MASTER PLAN EXTENSION UDATE

NEEDHAM, MASSACHUSETTS

MARCH 20, 2023


DORE + WHITTIER

EXECUTIVE SUMMARY

INTRODUCTION & BACKGROUND

In November 2020, Dore + Whittier Architects (D+W) completed a master plan study of the district's elementary and middle schools that included a comprehensive facility assessment, a capacity analysis of each building, and an in-depth study of the enrollment projections provided by the district.

In August 2021, D+W responded to the Town of Needham's request of the Town of Needham to revisit the master plan options that had been developed in the 2020 study to determine if the costs of the options were more feasible if the timelines were extended. Additionally, the District requested the development of an additional "Status Quo" option that placed an addition onto the Eliot School and reduced the size of the Mitchell School from five sections per grade to four sections. This option is referred to as 'Option E'.

This Master Plan Extension Study began in late August 2021 with the following goals:

- Resolve the capacity and facility issues at the Mitchell School
- Resolve the capacity issues of the elementary schools across the district
- Resolve the facility issues at the Pollard School
- Resolve the capacity issues at the High Rock School
- Lower the upfront financial investment of the Town by extending the timeline between building projects

Due to unprecedented cost escalation in 2022, D+W was asked in November 2022 to revisit the costs associated with the final four Master Plan Options. According to PM+C (D+W's cost estimating consultant) 2022 had seen an escalation of 15%, as compared to 2020 at 0% and 2021 at 5%. Projections for years 2023 and 2024 are 5% and 4% respectively, followed by a return to more common projections of 3% in 2025 through 2027. Following a review of these amounts with the district, it was determined that projects scheduled to bid prior to 2030 would receive an increase in escalation from 4.5% per year (previously projected) to 6% per year. Projects bidding after 2030 would continue to maintain the conservative 4.5% per year escalation costs. Each of the four options received this increase and the revised estimated total project cost are reflected in this updated executive summary. As part of this update, the final four options have been added to this Executive Summary.

Please note that the Massachusetts School Building Authority (MSBA) is referenced as a possible partner in several of the Master Plan Options. MSBA participation is at their discretion and granted only if the district is accepted into the Program following the submission of a Statement of Interest (SOI). The level of MSBA funding is determined following acceptance, and completion of the Feasibility Study with the signing of the Project Funding Agreement (PFA). It is not possible to determine the level or percentage of participation that will be granted prior to the PFA as many factors weigh into this calculation. Additionally, in signing the PFA the Town must demonstrate to the MSBA that they have the funding in place to support the entire project independent of the MSBA's participation.

Note: The full School Master Plan report, and all subsequent presentations to the PPBC, School Committee, Select Board and Finance Committee have been posted on the School Department website:
https://www.needham.k12.ma.us/departments/business__operations/facilities/master_planning

THE REPORT

This report reflects the work, data, and analysis that led to the development of multiple scenarios to resolve key issues that were identified through our research. The report is broken into four sections:

Section I – Executive Summary: This section provides an overview of the work, findings, and options that are found in greater detail in the subsequent sections of this report.

Section II – Facility Conditions Overview: This section provides an overview of the work that was studied in the 2020 Master Plan as it pertains to the four facilities included in the study.

Section III - Analysis & Programming: This section includes the review of updated enrollment projections, the facility capacity, and space needs for the four buildings included in this study. The analysis of enrollment, space needs, and the educational program analysis informed the development of the master plan options.

Section IV - Master Plan Options and Timelines: This section provides the master plan options that were developed and studied as well as timelines to completion of the master plan and the cost associated with each option.

OVERVIEW OF THE DISTRICT'S ELEMENTARY AND MIDDLE SCHOOLS

The following information was developed as part of the original report and were not updated in November 2022 or in March 2023. It was assumed that the enrollment projections had remained consistent with the information noted below. However, an updated demographic report dated January 2023 by Dr. McKibben (see attached) indicates the under the "best scenario" the student enrollment in grades K-8 exceeds those previously projected. The report indicates that 3,880 students are projected for K-8 in the 2023-24 school year. Which is slightly more than originally projected but that the number will reach 3,964 by 2030-31 school year which is earlier and greater than the previous projections.

The Needham Public School District currently serves approximately 3,775 students in grades K - 8 and is projected to reach 3,831 students by the 2023-24 school year. This number will remain relatively steady for several years prior to climbing again in 2032-33 and peaking at 3881 students in the school year 2034-35. These enrollments do not include the PK grade level or account for a universal PK enrollment.
Five elementary schools serve the district's 2,497 K-5 students. These schools vary considerably in enrollment size, sections per grade, and age of facility. The newest school, the Sunita L. Williams School, opened in September 2019 and replaced the aging Hillside School. The oldest elementary school in the district is the Mitchell School which was constructed in 1949. Additions to the building were added in 1958 and 1968 and modular classrooms were added in 2014 and in 2019. The Mitchell School is a four section per grade school that currently serves 449 students.

The High Rock School and Pollard School serve the district's 1,278 grade 6-8 students. The High Rock School, originally an elementary school, underwent renovations and opened as a grade 6 school in 2009 to address the overcrowding that was occurring at the Pollard Middle School. There are 449 students at the High Rock School. The Pollard School was constructed in 1956 and additions were added in 1958, 1968, and 1992. Modular classrooms were added to the building in 2002. The Pollard School serves grades 7 and 8 and has a current enrollment of 829 students.

DOCUMENTS AND DATA GATHERING FOR THIS REPORT

The Analysis and Programming section of this report includes updated enrollment and district wide capacity analysis based on the November 2021 DRAFT enrollment projections developed by McKibben Demographics Research using the actual enrollments in October 2021. Facility space needs were based on the current (2021) educational programs of the elementary and middle schools.

D+W used the following method to develop this report:

A. Data gathering and review of previous studies
B. Analysis and Programming of updated enrollment and educational programs
C. Development of Master Plan Scenarios
D. Development of Timeline to Completion of Master Plan Scenarios

A working group was developed to assist D+W throughout the course of this study. Public presentations include the School Committee, the PPBC, and the families and staff of Mitchell, Pollard and High Rock Schools. Copies of these presentations have been included in the appendix of this report and can be viewed on the various websites of each of the committees.

FACILITY CONDITIONS SUMMARY

The Facility Assessment Reports were developed by the architectural and consultant teams in 2019. Copies of those reports for the Mitchell, Eliot, High Rock and Pollard School have been included in this report in Section II. These assessments were not updated for this report. It is important to note that these assessments were made prior to the COVID 19 pandemic and do not reflect any recommendations or requirements associated with COVID 19.

The Capital Improvement Plan (CIP) spreadsheets included in Section II were developed in 2019 and were not updated for this report. These spreadsheets provide cost estimates for the specific issues identified as in need of repair or replacement at the time of the assessments. Capital improvement costs for each facility were identified and estimated in June 2020 and have not been escalated to current day or to any future date. These costs are developed based on an approximate quantity or area of repair. Estimates were prepared for budgetary purposes only and are preliminary in nature based on recent bid history and area calculations. The Capital Improvement Plan (CIP) spreadsheet reflects the cost of the work, designer pricing contingency (15%), and soft cost (25%) to arrive at an estimated project cost. Further refinement of costs will need to be evaluated as the scope of work is developed further. The CIP spreadsheet does not consider bundled scopes of work (ie. the installation of sprinklers with the replacement of ceiling tile systems) which could add to potential cost savings. Cost estimates also assume that the work is placed out to bid. Use of building maintenance staff to address certain maintenance items (that are within the limits of MGL) could result in significant offsets to the costs identified.

In reviewing the Capital Improvement costs for each facility, it is important to note that investments in the facility that exceed either a percentage of the value of the building or a percentage of the gross square feet of the building may trigger other code related work such as seismic, accessibility, and fire protection upgrades that were outside of the original scope of improvement. The Master Plan Timelines shown in Section IV of this report note the maximum capital improvement dollars (CIP) that can be spent in a three-year period based on the current value of the facility. As the value of the facility is adjusted regularly, the maximum allowable capital expense must also be adjusted. Per this updated study the fair market value

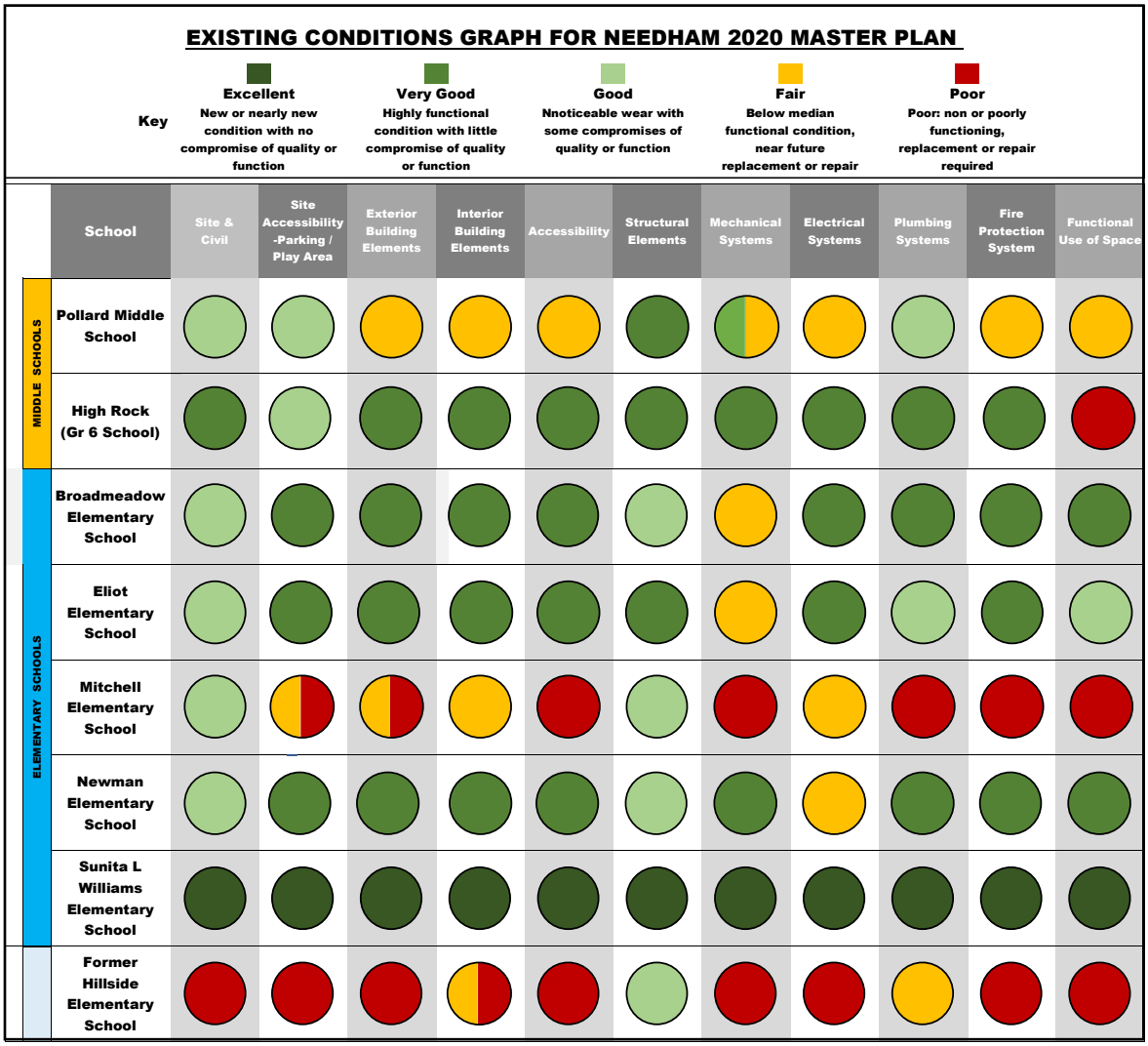
of the Pollard Middle School was noted as $20,421,500 and the Mitchell School was noted as $8,215,200 thus limiting the capital improvements to $5.7m and $1.8m respectively over a three-year period.

FACILITIES OVERVIEW

The following chart is a summary of the facility assessment needs for each school. The categories of assessment are (from left to right) Site & Civil, Site Accessibility / Parking / Play Areas, Exterior Building Elements (doors, windows, walls, roof, etc.), Interior Building Elements (floors, ceilings, walls, doors, etc.), Interior Accessibility, Structural Elements, Mechanical Systems, Electrical Systems, Plumbing Systems, Fire Protection, and the Functional Use of the Building, which reflects how well the building serves the educational program. Elements that performed poorly or are in the greatest need for repair or replacement are shown in red; yellow is fair condition – not an immediate need but generally will need replacement in the near future. The lightest green notes systems in good condition, medium green indicates very good condition, and the dark green is excellent or new condition. A quick view of the chart shows that the former Hillside School facility performed at the lowest level in almost every category. The purpose of including this facility in the study was to assess its potential use as swing space during the renovation of other school facilities. The facility is currently in use as a temporary police and fire station while those facilities are under construction. Research conducted as part of this study indicated that the facility was converted to Business Use, a lower risk category than School, and thereby not requiring the upgrade to a fully sprinklered facility. Should this building be considered for school swing space it would require a re-classification as a School, which would trigger full compliance with the building code for schools resulting in: upgrades to the structural system for seismic, wind and snow loads, the installation of a sprinkler system throughout the facility, installation of a code compliant fire alarm system, upgraded electrical service, new ventilation system, energy code compliant plumbing fixtures and the upgrade of the entire building to meet ADA / MAAB including the installation of a three stop elevator to service all areas of the building. A letter dated December 13, 2019, from our office to Mr. Steven Popper outlining these issues is included in the Appendix of this report.

Excluding the former Hillside School, the Mitchell School facility has been identified as the facility with the most needs, followed by the Pollard School. All other facilities are in good condition with isolated needs such as mechanical or electrical systems. The column on the far right of the chart identifies how well the facility is serving the educational program. This is equally important when we begin to address master planning needs. It indicates that, aside from the Mitchell School, the only other school that is doing poorly in this category is the High Rock School. In general, this is due to overcrowding. The High Rock School serves approximately 449 students in Grade 6 and is limited in its ability to provide appropriate special education teaching spaces and spaces for specials among other program deficits. More information regarding the educational program deficits for this school is listed below and in Section III of this report.

Per this December 2022 updated report, the Hillside School facility has been renovated for temporary use by the school administration while the Emory Grover building undergoes renovations. Renovation included the installation of a fully automatic fire suppression system (sprinklers), the replacement of one of the boilers, and the replacement of all of the AC units. The facility use has been converted to "Business Use" and would require significant code upgrades to revert back to "Educational Use".



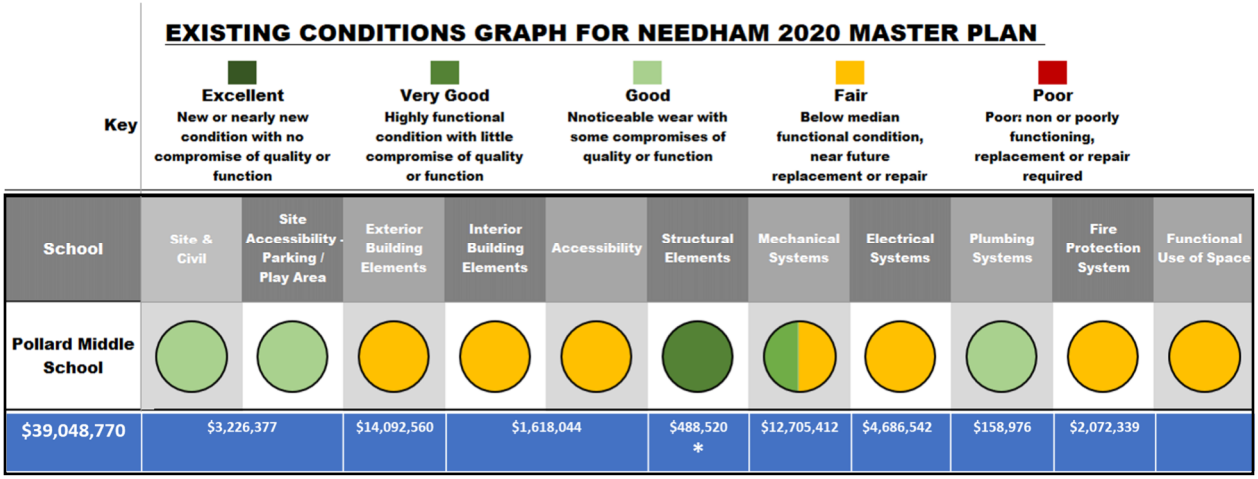
MIDDLE SCHOOLS

Pollard Middle School

Based on the Massachusetts School Building Authority (MSBA) guidelines for a middle school, the Pollard Middle School has adequate gross square footage for its population. However, there are many undersized classrooms, inadequate teacher planning, administration, or meeting spaces, insufficient space for special education, and antiquated science labs. The modular classroom building is fully occupied but the modular classroom building has exceeded its useful life and is in need of replacement.

