educational suitability/ functionality of each facility was assessed with BASYS® using the following categories:

ENVIRONMENT	The overall environment of the facility with respect to creating a safe and positive working/learning environment.
CIRCULATION	Pedestrian/vehicular circulation and the appropriateness of site facilities and signage.
SUPPORT SPACE	The existence of facilities and spaces to support the educational/governmental program being offered. These include offices, general classrooms, special learning spaces (e.g. music rooms, libraries, science labs), and support spaces (e.g. administrative offices, counseling offices, reception areas, kitchens, health clinics).
SIZE	The adequacy of the size of the program spaces.
LOCATION	The appropriateness of adjacencies (e.g., physical education space separated from quiet spaces).
STORAGE & FIXED EQUIPMENT	The appropriateness of utilities, fixed equipment, storage, and room surfaces (e.g. flooring, ceiling materials, and wall coverings) as well as safety and program equipment (e.g., kiln, sinks, safety shower/eyewash equipment).

Suitability scores are interpreted as follows:

90+	**Excellent:** The facility is designed to provide for and support the educational/governmental program offered. It may have a minor suitability/functionality issues but overall, it meets the needs of the educational/governmental program.
80-89	**Good:** The facility is designed to provide for and support most of the educational/governmental program offered. It may have minor suitability/functionality issues but generally meets the needs of the educational/governmental program.
70-79	**Fair:** The facility has some problems meeting the needs of the educational/governmental program and will require remodeling/renovation.
60-69	**Poor:** The facility has numerous problems meeting the needs of the educational/governmental program and needs significant remodeling, additions, or replacement.
BELOW 60	**Unsatisfactory:** The facility is unsuitable in support of the educational/governmental program.

The table below presents the range and average of suitability scores by site type. The suitability scores range from 50 to 82. The average scores fall within the "Poor" to "Fair" range.

Site Type	SUITABILITY SCORE RANGE		AVERAGE SUITABILITY SCORE
	LOW	HIGH	
Elementary Schools	50	82	69
Middle Schools	73	78	64
High Schools	73	79	76

5.3 TECHNOLOGY READINESS

The BASYS® technology readiness score measures the capability of the existing infrastructure to support information technology and associated equipment. The technology infrastructure assessment was conducted by an assessor without any invasive or longitudinal speed or data usage measurements and should be viewed as a "snapshot in time." The score can be interpreted as follows:

90+	**Excellent:** The facility has excellent infrastructure to support information technology.
80-89	**Good:** The facility has the infrastructure to support information technology.
70-79	**Fair:** The facility is lacking in some infrastructure to support information technology.
60-69	**Poor:** The facility is lacking significant infrastructure to support information technology.
BELOW 60	**Unsatisfactory:** The facility has little or no infrastructure to support information technology.

The table below presents the range of technology scores and the average technology scores by site type. Technology readiness scores vary from 71 to 100, with the average scores in the "Good" to "Excellent" range. These scores are higher than expected, especially in a district with older buildings (average age 70-years) and document the district's effort to provide infrastructure and create robust technology-based opportunities for students and staff in all schools.

SITE TYPE	TECHNOLOGY READINESS SCORE RANGE		AVERAGE
	LOW	HIGH	
Elementary Schools	71	95	80
Middle Schools	79	100	92
High Schools	76	98	87

5.4 COMBINED SCORES

The building/site condition, educational suitability, and technology readiness scores are combined into one score for each facility to assist in the task of prioritizing projects. Since the condition score is a measure of the maintenance needs (e.g., leaky roofs, etc.) and the suitability score is a measure of how well the building design and configuration supports the educational program or building function, it is possible to have a high score for one assessment and a low score for another assessment. It is the combined score that attempts to give a comprehensive picture of the conditions that exist at each facility and how each facility compares relative to the other facilities in the district.

To create the Combined Score, the three scores are weighted. For MSD, the scores were weighted as shown below:

- Building/Site condition – 50%
- Educational suitability – 30%
- Technology readiness – 20%

The table below presents the range of the Combined Scores and the average scores by site type. The Combined Scores vary from 58 to 88, with the average scores in the "Fair" to "Good" range.

SITE TYPE	COMBINED SCORE (30/45/5/20) RANGE		AVERAGE
	LOW	HIGH	
Elementary Schools	58	88	74
Middle Schools	76	83	81
High Schools	74	83	78

5.5 FINDINGS

The three facility assessments have identified deficiencies in all areas of MSD facilities. While there are some exceptions, it is a fair generalization to say that some MSD school buildings are not providing an adequate environment for teaching and learning. The individual schools scoring less than 70 as a Combined Score will need the most attention. For those schools, there are a variety of challenges at the building level. Some scored poorly in the building condition assessment, while others did poorly in the suitability portion of the assessment.

These facility assessments provide the data to prioritize projects based on the overall facility needs of the district. These data, combined with the building efficiency analysis, will be used to develop master planning recommendations in **Section 6.0**.

School	Suitability Score	Tech Readiness Score	Building Condition Score	Combined Condition Score
West High	73	76	75	74
Northwest	76	71	81	77
Memorial	79	82	78	79
Jewett	70	84	81	79
Webster	66	93	76	76
Smyth Road	71	76	62	68
Hillside	81	90	82	83
McDonough	80	76	74	76
Bakersville	61	76	81	74
Beech Street	80	83	75	78
Highland-Goffe's Falls	82	83	93	88
Central	73	90	72	76
Wilson	65	74	74	71
MST	79	98	79	83
Southside	78	79	74	76
Green Acres	69	93	70	74
McLaughlin	80	100	78	83
Weston	65	95	86	81
Hallsville	50	67	58	58
Gossler Park	65	66	63	64
Parkside	73	100	78	81
Parker-Varney	70	88	75	76

6.0 MASTER PLAN RECOMMENDATIONS

This section presents the process utilized to determine priorities and prepare recommendations for master planning for the Board's review. This section is divided into the following components

- **Findings** – a description of issues that MGT identified through the study process that have facility implications for short- and long-range planning.
- **Recommendations** – a set of issues that the Board may want to consider for school facility planning, including possible program placement changes, facility improvements, and opportunities for repurposing.
- **Supporting Recommendations** – some additional opportunities that are important for the board to consider as the district creates and implements the master plan.

6.1 FINDINGS

Any long-range study includes gathering information and documenting issues, conditions, ideas, and data. In MSD, as described in earlier sections, this information has come from interviews, community surveys, document reviews, and on-site assessments of each of the district's facilities.

MGT's recommendations are based on the following findings:

1. MSD HAS MORE CAPACITY THAN NEEDED TO SUPPORT CURRENT AND PROJECTED STUDENT ENROLLMENT

Using either the MGT or MSD method for calculating school capacity, there are many "empty seats" across the school district. Currently, there are nearly 4,000 empty seats and, without changes, the number is projected to grow to more than 4,500 over the next 10 years. Having "empty seats" carries several costs, including lost revenue and increased per student energy and operational costs. Without changes in the district's facility inventory, these costs are projected to increase over time.

MGT created a cost estimate for empty seats with data from a national source. Using the American School and University magazine's annual review of Maintenance and Operations (M&O) costs, and a conservative conversion estimate of seats into students of 65% (since scheduling varies between elementary, middle, and high schools and thus seat conversion is not a one-to-one correlation). MGT conservatively estimates that MSD is spending $1,981,870.70 on empty seats in FY 2020-21 (3,701 empty seats x 65% x $823.84/student). Over the next ten-years, the district could spend more than $20,000,000 in M&O costs for empty seats if substantial efforts are not taken to reduce the excess capacity.

2. MSD SCHOOLS ARE NOT EQUALLY ABLE TO PROVIDE 21ST CENTURY LEARNING ENVIRONMENTS THAT SUPPORT STUDENT PROJECTS, ENGAGEMENT, AND COLLABORATION

The average age of schools in MSD is 70 years. As buildings go, this is old. Most building systems – plumbing, lighting, heating, etc., – have "life-cycles." Few building life cycles extend beyond 50 years.

In addition to facility condition issues, MGT gathered information about the suitability of each space to support instruction. Buildings planned and built before 1980 did not include space for Title I, English Language Support, Special Education, or technology. Those schools typically had classrooms, but no flexible learning spaces to support differentiated learning with small groups or various learning styles.

Data gathered from assessments of MSD schools provide evidence of the impact of the age of the schools

on the learning environment. Data gathered included Building/Site Condition, Educational Suitability, and Technology Readiness. The data assessments show the following:

- The average **technology readiness** score is "Excellent," documenting the emphasis placed on student and faculty technology access over the last several years.
- The average **educational suitability** score is "Fair," indicating deficiencies in meeting educational program needs in many schools.
- The average **building/site condition** score is "Fair" and there is a wide variation of scores with some schools having significant facility deficits.

3. THE DISTRICT'S ESTIMATED COST TO IMPROVE ALL FACILITIES TO A COMBINED SCORE OF 85 IN ALL FOUR ASSESSMENT CATEGORIES IS $ $92,792,206.69

Using construction cost data from School Planning & Management Magazine Annual School Construction Report, MGT estimated the cost to renovate each school.

REGION 1 MEDIANS NEW SCHOOLS *(CT, ME, MA, NH, RI, VT)*

	Elementary	Middle	High
$/sq. ft.	$400.36	$371.59	$387.75
$/student	$86,619	$67,628	$80,474
Sq. ft./student	214.2	182.6	193
Students	629	1001	1118
Size (sq. ft.)	103,650	182,059	222,826
Total cost *($000)*	$36,900	$67,800	$89,970

The median elementary school in Region 1 spent $400.36 per square foot or $86,619 for each of 629 students accommodated. Construction costs in Region 1 are higher than anywhere else ($/square foot) but reporting throughout the region is consistent.

School	Suitability Score	Suitability Renovation Estimate	Condition Score	Condition Renovation Estimate	Technology Score	Technology Renovation Estimate	Total Renovation Estimate
West High	74	$2,381,153.53	75	$6,347,178.24	76	$145,756.63	$ 8,874,088.40
Northwest	77	$546,538.24	81	$875,862.57	71	$71,924.99	$ 1,494,325.80
Memorial	79	$1,151,995.96	78	$4,489,442.40	82	$50,365.93	$ 5,691,804.29
Jewett	79	$673,081.48	81	$558,593.00	84	$2,836.58	$ 1,234,511.06
Webster	76	$1,294,758.81	76	$1,958,668.02	93	$0	$ 3,253,426.83
Smyth Road	68	$737,338.51	62	$4,057,596.15	76	$40,637.70	$ 4,835,572.36
Hillside	83	$566,955.61	82	$1,512,748.54	90	$0	$ 2,079,704.15
McDonough	76	$411,985.24	74	$2,731,080.08	76	$58,686.06	$ 3,201,751.37
Bakersville	74	$1,306,505.90	81	$658,924.02	76	$40,929.87	$ 2,006,359.79
Beech Street	78	$447,457.17	75	$2,775,969.41	83	$12,036.09	$ 3,235,462.66
Highland-Goffe's Falls	88	$246,161.75	93	$0	83	$10,319.43	$ 256,481.18
Central	76	$3,628,428.13	73	$13,110,510.87	90	$0	$ 16,738,939.00
Wilson	71	$1,199,365.34	74	$2,268,417.34	74	$53,133.29	$ 3,520,915.97
MST	83	$781,820.33	79	$2,409,866.25	98	$0	$ 3,191,686.58
Southside	76	$908,949.48	74	$4,932,687.21	79	$60,771.28	$ 5,902,407.97
Green Acres	74	$1,050,692.20	70	$3,173,159.28	93	$0	$ 4,223,851.47
McLaughlin	83	$561,844.08	78	$2,703,874.64	100	$0	$ 3,265,718.72
Weston	81	$1,465,876.08	86	$0	95	$0	$ 1,465,876.08
Hallsville	58	$1,607,376.21	59	$4,073,371.90	67	$68,921.01	$ 5,749,669.12
Gossler Park	64	$957,923.37	63	$3,564,630.16	66	$75,767.41	$ 4,598,320.94
Parkside	81	$1,596,444.28	78	$2,960,294.03	100	$0	$ 4,556,738.31
Parker-Varney	76	$1,068,140.48	75	$2,346,454.15	88	$0	$ 3,414,594.63

*Source – School Planning & Management Magazine Annual School Construction Report

Additional recommendations make clear that addressing the facility needs of each current building may not be the most efficient and effective way to address facility needs in the district, given the number of schools that are under- and over-utilized.

4. MSD'S HIGH SCHOOL COHORT SURVIVAL RATE IS VERY LOW

As shown in the table below, students entering high school choose not to stay in MSD. While analyzing the data, MGT noted there is a large drop in enrollment between the Freshman and Sophomore years and between the Junior and Senior years, although enrollment only decreases slightly between Sophomore and Junior Years. The survival percentage, or the percentage of incoming freshman that stay through their senior year, is consistently around 60% with the exception the 2017-2021 cohort.

When dissecting the 2017-2021 cohort data, it appears the decreases in enrollment follow the same pattern as the previous cohorts except there was not a significant drop between the Junior and Senior years. This may be due to the onset of remote instruction as a result of the Covid-19 pandemic.

