

## **Attachment A – Module 4 – Schematic Design Review Comments**

**District:** City of Somerville

**School:** Somerville High School

**Owner's Project Manager:** PMA Consultants, LLC

**Designer Firm:** Symmes, Maini & McKee Associates

**Submittal Due Date:** January 4, 2017

**Submittal Received Date:** January 4, 2017

**Review Date:** January 4-12, 2017

**Reviewed by:** K.Brown, J. Jumpe

### **MSBA REVIEW COMMENTS:**

*The following comments<sup>1</sup> on the Schematic Design submittal are issued pursuant to a review of the project submittal document for the addition/renovation of the proposed project and presented as a Schematic Design submission in accordance with the MSBA Module 4 Guidelines.*

#### **4.1.1 DESE SUBMISSION**

Provide the following Items		Complete; <i>No response required</i>	Provided; <i>District's response required</i>	Not Provided; <i>District's response required</i>	Receipt of District's Response; <i>To be filled out by MSBA Staff</i>
1	Cover Letter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### **Comment:**

*1,2) As noted in the 1.3.17 email from MSBA, prior to MSBA forwarding the submittal to DESE, the District should revise the following:*

*OPM Cover Letter (Original Signed Hardcopy)*

- 1. Missing targeted Board date for PS+B approval*
- 2. Net square footage listed in bullet #2 is incorrect*

#### **RESPONSE:**

- In response to Items 1 & 2 noted above, the District prepared and submitted a revised OPM Cover Letter to the MSBA on January 5, 2017. The revised OPM Cover Letter is attached at the end of these review response comments for reference.*

<sup>1</sup> The written comments provided by the MSBA are solely for purposes of determining whether the submittal documents, analysis process, proposed planning concept and any other design documents submitted for MSBA review appear consistent with the MSBA's guidelines and requirements, and are not for the purpose of determining whether the proposed design and its process may meet any legal requirements imposed by federal, state or local law, including, but not limited to, zoning ordinances and by-laws, environmental regulations, building codes, sanitary codes, safety codes and public procurement laws or for the purpose of determining whether the proposed design and process meet any applicable professional standard of care or any other standard of care. Project designers are obligated to implement detailed planning and technical review procedures to effect coordination of design criteria, buildability, and technical adequacy of project concepts. Each city, town and regional school district shall be solely responsible for ensuring that its project development concepts comply with all applicable provisions of federal, state, and local law. The MSBA recommends that each city, town and regional school district have its legal counsel review its development process and subsequent bid documents to ensure that it is in compliance with all provisions of federal, state and local law, prior to bidding. The MSBA shall not be responsible for any legal fees or costs of any kind that may be incurred by a city, town or regional school district in relation to MSBA requirements or the preparation and review of the project's planning process or plans and specifications.

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
2	Special Education Delivery Methodology Letter	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Comment:**

*SPED Delivery Methodology Letter (Original Signed Hardcopy)*

1. Provide a description of the current District wide special education programs and methodology
2. Provide the number of students currently served, both District wide and at the grade levels under consideration
3. Describe how the proposed program fits into the District wide services
4. Describe the number of students that will be served in the subject school building
5. Describe potential Collaboratives, Pre-K or Early Childhood SPED at the District level, or private and/or public partnerships/ relationships that may affect SPED
6. Clarify how SHIP Grades 9-12 and SHIP Transition Program are housed in the same room or separate rooms

**RESPONSE:**

1. In response to Items 1-6 noted above, the District prepared and submitted a revised SPED Delivery Methodology letter to the MSBA. Two original wet signed hard copies of which were hand delivered to the MSBA on January 6, 2017. The revised letter addresses each of the individual items 1-6 noted above within the letter text. The revised letter is attached at the end of these review response comments for reference.

**4.1.2 SCHEMATIC DESIGN BINDER**

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response To be filled out by MSBA Staff
2	Final Design Program				
	b) Educational space summary spreadsheets	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*2b) In the District's response to these comments, MSBA requires a completed and signed space summary spreadsheet (for inclusion in the Project Funding Agreement) that includes the following:*

1. MSBA guideline spaces that have not been manipulated
2. All proposed net spaces in one of the 12 appropriate space categories
3. Total Building Net and Gross Floor Area, and resulting grossing factor

**RESPONSE:** An updated, completed and signed space summary spreadsheet is attached at the end of these review response comments for inclusion in the Project Funding Agreement. As requested, it includes:

1. MSBA guideline spaces that have not been manipulated (with the exception of customizations to accommodate the comprehensive high school FTE population that were pre-approved and reviewed by MSBA)
2. All proposed net spaces in one of the 12 appropriate space categories
3. Total Building Net and Gross Floor Area, and resulting grossing factor

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response To be filled out by MSBA Staff
5	Geotechnical and Geo-environmental Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>5) A Geotechnical report is provided with no response required from the District. However, the submittal states that a Phase 2 Environmental Assessment was performed and included in the submittal, but this assessment is not provided. Please provide as a part of the response to this review. MSBA notes that all costs associated with abatement of the noted fuel storage tanks and any potential hazardous soils are ineligible for MSBA reimbursement.</p> <p>RESPONSE: The Phase 2 Environmental Assessment (produced by CDW Consultants, Inc. and dated December 2016) was included as part of the digital submission of the Schematic Design report, and can be found starting on page 1155 of the PDF document that contains the report. If the printing of the hard copy Schematic Design report inadvertently omitted the Phase 2 Environmental Assessment report, the "hard copy" version of that document (without the 100+ pages of full test results) has been attached at the end of these review response comments for reference. The full Phase 2 report, including all test results, can be found in the digital submission of the Schematic Design report.</p>					

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response To be filled out by MSBA Staff
6	Code Analysis and List of Permitting and other Regulatory Filing Requirements	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>6) The submitted Code Analysis references the 9<sup>th</sup> edition of the Massachusetts Building Code MA 780 CMR including Chapter 34 (Existing Building Code) and the 2015 edition of the International Energy Conservation Code. The report notes that the existing auditorium building will be made compliant with the new construction criteria. MSBA notes that Somerville is a Designated "Green" Community. The project will be required to comply with the current "Stretch" Energy Code. Please confirm.</p> <p>RESPONSE: The notes above are confirmed.</p>					

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response To be filled out by MSBA Staff
12	Timeline associated with filing the Project Notification Form with Massachusetts Historical Commission ("MHC") and obtaining MHC approval prior to construction bids.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*12) The submittal includes a letter from the Massachusetts Historical Commission ("MHC") to the City of Somerville dated August 18, 2016 in which the MHC accepts the District's Preferred Option 4B, with stipulations that will be described in a Memorandum of Agreement drafted by the MHC to the City. As noted in the June 27, 2016 MSBA Preferred Schematic Report review comments, please include in the schedule submitted with the following submittal, the timeline associated with obtaining final Massachusetts Historical Commission ("MHC") approval prior to construction bids. The District should keep the MSBA informed of any decisions and/or proposed actions and should confirm that the proposed project is in conformance with Massachusetts General Law 950, CRM 71.00.*

**RESPONSE:** Acknowledged. Subsequent submissions of the project schedule will identify both the timeline associated with final MHC approval, as well as a copy of the Memorandum of Agreement once it has been finalized.