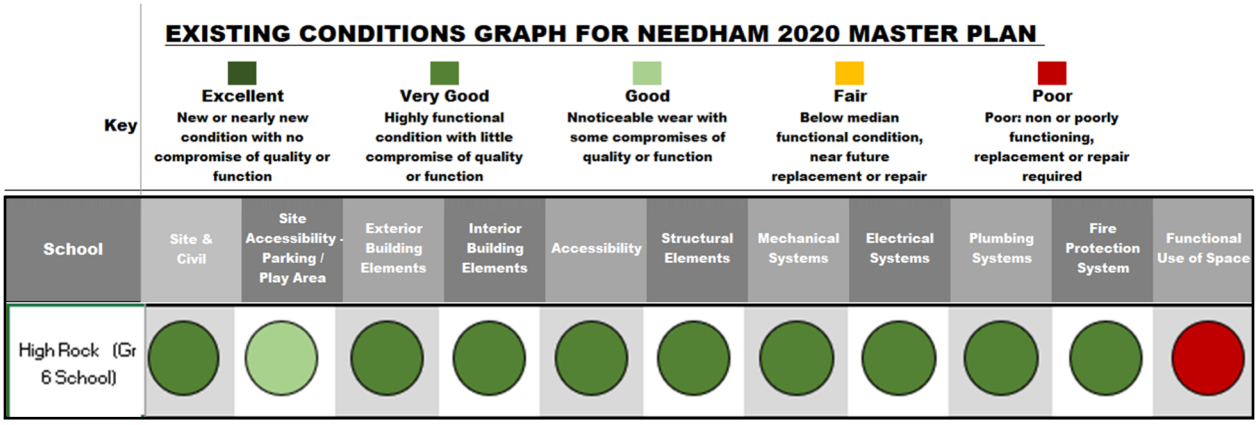
The school was constructed in 1956 and had a significant renovation in 1996. Overall, the building is in fair condition and in need of upgrades to the building envelope, mechanical system, and electrical system. Heating and cooling the building consistently is difficult given the age of the equipment, the fluctuation of gas pressure being delivered to the boilers, and the lack of a proper thermal envelope. There are several areas throughout the building that do not meet current ADA / MAAB requirements including stair railings, door push / pull clearances and equal accessibility to all spaces. Finally, the building is only partially sprinklered. Any upgrades to the facility may trigger the need to provide a fully automated fire suppression system throughout the entire building. The cost of this work may trigger other code upgrades including seismically clipping interior walls, a cost that is not anticipated in the CIP scope. The project

cost estimate for the identified facility needs was estimated in June 2020 to be approximately $40,000,000 over the next ten years (without escalation). Upgrades to the facility need to be carefully planned as to not trigger additional whole facility renovations.



High Rock Grade 6 School

By comparison the High Rock school has far fewer capital needs. The addition and renovations in 2009 provided a fully sprinklered building and brought the building into compliance with accessibility requirements. Aside from on-going maintenance and small repairs, the facility does not require any major capital investments in the immediate future. However, the educational program needs would suggest that a major classroom addition is needed to serve the current and future Grade 6 enrollment. This is further discussed in the 'Analysis and Programming' section of this report.



ELEMENTARY SCHOOLS

Overall, the elementary schools, with the exception of the Mitchell School, are in very good condition. The extensive renovations / additions to Broadmeadow Elementary School in 2003, the Newman School in 2012, the replacement of the Eliot School in 2001, and the new Sunita L. Williams School are clear examples of the community's commitment to their school facilities.

Mitchell School

Despite the ongoing efforts to maintain the Mitchell Elementary School facility, many systems are beyond their useful life and require replacement. The original building was constructed in 1948, with additions in '58 and '68. Many of the building systems are original. Upgrades to the facility, while occupied are difficult as any renovation will likely trigger code required upgrades to the entire facility including the addition of sprinklers, full compliance with handicap accessibility, and structural upgrades to meet current seismic code requirements; a cost that is not anticipated in the CIP scope. The project cost estimate for the identified facility needs was estimated in June 2020 to be approximately $25,000,000 over the next ten years (without escalation). Upgrades to the facility need to be carefully planned in three-year increments as to not trigger additional whole facility renovations. Additionally, the facility lacks the space needed to provide equitable educational programs to the current population. Six modular classrooms have been added to the site to serve the full day kindergarten program and provide space for art and music instruction.

EXISTING CONDITIONS GRAPH FOR NEEDHAM 2020 MASTER PLAN

Key	Excellent	Very Good	Good	Fair	Poor
	New or nearly new condition with no compromise of quality or function	Highly functional condition with little compromise of quality or function	Nnoticeable wear with some compromises of quality or function	Below median functional condition, near future replacement or repair	Poor: non or poorly functioning, replacement or repair required

School	Site & Civil	Site Accessibility - Parking / Play Area	Exterior Building Elements	Interior Building Elements	Accessibility	Structural Elements	Mechanical Systems	Electrical Systems	Plumbing Systems	Fire Protection System	Functional Use of Space
Mitchell Elementary School											
$24,801,107	$1,338,387		$5,504,357	$1,831,496		Included *	$10,528,158	$3,076,073	$1,778,267	$744,369	

ANALYSIS & PROGRAMMING SUMMARY

D+W performed a review and analysis of the DRAFT 2021 enrollment forecast produced by McKibben Demographics. This analysis was used to identify how many general classrooms and teaching stations would be necessary at both the elementary and middle school levels to maintain class sizes within the district's guidelines. The McKibben forecast included four separate forecasts: 2020 Best Covid Forecast, 2020 Best NO Covid Forecast, 2020 High No Covid Forecast, and 2021 Best No Covid Forecast. The 2021 Best No Covid Forecast numbers were used for this analysis. However, all forecasts were included in the graphs below. The details of this analysis can be found in Section III of this report. The bullets below highlight the key findings from these analyses.

Enrollment Forecast:

- Following a slight decrease, the elementary (K-5) population is expected to steadily increase from 2,497 students in 2021/22 to a peak of 2,539 students in the school year 2032/33.

- The middle school grade population (6^{th}-8^{th}) is expected to experience an increase in the near future from 1278 students in 2021/22 to 1374 students in the year 2024/25 and then fluctuate over the course of the following years, settling around 1,363 students in the school year 2035/36.

Space Needs Analysis for Elementary Schools (grades K-5):

- There are five existing elementary schools in the district which contain a total of 120 general education classrooms: not including the six modular classrooms at the Mitchell School.

- In order to remain within the district's guidelines for students per classroom, the District needs a minimum of 126 K-5 classrooms. Ideally, 132 general classrooms should be provided to allow equity among the elementary school programs.

Space Needs Analysis for Middle Schools (grades 6-8):

- There are two schools that serve grades 6-8 with a total of 86 general classrooms; not including the modular classrooms located at the Pollard School.

- A minimum of 101 general classrooms are needed at this grade level.

- The existing High Rock School contains a total of 25 teaching stations. In order to maintain an average class size of 22 students per teaching station at this grade level, the building requires at least 31 teaching stations at the school's current utilization rate of 71%.

- High Rock School also has spatial deficiencies related to special education spaces, an undersized cafeteria, and an undersized gymnasium. D+W did not explore ways to address the deficiencies associated with the gymnasium or cafeteria but recommend that if a classroom addition is considered for this Grade 6 school, the addition should contain approximately 10 spaces to address both the teaching station and special education needs.

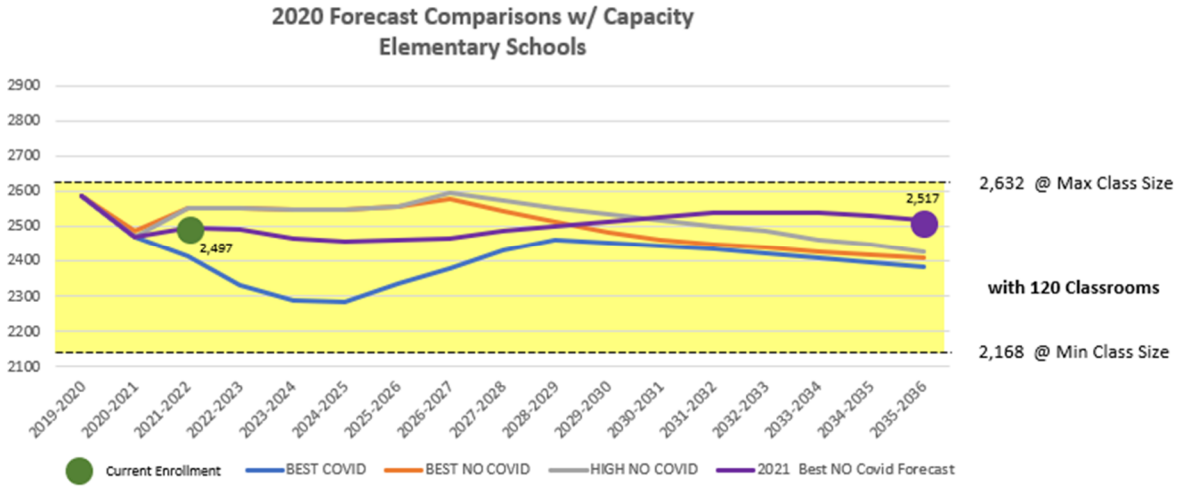
- The existing Pollard Middle School has 61 existing teaching stations. The ten existing modular classrooms are excluded from this count.

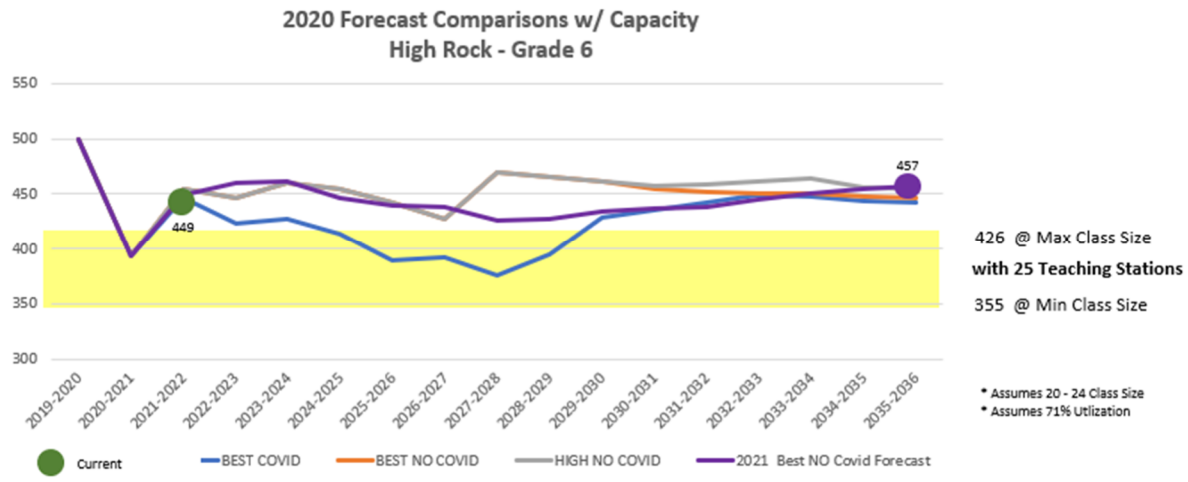
- Should Pollard Middle School continue to serve only grades 7th & 8th, it appears the existing 61 teaching stations are enough to serve the enrollment forecast assuming the school adjusts its daily schedule to utilize space slightly more efficiently, similar to the daily schedule used at High Rock.

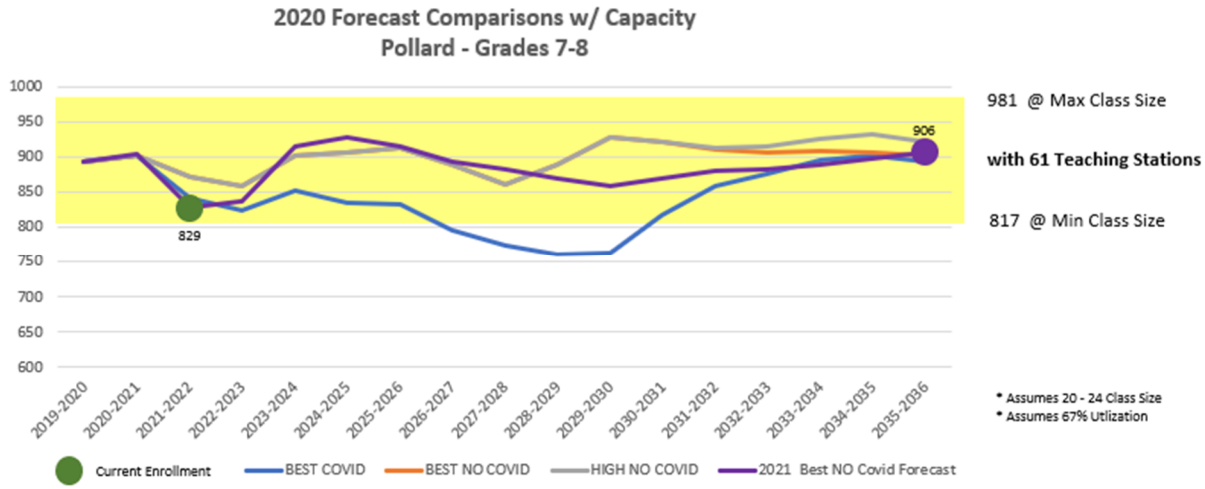
- Should the Pollard Middle School serve grades 6th-8th, the analysis suggests a need for 101 total teaching stations based on the current enrollment projections.

Capacity Analysis:

The yellow band in the Capacity Analysis graphs below indicates the capacity of students at both the minimum and maximum class size. The charted graph lines indicate the 2020 enrollment projections. The purple line noted "2021 Best NO Covid Forecast" has been used as the basis for the analysis in this report. The elementary school graph below indicates that the district is currently operating near maximum class size across the district. Providing the additional six to twelve classrooms noted would allow class sizes to be reduced and provide additional spaces for foreign language, extended learning, and technology / maker space opportunities. At the High Rock School we see the impact of not having enough general classrooms to meet the current or future enrollment needs for the grade 6 population. The Pollard School graph indicates that there is currently enough space for all the students based on the current schedule. However, the number of classrooms limits the expansion of the educational program without increasing the number of students per classroom.







MASTER PLAN SCENARIOS

As part of the 2020 Master Plan Study, D+W explored several master plan scenarios to address the findings of the facility needs assessment, enrollment and space needs analysis, and the capacity analysis:

- Mitchell Elementary School possesses the greatest facility and spatial needs of all the schools in the district's inventory,
- Additional classrooms are needed at the elementary school level,
- High Rock School is in good condition but needs additional classrooms to serve the grade 6 population and program needs,
- Pollard exhibits the second greatest facility needs and may possess some capacity needs depending on the school scheduling methodology and educational programs.

The scenarios explored included the "Status Quo" option that explored keeping the grade configuration as is (K-5; 6; 7-8; 9-12) and renovating, adding on, or building a new facility on the existing sites to address the specific needs at each of the schools. All other options explored a grade configuration changes to address the needs at each of the schools and across the district. These scenarios included moving grade 6 to the Pollard site to create a 6-8 middle school and moving grade five into the middle school model for two 5-8 schools. Each scenario was explored by calculating the size of each potential project (component of the scenario) and testing its feasibility on the existing site as either a renovation, renovation/addition, or new construction project depending on the specifics of the project. Based on these explorations, three scenarios were eliminated from consideration: the Super School, the Two 5-8 Middle Schools, and the One 5-8 Middle School.

Master Plan Scenarios Being Explored: Major Project Required

	Status Quo Pk, K-5th, 6th,7th-8th	**Discontinue High Rock** 5ES & MS Pk, K-5th, 6th-8th	**High Rock As ES** 6ES & MS Pk, K-5th, 6th-8th	**Two 6-8 Middle Schools** 5ES & 2MS Pk, K-5th, 6th-8th	**One 5-8 Middle School** 5ES & MS Pk, K-4th, 5th-8th	**Two 5-8 Middle Schools** 5ES & 2 MS Pk, K-4th, 5th-8th	**Super School** 5ES* & MS Pk, K-5th, 6th-8th
Broadmeadow	K-5th Remains	K-5th Remains	K-5th Remains	K-5th Remains	K-4th Remains	K-4th Remains	K-5th Remains
Eliot	K-5th Remains	K-5th Remains	K-5th Remains	K-5th Remains	K-4th Remains	K-4th Remains	K-5th Remains
Mitchell	**K-5th New ES (5 sections)**	**K-5th New ES (5 sections)**	**K-5th New ES (3 sections)**	**K-5th New ES (7 sections)**	**K-4th New ES (4 sections)**	**K-4th New ES (3 sections)**	**Discontinued**
Newman	PK, K-5th Remains	PK, K-5th Remains	PK, K-5th Remains	**6th-8th MS Reno**	PK, K-4th Remains	**5th-8th Reno/Add**	PK, K-5th Remains
Williams	K-5th Remains	K-5th Remains	K-5th Remains	K-5th Remains	K-4th Remains	K-4th Remains	K-5th Remains
High Rock	**6th Only Addition**	**Repurposed TBD**	**Repurposed for ES**	**Repurposed for ES**	**Repurposed TBD**	**Repurposed K-4th**	**Repurposed TBD**
Pollard	**7th-8th Reno/Add or New**	**6th-8th Reno/Add or New**	**6th-8th Reno/Add or New**	**6th-8th Reno or New**	**5th-8th Reno/Add or New**	**5th-8th Reno or New**	**K-5th & 6th-8th Reno/Add or New**

The four remaining scenarios identified for the district to consider are noted below. The scenarios were then cost estimated and sequenced on a timeline to determine the escalation to the mid-point of construction for each of the facilities. A description of each of the four scenarios and the June 2020 cost estimates are shown in the following table.

