



**Needham Public Schools
Needham, Massachusetts**

School Space Committee

*Report to the Needham School Committee
March 17, 2009*

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Introduction

For several years the Needham community and Needham School Committee have worked hard to plan for and address enrollment growth, aging school facilities, and school space needs. Over the last ten years the Needham community has supported over \$100 million in new construction and renovations for new and existing school construction. When the School Committee voted in 2006 to renovate High Rock and open the district's eighth school, the Committee also asked the superintendent to assess enrollment trends to assist with future planning and school needs.

In the summer of 2008 it became clear that a failure of the Newman Elementary School's heating and ventilation (HVAC) system would require a significant renovation and introduce a large and unanticipated capital project into the town's Facilities Master Plan. The deteriorating Newman HVAC system, the demand for additional municipal buildings and space, and a difficult economic climate meant that a review of school space needs and planning was prudent to ensure town resources could be targeted to address these concerns in a responsible way that supports the educational needs of our students.

In the fall of 2008 the Needham School Committee asked the superintendent to convene a broad based committee to provide ideas and guidance to the School Committee about short and long-term school space needs, with special attention to enrollment trends, capital needs, and the planned Newman renovation. The 16-member committee included representatives from the School Committee, Board of Selectmen, Finance Committee, Permanent Public Building Committee, Future School Needs Committee, school administration, town administration, and the Needham community.

The committee began its work on December 23, 2008 and held eight meetings and one community forum. The committee also conducted walk-throughs at the elementary schools to view school space and needs. Several committee members worked outside this schedule to gather data, research information, and plan presentations to the committee. Additionally, the committee established a blog within the Needham Public Schools website to facilitate the dissemination of information, share data, and offer perspectives: <http://space.nehoiden.net/>

Essential Questions

The Committee used the following essential questions to guide its discussions:

1. How do enrollment trends affect the School Committee's existing grade configuration model?
2. How can we best meet the needs of preschool and kindergarten students now and in the future?
3. What space, building and infrastructure needs may cause a need to renovate Hillside, Mitchell and Pollard?
4. How can we best use existing school space, including the Pollard modulars, Emery Grover, the Nike site, and the Newman Science Center to address space needs?

Additionally, the Committee looked broadly at all PreK-12 school space needs, reviewed program trends (e.g., special education), and discussed the implications of class size and space needs in the contemporary classroom.

Conclusions and Findings

Following a review and discussion of school educational priorities, enrollment trends, current class size policy, and work previously done on long-term options, including different grade configurations and the 2006 Town of Needham Facilities Master Plan, the committee reached several general conclusions and findings. Enrollment data, trends, and classroom space information is included in the Appendix of this report.

General Conclusions:

- Teaching and learning in today's classroom requires a flexible use of design, space, and storage.
- Enrollment projections indicate declining elementary student enrollment but increasing secondary enrollment.
- There is sufficient space at the secondary level to accommodate the student population, but program growth and older buildings may stress the capacity at Mitchell and Hillside.
- It is important to plan for a range of enrollments at the elementary level. If there is a need for an additional school building, it would be an elementary school.
- The existing grade configuration (K-5, 6-8, 9-12) works in the school space available.

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Findings:

1. How do enrollment trends affect the School Committee's existing grade configuration model?

- Enrollment projections become less certain the further out they are projected. Planning must account for a range of enrollment possibilities.
- Current projections are for declining enrollments at the elementary level and for increasing populations at the secondary level.
- Under the FSNC's declining elementary enrollment projections, there will be sufficient K-5 spaces over the next five years, with some adjustments required between schools. Secondary spaces also are projected to remain adequate, following the opening of High Rock School.
- If, however, Kindergarten enrollments were to remain level, space constraints will exist. In this scenario, the following adjustments to the educational program would be required:
 - Dislocation of Kindergarten After School Enrichment (KASE), music and art spaces to create additional classroom space at Broadmeadow, Eliot, Hillside and Mitchell as needed.
 - Possible addition of modular classrooms at Hillside and Mitchell schools.
- The current grade configuration accommodates all projected Needham students. Changing to K-4/5-8 requires substantial additions to Newman School. A K-4/5-6/7-8 configuration would also require a small number of additional classrooms and does not yield additional capacity.
- Construction of a new middle school will not be needed in the foreseeable future, based on enrollment projections. Additional elementary or early childhood space may be needed, however, if elementary enrollments are higher than predicted.

2. What space, building and infrastructure needs may cause a need to renovate Hillside, Mitchell and Pollard?

- Growing enrollment and special education program needs at Mitchell and Hillside will stress the capacity and infrastructure of both schools.
- Mitchell, Hillside and Pollard require maintenance attention and building upgrades.
- Undersized and awkward classroom spaces at Hillside and Mitchell challenge the effectiveness of teaching, learning, and program delivery.
- Undersized or insufficient storage at Hillside and Mitchell limit program effectiveness and exacerbate classroom deficiencies.

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3. How can we best meet the needs of preschool and kindergarten students now and in the future?

- District-wide full-day kindergarten will not be possible for the foreseeable future, given projected enrollment, existing facilities, and the current grade configuration.
- Projected preschool needs will require additional space in the future.
- Given either level or increasing kindergarten enrollments, there may not be sufficient space to house KASE in the elementary schools.

4. How can we best use existing school space, including the Pollard modulars, Emery Grover, the Nike site and the Newman Science Center to address space needs.

- No specific conclusions were drawn about how best to use Pollard modulars, Emery Grover, the Nike site, or the Science Center in the long term.
- Pollard modulars, however, will be needed in the short-term to accommodate a portion of the Newman population during a planned construction/renovation project at that building.

Recommendations

Based on the general conclusions and findings, the Committee proposes several recommendations for the Needham School Committee to consider and act on as appropriate:

- Seek to reserve land for a contingency additional elementary school or early childhood facility, instead of a middle school-sized parcel, as suggested by the 2006 Facilities Master Plan.
- Consider strategies for reducing the “feel” and size of Newman School; consider different administrative and organizational models.
- Investigate options for addressing existing and projected five-year space needs:
 - Assess the site feasibility and need for modular classrooms at Hillside and Mitchell schools and propose any new space as part of the town’s capital plan.
 - Work with the town and within the capital plan to consider renovations and upgrades to Mitchell, Hillside and Pollard schools.
 - Review the class size policy to ensure that best educational practices and space planning, consistent with resources, are supported by the stated policy.
 - Consider spot redistricting as a tool for managing enrollment trends at the elementary level.