Historical Enrollment

Grade	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
9th	1698	1746	1658	1361	1279	1248	1287	1123			
10th		1269	1293	1297	1170	1094	1047	1100	923		
11th			1260	1191	1235	1068	1011	973	1060	883	
12th				985	1004	980	846	818	774	816	868
Cohort Survival %				58%	57.5%	59%	62%	64%	62%	63%	77%

5. HIGH DEFERRED MAINTENANCE, LIFECYCLE, & CAPITAL IMPROVEMENT COSTS

According to Manchester School District Facilities Condition Assessment (March 2020), MSD has more than $158,000,000 of deferred maintenance, lifecycle, and capital improvement costs. Each of these are defined further below:

- Deferred Maintenance (DM) costs are defined as critical maintenance that has been delayed and will result in significant added costs, potential program curtailment or interruption, and/or liability issues. DM usually refers to critical components such as boilers, roofs, alarm panels, water heaters, etc.

- Lifecycle (LC) costs are defined as the investments necessary due to existing equipment or building components having worn out due to age. Replacements that are essential for the normal protection and preservation of the facilities' structural integrity and functional utility.

- Capital Improvement (CI) costs are defined as the investments that are recommended to install additional systems or improvement dedicated to raise the facility, electrical/mechanical systems, and/or architectural systems to currently acceptable standards.

6.2 RECOMMENDATIONS FOR LONG-RANGE FACILITY MASTER PLANNING

Based on the findings described above, MGT recommends that the Manchester Board of School Committee develop a long-range plan that includes the activities described below. Each activity addresses issues found in the district during this project.

1. **Reduce capacity/number of facilities across the district to allow for reallocation of funds to support instruction.**

Schools should be re-purposed/closed based on identified criteria, including facilities that do not meet program standards, are high in operational or energy costs, do not have ADA access or air conditioning, have difficulty meeting student achievement standards, or have other issues.

Major Criteria for Repurposing/closure selection:

- Combined Score for facility assessments
- Distribution of schools aligned to distribution of students
- Deferred maintenance costs
- Utility costs
- Strategic land use planning
- Program considerations
- Access issues and transportation issues

Therefore, MGT is making the following recommendations:

Option 1:

Move the remaining 5th grade students to Middle school, close Hallsville elementary, Gossler Park elementary, Smyth Road elementary, Wilson elementary, Central High, and re-purpose or divest the sites. Closure of these five schools will decrease excess seats, and as illustrated in the table below, save the district approximately $47,300,000 in deferred maintenance, system upgrades, and capital improvements as well as almost $600,000 annually in utility costs. MSD would also realize cost efficiencies in administrative and operational staff.

School	Deferred Maintenance	System Life Cycle Improvements	Capital Improvements	Annual Utilities
Hallsville ES	$311,969	$445,641	$4,020,854	$55,349
Gossler Park ES	$1,934,995	$1,042,274	$1,517,459	$50,623
Smyth Road ES	$1,511,521	$811,030	$2,725,917	$42,567
Wilson ES	$18,845	$632,171	$3,308,918	$37,499
Central HS	$5,710,685	$9,899,665	$13,399,510	$400,703
Totals	$9,488,015	$12,830,781	$24,972,658	$586,741
Grand Total				$47,878,195

Option 2:

Move 5th grade students back to elementary school, close Hallsville elementary, Gossler Park elementary, Smyth Road elementary, Southside Middle, Central High, and re-purpose or divest the sites. Closure of these five schools will decrease excess seats, and as illustrated in the table below, save the district approximately

$54,200,000 in deferred maintenance, system upgrades, and capital improvements as well as almost $685,000 annually in utility costs. MSD would also realize cost efficiencies in administrative and operational staff.

School	Deferred Maintenance	System Life Cycle Improvements	Capital Improvements	Annual Utilities
Hallsville ES	$311,969	$445,641	$4,020,854	$55,349
Gossler Park ES	$1,934,995	$1,042,274	$1,517,459	$50,623
Smyth Road ES	$1,511,521	$811,030	$2,725,917	$42,567
Southside MS	$320,215	$714,139	$9,814,945	$134,977
Central HS	$5,710,685	$9,899,665	$13,399,510	$400,703
Totals	$9,789,385	$12,912,749	$31,478,685	$684,219
Grand Total				$54,865,038

Review closure sites for re-purpose opportunities or divestiture. Re-purpose plans could include use by the district for another activity – e.g., office space or professional development or storage, instead of instructional space for students. Re-purpose plans could also include buildings offered wholly or in part to another organization. It could also mean closing and selling the building and removing it from the district's inventory. MGT recommends annual monitoring and adjustment of the list of "re-purpose buildings.

2. Build new facilities to address condition and 21st century educational suitability of schools as well as continue to reduce capacity.

Option 1:

Utilizing savings from the closure of the excess schools, MSD should consider updating their oldest elementary facilities by building new a 750-student 21st century elementary school, possibly on the current Smyth Road Elementary site. Once completed, MSD could combine Webster Elementary and McDonough Elementary into the new school, further reducing excess seats and saving funds that would otherwise be spent on deferred maintenance, lifecycle upgrades, and capital improvements. As funds are available, MSD should continue the process of building new elementary schools in the future to replace the oldest facilities. The estimated cost to build a 750-student elementary school is $65,000,000

Option 2:

Renovate Northwest and Highand-Goff's elementary schools. These are the two newest elementary schools and have the highest assessment scores.

Option 3:

Renovate Parkside, Hillside, and McLaughlin middle schools. These three middle schools each score above the 80 percentile on the combined assessment. The estimated renovation cost for these three schools is illustrated in the table below:

School	Estimated renovation cost
Parkside	$20,000,000
Hillside	$15,000,000
McLaughlin	$16,000,000
Total	$51,000,000

Option 4:

Build two new 21st century High schools to replace Central, West and Memorial High schools. MST would remain as a Career and Technical Center. The estimated cost per high school is $150,000,000.

Option 5:

Merge Memorial and MST to expand the project-based education concept currently offered at MST. Renovate Memorial and MST to improve both facility condition and education suitability. Design and renovate West as a traditional school but updated to current educational and athletic standards. The estimated cost of renovations is illustrated in the table below:

School	Estimated renovation cost
West	$30,000,000
Memorial	$25,000,000
Total	$55,000,000

3. Centralized early childhood education facility

MSD should consider establishing a stand-alone early childhood education facility. Having a centrally located early childhood education facility will allow MSD to concentrate resources in one location and design the facility specifically for early childhood education.

MSD should consider closed schools for the location of the early childhood education facility. Several schools are single story and could possibly be renovated specifically for early childhood education or all sites could be demolished, and a new facility erected.

4. Re-imagine what 21st century High School could look like in MSD.

As illustrated in this report, MSD high school enrollment has declined at a much higher rate than elementary and middle school enrollment indicating that high school students are choosing to leave the district. To retain and possibly recruit students from nearby communities, MSD should consider developing an educational program designed at capturing those high school students that are not completing their education with MSD. For example, remote and/or hybrid instruction, Performing arts, Visual Arts, Engineering, Cooperative on the job training opportunities, etc.

Once completed, MSD will have multiple educational opportunities to engage students in the learning style that is most appropriate for them, thus improving the high school cohort survival percentage, but more importantly, helping more students reach their potential.

5. Conduct a boundary review

As noted earlier, while MSD has excess seats in the elementary level, other schools are over-enrolled. For example, Bakersville elementary is utilized at 124% of its designed capacity. Additionally, with the recommended closer of schools, the entire district should be reviewed to balance enrollment between the remaining schools.

A boundary review will re-design attendance boundaries to more equally distribute enrollment, so no school is over utilized.

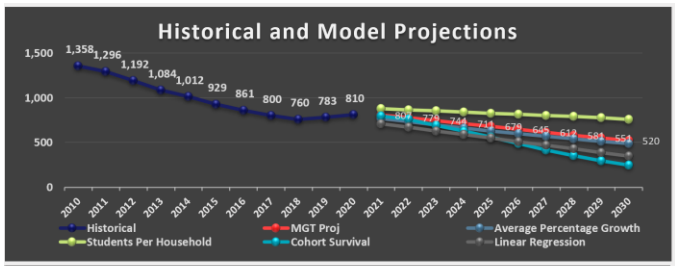
APPENDIX A – BUILDING INVENTORY

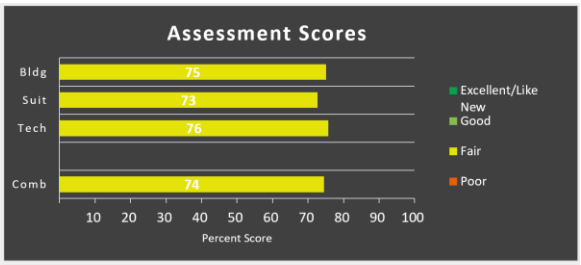
WEST HIGH SCHOOL

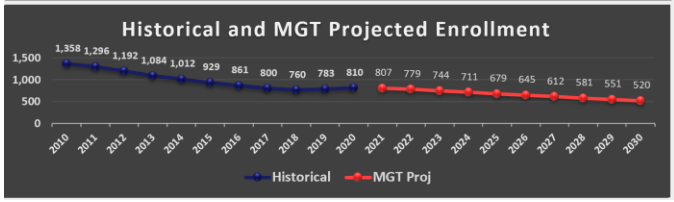
9 Notre Dame Ave
Manchester NH, 03102

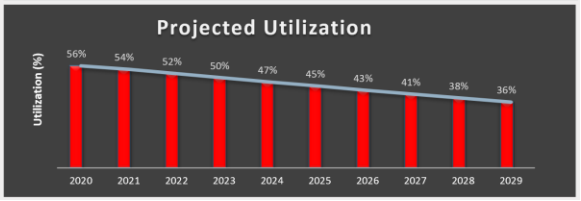
Grades: 9-12
Building Area: 165,346 GSF
Site Area: 9.8 acres + Sports Campus Across Street
Construction dates: 1922, 1958, 1967
Functional Capacity: 1,906
Programmatic Capacity: 1,430*
Classroom Count: 78
Cafeteria size: 10,148 GSF

*Programmatic Capacity is equal to Functional Capacity times High School Utilization Rate (.75)



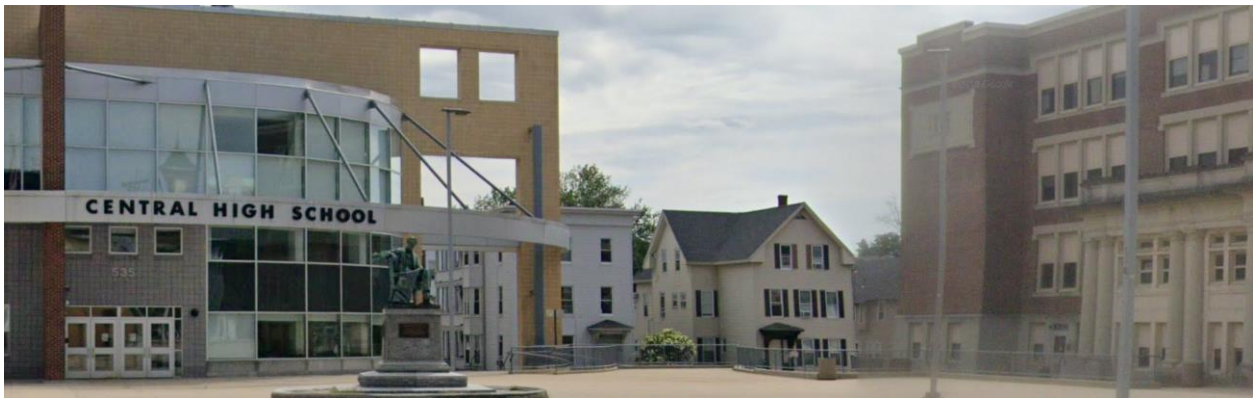






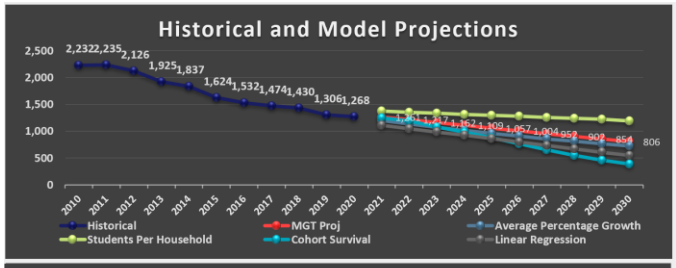
CENTRAL HIGH SCHOOL

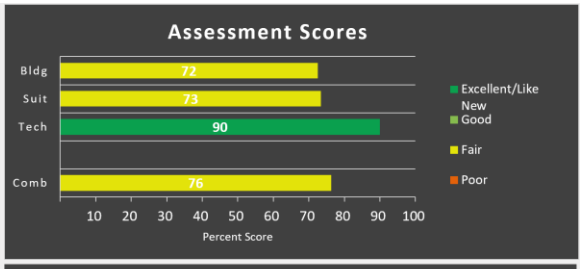
535 Beech Street
Manchester NH, 03104

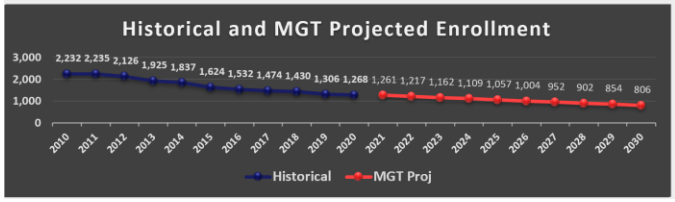


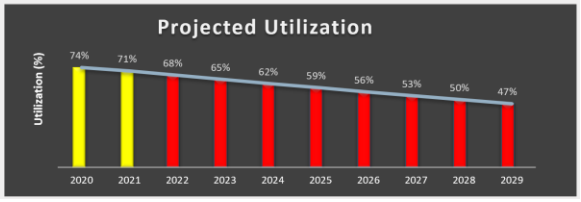
Grades: 9-12
Building Area: 270,062 GSF
Site Area: 5.3 acres
Construction dates: 1895, 1925, 1959, 1967
Functional Capacity: 2,288
Programmatic Capacity: 1,714*
Classroom Count: 98
Cafeteria size: 7,706 GSF