- **Status Quo** – Perform the work necessary to address each of the identified needs without changing the grade configuration or the number of elementary schools. Essentially address the Mitchell needs at Mitchell, address the High Rock needs at High Rock, address the Pollard needs at Pollard.

- **Discontinue High Rock** – Relocate 6th grade to be housed with grades 7th and 8th grade at the Pollard site. Use the vacant High Rock School as swing space for a Mitchell project sized to address all the capacity needs across the elementary schools, then discontinue High Rock for educational

use. Essentially address the High Rock and Pollard needs at Pollard. Address the Mitchell needs at Mitchell with a five section per grade project.

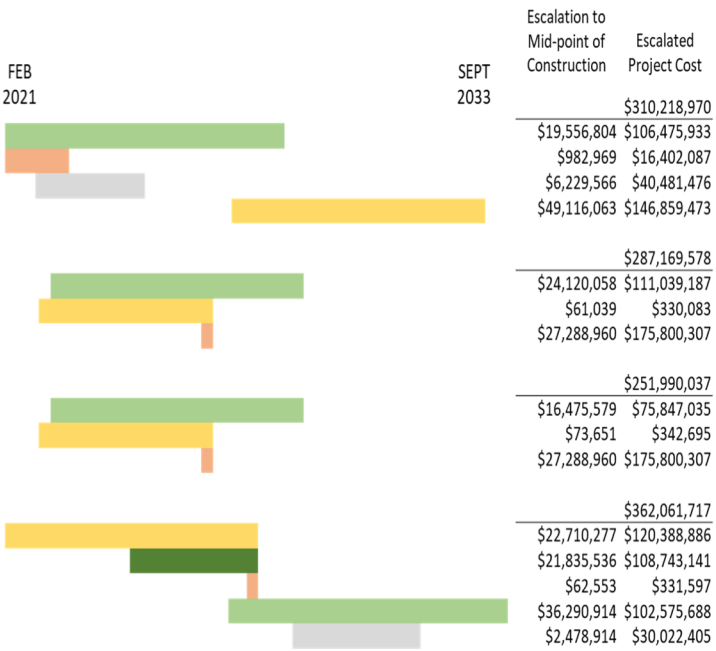
- **High Rock as Elementary School** – Relocate 6th grade to be housed with grades 7th and 8th at the Pollard site. Use the vacant High Rock School as swing space for a Mitchell project, sized only for three sections per grade and then allow High Rock to serve as a permanent elementary school to address some of the capacity needs at the other elementary schools. Essentially address the High Rock and Pollard needs at Pollard, and address the Mitchell needs at Mitchell with a three section per grade project.

- **Two 5th-8th Middle Schools** - Relocate 5th and 6th grade to be housed with grades 7th and 8th at both the Pollard and Newman sites. Newman requires an addition. Reconfigure elementary schools to be K-4th with the Pre-K incorporated into the Mitchell project. Repurpose the High Rock School as an elementary school to partially replace Newman as an elementary school. Essentially, address the High Rock and Pollard needs with projects at Pollard and Newman (addressing these needs in two projects limits the number of students on the Pollard campus.) Address Mitchell needs at Mitchell.

The table below summarizes the individual component cost estimates for each of these four scenarios, the sequence of each project's timeline, and the estimated overall total escalated project cost of each scenario.

Scenario Comparisons

	Project Cost in 2020 Dollars	Escalation to Mid-point of Construction	Escalated Project Cost
Status Quo Scenario	**$234,333,567**		$310,218,970
New 5 Section School @ Mitchell ES Site	**$86,919,129**	$19,556,804	$106,475,933
Addition @ High Rock	**$15,419,118**	$982,969	$16,402,087
Two Story ES School Modular Swing Space Project @ Defazio Park	**$34,251,910**	$6,229,566	$40,481,476
7th-8th Reno/Add @ Pollard	**$97,743,409**	$49,116,063	$146,859,473
Discontinue High Rock Scenario	**$235,699,520**		$287,169,578
New 5 Section School @ Mitchell ES Site	**$86,919,129**	$24,120,058	$111,039,187
ES @ High Rock	**$269,044**	$61,039	$330,083
6th-8th Reno/Add @ Pollard	**$148,511,347**	$27,288,960	$175,800,307
High Rock As ES	**$208,151,847**		$251,990,037
New 3 Section School @ Mitchell ES Site	**$59,371,456**	$16,475,579	$75,847,035
ES @ High Rock	**$269,044**	$73,651	$342,695
6th-8th Reno/Add @ Pollard	**$148,511,347**	$27,288,960	$175,800,307
Two 5th-8th MS Scenario	**$278,683,524**		$362,061,717
5th-8th Reno/Add @ Pollard	**$97,678,609**	$22,710,277	$120,388,886
5th-8th Reno/Add @ Newman	**$86,907,605**	$21,835,536	$108,743,141
ES @ High Rock	**$269,044**	$62,553	$331,597
New 3 Section + PK School @ Mitchell ES Site	**$66,284,774**	$36,290,914	$102,575,688
Single Story ES School Modular Swing Space Project @ Defazio Park	**$27,543,491**	$2,478,914	$30,022,405

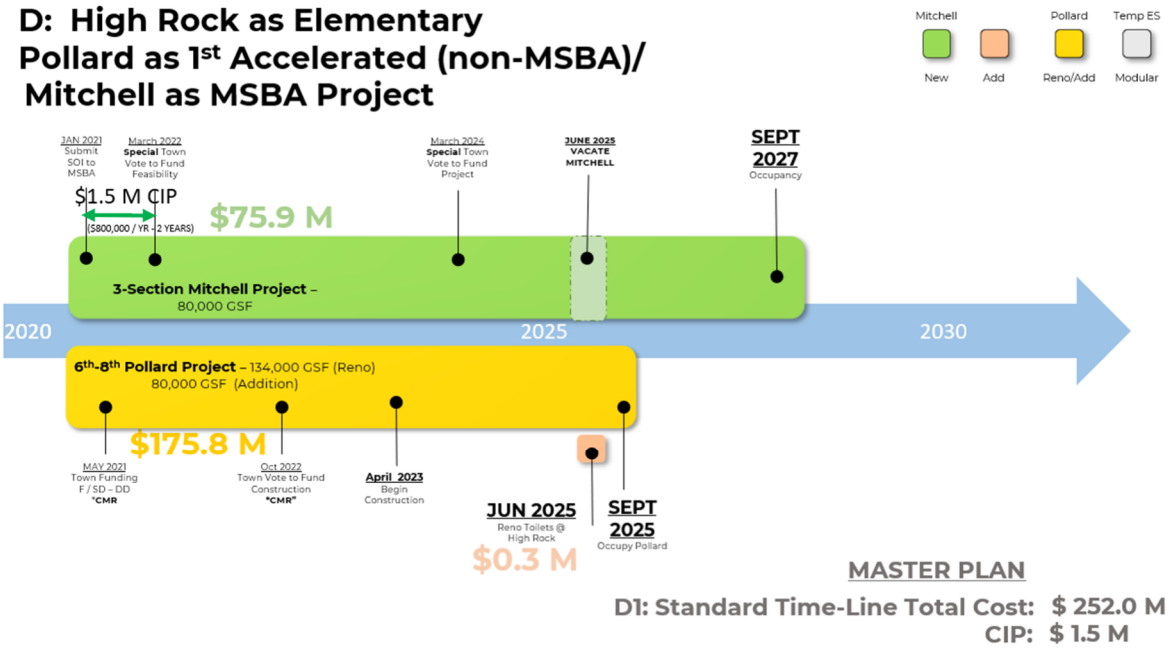


Note: These pre-pandemic costs noted above are based upon June 2020 cost estimates, with projects starting in February 2021.

It is important to note that all four scenarios noted for consideration require at least two projects to be in process concurrently. Some scenarios could be sequenced differently to limit the concurrency of projects in an effort to reduce the financial commitment of the Town at any one time, but doing so may result in a longer time to completion, greater escalation costs, and an increase to the overall project costs. Based on the scenarios presented, the High Rock School as an elementary school which includes an addition and renovation to the Pollard School has both the shortest time to completion and is the most cost-effective solution. This scenario also presents the best use of the Town's current assets.

The purpose of this 2022 Master Plan Study (January 2022) is to review the cost and time to completion of the above scenarios if they did not have concurrent projects. For the purposes of this study, the above project cost estimates associated with the renovations, additions, and new construction were used and escalated to the mid-point of construction based on the updated project timelines. The two 5-8 middle school scenario was removed from further study. However, an additional "status quo" option was added, Option E, which included additions at the Pollard and High Rock School to resolve the middle school facility and capacity issues, a new four section per grade school at the Mitchell School site, and the addition of six classrooms at the Eliot School to provide the minimum 126 classrooms at the elementary school grade level. Since the Eliot School addition had not been previously estimated a similar cost per square foot was used for the construction cost but the cost of the site work would need to be in addition to the cost noted in the updated master plan options.

In the 2020 study "Option D" was noted as the preferred option as it provided the shortest time to completion and had the lowest overall cost. It is important to note that in this option the Town would need to fund the Pollard School additions and renovations as it is unlikely that the MSBA would participate in two projects at the same time.



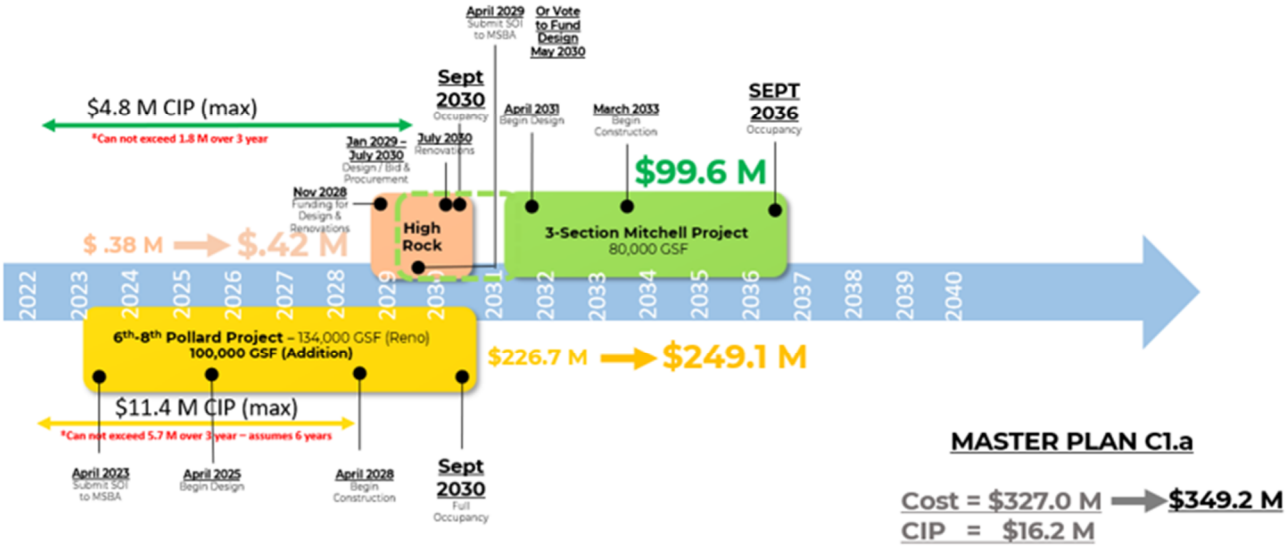
The 2020 timeline options assumed a submission of a Statement of Interest (SOI) to the MSBA in 2021. The revised timelines (below) were developed in January of 2022 and moved this SOI submission date or project start date to April 2023. The updated timelines include the new Option E as part of the January 2022 update to the study. These timeline options are noted with an "a" to avoid confusion with the timelines included in the original study. As part of this most recent revision (November / December 2022) the costs noted in the January 2022 timelines have been revised to reflect the increased escalation through 2030. It is important to note that any delay in the start of any of the projects will have an impact on the option timelines and the costs of the projects.

The timeline options can be divided into two major categories. First, the "Status Quo Options" (A and E), which provide a new school on the Mitchell School site, additions and renovations to Pollard and High Rock Schools and, in Option E only, an addition to the Eliot School. These are considered 'status quo' as there is no change to the current grade configuration (grade 6 remains an independent school).

The second category creates a sixth elementary school at the High Rock School and Grade 6 students are moved to the Pollard Middle School. In Option C the timeline is stretched out so that the design of the new Mitchell School project is not started until the completion of the MSBA Pollard School project. In option D the Pollard School is not an MSBA project and the design for the new Mitchell School is scheduled to start as soon as the existing Mitchell School is vacated.

Currently, March 2023, "Option C" has become the preferred option as it allows the district to spread the cost of the projects out over time. For financial reasons the Town would like to submit an SOI to the MSBA for the Pollard School to help off-set the cost of project. The updated Master Plan Timelines (outlined on the following pages) indicate the time difference between C1a and D1a for the Mitchell School students to move into a new school is one year.

C1a. Pollard as 1st Project (MSBA) 6-8 School / High Rock as Elementary/ Mitchell as 2nd Project (MSBA)



MASTER PLAN OPTIONS TIMELINES

Aa: Status Quo

District Wide Grade Configuration: PK, K-5th, 6th, 7th – 8th
Estimated Total Option Cost: $234.3 M (6/2020): $391.3 M (1/2022) : $406.2 M (11/2022)

The Status Quo scenario maintains both the current grade configuration and the number of elementary schools. It explores what would be required to meet the spatial needs and accommodate the enrollment forecast by executing projects at each site where spatial deficiencies exist. Based on the enrollment and capacity analysis presented earlier in this report, three major projects would be required.

1. The Mitchell School: a new school would be built on the existing Mitchell School site. The school would include 30 general classrooms creating a five-section school which will meet the district's need for 126 general classrooms at the elementary level. Since a new school cannot be constructed on site while the current school is occupied this option includes the cost of constructing a temporary school.

2. The High Rock School: continues to serve grade 6 students from across the district. Based on the capacity and program needs nine additional classrooms will be added to the existing building and additions and renovations will be needed in other areas of the existing building to serve the enrollment forecast. As the additions and renovations would be made while the students are occupying this school additional phasing cost and time have been included in this option.

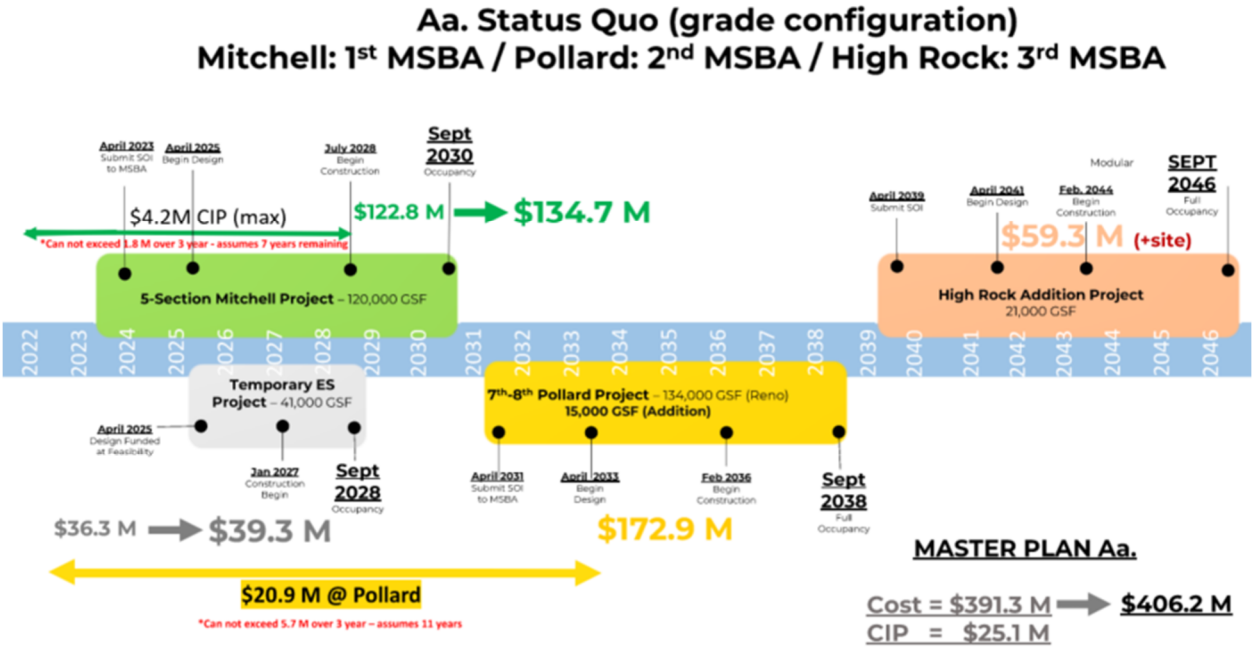
3. The Pollard School: additions and renovations will be made at the middle school based on the enrollment forecast and program needs. The study identified the need for 67 teaching stations to serve the grade 7 and 8 student population. The building addition would replace the existing modular classrooms that have reached the end of their useful life. As the additions and renovations would be made while the students are occupying this school additional phasing cost and time have been included in this option.

