



Hillside School at Central Avenue Frequently Asked Questions

Project Overview:

1. Why do we need this school construction project?

The purpose of the Hillside construction project is to address overcrowding and building deficiencies at the Hillside Elementary School. The September 2016 preliminary enrollment is 470 students, compared to the 261-student design capacity of the existing Hillside School. As a result, the existing school is approximately 40% undersized, based on current MSBA standards. In 1997, two modular classrooms were installed to address the space issue, but these classrooms are now 20 years old and have reached the end of their useful life. In addition, the school, which was originally built in 1959 and expanded in 1968, is now more than 50 years old, with outdated or failing building systems. The school is not handicapped accessible, has limited vehicular access and continues to require ongoing monitoring of the groundwater and indoor air quality for contaminants related to the 1980s chemical spill at Microwave Development Laboratory, up gradient of the school site. Finally, the high groundwater results in flooding, and in some cases, floods the lower level classroom wing resulting in the need to close sections of the school to address the water infiltration.

2. How did we get to this stage of the project?

On March 20, 2013, the Town submitted a Statement of Interest (SOI) to the Massachusetts School Building Authority (MSBA) to address the aforementioned deficiencies at the Hillside School. In July 2014, the MSBA invited the Town to conduct a joint feasibility study to examine alternatives and identify possible solutions to the issues noted in the SOI. A Preliminary Design Program (PDP) was developed that outlined multiple options for both a K-5 school and a Grade 6 school and identified several potential building sites, including reconstructing the school at the current Hillside site or rebuilding elsewhere.

After months of study, input from the community at several public hearings, thoughtful deliberation among the School Committee and the Permanent Public Building Committee (PPBC), and after consultation with Town Officials and Boards, the School Committee voted unanimously to support a new K-5 school at the Central Avenue site (former Owens Poultry Farm and adjacent houses) as the preferred option for a new elementary school. The Central Avenue site was preferred because it met all of the School Committee's priorities for a new elementary school, including that it: a) contained sufficient space for Full Day Kindergarten; b) was a neighborhood-based school; c) minimized additional transportation and operating costs; d) minimized non-reimbursable construction costs, such as temporary classrooms; and e) minimized the need for redistricting. In addition, the site provides ample and appropriate space for all of the educational and programmatic needs of the school. The Central Avenue site also will allow the Town to preserve two potential future sites for school or Town

use: the existing Hillside campus and a portion of the DeFazio Field Complex. Finally, Central Avenue is a beautiful site that will be a wonderful venue for children to grow, learn and play. The Central Avenue site was submitted to the MSBA as part of the Preferred Schematic Report, and was approved by the MSBA Board on January 27, 2016.

The Town began Schematic Design in January 2016. The final Schematic Design submission was submitted to the MSBA on June 2, 2016 and was approved by the MSBA Board of Directors on July 20, 2016. A copy of the Schematic Design submission is available on the School Department's website at: http://rwd1.needham.k12.ma.us/Hillside_and_Mitchell_Planning/.

Project Scope and Schedule:

3. What are the features of the proposed new Hillside School?

The new school is a K-5 building with a three-story academic wing. The proposed facility, which has not yet been named and for the purposes of this document will be referred to as Hillside, has 90,702 square feet of space (compared to 47,197 square feet at the existing Hillside School.) The new school includes spaces dedicated to art, music, Spanish and technology. There are extended learning areas on each floor for project-based learning and large group activities, a library with separate teaching zones, several special education teaching areas located throughout the facility, a gymnasium, adaptive physical education room, teaching space for occupational/physical therapy (OT/PT,) an administrative suite with conference rooms and teachers' work rooms, and a cafeteria with a performance platform and separated quiet dining spaces for student use. School safety and security features include monitored entrance vestibule, separation between public afterhours spaces and the academic wing, and other safety technology appropriate for elementary schools. The design also includes wireless technology throughout the facility and modern HVAC systems.

The new school is designed to meet the MSBA target enrollment of 430 K-5 students and provides for four sections per grade. The four sections of Kindergarten will accommodate a Full Day Kindergarten program and will allow the District to implement this long-standing need across all five elementary schools. All of the classrooms are designed to be larger than the existing Hillside classrooms, and all are proposed to meet MSBA guidelines to ensure sufficient student space, flexibility and movement.

4. What are some of the planned site, landscape and play features of the new school?

The new school will offer ample outdoor education and play space for children. The play spaces are spread out around the campus. Open playfields will be located at the rear of the school (to the northwest) adjacent to play structures and hardscape play areas. Play space will be designed near the cafeteria (on the southwest side of the building) to include a kindergarten playground and hardscape play area. The play space at the rear of the building will be accessed from the gymnasium level, and will include a hardscape play area with basketball, hopscotch, four square, chess and other hardscape play activities, as well as play structures designed for Grades 1-5, quiet spaces for sitting, and an open green space for field activities. The adjacent field will be about 25 yards x 35 yards, which is larger than U6 and U8 regulation soccer fields, but slightly smaller than U10 youth soccer fields.