* Programmatic Capacity is equal to Functional Capacity times High School Utilization Rate (.75)







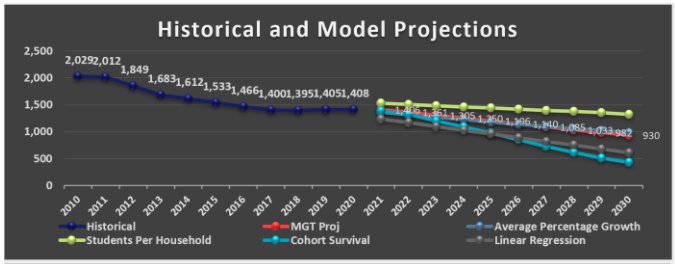


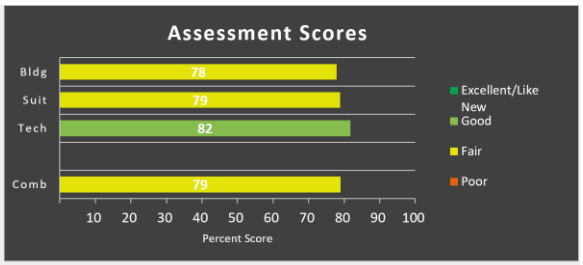
MEMORIAL HIGH SCHOOL

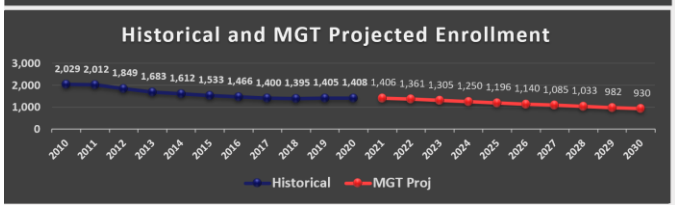
1 Crusader Way
Manchester NH, 03103

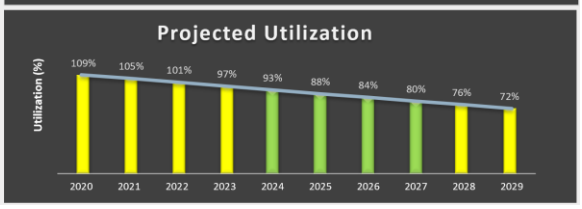
Grades: 9-12
Building Area: 182,528 GSF
Site Area: 47 acres (shared campus with Jewett Elementary and Southside Middle)
Construction dates: 1960, 1965, 1987, 1989, 1998
Functional Capacity: 1,724
Programmatic Capacity: 1,293*
Classroom Count: 62
Cafeteria size: 9,715 GSF

* Programmatic Capacity is equal to Functional Capacity times High School Utilization Rate (.75)







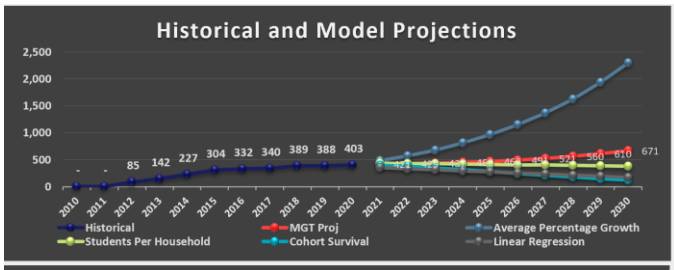


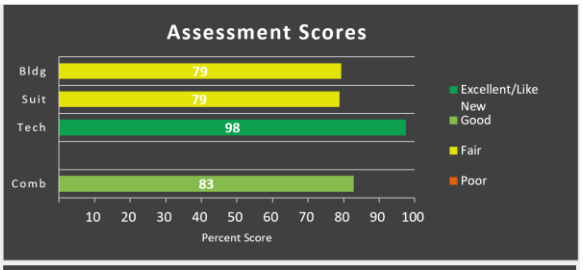
MST HIGH SCHOOL

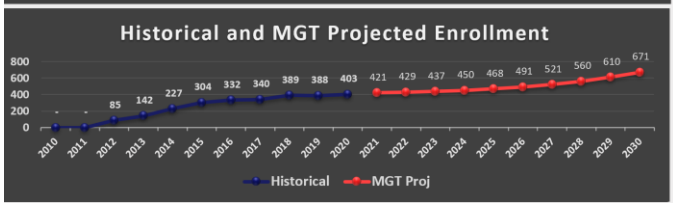
100 Gerald Connors Circle
Manchester NH, 03103

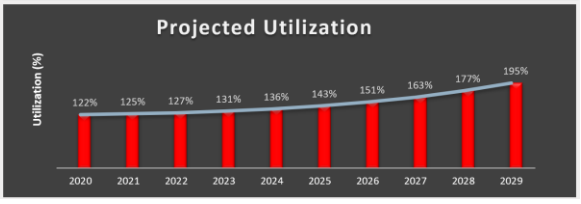
Grades: 9-12
Building Area: 110,000 GSF
Site Area: 11 acres
Construction dates: 1982
Functional Capacity: 458
Programmatic Capacity: 344*
Classroom Count: 37
Cafeteria size: N/A

* Programmatic Capacity is equal to Functional Capacity times High School Utilization Rate (.75)







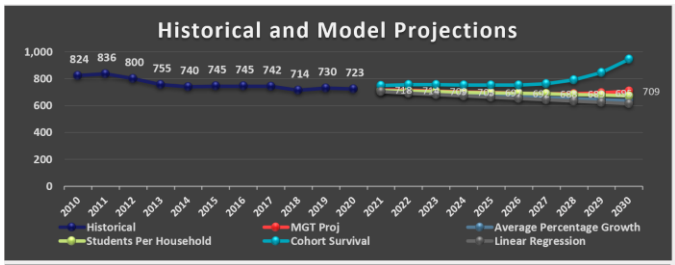


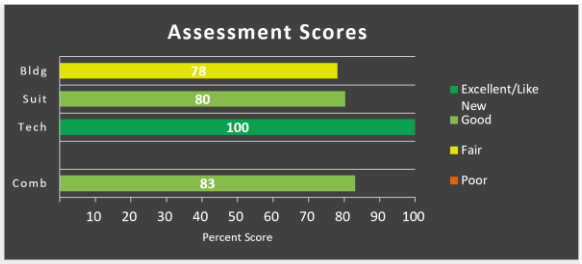
MCLAUGHLIN MIDDLE SCHOOL

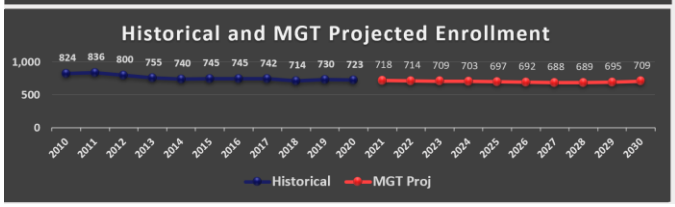
201 Jack Lovering Drive
Manchester NH, 03109

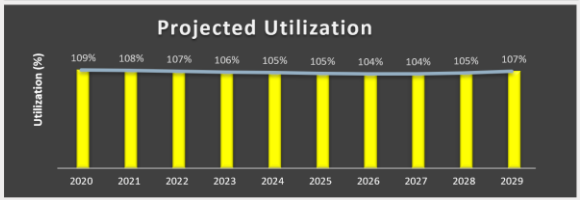
Grades: 6-8
Building Area: 105,000 GSF
Site Area: 41.3 acres (shared campus with Green Acres Elementary)
Construction dates: 1998
Functional Capacity: 778
Programmatic Capacity: 661*
Classroom Count: 44**
Cafeteria size: 3,480 GSF

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.85)
**Does not include portable classrooms







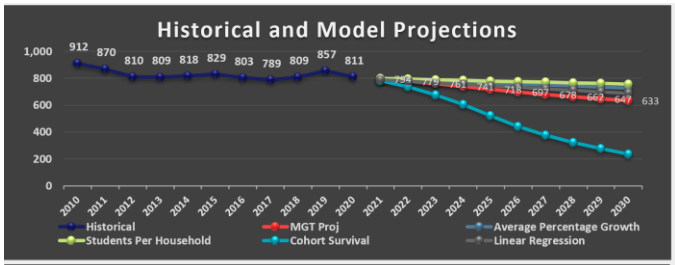


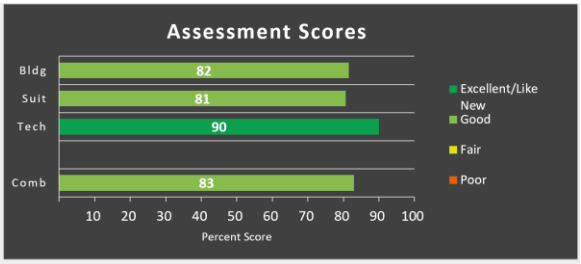
HILLSIDE MIDDLE SCHOOL

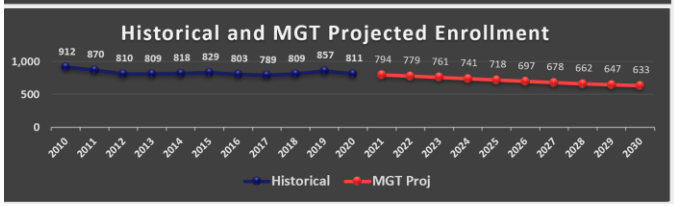
112 Reservoir Avenue
Manchester NH, 03104

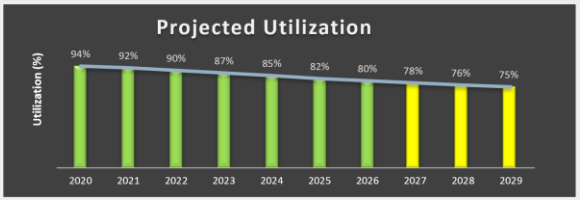
Grades: 6-8
Building Area: 116,648 GSF
Site Area: 137 acres (including Derryfield Park)
Construction dates: 1967
Functional Capacity: 998
Programmatic Capacity: 848*
Classroom Count: 57**
Cafeteria size: 3,672 GSF

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.85)
**Does not include portable classrooms







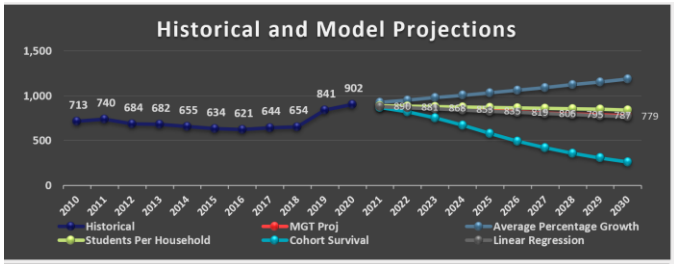


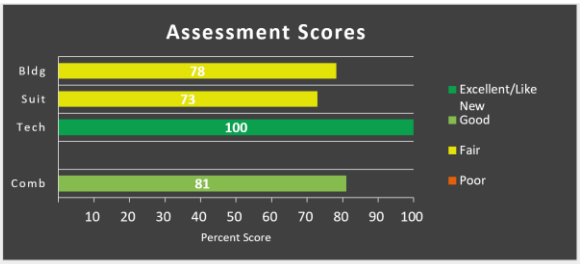
PARKSIDE MIDDLE SCHOOL

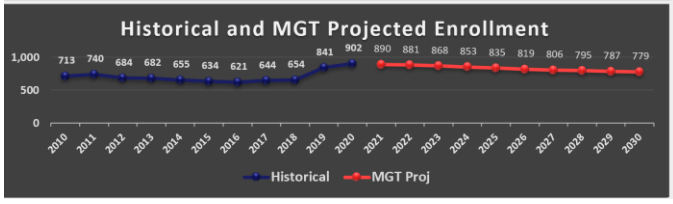
75 Parkside Avenue
Manchester NH, 03102

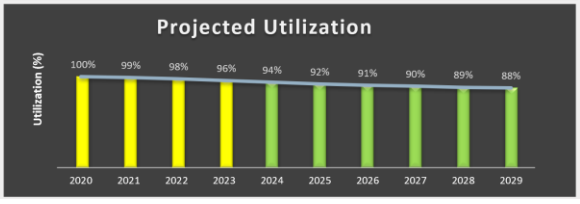
Grades: 5-8
Building Area: 118,550 GSF
Site Area: 23 acres (shared campus with Gossler Park Elementary)
Construction dates: 1967, 1999
Functional Capacity: 1,044
Programmatic Capacity: 887*
Classroom Count: 61**
Cafeteria size: 3,672 GSF