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- Remain vigilant around enrollment trends, particularly those affecting individual schools.
- Work with the Future School Needs Committee (FSNC) to improve methodologies for projecting enrollment at each elementary school, as well as for the District as a whole.
- Review Preschool, Kindergarten, and KASE space/programmatic needs to determine if an early childhood center is feasible and appropriate.
- Identify current and future district administrative and space needs and evaluate these needs in light of the viability of the Emery Grover Building.
- Design, renovate, and build school spaces with maximum flexibility for student use, technology infrastructure, and energy efficiency.

Summary

Members on the School Space Committee represented a range of perspectives and voices who collaborated to discuss and understand the very real space needs of the Needham Public Schools. There was a ready acknowledgement of the significant building and capital challenges and needs of the town and schools, especially in light of the sobering national and local fiscal and economic climate.

Nonetheless, we present our report to the Needham School Committee confident that our work will allow the School Committee to assess next steps and priorities and satisfied that our recommendations are in the best interest of the community and the students of the Needham Public Schools.

We look forward to discussing this report with you at your convenience.

Appendix

- I. Facilities Master Plan Executive Summary by DiNisco Design Partnerships, November 15, 2006.
- II. Needham Public Schools Enrollment 1998/99 - 2017/18.
- III. Future School Needs Committee Enrollment Projections, October 23, 2008.
- IV. Space Chart/Capacity by Schools
- V. School Committee Policy IHB: Class Size

Executive Summary

EXECUTIVE SUMMARY

Introduction

This report has been prepared under the direction of the Permanent Public Building Committee (PPBC) with the guidance of the Facilities Working Group (FWG) which consists of numerous Town officials, Town Departments, facility user groups and citizens.

It has been an exhaustive and deliberative process that began in October 2005 and has included numerous participants in meetings, work shops and public forums. The process has been open and collaborative with the focus on the best approach to solve Needham's current and future needs.

This study begins with a review and update of the previous 1999 Town Wide Comprehensive Facilities Study. It includes the evaluation of programmatic requirements for all Town departments and all Town owned facilities with the exception of the High School and the Public Safety Building.

Goals & Objectives

The 1999 Master Plan has served the Town well, but now it is time for the Town to reconsider the next set of facilities decisions. The overall objective of the current Master Plan Study is to build on the information obtained through prior facility and site studies. Specific objectives include:

1. Evaluate space needs for:
 - Schools & School Administration
 - Senior Center
 - Current Town Hall Departments
 - Department of Public Works (DPW)
 - Recycling and Transfer Station (RTS)
 - Public Facilities
 - Emergency Management
2. Identify sites and determine building sizes.
3. Create a realistic master plan for implementation.
4. Estimate capital and operating costs.
5. Develop implementation strategies.
6. Identify required transition space.
7. Determine disposition of Town buildings.

8. Identify private / public partnerships.
9. Provide for future growth.

Need

The needs assessment begins with departmental programmatic requirements which includes efficient operations, location and adequate office space. It also includes an evaluation of physical facilities for condition, suitability for its current use and building code issues.

Middle and Elementary Schools

Pollard Middle School was built in 1958, added to in 1969, renovated in 1995 and expanded in 2002 with the addition of ten portable classrooms. It has the capacity of 800 students plus 200 for the portable classrooms. Today it houses 1,080 students (grades 6, 7 & 8) and by 2013 this number will grow to 1,369 students. There is no space for additional incoming students and the current plan is to add two more portable classrooms in 2008 as an interim solution.

Enrollment at the Elementary schools will continue to increase until 2009 at which time there will be a gradual decrease. However, the influx of new residential development at New England Office Park and other locations will alter number of Needham school age children which may well push out the enrollment curve for both elementary and middle schools.

School enrollment projections have been prepared by Future School Needs Committee during the past eleven years. These projections have been carefully evaluated for consistency and accuracy by comparing 5 year and 10 year projections to actual enrollments for the same time periods. The validity and accuracy of the process and enrollment numbers have been confirmed. It is reasonable and prudent to accept these projections and to plan accordingly.

Town Offices

In 1901 Town Meeting recognized the "... need for proper and fitting accommodations to conduct town business..." with a building that has"

- A adequate space (town offices)
- Fire-proof security (town records)
- Dynamic and modern presence

This describes a Town hall as a civic monument to Needham's new, 20th century identity.

Today the Town Hall overlooks a beautiful common, is the civic center of Needham and anchor to the downtown business district. There is inadequate space for Administration & Finance, Community Services and Community Development. The original building is 100 years old and the second floor conversion was completed in 1965. It is over-crowded, suffers antiquated mechanical systems, limited handicapped accessibility and lacks fireproof storage. While it was appropriate for the 20th century, today it is neither modern nor dynamic.

DPW

The existing DPW facility on Dedham Avenue is too small for department needs, and garage space is inefficient and inappropriate. Second floor office space has a fire escape as a second means of egress, there is no handicapped accessibility and there is a history of air quality problems from the garage below. There is also an EPA citation for environmental site issues.

School Administration

The Emery Grover Building is too small for all School Administration Central Offices. Those spaces that do not fit are dispersed throughout the school system. The existing configuration of space is inefficient, there is no handicapped accessibility and building systems are antiquated. The School Department priority is that Central Administration be under one roof. Location is not important.

Senior Center

The existing Senior Center located in the basement of the Stephen Palmer Building is too small with limited handicapped accessibility and inadequate parking. While it is an excellent location for services and downtown amenities, the building is inappropriate as a senior center.

Emergency Operations Center (EOC)

The EOC is a command post for vital town departments and is used only in the event of an emergency. Its current location in inadequate, rented space on Dedham Avenue is normally unoccupied and is used only during emergencies. It is not a satisfactory arrangement for such a vital activity.

Planning Options

Middle and Elementary Schools

Middle school options include four different approaches with a total of 11 options.

- Option A--New middle school at Dedham Ave.
- Option B--Addition at Pollard
- Option C--Convert Newman to a middle school
- Option D--Convert High Rock to a middle school

Some options are for grades 6-8 and others for 5-8, with a middle school size varying from 528 to 1,054 students. The 5-8 plans solve emerging elementary growth while 6-8 plans defer the problem. The School Committee has commented favorably on a new middle school (528 students) at the Dedham Avenue site as the preferred Middle School option.

In addition, the School Department has also identified an immediate need for the re-activation of High Rock School as a satellite middle school beginning in 2009 to accommodate current overcrowding at Pollard. The proposed option is the renovation/addition of High Rock plus six portable classrooms (a capacity of 440 students) for the entire 6th grade.

This short-term solution is to design High Rock as an elementary school but to use it for the sixth grade and to use Pollard as a 7-8 middle school.

The long-term solution is the subsequent construction of a new middle school on Dedham Avenue for grades 6-8. High Rock reverts to a K-5 elementary school with a capacity of 352 students. This solution satisfies the short and mid-term needs for overcrowding and assumes future modernization of Hillside and Mitchell for equity of elementary physical facilities.