The proposed design takes advantage of the topography to create several outdoor learning spaces near the front of the school. These include an amphitheater, outdoor classroom, swing bench, art plaza, seating, a planting garden and a sensory garden. The amphitheater can be used for impromptu

performances, group meetings, presentations, ‘Morning Mingle’ and staging for parent pickup. The arts plaza is located outside of the Art room for the drawing and painting of the natural environment. The adjacent garden will have raised vegetable gardens, which will be another outdoor learning environment for students, and provide a link to the former farming use of this site. The sensory garden will be planted with a variety of herbs, bushes and perennials that will enable students to experience the environment with all their senses. The open space on the west of the building will eventually have outdoor learning areas, a science pond, walking trails and pedestrian bridges, which connect to adjacent conservation areas. The entire campus will be planted with species of trees and shrubs that are indigenous and integrated into the Needham Science curriculum.

Finally, the site abuts an expansive conservation area to the west toward Wellesley, including woods on the northwest side of the property, all of which offer a scenic, picturesque and attractive school setting. The design intent is to take full advantage of these natural areas for instructional purposes. Students will have opportunities to engage the water’s edge and the habitats that exist there for the collection, examination and identification of native plant, animal and insect species. In addition, a nature trail is envisioned winding through the hill at the back of the property.

5. How will the Central Avenue site accommodate pick-up and drop-off car traffic?

The site will separate bus and service traffic from parent drop off zones and will provide parking for 100 cars, plus overflow parking capability for special events. (The number of parking spaces is twice the number of available spaces in the current Hillside school lot.) Overflow and event parking can be accommodated on site, along the drive aisle, drop-off zones and within the dedicated bus loop and access drive, thereby reducing the traffic impact on neighborhood streets.

The parking lot layout allows for a pick-up and drop-off lane that will accommodate about 57 cars. In inclement weather conditions, with double loading of a portion of the pick-up lane, 80 cars could be accommodated on site. During the peak pickup period observed in the traffic study that was completed as part of the Feasibility Design effort, only 47 cars were stacked up within the existing Hillside school lot, the adjacent streets of Castle Place and McCullough Street and backed up onto West Street. The Central Avenue site can be managed so cars do not back up on to Central Avenue.

6. Can school buses access the Central Avenue site down Sunset Road? Is the road big enough?

Yes, the road is designed to meet Town residential street standards and is, therefore, wide enough to accommodate bus and emergency traffic. (School busses drive down residential streets throughout Needham every school day.) Buses will enter the site from Central Avenue and exit the site via Sunset Road. The entrance area provides queue space for five (5) buses to align single file and the ability for additional buses to park side by side within the bus drive if needed.

Pupil transportation vans will enter the site in the same location as cars and, after turning to the right, will turn left into a shorter loop that will access a designated van drop-off/ pick-up zone. The van zone is designed for five vans to be parked along the curb; if needed, vans can stack in the short loop out of the way of the parent loop.

7. Will the Central Avenue school be a ‘walkable’ school? How does it compare to the current Hillside School?

Yes, the site will allow students to walk safely to school. The projection is that 25% of the students will be within a ¾ mile walking distance to the new Central Avenue School. The existing Hillside site has about 30% of the students within this walking zone.

8. Will a portion of the new school playfield and walking trails be built on property owned by the Town of Wellesley?

Yes. The Town of Needham has entered into a License Agreement with the Town of Wellesley to use some of the land which Wellesley owns to the west of the Central Avenue site. The Town of Wellesley owns an 80+ acre parcel, which is mainly wetlands, surrounding the Rosemary Brook that acts as a buffer to water supply wells. The License Agreement will allow for Needham to construct a playing field and nature trails on farm fields and uplands, which are bisected by the property line on the western side of the school.

The Town of Needham will secure funding for the design and construction of the playing field and nature trails as separate but parallel projects to the MSBA-funded Hillside School reconstruction project.

9. Why was the school designed for 430 students if the October 1, 2015 enrollment was 465?

The 430-student design enrollment was developed through a collaborative process with the MSBA, using enrollment information provided by the District and a state-wide enrollment model developed by MSBA. The MSBA’s model projected the need for a 430-student school, assuming Full Day Kindergarten. Although the District had advocated for a higher design enrollment, the MSBA and the District ultimately came to agreement on the 430-student enrollment in July, 2014. The design enrollment is used by MSBA to determine the square feet per student space allowance and total square footage allowance for the new facility.

10. Although the design capacity is 430 students, will the building accommodate the current enrollment and future growth?

Yes. Although the School Committee and MSBA agreed to design and build a school for 430 students, the MSBA allowed the architects to use the lowest possible number of students per classroom in the design to provide capacity for enrollments in excess of this amount. The school will actually be able to accommodate up to 544 students, according to current School Committee class size guidelines (of 18-22 students K-3, and 20-24 students in Grades 4-5.) The preliminary population of the Hillside School is 470, as of September 2016. The anticipated enrollment in September 2020, the planned opening of the school, is 483 students. The flexibility to accommodate future growth is therefore built into the new school without adding any additional new space.

