District: Acton-Boxborough Regional School District
School Name: C.T. Douglas Elementary School
Recommended Category: Preferred Schematic
Date: June 19, 2019

Recommendation

That the Executive Director be authorized to approve the Acton-Boxborough Regional School District (the "District"), as part of its Invitation to Feasibility Study, to proceed into Schematic Design to replace the existing C.T. Douglas Elementary School and the Paul P. Gates Elementary School with a single building on the existing Paul P. Gates Elementary School site. MSBA staff has reviewed the Feasibility Study and accepts the District's Preferred Schematic.

District Information	
District Name	Acton-Boxborough Regional School District
Elementary School(s)	Carol Huebner Early Childhood Program (PK) Blanchard Memorial Elementary School (K-6) C.T. Douglas Elementary School (K-6) Luther Conant Elementary School (K-6) McCarthy-Towne Elementary School (K-6) Merriam Elementary School (K-6) Paul P. Gates Elementary School (K-6)
Middle School(s)	Raymond J. Grey Junior High (7-8)
High School(s)	Acton-Boxborough Regional High (9-12)
Priority School Name	C.T. Douglas Elementary School
Type of School	Elementary School
Grades Served	K-6
Year Opened	1967
Existing Square Footage	48,324
Additions	Modular classroom buildings added in 2001 and 2010
Acreage of Site	31.55 acres
Building Issues	The District identified deficiencies in the following areas: – Structural integrity – Mechanical systems – Electrical systems – Plumbing systems – Envelope – Windows – Accessibility In addition to the physical plant issues, the District reported that the existing facility does not support the delivery of its educational program as well as existing and projected overcrowding. Additionally, the building currently has no operable fire protection system.
Original Design Capacity	Unknown
2018-2019 Enrollment	405
Agreed Upon Enrollment	Study Enrollment includes the following configurations: 650 (PK-6)

District Information	
	990 (PK-6) (Preferred Schematic) 1,015 (PK-6)
Enrollment Specifics	Contingent upon the Board's approval of the Preferred Schematic, the District will sign a Design Enrollment Certification for 990 students in grades K-6, for a project that will serve grades PK-6.
Total Project Budget – Debt Exclusion Anticipated	Yes

MSBA Board Votes	
Invitation to Eligibility Period	February 15, 2017
Invitation to Feasibility Study	February 14, 2018
Preferred Schematic Authorization	On June 26, 2019 Board agenda
Project Scope & Budget Authorization	District is targeting Board authorization on October 30, 2019
Feasibility Study Reimbursement Rate (Incentive points are not applicable)	45.32%

Consultants	
Owner's Project Manager (the "OPM")	Skanska USA Building Inc.
Designer	Arrowstreet Inc.

Discussion

The existing C.T. Douglas Elementary School and the Paul P. Gates Elementary School share a 31.55-acre parcel that is split by the Fort Pond Brook located in the Town of Acton. The existing C.T. Douglas Elementary School, constructed in 1966, is a 48,324 gross square foot (gsf) school located at 21 Elm Street. The Paul P. Gates Elementary School, constructed in 1968, is a 52,000 gsf school located at 75 Spruce Street. Both schools currently house students in grades K-6. To ease overcrowding, the District expanded the C.T. Douglas Elementary School with the addition of three modular classrooms in 2001 and two more in 2010.

The District requested and MSBA agreed to study potential solutions that include consolidation with the Paul P. Gates School or the Luther Conant Elementary School.

The District identified numerous deficiencies in the Statements of Interest for each of the schools, including a lack of accessibility, overcrowding resulting in educational program constraints, lack of a building fire protection system, and building systems that are at the end of their useful life, including HVAC, plumbing, and electrical systems. The District also identified issues with the building envelope of the Paul P. Gates Elementary School.

In conjunction with its consultants, the District performed a comprehensive assessment of the existing conditions and the educational program and received input from educators, administrators, and facilities personnel. The study considered solutions for the existing C.T. Douglas Elementary School, a twin-school building that consolidates the C.T. Douglas and Paul P. Gates Elementary Schools, and a twin-school building that consolidates the C.T. Douglas and

Luther Conant Elementary Schools. Based on the findings of this effort, the District and its consultants initially studied five preliminary options including the following:

Option	Description of Preliminary Options
1	**Base Repair** of the C.T. Douglas Elementary School on the existing C.T. Douglas Elementary School site
2	**Addition/Renovation** of the C.T. Douglas Elementary School, for an enrollment of 650 students, on the existing C.T. Douglas Elementary School site
3	**New Construction** of a consolidated C.T. Douglas and Gates Elementary School, for an enrollment of 990 students, on the existing C.T. Douglas Elementary School site
4	**New Construction** of a consolidated C.T. Douglas and Gates Elementary School, for an enrollment of 990 students, on the existing Gates Elementary School site
5	**New Construction** of a consolidated C.T. Douglas and Conant Elementary School, for an enrollment of 1,015 students, on the existing Conant Elementary School site

