

District: Town of Watertown
 School Name: Watertown High School
 Recommended Category: Preferred Schematic
 Date: August 18, 2021

Recommendation

That the Executive Director be authorized to approve the Town of Watertown (the “District”), as part of its Invitation to Feasibility Study, to proceed into Schematic Design to replace the existing Watertown High School with a new facility serving grades 9-12 on the existing site. MSBA staff has reviewed the Feasibility Study and accepts the District’s Preferred Schematic.

MSBA staff also recommends that the Executive Director be authorized to extend the termination date of the Feasibility Study Agreement between the Massachusetts School Building Authority (the “MSBA”) and the Town of Watertown (the “Town”), as part of its Invitation to Feasibility Study for the Watertown High School, from December 12, 2021 to February 28, 2022.

District Information	
District Name	Town of Watertown
Elementary School(s)	Early Steps Pre-School (Integrated PK for ages 3-5) Cuniff Elementary School (PK-5) Elementary School (PK-5) Hosmer Elementary School (PK-5) James Russell Lowell Elementary School (PK-5)
Middle School(s)	Watertown Middle School (6-8)
High School(s)	Watertown High School (9-12)
Priority School Name	Watertown High School
Type of School	High School
Grades Served	9-12
Year Opened	1929
Existing Square Footage	222,866
Upgrades/Additions	1934, 1959, 1981, and 2004
Acreage of Site	4.27 acres
Building Issues	The District identified deficiencies in the following areas: <ul style="list-style-type: none"> – Mechanical systems – Electrical systems – Plumbing systems – Envelope – Windows – Roof – 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 overcrowding.
Original Design Capacity	Unknown
2020-2021 Enrollment	695
Agreed Upon Enrollment	720
Enrollment Specifics	The District and MSBA have mutually agreed upon a design enrollment of 720 students serving grades 9-12.

District Information	
Total Project Budget – Debt Exclusion Anticipated	Yes

MSBA Board Votes	
Invitation to Eligibility Period	December 13, 2017
Invitation to Feasibility Study	December 12, 2018
Preferred Schematic Authorization	On August 25, 2021 Board agenda
Project Scope & Budget Authorization	District is targeting Board authorization in February 2022
Feasibility Study Reimbursement Rate (Incentive points are not applicable)	47.00%

Consultants	
Owner’s Project Manager (the “OPM”)	Compass Project Management, Inc.
Designer	Ai3 Architects, LLC

Discussion

The existing Watertown High School is a 222,866 square foot facility located on a 4.27-acre site that currently serves students in grades 9-12. The original building was constructed in 1929, with upgrades and additions in 1934, 1959, 1981, and 2004.

The District identified numerous deficiencies in the Statement of Interest (“SOI”) that are associated with mechanical, electrical, and plumbing systems; building envelope; windows and roofing beyond their usable lifespan; and accessibility constraints. The District also identified overcrowding in the current facility.

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. Based on the findings of this effort, the District and its consultants initially identified (14) options at the Preliminary Design Program phase that included (1) base repair option, (2) addition/renovation options, and (11) new construction options, as presented below.

Option	Description of Preliminary Options
Base Repair Option	Code upgrade option at the existing Watertown High School.
1	New construction on the existing Watertown High School site.
2A	Addition/renovation at the existing Watertown High School. This option renovates most of the existing high school with minimal additions.
2B	Addition/renovation at the existing Watertown High School. This option is a large addition with selective preservation of the existing building.
3A	New construction on the existing Watertown High School site with a new gymnasium and a new Council on Aging facility on the Phillips site. The existing District Administration is relocated.