11. What is the size of the new school, compared to MSBA guidelines?

The size of the proposed new Hillside School exceeds MSBA guidelines, which were developed to provide minimum space standards for new public schools within Massachusetts. The new school is 90,702 gross square feet, which exceeds the MSBA guideline of 70,878 g.s.f. (based on the design enrollment) by 19,824 gross square feet. Restated in terms of total building net floor area (which

includes the interior program are and support spaces), the District is proposing to provide a total of 60,444 net square feet, which exceeds the MSBA guidelines by 14,443 net square feet, as shown below.

Building Area	Needham N.S.F.	MSBA Guideline N.S.F.	Over/ (Under) Guideline
Core academics, including extended learning areas	30,750	18,800	11,950
Special education classrooms	6,594	4,530	2,064
Art, music, physical education, media	11,451	11,480	(29)
Dining/ cafeteria	6,790	6,506	284
Administration, guidance, health services	2,830	2,655	175
Custodian, maintenance	2,029	2,030	(1)
Total	60,444	46,001	14,443

Nearly all of the 14,443 additional net square feet represent classroom/instructional space to accommodate Hillside’s existing and projected enrollment. As noted above, although the official MSBA design enrollment of the school is 430 students, the school has been designed to accommodate up to 544 students, to provide both flexibility and capacity to meet the current enrollment and provide for future enrollment growth. Correspondingly, 97% or 13,985 of the 14,443 n.s.f. is for classrooms/instructional space. The design team, School Committee and PPBC have determined that four classrooms per grade level is necessary and appropriate at the new school, given enrollment needs now and into the future; the MSBA agreed with this determination and approved the additional square feet to accommodate the additional classroom space. The proposed school also accommodates all of the core education programs, which Needham offers, including a world language classroom, small group and extended learning areas, technology and STEAM. (These programs are not included within the MSBA base program.) Finally, the Hillside special education spaces exceed MSBA guidelines to accommodate the breadth of special education services offered at this school and to consolidate the K-5 Early Learning Center program at a single school. (Currently the K-2 ELC program is located at Newman School and the Grade 3-5 program is provided at the Hillside School. The consolidated program will minimize disruptive transitions for kids and provide a seamless K-5 experience.)

12. How does the new school compare to elementary schools in other towns on a square-foot-per-student basis?

When the anticipated student enrollment is taken into account, the new school compares favorably to elementary schools in other towns, on a square-foot-per-student basis.

Based on data published by the MSBA, the average number of square feet per student for other MSBA-funded elementary schools designed after January 1, 2014 is 183 s.f./ student. As noted above, although the MSBA process artificially capped the design enrollment for the new school at 430 students, the preliminary enrollment for September 2016 is 470 and the projected enrollment for September 2020, when the school will open, is 483 students. At 483 students, the new school’s average area per student will be 188 s.f./ student, which is very close to the average for other MSBA-funded schools. Finally, the school is being built with the flexibility to accommodate a population of up to 544 students, or 167 s.f./ student.

13. Is there sufficient acreage for the school at the Central Avenue site?

Yes, the 10.5-acre Owens Farm site has approximately five buildable acres, which will provide sufficient space for a new elementary school. The decision to purchase the additional parcel at 609 Central Avenue will help to lessen the traffic impact of the new school on the adjacent neighborhood by reducing bus traffic on Sunset Road, enhance the planted buffer along the southern boundary, increase the school parking lot to 100 cars, separate bus and service traffic from car traffic, and increase the size of the upper playground. The abutting conservation lands of the Rosemary Brook also will provide a permanent open buffer to the west and north.

14. Doesn't the site have large areas of wetlands? Will the wetlands cause problems at the school site?

Yes, the site has a substantial area of abutting wetlands, however, construction of the school in proximity to the wetlands will not cause problems either for the school or the neighbors. The new school will be built approximately five feet above the flood plain at its lowest floor. In addition, new construction will balance any filled land with an equal volume of cut area, so that the school will not cause flooding to the neighbors.

15. Does the site have any environmental issues? What has been done at the site to date?

Based on the Geotechnical and Geo-Environmental Analysis Report, included in the Schematic Design Submission to the MSBA, the architects noted that "... there are no known geo-environmental concerns" with the Central Avenue site. Although soil and groundwater samples revealed that at some point in the past animal oil (grease/fat) had been dumped on the site, these contaminants were removed from the site this past summer (2016) and disposed of off-site as part of the first phase of the construction project.

Moreover, the Central Avenue site will not be affected by the MDL contamination found at the existing Hillside School site. The State installed a reactive barrier at the Central Ave Rosemary Brook Bridge to protect the Wellesley Water supply. The reactive barrier has been effective at stopping the contamination from reaching this area and is subject to ongoing monitoring.

16. What will the current Hillside School be used for after the new school opens?

The existing Hillside School will be used as swing space for other school and Town building projects in the near term.

17. After the school opens, will it be available to the Town for public use?

Yes. The building and site are designed to provide spaces that can be shared with the community when not in use by the school. These areas include the gym, cafeteria/performance space, the library, playgrounds and walking trails.