After MSBA staff's review of the District's Preliminary Design Program, MSBA staff noted that additional analysis was required to demonstrate that the options investigated were sufficiently comprehensive in scope. Upon further review and discussion, MSBA staff and the District agreed to the options presented below for development and consideration in the Final Evaluation of Options:

Summary of Preliminary Design Pricing for Final Evaluation of Options

Option (Description)		Total Gross Square Feet	Square Feet of Renovated Space (cost*/sq. ft.)	Square Feet of New Construction (cost*/sq. ft.)	Site, Building Takedown, Haz Mat. Cost*	Estimated Total Construction ** (cost*/sq. ft.)	Estimated Total Project Costs
1	Option 1: (Base Repair) Douglas Site; 650 enrollment	48,324	48,324 $338/sq. ft.		$2,024,547	$18,383,889 $380/sq. ft.	$24,393,571
2	Option 2: (Addition/Renovation) Douglas Site; 650 enrollment	125,160	30,000 $422/sq. ft.	95,160 $468/sq. ft.	$11,729,794	$68,968,166 $551/sq. ft.	$91,513,767
3	Option 2.1: (New Construction) Douglas Site; 650 enrollment	125,160		125,160 $471/sq. ft.	$15,750,007	$74,639,166 $596/sq. ft.	$99,038,609
4	Option 2.2: (New Construction) Conant Site; 650 enrollment	125,160		125,160 $480/sq. ft.	$13,904,716	$73,975,818 $591/sq. ft.	$98,158,414
5	Option 2.7: (Base Repair) Gates Site; 990 enrollment	55,933	55,933 $334/sq. ft.		$2,342,707	$21,006,197 $376/sq. ft.	$27,873,095
6	Option 2.8: (Addition/Renovation) Gates Site; 990 enrollment	177,645	55,933 $420/sq. ft.	121,712 $465/sq. ft.	$17,113,130	$97,297,344 $547/sq. ft.	$128,984,294

Option (Description)		Total Gross Square Feet	Square Feet of Renovated Space (cost*/sq. ft.)	Square Feet of New Construction (cost*/sq. ft.)	Site, Building Takedown, Haz Mat. Cost*	Estimated Total Construction ** (cost*/sq. ft.)	Estimated Total Project Costs
7	Option 2.9: (Addition/Renovation) Douglas Site; 990 enrollment	177,645	30,000 $420/sq. ft.	147,645 $465/sq. ft.	$15,568,896	$96,841,395 $545/sq. ft	$128,498,717
8	Option 3: (New Construction) Douglas Site; 990 enrollment	177,645		177,645 $465/sq. ft.	$15,560,979	$98,141,757 $552/sq. ft.	$130,224,165
9	Option 4: (New Construction) Gates Site; 990 enrollment	177,645		177,645 $456/sq. ft.	$17,762,163	$98,707,668 $556/sq. ft.	$130,973,745
10	Option 4.1: (New Construction) Gates Site; 990 enrollment	177,645		177,645 $471/sq. ft.	$18,457,515	$102,184,957 $575/sq. ft.	$137,949,692
11	Option 4.6: (Base Repair) Conant site; 1,015 enrollment	55,017	55,017 $334/sq. ft.		$2,654,794	$21,012,093 $382/sq. ft.	$27,880,918
12	Option 4.7: (Addition/Renovation) Conant site; 1,015 enrollment	177,645	55,017 $420/sq. ft.	122,628 $465/sq. ft.	$16,223,549	$96,384,848 $543/sq. ft.	$127,892,925
13	Option 4.8: (Addition/Renovation) Douglas Site; 1,015 enrollment	177,645	30,000 $420/sq. ft.	147,645 $465/sq. ft.	$15,568,896	$96,841,395 $545/sq. ft.	$128,498,717
14	Option 4.9: (New Construction) Douglas Site; 1,015 enrollment	177,645		177,645 $465/sq. ft.	$15,560,979	$98,141,757 $552/sq. ft.	$130,224,165
15	Option 5: (New Construction) Conant Site; 1,015 enrollment	177,645		177,645 $456/sq. ft.	$16,160,302	$97,154,051 $547/sq. ft.	$128,913,579
16	Option 5.1: (New Construction) Conant Site; 1,015 enrollment	177,645		177,645 $472/sq. ft.	$16,396,846	$100,214,874 $565/sq. ft.	$135,290,080

** Marked up construction costs*
*** Does not include construction contingency*

The District originally proposed Option 4 as the Preferred Schematic to proceed into Schematic Design. The District selected this option as this consolidation of two schools aligns with the grade configuration of the District's "twin-school" model for the McCarthy-Towne and Merriam Elementary Schools, it does not require extensive construction phasing, it supports the District's educational vision, affords more opportunity for the District's sustainability and building performance goals, preserves and maximizes the green area around the school, and minimizes potential impact to the adjacent wetlands and the Riverfront area.

Options 1, 2.7, and 4.6 were eliminated from further consideration because the existing buildings are not adequately sized to meet the requirements of the District's study enrollments.

Options 2, 2.8, 2.9, 4.7, and 4.8 (addition/renovations) were not favored by the District due to concerns that phased renovations in an occupied school could disrupt the quality of the students' education, and because of community feedback advocating for the project to stay in West Acton (Douglas/Gates sites).