3B	New construction on the existing Watertown High School site with a new gymnasium and renovates the existing Council on Aging facilities on the Phillips site. The existing District Administration is relocated.
3A +Admin.	New construction on the existing Watertown High School site with a new gymnasium and new Council on Aging facility and a new District Administration on the Phillips site.
3C	New construction on the Philips site with a new gymnasium and a new Council on Aging facility and District Administration on the existing Watertown High School site.
4A	New construction on the Department of Public Works (“DPW”) site.
4B	New construction on the combined DPW / Watertown High School Stadium / Victory Field sites with reconfigured athletic fields.
4C	New construction on the combined DPW / Watertown High School Stadium / Victory Field sites with reconfigured athletic fields.
4D	New construction on the combined Watertown High School Stadium / Victory Field sites with reconfigured athletic fields; and DPW remains in place.
5	New construction on the Moxley Field site.
6	New construction on an alternative site of an appropriate size that would be purchased by the District.

It should be noted that as a result of further analysis during the Preliminary Design Phase, the District determined that the “Base Repair Option” would not be further considered as a viable solution because this option does not meet the needs of the District’s educational program, would result in significant disruption to ongoing education during construction, and does not address existing overcrowding. However, this option was included for cost comparison purposes only going forward and all other preliminary options would be further evaluated in the Preferred Schematic phase.

During the Preferred Schematic phase, it should be noted that the District and design team further developed the following options:

- “Option 1” was further developed resulting in (4) options varying in scope, schedule, and budget referred to as “Options 1A, 1B, 1C, and 1D”. These options explored various design concepts of a new 3-story high school building on the existing Watertown High School site, a new gymnasium and Council on Aging facility on the existing Phillips site, and a renovation of the existing Phillips building for the District Administration offices.
- “Options 3A-3C” were further developed resulting in the addition of (5) options varying in scope, schedule, and budget referred to as “Options 3D-1, 3D-2, 3D-3, 3D-4 and 3E”. These options explored various design concepts of a high school campus with placement of a new 3 or 4 story academic building on the existing Phillips site and a new performing arts/gymnasium building on the existing Watertown High School site, including new District Administration offices and Council on Aging programs. These options include a pedestrian bridge over Common Street connecting the two proposed buildings. Additionally, “Option 3E” investigates the creation of a high school campus with the placement of a new 4-story academic building, with a central courtyard, on the existing Phillips site and a new performing arts/gymnasium building on the existing high school

site, including new District Administration offices and Council on Aging Programs. It should be noted that the primary differences between “Options 3D1-4” and “Option 3E” are the pedestrian bridge in “Options 3D1-4” and the phasing of the new performing arts wing.

- “Option 4D” was further developed resulting in adding (2) options varying in scope, schedule, and budget referred to as “Options 4D.1 and 4E”. “Option 4D” proposes to locate a new 4-story high school building on the existing Victory Field site on Orchard Street, and “Option 4E” proposes a new 4-story high school building on the existing Watertown High School Stadium site on Orchard Street.

As a result of evaluation during the Preferred Schematic phase, the following options were not considered further by the District and design team:

- “Options 1A-1D”, because each option would require complex phased construction, extended construction durations, and significant disruption to ongoing education during construction.
- “Option 2A”, because this option consists of complex phased/occupied construction as well as completely relocating students during critical phases without having viable swing space identified. Teachers would be asked to travel between future swing space off campus and to programs that remain on campus. In addition, the site is consumed by the building with little to no outdoor learning/open space. The 1929 building has small room sizes dependent on the existing structural grid creating existing spaces that are undersized and not conducive to the delivery of a 21st educational program, and not all educational goals and adjacencies included in the Educational Program can be met.
- “Option 3A”, because the proposed layout and location of the new high school on the site, including the significant setback from Columbia St., was considered undesirable. In addition, green/open space is proposed to the north offering limited sun exposure. Also, the site proposed plan does not adequately address how services and deliveries to the kitchen would be handled and a new permanent home for District Administration would need to be decided during the design of the high school project.
- “Option 3B”, because the drawbacks associated with “Option 3A” are similar in this scenario, however, because of the Council on Aging location, the high school new gym would be smaller and results in less open space compared to “Option 3A”.
- “Option 3A+Admin”, because the drawbacks associated with “Option 3A” are similar in this scenario, however, because of the District Administration location, the high school’s new gym would be smaller and results in less open space compared to “Option 3A”.
- “Option 3C”, because the existing gym would be demolished before the new gym is built and a swing space gym would be needed on Victory Field. This option would require 60 months of construction, and results in one of the most expensive options. Building gym swing space on Victory Field was not favorable and there were concerns regarding shuttling students and staff to the remote gym space.