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.85)
**Does not include portable classrooms







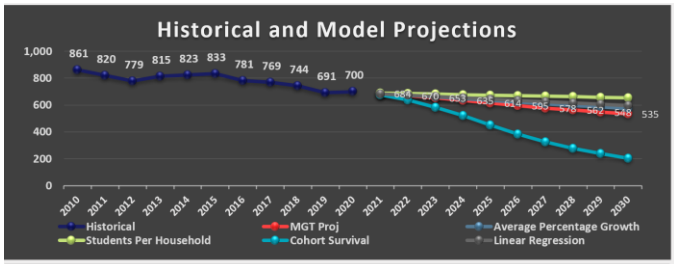


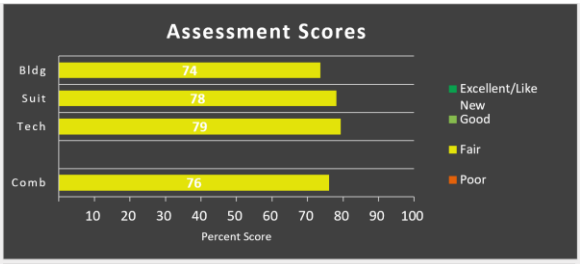
SOUTHSIDE MIDDLE SCHOOL

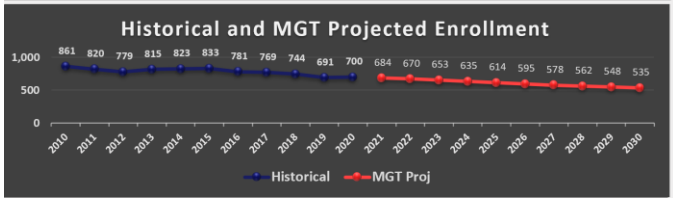
300 S. Jewett Street
Manchester NH, 03103

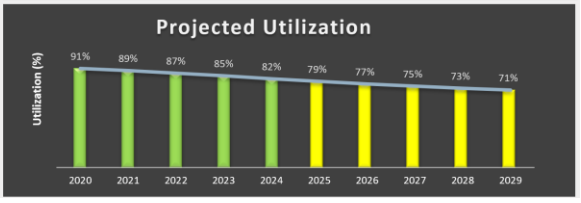
Grades: 6-8
Building Area: 116,648 GSF
Site Area: 47 acres (shared campus with Jewett Elementary and Memorial High)
Construction dates: 1967
Functional Capacity: 883
Programmatic Capacity: 751*
Classroom Count: 54**
Cafeteria size: 3,672 GSF

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.85)
**Does not include portable classrooms







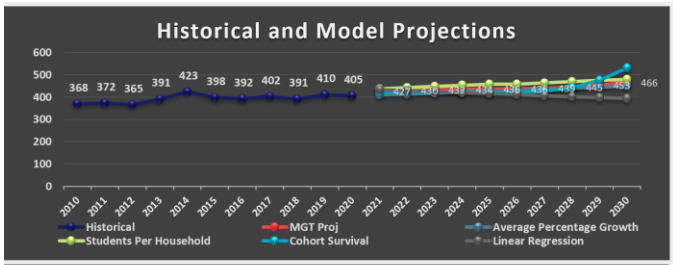


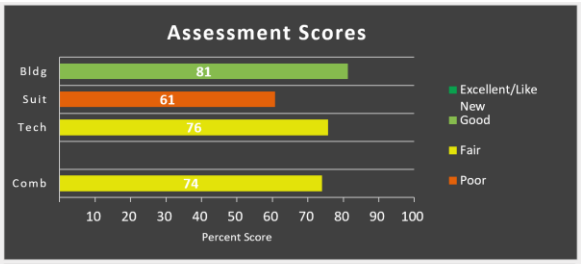
BAKERSVILLE ELEMENTARY SCHOOL

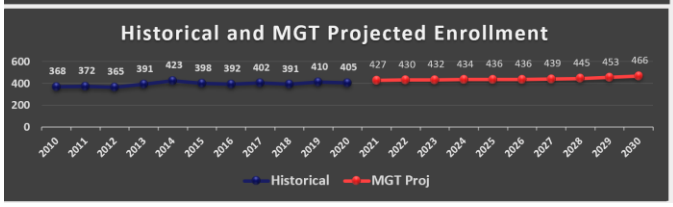
20 Elm Street
Manchester NH, 03101

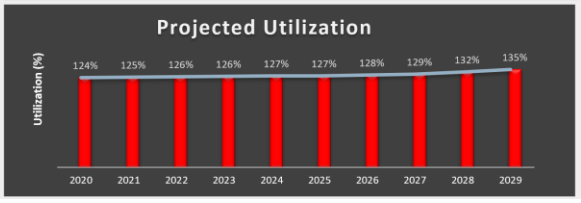
Grades: PK-5
Building Area: 44,968 GSF
Site Area: .7 acres
Construction dates: 1895, 1916, 1990
Functional Capacity: 363
Programmatic Capacity: 344*
Classroom Count: 20**
Cafeteria size: 4,600 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







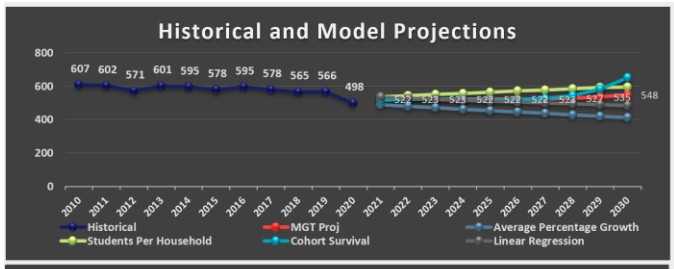


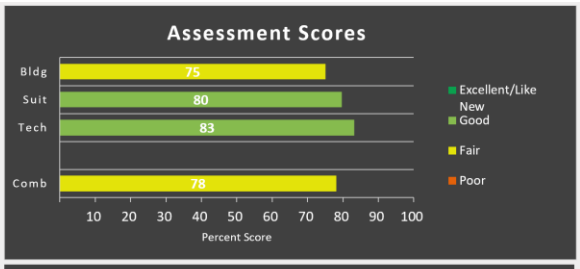
BEECH STREET ELEMENTARY SCHOOL

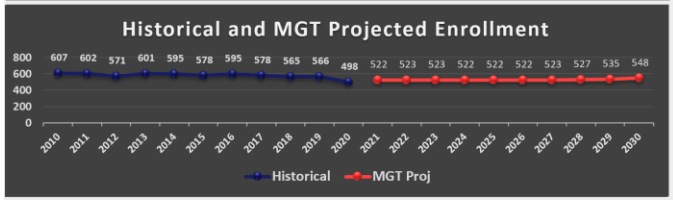
333 Beech Street
Manchester NH, 03103

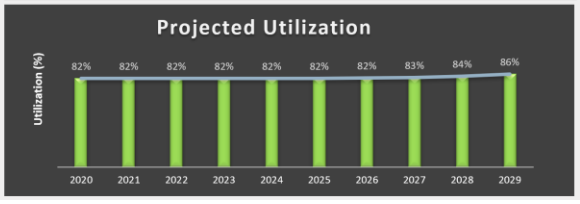
Grades: K-5
Building Area: 69,896 GSF
Site Area: 1.5 acres
Construction dates: 1973
Functional Capacity: 670
Programmatic Capacity: 636*
Classroom Count: 29**
Cafeteria size: 3,697 GSF

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms







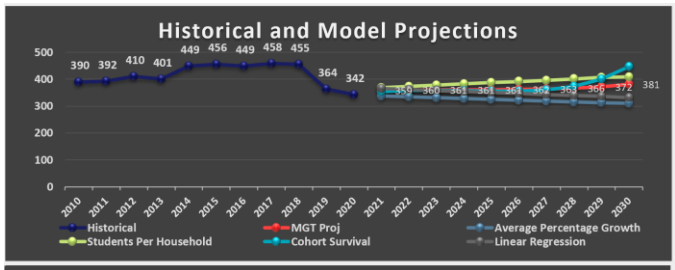


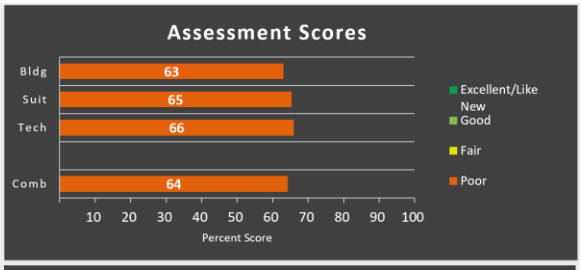
GOSSLER PARK ELEMENTARY SCHOOL

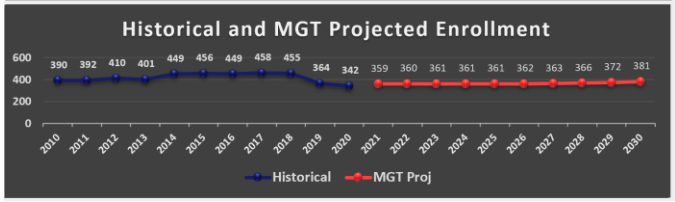
145 Parkside Avenue
Manchester NH, 03102

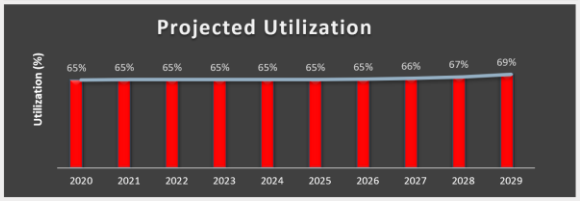
Grades: K-4
Building Area: 40,526 GSF
Site Area: 23 acres (shared campus with Parkside Middle)
Construction dates: 1956, 1961, 1990
Functional Capacity: 584
Programmatic Capacity: 555*
Classroom Count: 23**
Cafeteria size: 3,150 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







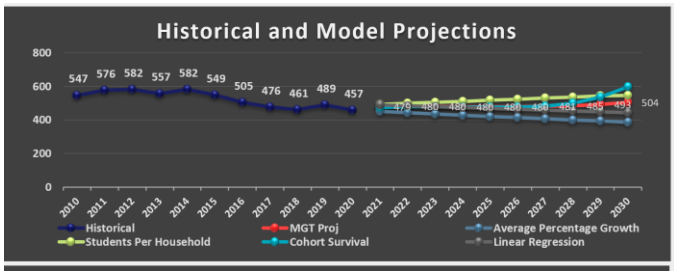


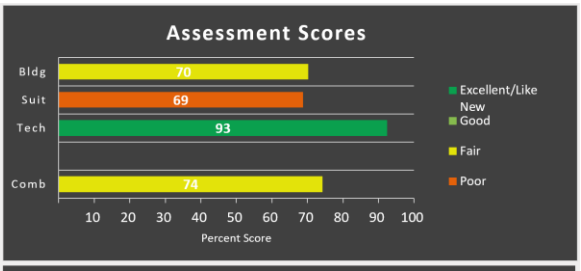
GREEN ACRES ELEMENTARY SCHOOL

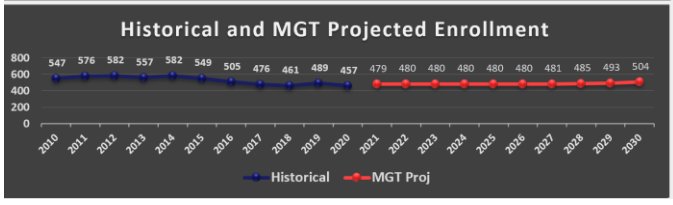
100 Jack Lovering Drive
Manchester NH, 03109

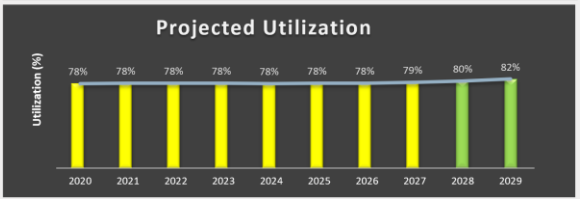
Grades: PK-5
Building Area: 53,734 GSF
Site Area: 41.3 acres (shared campus with McLaughlin Middle)
Construction dates: 1963, 1971
Functional Capacity: 649
Programmatic Capacity: 616*
Classroom Count: 26**
Cafeteria size: 5,017 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