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response To be filled out by MSBA Staff
13	Room Data Sheets	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*13) MSBA notes handicapped accessibility is being provided to the auditorium stage with use of a vertical wheelchair lift. Although it is understood that this portion of the project is in the existing (repurposed) building, and the proposed accessibility appears to be compliant with MA 521 CMR, MSBA encourages the District and design team to further consider inclusive and universal methods such as sloping walkways or ramps, and access to the stage from both sides of the auditorium.*

**RESPONSE:** Acknowledged. If the auditorium were being built as new construction, alternative approaches would be available to provide improved accessibility for the stage. However, given the need to leverage the existing structure for budgetary and historic requirements, the design was forced to raise the stage (and the entirety of the raked audience seating) from the surrounding existing floor construction. Choosing to do otherwise would have resulted in the loss of usable area on the existing level below the auditorium, which was not viable from an efficiency and circulation standpoint. Given the constraint of the existing structure and building configuration, the District and design team will work to ensure that the overall auditorium environment is as inclusive as possible in terms of the stage and audience access, and will confirm compliance with the requirements of MA 521 CMR.

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Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response To be filled out by MSBA Staff
17	Designer's Construction Cost Estimate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*17) As described in the Preferred Schematic Report, the original 1895 school and portions of the 1914 additions will be repurposed by the City outside of the scope of the Somerville High School project. The Project Scope and Budget submittal describes stabilization efforts required as part of the High School project, including limited masonry infill resulting from surrounding demolition and code required lateral bracing and temporary fire alarms. The estimated cost of this stabilization is indicated in the cost estimate at \$1.4m. As noted in the Preferred Schematic Report, the District understands that any subsequent work on this portion of the existing building beyond the stabilization indicated in the cost estimate will not be included in the scope of budget of this project. Please confirm.*

**RESPONSE:** Confirmed - the District understands that any subsequent work (beyond that which comprises the estimated \$1.4m value for the stabilization work) will not be included in the scope of budget of this project.

**Additional Comments:**

- On July 20, 2016 the MSBA Board of Directors approved the District's Preferred Option 4B for a 373,373 square foot addition / renovation option with an estimated total project cost of \$255,997,997. This Schematic Design submittal under review shows this same option currently as a 377,192 square foot addition / renovation option with an estimated total project cost of \$255,989,563. This represents an increase of 3,819 square feet and a decrease of \$8,434.*

**RESPONSE:** The District and design team confirms the reporting of the project size and estimated total project cost by MSBA. Please note that based on discussion with MSBA following the submission of the Schematic Design documents, and as detailed below in the response to the Space Summary Review comments, the revised total gross floor area of the project is now anticipated to be 369,496 gsf. The estimated total project cost is still anticipated to be \$255,989,563.

## **Attachment B – Module 4 – Schematic Design Space Summary Review**

The MSBA considers it critical that the Districts and their Designers aggressively pursue design strategies to achieve compliance with the MSBA guidelines for all proposed projects in the new program and strive to meet the gross square footage allowed per student and the core classroom space standards, as outlined in the guidelines. The MSBA also considers its stance on core classroom space critical to its mission of supporting the construction of successful school projects throughout the Commonwealth that meet current and future educational demands. The MSBA does not want to see this critical component of education suffer at the expense of larger or grander spaces that are not directly involved in the education of students.

MSBA recognizes the benefits and the challenges associated with saving or renovating existing spaces, and may consider variations in the guidelines for renovation projects beyond those included below. Please note that any spaces in new construction or substantially renovated spaces must be compliant with MSBA space standards for both allotted area and room quantity unless otherwise approved in writing by the MSBA.

*As a comprehensive high school where students rotate their schedule between core academic and Career Technical Education (“CTE”) spaces, the design enrollment used in each category of the evaluation below is determined by the agreed upon design enrollment, modified for each category to reflect the anticipated number of students in that area. Portions of the building will be used either by students in the CTE rotation, in the academic rotation, or, in some areas, by the entire school population. The proposed space summary also includes 75 students in a Next Wave/Full Circle (“NWFC”) program that are substantially separate from the general school population. This population is indicated in the SPED category.*

*As detailed below, the Full Time Equivalent (“FTE”) student enrollment in the academic rotation is 1,387, the total population of the High School without the NWFC is 1,515, the CTE population is based on the remaining 128 students, and the total population of the High School including the NWFC students is 1,590.*

*Finally, note that the NWFC area and general SPED population spaces are evaluated separately, and non-Chapter 74 spaces for the general population are evaluated separately from the Chapter 74 approved CTE spaces.*

<b>Spaces</b>	<b>Used by</b>	<b>Enrollment Used</b>	<b>Guidelines</b>	<b>SD</b>	<b>Difference from guidelines</b>	<b>Difference from PSR</b>
Core Academic Spaces	FTE / Academic Equivalent	1,387	65,080	67,064	+1,984	+1,098
General Special Education (exclusive of NWFC)	Total Population without NWFC	1,515	16,110	10,756	-5,354	-360
Special Education (NWFC students only)	NWFC only	75	8,086*	8,086	-	+18
Art and Music	FTE / Academic Equivalent	1,387	8,200	9,731	+1,531	+269
Chapter 74 CTE spaces	NA	NA	49,549*	49,549	-	+214
Non-Chapter 74 CTE Program	FTE / Academic Equivalent	1,387	16,000	9,967	-6,033	+142
Health and Physical Education	Total Population without NWFC	1,515	24,684	39,377	+14,693	-452
Media Center	FTE / Academic Equivalent	1,387	8,569	7,750	-819	+250

Spaces	Used by	Enrollment Used	Guidelines	SD	Difference from guidelines	Difference from PSR
Auditorium and Drama	Total Population without NWFC	1,515	10,400	10,895	+495	+95
Dining and Food Service	Total Population without NWFC	1,515	12,148	12,760	+612	+825
Medical	Total Population without NWFC	1,515	1,310	1,195	-115	-115
Administration and Guidance	Total Population without NWFC	1,515	5,678	11,395	+5,717	+473
Custodial and Maintenance	Total Population w/ NWFC	1,590	2,818	2,574	-244	+156
Other	NA	NA	-	3,622	+3,622	+1,222
<b>Total Building Net</b>	<b>Total NSF of the Building</b>		<b>228,632</b>	<b>244,721</b>	<b>+16,089</b>	<b>+3,835</b>
<b>Total Gross</b>	<b>Total NSF + 50%</b>		<b>342,948</b>	<b>377,192</b>	<b>+34,244</b>	<b>+3,819</b>
<b>Grossing Factor</b>	<b>NA</b>		<b>1.50</b>	<b>1.54</b>	<b>+0.04</b>	<b>-0.01</b>

*\*MSBA does not have guidelines for these categories, proposed areas are shown instead in order to calculate allowable building net and gross guidelines area totals.*