- “Options 4A-C”, because these options require relocation of the DPW adding \$44-\$59 million to the proposed project and the sports fields would remain offline for an extended period of time. In addition, there were concerns regarding the tight site constraints of the DPW site which would compromise emergency access and prevent an ideal educational layout and function.
- “Options 4D.1 and 4E”, because development of the proposed site would eliminate the largest and most centrally located green spaces within the District. These options would also require extensive renovations/replacement of the existing stadiums, and would create significant change and disruption to both the high school neighborhood and Victory Field neighborhood.
- “Option 5”, because of the associated permanent displacement of the existing recreational fields and the associated relocation of the high school out of a desired central location. It is anticipated that this option would also result in additional traffic due to the proximity to the existing middle school.
- “Option 6”, because no other centrally located buildable sites were found to be available.

The District presented its original Preferred Schematic, referred to as “Option 3D-4”, for the Watertown High School project at the January 13, 2021 MSBA Facilities Assessment Subcommittee (“FAS”) meeting. “Option 3D-4” proposed a two-site solution where a new 4-story academic component of the high school would be located on the Phillips site and the performing arts and physical education portion of the high school would be located on the site of the existing high school. This option also included scope to provide space for the District Administration, Council on Aging, and Public Facilities Department. The presentation of this option raised a number of questions regarding the proposed two-site solution. As a result, the District captured input from the FAS, evaluated potential improvements, and further explored building options associated with a one-site solution. Based on this effort, the District and design team developed (3) additional alternatives referred to as “Options 1F, 1H, and 1J”. Subsequently, the District and design team presented an updated one-site solution at the March 24, 2021 FAS meeting.

Based on the District’s previous presentations to FAS and subsequent efforts to refine the Preferred Schematic, MSBA staff and the District agreed to explore the following (7) options for further development and consideration in the final evaluation and development of preliminary design pricing as presented below, including: (1) code upgrade option, (1) addition/renovation option, and (5) new construction options. As noted, the “Base Repair Option” was included for cost comparison purposes only. In addition to studying additional options, the District and its design team performed a second review of space needs, multiple uses for spaces and scheduling opportunities that allowed it to reduce the building’s overall size by approximately 54,000 gross square feet creating a more efficient and affordable project.

Summary of Preliminary Design Pricing for Final Evaluation of Options

Option (Description)	Total Gross Square Feet	Square Feet of Renovated Space (cost*/sf)	Square Feet of New Construction (cost*/sf)	Site, Building Takedown, Haz Mat. Cost*	Estimated Total Construction ** (cost*/sf)	Estimated Total Project Costs
Base Repair Option: Code upgrade only	222,866	222,866 \$471/sf	N/A	\$11,530,630	\$116,422,513 \$522/sf	\$144,363,916
Option 2B: Addition/reno at the existing HS and Phillips site	278,089	141,392 \$823/sf	136,697 \$709/sf	\$30,571,896	\$243,847,765 \$877/sf	\$302,371,229
Option 3D-4: New construction at existing HS and Phillips site	311,537	N/A	311,537 \$490/sf	\$22,874,628	\$175,649,257 \$564/sf	\$217,805,079
Option 3E: New construction at existing HS and Phillips site	324,142	N/A	324,142 \$490/sf	\$24,965,654	\$183,649,370 \$567/sf	\$227,725,219
Option 1F: New construction at existing HS site	257,227	N/A	257,227 \$466/sf	\$17,094,676	\$136,944,535 \$532/sf	\$192,084,195
Option 1H: <i>New construction at the existing HS site</i>	257,227	N/A	257,227 \$464/sf	\$17,017,977	\$136,371,305 \$530/sf	\$191,373,390
Option 1J: New construction at the existing HS site	257,227	N/A	257,227 \$513/sf	\$17,806,616	\$149,887,536 \$583/sf	\$204,500,948

For Options 3D-4, 3E, 1F, 1H, and 1J - It should be noted that the total gross square footage includes proposed square footage for a parking garage.