Town Offices

Numerous planning options were explored that range from restoring the 2nd floor as meeting space, to a below grade addition under the parking lot, to a rear addition and / or a town hall annex.

At the present time two viable alternatives emerge. The first is identified as the Infill Option adds an additional floor within the former Meeting Hall creating a three level Town Hall. The expanded building accommodates Administration departments (Town Manager / Select

Executive Summary

men, Clerk, Finance, Personnel). This option depends on Emery Grover being used as a Town Hall Annex for all Community Services departments and the Planning Department which are currently in Town Hall. The historic exterior is maintained. A sense of the original meeting hall architecture is maintained on the interior. The existing parking lot for 26 cars remains intact.

A second approach identified as the Atrium Option has a much larger addition built out to the property line in the existing parking lot. An atrium space adjoins what was the north exterior wall. The expanded building accommodates all Administration departments, Community Services departments and the Planning Department which are currently in Town Hall in addition to fully restoring the meeting hall which has a seating capacity of 400 - 500 people. This option eliminates parking for 26 cars.

While there are advantages and disadvantages to both approaches, this issue will continue to be evaluated. Both options are valid. Ultimately the final decision will emerge after continued discussions on cost/benefits and affordability.

Emery Grover

Many possible alternative uses of the Emery Grover Building have been considered. As a senior center the multiple floor levels are a disadvantage for seniors, even with an elevator. Since Emery Grover has a strong civic presence and is located downtown, a Town Hall Annex or housing are appropriate uses.

If used for senior housing, the building could accommodate approximately 24 units. If used as a Town Hall Annex it could accommodate Community Services and Community Development with the 3rd floor "attic" available for future expansion or other community use.

From these options two specific approaches emerge. The first is the use of Emery Grover as a Town Hall Annex including current School Administration offices. This option is linked with the Infill Addition of Town Hall whereby all existing departments currently in both buildings are housed in enlarged and fully renovated spaces.

The second approach is linked to the Atrium Addition, whereby Emery Grover is fully renovated for School Administration offices. Both Emery Grover options

will continue to be evaluated in conjunction with Town Hall options.

DPW

Possible sites for a DPW facility include

- Dedham Avenue - Renovation / New
- Greendale Avenue - New
- Central Avenue (RTS) - New

Each option has inherent problems.

The RTS site has significant topographic, wetland, space and traffic issues. It must also provide continued use of trash disposal and recycling during construction. The capped landfill may be used for a reprocessed material staging area, but cannot be used for structures. The DPW has suggested that the salt storage shed on Dedham Avenue could be relocated to the RTS regardless of the option.

While there are technical issues, Greendale Avenue is adequately sized for a new DPW building with adequate vehicular access.

The current Dedham Avenue site can accommodate a new or expanded DPW facility although current activities must be relocated while construction is underway. While this is a feasible option, a DPW facility in close proximity to recreation land must be addressed as a long term land use issue.

For purposes of this study we have included DPW at the RTS site as a placeholder until further deliberation finalizes one of the three sites or until an alternative site is identified.

Senior Center

While the existing Senior Center is an excellent location to services and downtown amenities, the building is inappropriate as a Senior Center. Options considered include new construction on the existing site as well as alternative locations.

Program configurations consider the Senior Center combined with a community center, community services departments and / or senior housing. Several options also pursued a potential public / private partnership with the YMCA. These options were discounted due to their cost and additional complexity which would push them further into the future.

From three options (Pickering Street, Dedham Avenue Pump House and Ridge Hill) only the latter two were considered further. Use of the Pump House on Dedham Avenue is inextricably connected with the location / relocation of the DPW from that site. The combined use for a Senior Center and DPW is not workable. Accordingly, the availability of the Pump House is indefinite and problematic.

Therefore, the current preferences is the Ridge Hill site and the renovation and addition of the existing Morse-Bradley house in two phases. The first phase provides immediate, improved space comparable to what exists at Stephen Palmer. The second phase would be a further enlargement dependent upon actual usage and affordability.

Emergency Operations Center (EOC)

The proposed option to relocate the EOC to the Public Safety building addresses the deficits of the current facility. Locating the Emergency Operations Center adjacent to police and fire departments, which have significant roles in any emergency event, is also a logical solution. The FWG and architect agreed that no other sites merited further consideration for this facility.

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Implementation

The final step is the implementation process whereby options are finalized and each project is prioritized. The Facilities Master Plan Timeline shows project costs in 2008 dollars, preliminary timelines, and alternative options for Town Hall. Projects for the time period between 2008 and 2012 have strong consensus. Priorities from 2013 on are more tentative and cost implications are less clear. While this is the current plan, timelines and priorities are subject to change.

2008

The highest priorities show construction beginning in 2008. Funding and design must precede construction by a minimum of one year.

The Selectmen have made a new Senior Center site a top priority. The proposed option is renovation/addition to the Morse-Bradley house at Ridge Hill with a project cost range of \$3.1 to \$4.0 million.

Two additional classrooms at Pollard must also be in place for the 2008 school year for incoming students. This cost is \$600,000.