18. Central Avenue has heavy traffic. Is the street too busy to accommodate another school?

No. During the feasibility study process, the Town commissioned a traffic safety analysis of the proposed project. The study concluded that the site is not too busy and that traffic conditions do allow

for the location of another school along Central Avenue, with some minor improvements. The consultant recommended the following improvements to mitigate the effect of increased traffic volumes at the site:

- Designate the area as a School Zone under state and local statute, and install the appropriate School Zone signs, which can also act as traffic calming devices.
- Improve the pedestrian experience along Central Avenue by improving the sidewalks on both sides of the roadway to accommodate safe walks to school and providing advanced warning signage for school entering and exiting traffic.
- Install ADA-accessible crosswalks
- Evaluate installing exclusive turning lanes at Central Avenue for school traffic.
- Reach out to parents via social media to increase safety awareness.

The School Committee recognizes that traffic and potential congestion on Central Avenue are key concerns for residents. Although the traffic study determined that the school will not have a detrimental impact on traffic, the Town will continue to evaluate this issue. An additional traffic study is expected to be completed as part of the design development process this Fall. The study will evaluate the potential need for a new traffic light at the intersection of West Street and Central Avenue or a flashing light at the new entry drive to the school. The existing traffic report is available online on the School Department's web site at: http://rwd1.needham.k12.ma.us/Hillside_and_Mitchell_Planning/.

19. What efforts will be made to protect the safety of student and parents at the new school location?

The building has been designed with safety and security in mind. Lockable doors will separate the three-story academic wing from the public spaces. Cameras, locks and alarms will be in place throughout the building, and the security system will include lock-down technology for the classroom doors and classroom wing. The administrative offices (located along the front entrance path) will have a clear view of the main entrance and of any visitors to the building. The front desk will control all access into the front door and vestibule during the school day. In addition to the normal protocols, the Police and Fire Departments also will have access to the exterior ground area of the building.

Finally, crossing guards will assist students in crossing streets safely. In addition to the traffic improvements noted above, crosswalks with flashing lights will be provided both at the north and south ends of the school to assist students crossing Central Avenue. One or two crossing guards will be stationed near the entrances to provide additional safety during school arrival and dismissal times. Once on school property, sidewalks are provided to allow for students to have safe and direct access to the front door, the lower student entrance, and rear playground space without crossing the parking area or drive aisles. As currently happens in all of Needham's schools, school staff are placed around the site to help ensure student safety. It should be noted that students are safely crossing Central Avenue now to arrive at the Newman School (where about 80% of the students walking to school cross Central Avenue or Great Plan Avenue at the beginning or end of the school day.) The Eliot School also has many students who cross Central Avenue safely at the crosswalk near Cedar Street with the assistance of a crossing guard.

20. What measures will be put in place to mitigate the potential impact of construction on Central Avenue traffic?

The Hillside School Design team has integrated construction traffic mitigation factors into the design work that has occurred to date and will coordinate further mitigation elements into the upcoming design work for the new Hillside School. Construction work is being divided into two phases: a) demolition and b) new construction. During the demolition phase, the existing sewer and water lines will be cut and capped at the property line, thereby minimizing the excavation work within Central Ave. The natural gas lines must be cut and capped by National Grid at the main line. Electric and communication lines will be cut and capped at the telephone poles. All demolition phase parking will be on site. Demolition and construction work times will conform with the Needham By-laws.

The General Contractor (GC) will be responsible for the new construction project schedule, including the installation of all new utilities from the street to the new school. Where feasible, the work will be restricted to non-peak traffic periods. The GC will be required to coordinate with the Needham Police Department for necessary street details during the work within the street, to facilitate traffic flow. The Central Ave work for the new school will be coordinated with other Town and utility company projects proposed for this area of Central Ave. Town website traffic alerts and sign boards will be used, when appropriate, to notify motorists when to expect construction, and/or seek alternate routes. The GC also will provide construction parking on site, through designated construction entrance/ exit points. Typically, the workers arrive on site in advance of the morning peak traffic period and exit prior to the afternoon peak traffic time. Major deliveries for items like structural steel will be allowed only during non-peak traffic hours. Further traffic mitigation measures will be reviewed by the Traffic Engineer and Design Team during the next phases of Design in coordination with the Town's boards, committee's and departments.

21. Will more buses be required at the new school location?

We expect that the same number of Needham buses and vans will be used at the new school as are currently used: two (2) vans for special needs students, two (2) METCO buses and four (4) Needham buses. The timing of routes and the distance to the new school should not have an impact on arrival or dismissal times. The new bus routes will be drawn and shared with parents before the new school opens.

22. Will re-districting be expected as a result of the new school?

A benefit of the Central Avenue site is that it requires no major redistricting of the Hillside School population. Although minor redistricting around the edges of the district may be desirable to re-balance population among the districts, we do not expect any major redistricting to occur as a result of this project.

23. How will the new school compare to Needham's other elementary schools?

When built, the new Hillside School will be comparable to Eliot, Broadmeadow, and Newman. The new school will provide students with the space needed to offer the educational programs that are provided at other elementary schools, including Spanish and interdisciplinary learning, including

technology and engineering. The extended learning areas are similar to those found at the Eliot School and will provide collaborative, flexible learning environments and the opportunity for project-based learning.