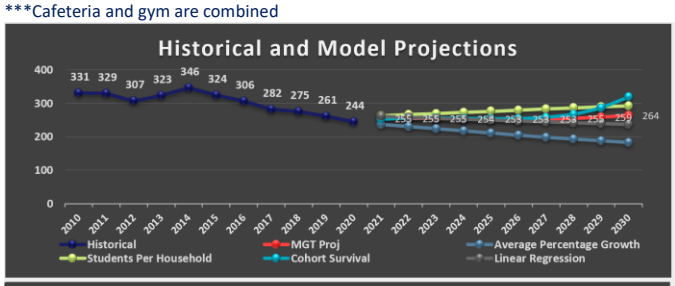


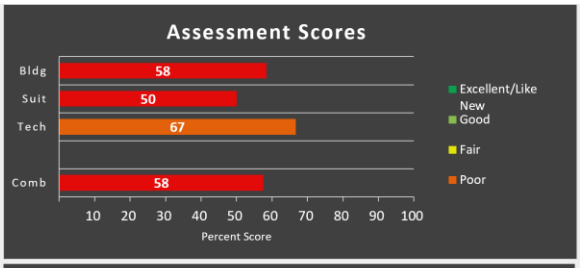
HALLSVILLE ELEMENTARY SCHOOL

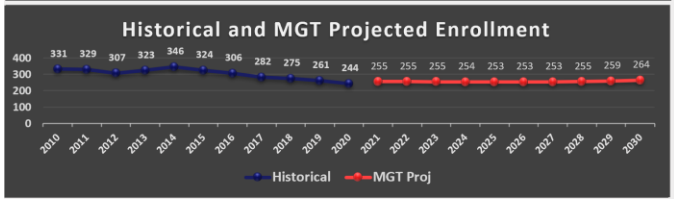
275Jewett Street
Manchester NH, 03103

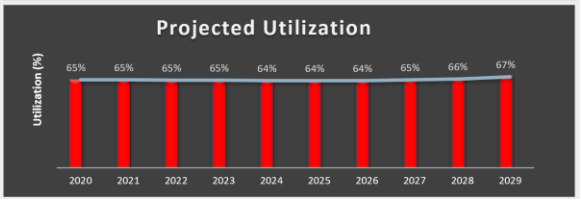
Grades: K-5
Building Area: 38,379 GSF
Site Area: 1.01 acres
Construction dates: 1891, 1908, 1922, 1926
Functional Capacity: 414
Programmatic Capacity: 393*
Classroom Count: 13**
Cafeteria size: 4,640 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







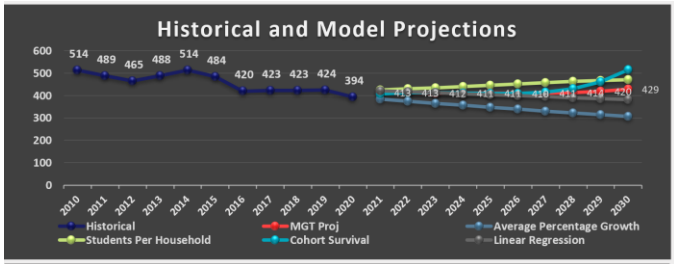


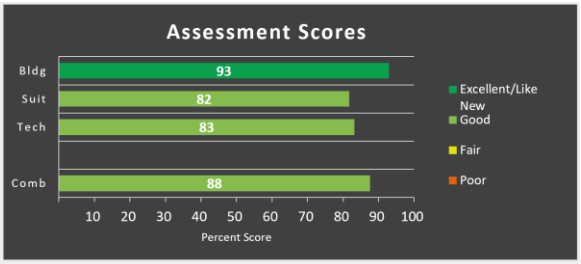
HIGHLAND-GOFFE'S FALLS ELEMENTARY SCHOOL

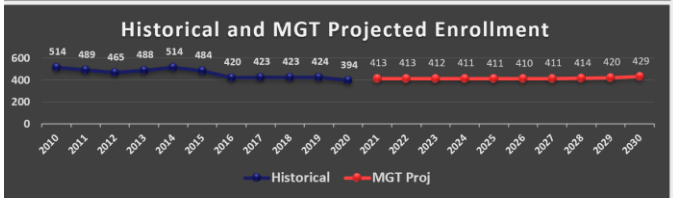
2021 Goffe's Falls Road
Manchester NH, 03103

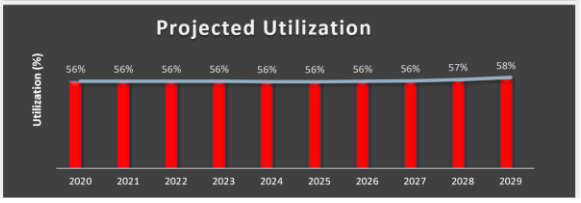
Grades: PK-5
Building Area: 59,927 GSF
Site Area: 15.9 acres
Construction dates: 1970
Functional Capacity: 774
Programmatic Capacity: 735*
Classroom Count: 29**
Cafeteria size: 3,987 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







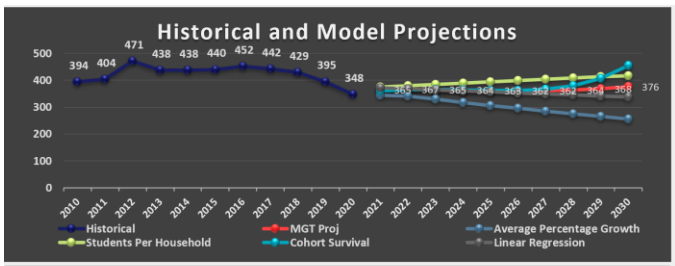


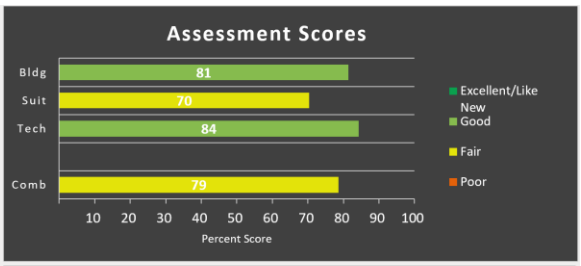
JEWETT ELEMENTARY SCHOOL

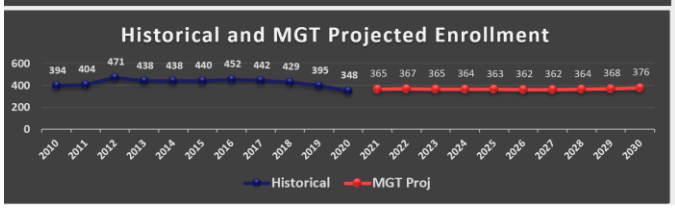
130 S. Jewett Street
Manchester NH, 03103

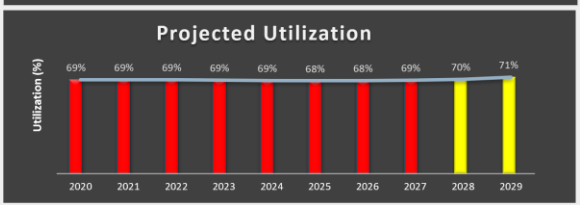
Grades: PK-5
Building Area: 38,436 GSF
Site Area: 47 acres (shared campus with Southside Middle and Memorial High)
Construction dates: 1955, 1963, 1990
Functional Capacity: 557
Programmatic Capacity: 529*
Classroom Count: 23**
Cafeteria size: 3,150 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







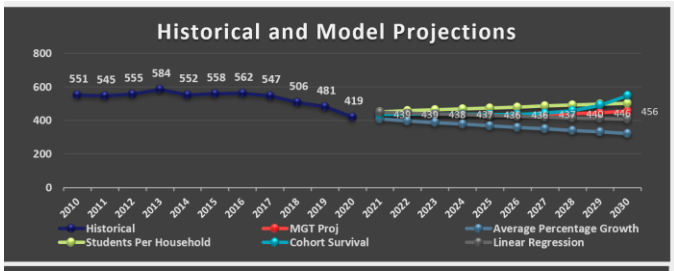


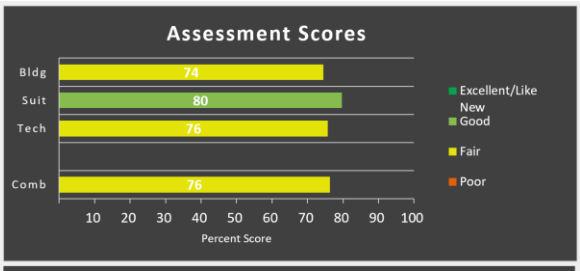
MCDONOUGH ELEMENTARY SCHOOL

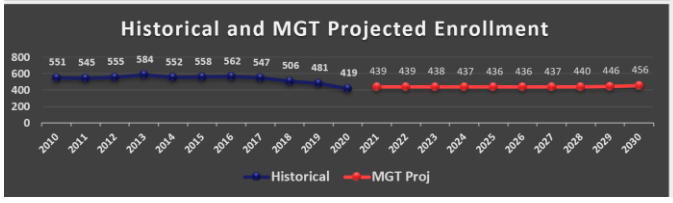
550 Lowell Street
Manchester NH, 03104

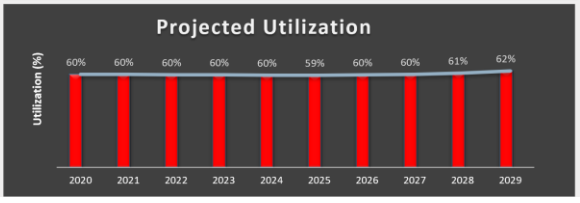
Grades: K-5
Building Area: 64,476 GSF
Site Area: 3.44 acres
Construction dates: 1964
Functional Capacity: 772
Programmatic Capacity: 733*
Classroom Count: 34**
Cafeteria size: 3,950 GSF

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms







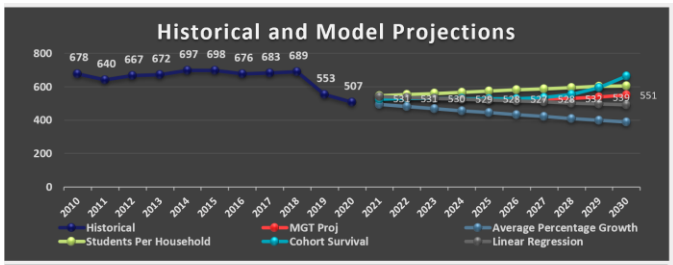


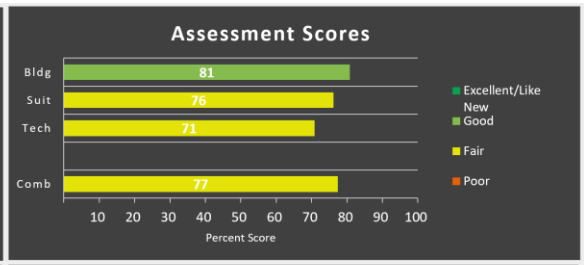
NORTHWEST ELEMENTARY SCHOOL

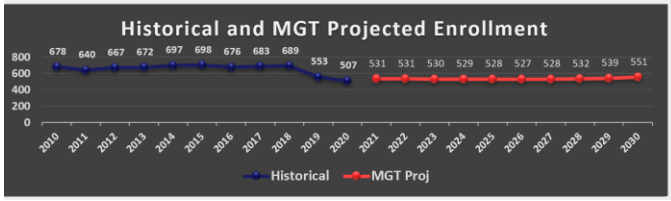
300 Youville Street
Manchester NH, 03102

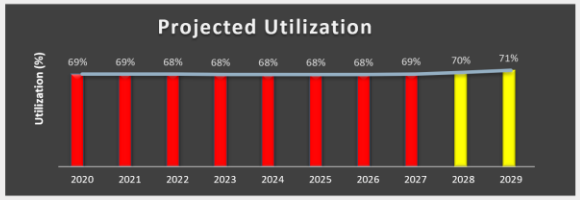
Grades: K-4
Building Area: 51,475 GSF
Site Area: 4.56 acres
Construction dates: 1987
Functional Capacity: 815
Programmatic Capacity: 774*
Classroom Count: 29**
Cafeteria size: 5,000 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







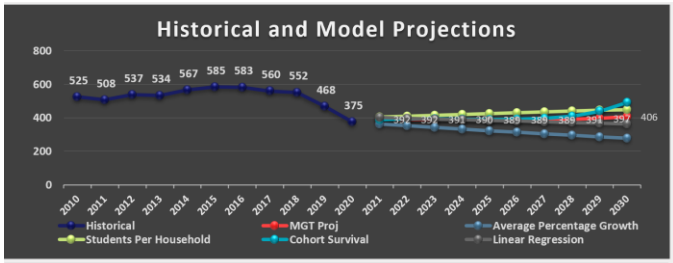


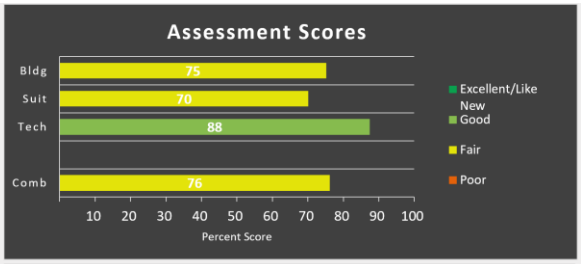
PARKER-VARNEY ELEMENTARY SCHOOL

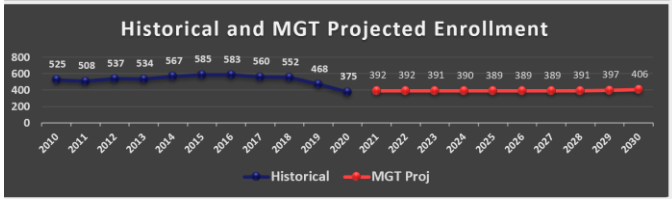
223 James A. Pollock Drive
Manchester NH, 03102