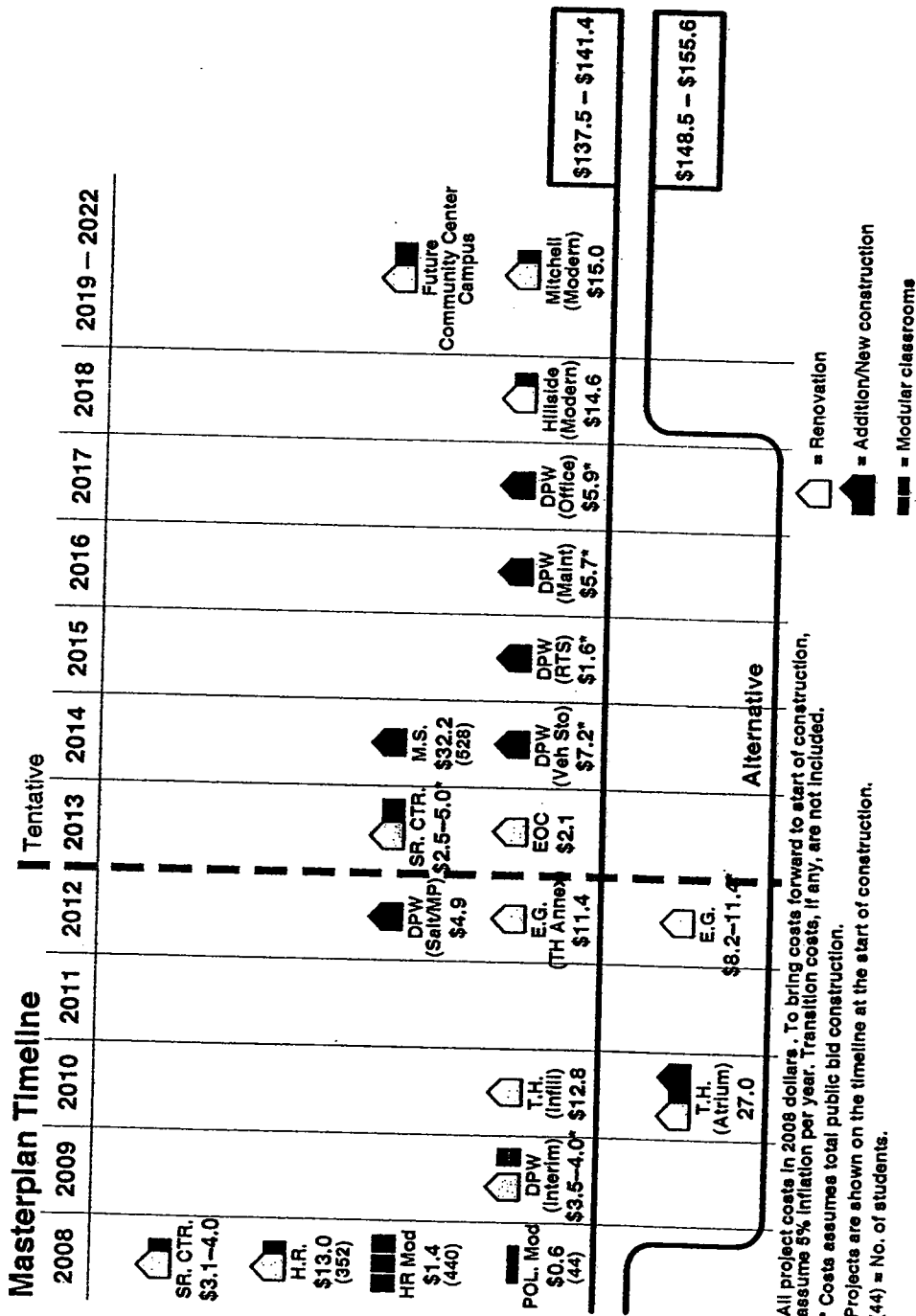
Renovation and addition to High Rock as an elementary school to be used until a new middle school is built costs \$14.4 million. This includes six portable classrooms to allow a full (sixth) grade to use the site temporarily. When High Rock reverts to an elementary school, the portable classrooms are removed and the elementary school capacity becomes 352 students.

2009

Since major improvements to the existing DPW are scheduled to begin in 2014 or later there was a strong consensus to act upon the issues of handicapped accessibility, emergency egress and air quality as early as possible. These improvements which range between \$3.5 and \$4.0 million do not preclude alternative uses of the existing buildings if DPW is eventually relocated elsewhere.

2010

Two options remain for the disposition of the Town Hall. While Town Hall improvements are a high priority, the choice between the Infill Addition (\$12.8M) versus the Atrium Addition (\$27.0M) warrants further deliberation.



All project costs in 2008 dollars. To bring costs forward to start of construction, assume 5% inflation per year. Transition costs, if any, are not included.
 * Costs assumes total public bid construction.
 Projects are shown on the timeline at the start of construction.
 (44) = No. of students.

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2012

Although the final disposition of the present DPW site is unresolved, there are strong planning and environmental reasons for relocating the existing salt shed to the KTS site and reorganizing the materials handling area there. The total cost of this work is \$4.9M.

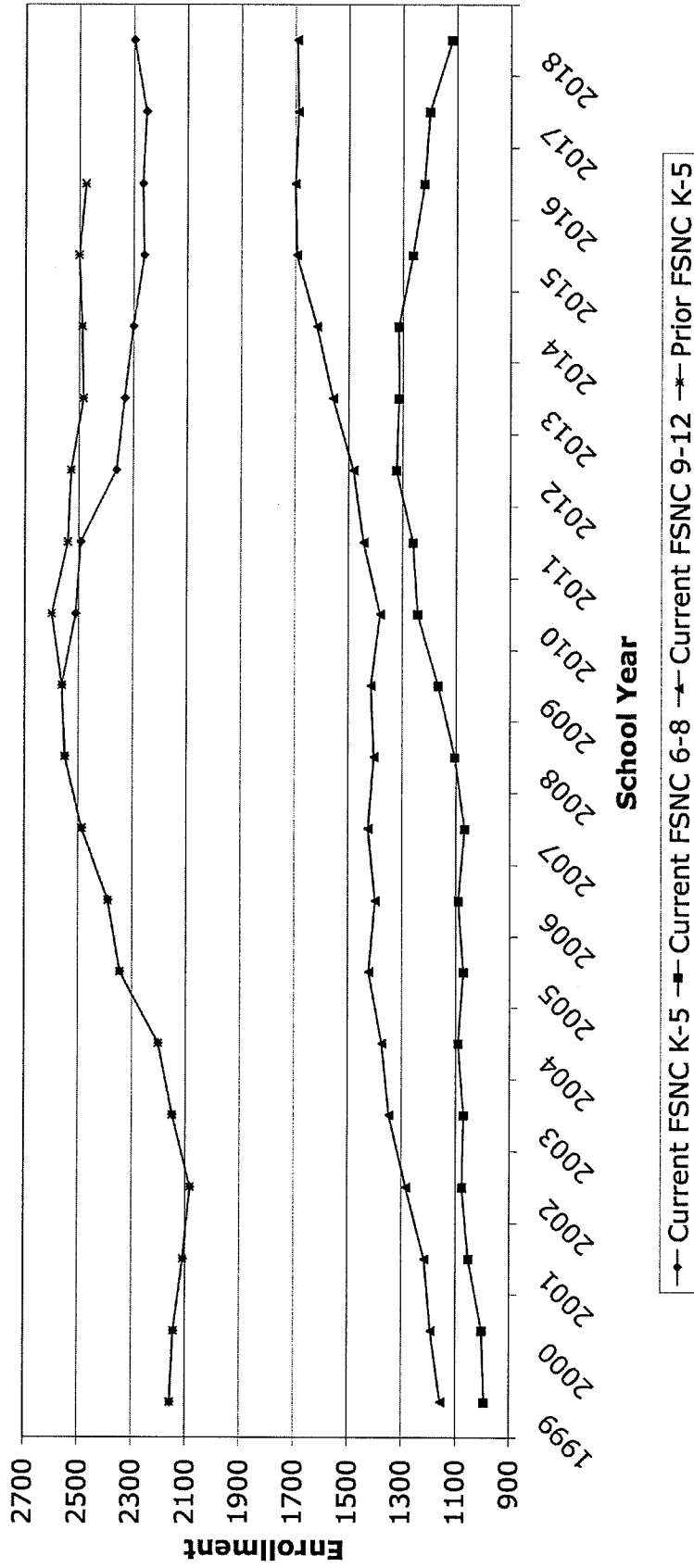
Work on Emery Grover is scheduled for 2012 either as a full renovation for Town Hall Annex (Infill Addition) at \$11.4M or as a full renovation for School Administration offices (Atrium Addition) which range from \$8.2M to \$11.4M.