Project Schedule:

24. What is the project schedule?

The schedule for the Hillside Project is as follows:

- October 5, 2016 - Special Town Meeting: Appropriate for Hillside School Construction and Outdoor Play Areas
- November 8, 2016 – Presidential Election: Proposition 2 ½ Debt Exclusion Override for Hillside School Project
- December 2016 – May 2018 –Design Development/ Preparation of Construction Documents/ Bidding
- June 2018 – August 2020 – Construction
- September 2020 – New School Opens

Currently, the Permanent Public Building Committee (PPBC) is considering an accelerated project schedule, which would open the building in September 2019, in an effort to save on cost escalation factors for construction. The anticipated savings are in the \$1.25 to \$1.50 million range. The PPBC will have a clearer understanding of the schedule and potential savings as the design development process gets underway in the Fall.

Project Costs & Financing:

25. What is the total cost of this project?

The total budget for the new Hillside School project is \$66,000,000. This is a ‘not to exceed’ amount that was voted by the MSBA Board, as well as the Board of Selectmen, School Committee and the PPBC. It represents the total cost for the entire project, inclusive of expenses that are eligible and ineligible for reimbursement from the MSBA. It is broken down as follows:

• New School Building	\$45,465,414
• Land Acquisition (Owens Poultry Farm, 609 Central Avenue)	\$7,280,000
• Project Contingency	\$4,552,000
• Soft Costs (Architect/Engineering/OPM/Debt Issuance/Other)	\$7,380,000
• Furnishings & Technology	\$1,075,000
• Moving Expense & Other	<u>\$247,586</u>
• Total	\$66,000,000

In addition, there are separate but parallel projects planned to construct outside play areas and a nature walk at the school for approximately \$460,000. At the request of the MSBA, these will be separate projects, due to the fact that all or a portion of these improvements will be constructed on land located on land owned by the Town of Wellesley but located within the Town of Needham. The Town has already licensed land from the Town of Wellesley for this purpose.

26. How will the project be funded?

The MSBA and Town will each fund a portion of the \$66,000,000 total project budget. The MSBA Board of Directors has approved an estimated maximum total facilities grant of between \$13,066,791 - \$14,014,874 for this school. The final amount that Needham receives will be based on a review and audit of the final project costs and may be an amount less than \$13,066,791. The District is responsible for financing the remainder of the project's costs.

The MSBA requires that Town Meeting appropriate and authorize the total project cost, including both the District's and the MSBA's share; however the District will only have to borrow for its portion. A Proposition 2 ½ Debt Exclusion Override for the project is scheduled for November 8, 2016.

27. What portion of the project cost will be requested at the October 5, 2016 Special Town Meeting?

The Special Town Meeting request is for \$57,542,500 to fund construction of the new school. Town Meeting already appropriated the cost of feasibility design and land purchase as follows:

- \$650,000 for Feasibility Study, Special Town Meeting, November 2013, Article #2
- \$45,000 for Feasibility Study, Special Town Meeting, November 2015, Article #12
- \$7,000,000 for Land Purchase (Owens Farm), Special Town Meeting, November 2015, Article #13
- \$762,500 for Land Purchase and Demolition (609 Central), Special Town Meeting, May 2016, Article #7

An Emergency Preamble will be requested as part of the warrant article to enable use of the funds immediately following final Special Town Meeting vote. The purpose of the preamble is to allow development of the project design on an accelerated schedule, which could lead to a shortened overall project schedule and potential budget savings.

In addition, \$250,000 in other Town Funds will be requested at the October 5, 2016 Special Town Meeting to design and build a playing field and adjacent walkways at the new school. This is intended to be a completely separate, but parallel project that would be timed with the design of the building. An additional project to construct the trail walk will be requested as part of the FY18 – FY22 Capital Improvement Plan. The PPBC is working with Parks and Forestry and the Conservation Department to explore opportunities to have some of the walking trails on the Wellesley-owned land constructed by the Student Conservation Association (SCA) (www.thesca.org/) in a project similar to those constructed in recent summers at Ridge Hill. There may be an educational opportunity to engage the SCA leaders with the Hillside teachers and students in the design of those nature trails.

28. What will the override amount be?

At the request of the MSBA, the debt exclusion ballot question will not specify an amount. This ballot question will be different from past ballot questions in that regard, as it has been the Town's long-standing practice to include the amount of borrowing in ballot questions. The reality is, however, that the Town cannot spend more than the \$66,000,000 total project budget without both the MSBA's approval and an additional appropriation approved by Town Meeting. As such, the spending authorization cannot exceed the \$66,000,000 amount.

As noted above, the Permanent Public Building Committee (PPBC) is considering an accelerated schedule, which would open the building one year earlier than planned in September 2019, in an effort to save on cost escalation factors for construction. If the accelerated schedule becomes a reality and the project budget is reduced, the amount borrowed will be reduced accordingly. Additionally, Town residents will have their tax bills increased ONLY by the Town's share of the actual cost of the project. The Town will not borrow the full amount unless it is necessary.

The override will not include the parallel projects to construct the outdoor playing field, play spaces and walking trail on the new Hillside site. These projects will be funded by cash or other Town revenues.

29. When is the Debt Exclusion Override Vote scheduled for?

The Proposition 2 ½ Debt Exclusion Override for the new Hillside School is scheduled to appear on the November 8, 2016 Presidential Election ballot. Passage of the ballot question requires a simple majority vote for approval.