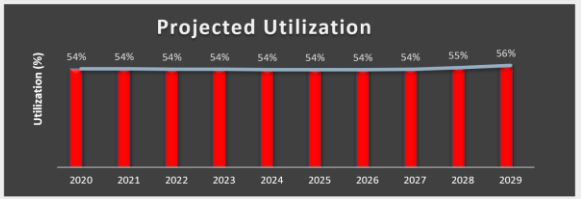
Grades: PK-4
Building Area: 59,927 GSF
Site Area: 13.5 acres
Construction dates: 1970
Functional Capacity: 758
Programmatic Capacity: 720*
Classroom Count: 28**
Cafeteria size: 3,987 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







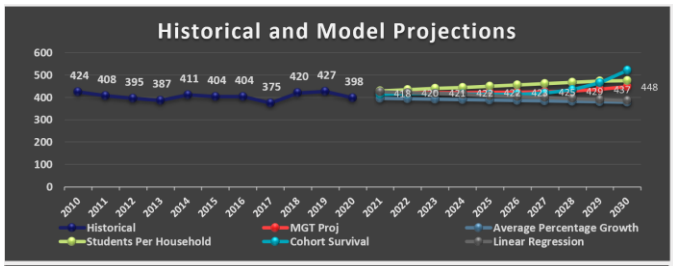


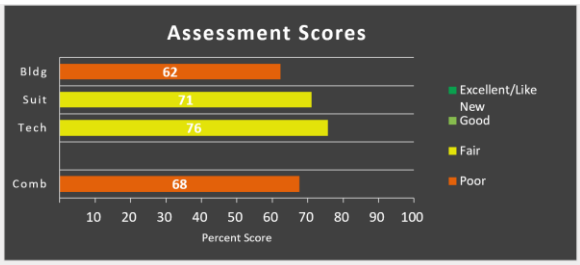
SMYTH ROAD ELEMENTARY SCHOOL

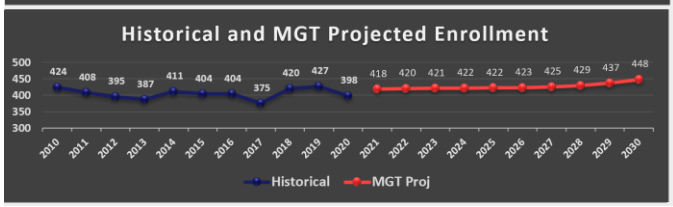
245 Bruce Road
Manchester NH, 03104

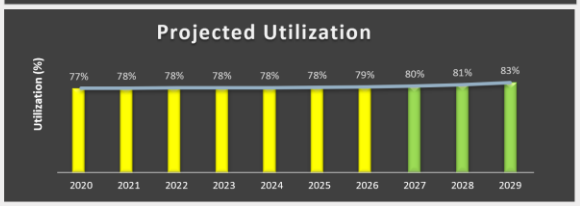
Grades: PK-5
Building Area: 44,647 GSF
Site Area: 11.5 acres
Construction dates: 1956, 1961, 1990
Functional Capacity: 569
Programmatic Capacity: 540*
Classroom Count: 25**
Cafeteria size: 3,150 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







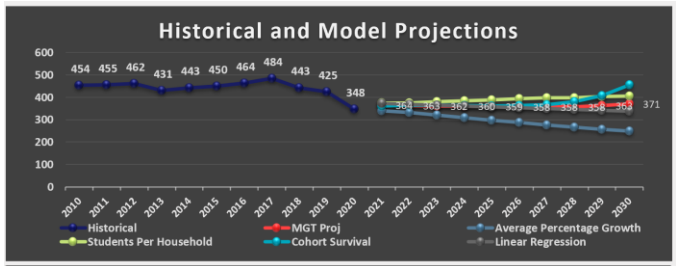


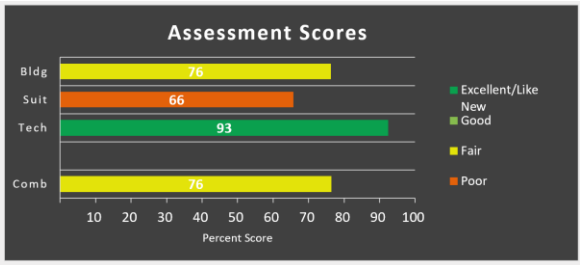
WEBSTER ELEMENTARY SCHOOL

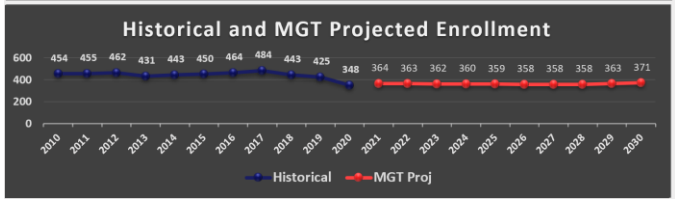
2519 Elm Street
Manchester NH, 03104

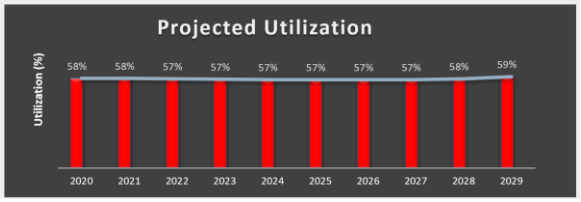
Grades: K-5
Building Area: 56,558 GSF
Site Area: 2.77 acres
Construction dates: 1940, 1971
Functional Capacity: 664
Programmatic Capacity: 630*
Classroom Count: 29**
Cafeteria size: 3,694 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







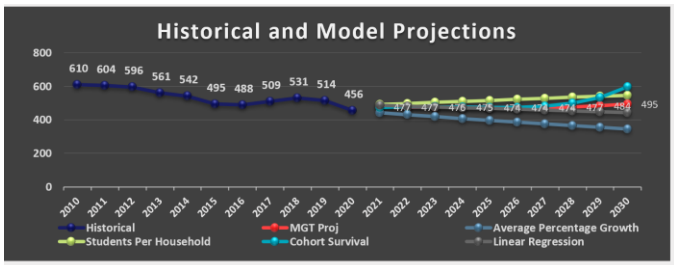


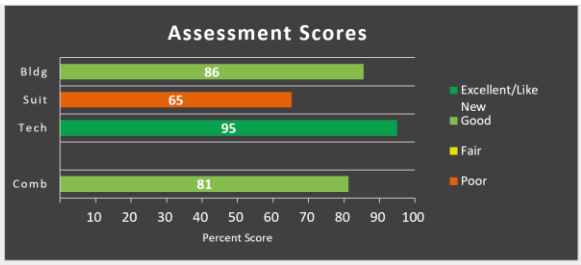
WESTON ELEMENTARY SCHOOL

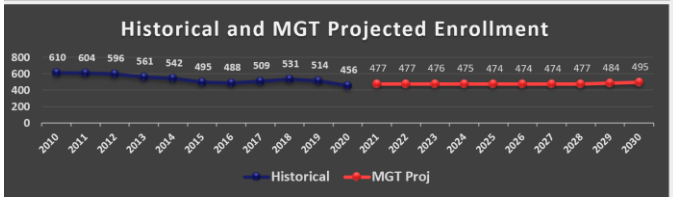
1066 Hanover Street
Manchester NH, 03104

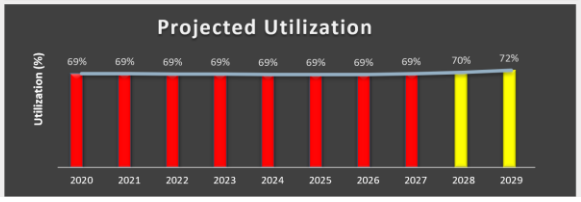
Grades: PK-5
Building Area: 61,827 GSF
Site Area: 2.77 acres
Construction dates: 1922, 1958, 1975
Functional Capacity: 728
Programmatic Capacity: 691*
Classroom Count: 26**
Cafeteria size: 3,890 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined







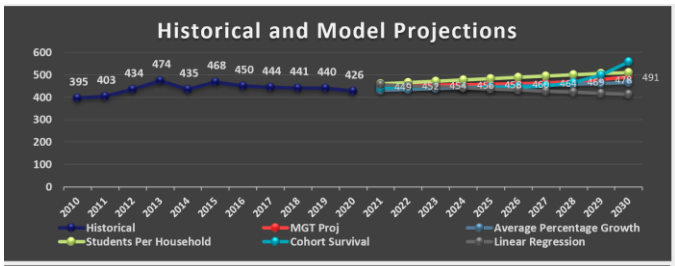


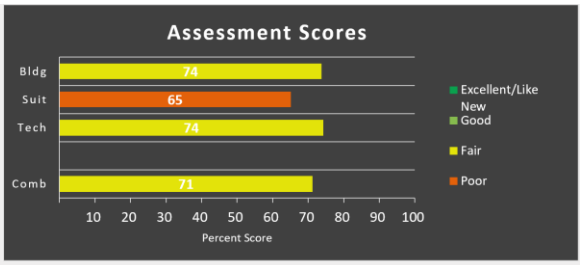
HENRY WILSON ELEMENTARY SCHOOL

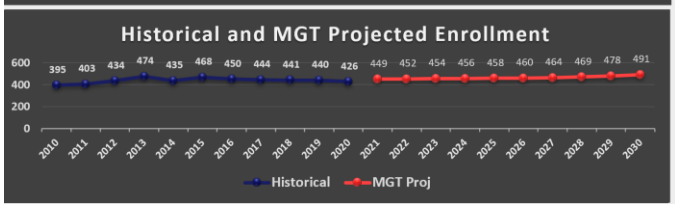
401 Wilson Street
Manchester NH, 03103

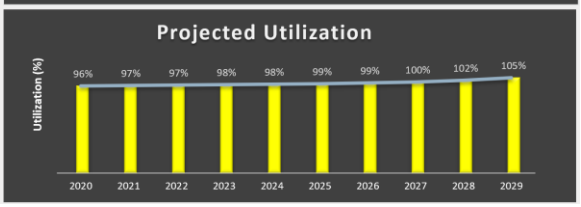
Grades: K-5
Building Area: 50,230 GSF
Site Area: .92 acres
Construction dates: 1896, 1917, 1996
Functional Capacity: 492
Programmatic Capacity: 467*
Classroom Count: 17**
Cafeteria size: 5,330 GSF***

* Programmatic Capacity is equal to Functional Capacity times Middle School Utilization Rate (.95)
**Does not include portable classrooms
***Cafeteria and gym are combined









APPENDIX B – EDUCATIONAL SUITABILITY & TECHNOLOGY READINESS GUIDE

EDUCATIONAL SUITABILITY & TECHNOLOGY READINESS REFERENCE GUIDE

TABLE OF CONTENTS

OVERVIEW AND BACKGROUND

This Guide defines the standards that will be used to assess the educational adequacy of schools for Manchester School District (MSD). The standards were developed in collaboration with educators from MSD and based on the New Hampshire Department of Education standards, the district's adopted Design Guidelines, and Educational Specifications. An assessment of educational adequacy measures how well the facility supports the instructional program in the school. This is not an assessment of the physical condition of the school – the roofing, the windows, etc., which rates the various building systems. This is an assessment of the learning spaces compared to the program needs at that school.

For each type of instructional space, the assessment includes four components:

- **Learning environment** - The room should provide an inviting and stimulating environment for learning, including lighting, HVAC, acoustics, etc.
- **Size** – The room should meet the size standard set by the district/state.
- **Location** – The room should be appropriately located based on the program needs: quiet, noisy, near the entrance, etc.
- **Storage and Fixed Equipment** – The room should have appropriate fixed equipment and storage for teacher/ student materials.

In addition to the instructional spaces, the adequacy assessment also includes the exterior of the building, e.g., traffic patterns, parking and access to the school, safety issues (lighting, signage, secure entrances), play and athletic areas, and infrastructure that supports technology readiness.

This Guide will be used for training of assessors to ensure inter-rater reliability and during the assessment of each school in the district. The Guide and the data gathered during the assessment will be made available to the public and will be used by the district to prioritize facility needs for future planning.

ACKNOWLEDGEMENTS

Special thanks to the following MSD staff who participated in the development of this Guide.

Dr. John Goldhardt	Superintendent
Amy Allen	Assistant Superintendent
Jenn Gillis	Assistant Superintendent
Mary Steady	Chief Equity Officer
Steve Cross	Chief Information Officer
Karen DeFrancis	Chief Financial Officer

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ART CLASSROOMS

Required space at all levels. Art rooms should be located in permanent buildings. If there is no space, score all components *Unsatisfactory*. For educational suitability purposes, if the art room is located in a portable, all four components should be scored *Unsatisfactory*.