**The MSBA review comments are as follows:**

**Special Education -** *For this review, the special education category is divided into two sections; general special education, and the NWFC programs. As noted on the space summary provided, the combined area in this category totals 18,842 nsf:*

**RESPONSE:** Acknowledged.

**Special Education (Exclusive of NWFC Program)** – The District is proposing a total of 10,756 net square feet (nsf) which is 5,354 nsf below the MSBA guidelines. *The proposed area in this category has decreased by 360 nsf since the PSR submittal. Please note that the Special Education program is subject to approval by the Department of Elementary and Secondary Education (DESE) and that formal approval of the District's proposed Special Education program is a prerequisite for executing a Project Funding Agreement with the MSBA.*

**RESPONSE:** Acknowledged.

**NWFC Program** – The District is proposing a total of 8,086 net square feet (nsf). *The proposed area in this category has increased by 18 nsf since the PSR submittal. Please note that the Special Education program is subject to approval by the Department of Elementary and Secondary Education (DESE) and that formal approval of the District's proposed Special Education program is a prerequisite for executing a Project Funding Agreement with the MSBA.*



RESPONSE: Acknowledged.

**Health and Physical Education** – The District is proposing a total of 39,377 nsf which exceeds the MSBA guidelines by 14,693 nsf. *The proposed area in this category has decreased by 452 nsf since submittal of the PSR. As noted in the PSR review, based on the design enrollment and class schedule, the MSBA accepts three additional 3,000 nsf PE stations totaling 9,000 nsf for an adjusted allowable area of 33,684 nsf. The proposed area for this category exceeds MSBA adjusted guidelines by 5,693 nsf. This overage is partially due to the existing gym being oversized by 5,209 nsf, and the remaining spaces in this category totaling 484 nsf are located in new construction area of the building. Based on review of the District’s space needs as described in its educational program, student enrollment, and constraints associated with renovating the existing building, the MSBA does not object to these spaces being included in the proposed project. However, area in excess of the adjusted guidelines (5,693 nsf) will be considered ineligible for funding by MSBA.*

RESPONSE: Acknowledged.

**Media Center** – The District is proposing a total of 7,750 nsf which is 819 nsf below the MSBA guidelines. *The proposed area in this category has increased by 250 nsf since the PSR submittal. The MSBA takes no issue with the proposed area in this category.*

RESPONSE: Please refer to page 3 of the Space Summary Review Comments memo (dated 1/25/17) that is attached for reference at the end of these response comments. The updated space summary that is provided as part of this response incorporates the proposed nsf adjustment described within the 1/25/17 memo.

**Auditorium / Drama** - The District is proposing a total of 10,895 nsf which exceeds the MSBA guidelines by 495 nsf. *The proposed area in this category has increased by 95 nsf since the PSR submittal. As noted in the PSR review, this overage is due to a stage that is 530 nsf larger than MSBA guidelines. The majority of this area (all but the stage) is located in the renovated 1929 portion of the existing building. Based on analysis of the District’s space needs as described in the District’s educational program and constraints of the existing building, the MSBA takes no issue with the proposed area in this category. However, 495 nsf of new construction area in this category will be considered ineligible for funding by MSBA.*

RESPONSE: Acknowledged.

**Dining & Food Service** – The District is proposing a total of 12,760 nsf which exceeds the MSBA guidelines by 612 nsf. *The proposed area in this category has increased by 825 nsf since the PSR submittal. The MSBA takes no issue with the proposed area in this category, which is located in the new portion of the building. However, 612 nsf of area in this category will be considered ineligible for funding by MSBA.*



RESPONSE: Please refer to page 5 of the Space Summary Review Comments memo (dated 1/25/17) that is attached for reference at the end of these response comments. The updated space summary that is provided as part of this response incorporates the proposed gsf and nsf adjustments described within the 1/25/17 memo.

**Medical** – The District is proposing a total of 1,195 nsf which is 115 nsf below the MSBA guidelines. *The proposed area in this category has decreased by 115 nsf since the PSR submittal. In the response to these review comments, please verify that the proposed square footage is sufficient to deliver the District’s programmatic needs.*

RESPONSE: Please refer to page 6 of the Space Summary Review Comments memo (dated 1/25/17) that is attached for reference at the end of these response comments. The updated space summary that is provided as part of this response incorporates the proposed nsf adjustment described within the 1/25/17 memo.

**Custodial & Maintenance** – The District is proposing a total of 2,574 nsf which is 244 nsf below the MSBA guidelines. *The proposed area in this category has increased by 156 nsf since the PSR submittal. The MSBA takes no issue with the proposed area.*

RESPONSE: Please refer to page 7 of the Space Summary Review Comments memo (dated 1/25/17) that is attached for reference at the end of these response comments. The updated space summary that is provided as part of this response incorporates the proposed nsf adjustment described within the 1/25/17 memo.

**Other** - The District is proposing a total of 3,622 nsf which exceeds the MSBA guidelines by 3,622 nsf. *The proposed area in this category has increased by 1,222 nsf since the PSR submittal. Proposed areas in this category include a 346 nsf school store, a 1,077 nsf SPS District Technology Office, a 1,082 nsf Somerville City Cable suite and a 1,117 nsf Somerville Health Alliance Health suite. The MSBA does not object to including these functions in the proposed project. However, 3,622 nsf of area in this category will be considered ineligible for funding by MSBA.*

RESPONSE: Acknowledged.

**Total Building Net Floor Area** – The District is proposing a total of 244,721 nsf which exceeds the MSBA guidelines by 16,089 nsf. *The proposed area has increased by 3,835 nsf since the PSR submittal. After adjusting the MSBA guidelines as noted above, allowable Total Building Net Floor Area is 234,299 nsf. Therefore, the proposed Total Building net Floor Area that will be considered ineligible is 10,422 nsf. In the response to these review comments, the District should address the items in each category above.*

RESPONSE: Please refer to the Space Summary Review Comments memo (dated 1/25/17) that is attached for reference at the end of these response comments. The updated space summary that is provided as part of this response incorporates the sum total of the proposed nsf adjustment described on pages 3, 5, 6 and 7 within the 1/25/17 memo.

**Total Building Gross Floor Area** – The District is proposing a total of 377,192 gsf (including the 9,088 mechanical space) which exceeds the MSBA guidelines by 34,244gsf. *The proposed area has increased by 3,819 gsf since the PSR submittal. The grossing factor with the mechanical space is 1.54, and 1.50 exclusive of the 9,088 gsf in mechanical space. Using the eligible Total Building Net Floor Area shown above and a grossing factor of 1.50, the allowable Total Building Gross Floor Area is 351,449 gsf.*

RESPONSE: Please refer to the second paragraph on page 2 of the Space Summary Review Comments memo (dated 1/25/17) that is attached for reference at the end of these response comments. The updated space summary that is provided as part of this response incorporates the proposed gsf adjustment described within the 1/25/17 memo.



