

The Public Schools of Southborough

Grade-Level Configuration Evaluation - 2021-2022

Purpose:

The Public Schools of Southborough in collaboration with the Town of Southborough's Capital Planning Committee - School Research Subcommittee are analyzing the space needs of The Public Schools of Southborough as well as the anticipated school-based capital projects. The purpose of this analysis is to:

- Evaluate enrollment trends and projections; and,
- Identify opportunities to effectively maximize school facilities and resources to improve educational experiences for students.

The Public Schools of Southborough acknowledges that the examination of facilities, programming, and capital investments requires a community partnership. Parents, students, educators, citizens, and the Town of Southborough are key stakeholders in vetting recommendations and determining the next steps. As the District considers the advantages and disadvantages of grade-level configurations, the District must consider student transportation, moving schedules and plans, staff contracts and distribution, and effects on school traffic. The report is intended to serve as a catalyst for the District and the Southborough School Committee to engage all stakeholders in future decisions and capital improvements to school facilities. Furthermore, the District acknowledges that school-based projects cannot be viewed in isolation and need to be placed in the context of the Town's Master Plan.

Process:

In the spring of 2020, The Public Schools of Northborough and Southborough reauthorized its strategic plan entitled - *Vision 2026: Educate, Inspire, Challenge*. This plan is grounded in a careful examination of student performance data and a thoughtful approach to continuous improvement in all facets of the organization. The Plan identifies five strategic objectives: Empowering Learners, Equity of Opportunity, Healthy and Balanced Learners, Educator Learning and Leadership, and Finance and Operations to Support Teaching and Learning. The fifth strategic objective identifies the importance of "developing, supporting and operating sustainable, functional, and well-maintained schools" (Vision 2026). This work is anchored on ensuring our buildings maximize the student experience in a cost-effective, energy-efficient manner.

Information in this report is a result of the following work by the Southborough principals and Central Leadership Team which is outlined below:

- Reviewed research on the impact of grade-level configuration on student programming
- Commissioned demographic reports to evaluate enrollment trends and projections
- Commissioned a Facilities Conditions Assessment of the Margaret A. Neary Elementary School
- Evaluated the District's current grade-level configurations
- Analyzed programmatic goals and aligned goals with how to best utilize current school facilities
- Reviewed short- and long-term capital projects

Research Review:

The research on the impact of grade-level configuration and student achievement does not identify or support one grade configuration as the most effective. Much of the research on grade configurations relates to school-to-school transitions and specifically focuses on the potential impact that such transitions have on student achievement. This is also a common concern cited by districts considering changes to their schools' grade spans. Researchers generally find that a higher number of school transitions may result in decreased student achievement and "affect instructional continuity and communication across grades."⁽⁴⁾

Multiple research studies in the 1990s by John Alspaugh conclude that academic loss across all content areas should be expected during transition years between elementary and intermediate grades, regardless of the grade level. Achievement typically rebounds in the second year after a school transition.⁽⁶⁾

Research into the potential impact of grade configurations is generally inconclusive, with results that are difficult to generalize to other districts. However, studies suggest that students perform better at schools with a larger number of grade levels. Research on school transitions finds that academic loss across all content areas should be expected during transition years. To address concerns and mitigate the impact of changing schools, districts should implement ongoing and comprehensive transition plans that engage students, teachers, and parents.⁽¹⁾

Key Findings:

- Grade-level configurations are typically driven by available space, not by programmatic design.⁽⁴⁾
- Grade-level configuration significantly impacts whether resources are being used efficiently (time, people, materials, and instructional resources).⁽⁷⁾
- Reducing the number of transitions between schools in a K-5 experience does impact student performance and a student's/family's sense of community.⁽¹⁾
- How educators are logically grouped across buildings impacts the opportunities for teachers to collaborate.⁽²⁾
- Researchers generally find that a higher number of school transitions may result in decreased student achievement and "affect instructional continuity and communication across grades."⁽⁶⁾

Demographic Reports:

To project school space needs in relationship to enrollment, the District engaged in two demographic studies to identify student enrollment projections. The first firm, NESDEC, identified a 3.8% decrease in enrollment from 2020 to 2030, which represents approximately forty-three students. The second firm, RLS Demographics, Inc. identified a 9.3% increase in enrollment for the same time period. These reports were utilized by the District's Central Leadership Team to identify opportunities for how current facilities could be utilized. As a result of its analysis of the enrollment data and evaluating available instructional space of each of the facilities, it determined that alternative grade-level configurations are feasible. For the purposes of its feasibility, the District utilized the 16% projected to increase from 2020 to 2030. The projection is based on a 10% increase in the Projected Total Fertility Rate (TFR) and Crude Migration Rate (CMR). The District's position is that it is the enrollment ceiling and provides flexibility if enrollment increases greater than RLS's projections.

Table A: RLS Current and Projected Enrollment - Southborough School District

	F-2015	F-2016	F-2017	F-2018	F-2019	F-2020	F-2021	F-2022	F-2023	F-2024	F-2025	F-2026	F-2027	F-2028	F-2029	F-2030
Total K to 8	1,268	1,257	1,235	1,191	1,200	1,135	1,152	1,133	1,124	1,138	1,130	1,131	1,149	1,156	1,196	1,237
Total K to G1	1,140	1,138	1,105	1,080	1,060	1,031	1,035	1,031	1,012	1,007	1,028	1,005	1,015	1,016	1,050	1,082
Kindergarten	128	119	130	111	140	104	117	102	112	131	102	126	134	141	146	155
Grade 1	121	136	120	133	117	143	116	124	108	120	139	108	134	142	149	155
Grade 2	110	127	138	124	138	120	146	119	128	111	123	143	111	138	146	154
Grade 3	131	118	128	134	120	134	127	146	119	128	111	123	143	111	137	146
Grade 4	159	137	121	129	135	123	137	129	149	121	130	113	125	146	113	140
Grade 5	138	161	137	129	133	129	123	136	129	148	121	130	113	124	145	113
Grade 6	161	143	159	136	129	132	128	122	136	128	147	120	129	112	124	144
Grade 7	156	157	146	152	135	123	129	125	119	132	125	143	117	126	109	121
Grade 8	164	159	156	143	153	127	129	129	125	119	132	125	143	117	125	109

Table B: Impact of a 10% Decrease and Increase in Total Fertility Rate and Crude Migration Rate

	10 Percent Decrease in TFR and CMR					Original Fertility/Migration Assumption					10 Percent Increase in TFR and CMR				
	F-2026	F-2027	F-2028	F-2029	F-2030	F-2026	F-2027	F-2028	F-2029	F-2030	F-2026	F-2027	F-2028	F-2029	F-2030
Total K to G8	1,119	1,122	1,112	1,136	1,160	1,131	1,149	1,156	1,196	1,237	1,144	1,176	1,200	1,256	1,315
Total G1 to G8	1,005	1,003	988	1,004	1,020	1,005	1,015	1,016	1,050	1,082	1,005	1,029	1,045	1,095	1,144
Kindergarten	114	119	125	131	141	126	134	141	146	155	138	148	155	161	171
Grade 1	108	121	127	133	140	108	134	142	149	155	108	147	157	165	172
Grade 2	143	111	125	130	136	143	111	138	146	154	143	111	151	161	170
Grade 3	123	143	111	125	130	123	143	111	137	146	123	143	111	151	161
Grade 4	113	125	146	113	127	113	125	146	113	140	113	125	146	113	154
Grade 5	130	113	124	145	113	130	113	124	145	113	130	113	124	145	113
Grade 6	120	129	112	124	144	120	129	112	124	144	120	129	112	124	144
Grade 7	143	117	126	109	121	143	117	126	109	121	143	117	126	109	121
Grade 8	125	143	117	125	109	125	143	117	125	109	125	143	117	125	109

Programmatic Evaluation:

The Southborough principals and Central Leadership Team reviewed and evaluated its programmatic design and current grade-level configurations. The Public Schools of Southborough provides students with a comprehensive educational experience that includes core content areas, music, art, physical education, world language, and digital literacy. Class sizes are in accordance with the Southborough School Committee's Class Size Policy, I-240.