System	Component	Description	What to Look For
Art	Environment	The room should provide an inviting and stimulating environment for learning.	**Spatial Configuration (immovable):** Does it support the instructional program? **Lighting:** Appropriate natural light/lighting levels? **Acoustics:** Are there impediments to hearing the teacher? Is there noise transfer between classrooms? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated?
	Size	The room should meet the square footage standards. **ES: 1,110 SF** **MS/HS: 1200 SF**	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards or is a portable
	Location	The room should be appropriately located for the program.	Rooms should be located on an exterior wall with windows for natural light.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program.	**Storage:** Room(s) have adequate permanent casework, appropriate materials and project storage **Fixed Equipment:** ES/MS: Should have sink. HS: Should have at least 2 sinks w/clay traps, kiln w/appropriate ventilation, display space, hard surfaced flooring, easily cleanable surfaces, and technology equipment. Room(s) should have the capacity to be darkened to display projected imagery.

Examples of art classrooms:

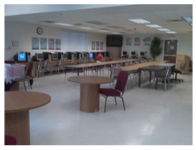


CAREER & TECHNICAL EDUCATION

Scores are based on the programs available in each building. Space is provided for various simulations of job-related experiences and laboratory workstations. For educational suitability purposes, if some CTE rooms are located in a portable building, the comment for all four components should include this information and scores lowered based on the percent that are located in portable buildings. If all CTE rooms are in portables, all components are scored *Unsatisfactory*.

System	Component	Description	What to Look For
Career Tech Ed	Environment	The room should provide an inviting/stimulating environment for learning.	**Spatial Configuration (immovable):** Does it support the instructional program? **Lighting:** Appropriate natural light/lighting levels? **Acoustics:** Are there impediments to hearing the teacher? Is there noise transfer between classrooms? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated?
	Size	The room should meet the square footage appropriate for the program. There is room for a lecture area and for movement of students.	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The room should be appropriately located for the program.	The classrooms(s) should be shielded from noise-producing activities and functions and there should be appropriate material delivery areas.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program.	**Storage:** There should be storage for student projects and supplies and secured storage areas for volatile, flammable, and corrosive chemicals and cleaning agents, if needed for the program. In addition, there should be proper storage and removal access for hazardous waste materials is provided in each laboratory using such materials. **Fixed Equipment:** As appropriate to the program, including any necessary safety equipment.

Examples of career and technical education classrooms:


COMPUTER LABS

Computer labs should be scored if they exist. If a school has no computer lab, it should be scored "N/A". For educational suitability purposes, if the computer lab is located in a portable, all four components should be scored *Unsatisfactory*.

System	Component	Description	What to Look For
Computer Labs	Environment	The room should provide an inviting and stimulating environment for learning.	**Spatial Configuration (immovable):** Does it support the instructional program? **Lighting:** Lighting should minimize screen glare and eye strain. **Acoustics:** Are there impediments to hearing the teacher? Is there noise transfer between classrooms? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated?
	Size	The room should meet the square footage standards and should accommodate movement of students around learning stations. **1110 SF (ES)** **1200 SF (MS)** **1200 SF (HS)**	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The room should be appropriately located for the program.	A room that is close to classroom areas and shielded from noise-producing activities or functions.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program. **Computer labs should have both hard connections and wireless availability.**	**Storage:** Is there adequate permanent casework and enough storage for teaching materials and records? **Fixed Equipment:** There should be sufficient outlets, power sources, and network links for the amount of equipment provided. Equipment should be properly secured and appropriate for the program. Furniture should /should not be fixed/permanent.

Examples of computer labs:



EARLY CHILDHOOD EDUCATION

For suitability purposes, if some early childhood classrooms are located in a portable building, the comment for all four components should include this information and the scores should be lowered based on the percent of classrooms in that category that are located in portable buildings. If all ECE classrooms are in portables, all components should be scored *Unsatisfactory*.

System	Component	Description	What to Look For
ECE	Environment	The room should provide an inviting and stimulating environment for learning.	**Spatial Configuration (immovable):** Does it support the instructional program? **Lighting:** Appropriate natural light/lighting levels? **Acoustics:** Are there impediments to hearing the teacher? Is there noise transfer between classrooms? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated?
	Size	The room should meet the square footage standards (including restrooms, storage, kitchenette, and teacher preparation) **1110 SF**	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The room should be appropriately located for the program.	A room that is appropriately located and shielded from noise-producing activities or functions and has access to a fenced outdoor play area. (Play area is scored under ***Outside Spaces***.)
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program.	**Storage:** Room(s) have adequate, age-appropriate casework and storage. **Fixed Equipment:** There should be a restroom in the classroom. Convenient access to washer and dryer. If the room is used for special education preschool, add a changing area in the restroom. Fixtures include sink, wall of cabinets, age-appropriate fixtures, and technology equipment. Some flooring is a "wet area".

Examples of ECE classrooms:



GENERAL CLASSROOMS

For suitability purposes, if some general classrooms are located in a portable building, the comment for all four components should include this information and scores lowered based on the percent that are located in portable buildings. If all general classrooms are in portables, all four components are scored *Unsatisfactory*.

System	Component	Description	What to Look For
General Classrooms	Environment	The rooms should provide an inviting and stimulating environment for learning.	**Spatial Configuration (immovable):** Does it support the instructional program? Classrooms should have flexible spaces for group learning. **Lighting:** Appropriate natural light/lighting levels? Clerestory windows OK. **Acoustics:** Are there impediments to hearing the teacher? Is there noise transfer between classrooms? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated?
	Size	The rooms should meet the square footage standards. **All Levels: 1000 SF**	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The rooms should be appropriately located for the program.	A room that is appropriately located and shielded from noise-producing activities or functions.
	Storage/Fixed Equip	The rooms should have adequate storage space and fixed equipment appropriate to the program.	**Storage:** Permanent casework and space for teaching materials and records. **Fixed Equipment:** One wall of cabinets, counters at age-appropriate height, a locked cabinet. There should be technology equipment appropriate to the program.

Examples of general classrooms:



INSTRUCTIONAL RESOURCE ROOMS

There should be space(s) for resource specialist, speech therapist, psychologists, itinerant teachers, bilingual specialists, migrant services and other services. For educational suitability purposes, if some instructional resource rooms are located in a portable building, the comment for all four components should include this information and scores lowered based on the percent that are located in portable buildings. If all resource rooms are in portables, all components are scored *Unsatisfactory*.

System	Component	Description	What to Look For
Instructional Resource Rooms	Environment	The room should provide an inviting and stimulating environment for learning.	**Spatial Configuration (immovable):** Does it support the instructional program and allow for collaborative learning opportunities? **Lighting:** Appropriate natural light/lighting levels? **Acoustics:** Are there impediments to hearing the teacher? Is there noise transfer between classrooms? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated?
	Size	The room should meet the square footage standards. **600 SF X 3 rooms** Should be space for speech therapy, physical therapy, occupational therapy, and private counseling. Physical and occupational therapy can be co-located.	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The room should be appropriately located for the program.	The room should be near other classrooms and shielded from noise-producing activities or functions.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program.	**Storage:** Room(s) have adequate permanent casework; teacher, and student storage. **Fixed Equipment:** Room(s) have program/technology equipment appropriate to the program.

Examples of instructional resource rooms:

KINDERGARTEN

If some kindergarten classrooms are located in a portable building, the comment for all four components should include this information and scores lowered based on the percent that are located in portable buildings. For educational suitability purposes, if all kindergarten classrooms are in portables, all components are scored *Unsatisfactory*.

System	Component	Description	What to Look For
Kindergarten	Environment	The room should provide an inviting and stimulating environment for learning.	**Spatial Configuration (immovable):** Does it support the instructional program? . **Lighting:** Appropriate natural light/lighting levels? **Acoustics:** Are there impediments to hearing the teacher? Is there noise transfer between classrooms? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated?
	Size	The room should meet the square footage standards (including restrooms, storage, teacher preparation). **1110 SF (50sf per student)**	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The room should be appropriately located for the program.	The room should be appropriately located, shielded from noise-producing activities or functions, and located close to parent drop-off and bus loading areas. Kindergarten is to be located on the ground floor.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program.	**Storage:** Storage space for teaching materials and records; and for children's clothing and personal items. Storage, casework, and learning stations are functionally designed for use in free play and structured activities; e.g., shelves are deep and open for frequent use of manipulative materials. **Fixed Equipment:** There should be a wet area with sink. Room(s) have program/technology equipment appropriate to the program. A restroom should be located within kindergarten classrooms or within 50' of classroom. Counters, furniture, etc. should be appropriate heights for kindergarten-aged students.

Examples of kindergarten classrooms:

LEARNING ENVIRONMENT

System	Component	Description	What to Look For
Learning Environment	Learning Style Variety	The school should have flexible learning spaces.	Space is provided to allow for various group sizes, projects, individual workstations, as well as general classrooms. Spaces are flexible, allowing for differentiated instruction to accommodate multiple teaching and learning styles.
	Interior Environment	The school should provide an inviting and stimulating environment for learning.	**Spatial Configuration (immovable):** Does it support the instructional program or are there oddly-placed posts, difficult angles to navigate or awkward spaces to use? **Lighting:** Is there appropriate natural light (windows with views) and adequate artificial lighting levels? **Acoustics:** Is there noise transfer between classrooms or from traffic or play areas into the classrooms? The large spaces, e.g., vestibules, halls, cafeteria, etc. are acoustically treated. **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are school common area finishes/equipment worn and/or dated?
	Exterior Environment	Schools should have outdoor areas for learning and social gathering opportunities.	Examples include: Outdoor science/nature learning labs, covered or open instructional areas, and social gathering spaces.

Examples of learning environments:



MEDIA CENTER

All schools are expected to have a media center. For educational suitability purposes, if the media center is in a portable, all components are scored *Unsatisfactory*.

System	Component	Description	What to Look For
Media Center	Environment	The room should provide an inviting/stimulating environment for learning. **There should be space for instruction, research and quiet reading.**	**Spatial Configuration (immovable):** Does it support the instructional program? **Lighting:** Appropriate natural light/lighting levels? **Acoustics:** Are acoustic materials in place to allow different activities to occur at the same time without interference? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated?
	Size	**Elementary: 4 SF/student (min. 1800 SF)** **Middle School: 4 SF/student (min. 1800 SF)** **High School: 4 SF/student (min. 1800 SF)** **Should include an office and workroom.**	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The room should be appropriately located for the program.	The media center should be centrally located to support access of all students and away from noisy parts of the building.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program.	**Storage:** Adequate permanent casework and enough storage for materials and technology. **Fixed Equipment:** Space and capability for computer terminals for student use, research and report writing. Equipment should be properly secured. Bookcases are ideally located on the perimeter or are low enough to allow supervision. The space should include a sink in the workroom, high ceilings, and flexible spaces. Space should include break out area for student collaboration, student instruction, and teacher instruction (professional development).

Examples of Media Centers:



MUSIC

Required space at all levels. If no music room exists, all four components should be scored *Unsatisfactory*. For educational suitability purposes, if the music room is located in a portable, all four components should be scored *Unsatisfactory*. All secondary schools should have separate choir and band space. High schools also have separate orchestral space.

System	Component	Description	What to Look For
Music	Environment	The room should provide an inviting/stimulating environment for learning.	**Spatial Configuration (immovable):** Size and height of instrumental and choral rehearsal rooms should be sufficient to allow for movement of students and instruments and various presentation arrangements **Lighting:** Appropriate natural light/lighting levels? **Acoustics:** Size and height of instrumental and choral rehearsal rooms should be sufficient to allow for acoustic quality. Flooring should be hard surface. **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated? **Safety:** Practice rooms have motion-sensor lighting, a window in the door, and adequate acoustical treatment.
	Size	The rooms should meet the square footage standards. **1,000 SF (ES)** **3,000 SF (MS) 3 rooms minimum - chorus, orchestra, band** **4,000 SF (HS) 3 rooms minimum chorus, orchestra, band. Practice Rooms. Office**	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The room should be appropriately located for the program.	All music rooms shall be located remotely from other classrooms to minimize sound transmission, should have convenient access to the auditorium, and practice rooms should have adequate supervision.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program. Different levels (staired area)	**Storage:** Room(s) have adequate casework (cabinets and bookshelves), and appropriate storage. Lockable student cabinets for instruments. **Fixed Equipment:** There should be sinks and storage, depending on type of program. Technology equipment appropriate to the program.