2013 to 2022

All of the projects after 2013 will be evaluated during the next six years for need, prioritization and affordability.

The facilities master plan is a dynamic blue print for making decisions. It is a guide for making individual decisions based upon a comprehensive evaluation of all Town needs and the affordability of each project. It is the point of departure from planning to implementation, a process that will serve the citizens of Needham as they make decisions on facilities for the next 50 years.

Needham Public Schools Enrollment
 (Excluding Preschool & Out of District)
 1998/99 - 2017/18



Future School Needs Committee

Enrollment Projections for School Years Beginning in 2008 Discussion and Analysis October 23, 2008

Each year the Future School Needs (FSN) Committee projects school enrollment for the next ten years. The goal of the projections is to both reflect an accurate picture of the next year's enrollment and determine general trends over the longer term. Historically, accurately projecting the number of students who will enter kindergarten has been the most difficult part of the projection.

We have been requested to estimate the impact of Section 40B on future enrollments. Several Section 40B projects have been approved and several more are being considered. Accurately estimating the impact on enrollment of these projects is extremely difficult due to many variables. For the purpose of this report, the impact of Section 40B has not been included.

Birth Trends

The births reflect reported births from September 1 to August 31 of each year. The reported births in the 2007/2008 year were 334. This figure is somewhat higher than each of the previous 3 years (315 in 04/05, 306 in 05/06 and 288 in 06/07). Those 3 years represent the three lowest counts in the past 10 years. We used a six-year average from 2003-2008 to estimate future assumed births (325 per year). Last year's figure was 330. Declining births affect our projections and we monitor this each year.

Accuracy of Prior Year Projections

Last year we projected total enrollment of 5,034 for the 2008/2009 school year. Actual enrollment is 5,059 -- a difference of 25 students. This represents a 0.5% understatement. We have shown our projection results for the last 15 years on the next page.

Year	Projected	Actual	% Understated (overstated)
2008	5,034	5,059	0.5%
2007	5,060	5,003	(1.1%)
2006	5,013	4,979	(0.7%)
2005	4,915	4,879	(0.7%)
2004	4,780	4,838	1.2%
2003	4,611	4,667	1.2%
2002	4,513	4,565	1.2%
2001	4,417	4,439	0.5%
2000	4,411	4,374	(0.8%)
1999	4,378	4,334	(1.0%)
1998	4,393	4,303	(2.1%)
1997	4,209	4,281	1.7%
1996	4,134	4,110	(0.6%)
1995	3,980	4,049	1.7%
1994	3,808	3,891	2.2%

Percent understated reflects Actual/Projected in percentage terms.

The past projections show that FSN usually projects annual enrollment for the next year within 2.0% (13 of the last 15 years). In 7 of the last 15 years the projections were within 1.0%. Since the revised kindergarten methodology was adopted 11 years ago (see below), only once (in 1998, the first year of the new method) was the projection off by more than 2.0%. The past 10 years the variance has been within 1.2% each year. However, despite better accuracy, the historical results point to the fact that the projections are **estimates** and in any given year there could be as much as a 3.0% (or greater) variance.

On a grade-by-grade basis, the projections were on target this year with the exception of kindergarten, first grade, and sixth grade. Kindergarten was understated by 14 students. This understatement would have been greater but the METCO kindergarten class is smaller than normal this year. This understatement is due to an influx of 41 students of kindergarten age in 2007 (eligible kindergartners increased from 402 to 443 in 2007).

In first grade there was an understatement of 29 students. A larger number of private kindergartners came back to public school than in previous years. We commented in our report last year that this was possible because last year a higher percentage of children attended private kindergarten, possibly

because of uncertainty regarding the KASE program. Our numbers did not reflect the possibility that a greater percentage of private kindergarten students might return to our system in first grade. In addition, there are 10 new METCO first graders this year.

Finally, there was an overstatement of 18 students in sixth grade as more 6th graders are attending private school than in previous years. It is not uncommon to have a larger than anticipated variance in the 6th grade.

General Methodology

Projections for grades 1-12 are determined based on the average of retention factors for each grade for the past five years. A retention factor is the enrollment in a given grade this year divided by the enrollment for the preceding grade last year. A retention factor greater than one indicates there are more children in a grade this year than were in the preceding grade last year. For example, the current retention factor for fifth grade is .9929, which equals 417 (fifth grade enrollment for 08/09 school year) divided by 420 (fourth grade enrollment for 07/08 school year). This factor is averaged with the factors from the prior four years to produce the average retention factor this year for fifth grade of 1.002.

Census Data and Kindergarten Methodology

Eleven years ago, we began using annual census data to project kindergarten enrollment. The prior methodology used the annual birth rates to project the number of kindergarteners 5 years later. We found the prior methodology to be generally reasonable but inconsistent from year to year. The revised methodology uses the annual census to track pre-school age children in town to help estimate the number who will be kindergarten eligible each year. We then estimate the percentage that will attend public school upon entering kindergarten. Our prior results clearly indicate that this methodology has significantly improved kindergarten accuracy. Until 2005, there was a clear increasing trend of public kindergarten attendance (91% in 2004, 89% in 2003, 85% in 2002, 80% in 2001 and 77% in 2000). We indicated two years ago that this trend might be topping out. The figures were 89% for 2005, 90% in 2006 and 85% in 2007. The estimate for 2008 is 88%. We used a range of 88%-90% in our projections this year.

The accuracy of the overall projections is based largely on the accuracy of kindergarten. The following table demonstrates our kindergarten results over the past 11 years. Our understatements in 2004 and 2005 were primarily due to understating METCO kindergarteners.

Year	Projected	Actual	Proj. – Actual
2008	385	399	(14)
2007	410	380	30
2006	447	456	(9)
2005	405	414	(9)
2004	422	433	(11)
2003	366	394	(28)
2002	347	383	(36)
2001	337	339	(2)
2000	346	346	0
1999	338	323	15
1998	365	315	50

There are several items that should be pointed out from the above chart. First, kindergarten is extremely difficult to estimate and the results can vary significantly from year to year. It is unreasonable to expect to be consistently within 10 students. Second, although the first year of the revised methodology (1998) produced a difference of 50 students, it was a better estimate than the prior methodology would have produced. Third, when a trend begins or changes our figures will tend to lag for several years before catching up.