The Southborough principals and Central Leadership Team, in their space needs analysis, used the following programmatic assumptions:

- No change to Southborough School Committee's Class Size Policy, I-240
- No change in the current level of programming (E.g. Music, art, physical education, special education, etc.)

Current Southborough School Buildings

The Public Schools of Southborough currently maintains four school buildings (Table A). Currently, Southborough students in grades PreKindergarten-Grade 8 learn in four different buildings with four different grade spans.

Table A

School	Grade Span*	Grade Level Configuration **	Maximum Classroom Spaces	Classroom Spaces Needed ***	Occupancy Permit	Septic Capacity	Projected Enrollment (2030)	Projected Staffing	Enrollment and Staffing
Mary E. Finn Elementary School****	PreK, K, 1	PreK-1	30	22	675	635	403	75	478
Albert S. Woodward Elementary School	2,3	2-3	24	18	500	624	331	60	391
Margaret A. Neary Elementary School	4,5	4-5	21	15	600	522	267	52	319
P. Brent Trottier Middle School	6,7,8	6-8	33	17	1200	720	374	90	464

*Grade span refers to the number of grade levels in a given school building.

**Grade-level configuration is a term that depicts which grades are grouped together.

***Assumes universal preschool is required (Used 20% enrollment increase in PreK from NESDEC Projections) and does not include spaces for special subjects (e.g. music and physical education), special education programs, cafeteria and office space.

Mary E. Finn Elementary School

The Mary E. Finn Elementary School is an early childhood center currently servicing students in grades Pre-K to Grade 1. The building was originally constructed in 1967 and was then renovated and expanded in 2000 to 76,000 square feet. The building was designed to house the District's youngest learners and includes developmentally appropriate bathroom facilities.

Albert S. Woodward Memorial Elementary School

The Albert S. Woodward Memorial Elementary is a traditional elementary school that currently serves students in Grade 2 and Grade 3. The building site was the original middle school for Southborough until the P. Brent Trottier Middle School was built in 1998. The original building was torn down and the footprint was used to build the 68,000 square foot facility, which opened in 2004. The design of the building from classroom configuration to common spaces like the library, cafeteria, and gymnasium are conducive to a variety of learning experiences.

Margaret A. Neary Elementary School

Originally constructed in 1970, the Margaret A. Neary Elementary School is a 62,736 gross square foot facility on a single level located on an eighty-one (81) acre site. During the 1990s, the Town of Southborough responded to its population growth by building/renovating several schools in rapid succession. The Margaret A. Neary Elementary School was not part of that investment.

The Margaret A. Neary Elementary School has been identified as the District's priority for renovation. While maintained over the years, the majority of the facility's building systems and components are nearing the end-of-life expectancy, especially the roof and electrical system. To support this determination, the District contracted with Vertex Companies, Inc. (Chester, PA) to complete a Facilities Conditions Assessment (March 2021). This assessment confirmed the need for renovation or replacement of the roof, electrical, and other building modifications to meet building code requirements. The District's priority is to modernize the Margaret A. Neary Elementary School to a condition that rectifies current deficiencies and satisfies projected future requirements for educational programs.

P. Brent Trottier Middle School

The P. Brent Trottier Middle School established in 1998 and expanded in 2004 is a well-designed 130,000 square foot middle school that services students in Grade 6, Grade 7, and Grade 8. The three-year experience provides students with community-building opportunities that provide a foundation for a transition into high school.