* Marked up construction costs

** Does not include construction contingency

*****District's Preferred Schematic**

The District has selected “Option 1H” as its Preferred Schematic to proceed into Schematic Design because this option best meets the needs of the District’s educational program, takes advantage of a single site solution, and will be designed to maintain optimal solar orientation for the proposed classrooms. Also, this option includes a lower estimated cost of construction when compared to other options considered, and it does not disrupt the existing spaces for the Council on Aging and the District Administration or require additional square footage for these spaces. However, space dedicated to the existing Public Facilities Department will be relocated off the new high school site. In addition, the proposed design anticipates improved safety and security associated with a single site solution and eliminates disruption to the existing high school stadium and Victory Field sites.

As noted, the “Base Repair Option” was not considered a viable option by the District because this option does not meet the needs of the District’s educational program, would result in significant

disruption to ongoing education during construction, and it does not address existing overcrowding.

“Option 2B” was not selected by the District because this option results in undesirable occupied phased construction that involves moving students and staff off campus resulting in significant disruption to ongoing education during construction. Additionally, this option is estimated to include the longest construction duration and highest estimated project cost.

“Options 3D-4 and 3E” were not selected by the District mainly because these options do not take advantage of a one-site solution as compared to “Option 1H”. These options both propose use of the entire Phillips site for high school use and would displace the existing Phillips Administration Building which is the home of District Administration, District Facilities, and the Council on Aging. Both options would also require the relocation of these three public buildings as part of the project. Including these public projects into the design would increase the overall square footage by approximately 35,000 sf which would significantly increase the overall project cost. The added programs would also require increased parking on the Columbia Street campus. Both options would also require a main entry on the Phillips campus and a main entry on Columbia Street campus leading to safety and security concerns. Due to the steep grade changes between both campuses, universal access would be difficult to achieve between these sites. Also, less than ideal STEM/STEAM connections would occur when the performing arts spaces and athletic center are removed from the “academic core.” “Option 3E” does not contain a pedestrian bridge which raises concerns about the safety of students frequently crossing Common Street multiple times a day, one of the most heavily traveled roads in Watertown.

“Option 1F” was not selected by the District because this 3-story option results in less-desirable sprawling classroom wings with disconnected academic commons spaces. In addition, the L-shape configuration of the academic neighborhoods and proposed location of the interdisciplinary commons create disconnected academic neighborhoods with unfavorable adjacencies.

“Option 1J” was not selected by the District because this option offers limited green space when compared to “Option 1H”. Additionally, this option is anticipated to include an extended construction duration and a higher estimated project cost when compared to “Option 1H”.

Following the District’s previous presentations to the MSBA Facilities Assessment Subcommittee at the January 13, 2021 and March 24, 2021 meetings, the District and design team presented its updated Preferred Schematic at the August 4, 2021 FAS meeting. At that meeting, members of the FAS discussed the following items: appreciation for the District’s and design team’s efforts to incorporate the MSBA’s feedback into its final preferred schematic and the ongoing communication from the project team, progress of the conceptual design since the District’s presentation at the March 24, 2021 FAS Meeting; benefits of the updated single-site Preferred Schematic including its support of the educational program, flexibility, and reduced estimated construction duration; appreciation for the sustainable design features of the proposed building; appreciation for the site plan and integration of universal design elements including sloped walkways; connections between the exposed area of the proposed parking garage and the surrounding site; and community outreach and support for the proposed project.

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, cost-effective, and meets the needs identified by the District.
- 2) The District will submit an operational budget for educational objectives and a capital budget for MSBA review.
- 3) The District's Special Education submission 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.
- 4) 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.
- 5) 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 Town of Watertown be approved to proceed into Schematic Design to replace the existing Watertown High School with a new facility serving grades 9-12 on the existing site.