We analyze census data each year in determining our projections. We continue to track the census until January 1 of the year following the entrance of kindergarten (we assume for this purpose that the number of children in a grade will be the same on a given September 1 and the following January 1).

As noted above, the percentage of students attending public kindergarten had been increasing until 2005. For our projections this year we used a range of 88%-90% going forward.

Our methodology reflects our best estimate for the projected number of children eligible for kindergarten in September 2009. To do this we create a minimum and maximum estimate using the 88%-90% range for public kindergarten enrollment and a METCO kindergarten enrollment range of 10-15 students. We assumed that the children eligible for kindergarten in September 2009 would increase to 437-441 (an increase from the current level of 415 as of 1/1/08). This estimate is based on our analysis of town census data (net in-migration) over the past five years at the pre-school ages. Assuming 88% of

the 437 attend public school and there are 10 METCO kindergarteners, there would be 395 kindergarteners in 2009 ($437 \times .88 + 10 = 395$). Likewise, the higher end of the range yields a figure of 412. The average is 404.

For years beyond 2010, we used a factor of 1.13 times the number of births to estimate the number of kindergarten students. This factor is based on an approximation using these factors from 2004 to 2008.

Effect of Alternative Kindergarten and Future Birth Assumptions

The assumed values for kindergarten enrollment each year have a significant impact on the long-term projections. We become less confident of our kindergarten estimates (and correspondingly our total estimates) as we move further away from the January 1, 2008 data. By the time we reach the kindergarten estimate for the school year 2014/2015 and beyond, the children have not yet been born and our calculation is based entirely on estimates of future births. Therefore we have estimated an expected range for enrollment in 5 years and in 10 years based on alternative assumptions. The ranges are intended to show a reasonable range in future years (both above and below our estimate), but there is no guarantee that the actual enrollment in 10 years will be within the ranges shown. It is much more likely (but again certainly not guaranteed) that the enrollment 5 years from now will be within the ranges shown.

For alternative kindergarten assumptions, we assumed low-end enrollment would be 10 students less than the figures on our spreadsheet for school years beginning in 2009, 2010, and 2011. We assumed it would be 20 students lower than expected in 2012 and beyond. For the high-end assumption, we assumed enrollment would be 10 students greater than the figures on our spreadsheet for the school years beginning in 2009, 2010, and 2011 and 20 students greater than expected in 2012 and beyond.

The range for kindergarten was coupled with birth assumptions after fiscal year 2008 of 300 children each year (low-end) and 350 children each year (high-end). This was approximated as a difference of 25 (plus or minus) from the estimated births beyond fiscal year 2008 of 325.

Total		
Year	<u>13/14</u>	<u>18/19</u>
Low end of range	5,130	4,785
FSN projection	5,204	5,107

High end of range	5,276	5,437
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K-5

Year	<u>13/14</u>	<u>18/19</u>
Low end of range	2,259	2,029
FSN projection	2,333	2,297
High end of range	2,405	2,574

6-8

Year	<u>13/14</u>	<u>18/19</u>
Low end of range	1,313	1,074
FSN projection	1,313	1,118
High end of range	1,313	1,159

9-12

Year	<u>13/14</u>	<u>18/19</u>
Low end of range	1,558	1,682
FSN projection	1,558	1,692
High end of range	1,558	1,704

The Committee welcomes any comments regarding these projections.

Respectfully submitted,

James Lamenzo, Chairman	appointed by Moderator
David Coelho	appointed by Selectmen
Marianne Cooley	appointed by School Committee
Ann DerMarderosian	appointed by Finance Committee
Heidi Black	appointed by Parent-Teachers' Council
Marjorie Margolis	appointed by Moderator
Mary Riddell	appointed by League of Women Voters
Roger Toran	appointed by Planning Board

FUTURE SCHOOL NEEDS COMMITTEE																	
ENROLLMENT PROJECTIONS																	
YEAR	2002/2003	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
BIRTHS*	340	372	315	306	288	334	325	325	325	325	325	334	325	325	325	325	325
SCHOOL YEAR	2008/2009	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
GRADE	PROJECTED	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
K	385	399	361	379	325	377	367	367	367	367	367	367	367	367	367	367	367
1	386	415	416	372	391	335	389	378	378	378	378	378	378	378	378	378	378
2	470	469	414	419	374	393	337	391	380	380	380	380	380	380	380	380	380
3	427	418	476	420	425	380	399	342	397	386	386	386	386	386	386	386	386
4	434	433	419	477	425	426	381	400	343	398	387	387	387	387	387	387	387
5	422	417	434	420	478	422	427	382	401	344	399	399	399	399	399	399	399
6	422	404	421	438	424	430	426	431	386	405	348	348	348	348	348	348	348
7	357	351	394	411	427	471	419	415	420	376	395	395	395	395	395	395	395
8	349	349	350	393	410	412	470	418	414	419	375	375	375	375	375	375	375
9	374	378	352	353	397	430	416	475	422	418	423	423	423	423	423	423	423
10	324	330	373	347	348	409	424	410	469	416	412	412	412	412	412	412	412
11	372	376	324	366	341	385	402	416	403	460	408	408	408	408	408	408	408
12	312	320	367	316	357	334	376	393	406	394	449	449	449	449	449	449	449
TOTAL	5,034	5,059	5,143	5,136	5,197	5,165	5,204	5,218	5,186	5,141	5,107	5,107	5,107	5,107	5,107	5,107	5,107
K-5	2,524	2,551	2,562	2,512	2,493	2,362	2,333	2,260	2,266	2,253	2,297	2,297	2,297	2,297	2,297	2,297	2,297
6-8	1,128	1,104	1,165	1,242	1,261	1,322	1,313	1,264	1,220	1,200	1,118	1,118	1,118	1,118	1,118	1,118	1,118
9-12	1,382	1,404	1,416	1,382	1,443	1,481	1,558	1,694	1,700	1,688	1,692	1,692	1,692	1,692	1,692	1,692	1,692
TOTAL	5,034	5,059	5,143	5,136	5,197	5,165	5,204	5,233	5,186	5,141	5,107	5,107	5,107	5,107	5,107	5,107	5,107

* REFLECTS JULY 1 TO JUNE 30 BIRTHS

Actual figures shaded
 K adjusted for METCO
 Constant births after FY08 based on 6 year average FY 03-08