Scenarios for Consideration:

The following four scenarios are evaluated below:

1. Keep Current Configuration: PreK-1, 2-3, 4-5, 6-8
2. Consolidate to three schools: PreK-2, 3-5, 6-8 (Decommission Woodward)
3. Consolidate to three schools: PreK-2, 3-5, 6-8 (Decommission Neary)
4. Consolidate to three schools: PreK-1, 2-4, 5-8 (Decommission Neary)

Each scenario was evaluated based on the following criteria:

1. Meets Occupancy Permit
2. Meets Septic Capacity
3. Meets Programmatic Space Requirements
4. Maximizes Resources (People, Materials, and Instructional Resources)
5. Minimizes Student Transitions

For enrollment projections, the District used RLS Demographics's 2030 enrollment projections, with a 10% increase in TFR and CMR.

Evaluation of Scenarios:

Based on the analysis of the four scenarios, it is the District's position that it is not feasible to consolidate due to the current spacing requirements to maintain class sizes and continue to offer a full complement of programming to its students. The District believes there is a risk of reaching its projected 2030 enrollment capacity and requiring the District to implement larger class sizes and utilize programmatic spaces (E.g. Art Rooms) to accommodate the student population.

Furthermore, it is the District's position that there is a high probability that within the next ten years there will be a requirement for public school systems across the state to offer universal preschool. If universal preschool is required, additional classroom space at Mary E. Finn Elementary School would be needed.

The District's recommendation is to investigate a building project that would consolidate schools. The next steps are to:

1. Partner with the Town's Capital Planning Committee - School Research Subcommittee
2. Partner with Southborough Selectboard on Town's Master Plan
3. Partner with Massachusetts School Building Authority (MSBA)
4. Evaluate and update the District's Capital Plan
5. Seek community input and feedback on scenarios
6. Seek opportunities to:
 - a. Maximize people, materials, and instructional resources
 - b. Maximize collaboration of faculty and staff
 - c. Minimize student transitions
 - d. Increase continuity and coherence of the overall program

Scenario 1: Keep Current Configuration - PreK-1, 2-3, 4-5, 6-8

School	Grade Span*	Grade Level Configuration **	Maximum Classroom Spaces	Classroom Spaces Needed	Occupancy Permit	Septic Capacity	Projected Enrollment (2030)	Projected Staffing	Enrollment and Staffing
Mary E. Finn Elementary School****	PreK, K, 1	PreK-1	30	22	675	635	403	75	478
Albert S. Woodward Elementary School	2,3	2-3	24	18	500	624	331	60	391
Margaret A. Neary Elementary School	4,5	4-5	21	15	600	522	267	52	319
P. Brent Trottier Middle School	6,7,8	6-8	33	17	1200	720	374	90	464

Analysis of Scenario 1: Keep Current Configuration - PreK-1, 2-3, 4-5, 6-8

School	Meets Occupancy Permit	Meets Septic Capacity	Meets Space Requirements	Collaboration Maximized	Resources Maximized	Minimizes Student Transitions
Mary E. Finn Elementary School	Yes	Yes	Yes	No	No	No
Albert S. Woodward Elementary School	Yes	Yes	Yes	No	No	No
Margaret A. Neary Elementary School	Yes	Yes	Yes	No	No	No
P. Brent Trottier Middle School	Yes	Yes	Yes	Yes	Yes	Yes

Scenario 2: PreK-2, 3-5, 6-8 (Decommission Woodward)

School	Grade Span*	Grade Level Configuration **	Maximum Classroom Spaces	Classroom Spaces Needed	Occupancy Permit	Septic Capacity	Projected Enrollment (2030)	Projected Staffing	Enrollment and Staffing
Mary E. Finn Elementary School****	PreK, K, 1, 2	PreK-2	30	32	675	635	573	105	678
Margaret A. Neary Elementary School	3, 4, 5	3-5	21	24	600	522	428	82	510
P. Brent Trottier Middle School	6, 7, 8	6-8	33	17	1200	720	374	90	464

Analysis of Scenario 2: PreK-2, 3-5, 6-8 (Decommission Woodward)