The sequencing of this scenario assumes that a Mitchell Elementary School project is identified as the district's priority project for the MSBA's grant program since it has the greatest physical and spatial needs. Due to the project size and site constraints of the Mitchell site, a temporary elementary school is necessary to serve as swing space during the construction of the Mitchell project. The temporary school must be completed prior to the start of construction on the Mitchell School site. Once the Mitchell School is complete the district can begin the submission process to the MSBA for the Pollard School which is then followed by the High Rock School additions and renovations.

The capital improvements necessary to maintain a working Mitchell School and those needed to maintain the operations of the Pollard School until the start of the major projects are noted in the green (Mitchell) and yellow (Pollard) arrows. These estimates are based on the Capital Improvements Plan included in the full report of 2020. The maximum amounts noted are based on the trigger thresholds identified in 2020. As the "fair market value" of the schools decreases

over time the maximum allowable expense without triggering major renovations will also decrease.

The cost arrows indicating an increase in cost for the Mitchell School, the Temporary School, and the overall option cost include the escalation increase from 4.5% to 6% for projects that are bid prior to 2030.



E: Status Quo

District Wide Grade Configuration: PK, K-5th, 6th, 7th – 8th
Estimated Total Option Cost: not estimated (6/2020) : $392.3 M (1/2022) : $404.4 M (11/2022)

The Status Quo scenario maintains both the current grade configuration and the number of elementary schools. It explores what would be required to meet the spatial needs and accommodate the enrollment forecast by executing projects at each site where spatial deficiencies exist. Based on the enrollment and capacity analysis presented earlier in this report, four major projects would be required to complete this option.

1. The Mitchell School: a new school would be built on the existing Mitchell School site. The school would include 24 general classrooms creating a four-section school which will not meet the district's need for 126 general classrooms at the elementary level. Since a new school cannot be constructed on site while the current school is occupied this option includes the cost of constructing a temporary school.

2. The Eliot School: in order to meet the district's need for 126 general classrooms at the elementary school level an addition is required at the Eliot School. Due to the site constraints this addition would be two stories and likely occur adjacent to the existing corridor on the courtyard side. No additional renovations to other areas of the building were included in this

proposed addition but the size of the cafeteria and number of special education spaces should be reviewed at the time of this addition.

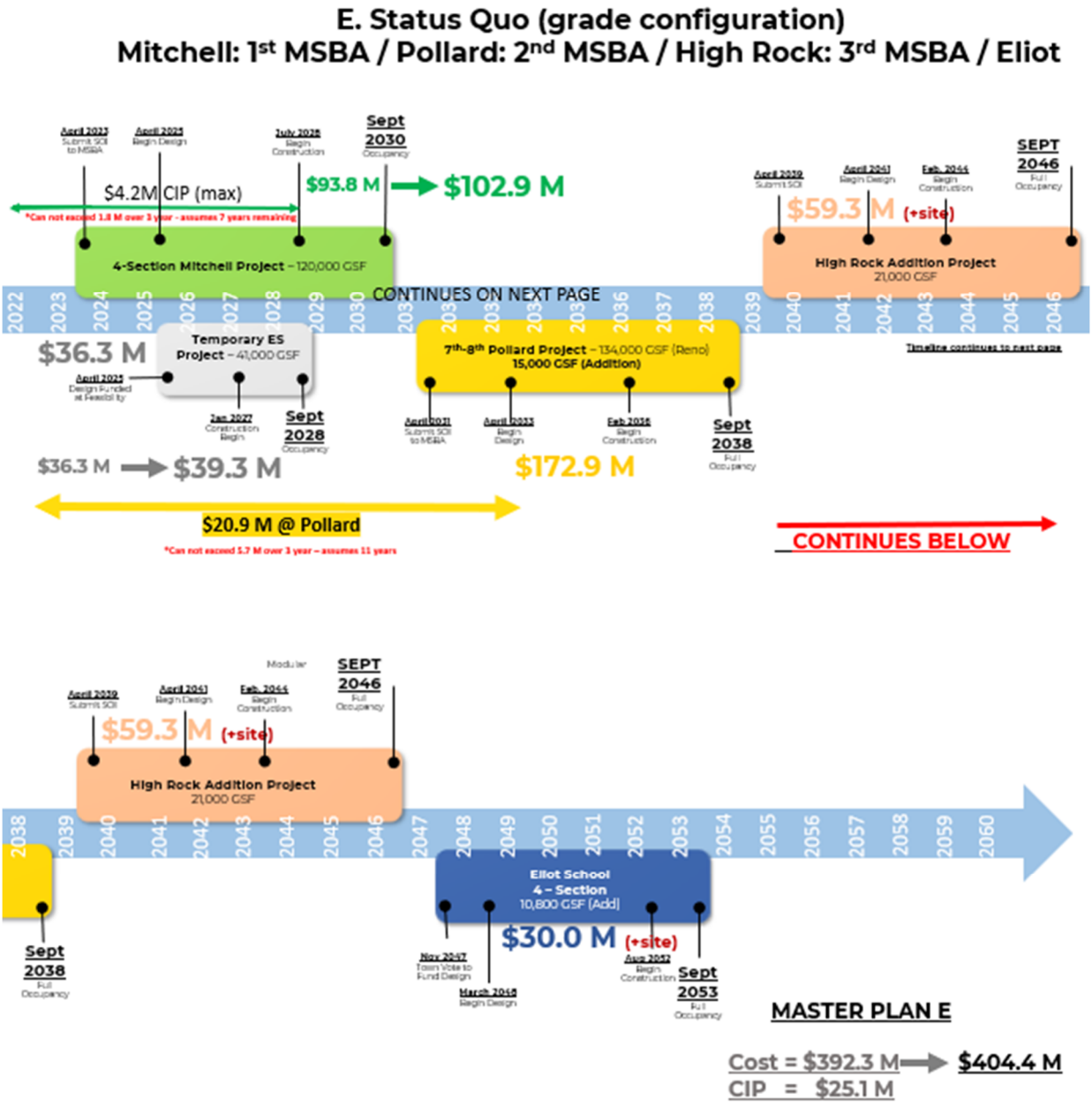
3. The High Rock School: continues to serve grade 6 students from across the district. Based on the capacity and program needs nine additional classrooms will be added to the existing building and additions and renovations will be needed in other areas of the existing building to serve the enrollment forecast. As the additions and renovations would be made while the students are occupying this school additional phasing cost and time have been included in this option.

4. The Pollard School: additions and renovations will be made at the middle school based on the enrollment forecast and program needs. The study identified the need for 67 teaching stations are needed serve the grade 7 and 8 student population. The building addition would replace the existing modular classrooms that have reached the end of their useful life. As the additions and renovations would be made while the students are occupying this school additional phasing cost and time have been included in this option.

The sequencing of this scenario is similar to Aa and assumes that a Mitchell Elementary School project is identified as the district's priority project for the MSBA's grant program since it has the greatest physical and spatial needs. Due to the project size and site constraints of the Mitchell site, a temporary elementary school is necessary to serve as swing space during the construction of the Mitchell project. The temporary school must be completed prior to the start of construction on the Mitchell School site. Once the Mitchell School is complete the district can begin the submission process to the MSBA for the Pollard School which is then followed by the High Rock School additions and renovations.

The capital improvements necessary to maintain a working Mitchell School and those needed to maintain the operations of the Pollard School until the start of the major projects are noted in the green (Mitchell) and yellow (Pollard) arrows. These estimates are based on the Capital Improvements Plan included in the full report of 2020. The maximum amounts noted are based on the trigger thresholds identified in 2020. As the "fair market value" of the schools decreases over time the maximum allowable expense without triggering major renovations will also decrease.

The cost arrows indicating an increase in cost for the Mitchell School, the Temporary School, and the overall option cost include the escalation increase from 4.5% to 6% for projects that are bid prior to 2030. The cost of this overall option will need to be increased by the cost of site work needed at the Eliot School as this was not included in the cost estimate for this project.



C1a: Grade Re-configuration 6th Elementary School and 6-8 Middle School

District Wide Grade Configuration: PK, K-5th, 6th – 8th
Estimated Total Option Cost: $208.6 M (6/2020): $327.0 M (1/2022): $349.2 M (11/2022)

The Grade Re-configuration scenario changes the number of elementary schools in the district by converting the High Rock School from a grade 6 school to an elementary school. This additional elementary school would allow the district to meet the minimum spatial needs required to accommodate the elementary school enrollment forecast, allow the district to provide reduce class sizes across the district, and provide program equity at each of the elementary schools. Grade 6 would be moved to the Pollard Middle School creating a 6-8 middle school. Based on the

enrollment and capacity analysis presented earlier in this report, two major projects would be required.

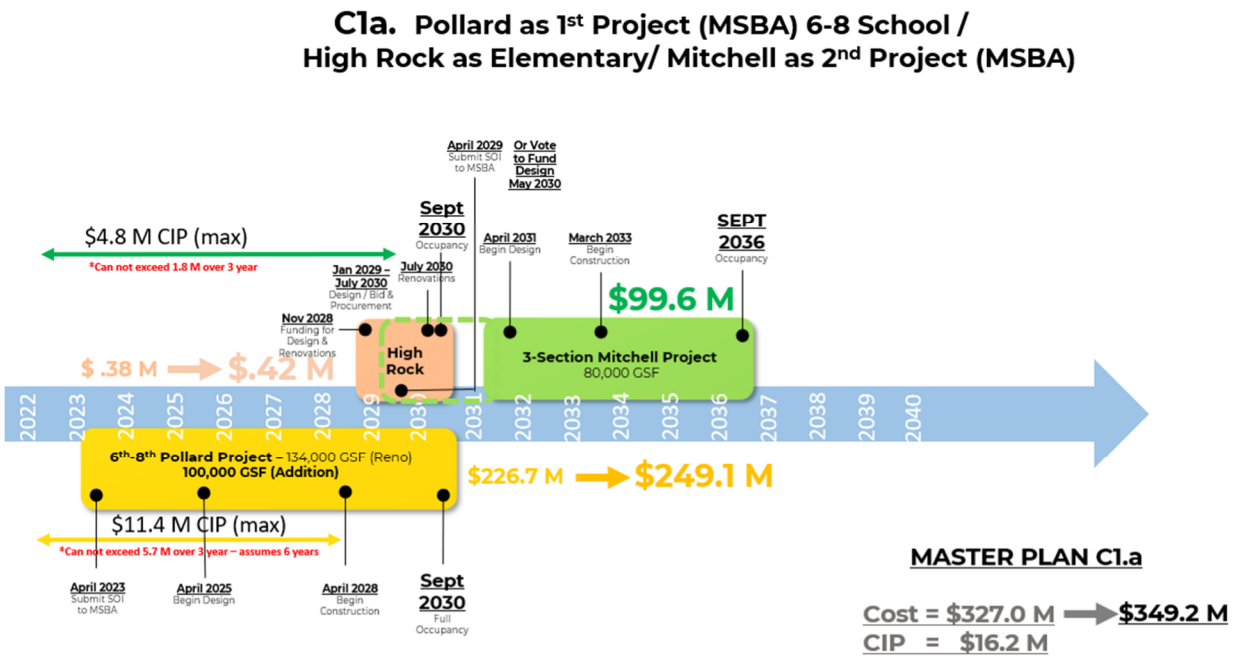
1. The Mitchell School: a new school would be built on the existing Mitchell School site. The school would include 18 general classrooms creating a three-section school. The High Rock School, which will receive minor renovations to accommodate elementary school students, will, in its final form, be a three-section school. The total number of general classrooms across the district will 132 which meets the district's need for 126 general classrooms at the elementary level while providing additional space for other programs such as foreign language, special education, or technology programs. This option eliminates the need for the temporary school swing space as all of the Mitchell School students would be moved to the High Rock School until a new Mitchell School can be completed.

2. The Pollard School: a large addition and renovations will be made at the middle school to accommodate the grade 6 population. Based on the enrollment forecast and program needs 101 teaching stations are needed serve grades 6- 8. The building addition would replace the existing modular classrooms and renovate other core areas of the school. As the additions and renovations would be made while the students are occupying this school additional phasing cost and time have been included in this option.

The sequencing of this scenario assumes that a Pollard School project is identified as the district's priority project for the MSBA's grant program as it seeks to resolve multiple facility issues. The Pollard School addition and renovation would occur while the school is occupied by grades 7 and 8 students only. After the completion of the project the High Rock grade 6 students would be moved to the Pollard School and minor renovations would be made to the High Rock School where upon Mitchell School students could then move into the High Rock School. A Mitchell School project would then take place on the Mitchell School site.

The capital improvements necessary to maintain a working Mitchell School and those needed to maintain the operations of the Pollard School until the start of the major projects are noted in the green (Mitchell) and yellow (Pollard) arrows. These estimates are based on the Capital Improvements Plan included in the full report of 2020. The maximum amounts noted are based on the trigger thresholds identified in 2020. As the "fair market value" of the schools decreases over time the maximum allowable expense without triggering major renovations will also decrease.

The cost arrows indicating an increase in cost for the Mitchell School, the Temporary School, and the overall option cost include the escalation increase from 4.5% to 6% for projects that are bid prior to 2030.



D1a: Grade Re-configuration, 6th Elementary School and 6-8 Middle School

District Wide Grade Configuration: PK, K-5th, 6th – 8th
Estimated Total Option Cost: $252.0 M (6/2020): $314.4 M (1/2022): $334.2 M (11/2022)

Similar to Option C1a this option changes the number of elementary schools in the district by converting the High Rock School from a grade 6 school to an elementary school. This additional elementary school would allow the district to meet the minimum spatial needs required to accommodate the elementary school enrollment forecast, allow the district to provide reduce class sizes across the district, and provide program equity at each of the elementary schools. Grade 6 would be moved to the Pollard Middle School creating a 6-8 middle school. Based on the enrollment and capacity analysis presented earlier in this report, two major projects would be required. The difference between C1a and D1a is the MSBA process. If the district chooses to finance the Pollard School project without the assistance of the MSBA the time to completion of the Pollard School could be reduced. Additionally, the district would have the opportunity to submit an SOI to the MSBA for the Mitchell School earlier than in option C1a therefore reducing the overall time to completion of the Master Plan. As in Option C1a this option requires two major building projects.

1. The Mitchell School: a new school would be built on the existing Mitchell School site. The school would include 18 general classrooms creating a three-section school. The High Rock School, which will receive minor renovations to accommodate elementary school students, will, in its final form, be a three-section school. The total number of general classrooms across the district will 132 which meets the district's need for 126 general classrooms at the elementary level while providing additional space for other programs such as foreign language, special education, or technology programs. This option eliminates the need for the

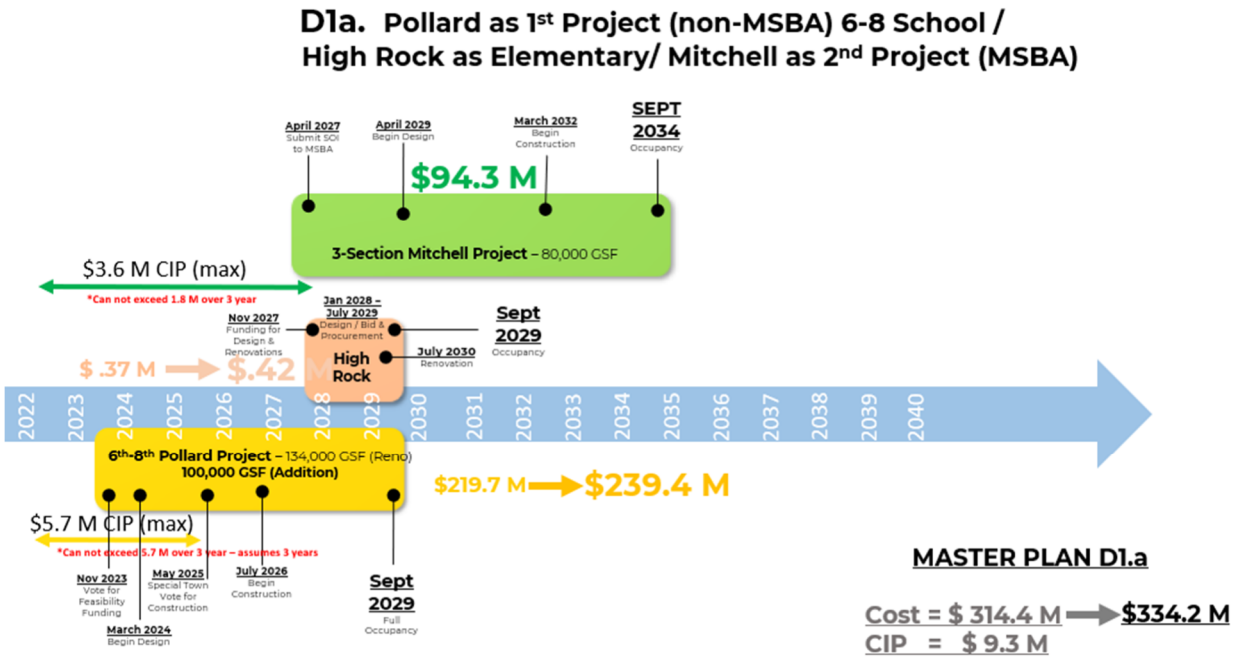
temporary school swing space as all of the Mitchell School students would be moved to the High Rock School until a new Mitchell School can be completed.