January 5, 2017

Ms. Mary Pichetti  
Director of Capital Planning  
Massachusetts School Building Authority  
40 Broad Street, Suite 500  
Boston, Massachusetts 02109

Dear Ms. Pichetti:

The District is pursuing approval of a Project Scope and Budget Agreement for the MSBA approved preferred schematic for the City of Somerville's new High School project at the MSBA Board of Directors meeting on February 15, 2017. The District's 2016 enrollment is 1,237. The design enrollment for the proposed school project, including Somerville's Next Wave Full Circle program is 1,590 students. The existing Somerville High school currently serves grades 9-12 and is proposed to continue to serve grades 9-12 with the exception of the Next Wave Full Circle program which serves grades 6-12 and is also scheduled to move to the new High School building upon completion.

In accordance with G.L. c. 70 B, MSBA staff has assembled the documents required for the review of the special education program at Somerville High School. The following are attached per the 'Submittal Requirements':

1. A letter from Superintendent Mary Skipper of Somerville Public Schools describing its special education program.
2. Proposed space summary that includes the existing facility, proposed spaces, and MSBA guidelines based on the agreed upon design enrollment. The first page of this summary indicates a total of 18,842 net square feet of space dedicated to the delivery of special education.
3. The floor plans for the proposed 368,104 gross square foot Somerville High School.
4. A completed Special Education Adjacency Table

I have reviewed the attached documents and confirm that the District's School Building Committee has officially approved the attached submittal on December 20, 2016 and verify that the space summary match the floor plan and is complete and conform to the MSBA requirements as described in Module 4 – Schematic Design Guidelines.

Sincerely,

Chad Crittenden  
Owner's Project Manager



# Somerville Public Schools

Education • Inspiration • Excellence

**Mary Skipper, Superintendent of Schools**

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Dear Director of School Governance,

The description below is a summary of the Special Education programs/services provided in the Somerville Public Schools district that will be incorporated as part of the proposed new layout of Somerville High School. This includes two major components –Special Education programs/services for Somerville High School students, as well as the Next Wave Junior High School and Full Circle High School, both alternative schools that will be co-located at the new Somerville High School facility.

## **District Special Education Programs and Methodology District Wide**

The Special Education Department is responsible for ensuring all students who require special education services in order to maximize their learning are identified and their individualized learning needs are met in the least restrictive environment. Special Education Department staff work with teachers, administrators and families to ensure Individualized Education Programs (IEPs) for students are implemented with integrity, are aligned with research-based, multisensory instruction related to their individual needs, and include appropriate supplemental services.

The District currently serves 1,169 Special Education students.

## **Somerville High School Special Education Program and Methodology Overview**

The Somerville High School (SHS) Special Education program is multifaceted and consists of a wide range of programming and services to meet the needs of students as determined through the IEP team process. The program is implemented in inclusionary, pull out, self-contained, and community based models. Although the majority of students are supported in an inclusionary model, some students require a more intensive and specialized level of support that is best met in a substantially separate setting. All students are included as appropriate through a thoughtful process of planning and support(s). SHS currently offers the following special education programs:

- Self-contained Life Skills program for students with severe physical and significant intellectual disabilities, serving 8-10 students up to age 22 in grades 9-12, which offers a modified curriculum with a focus on pre-vocational experience and adaptive living skills.
- A self-contained SHIP (Somerville High School Intensive Program) classroom for students in grades 9-12 with severe, often multiple disabilities and/or medical frailties. The program includes a full-time nurse and necessary medical equipment. The program has a focus on life skills, pre-vocational, and adaptive living skills.
- A self-contained Transition Life Skills program for students from 18-22 years old. The program focuses on life skills, post-secondary employment, independent living, travel training, vocational, and adaptive living skills.



- Resource Room ELA and Math program serving 10-12 students with moderate special needs in grades 9-12, who require substantially separate programs with modifications to the facility and to core content.
- Study Skills programs. Resource Rooms for students with moderate special needs in grades 9-12, serving 10-12 students. Focus on executive functioning, remediation, educational planning, and becoming independent learners.
- Team Core Academic Classes (ELA, Math, Science, History and Social Sciences). Students are team-taught by general educators and special educators within the general education setting.
- School Adjustment Counseling programs for students in grades 9-12 offers students with individual/small group counseling, social skills/social thinking development, and crisis management support.
- Related Special Education Services include:
  - Occupational Therapy - sensory and fine motor, individual and group
  - Physical Therapy - gross motor, motor planning individual
  - Speech Therapy - speech and language therapy individual & group
  - Vision services - visual planning, tracking, orientation and mobility
  - Assistive Technology - augmentative and assistive technology

Somerville High School currently serves 210 Special Education students at the current/proposed grade levels.

#### **Deficiencies in Current Building:**

- Lack of Special Education Department Head at SHS
- Appropriate classroom based toileting facilities for Life Skills and SHIP classrooms
- Functional daily living facilities model apartment that includes (but is not limited to) a kitchen with sink and refrigerator, washing machine and dryer, and shower
- Vocational/Job Readiness work space

#### **Proposed Program Delivery:**

The proposed design of Somerville High School currently anticipates accommodating 230 Special Education students at the current/proposed grade levels. The following proposed programs and services will address identified deficiencies and enhance special education services to SHS students:

- The SHIP program focuses on education for students with more intensive needs, including medically fragile students. The SHIP Program will require a full-time nurse in a program separate office with necessary medical equipment including a large wheelchair access toilet room with a changing table that allows for adult assistance; a ceiling built lift for moving, changing, and lifting multiple physically handicapped non-ambulatory students.



- The Transition Program for students up to age 22 to address a 48-month age gap in current program services. The program focus would be on life skills, post-secondary employment, independent living, travel training, vocational training, and adaptive living skills. There needs to be a dedicated space for a Transition Specialist who works to prepare SHS Special Education students for college, career (vocational), and life success. The Transition Specialist requires an office space along within a flexible classroom space to instruct students 1:1 or in a small group format.
- Special Education Department Head office and conference room to meet with staff, parents, and other departments to work collaboratively to meet the specialized needs of students. The addition of the SHS Special Education Department Head will significantly improve the level of support and alignment with SPS goals for all students and increase inclusive and integrated opportunities for special education students.
- A Life Skills/SHIP Apartment Model. Various special education programs require a separate space designed to provide a simulated daily living environment. The apartment should include a kitchen, living area, a large toilet room that allows for adult assistance, and a shower. This room would also be used by related service personnel when working with students in the transitional programs to help students develop and apply functional skills and increase independence within a natural environment.
- A High Functioning Autism Spectrum Disorder Resource Room/Classroom, moderate needs. The district has identified a high level of programming need for students with high-functioning autism/spectrum disorder with an emphasis on social skill development. This program requires a classroom space with a break-out room that allows for students to engage in small group activities as appropriate with access to smaller setting spaces to access a safe zone, sensory activities and individual/small group therapies. Additionally, this program requires a small private space that can be used for individual counseling or family meetings. This program should be located in close proximity to the Sensory Room.
- An Autism classroom (nonverbal), severe needs. SPS currently has an autism program for students in grades K-8 that will be expanding programming as our middle school students move up to the high school. This program will require a classroom space with a break-out room that allows for students to engage in small group activities as appropriate with access to smaller setting spaces to access a safe zone, sensory activities and individual/small group therapies. This program should be located in close proximity to the Sensory Room. SPS currently has an autism program for students in grades K-8 diagnosed with autism that will be expanding programming as middle grades students move up to the high school.
- A Therapeutic Classroom for students with emotional anxiety, with an attached therapeutic office/workspace. SPS has identified a high level of programming need for students with significant school phobia and anxiety at the high school level. This program requires a classroom space with its own separate entrance and a break-out room that allows for students to engage in small group activities as appropriate. Additionally, this program requires a small private space that can be used for individual counseling or family meetings.
- A Sensory Room for Occupational Therapy. This room is needed for students diagnosed with autism and/or sensory processing disorder or sensory integration disorder. Sensory processing disorder is a neurological condition in which a person responds inappropriately to sensory signals. These students require a therapeutic space for sensory which can be overwhelming and that often prevents the brain