School	Meets Occupancy Permit	Meets Septic Capacity	Meets Space Requirements	Collaboration Maximized	Resources Maximized	Minimizes Student Transitions
Mary E. Finn Elementary School	No	No	No	Yes	Yes	Yes
Margaret A. Neary Elementary School	Yes	No	No	Yes	Yes	Yes
P. Brent Trottier Middle School	Yes	Yes	Yes	Yes	Yes	Yes

Scenario 3: PreK-2, 3-5, 6-8 (Decommission Neary)

School	Grade Span*	Grade Level Configuration **	Maximum Classroom Spaces	Classroom Spaces Needed	Occupancy Permit	Septic Capacity	Projected Enrollment (2030)	Projected Staffing	Enrollment and Staffing
Mary E. Finn Elementary School****	PreK, K, 1, 2	PreK-2	30	32	675	635	573	105	678
Albert S. Woodward Elementary School	3, 4, 5	3-5	24	24	500	624	428	92	520
P. Brent Trottier Middle School	6, 7, 8	6-8	33	17	1200	720	374	90	464

Analysis of Scenario 3: PreK-2, 3-5, 6-8 (Decommission Neary)

School	Meets Occupancy Permit	Meets Septic Capacity	Meets Space Requirements	Collaboration Maximized	Resources Maximized	Minimizes Student Transitions
Mary E. Finn Elementary School	No	No	No	Yes	Yes	Yes
Albert S. Woodward Elementary School	No	Yes	Yes	Yes	Yes	Yes
P. Brent Trottier Middle School	Yes	Yes	Yes	Yes	Yes	Yes

Scenario 4: PreK-1, 2-4, 5-8 (Decommission Neary)

School	Grade Span*	Grade Level Configuration **	Maximum Classroom Spaces	Classroom Spaces Needed	Occupancy Permit	Septic Capacity	Projected Enrollment (2030)	Projected Staffing	Enrollment and Staffing
Mary E. Finn Elementary School****	PreK, K, 1	PreK-1	30	22	675	635	403	75	478
Albert S. Woodward Elementary School	2, 3, 4	2-4	24	27	500	624	485	92	577
P. Brent Trottier Middle School	5, 6, 7, 8	5-8	33	22	1200	720	487	120	607

Analysis of Scenario 4: PreK-1, 2-4, 5-8 (Decommission Neary)

School	Meets Occupancy Permit	Meets Septic Capacity	Meets Space Requirements	Collaboration Maximized	Resources Maximized	Minimizes Student Transitions
Mary E. Finn Elementary School	Yes	Yes	Yes	Yes	Yes	Yes
Albert S. Woodward Elementary School	No	Yes	No	Yes	Yes	Yes
P. Brent Trottier Middle School	Yes	Yes	Yes	Yes	Yes	Yes

*Grade span refers to the number of grade levels in a given school building.

**Grade-level configuration is a term that depicts which grades are grouped together.

References

Bickel, Robert; Howley, Craig; Williams, Tony & Glascock, Catherine. (2000, November) Will the real “Texas miracle in education” please stand up? Grade span configuration, achievement, and expenditure per pupil. Randolph, VT: Rural School and Community Trust. (ERIC Document No. ED447995)⁽¹⁾

Black, Susan. (2006). The Right Size School. *American School Board Journal*, 193, 63-65⁽²⁾

Clouter, Amy. “Grade Level Configuration Report: Educational Considerations.” (October 2017) Shrewsbury Public Schools, Shrewsbury, MA⁽³⁾

Hanover Research. “Early Grades Reconfiguration Analysis: Prepared for Attleboro Schools,” (April 2018) Arlington, VA.⁽⁴⁾

Hooper, D.W. (2002, March). Configurations alone don’t breed success. *School Administrator*, 59(3),⁽⁵⁾

Hanover Research. “Early Grades Reconfiguration Analysis: Prepared for Attleboro Schools,” (April 2018) Arlington, VA.⁽⁶⁾

Klump, J.(2006) What the research says (or doesn’t say) about K-8 versus middle school grade configurations: Assessing the benefits of K-8 schools. *Northwest Education*, 11⁽⁷⁾