2. The Pollard School: a large addition and renovations will be made at the middle school to accommodate the grade 6 population. Based on the enrollment forecast and program needs 101 teaching stations are needed serve grades 6- 8. The building addition would replace the existing modular classrooms and renovate other core areas of the school. As the additions and renovations would be made while the students are occupying this school additional phasing cost and time have been included in this option.

The sequencing of this scenario assumes that a Pollard School project is provided funding from the Town. The Pollard School addition and renovation would occur while the school is occupied by grades 7 and 8 students only. As the Pollard School project is nearing completion a Mitchell School SOI could be submitted to the MSBA noting the project as the district's priority project. The High Rock grade 6 students would be moved to the Pollard School once the Pollard School addition and renovation project is complete and minor renovations would be made to the High Rock School to serve the elementary school population. Mitchell School students could then move into the High Rock School which could serve as a four-section school until a new Mitchell School can be completed. A Mitchell School project would be constructed on the Mitchell School site.

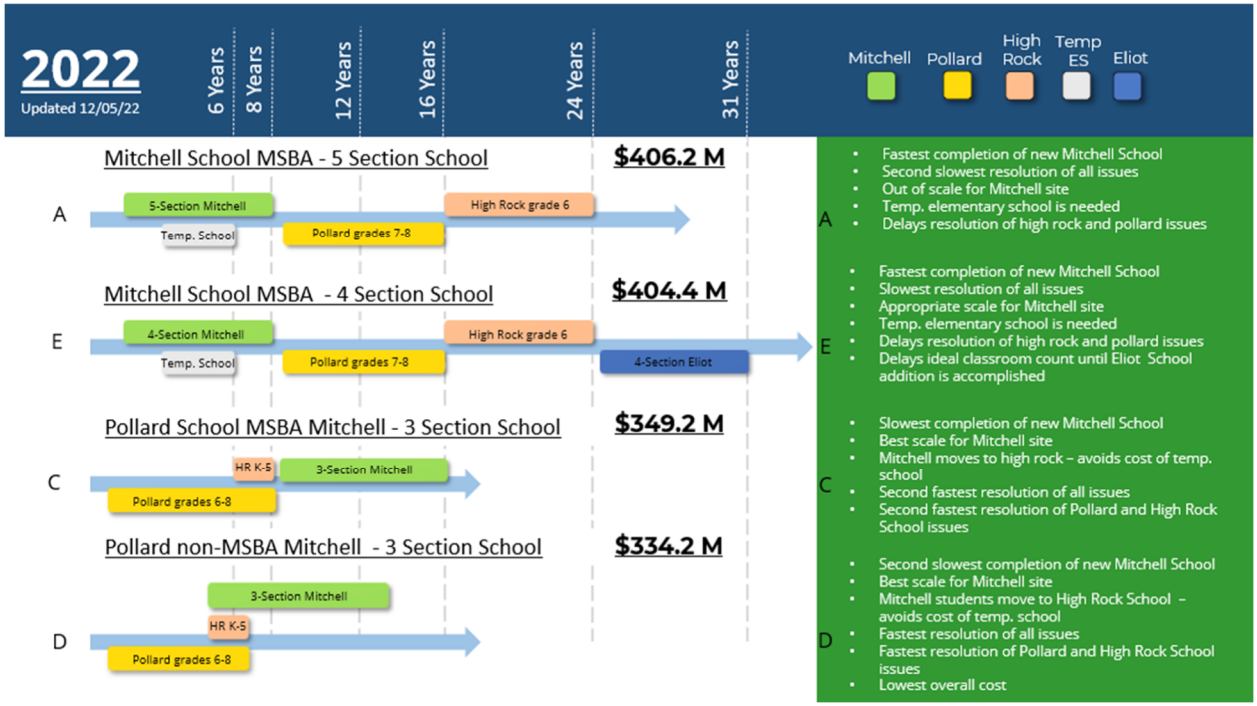
The capital improvements necessary to maintain a working Mitchell School and those needed to maintain the operations of the Pollard School until the start of the major projects are noted in the green (Mitchell) and yellow (Pollard) arrows. These estimates are based on the Capital Improvements Plan included in the full report of 2020. The maximum amounts noted are based on the trigger thresholds identified in 2020. As the "fair market value" of the schools decreases over time the maximum allowable expense without triggering major renovations will also decrease.

The cost arrows indicating an increase in cost for the Mitchell School, the Temporary School, and the overall option cost include the escalation increase from 4.5% to 6% for projects that are bid prior to 2030.



CONCLUSION

The chart below is a summary of the information noted above.



NEEDHAM PUBLIC SCHOOLS

POPULATION AND ENROLLMENT FORECASTS, 2023-24 THROUGH 2037-38

JANUARY 2023

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CONTENTS

EXECUTIVE SUMMARY

1. The resident total fertility rate for Needham Public Schools over the 15-year life of the forecasts is below replacement level. (1.76 vs. the theoretical replacement level of 2.1)

2. Most in-migration to the district continues to occur in the 0-to-9 and 30-to-44-year-old age groups.

3. The local 18-to-24-year-old population continues to leave the district, going to college or moving to other urbanized areas. This population group accounts for the largest segment of the district's out migration flow. The second largest out flow is the 70+ age group, which are downsizing their homes and leaving the district

4. The primary factors causing the district's enrollment to rise and then stabilize over the next 15 years is the number of empty nest households (homeowners age 70+) "turning over" compared to the number of homes (homeowners aged 50-59) that become empty nest each year.

5. Changes in year-to-year enrollment over the next ten years will primarily be due to the size of the grade cohorts entering and moving through the school system in conjunction with the size of the cohorts leaving the system.

6. The elementary enrollment will stabilize after the 2030-31 school year in both scenarios. This will be due primarily to the fact that the rising 5th grade cohorts and the incoming grade cohorts will be roughly the same size.

7. In the Best scenario, the median age of the population will increase from 43.1 in 2020 to 45.1 in 2035. In the High scenario, the median age of the population will increase from 43.1 in 2020 to 44.9 in 2035.

8. Even if the district continues to have some of annual new home construction (particularly if that construction is rental units), the rate, magnitude and price of existing home sales will become the increasingly dominant factor affecting the amount of population and enrollment change.

9. In the Best scenario, total district enrollment is forecasted to increase by 144 students, or 2.6%, between 2022-23 and 2027-28. Total enrollment is forecasted to increase by 79 students, or 1.4%, from 2027-28 to 2032-33. The total enrollment is forecasted to grow by 12 students, or 0.2%, from 2032-33 to 2037-38.

10. In the High scenario, total district enrollment is forecasted to increase by 174 students, or 3.1%, between 2022-22 and 2027-28. Total enrollment is forecasted to increase by 108 students, or 1.9%, from 2027-28 to 2032-33. The total enrollment is forecasted to increase by 23 students, or 0.4%, from 2032-33 to 2037-38.

INTRODUCTION

By demographic principle, distinctions are made between projections and forecasts. A projection extrapolates the past (and present) into the future with little or no attempt to take into account any factors that may impact the extrapolation (e.g., changes in fertility rates, housing patterns or migration patterns) while a forecast results when a projection is modified by reasoning to take into account the aforementioned factors.

To maximize the use of this study as a planning tool, the ultimate goal is not simply to project the past into the future, but rather to assess various factors' impact on the future. The future population and enrollment change of each school district is influenced by a variety of factors. Not all factors will influence the entire school district at the same level. Some may affect different attendance areas at dissimilar magnitudes and rates causing changes at varying points of time within the same district. The forecaster's judgment, based on a thorough and intimate study of the district, has been used to modify the demographic trends and factors to predict likely changes more accurately. Therefore, strictly speaking, this study is a forecast, not a projection; and the amount of modification of the demographic trends varies between different areas of the district as well as within the timeframe of the forecast.

To calculate population forecasts of any type, particularly for smaller populations such as a school district, realistic suppositions must be made as to what the future will bring in terms of age specific fertility rates, mortality rates, migration rates and residents' demographic behavior at certain points of the life course. The demographic history of the school district and its interplay with the social and economic history of the area is the starting point and basis of most of these suppositions particularly on key factors such as the age structure of the area. The unique nature of each district's and attendance area's demographic composition and rate of change over time must be assessed and understood to be factors throughout the life of the forecast series. For example, age structure, which is the variable with the greatest predictive value in regard to future population and enrollment change, is usually quite varied between different attendance areas. Moreover, no two populations, particularly at the school district, have exactly the same characteristics.

The manifest purpose of these forecasts is to ascertain the demographic factors that will ultimately influence the enrollment levels in the district's schools. There are of course, other non-demographic factors that affect enrollment levels over time. These factors include, but are not limited to transfer policies within the district; student transfers to and from neighboring districts; placement of "special programs" within school facilities that may serve students from outside the attendance area; state or federal mandates that dictate the movement of students from one facility to another (No Child Left Behind was an excellent example of this factor); the development of charter schools in the district and general area; the prevalence of home schooling in the

area; and the dynamics of local private schools.

Unless the district specifically requests the calculation of forecasts that reflect the effects of changes in these non-demographic and non-economic factors, their influences are held constant for the life of the forecasts. Again, the main function of these forecasts is to determine what impact demographic changes will have on future enrollment. It is quite possible to calculate special "scenario" forecasts to measure the impact of school policy modifications as well as planned economic and financial changes. However, in this case the results of these population and enrollment forecast are meant to represent the most likely scenario for changes over the next 15 years in the district and its attendance areas given the assumptions used in these forecasts.

The first part of the report will examine the assumptions made in calculating the population forecasts for the Needham Public Schools. Since the results of the population forecasts drive the subsequent enrollment forecasts, the assumptions listed in this section are paramount to understanding the area's demographic dynamics. The remainder of the report is an explanation and analysis of the district's population forecasts and how they will shape the district's grade level enrollment forecasts.

DATA

The data used for the forecasts come from a variety of sources. The Needham Public Schools provided enrollments by grade and attendance center for the school years 2010-2011 to 2022-23. Birth and death data for the years 2000 through 2020 were obtained from the Massachusetts Department of Health. The net migration values were calculated using Internal Revenue Service migration reports for the years 2000 through 2020. The data used for the calculation of migration models came from the United States Bureau of the Census, 2005 to 2010, and the models were designed using demographic and economic factors. The base age-sex population counts used are from the results of the 2010 Census, calibrated to the 2020 Census results by attendance area.

Recently the Census Bureau began releasing annual estimates of demographic variables at the block group and tract level from the American Community Survey (ACS). There has been wide scale reporting of these results in the national, state, and local media. However, due to the methodological problems the Census Bureau is experiencing with their estimates derived from ACS data, particularly in areas with a population of less than 60,000, the results of the ACS are not used in these forecasts. For example, given the sampling framework used by the Census Bureau, each year only 340 of the over 11,200 current households in the district would have been included. For comparison 1,500 households in the district were included in the sample for the long form questionnaire in the 2000 Census. As a result of this small sample size, the ACS survey result from the last 5 years must be aggregated to produce the tract and block group estimates.

To develop the population forecast models, past net migration patterns, household structure, current age specific fertility patterns, the magnitude and

dynamics of the gross migration, the age specific mortality trends, the distribution of the population by age and sex, the rate and type of existing housing unit sales, and future housing unit construction are considered to be primary variables. In addition, the change in household size relative to the age structure of the forecast area was addressed. While there was a slight drop in the average household size in Massachusetts and most other areas of the nation during the previous 20 years, the average persons per household in Needham actually increase over the last decade. (2.72 persons per household in 2010 compared to 2.78 in 2020). However, the rate of this increase has been forecasted to slow significantly over the next fifteen years.

ASSUMPTIONS

For these forecasts, the mortality probabilities are held constant at the levels calculated for the year 2019. While the number of deaths in an area are impacted by and will change given the proportion of the local population over age 65, in the absence of an extraordinary event such as a natural disaster or a breakthrough in the treatment of heart disease, death rates rarely move rapidly in any direction, particularly at the school district or attendance area level. Thus, significant changes are not foreseen in district's mortality rates between now and the year 2035. (At this point in time, there is insufficient data at the geographic and age level to ascertain the impacts of COVID-19 on mortality rates.

We assume that most areas will return to their traditional mortality rate levels by 2023.) Any increases forecasted in the number of deaths will be due primarily to the general aging of the district's population and specifically to the increase in the number of residents aged 65 and older. Given that the median age of the district is currently over 40, this will become an increasing important demographic dynamic over the next 15 years.

Similarly, fertility rates are assumed to stay fairly constant for the life of the forecasts. Like mortality rates, age specific fertility rates rarely change quickly or dramatically, particularly in small areas. Even with the recently reported rise in the age 30- to 39-year-old fertility rates of the United States, overall total fertility rates have stayed within a 15% range for most of the last 40 years. In fact, the vast majority of year-to-year change in an area's number of births is due to changes in the number of women in childbearing ages (particularly ages 20-34) rather than any fluctuation in an area's fertility rate.

The resident total fertility rate (TFR), the average number of births a woman will have while living in the school district during her lifetime, is estimated to be 1.76 for the total district for the ten years of the population forecasts. A TFR of 2.1 births per woman is considered to be the theoretical "replacement level" of fertility necessary for a population to remain constant in the absence of in-migration. Therefore, in the absence of migration, fertility alone would be insufficient to maintain the current level of population and enrollment within the Needham Public Schools over the course of the forecast period. It is important to note that this is the resident birth rate. Births that occur to women who then move into the district with their children are accounted for in

the migration calculations. At the current TFR and given the number of women in prime childbearing age in the district (ages 20–34-year-old), the district will consistently see the number of total resident births be on average over 90 lower than the average enrollment in grade one.

A close examination of data for Needham Public Schools has shown the age specific pattern of net migration will be nearly constant throughout the life of the forecasts. While the number of in and out migrants has changed in past years for the Needham Public Schools (and will change again over the next 15 years), the basic age pattern of the migrants has stayed nearly the same over the last 30 years. Based on the analysis of data it is safe to assume this age specific migration trend will remain unchanged into the future.

This pattern of migration shows most of the local out-migration occurring in the 18-to-24-year-old age group as young adults leave the area to go to college or move to other urbanized areas. Hence, when a district has larger than normal 12th grade classes, they will experience a slight rise in gross out migration as these students now leave for college. The second largest group of out-migrants are those householders aged 70 and older who are downsizing their residences and then in most cases move out of the district (this is an important outflow since these downsizing seniors provide most of the homes that are in the existing housing market). The majority of the local in-migration occurs in the 0-to-9 and 30-44 age groups (the bulk of them come from areas within 75 miles of the Needham Public Schools) primarily consisting of younger adults and their children.

As the Norfolk County area is not currently contemplating any major expansions or contractions, the forecasts also assume that the current economic, political, social, and environmental factors, as well as the transportation and public works infrastructure (with a few notable exceptions) of the Needham Public Schools and its attendance areas will remain the same through the year 2034. Below is a list of assumptions and issues that are specific to Needham Public Schools. These issues have been used to modify the population forecast models to predict the impact of these factors more accurately on each area's population change. Specifically, the forecasts for the Needham Public School assume that throughout the study period these general factors will apply:

a. The national, state or regional economy does not go into deep recession at any time during the 10 years of the forecasts; (Deep recession is defined as four consecutive quarters where the GDP contracts greater than 1% per quarter)

b. The interest rate for a 30-year fixed home mortgage stays between 5.0% and 7.0% over the 15-year life of the forecasts;

c. The rate of mortgage approval stays at 2015-2022 levels and lenders do not return to "sub-prime" mortgage practices;

d. There are no additional restrictions placed on home mortgage lenders or additional

bankruptcies of major credit providers;

e. The rate of housing foreclosures does not exceed 125% of the 2015-2020 average of Norfolk County for any year in the forecasts;

f. In the Best scenario, all currently platted, and approved housing developments are built out and completed by 2036. All housing units constructed are occupied by 2037;

g. In the High scenario, all the aforementioned currently platted and approved housing developments are built out and completed by 2036. Additionally, the Overlay project will be Started in 2027 built out by 2031. All housing units constructed are occupied by 2034. Overlay is assumed to have 250 units total, with a 5 year build out plan;

h. The average annual unemployment rates for the Norfolk County and the Greater Boston Metropolitan Area will remain below 7.0% for the 15 years of the forecasts;

i. The rate of students transferring into and out of the Needham Public Schools will remain at the 2015-16 to 2022-23 average;

j. The inflation rate for gasoline will stay below 5% per year for the 15 years of the forecasts;

k. The state of Massachusetts will not change any of its current laws regarding inter-district transfers, charter schools or school vouchers;

l. No charter school opens in the district or the immediate area any time over the next 15 years;

m. The town of Needham will average approximately 260 existing housing unit sales annually until 2035;

n. The apartment occupancy rate for the district stays above 95% for the 15 years of forecast cycle;

o. There will be no building moratorium within the district;

p. Businesses within the district and the Needham Public Schools area will remain viable;

q. The number of existing home sales in the district that are a result of "distress sales" (homes worth less than the current mortgage value) will not exceed 20% of total homes sales in the district for any given year;

r. Housing turnover rates (sale of existing homes in the district) will remain at their current levels. The majority of existing home sales are made by homeowners over the age of 60;

s. The district will not experience any natural disasters over the next 15 years;

t. Private school and home school attendance rates will remain constant;

u. The number of students engaging in virtual learning, (both within and outside of the district) will remain constant over the next 15 years;

v. There is no return to any pandemic conditions at any time over the next 15 years.