30. What is the MSBA's share of the overall project costs and how was that share determined?

As noted above, the MSBA Board of Directors has approved an estimated maximum total facilities grant of between \$13,066,791 - \$14,014,874 for this school. The final amount that Needham receives will be based on a review and audit of the final project costs and may be an amount less than \$13,066,791.

The MSBA's share of this project was derived in a multi-step process. First, a project budget was developed, which included all of the costs associated with planning, developing, designing, bidding, constructing and completing the project. Then, the District's reimbursement rate was set, according to the formula outlined in state law. The State's share represents is the product of the reimbursement multiplied by the overall project budget, with some exceptions. Under the MSBA's regulations and policies, some project costs are categorically ineligible for reimbursement, such as site acquisition, moving expenses and debt issuance costs. In addition, some reimbursable expenses are 'capped' by the MSBA as follows:

- Design costs above 10% of building costs;
- Site development costs exceeding 8% of total construction cost;
- Reimbursable construction cost in excess of \$312/s.f.; and
- Furnishing, fixtures, equipment and technology costs in excess of \$2,400/student allowance.

The MSBA's voted maximum total facilities grant to Needham is based on a MSBA reimbursement rate of 34.72% of eligible project costs. The major non-reimbursable expenses for the Hillside project are: site acquisition, moving expenses and debt issuance costs.

31. How was Needham's 34.72% reimbursement rate determined, and how does it compare to other Towns?

MSBA reimbursement rates are based on the formula set out in Massachusetts General Law. The formula includes a 31% "base rate," which is then adjusted based on three socio-economic factors: a

community income factor, a community property wealth factor, and a community poverty factor. Up to 18 additional incentive points may be earned in the following categories: Model School Program (up to 5 points), newly-formed regional school district (up to 6 points), High Efficiency Green School Program (up to 2 points), best practices for routine and capital maintenance (up to 2 points), overlay zoning under MGL Ch 40R and 40S (up to 2 points), use of Construction-Manager-At-Risk (up to 1 point), renovation/re-use of existing facilities (up to 5 points), and establishing a maintenance trust (up to 1 point).

Needham's anticipated reimbursement rate of 34.72% is based on receiving the 31 base points, plus 1.72 maintenance best practices incentive points and 2.0 Energy Efficiency – Green Schools incentive points for designing the project to meet Leadership in Energy and Environmental Design (LEED – Silver standards. Needham did not pursue a CM-at-Risk delivery method for this project based on the PPBC's belief that the potential cost savings resulting from the traditional Chapter 149 "Design, Bid, Build" model with a general contractor would outweigh the scheduling and coordination advantages that the project could expect with a CM-at-Risk Chapter 149A delivery method.

Needham's reimbursement rate is lower than that received by many other towns, primarily because Needham simply does not qualify for adjustments to the 31% base rate, based on income, property wealth or poverty factors. Additionally, Needham received only limited incentive points, based on the eligible categories above.

32. If the MSBA's reimbursement rate is 34.72%, why doesn't the MSBA's share represent 34.72% of the overall project budget?

The anticipated MSBA reimbursement rate for the Hillside Elementary School Project is 34.72%. However, because some project costs are ineligible for reimbursement, and because some reimbursable expenses are 'capped', the effective cost sharing for the new school will be between 20% - 22%.

33. The project has a budgeted construction cost of \$501 per square foot, in excess of the MSBA's \$312/s.f. 'cap' amount. Does this mean the Hillside Project is more costly than MSBA guidelines allow?

No. The MSBA does not expect construction costs to be less than \$312/s.f., nor is the cap intended to represent an idea of what a 'reasonable cost' should be. Rather the \$312 cap is the MSBA's way of 'spreading' finite resources to as many districts as possible. The MSBA fully understands that construction costs will exceed the cap amount. The vast majority of recent new school buildings within Massachusetts exceed this cost /s.f. reimbursement rate.

The \$501 budgeted construction cost/ s.f. of the Hillside Project is based on a total construction budget of \$45,465,414 and 90,702 gross s.f.

34. What will the estimated cost per taxpayer be?

The estimated average single family home (ASFH) annual tax bill would be increased by up to \$375/year to pay the annual debt service for the proposed excluded debt. These calculations are based on the FY 2016 property values, with the ASFH assessment at \$830,790.

35. How does the cost of the school compare to other towns on a square foot basis?

The cost of the new Hillside School is higher than some comparable projects, due to the rising cost of construction (particularly in the Metrowest area) and characteristics specific to the Central Avenue site. Based on MSBA data for elementary school projects built after January 1, 2014, the cost of construction per square foot ranges from \$402/s.f. to \$583/s.f., with an average cost of \$460/s.f., after adjusting for both inflation and a comparable June 2019 midpoint of construction date (as planned for this project.) At \$501/s.f., the new Hillside School is on the higher end of this range.