from getting and interpreting sensory information. Inappropriate reaction to bright lights, loud noises, motion, and other sensory experiences can trigger anxiety, motor problems, behavioral disturbances, and cause difficulty learning. The Sensory Room would have stations with active areas, calming areas, and various types of sensory activities. Rooms often have dim lighting, soothing colors, vestibular swings which hang from the ceiling and other sensory devices.

- Students are team taught by general educators and special educators within the general education setting. The addition of a special education work space near/attached to team core academic classes (ELA, Math, Science, History and Social Sciences) will offer the flexibility of grouping and allow students access to multiple modalities of instruction. This will help to minimize distraction and create a variety of teaching opportunities and environments that support student learning. Four special educators at SHS currently do not have a work space/office to share or work collaboratively. Special educators at SHS have a core area of academic focus (ELA, Math, Science, History) and would greatly benefit from work space for collaboration with their co-teachers, with general education educators, for testing students, and to conduct meetings. The addition of work spaces for special educators would greatly enhance their ability to meet the needs of students with a wide range of special needs. These office spaces would serve 2 special educators in the core academic area.

#### **Coordinated Review Process:**

The most recent Coordinated Program Review was completed December-March of the 2014-2015 School Year. The following issues/problems were identified in that review:

- The need to provide Professional Development for general education around the IEP process and improve inclusion practices and meeting the needs of diverse students.
- Age Span Requirements - some programs and classrooms with more than 48-month age span.
- Determination of Placement - increase in participation of general educators in team meetings and education planning
- Team Meeting Attendance - increase in participation of general educators in team meetings and education planning
- Age of Majority - emphasis on transition planning and improved post-secondary outcomes aligned with IEP development.

Work is already under way to address all areas of concern identified in the latest CPR, including professional development to strengthen understanding of the IEP process and inclusion practices. The creation of work spaces both near/attached to team classes will provide greater ability for special educators and general educators to plan for the needs of all students in inclusive settings. Concerns regarding professional development and determination of placement will be addressed through the combination of special educators and general educators working together throughout the IEP process, and will be enhanced by locating special educators' office/work spaces in proximity to related core academic teachers. The addition of a SHS Special Education Department Head will support collaborative work with general education department heads around professional development and inclusive practices, which will in turn help increase Team Meeting attendance, resulting in an improved placement process.



The development of the Transitions program along with new programming for students with Autism and High Functioning Autism Spectrum Disorder, and the addition of a therapeutic classroom for students with emotional anxiety will support planning for students with relation to Age Span Requirements and Determination of Placement.

The addition of the Life Skills/SHIP Apartment Model, SHIP classroom, and Transition Specialist & Classroom will work to meet the requirements with regards to Age of Majority with an emphasis on transition planning and improved post-secondary outcomes aligned with IEP development.

#### **Local Review Process:**

The design team, school administration, and special education staff met on multiple occasions to discuss the current and proposed special education programs at SHS. All special education staff were consulted about their program space needs.

The Director of Special Education has reviewed the proposed layout of the school and agrees the locations of the various programs provide optimal access to the general education curriculum and inclusion in the life of the school.

Deliberate decisions were made to locate our specialized self-contained classrooms adjacent to the general education classrooms. The Superintendent expressed concern that all classrooms for special education students must be located in the same corridors as general education classrooms to provide access for inclusionary opportunities.

The district does not have any grade or school configuration policies. The proposed building will continue to educate students in grades 9-12, as well as special education students who are educated to the age of 22.

#### **Integration with District-wide Services:**

The District currently provides the following Special Education programs (in addition to those described above that are located at Somerville High School):

- ECIP (Early Childhood Intervention Program) – Housed at the Capuano Early Childhood Center, this program is designed for students whose pre-academic skills are significantly below age/grade level expectation and who have significant difficulty accessing grade level curriculum independently.
- Integrated ECIP – Housed at the Capuano Early Childhood Center, this program is designed to integrate pre-K students with disabilities and developing social skills with peer models in the general education environment. Students placed in this class based on disability needs require modifications to access the curriculum.
- ECIP ASD – Housed at the Capuano Early Childhood Center, this program is designed for students who qualify for services as a result of an Autism Spectrum Diagnosis. Most students are nonverbal or have limited language.
- Therapeutic K – Housed at the Capuano Early Childhood Center, this program is designed for kindergarten students whose social emotional dysregulation impacts their access to the kindergarten curriculum.
- Integrated K – There are integrated kindergarten classrooms at Capuano, Healey and Winter Hill schools. This program is designed to integrate kindergarten students with disabilities and peer models in the general education environment.

- ASD – This program is designed for students who qualify for services as a result of an Autism Spectrum Diagnosis. Cognitive functioning varies as do communication skills and methods. Students in grades K-6 attend the program at the Winter Hill Community Innovation School, whereas students in grades 7-8 attend the program at the Kennedy School.
- Sub-Separate Multi-grades – These classes are located in a variety of school buildings - Kennedy, East Somerville Community School, Winter Hill Community Innovation School, and Healey. The classes are substantially separate and span multiple grades. Students in these classes are unable to access the general education curriculum and some access the standards through entry points designed by DESE. Students in these classes are significantly below grade level and have a variety of cognitive disabilities.
- SEEK (Social and Educational Enrichment at Kennedy) – Housed at the Kennedy School, this therapeutic program is designed for students who need more support and instruction regarding coping skills and emotional regulation strategies to appropriately interact with peers and to access the curriculum.
- SKIP (Specialized Kennedy Intensive Program) – Housed at the Kennedy School, this program serves students who present with complicated educational learning profiles. The students may have a variety of disabilities including, but not limited to, complex medical care needs, severe developmental delays, severe cognitive impairments, and multiple disabilities.

The existing programs to be maintained and new programs to be added at Somerville High School are intended to reinforce, enhance, and supplement integration with District-wide Special Education services for the full range of students that the District serves, and to ensure that students who continue to need specialized support as they transition to high school are receiving the necessary support in the most appropriate environment for their individual needs.