If a major employer in the district or in the Greater Boston Metropolitan Area (particularly in the western suburbs) closes, reduces or expands its operations, the population forecasts would need to be adjusted to reflect the changes brought about by the change in economic and employment conditions. The same holds true for any major change in the local infrastructure (e.g., highway construction, water and sewer expansion, changes in zoning regulations etc.), an economic downturn, any weakness in the housing market or any instance or situation that causes rapid and dramatic population changes that could not be foreseen at the time the forecasts were calculated.

The high proportion of high school graduates from the Needham Public Schools that attend college or move to urban areas outside of the district for employment is a significant demographic factor. Their departure is a major reason for the extremely high out-migration in the 18 to 24 age group and was taken into account when calculating these forecasts (this is also a contributing factor on why the district resident fertility rate and subsequent number of births is so low). The out-migration of graduating high school seniors is expected to continue over the period of the forecasts and the rate of out-migration has been forecasted to remain the same over the life of the forecast series.

Finally, all demographic trends (i.e., births, deaths, and migration) are assumed to be linear in nature and annualized over the forecast period. For example, if 1,000 births are forecasted for a 5-year period, an equal number, or proportion of the births are assumed to occur every year, 200 per year. Actual year-to-year variations do and will occur, but overall year-to-year trends are expected to be constant.

METHODOLOGY

The population forecasts presented in this report are the result of using the Cohort-Component Method of population forecasting (Siegel, and Swanson, 2004: 561-601) (Smith et. al. 2004). As stated in the **INTRODUCTION**, the difference between a projection and a forecast is in the use of explicit judgment based upon the unique features of the area under study. Strictly speaking, a cohort projection refers to the future population that would result if a mathematical extrapolation of historical trends. Conversely, a cohort-component forecast refers to the future population that is expected because of a studied and purposeful selection of the components of change (i.e., births, deaths, and migration) and forecast models are developed to measure the impact of these changes in each specific geographic area.

Five sets of data are required to generate population and enrollment forecasts. These five data sets are:

a. a base-year population (here, the 2010 Census population for Needham Public Schools);

b. a set of age-specific fertility rates for the district and the attendance areas to be used over the forecast period;

c. a set of age-specific survival (mortality) rates for the district and the attendance areas;

d. a set of age-specific migration rates for the district and the attendance areas, and;

e. the historical enrollment figures by grade.

The most significant and difficult aspect of producing enrollment forecasts is the generation of the population forecasts in which the school age population (and enrollment) is embedded. In turn, the most challenging aspect of generating the population forecasts is found in deriving the rates of change in fertility, mortality, and migration. From the standpoint of demographic analysis, the Needham Public Schools is classified as a "small area" population (as compared to the population of the state of Massachusetts or to that of the United States). Small area population forecasts are more complicated to calculate because local variations in fertility, mortality, and migration may be more irregular than those at the regional, state, or national scale. Especially challenging is the forecast of the migration rates for local areas, because changes in the area's socioeconomic characteristics can quickly change from past and current patterns (Peters and Larkin, 2002.)

The population forecasts for Needham Public Schools were calculated using a cohort-component method with the populations divided into male and female groups by five-year age cohorts that range from 0-to-4 years of age to 85 years of age and older (85+). Age- and sex-specific fertility, mortality, and migration models were constructed to specifically reflect the unique demographic characteristics of each of the attendance areas in the Needham Public Schools.

The enrollment forecasts were calculated using a modified average survivorship method. Average survivor rates (i.e., the proportion of students who progress from one grade level to the next given the average amount of net migration for that grade level) over the previous five years of year-to-year enrollment data were calculated for grades two through twelve. This procedure is used to identify specific grades where there are large numbers of students changing facilities for non-demographic factors, such as private school transfers or enrollment in special programs.

The survivorship rates were modified or adjusted to reflect the average rate of forecasted in and out migration of 5-to-9, 10-to-14 and 15-to-17-year-old cohorts to each of the attendance centers in Needham Public Schools for the period 2010 to 2015. These survivorship rates then were adjusted to reflect the forecasted changes in age-specific migration the district should experience over the next five years. These modified survivorship rates were used to project the enrollment of grades 2 through 12 for the period 2015

to 2020. The survivorship rates were adjusted again for the period 2020 to 2025, 2025 to 2030 and 2030 to 2035 to reflect the predicted changes in the amount of age-specific migration in the district for those time period.

The forecasted enrollments for kindergarten and first grade are derived from the 5-to-9-year-old population of the age-sex population forecast at the elementary attendance center district level. This procedure allows the changes in the incoming grade sizes to be factors of forecasted population change and not an extrapolation of previous class sizes. Given the potentially large amount of variation in kindergarten enrollment due to parental choice, changes in the state's minimum age requirement, and differing district policies on allowing children to start Kindergarten early, first grade enrollment is deemed to be a more accurate and reliable starting point for the forecasts. (McKibben, 1996). The level of the accuracy for both the total population and total enrollment forecasts at the school district level is estimated to be ±2.5% for the life of the forecasts.

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Appendix A: Population Forecasts—Best Scenario

Needham Public Schools Total Population BEST SCENARIO

	2010	2015	2020	2025	2030	2035
0-4	1,871	1,980	1,960	1,920	1,920	1,910
5-9	2,488	2,270	2,470	2,440	2,410	2,480
10-14	2,467	2,620	2,420	2,560	2,510	2,510
15-19	1,863	2,050	2,230	2,010	2,230	2,170
20-24	981	980	1,060	1,190	1,060	1,230
25-29	713	940	920	950	1,010	910
30-34	979	1,390	1,540	1,520	1,530	1,530
35-39	1,755	1,760	2,130	2,230	2,180	2,120
40-44	2,293	2,130	2,120	2,650	2,740	2,660
45-49	2,523	2,270	2,180	2,110	2,630	2,700
50-54	2,419	2,480	2,260	2,120	2,090	2,600
55-59	2,045	2,380	2,440	2,210	2,090	2,040
60-64	1,801	1,930	2,230	2,300	2,070	1,970
65-69	1,185	1,640	1,770	2,050	2,120	1,860
70-74	874	1,090	1,530	1,630	1,920	1,970
75-79	830	830	1,040	1,440	1,540	1,750
80-84	776	760	760	950	1,330	1,420
85+	1,041	1,040	1,040	1,020	1,110	1,350
Total	**28,904**	**30,540**	**32,100**	**33,300**	**34,490**	**35,180**
Median Age	42.9	43.0	43.1	43.5	44.4	45.1
Births		1,350	1,370	1,350	1,380	1,370
Deaths		1,300	1,350	1,410	1,550	1,790
Natural Increase		50	20	-60	-170	-420
Net Migration		1,610	1,500	1,370	1,270	1,200
Change		*1,660*	*1,520*	*1,310*	*1,100*	*780*

Differences between period Totals may not equal Change due to rounding.

Broadmeadow Elementary Total Population **BEST SCENARIO**

	2010	2015	2020	2025	2030	2035
0-4	391	390	360	320	380	350
5-9	562	520	500	470	450	470
10-14	545	600	540	520	490	480
15-19	340	420	480	430	420	390
20-24	138	150	250	260	220	220
25-29	97	110	120	210	160	140
30-34	127	220	210	260	310	260
35-39	378	310	380	370	420	450
40-44	465	440	360	540	530	560
45-49	512	460	440	360	540	530
50-54	441	500	460	420	350	530
55-59	394	430	500	450	420	350
60-64	329	390	420	480	430	400
65-69	207	290	350	380	440	400
70-74	172	170	250	300	340	400
75-79	155	160	160	230	290	310
80-84	142	140	150	140	210	260
85+	107	140	160	170	180	220
Total	**5,498**	**5,840**	**6,090**	**6,310**	**6,580**	**6720**
Median Age	41.9	42.3	42.8	42.9	44.2	45.4
Births	210	200	220	220	200	
Deaths	190	210	230	250	290	
Natural Increase	20	-10	-10	-30	-90	
Net Migration	310	270	270	260	250	
Change	*330*	*260*	*260*	*230*	*160*	

Differences between period Totals may not equal Change due to rounding.

Eliot Elementary Total Population **BEST SCENARIO**

	2010	2015	2020	2025	2030	2035
0-4	281	330	340	350	330	320
5-9	370	350	390	400	400	410
10-14	350	440	410	430	440	430
15-19	245	220	320	310	360	370
20-24	142	110	100	220	200	220
25-29	157	280	230	190	300	270
30-34	225	360	440	320	300	360
35-39	279	490	590	620	470	430
40-44	385	410	600	680	700	560
45-49	369	380	410	600	670	690
50-54	384	360	380	390	590	660
55-59	306	380	360	370	390	570
60-64	245	300	360	350	360	380
65-69	160	240	290	360	340	350
70-74	137	150	220	260	320	310
75-79	165	130	140	210	240	300
80-84	141	150	120	130	200	230
85+	197	200	200	180	180	200
Total	**4,537**	**5,280**	**5,900**	**6,370**	**6,790**	**7060**
Median Age	42.8	40.7	41.1	42.5	44.3	46.2
Births	270	280	260	260	250	
Deaths	210	220	220	240	280	
Natural Increase	60	60	40	20	-30	
Net Migration	660	590	450	380	330	
Change	*720*	*650*	*490*	*400*	*300*	

Differences between period Totals may not equal Change due to rounding.

Sunita Williams Elementary Total Population **BEST SCENARIO**

	2010	2015	2020	2025	2030	2035
0-4	341	410	410	390	390	380
5-9	410	400	490	510	500	500
10-14	373	400	420	490	510	500
15-19	445	330	360	380	450	460
20-24	353	320	290	240	240	310
25-29	191	260	230	200	140	150
30-34	230	320	370	370	340	280
35-39	337	350	440	500	500	460
40-44	416	420	350	510	570	570
45-49	475	410	420	350	510	560
50-54	463	470	410	410	350	500
55-59	388	460	460	400	400	340
60-64	362	370	440	450	390	390
65-69	238	310	330	380	390	330
70-74	179	220	300	310	370	380
75-79	165	170	210	280	290	340
80-84	217	150	160	200	250	270
85+	449	380	320	280	270	290
Total	**6,030**	**6,150**	**6,410**	**6,650**	**6,860**	**7010**
Median Age	44.0	43.4	42.8	42.4	43.2	44.1
Births	310	330	300	300	290	
Deaths	360	320	300	310	350	
Natural Increase	-50	10	0	-10	-60	
Net Migration	210	210	220	230	220	
Change	*160*	*220*	*220*	*220*	*160*	

Differences between period Totals may not equal Change due to rounding.

Mitchell Elementary Total Population **BEST SCENARIO**

	2010	2015	2020	2025	2030	2035
0-4	344	370	380	390	380	440
5-9	461	440	520	500	500	520
10-14	417	470	460	530	510	510
15-19	270	400	470	420	520	500
20-24	120	100	130	230	220	280
25-29	85	90	70	100	210	200
30-34	148	150	150	120	150	250
35-39	294	210	210	190	160	190
40-44	400	290	240	230	220	180
45-49	407	400	290	240	230	210
50-54	383	400	390	290	240	230
55-59	351	380	390	390	280	230
60-64	299	280	300	310	310	220
65-69	174	250	230	240	250	240
70-74	116	160	240	210	230	240
75-79	86	120	160	230	210	220
80-84	79	80	100	150	220	190
85+	88	100	110	120	150	210
Total	**4,521**	**4,690**	**4,840**	**4,890**	**4,990**	**5060**
Median Age	41.5	42.0	40.6	39.1	35.2	31.6
Births	230	230	230	270	320	
Deaths	230	250	280	300	330	
Natural Increase	0	-20	-50	-30	-10	
Net Migration	170	150	130	110	120	
Change	*170*	*130*	*80*	*80*	*110*	

Differences between period Totals may not equal Change due to rounding.

Newman Elementary Total Population BEST SCENARIO

	2010	2015	2020	2025	2030	2035
0-4	514	480	470	470	440	420
5-9	685	560	570	560	560	580
10-14	783	710	590	590	560	590
15-19	563	680	600	470	480	450
20-24	230	300	290	240	180	200
25-29	183	200	270	250	200	150
30-34	249	340	370	450	430	380
35-39	467	400	510	550	630	590
40-44	628	570	570	690	720	790
45-49	761	620	620	560	680	710
50-54	749	750	620	610	560	680
55-59	607	730	730	600	600	550
60-64	566	590	710	710	580	580
65-69	406	550	570	690	700	540
70-74	271	390	520	550	660	640
75-79	259	250	370	490	510	580
80-84	197	240	230	330	450	470
85+	201	220	250	270	330	430
Total	**8,319**	**8,580**	**8,860**	**9,080**	**9,270**	**9330**
Median Age	43.9	45.4	46.5	47.4	48.2	48.6
Births	330	330	340	330	310	
Deaths	310	350	380	450	540	
Natural Increase	20	-20	-40	-120	-230	
Net Migration	260	280	300	290	280	
Change	*280*	*260*	*260*	*170*	*50*	

Differences between period Totals may not equal Change due to rounding.

Appendix B: Population Forecasts—High Scenario

Needham Public Schools Total Population **HIGH SCENARIO**

	2010	2015	2020	2025	2030	2035
0-4	1,871	1,980	1,960	1,920	1,940	1,960
5-9	2,488	2,270	2,470	2,440	2,440	2,510
10-14	2,467	2,620	2,420	2,560	2,520	2,550
15-19	1,863	2,050	2,230	2,010	2,210	2,160
20-24	981	980	1,060	1,190	1,030	1,170
25-29	713	940	920	950	1,030	900
30-34	979	1,390	1,540	1,520	1,560	1,570
35-39	1,755	1,760	2,130	2,230	2,220	2,190
40-44	2,293	2,130	2,120	2,650	2,760	2,740
45-49	2,523	2,270	2,180	2,110	2,630	2,720
50-54	2,419	2,480	2,260	2,120	2,090	2,600
55-59	2,045	2,380	2,440	2,210	2,090	2,040
60-64	1,801	1,930	2,230	2,300	2,070	1,970
65-69	1,185	1,640	1,770	2,050	2,100	1,860
70-74	874	1,090	1,530	1,630	1,920	1,940
75-79	830	830	1,040	1,440	1,540	1,750
80-84	776	760	760	950	1,330	1,420
85+	1,041	1,040	1,040	1,020	1,110	1,350
Total	**28,904**	**30,540**	**32,100**	**33,300**	**34,590**	**35,400**
Median Age	42.9	43.0	43.1	43.5	44.2	44.9
Births		1,350	1,370	1,350	1,380	1,390
Deaths		1,300	1,350	1,410	1,550	1,790
Natural Increase		50	20	-60	-170	-400
Net Migration		1,610	1,500	1,360	1,360	1,310
Change		*1,660*	*1,520*	*1,300*	*1,190*	*910*

Differences between period Totals may not equal Change due to rounding.

Broadmeadow Elementary Total Population **HIGH SCENARIO**

	2010	2015	2020	2025	2030	2035
0-4	391	390	360	320	380	350
5-9	562	520	500	470	450	470
10-14	545	600	540	520	490	480
15-19	340	420	480	430	420	390
20-24	138	150	250	260	220	220
25-29	97	110	120	210	160	140
30-34	127	220	210	260	310	260
35-39	378	310	380	370	420	450
40-44	465	440	360	540	530	560
45-49	512	460	440	360	540	530
50-54	441	500	460	420	350	530
55-59	394	430	500	450	420	350
60-64	329	390	420	480	430	400
65-69	207	290	350	380	440	400
70-74	172	170	250	300	340	400
75-79	155	160	160	230	290	310
80-84	142	140	150	140	210	260
85+	107	140	160	170	180	220
Total	**5,498**	**5,840**	**6,090**	**6,310**	**6,580**	**6720**
Median Age	41.9	42.3	42.8	42.9	44.2	45.4
Births	210	200	220	220	200	
Deaths	190	210	230	250	290	
Natural Increase	20	-10	-10	-30	-90	
Net Migration	310	270	260	260	250	
Change	*330*	*260*	*250*	*230*	*160*	

Differences between period Totals may not equal Change due to rounding.