Examples of music classrooms:


NON-INSTRUCTIONAL SPACES

System	Component	Description	What to Look For
Non-Instructional	Administration	Administrative spaces should be configured and equipped appropriately. There should be active control of the front door.	Administrative office/clerical space appropriate for the school size. With adequate reception space for parents and visitors. Storage area for consumable materials. Adult restrooms. Principal's office with space for meetings of four people. Small meeting space for meetings of up to 10 people. Faculty mailboxes should not be accessed through the public space. There needs to be a large storage space adequate to store furniture and excess supplies (not in the mechanical or electrical space).
	Cafeteria	A multi-use room or rooms capable of seating one-third of the capacity of the school for dining.	There is good circulation and routing. The cafeteria is acoustically isolated, has appropriate storage and seating. There needs to be a space to store all the tables and chairs for multipurpose usage. The area for the cafeteria line is designed for the flow of traffic for each lunch period and should allow all students adequate eating time during each lunch period. Tables and benches or seats are designed to maximize space and allow flexibility in the use of the space and create lines of sight for adequate supervision.
	Food Service and Prep	Food service and prep spaces (kitchen, freezer, cooler, office, restrooms, etc.) are sized and located appropriately. The kitchen area should have separate areas for pickup and delivery, have adequate storage, and fixed equipment.	Design of kitchen reflects its planned function, e.g., whether for food preparation or warming only. Space is available for refrigeration and preparation of foods to accommodate maximum number of students planned for the school. Office, changing, and restroom area for food preparation staff is available and shall comply with local department of health requirements. Safety equipment is available. The delivery area is separate from other traffic and does not provide an unsecured access point into the school. Doorbell/buzzer and peephole at access door.
	Clinic	Each school should have a health clinic.	There should be a health service area with space for nurse desk, patient beds (2), filing cabinets, and both dry (locked) and refrigerated medication storage. There should also be an ADA accessible restroom. Cot area should be supervised by office.

NON-INSTRUCTIONAL SPACES (CONTINUED)

System	Component	Description	What to Look For
Non-Instructional	Counseling	There should be office area for the psychologist/counseling program which provides for confidentiality and may be shared with other support service programs. Middle: 3 offices High: 7 offices	There should be a reception/waiting area. The space should be located adjacent to the fireproof records storage. **Component requirements** Guidance Office = 150 SF Reception = 150 SF Records Room = 150 SF
	Custodial and Maintenance	There should be a custodial receiving area (250 SF) and custodial closets with floor mop sink in each major building area.	The receiving area should be on the ground floor with direct access from delivery truck loading/unloading area and should have shelving for bulk storage of equipment and supplies.
	Student Restrooms	Restroom stalls shall be sufficient to accommodate the maximum planned enrollment and shall be located on campus to allow for supervision.	Restrooms are appropriately located and adequate in number, well-ventilated, and the fixtures are appropriate. Floor and wall surfaces are washable. Toilet partitions and urinal privacy partitions are in place. Restroom ratio should be 1 to 50 for girls, 1 to 75 for boys.
	Faculty Workspace	The faculty should have a space for dining and a work area.	The faculty space should be sized appropriately for the school. There should also be workspace equipped for copying and other instructional materials preparation.

Examples of non-instructional spaces:




OUTSIDE SPACES

System	Component	Description	What to Look For
Outside	Vehicular Traffic	Traffic routing should be safe with good separation.	Bus, parent, and service lanes are "off-street" and do not conflict with each other, playground, or parking areas. There is adequate bus loading near entrances to the building.
	Pedestrian Traffic	Pedestrian traffic routing is safe with good separation from vehicular traffic.	There should be safe walk routes (sidewalks and marked crosswalks) that direct students and the public to appropriate entrances.
	Parking	Parking should be adequate in size and marked.	There is adequate off-street paved, marked, and lighted parking for staff and visitors for daily operations (not events). Parking lots have reasonable access to school entrances. Minimum adequate parking spaces defined as one space per staff member and six visitor spaces. Student parking should be adequate.
	Play Areas/Fields	Play areas should be adjacent to the school, adequate in size, and allow for free and organized play time.	There should be an area for covered play, a hard-surfaced area, and playground equipment. **PK/K only:** separately fenced area with both hard and grassed areas. For PK, this should be accessed directly from the classroom(s). **MS only:** include hard surface and grassed areas for physical Education. **HS only**: track and field, football field, soccer fields, baseball and softball fields, and tennis courts. Adequate space for outdoor physical education classes.

Examples of outside spaces:



PERFORMING ARTS

All schools are required to have a performing arts space.

System	Component	Description	What to Look For
Performing Arts	Environment	The room should provide an inviting/stimulating environment for learning.	**Spatial Configuration (immovable):** Does it support the instructional program? **Lighting:** Appropriate lighting levels? **Acoustics:** Are there impediments to hearing? Is there noise transfer between spaces? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated?
	Size	**ES:** Can be with the cafetorium or gymatorium with a stage. **MS/HS:** The auditorium should have fixed seating for one grade level. HS: three spaces minimum – auditorium plus two of the following: small theater, black box, prop room, practice room, recording studio, etc.	MS/HS performing arts spaces including auditorium, stage, seating, green room, dressing rooms, sound booth, lighting booth, etc. meet instructional space guidelines/standards. **EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The room should be appropriately located for the program.	The performing arts space should be located on the ground floor and acoustically isolated from the quiet spaces. There should be convenient public & after-school access with the means to restrict access to other spaces and easy access to restrooms and water fountains.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program.	The performing arts space should have adequate and appropriate storage, curtain, lighting, sound system, and technology equipment appropriate to the program.

Examples of performing arts spaces:

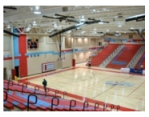


PHYSICAL EDUCATION

All schools are expected to have a P.E. space, with one gym at the ES (can be gymatorium) and MS, and two for HS. If no space exists, all four components should be scored *Unsatisfactory*.

System	Component	Description		What to Look For
P.E.	Environment	The room should provide an inviting/stimulating environment for learning.		**Spatial Configuration (immovable):** Does it support the instructional program? **Lighting:** Appropriate natural light/lighting levels? **Acoustics:** Are there impediments to hearing the teacher? Is there noise transfer between programs? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated? **Flooring MS/HS:** regulation wood gym floor. ES: rubber is Good, wood is Excellent.
	Size	**ES:** Gym	**ES: 3000 SF** **MS: 6000 SF** **HS: 8000 SF**	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
		MS: Competition court, 2 regulation cross-courts, seating for entire ASB. Competition gym Boys/girls lockers 2000 SF each w/private shower facilities Storage/Office 600 SF	**HS:** Competition court, 2 regulation cross courts, seating for entire ASB. Competition and practice gym Weight room; multi-purpose (wrestling/dance/gymnastics) Boys/girls lockers 2000 SF each w/private shower facilities Storage/Office 600 SF, training room, concession stand	
	Location	The room should be appropriately located for the program.		The gymnasium is secured from other parts of the campus for evening and weekend events or for public use purposes. Access to public restrooms.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program.		**Storage:** There should be adequate and appropriate storage. **Fixed Equipment:** Water fountains and fixed equipment (backboards, safety padding, and bleachers down one side as a minimum). Dance rooms should have a wooden floor and mirrored wall.

Examples of physical education spaces:


SAFETY & SECURITY

System	Component	Description	What to Look For
Safety and Security	**Fencing**	The school site should be appropriately fenced.	The school site is appropriately fenced. Entrances and egresses are limited, where appropriate. Preschool/kindergarten playgrounds are fenced separately from other play areas, which should also be completely fenced.
	Signage & Way Finding	Interior and exterior signage should be adequate for the needs of the school.	Adequate signage or graphics direct the public to major spaces (e.g. entrance, office, gym, auditorium, etc.) of the school and grounds. Traffic and parking signs are adequate to direct visitors. All rooms are identified with numbers/signs.
	Ease of Supervision	The building layout and equipment should enhance building supervision.	Supervision is enhanced through proper sightlines, few or no "hiding areas," appropriate interior/exterior lighting, good direct visibility or via security cameras both inside and outside the building. PK/Kindergarten classrooms should be designed to allow supervision of play yards (unless prevented by site shape or size) and all areas of the classroom. Outdoor restrooms having direct outside access are located in areas that are visible from playground and are easily supervised. No easy sight into assembly areas.
	Controlled Entrances	Points of entry should be controlled for student and staff safety.	School design or configuration allows for control of entrances to the school. Public entrances are easily supervised and controlled with a security vestibule. Intercom and buzzer system.

Examples of safety & security:



SELF-CONTAINED SPECIAL EDUCATION

Required space where program exists, score *N/A* if program does not exist. For educational suitability purposes, if some self-contained rooms are located in a portable building, the comment for all four components should include this information and scores lowered based on the percent that are located in portable buildings. If all self-contained rooms are in portables, all components are scored *Unsatisfactory*.

System	Component	Description	What to Look For
Self-Contained Special Ed	**Environment**	The room should provide an inviting/stimulating environment for learning.	**Spatial Configuration (immovable):** Does it support the instructional program? **Lighting:** Appropriate natural light/lighting levels? **Acoustics:** Are there impediments to hearing the teacher? Is there noise transfer between classrooms? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated?
	Size	The room should meet the square footage standards. **1110 SF (ES)** **1200 SF (MS)** **1200 SF (HS)**	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The room should be appropriately located for the program.	The classroom(s) should be shielded from noise-producing activities and located centrally.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program.	**Storage:** Room(s) have adequate permanent casework and teacher and student storage. **Fixed Equipment:** The classrooms should have special needs equipment and technology equipment appropriate to the program. Each room should have a restroom with hot water, and convenient changing area. There should be a washer/dryer in a convenient location.

Examples of self-contained special education classrooms:



SCIENCE LAB

Required space at MS/HS, score all four components *Unsatisfactory* if none exists. For educational suitability purposes, if all the science rooms are located in a portable, all four components should be scored *Unsatisfactory*. The secondary schools should include both classrooms and lab spaces.

System	Component	Description	What to Look For
Science	Environment	The room should provide an inviting/stimulating environment for learning.	**Spatial Configuration (immovable):** Classrooms are flexibly designed to insure full student access to laboratory stations and lecture areas. **Lighting:** Appropriate natural light/lighting levels? **Acoustics:** Are there impediments to hearing the teacher? Is there noise transfer between classrooms? **HVAC/Temperature:** Is there proper ventilation and consistent and adequate climate control? **Aesthetics:** Are the room finishes/equipment worn and/or dated? **Flooring:** There should be wet flooring.
	Size	The room should meet the square footage standards. **1080 SF (If lab only)** **1440 SF (If combination lab-classroom)**	**EXCEL:** 90-100% of the room(s) meet standards **GOOD:** 80-89% of the room(s) meet standards **FAIR:** 65-79% of the room(s) meet standards **POOR:** 50-64% of the room(s) meet standards **UNSAT:** <50% of the room(s) meet standards
	Location	The room should be appropriately located for the program.	The science classroom should be shielded from noise-producing activities or functions.
	Storage/Fixed Equip	The room should have adequate storage space and fixed equipment appropriate to the program.	**Storage:** Space for teaching materials and adequate permanent casework. There should be separate secured storage areas area provided for volatile, flammable, and corrosive chemicals and cleaning agents. **Fixed Equipment:** There should be a science classroom with wet flooring, appropriate science storage and extra sinks as well as safety equipment (FE, shower, eyewash) and supplies. A separate room for storage and prep area. Fume hoods in 50% of the rooms, water and gas in all spaces, chemical storage, prep room. Maximum of 24 workstations. One ADA workstation.

Examples of science classrooms & labs



TECHNOLOGY READINESS

Standard: wireless capability throughout the school, fiber access to each school, telephones to each instructional space, and four hardwire connections to each classroom.

System	Component	Description	What to Look For
Technology Readiness	Comm./IT Environment	Communications and IT equipment should be in a climate-controlled environment that is secure and accessible.	Equipment is located in a place designed for Comm/IT equipment. Space is properly climate-controlled, secure, easily accessed. The area has adequate storage, utilities, and fixed equipment and is free of clutter.
	Electrical Power	Sufficient electrical power to provide for each student and staff operation of multiple devices.	No power strips, no extension cords, no plug-in outlet extenders. Check for microwave, coffee pots, refrigerators, etc. Check for breaker tripping.
	Cooling	Classrooms and computer lab computers should be in a climate-controlled environment.	Each CR or computer lab has sufficient HVAC capacity for the equipment present. Is the HVAC zoned separately to keep servers in a ventilated and humidity-controlled environment?
	Network Connectivity	All schools should be connected to the Local Area Network. There should be adequate network access to provide for ubiquitous wireless in all instructional spaces. Each area (CR, media center, computer lab and support area) has adequate network access for computers and applicable instructional technology devices through either network drops or dense wireless	If Network connection is not fiber based, connectivity should score some or disagree.
	Network Performance	Network should allow for educational, administrative, and operational programs to run in a fashion that does not impede teacher, students, and staff from performing their daily functions and responsibilities.	Internet connectivity is available and reliable. If network performance is an issue, Comment item and the Project manager will check with district Technology Director to identify potential causes.
	Video Distribution	All schools should have capability to stream live internet feeds or other video sources without disruption to other network functions.	There should be a projection device in each classroom.

	Voice Distribution	All schools should have the capability to direct contact each classroom, support, and office spaces. Capability to have building-wide paging and announcements. Voicemail capabilities for staff.	Paging should be heard in all spaces; inside the building and parking lot areas and bus drop off area, and playgrounds and fields. Faculty and Staff have voicemail access.
	Faculty/Staff	Faculty and Staff: All staff should have fixed equipment.	Faculty stations have hardwired connections and sufficient electrical power to run computers and multimedia equipment in classrooms. Staff stations have appropriately located computer drops and electrical outlets

BASYS ORDER TOC

This table of contents is as each component listed in BASYS-order but with the Guide page number for handy reference.