Note: Kindergarten Data is Sections

Color = Full Size Classroom

Sections	FY 09	FY09 Capacity	FY 10	FY10 Ovr/(Undr) Capacity	FY 11	FY11 Ovr/(Undr) Capacity	FY 12	FY12 Ovr/(Undr) Capacity	FY 13	FY13 Ovr/(Undr) Capacity	FY 14	FY14 Ovr/(Undr) Capacity
Broadmeadow												
K	4.00	4.00	4.00	-	4.00	-	4.00	-	3.00	-	4.00	-
1	5.00	5.00	4.00	(1.00)	4.00	(1.00)	4.00	(1.00)	4.00	(1.00)	3.00	(2.00)
2	5.00	5.00	5.00	-	4.00	(1.00)	4.00	(1.00)	4.00	(1.00)	4.00	(1.00)
3	5.00	5.00	5.00	-	5.00	-	4.00	(1.00)	4.00	(1.00)	4.00	(1.00)
4	5.00	5.00	5.00	-	5.00	-	5.00	-	4.00	(1.00)	4.00	(1.00)
5	4.00	4.00	5.00	1.00	5.00	-	5.00	-	5.00	-	4.00	-
Subtotal	28.00	28.00	28.00	-	27.00	(1.00)	26.00	(2.00)	24.00	(3.00)	23.00	(5.00)
KASE	-	-	-	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Miusic	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Art	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
SPED/SLC	1.00	1.00	1.00	-	1.00	-	2.00	1.00	2.00	1.00	2.00	1.00
Other SPED	3.00	3.00	4.00	1.00	4.00	1.00	4.00	1.00	4.00	1.00	4.00	1.00
Tech Lab	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Media	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
reading	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Perf Ctr/Music	-	-	-	(1.00)	-	(1.00)	-	(1.00)	-	(1.00)	-	(1.00)
Subtotal	9.00	10.00	10.00	-	12.00	2.00	12.00	2.00	12.00	2.00	12.00	2.00
Net	-	-	-	-	1.00	-	-	-	-	(1.00)	-	(3.00)

Sections	FY 09	FY09 Capacity	FY 10	FY10 Ovr/(Undr) Capacity	FY 11	FY11 Ovr/(Undr) Capacity	FY 12	FY12 Ovr/(Undr) Capacity	FY 13	FY13 Ovr/(Undr) Capacity	FY 14	FY14 Ovr/(Undr) Capacity
Eliot												
K	3.00	4.00	3.00	-	4.00	-	3.00	-	3.00	-	3.00	-
1	3.00	3.00	3.00	-	3.00	-	4.00	1.00	3.00	-	3.00	-
2	4.00	4.00	3.00	(1.00)	3.00	(1.00)	3.00	(1.00)	4.00	-	3.00	(1.00)
3	3.00	3.00	4.00	1.00	3.00	-	3.00	-	3.00	-	3.00	-
4	3.00	3.00	3.00	-	4.00	1.00	3.00	-	3.00	-	3.00	-
5	3.00	3.00	3.00	-	3.00	-	4.00	1.00	3.00	-	3.00	-
Subtotal	19.00	20.00	19.00	-	20.00	-	20.00	1.00	19.00	-	18.00	(1.00)
KASE	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Music	1.00	1.00	1.00	-	1.00	-	1.00	(1.00)	1.00	-	1.00	-
Art	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
SPED/LBC	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Other SPED	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Tech Lab	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Media	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Perf Ctr/ Music	-	-	-	(1.00)	-	(1.00)	1.00	-	-	(1.00)	-	(1.00)
Subtotal	7.00	8.00	7.00	(1.00)	7.00	(1.00)	7.00	(1.00)	7.00	(1.00)	7.00	(1.00)
Net	-	-	-	-	1.00	-	-	-	-	(1.00)	-	(2.00)

	FY 09	FY09 Capacity	FY 10	FY10 Ovr/(Undr) Capacity	FY 11	FY11 Ovr/(Undr) Capacity	FY 12	FY12 Ovr/(Undr) Capacity	FY 13	FY13 Ovr/(Undr) Capacity	FY 14	FY14 Ovr/(Undr) Capacity
Newman												
PRek	5.00	5.00	5.00	-	5.00	-	5.00	-	5.00	-	5.00	-
K	6.00	6.00	5.00	-	5.00	-	5.00	-	5.00	-	5.00	-
1	5.00	5.00	6.00	1.00	5.00	-	5.00	-	5.00	-	5.00	-
2	6.00	6.00	5.00	(1.00)	6.00	-	5.00	(1.00)	5.00	(1.00)	5.00	(1.00)
3	6.00	6.00	6.00	-	6.00	(1.00)	5.00	(1.00)	5.00	(1.00)	4.00	(2.00)
4	6.00	6.00	6.00	-	6.00	-	5.00	(1.00)	5.00	(1.00)	5.00	(1.00)
5	5.00	5.00	5.00	-	6.00	1.00	6.00	1.00	5.00	-	5.00	-
Subtotal	39.00	39.00	38.00	-	38.00	-	36.00	(2.00)	35.00	(3.00)	34.00	(4.00)
KASE	2.00	2.00	2.00	-	2.00	-	2.00	-	2.00	-	2.00	-
Music (stage)	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Art	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
ELC I	2.00	2.00	2.00	-	2.00	-	2.00	-	2.00	-	2.00	-
SPED PDD	-	-	-	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Reading	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
OT/PT/Motor	3.00	3.00	3.00	-	3.00	-	3.00	-	3.00	-	3.00	-
Tech Lab	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Media	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
nedp	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Sci Ctr Class	1.00	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Sci Ctr/small	3.00	3.00	3.00	-	3.00	-	3.00	-	3.00	-	3.00	-
small speed/guidan	7.00	7.00	7.00	-	7.00	-	7.00	-	7.00	-	7.00	-
Subtotal	24.00	24.00	24.00	-	25.00	1.00	25.00	1.00	25.00	1.00	25.00	1.00

Net 1.00 (1.00) (2.00) (3.00)