Estimated Elementary School Construction & Total Project Budget Cost Data at Schematic Design (On or After January 1, 2014)									
District	School Name	Construct'n Type	Assumed Start Date of Construct'n	Construct'n Cost	Design Enrollment	GSF	SF/Student	Construct'n Cost/SF Escalated at 5%/yr to 6/19	MSBA Reimb. Rate
Gloucester	West Parish	New	6/14	29,995,466	355	65,679	185	583	59.73%
Worcester	Nelson Place ES	New	1/15	46,546,300	600	111,256	185	519	80.00%
Dedham	Early Childhood Center	New	5/17	23,213,533	200	50,988	255	504	51.33%
Hopkinton	Early Elementary School	New	8/16	35,140,982	395	83,256	211	485	44.50%
Athol-Royalston	Riverbend ES	New	11/14	35,191,363	545	95,726	176	482	80.00%
Brookline	Edward Devotion School	Add/Reno	6/16	92,237,854	1,010	227,087	225	470	38.30%
New Bedford	John Hannigan ES	New	7/16	29,792,732	400	74,056	185	464	80.00%
Milford	Woodland ES	New	1/15	48,381,844	985	132,539	135	453	59.94%
Narragansett	Templetonn Center ES	New	10/16	36,522,000	580	92,735	160	449	63.11%
Newton	Angier ES	New	6/14	26,231,698	465	74,960	161	447	40.10%
South Hadley	Plains ES	New	3/14	21,563,821	270	63,377	235	439	62.69%
Granby	West Street ES	Add/Reno	2/17	26,453,000	430	68,760	160	431	63.63%
Woburn	Wyman-Hurid ES	New	7/16	26,285,514	410	70,701	172	429	54.74%
Revere	Staff Sgt. James J. Hill ES	New	1/14	33,897,336	690	103,650	150	426	80.00%
Northboro	Lincoln Street ES	Add/Reno	4/15	18,224,600	270	52,920	196	422	52.88%
Whitman-Hanson	Maquan ES	New	9/15	45,696,905	800	132,841	166	413	59.17%
Carver	Carver ES	New	9/16	39,443,454	750	112,278	150	402	59.47%
Average Other MSBA (Excluding Hillside)								183	460
Needham (Design Enroll)	Hillside ES	New	6/18	45,465,414	430	90,702	211	501	34.72%
Needham (Proj Enroll)	Hillside ES	New	6/18	45,465,414	483	90,702	188	501	34.72%

Source: MSBA, http://www.massschoolbuildings.org/sites/default/files/edit-contentfiles/Building_With_Us/Cap_Plan_Charts/Cost_Data/Est_Con_Total_Proj_Budget_ES_Current_5_25_16.pdf

The rising cost of construction was discussed by the MSBA Board at its May 2016 Board Meeting. The Board examined the trend in construction costs, compared to common economic indicators, and reviewed the status of sixteen recently completed Core Program projects. The trend data provided support for a decision to increase the reimbursable cost per square foot from \$299/s.f. to the current \$312/s.f. Moreover, the Board also received information that 10 of 14 recently completed Core Program projects required additional appropriations beyond the original project budget, to cover increases in construction costs beyond schematic design estimates. These increases ranged from 0.2% to 14.5%, with an average increase of 6.0%.

In addition, characteristics at the Central Avenue site, such as sloping and uneven terrain, have required proportionately more site preparation and improvements compared to a flat site. Additionally, the stepped design of the new school (which was needed to integrate the school into the sloping site and keep the new school within the scale of existing homes in the neighborhood) increases the unit cost per square foot of the school, because the building geometry increases the size of the building envelope (roof, façade, slab and footings), compared to schools with the same footprint on multiple stories.

36. How did the cost of constructing a new school at the Central Avenue site compare to the cost of the other project options considered?

The School Committee selected the Central Avenue construction option in part because it minimized overall costs for the Town. Specifically, the Central Avenue project avoided the need to construct modular swing space, and minimized the transportation and operating cost impact of redistricting. For example, the two options to construct a new school on the existing Hillside site (which ranged in cost from \$86.5 - \$91.2 million) included the cost of constructing swing space at DeFazio Park for \$19.9 million. An alternate scenario to renovate the High Rock School for Hillside's use and construct a new Grade 6 school at DeFazio cost \$96.3 million, based on the need to retrofit the High Rock School for \$14.8 million. Finally, the option to construct a new elementary school at the DeFazio East site would have required substantial redistricting that would have resulted in additional transportation and operating costs, as well as the need to replace playing fields disturbed by the construction project, none of which was included in the \$61.0 million estimated project cost.

37. What efforts have been made to reduce the total cost of this project during the design process?

Since the start of the feasibility study, the building program area has been reduced by about 3,300 s.f.. Additionally, the Schematic Design cost estimate reflects an approximate \$4.4 million reduction in building cost compared to the Preferred Schematic Report stage submission, as a result of a variety of adjustments and refinements. Finally, during the Preferred Schematic Report phase, options that required the construction of temporary modular classrooms were eliminated, reducing estimated project costs by about \$15 million.

The building also will be the most energy efficient school within Needham, in compliance with current energy codes and LEED silver certification, and will result in future operating savings.