The District is a member of the Shore Educational Collaborative, which currently serves four (4) Somerville Public Schools special education students. The District does not currently house any collaborative programs within the District, nor does it plan to house collaborative programs within the proposed project. Surrounding communities have similar needs and resources available in their Districts, and there has not been a need for housing of Collaborative programs within our district expressed in recent discourse.

Included in the list of District-wide Special Education programs above are both Pre-K and Early Childhood Special Education programs. These programs are currently located in facilities other than Somerville High School, and it is the District's intent to maintain the separate locations to ensure that instruction is being provided in age-appropriate settings for students at every grade level.

The District participates with the following private and/or public entities that affect its Special Education Programs:

- ARISE provides applied behavior analysis support for students and staff on a contractual basis at two of the District's K-8 schools. No services are currently provided at Somerville High School.
- The Triumph Center provides social skills training and applied behavior analysis support for students and staff at two of the District's K-8 schools. No services are currently provided at Somerville High School.

Neither of the above programs require the design of dedicated space within the proposed project. The programs have need for intermittent use of small group meetings spaces. This need can be accommodated for, if needed, within the overall resource of the new high school building. The design incorporates multiple small group meeting rooms (the Media Center has seven such spaces, as one example) that will be

tied into an overall building scheduling system. Using the scheduling system, Special Education coordinators will have the ability to reserve these rooms when needed for use by outside entities.

### **Proposed Program Space:**

#### **Administrative:**

In the proposed project, there are designated office spaces for Adjustment Counselors (2E & 5A) as well as the Special Education Department Head (4C). Administration offices are intended to be distributed throughout the school environment to maximize the interactions between general and special education. Additionally, a shared staff workroom will be located on Level 3 (3F). The workroom will be furnished in a flexible manner that will allow it to function as either a meeting room, a work room, or even a small group instruction room.

#### **Transition Program:**

SHIP Grades 9-12 & Transition Programs will be enhanced by the use of and access to a sensory room, model apartment, and transitional specialist for transitional post-secondary planning. The primary SHIP self-contained classroom is located on Level 3 (3B), immediately adjacent to an exterior protected rooftop courtyard. Due diligence will be performed during subsequent phases of the design process to ensure a safe environment can be maintained for the medically fragile students who attend the SHIP program. The classroom space itself will be provided with a high degree of air filtration, and finishes will be selected to provide a hygienic environment. An evacuation plan for students will be developed in conjunction with administrators and first responders. Accessed from within the footprint of the self-contained classroom, there is a dedicated Nurse's Office (3D), as well as a large toilet room (3C) that will allow for assistance.

#### **Transition Specialist:**

All SHS Special Education programming will be enhanced by the addition of a Transition Specialist and vocational planning work area to help students with a wide range of disabilities focus on post-secondary planning (college and career readiness, independent living and group work settings, vocational planning, transition to adult agencies), working with all collateral agencies for improved post-secondary outcomes. The Transition Skills classroom will be located on Level 1 (1C), and will serve as a dedicated environment for the Transition Specialist. This space is intentionally positioned at a point that is proximate to the building exterior to support access to the resources & activities outside of the high school.

#### **Life Skills/SHIP Apartment Model:**

The addition of the Life Skills/SHIP Apartment Model will make a significant difference in students' ability to apply skills learned in a natural setting that simulates a daily living environment. The apartment would also be used by related service personnel when working with students in the Transitional programs to help students apply functional skills and increase independence within a natural environment. The Apartment space is located on Level 1 (1A), adjacent to the main Dining Commons for the school. The Apartment space has been intentionally detached from both the SHIP and Life Skills program in order to allow it to be a resource that is equally available to each, as well as to all of the additional special education programs within the high school. Accessed from within the footprint of the Apartment space is a dedicated large toilet room (1B), which includes a functioning shower.

#### **Life Skills Classroom:**

The Life Skills Classroom provides a learning environment for students with severe physical and significant intellectual disabilities, serving 8-10 students up to age 22 in grades 9-12. This substantially separate classroom environment is located on Level 5 (5B), in immediate proximity to the general use

student toilet rooms. While substantially separate as a classroom environment, this space is intentionally positioned amongst the general academic classrooms to provide opportunities for interaction with general academic instruction.

**Autism Spectrum Disorder Classrooms:**

The Addition of the High Functioning Autism Spectrum Disorder [ASD] Resource/Classroom will support SPS' identified need of programming for students with high functioning autism/spectrum disorder with an emphasis on social skills development. The High Functioning ASD classroom is located on Level 2 (2F), immediately adjacent to a general-use, single user student toilet room. It has been located on the same level and in general proximity to the Severe Needs ASD classroom (2C), with the intention of allowing for shared resources and support amongst the two spaces. The addition of an Autism classroom for nonverbal students on the severe spectrum will help students be more successful within their community and with their typical peers. While in proximity to each other, the classrooms maintain the intent of inclusion with the remainder of the high school. A dedicated Quiet Room (2G) is associated with the Severe Needs ASD classroom.

**Therapeutic Classroom:**

The addition of a Therapeutic Classroom for students with emotional anxiety with a separate entrance and an attached therapeutic office/workspace will help to meet the SPS identified high level of programming need for students with significant school phobia and anxiety at the high school level. This classroom environment has been located on Level 2 (2A1), with the intention of providing ready access to the ASD classroom spaces, as well as the Sensory Room. Immediately adjacent to the classroom space is a workspace (2A2) that will allow for quiet/focused instruction.

**Sensory Room:**

The addition of a Sensory Room (Occupational Therapy) is needed for students diagnosed with autism and/or sensory processing disorder or sensory integration disorder and will allow students to access a therapeutic space for sensory that can be overwhelming to these students, and which prevents the brain from getting and interpreting sensory information. The Sensory Room (2D) is located on Level 2, in proximity to the Therapeutic Classroom and ASD classrooms, and will provide opportunities for both OT and PT sensory support.

**Resource Rooms:**

Resource Room classrooms for ELA and Math instruction will each accommodate 10-12 students with moderate special needs in grades 9-12, who require substantially separate programs with modifications to the facility and to core content. The resource rooms (3E, 3H, 4A & 4E) have been distributed among the general academic classrooms to align with inclusionary goals. Additionally, a Study Skills classroom (4B) has been located on Level 4, with a particular focus on executive functioning, remediation, educational planning, and helping students to become independent learners.

**Small Group Rooms:**

Small Group rooms are intended as learning environments to support team core academic classes (ELA, Math, Science, History and Social Sciences). Students are team-taught by general educators and special educators within the general education setting, with a regular need for some pull-out instruction. The Small Group rooms (2B, 3A, 3G & 4D) have been distributed among the general academic classrooms to align with inclusionary goals.

**Next Wave Junior High School and Full Circle High School Special Education Program and Methodology Overview**



Next Wave Junior High School (grades 6-8) and Full Circle High School (grades 9-12) currently serve as the district's special education day and alternative education programs. Both are designed to meet the special academic, social, emotional, and behavioral needs of adolescents between the ages of 12 and 21 who, for many reasons, are unable to experience success in the traditional education setting and who require a substantially separate educational setting. Next Wave/Full Circle programs are currently housed in a separate building with very limited access to current Somerville High School resources. Next Wave/Full Circle will continue to operate as an independent educational program but will be housed in a wing or separate part of the newly designed Somerville High School so its students have an opportunity and access to the resources, programs, and supports SHS has to offer.