Eliot Elementary Total Population **HIGH SCENARIO**

	2010	2015	2020	2025	2030	2035
0-4	281	330	340	350	350	370
5-9	370	350	390	400	430	440
10-14	350	440	410	430	450	470
15-19	245	220	320	310	340	360
20-24	142	110	100	220	170	160
25-29	157	280	230	190	320	260
30-34	225	360	440	320	330	400
35-39	279	490	590	620	510	500
40-44	385	410	600	680	720	640
45-49	369	380	410	600	670	710
50-54	384	360	380	390	590	660
55-59	306	380	360	370	390	570
60-64	245	300	360	350	360	380
65-69	160	240	290	360	320	350
70-74	137	150	220	260	320	280
75-79	165	130	140	210	240	300
80-84	141	150	120	130	200	230
85+	197	200	200	180	180	200
Total	**4,537**	**5,280**	**5,900**	**6,370**	**6,890**	**7280**
Median Age	42.8	40.7	41.1	42.5	43.8	45.3
Births	270	280	260	260	270	
Deaths	210	220	220	240	280	
Natural Increase	60	60	40	20	-10	
Net Migration	660	590	450	470	440	
Change	*720*	*650*	*490*	*490*	*430*	

Differences between period Totals may not equal Change due to rounding.

Sunita Williams Elementary Total Population **HIGH SCENARIO**

	2010	2015	2020	2025	2030	2035
0-4	341	410	410	390	390	380
5-9	410	400	490	510	500	500
10-14	373	400	420	490	510	500
15-19	445	330	360	380	450	460
20-24	353	320	290	240	240	310
25-29	191	260	230	200	140	150
30-34	230	320	370	370	340	280
35-39	337	350	440	500	500	460
40-44	416	420	350	510	570	570
45-49	475	410	420	350	510	560
50-54	463	470	410	410	350	500
55-59	388	460	460	400	400	340
60-64	362	370	440	450	390	390
65-69	238	310	330	380	390	330
70-74	179	220	300	310	370	380
75-79	165	170	210	280	290	340
80-84	217	150	160	200	250	270
85+	449	380	320	280	270	290
Total	**6,030**	**6,150**	**6,410**	**6,650**	**6,860**	**7010**
Median Age	44.0	43.4	42.8	42.4	43.2	44.1
Births	310	330	300	300	290	
Deaths	360	320	300	310	350	
Natural Increase	-50	10	0	-10	-60	
Net Migration	210	210	220	230	220	
Change	*160*	*220*	*220*	*220*	*160*	

Differences between period Totals may not equal Change due to rounding.

Mitchell Elementary Total Population **HIGH SCENARIO**

	2010	2015	2020	2025	2030	2035
0-4	344	370	380	390	380	440
5-9	461	440	520	500	500	520
10-14	417	470	460	530	510	510
15-19	270	400	470	420	520	500
20-24	120	100	130	230	220	280
25-29	85	90	70	100	210	200
30-34	148	150	150	120	150	250
35-39	294	210	210	190	160	190
40-44	400	290	240	230	220	180
45-49	407	400	290	240	230	210
50-54	383	400	390	290	240	230
55-59	351	380	390	390	280	230
60-64	299	280	300	310	310	220
65-69	174	250	230	240	250	240
70-74	116	160	240	210	230	240
75-79	86	120	160	230	210	220
80-84	79	80	100	150	220	190
85+	88	100	110	120	150	210
Total	**4,521**	**4,690**	**4,840**	**4,890**	**4,990**	**5060**
Median Age	41.5	42.0	40.6	39.1	35.2	31.6
Births	230	230	230	270	320	
Deaths	230	250	280	300	330	
Natural Increase	0	-20	-50	-30	-10	
Net Migration	170	150	130	110	120	
Change	*170*	*130*	*80*	*80*	*110*	

Differences between period Totals may not equal Change due to rounding.

Newman Elementary Total Population HIGH SCENARIO

	2010	2015	2020	2025	2030	2035
0-4	514	480	470	470	440	420
5-9	685	560	570	560	560	580
10-14	783	710	590	590	560	590
15-19	563	680	600	470	480	450
20-24	230	300	290	240	180	200
25-29	183	200	270	250	200	150
30-34	249	340	370	450	430	380
35-39	467	400	510	550	630	590
40-44	628	570	570	690	720	790
45-49	761	620	620	560	680	710
50-54	749	750	620	610	560	680
55-59	607	730	730	600	600	550
60-64	566	590	710	710	580	580
65-69	406	550	570	690	700	540
70-74	271	390	520	550	660	640
75-79	259	250	370	490	510	580
80-84	197	240	230	330	450	470
85+	201	220	250	270	330	430
Total	**8,319**	**8,580**	**8,860**	**9,080**	**9,270**	**9330**
Median Age	43.9	45.4	46.5	47.4	48.2	48.6
Births	330	330	340	330	310	
Deaths	310	350	380	450	540	
Natural Increase	20	-20	-40	-120	-230	
Net Migration	260	280	300	290	280	
Change	*280*	*260*	*260*	*170*	*50*	

Differences between period Totals may not equal Change due to rounding.

Appendix C: Enrollment Forecasts—Best Scenario

Needham Public Schools Total Enrollment **BEST SCENARIO**

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
PK	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
K	418	417	414	408	398	397	401	404	406	408	411	408	407	405	404	396
1	389	436	432	429	422	412	411	415	418	420	421	424	423	422	420	419
2	433	399	448	444	440	432	422	421	425	428	430	431	434	433	432	430
3	421	443	406	455	452	448	440	430	429	433	437	438	440	442	441	440
4	434	429	449	413	462	459	455	445	435	434	439	445	447	449	451	450
5	436	442	434	454	418	469	464	460	450	440	439	446	453	454	456	458
Total: K-5	**2531**	**2566**	**2583**	**2603**	**2592**	**2617**	**2593**	**2575**	**2563**	**2563**	**2577**	**2592**	**2604**	**2605**	**2604**	**2593**
6	**446**	**438**	**446**	**438**	**461**	**424**	**476**	**471**	**467**	**459**	**447**	**446**	**453**	**460**	**461**	**463**
7	443	442	434	442	434	456	422	474	469	465	457	445	444	451	458	459
8	375	434	433	425	429	425	447	414	465	460	456	448	436	435	442	449
Total: 7-8	**818**	**876**	**867**	**867**	**863**	**881**	**869**	**888**	**934**	**925**	**913**	**893**	**880**	**886**	**900**	**908**
9	417	368	425	424	417	420	417	438	406	456	451	447	439	427	426	433
10	428	415	364	421	420	413	416	413	434	402	451	449	445	437	425	424
11	421	426	411	360	417	416	409	412	409	430	398	449	447	443	435	423
12	379	419	422	407	356	413	412	405	408	405	426	394	445	443	439	431
SP	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Total: 9-SP	**1653**	**1636**	**1630**	**1620**	**1618**	**1670**	**1662**	**1676**	**1665**	**1701**	**1734**	**1747**	**1784**	**1758**	**1733**	**1719**
Total: K-12	**5533**	**5601**	**5611**	**5613**	**5619**	**5677**	**5685**	**5695**	**5714**	**5733**	**5756**	**5763**	**5806**	**5794**	**5783**	**5768**
Total: K-12	5533	5601	5611	5613	5619	5677	5685	5695	5714	5733	5756	5763	5806	5794	5783	5768
Change		*68*	*10*	*2*	*6*	*58*	*8*	*10*	*19*	*19*	*23*	*7*	*43*	*-12*	*-11*	*-15*
%Change		*1.2%*	*0.2%*	*0.0%*	*0.1%*	*1.0%*	*0.1%*	*0.2%*	*0.3%*	*0.3%*	*0.4%*	*0.1%*	*0.7%*	*-0.2%*	*-0.2%*	*-0.3%*
Total: K-5	2531	2566	2583	2603	2592	2617	2593	2575	2563	2563	2577	2592	2604	2605	2604	2593
Change		*35*	*17*	*20*	*-11*	*25*	*-24*	*-18*	*-12*	*0*	*14*	*15*	*12*	*1*	*-1*	*-11*
%Change		*1.4%*	*0.7%*	*0.8%*	*-0.4%*	*1.0%*	*-0.9%*	*-0.7%*	*-0.5%*	*0.0%*	*0.5%*	*0.6%*	*0.5%*	*0.0%*	*0.0%*	*-0.4%*
Total: 6	446	438	446	438	461	424	476	471	467	459	447	446	453	460	461	463
Change		*-8*	*8*	*-8*	*23*	*-37*	*52*	*-5*	*-4*	*-8*	*-12*	*-1*	*7*	*7*	*1*	*2*
%Change		*-1.8%*	*1.8%*	*-1.8%*	*5.3%*	*-8.0%*	*12.3%*	*-1.1%*	*-0.8%*	*-1.7%*	*-2.6%*	*-0.2%*	*1.6%*	*1.5%*	*0.2%*	*0.4%*
Total: 7-8	818	876	867	867	863	881	869	888	934	925	913	893	880	886	900	908
Change		*58*	*-9*	*0*	*-4*	*18*	*-12*	*19*	*46*	*-9*	*-12*	*-20*	*-13*	*6*	*14*	*8*
%Change		*7.1%*	*-1.0%*	*0.0%*	*-0.5%*	*2.1%*	*-1.4%*	*2.2%*	*5.2%*	*-1.0%*	*-1.3%*	*-2.2%*	*-1.5%*	*0.7%*	*1.6%*	*0.9%*
Total: 9-SP	1653	1636	1630	1620	1618	1670	1662	1676	1665	1701	1734	1747	1784	1758	1733	1719
Change		*-17*	*-6*	*-10*	*-2*	*52*	*-8*	*14*	*-11*	*36*	*33*	*13*	*37*	*-26*	*-25*	*-14*
%Change		*-1.0%*	*-0.4%*	*-0.6%*	*-0.1%*	*3.2%*	*-0.5%*	*0.8%*	*-0.7%*	*2.2%*	*1.9%*	*0.7%*	*2.1%*	*-1.5%*	*-1.4%*	*-0.8%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Broadmeadow Elementary: Total Enrollment **BEST SCENARIO**

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
K	78	77	76	77	74	73	74	75	77	78	79	79	80	80	81	80
1	81	82	82	81	81	78	77	78	79	81	81	82	82	83	83	84
2	90	83	84	84	83	83	80	79	80	81	83	83	84	84	85	85
3	86	93	85	86	86	85	85	82	81	82	83	85	85	86	86	87
4	99	88	94	86	87	87	86	84	81	80	81	84	86	86	87	87
5	76	100	89	95	87	88	86	85	83	80	79	82	85	87	87	88
Total: K-5	**510**	**523**	**510**	**509**	**498**	**494**	**488**	**483**	**481**	**482**	**486**	**495**	**502**	**506**	**509**	**511**
Total: K-5	**510**	**523**	**510**	**509**	**498**	**494**	**488**	**483**	**481**	**482**	**486**	**495**	**502**	**506**	**509**	**511**
Change		*13*	*-13*	*-1*	*-11*	*-4*	*-6*	*-5*	*-2*	*1*	*4*	*9*	*7*	*4*	*3*	*2*
%Change		*2.5%*	*-2.5%*	*-0.2%*	*-2.2%*	*-0.8%*	*-1.2%*	*-1.0%*	*-0.4%*	*0.2%*	*0.8%*	*1.9%*	*1.4%*	*0.8%*	*0.6%*	*0.4%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Eliot Elementary: Total Enrollment **BEST SCENARIO**

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
K	66	68	69	68	66	67	67	68	68	69	70	71	72	73	74	72
1	74	68	69	70	69	67	68	68	69	69	70	71	72	73	74	75
2	66	75	69	70	71	70	68	69	69	70	70	71	72	73	74	75
3	69	67	76	70	71	72	71	69	70	70	71	71	72	72	73	74
4	73	70	68	78	71	72	73	72	70	71	71	72	72	73	73	74
5	78	74	71	69	79	72	73	74	73	71	72	72	73	72	73	73
Total: K-5	**426**	**422**	**422**	**425**	**427**	**420**	**420**	**420**	**419**	**420**	**424**	**428**	**433**	**436**	**441**	**443**
Total: K-5	426	422	422	425	427	420	420	420	419	420	424	428	433	436	441	443
Change		*-4*	*0*	*3*	*2*	*-7*	*0*	*0*	*-1*	*1*	*4*	*4*	*5*	*3*	*5*	*2*
%Change		*-0.9%*	*0.0%*	*0.7%*	*0.5%*	*-1.6%*	*0.0%*	*0.0%*	*-0.2%*	*0.2%*	*1.0%*	*0.9%*	*1.2%*	*0.7%*	*1.1%*	*0.5%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Sunita Williams Elementary: Total Enrollment BEST SCENARIO

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
K	88	90	91	90	88	88	89	89	87	86	86	85	84	83	82	80
1	79	92	92	93	92	90	90	91	91	89	88	88	87	86	85	84
2	99	81	96	96	96	95	93	93	94	94	92	91	91	90	89	88
3	89	102	83	98	98	98	97	95	95	96	96	94	94	94	93	92
4	84	92	104	85	100	100	100	99	97	97	99	99	98	98	98	97
5	90	86	93	105	86	102	102	102	101	99	99	101	102	101	101	101
Total: K-5	**529**	**543**	**559**	**567**	**560**	**573**	**571**	**569**	**565**	**561**	**560**	**558**	**556**	**552**	**548**	**542**
Total: K-5	529	543	559	567	560	573	571	569	565	561	560	558	556	552	548	542
Change		*14*	*16*	*8*	*-7*	*13*	*-2*	*-2*	*-4*	*-4*	*-1*	*-2*	*-2*	*-4*	*-4*	*-6*
%Change		*2.6%*	*2.9%*	*1.4%*	*-1.2%*	*2.3%*	*-0.3%*	*-0.4%*	*-0.7%*	*-0.7%*	*-0.2%*	*-0.4%*	*-0.4%*	*-0.7%*	*-0.7%*	*-1.1%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Mitchell Elementary: Total Enrollment BEST SCENARIO

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
K	85	83	81	79	78	78	79	79	80	80	81	79	78	77	76	74
1	63	89	86	84	82	81	81	82	82	83	83	84	84	83	82	81
2	78	65	91	88	86	84	83	83	84	84	85	85	86	86	85	84
3	74	80	66	92	89	87	85	84	84	85	86	86	86	87	87	86
4	78	75	81	67	93	90	88	86	85	85	86	87	87	87	88	88
5	74	80	76	82	68	94	91	89	87	86	86	87	88	88	88	89
Total: K-5	**452**	**472**	**481**	**492**	**496**	**514**	**507**	**503**	**502**	**503**	**507**	**508**	**509**	**508**	**506**	**502**
Total: K-5	452	472	481	492	496	514	507	503	502	503	507	508	509	508	506	502
Change		*20*	*9*	*11*	*4*	*18*	*-7*	*-4*	*-1*	*1*	*4*	*1*	*1*	*-1*	*-2*	*-4*
%Change		*4.4%*	*1.9%*	*2.3%*	*0.8%*	*3.6%*	*-1.4%*	*-0.8%*	*-0.2%*	*0.2%*	*0.8%*	*0.2%*	*0.2%*	*-0.2%*	*-0.4%*	*-0.8%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Newman Elementary: Total Enrollment BEST SCENARIO

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
K	101	99	97	94	92	91	92	93	94	95	95	94	93	92	91	90
1	92	105	103	101	98	96	95	96	97	98	99	99	98	97	96	95
2	100	95	108	106	104	100	98	97	98	99	100	101	101	100	99	98
3	103	101	96	109	108	106	102	100	99	100	101	102	103	103	102	101
4	100	104	102	97	111	110	108	104	102	101	102	103	104	105	105	104
5	118	102	105	103	98	113	112	110	106	104	103	104	105	106	107	107
Total: K-5	**614**	**606**	**611**	**610**	**611**	**616**	**607**	**600**	**596**	**597**	**600**	**603**	**604**	**603**	**600**	**595**
Total: K-5	614	606	611	610	611	616	607	600	596	597	600	603	604	603	600	595
Change		*-8*	*5*	*-1*	*1*	*5*	*-9*	*-7*	*-4*	*1*	*3*	*3*	*1*	*-1*	*-3*	*-5*
%Change		*-1.3%*	*0.8%*	*-0.2%*	*0.2%*	*0.8%*	*-1.5%*	*-1.2%*	*-0.7%*	*0.2%*	*0.5%*	*0.5%*	*0.2%*	*-0.2%*	*-0.5%*	*-0.8%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

High Rock: Total Enrollment BEST SCENARIO

	2022-23	2023-24	2024-25	2025-26-	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
6	446	438	446	438	461	424	476	471	467	459	447	446	453	460	461	463
Total 6	**446**	**438**	**446**	**438**	**461**	**424**	**476**	**471**	**467**	**459**	**447**	**446**	**453**	**460**	**461**	**463**
Total 6	446	438	446	438	461	424	476	471	467	459	447	446	453	460	461	463
Change		*-8*	*8*	*0*	*15*	*-37*	*52*	*-5*	*-4*	*-8*	*-12*	*-1*	*7*	*7*	*1*	*2*
% Change		*-2.7%*	*-11%*	*0.0%*	*3.4%*	*-8.0%*	*12%*	*-1.1%*	*-0.8%*	*-1.7%*	*-2.6%*	*-0.2%*	*1.6%*	*1.5%*	*0.2%*	*0.4%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Pollard Middle School: Total Enrollment BEST SCENARIO