38. What value engineering will be done going forward to further reduce project expenses?

As noted above, the PPBC is considering an accelerated schedule, which would open the building in September 2019 in an effort to save on cost escalation factors for construction. The anticipated cost savings are in the \$1.25 to \$1.50 million range. However, many exterior market forces influence construction costs.

Each future step of refinement in the design will offer opportunities to look for potential cost savings.

39. Now that the building will be larger, will it be necessary to seek an operating override for any additional cost associated with the operation of the new Hillside School?

No, an operating override will not be necessary –we expect only minimal increases to overall building operating costs. On a preliminary basis, we expect the following:

- Electricity - The new building will be about twice as large as the existing Hillside School building, yet because of the energy efficient envelope, LED lighting systems, energy efficiency lighting and heating controls and energy wheels, the electrical consumption in the new

building is projected to increase only by about 10% above the existing school electrical consumption.

- Gas vs. Oil – the operating cost for the new high efficiency gas fired boilers and hot water heaters will have a similar increase of approximately 10% in the operating cost compared to the existing Hillside oil boiler system, despite doubling the building area.
- Custodial staffing – Two additional custodians may be needed to meet the ratio of 1 custodian per 20,000/s.f. at the new school, and to continue to provide minimal custodial support at the existing Hillside School, which will remain open for other Town needs.
- Teachers and Administrative Staffing –
 - The existing teachers and staff will be relocated to the new building, with no anticipated increases related to the building or the move. This project is unlike the High Rock School, which increased the number of school buildings in the Town’s inventory and therefore required duplicate staffing in some areas (like administration), as well as additional specialists to meet scheduling and student support requirements in a second middle school building. Since the new school will continue to serve the existing population of students in the same manner as they are currently served, no major staffing changes are anticipated.
- Pupil Transportation – We expect that the same number of Needham buses and vans will be used at the new school as are currently used: two (2) vans for special needs students, two (2) METCO buses and four (4) Needham buses. If the number of students who live more than 2 miles from school increases (in the furthest corner of the Hillside District), we may experience a minor loss in transportation fee revenue.
- Crossing Guards – An additional 1-2 crossing guards may be needed at the new school. We anticipate that two (2) guards will be needed in front of the school, on each side of the parking lot, with the possibility that an additional guard may be needed elsewhere on Central Avenue and/or at the bus loop. Currently, there are two (2) guards for the existing Hillside School, stationed at the intersections of West/Glen Gary and West/Hillside streets. These existing Crossing Guards may be reassigned to the new Central Ave location. Details will continue to be discussed with the Needham Police Department during the Design Development phase.

The implementation of Full Day Kindergarten will require additional staffing District-wide, the costs of which will be considered separately from the Hillside project. No decisions have yet been made on whether an operational override will be needed to implement Full Day Kindergarten across the District.

Community & Other:

40. How has the community been involved in the design process?

The community has been extensively involved in the design process for the new school during each step in the design process that started in March of 2015. The design incorporates the comments, considerations and concerns identified by a School Department Working Group, several Hillside School user groups (consisting of current teachers, department heads, district curriculum developers and members of the Parent Teacher Council) and as well as the PPBC, Development Review Team, Design Review Board, the Planning Board, Conservation

Commission, public safety officials, other Town committees, the MSBA and the general public, with whom the architects met several times during the design process.

41. What is the height limitation exception and why is the zoning by law change needed?

The Warrant Article Amendment to the Zoning By-Law section “4.2.2 Height Limitation Exception” requests an amendment to the Needham Zoning By-Law that limits the height of school and municipal buildings within the Rural Residence-conservation, Single Residence A, Single Residence B, General Residence and Institutional Districts. The modification is needed to accommodate the needs of new schools and municipal buildings with contemporary mechanical and air-conditioning equipment, solar panels and day-lighting requirements.

Section 4.2.2 of the Needham Zoning By-Law already allows for school and municipal buildings to have three (3) stories and 40 feet in height. This amendment would increase the height limit to 45 feet. The amendment would also allow for rooftop equipment to project no more than 15 feet above that height for no more than 33% of the roof area. It would also allow for cornices and parapets up to five (5) feet in height, and allow for solar panels with no limitation on roof coverage except for a setback from the building edge equal to the height of the panel.

Contemporary school and municipal buildings typically require a floor to floor height of about fourteen feet to maximize natural light into the classroom spaces, while allowing for the structural framing, heating ventilating and air conditioning (HVAC) ductwork, plumbing, electrical and tel./data equipment to fit in above the acoustical ceiling tiles. The rooftop equipment height and roof coverage is necessary to provide adequate space for contemporary HVAC equipment, elevator housings and equipment, exhausts, generators, roof access and stairways and the like above the roof.

The MSBA requires that all new schools in the Massachusetts that are eligible for state funding must be “solar ready” to receive Solar Photovoltaic panels so that even if they are not funded in the original construction solar panels could be added at a future time. This modification would allow a school or municipal building to maximize the benefit of rooftop solar panels while requiring a setback from the roof edge equal to the height of the panels.

Several recent public and private school additions and new construction projects have been granted waivers and / or variances by invoking the “Dover Amendment” and/ or approvals through “existing non-conformance waivers”. It was determined during the Feasibility Study for the Hillside School project that these modifications are needed for both current and future school projects.