Additionally, for students attending Next Wave/Full Circle, there will be a transition plan in place as part of each student's educational plan for how and how often the student is able to access and participate in SHS resources and activities. This transition plan will include appropriate supports and mechanisms for monitoring each student.

The Next Wave Junior High School currently serves 17 students, and Full Circle High School currently serves 53 students, both at the current/proposed grade levels.

#### **Deficiencies in Current Building:**

Students who currently attend Next Wave and Full Circle are housed in a separate building, the Edgerly, which is a 15-minute walk from Somerville High School. The design of the school is to serve 60% students on IEPs and 40% students who are at risk and need an alternative education model. Although some Full Circle students are independent enough to take classes in the CTE program at SHS or to participate in sports and extracurricular activities at SHS, the sheer distance between the buildings and commute time serves as a barrier for this to happen on any regular basis. Our current proposal aims to locate Next Wave/Full Circle within the new SHS building so that this group of students, if their education plans allow for it, can benefit from a more comprehensive school experience by having easy access to CTE programs, sports programs, clubs and extracurricular activities, a full-time nurse, and ELL services.

Opportunities for authentic, small-group, interactive learning experiences in small and safe learning environments are critically important to supporting the development of a high-risk student population. Some of the existing limitations include:

- Outdated classrooms that limit flexibility
- Single teaching wall in many classrooms, making differentiation difficult
- Lack of ubiquitous technology that would allow students to participate in interactive and engaging methodologies
- Traditional classroom to classroom adjacencies that limit communication
- Lack of proximity to resources available to traditional middle grades/high school students that could further enhance social/emotional development of this at-risk student population

#### **Proposed Program Delivery:**

The new design plan for Somerville High School proposes including the District's alternative programs, Next Wave and Full Circle, into a substantially separate section of the new building. Next Wave and Full Circle currently serve as the District's special education day and alternative education programs, serving

students whose IEPs call for substantially separate placement. Next Wave serves grades 6-8 and Full Circle serves grades 9-12. Particularly for students in grades 6-8, there will be a transition component built into each student's education plan that will allow for a student's gradual participation in SHS's 9-12 educational program. This transition component may include participation in advanced courses, i.e. Algebra I, sports and other curricular activities.

The proposed design of the Next Wave Junior High School currently anticipates accommodating 25 students, and the proposed design of the Full Circle High School currently anticipates accommodating 50 students, both at the current/proposed grade levels.

Transitions within the building between the distinct Next Wave/Full Circle and SHS education programs will be mitigated by housing Next Wave/Full Circle in a substantially separate section or wing of the building that includes a separate entrance, flexible classrooms that will accommodate an 8:1 student-teacher ratio but can also accommodate combined classes as well, therapeutic facilities to meet the specialized needs of students, a separate meeting space/conference room, an independent science lab/maker space to be utilized exclusively by NW/FC students, and other core educational facilities. The use of adjacent SHS common areas such as the gymnasium, auditorium, or cafeteria will be coordinated through careful scheduling and supervision.

The highly specialized therapeutic program offered to Next Wave/Full Circle students requires a substantially separate environment in which students can work on gaining the skills to be able to function in a more inclusive environment. Placement of special education students into Next Wave/Full Circle is driven by IEPs that call for a substantially separate, smaller therapeutic educational setting. In contrast, special education students in the inclusion model at Somerville High School often need accommodations to help them access the curriculum, but are able to effectively function in a larger school environment and do not need the intense psychological/social interventions provided at Next Wave/Full Circle.

#### **Coordinated Review Process:**

Please refer to the Coordinated Review Process that is described for the SHS Special Education program above.

#### **Local Review Process:**

The design team and Next Wave / Full Circle staff met on multiple occasions to discuss the current and proposed programs for both alternative schools. The program space needs of both schools were considered.

The Principal of Next Wave and Full Circle has reviewed the proposed layout of the schools and agrees the locations of the various programs provide optimal relationships to each other and the requisite proximity and separation from the general Somerville High School environment.

The district does not have any grade or school configuration policies. Next Wave Junior High School (grades 6-8) and Full Circle High School (grades 9-12) currently educate students between the ages of 12 and 21.

#### **Proposed Program Space:**

##### **Administrative:**

In the proposed project, there are designated offices spaces for a Clinical Counselor (LD), two Crisis Counselors (LH & LI), a Nurse (LK), a Reception Desk with a Receptionist and an Aide Workstation

(LM), as well as the Next Wave / Full Circle Director's office (LF). Administration offices are intended to be distributed throughout the two schools so that there is ample adult presence and supervision throughout the environment. Additionally, there is a small conference room (LE) located in proximity to the main entrance for meeting activities. The Next Wave / Full Circle staff will also be able to leverage/schedule larger meeting spaces within Somerville High School in the event that a larger meeting environment is required.

**Next Wave Program:**

The Next Wave program is comprised of four classroom environments (LC) for academic instruction. These classroom spaces are accessed from a shared commons environment that can also function as a collaborative working environment. Additionally, two of the classrooms are separated by an operable partition that will allow for flexibility of the classroom footprint, permitting differentiated learning experience opportunities.

**Full Circle Program:**

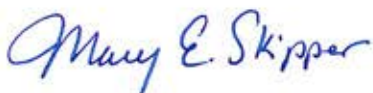
The Full Circle program is comprised of six enclosed classroom environments (LA) for academic instruction. Two of the classrooms are separated by an operable partition that will allow for flexibility of the classroom footprint, permitting differentiated learning experience opportunities. The enclosed classroom spaces are accessed from a shared commons area that can also function as a collaborative working environment that is capable of accommodating class activities. Additionally, there is one flexible Science classroom (LB) for additional curriculum opportunities.

**Shared Next Wave / Full Circle Resources:**

The two alternative schools incorporate a series of shared resources that are beneficial for both programs. These spaces include a Student Shop (LJ), a Timeout Room (LL), as well as the central Commons (LN). The Student Shop will provide access to a collection of tools for STEM focused, hands-on and project based learning. The Timeout Room creates an environment for supervised focused study external to the distractions of the traditional classroom environment. The central Commons is a flexible resource that will be used for dining, all school assemblies, as well as academic instruction. The Commons is flanked by a Kitchen/Servery space (LG) that both provides a serving position for Food Services to provide student meals, and also provides an instructional kitchen environment that can be used for cooking instruction when it is not being used as a servery.

Please feel free to contact us with any further questions or concerns.