	2022-23	2023-24	2024-25	2025-26-	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
7	443	442	434	442	434	456	422	474	469	465	457	445	444	451	458	459
8	375	434	433	425	429	425	447	414	465	460	456	448	436	435	442	449
Total: 7-8	**818**	**876**	**867**	**867**	**863**	**881**	**869**	**888**	**934**	**925**	**913**	**893**	**880**	**886**	**900**	**908**
Total: 7-8	818	876	867	867	863	881	869	888	934	925	913	893	880	886	900	908
Change		*58*	*-9*	*0*	*-4*	*18*	*-12*	*19*	*46*	*-9*	*-12*	*-20*	*-13*	*6*	*14*	*8*
% Change		*7.1%*	*-1.0%*	*0.0%*	*-0.5%*	*2.1%*	*-1.4%*	*2.2%*	*5.2%*	*-1.0%*	*-1.3%*	*-2.2%*	*-1.5%*	*0.7%*	*1.6%*	*0.9%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Needham High School: Total Enrollment BEST SCENARIO

	2022-23	2023-24	2024-25	2025-26-	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
9	417	368	425	424	417	420	417	438	406	456	451	447	439	427	426	433
10	428	415	364	421	420	413	416	413	434	402	451	449	445	437	425	424
11	421	426	411	360	417	416	409	412	409	430	398	449	447	443	435	423
12	379	419	422	407	356	413	412	405	408	405	426	394	445	443	439	431
Total: 9-12	**1645**	**1628**	**1622**	**1612**	**1610**	**1662**	**1654**	**1668**	**1657**	**1693**	**1726**	**1739**	**1776**	**1750**	**1725**	**1711**
Total: 9-12	1645	1628	1622	1612	1610	1662	1654	1668	1657	1693	1726	1739	1776	1750	1725	1711
Change		*-17*	*-6*	*-10*	*-2*	*52*	*-8*	*14*	*-11*	*36*	*33*	*13*	*37*	*-26*	*-25*	*-14*
% Change		*-1.0%*	*-0.4%*	*-0.6%*	*-0.1%*	*3.2%*	*-0.5%*	*0.8%*	*-0.7%*	*2.2%*	*1.9%*	*0.8%*	*2.1%*	*-1.5%*	*-1.4%*	*-0.8%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Appendix D: Enrollment Forecasts—High Scenario

Needham Public Schools Total Enrollment **HIGH SCENARIO**

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
PK	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
K	418	416	414	408	404	405	410	413	415	417	418	413	410	406	403	398
1	389	436	431	429	422	418	417	422	425	427	428	429	426	423	419	416
2	433	399	448	443	440	434	428	427	433	436	438	439	439	436	433	429
3	421	443	406	455	451	448	442	436	436	442	446	447	448	448	445	442
4	434	429	449	413	462	458	455	447	442	442	449	455	456	457	457	454
5	436	442	434	454	418	469	463	460	452	448	448	457	463	464	465	465
Total: K-5	**2531**	**2565**	**2582**	**2602**	**2597**	**2632**	**2615**	**2605**	**2603**	**2612**	**2627**	**2640**	**2642**	**2634**	**2622**	**2604**
6	**446**	**438**	**446**	**438**	**461**	**424**	**476**	**470**	**467**	**461**	**455**	**455**	**464**	**470**	**471**	**472**
7	443	442	434	442	434	456	422	474	468	465	459	453	453	462	468	469
8	375	434	433	425	429	425	447	414	465	459	456	450	444	444	453	459
Total: 7-8	**818**	**876**	**867**	**867**	**863**	**881**	**869**	**888**	**933**	**924**	**915**	**903**	**897**	**906**	**921**	**928**
9	417	368	425	424	417	420	417	438	406	456	450	447	441	435	435	444
10	428	415	364	421	420	413	416	413	434	402	451	448	445	439	433	433
11	421	426	411	360	417	416	409	412	409	430	398	449	446	443	437	431
12	379	419	422	407	356	413	412	405	408	405	426	394	445	442	439	433
SP	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Total: 9-SP	**1653**	**1636**	**1630**	**1620**	**1618**	**1670**	**1662**	**1676**	**1665**	**1701**	**1733**	**1746**	**1785**	**1767**	**1752**	**1749**
Total: K-12	**5533**	**5600**	**5610**	**5612**	**5624**	**5692**	**5707**	**5724**	**5753**	**5783**	**5815**	**5829**	**5873**	**5862**	**5851**	**5838**
Total: K-12	5533	5600	5610	5612	5624	5692	5707	5724	5753	5783	5815	5829	5873	5862	5851	5838
Change		*67*	*10*	*2*	*12*	*68*	*15*	*17*	*29*	*30*	*32*	*14*	*44*	*-11*	*-11*	*-13*
%Change		*1.2%*	*0.2%*	*0.0%*	*0.2%*	*1.2%*	*0.3%*	*0.3%*	*0.5%*	*0.5%*	*0.6%*	*0.2%*	*0.8%*	*-0.2%*	*-0.2%*	*-0.2%*
Total: K-5	2531	2565	2582	2602	2597	2632	2615	2605	2603	2612	2627	2640	2642	2634	2622	2604
Change		*34*	*17*	*20*	*-5*	*35*	*-17*	*-10*	*-2*	*9*	*15*	*13*	*2*	*-8*	*-12*	*-18*
%Change		*1.3%*	*0.7%*	*0.8%*	*-0.2%*	*1.3%*	*-0.6%*	*-0.4%*	*-0.1%*	*0.3%*	*0.6%*	*0.5%*	*0.1%*	*-0.3%*	*-0.5%*	*-0.7%*
Total: 6	446	438	446	438	461	424	476	470	467	461	455	455	464	470	471	472
Change		*-8*	*8*	*-8*	*23*	*-37*	*52*	*-6*	*-3*	*-6*	*-6*	*0*	*9*	*6*	*1*	*1*
%Change		*-1.8%*	*1.8%*	*-1.8%*	*5.3%*	*-8.0%*	*12%*	*-1.3%*	*-0.6%*	*-1.3%*	*-1.3%*	*0.0%*	*2.0%*	*1.3%*	*0.2%*	*0.2%*
Total: 7-8	818	876	867	867	863	881	869	888	933	924	915	903	897	906	921	928
Change		*58*	*-9*	*0*	*-4*	*18*	*-12*	*19*	*45*	*-9*	*-9*	*-12*	*-6*	*9*	*15*	*7*
%Change		*7.1%*	*-1.0%*	*0.0%*	*-0.5%*	*2.1%*	*-1.4%*	*2.2%*	*5.1%*	*-1.0%*	*-1.0%*	*-1.3%*	*-0.7%*	*1.0%*	*1.7%*	*0.8%*
Total: 9-SP	1653	1636	1630	1620	1618	1670	1662	1676	1665	1701	1733	1746	1785	1767	1752	1749
Change		*-17*	*-6*	*-10*	*-2*	*52*	*-8*	*14*	*-11*	*36*	*32*	*13*	*39*	*-18*	*-15*	*-3*
%Change		*-1.0%*	*-0.4%*	*-0.6%*	*-0.1%*	*3.2%*	*-0.5%*	*0.8%*	*-0.7%*	*2.2%*	*1.9%*	*0.8%*	*2.2%*	*-1.0%*	*-0.8%*	*-0.2%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Broadmeadow Elementary: Total Enrollment **HIGH SCENARIO**

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
K	78	77	76	77	74	73	74	75	77	78	79	79	80	80	81	80
1	81	82	82	81	81	78	77	78	79	81	81	82	82	83	83	84
2	90	83	84	84	83	83	80	79	80	81	83	83	84	84	85	85
3	86	93	85	86	86	85	85	82	81	82	83	85	85	86	86	87
4	99	88	94	86	87	87	86	84	81	80	81	84	86	86	87	87
5	76	100	89	95	87	88	86	85	83	80	79	82	85	87	87	88
Total: K-5	**510**	**523**	**510**	**509**	**498**	**494**	**488**	**483**	**481**	**482**	**486**	**495**	**502**	**506**	**509**	**511**
Total: K-5	510	523	510	509	498	494	488	483	481	482	486	495	502	506	509	511
Change		*13*	*-13*	*-1*	*-11*	*-4*	*-6*	*-5*	*-2*	*1*	*4*	*9*	*7*	*4*	*3*	*2*
%Change		*2.5%*	*-2.5%*	*-0.2%*	*-2.2%*	*-0.8%*	*-1.2%*	*-1.0%*	*-0.4%*	*0.2%*	*0.8%*	*1.9%*	*1.4%*	*0.8%*	*0.6%*	*0.4%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Eliot Elementary: Total Enrollment **HIGH SCENARIO**

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
K	66	67	69	68	72	75	76	77	77	78	77	76	75	74	73	74
1	74	68	68	70	69	73	74	75	76	76	77	76	75	74	73	72
2	66	75	69	69	71	72	74	75	77	78	78	79	77	76	75	74
3	69	67	76	70	70	72	73	75	77	79	80	80	80	78	77	76
4	73	70	68	78	71	71	73	74	77	79	81	82	81	81	79	78
5	78	74	71	69	79	72	72	74	75	79	81	83	83	82	82	80
Total: K-5	**426**	**421**	**421**	**424**	**432**	**435**	**442**	**450**	**459**	**469**	**474**	**476**	**471**	**465**	**459**	**454**
Total: K-5	426	421	421	424	432	435	442	450	459	469	474	476	471	465	459	454
Change		*-5*	*0*	*3*	*8*	*3*	*7*	*8*	*9*	*10*	*5*	*2*	*-5*	*-6*	*-6*	*-5*
%Change		*-1.2%*	*0.0%*	*0.7%*	*1.9%*	*0.7%*	*1.6%*	*1.8%*	*2.0%*	*2.2%*	*1.1%*	*0.4%*	*-1.1%*	*-1.3%*	*-1.3%*	*-1.1%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Sunita Williams Elementary: Total Enrollment **HIGH SCENARIO**

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
K	88	90	91	90	88	88	89	89	87	86	86	85	84	83	82	80
1	79	92	92	93	92	90	90	91	91	89	88	88	87	86	85	84
2	99	81	96	96	96	95	93	93	94	94	92	91	91	90	89	88
3	89	102	83	98	98	98	97	95	95	96	96	94	94	94	93	92
4	84	92	104	85	100	100	100	99	97	97	99	99	98	98	98	97
5	90	86	93	105	86	102	102	102	101	99	99	101	102	101	101	101
Total: K-5	**529**	**543**	**559**	**567**	**560**	**573**	**571**	**569**	**565**	**561**	**560**	**558**	**556**	**552**	**548**	**542**
Total: K-5	529	543	559	567	560	573	571	569	565	561	560	558	556	552	548	542
Change		*14*	*16*	*8*	*-7*	*13*	*-2*	*-2*	*-4*	*-4*	*-1*	*-2*	*-2*	*-4*	*-4*	*-6*
%Change		*2.6%*	*2.9%*	*1.4%*	*-1.2%*	*2.3%*	*-0.3%*	*-0.4%*	*-0.7%*	*-0.7%*	*-0.2%*	*-0.4%*	*-0.4%*	*-0.7%*	*-0.7%*	*-1.1%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Mitchell Elementary: Total Enrollment **HIGH SCENARIO**

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	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
K	85	83	81	79	78	78	79	79	80	80	81	79	78	77	76	74
1	63	89	86	84	82	81	81	82	82	83	83	84	84	83	82	81
2	78	65	91	88	86	84	83	83	84	84	85	85	86	86	85	84
3	74	80	66	92	89	87	85	84	84	85	86	86	86	87	87	86
4	78	75	81	67	93	90	88	86	85	85	86	87	87	87	88	88
5	74	80	76	82	68	94	91	89	87	86	86	87	88	88	88	89
Total: K-5	**452**	**472**	**481**	**492**	**496**	**514**	**507**	**503**	**502**	**503**	**507**	**508**	**509**	**508**	**506**	**502**
Total: K-5	452	472	481	492	496	514	507	503	502	503	507	508	509	508	506	502
Change		*20*	*9*	*11*	*4*	*18*	*-7*	*-4*	*-1*	*1*	*4*	*1*	*1*	*-1*	*-2*	*-4*
%Change		*4.4%*	*1.9%*	*2.3%*	*0.8%*	*3.6%*	*-1.4%*	*-0.8%*	*-0.2%*	*0.2%*	*0.8%*	*0.2%*	*0.2%*	*-0.2%*	*-0.4%*	*-0.8%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Newman Elementary: Total Enrollment HIGH SCENARIO

	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
K	101	99	97	94	92	91	92	93	94	95	95	94	93	92	91	90
1	92	105	103	101	98	96	95	96	97	98	99	99	98	97	96	95
2	100	95	108	106	104	100	98	97	98	99	100	101	101	100	99	98
3	103	101	96	109	108	106	102	100	99	100	101	102	103	103	102	101
4	100	104	102	97	111	110	108	104	102	101	102	103	104	105	105	104
5	118	102	105	103	98	113	112	110	106	104	103	104	105	106	107	107
Total: K-5	**614**	**606**	**611**	**610**	**611**	**616**	**607**	**600**	**596**	**597**	**600**	**603**	**604**	**603**	**600**	**595**
Total: K-5	614	606	611	610	611	616	607	600	596	597	600	603	604	603	600	595
Change		*-8*	*5*	*-1*	*1*	*5*	*-9*	*-7*	*-4*	*1*	*3*	*3*	*1*	*-1*	*-3*	*-5*
%Change		*-1.3%*	*0.8%*	*-0.2%*	*0.2%*	*0.8%*	*-1.5%*	*-1.2%*	*-0.7%*	*0.2%*	*0.5%*	*0.5%*	*0.2%*	*-0.2%*	*-0.5%*	*-0.8%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

High Rock: Total Enrollment HIGH SCENARIO

	2022-23	2023-24	2024-25	2025-26-	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
6	446	438	446	438	461	424	476	470	467	461	455	455	464	470	471	472
Total 6	**446**	**438**	**446**	**438**	**461**	**424**	**476**	**470**	**467**	**461**	**455**	**455**	**464**	**470**	**471**	**472**
Total 6	446	438	446	438	461	424	476	470	467	461	455	455	464	470	471	472
Change	*-4*	*-8*	*8*	*0*	*15*	*-37*	*52*	*-6*	*-3*	*-6*	*-6*	*0*	*9*	*6*	*1*	*1*
% Change	*-0.9%*	*-2.7%*	*-11%*	*0.0%*	*3.4%*	*-8.0%*	*12%*	*-1.3%*	*-0.6%*	*-1.3%*	*-1.3%*	*0.0%*	*2.0%*	*1.3%*	*0.2%*	*0.2%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Pollard Middle School: Total Enrollment HIGH SCENARIO

	2022-23	2023-24	2024-25	2025-26-	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
7	443	442	434	442	434	456	422	474	468	465	459	453	453	462	468	469
8	375	434	433	425	429	425	447	414	465	459	456	450	444	444	453	459
Total: 7-8	**818**	**876**	**867**	**867**	**863**	**881**	**869**	**888**	**933**	**924**	**915**	**903**	**897**	**906**	**921**	**928**
Total: 7-8	818	876	867	867	863	881	869	888	933	924	915	903	897	906	921	928
Change		*58*	*-9*	*0*	*-4*	*18*	*-12*	*19*	*45*	*-9*	*-9*	*-12*	*-6*	*9*	*15*	*7*
% Change		*7.1%*	*-1.0%*	*0.0%*	*-0.5%*	*2.1%*	*-1.4%*	*2.2%*	*5.1%*	*-1.0%*	*-1.0%*	*-1.3%*	*-0.7%*	*1.0%*	*1.7%*	*0.8%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Needham High School: Total Enrollment HIGH SCENARIO

	2022-23	2023-24	2024-25	2025-26-	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	3037-38
9	417	368	425	424	417	420	417	438	406	456	450	447	441	435	435	444
10	428	415	364	421	420	413	416	413	434	402	451	448	445	439	433	433
11	421	426	411	360	417	416	409	412	409	430	398	449	446	443	437	431
12	379	419	422	407	356	413	412	405	408	405	426	394	445	442	439	433
Total: 9-12	**1645**	**1628**	**1622**	**1612**	**1610**	**1662**	**1654**	**1668**	**1657**	**1693**	**1725**	**1738**	**1777**	**1759**	**1744**	**1741**
Total: 9-12	1645	1628	1622	1612	1610	1662	1654	1668	1657	1693	1725	1738	1777	1759	1744	1741
Change		*-17*	*-6*	*-10*	*-2*	*52*	*-8*	*14*	*-11*	*36*	*32*	*13*	*39*	*-18*	*-15*	*-3*
% Change		*-1.0%*	*-0.4%*	*-0.6%*	*-0.1%*	*3.2%*	*-0.5%*	*0.8%*	*-0.7%*	*2.2%*	*1.9%*	*0.8%*	*2.2%*	*-1.0%*	*-0.9%*	*-0.2%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.