	FY 09	FY09 Capacity	FY 10	FY10 Ovr/(Undr) Capacity	FY 11	FY11 Ovr/(Undr) Capacity	FY 12	FY12 Ovr/(Undr) Capacity	FY 13	FY13 Ovr/(Undr) Capacity	FY 14	FY14 Ovr/(Undr) Capacity
Pollard												
6	18.00	18.00	-	(18.00)	-	(18.00)	-	(18.00)	-	(18.00)	-	(18.00)
7	16.00	16.00	18.00	2.00	18.00	2.00	20.00	4.00	20.00	4.00	20.00	4.00
8	16.00	16.00	16.00	-	18.00	2.00	18.00	2.00	20.00	4.00	20.00	4.00
Subtotal	50.00	50.00	34.00	(16.00)	36.00	(14.00)	38.00	(12.00)	40.00	(10.00)	40.00	(10.00)
Art	4.00	4.00	4.00	-	4.00	-	4.00	-	4.00	-	4.00	-
Music	4.00	4.00	4.00	-	4.00	-	4.00	-	4.00	-	4.00	-
World Language	4.00	4.00	4.00	-	4.00	-	4.00	-	4.00	-	4.00	-
Experiential Ed	-	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Weight Room	-	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Tech lab	3.00	3.00	3.00	-	3.00	-	3.00	-	3.00	-	3.00	-
SPED	11.00	11.00	11.00	-	12.00	1.00	12.00	1.00	12.00	1.00	13.00	2.00
Subtotal	26.00	26.00	28.00	2.00	29.00	3.00	29.00	3.00	29.00	3.00	30.00	4.00

(14.00) (11.00) (9.00) (7.00) (6.00)

	FY 09	FY09 Capacity	FY 10	FY10 Ovr/(Undr) Capacity	FY 11	FY11 Ovr/(Undr) Capacity	FY 12	FY12 Ovr/(Undr) Capacity	FY 13	FY13 Ovr/(Undr) Capacity	FY 14	FY14 Ovr/(Undr) Capacity
6		20.00	20.00	-	20.00	-	20.00	-	22.00	2.00	20.00	-
Subtotal		20.00	20.00	-	20.00	-	20.00	-	22.00	2.00	20.00	-
Music	-	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
Art	-	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
SPED	-	7.00	7.00	-	7.00	-	7.00	-	8.00	1.00	8.00	1.00
Tech Lab	-	1.00	1.00	-	1.00	-	1.00	-	-	(1.00)	1.00	-
Media	-	1.00	1.00	-	1.00	-	1.00	-	1.00	-	1.00	-
World Lang	-	1.00	1.00	-	1.00	-	1.00	-	-	(1.00)	1.00	-
Subtotal	-	12.00	12.00	-	12.00	-	12.00	-	11.00	(1.00)	13.00	1.00
										1.00		1.00

	FY 09	FY09 Capacity	FY 10*	FY10 Ovr/(Undr) Capacity	FY 11	FY11 Ovr/(Undr) Capacity	FY 12	FY12 Ovr/(Undr) Capacity	FY 13	FY13 Ovr/(Undr) Capacity	FY 14	FY14 Ovr/(Undr) Capacity
NHS												
English	12.00	13.00	12.00	(1.00)	12.00	(1.00)	13.00	-	14.00	1.00	14.00	1.00
Math	10.00	11.00	11.00	-	11.00	-	12.00	1.00	12.00	1.00	13.00	2.00
Science	10.00	13.00	13.00	-	13.00	-	13.00	-	13.00	-	13.00	-
Soc Studies	11.00	13.00	13.00	-	13.00	-	12.00	(1.00)	12.00	(1.00)	13.00	-
World Lang	9.00	11.00	11.00	-	11.00	-	11.00	-	11.00	-	11.00	-
Multipurpose	-	3.00	-	(3.00)	-	(3.00)	-	(3.00)	-	(3.00)	-	(3.00)
Tech Lab	3.00	3.00	3.00	-	3.00	-	3.00	-	3.00	-	3.00	-
SPED	7.00	7.00	7.00	-	8.00	1.00	8.00	1.00	8.00	1.00	8.00	1.00
Art	8.00	8.00	8.00	-	8.00	-	8.00	-	8.00	-	8.00	-
Music	2.00	2.00	2.00	-	2.00	-	2.00	-	2.00	-	2.00	-
Wellness	3.00	3.00	3.00	-	3.00	-	3.00	-	3.00	-	3.00	-
Subtotal	75.00	87.00	83.00	(4.00)	84.00	(3.00)	85.00	(2.00)	86.00	(1.00)	88.00	1.00
				(4.00)		(3.00)		(2.00)		(1.00)		1.00

* Reflects 4.0 FTE reduction FY10

SCHOOL COMMITTEE POLICY
NEEDHAM PUBLIC SCHOOLS

FILE: IHB

Policy for: CLASS SIZE	Revision 2
Date Approved by School Committee: 3/24/87	Signature of Chairman: <i>William J. Miles</i>
Page 1 of 3	

Statement: The School Committee recognizes that class size can be an important factor in good education. However, it is also recognized that achievement of educationally optimum class sizes is contingent, in part, upon considerations which rest outside the province of the Committee, such as:

- - building and space availability
- - budgetary and staffing limitations
- - unforeseeable circumstances (program changes, student transfers, etc.)

Subject to the above types of consideration, the School Committee will make every effort to ensure that class size is, in each instance, the most effective for the learning process. Final class size decisions must rest with the Committee.

In keeping with this policy, the School Committee and Administration will adhere, wherever possible, to established and approved guidelines. These guidelines will be periodically re-evaluated in order to assure their continued applicability and practicability.

Policy:

- | | | |
|--|-----|-----------------------|
| <u>Kindergarten:</u> Below 24 students | - - | one class |
| 24 to 27 students | - - | employ an aide |
| Over 27 students | - - | develop another class |

SCHOOL COMMITTEE POLICY
NEEDHAM PUBLIC SCHOOLS

FILE: IHB

Policy for: CLASS SIZE	Revision 2
Date Approved by School Committee: 3/24/87	Signature of Chairman: <i>William J. Miles</i>
Page 2 of 3	

Grades 1-5: Below 27 students -- one class
27 to 29 students -- employ an aide
Over 29 students -- develop another class

Grades 6-12: Below 15 students -- the class shall not
continue unless in the
category of exceptions
in this policy.

EXCEPTIONS

- 1) The following classes will not operate if there are less than ten students enrolled:
 - a) Accelerated and advanced placement classes in major subjects (English, foreign language, mathematics, science, and social studies).
 - b) Foreign language classes in the fourth year of study.*
 - c) Business classes in the third and fourth year.
 - d) Secondary remedial classes.
- 2) Remedial Reading -- due to the nature of this class and its objective, the recommendation is a minimum of eight and a maximum of twelve students.

SCHOOL COMMITTEE POLICY
NEEDHAM PUBLIC SCHOOLS

FILE: IHB

Policy for: CLASS SIZE	Revision 2
Date Approved by School Committee: 3/24/87	Signature of Chairman: <i>William J. Mills</i>
Page 3 of 3	

3) Physical Education

- a) Grades 7-8 An average class size of 22 students or more will be maintained.
- b) Grades 9-12 An average class size of 25 students or more will be maintained.

* For any fourth-year foreign language class below ten, every effort should be made to have a combined third/fourth-year class.