Options 2.2, 4.1, 5 and 5.1 (new construction) were not favored by the District due to concerns that multi-phased construction on an occupied site could disrupt the quality of the students' education, and because of community feedback advocating for the project to stay in West Acton (Douglas/Gates sites).

Options 2.1, 3, and 4.9 address alternatives for utilizing the existing Douglas school and site. Due to environmental constraints on the Douglas School site and necessary encroachment onto an adjacent Town of Acton owned park property, none of these options were preferred by the District.

The District presented its proposed Preferred Schematic to the MSBA Facilities Assessment Subcommittee ("FAS") on March 13, 2019. At that meeting, members of the FAS raised concerns about the lack of development of the building layout and about flexibility. As a result, Option 4 was further developed in a subsequent Preferred Schematic Report to more optimally support the District's goal of two separate school identities and separate school operations, while also supporting the possibility for the school to operate as a single facility in the future.

After final consideration and consultation with MSBA staff and the FAS, the District added a further development of Option 4 (Option 4A) as follows:

	Additional Option (Description)	Total Gross Square Feet	Square Feet of Renovated Space (cost*/sq. ft.)	Square Feet of New Construction (cost*/sq. ft.)	Site, Building Takedown, Haz Mat. Cost*	Estimated Total Construction ** (cost*/sq. ft.)	Estimated Total Project Costs
17	***Option 4A: (New Construction) Gates Site; 990 enrollment******	***177,645***		***177,645*** ***$456/sq. ft.***	***$17,762,163***	***$98,707,668*** ***$556/sq. ft.***	***$130,973,745***

** Marked up construction costs*
*** Does not include construction contingency*
******District's Preferred Schematic***

The District confirmed its selection of Option 4A as the Preferred Schematic to proceed into Schematic Design. Option 4A consolidates two schools replicating the "twin-school" model of the existing McCarthy-Towne and Merriam Elementary Schools, does not require extensive construction phasing, and it supports the District's educational vision of two separate school identities while allowing the possibility for the school to operate as a single facility in the future if desired. Additionally, Option 4A affords more opportunity for the District's sustainability and building performance goals, preserves and maximizes the green area around the school, and minimizes potential impact to the adjacent wetlands and riverfront area.

The District and its consultants presented the updated Preferred Schematic at the June 5, 2019 FAS meeting. The FAS, MSBA Staff, and the District discussed: 1) appreciation for the additional level of clarity provided in the updated plans and presentation, especially regarding how proposed shared spaces and the two unique school identities interact through the use of unifying elements; 2) opportunities for further development of the site, and consideration of incorporating more buffers and separation between the building and vehicular traffic, in order to create less of a "school in a parking lot" atmosphere; 3) opportunities to further develop the proposed scale and image of the south elevation and front entrance of the building, and consideration of how the north elevation distinctly scales down the size of the building from that perspective; 4) consideration for the south facing art and music classrooms, and how those proposed spaces may utilize the natural light expected from their positioning; 5) the long corridors proposed in the design, and consideration of how the ins and outs of each corridor could be more clearly defined for the youngest population of students; 6) opportunities for further development of the service entrance, and additional separation from the proposed outdoor play areas; 7) opportunities to develop more intimate play areas through the use of creative building envelope and landscape design; 8) opportunities to more clearly define Pre-Kindergarten student use of proposed outdoor play areas as part of the educational curriculum; 9) further consideration for the proposed cafetorium partition, and how students entering from one side may need to traverse through the proposed partition; 10) consideration for building in flexibility in the design of some grade 1 classrooms to potentially serve Kindergarten students in the future; and 11) consideration for the incorporation of the learning commons and utilizing the natural topography of the existing site.

MSBA staff reviewed the conclusions of the Feasibility Study and all other subsequent submittals with the District and found:

1) The options investigated were sufficiently comprehensive in scope, the approach undertaken in this study was appropriate, and the District's Preferred Schematic is reasonable and cost-effective and meets the needs identified by the District.

2) MSBA staff will determine the extent of recovery and effect on the MSBA grant associated with the previous Green Repair project for the existing Douglas Elementary School as part of the MSBA review of the District's Schematic Design submittal.

3) The District has submitted an operational budget for educational objectives and a capital budget statement for MSBA review.

4) The District's Schematic Design submittal will be subject to final review and approval by the Department of Elementary and Secondary Education as part of the Schematic Design submittal, which is prior to executing a Project Scope and Budget Agreement.

5) Subject to Board approval, the MSBA will participate in a project that includes spaces that meet MSBA guidelines, except for variations previously agreed to by the MSBA. All proposed spaces will be reviewed during the Schematic Design phase.

6) As part of the Schematic Design phase, the District will work with the MSBA to determine a mutually agreeable methodology to differentiate eligible costs from ineligible costs.

Based on the review outlined above, staff recommends that the Acton-Boxborough Regional School District be approved to proceed into Schematic Design to replace the existing C.T.

Douglas Elementary School and the Paul P. Gates Elementary School with a single building on the existing Paul P. Gates Elementary School site.