Mary E. Skipper



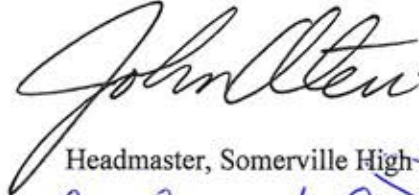
Somerville Superintendent of Schools

Margaret DePasquale Green



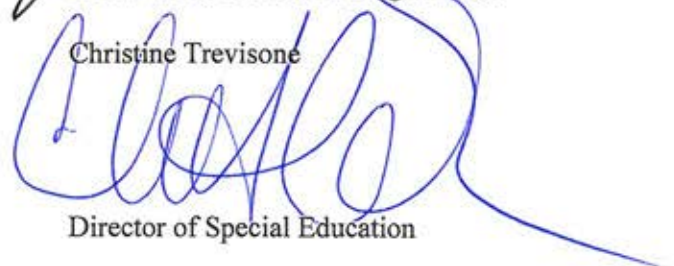
Principal, Next Wave JH and Full Circle HS

John Oteri



Headmaster, Somerville High-School

Christine Trevisone



Director of Special Education



## ***Proposed Space Summary - Somerville High School - Schematic Design***

2/2/2017: SD rev1

Somerville High School		Existing Conditions	
ROOM TYPE	ROOM NFA <sup>1</sup>	# OF RMS	area totals
<b>CORE ACADEMIC SPACES</b>			<b>59,494</b>
Classroom - General	varies	54	34,794
Classroom - ESL	varies	5	4,286
Teacher Planning	varies	12	3,389
Small Group Seminar (20-30 seats)			
Lecture Hall/Mini-Theater (200 seats)			
Science Classroom / Lab	varies	13	12,339
Prep Room	varies	8	1,633
Central Chemical Storage Rm	105	1	105
Computer Labs	varies	3	1,998
Language Lab	950	1	950
<b>SPECIAL EDUCATION</b>			<b>5,282</b>
Self-Contained SPED	<i>see below</i>		
Self-Contained SPED Toilet			
Life Skills Classroom	981	1	981
Shared Apartment/Kitchenette			
"SHIP" Medically Fragile Student Classroom	1,175	1	1,175
ASD Classroom w/ Breakout - Severe			
Quiet Room			
ASD Classroom w/ Breakout - Moderate			
Study Skills Classroom			
Therapeutic Classroom			
PT/OT/Speech Sensory Room			
Transition Skills Classroom ( <i>for 18-22 year old students</i> )	297	1	297
Resource Room	varies	3	1,835
Small Group Room	150	1	150
SPED Office - Adj Counselor	varies	3	358
SPED Office - Department Head			
SPED Office - Workroom	486	1	486
Next Wave/Full Circle Program			
FC Classrooms			
NW Classrooms			
NWFC Reception			
NWFC Clinical Counselor Office			
NWFC Director Office			
NWFC Aide Workstation			
NWFC Crisis Counselor Office			
NWFC Nurse Station			
NWFC Conference Room (4 seats)			
NWFC Student Shop			
NWFC Kitchenette			
NWFC Commons			
NWFC Timeout Room			
Self-Contained SPED Toilet			

PROPOSED								
Existing to Remain/Renovated			New			Total		
ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals
		1,688			65,376			67,064
varies	2	1,688	varies	40	33,836	varies	42	35,524
			varies	3	2,741	varies	3	2,741
			varies	12	3,622	varies	12	3,622
			varies	3	1,450	varies	3	1,450
			2,524	1	2,524	2,524	1	2,524
			varies	12	17,398	varies	12	17,398
			varies	8	2,385	varies	8	2,385
			217	1	217	217	1	217
			1,203	1	1,203	1,203	1	1,203
		616			18,226			18,842
			varies	2	295	varies	2	295
			573	1	573	573	1	573
			573	1	573	573	1	573
			varies	2	1,284	varies	2	1,284
			772	1	772	772	1	772
			168	1	168	168	1	168
			813	1	813	813	1	813
			375	1	375	375	1	375
			varies	2	408	varies	2	408
			303	1	303	303	1	303
			708	1	708	708	1	708
			varies	4	1,713	varies	4	1,713
			varies	4	1,497	varies	4	1,497
			varies	3	728	varies	3	728
			219	1	219	219	1	219
			327	1	327	327	1	327
			varies	8	3,010	varies	8	3,010
			varies	5	2,170	varies	5	2,170
			350	1	350	350	1	350
			100	1	100	100	1	100
			103	1	103	103	1	103
			54	1	54	54	1	54
			varies	2	221	varies	2	221
			115	1	115	115	1	115
			101	1	101	101	1	101
616	1	616				616	1	616
			158	1	158	158	1	158
			600	1	600	600	1	600
			238	1	238	238	1	238
			varies	4	250	varies	4	250
						NWFC Subtotal:		8,086

[illegible]

## ***Proposed Space Summary - Somerville High School - Schematic Design***

2/2/2017: SD rev1

Somerville High School		Existing Conditions		
ROOM TYPE		ROOM NFA <sup>1</sup>	# OF RMS	area totals
ART & MUSIC				9,335
Art Classroom - 25 seats		varies	3	2,769
Art Workroom w/ Storage & kiln		varies	2	345
Art Computer Lab		varies	2	1,712
Photography / Dark Room		491	1	491
Band - 50 - 100 seats		1,163	1	1,163
Orchestra - 75 seats		883	1	883
Chorus - 50 - 100 seats		918	1	918
Ensemble				
Music Practice		varies	2	150
Music Storage		varies	9	904
VOCATIONS & TECHNOLOGY				51,905
Chapter 74 Vocational Spaces				
Automotive Technology		6,398	1	6,398
Barbering				
Carpentry		4,765	1	4,765
Cosmetology		2,346	1	2,346
Culinary Arts		6,076	1	6,076
Dental Assisting		1,671	1	1,671
Drafting		724	1	724
Early Education and Care		832	1	832
Child Care Classroom		640	1	640
Education Lab				
Office				
Toilet Rooms		varies	2	165
Electricity		2,412	1	2,412
Graphic Communications		4,849	1	4,849
Health Assisting		2,364	1	2,364
HVAC				
Information Support Services & Networking		2,189	1	2,189
Machine Tool Technology		3,398	1	3,398
Medical Laboratory Technology				
Metal Fabrication & Joining Technologies		4,027	1	4,027
Plumbing				
Auto Body (non-active program)		1,517	1	1,517
Vocational Classrooms (incl above)				
Vocational Offices & Storage (incl above)				
Academic Technology Spaces				
Tech Clrm. - (E.G. Drafting, Business)				
Tech Shop - (E.G. Consumer, Wood)				
Large Group Instruction (80-100 seats)				
TV/Media Computer Lab		957	1	957
Business Computer Lab		903	1	903
Broadcast Studio		354	1	354
TV Studio Control Booth				
Family & Consumer Science Lab		884	1	884
Fabrication Lab/Engineering & STEAM/Robotics Lab		3,659	1	3,659
Technical Career Resource Center		775	1	775
Robotics Project Support Room				
				7,532

PROPOSED								
Existing to Remain/Renovated			New			Total		
ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals
		0			9,731			9,731
			varies	3	3,661	varies	3	3,661
			varies	2	412	varies	2	412
			401	1	401	401	1	401
			1,506	1	1,506	1,506	1	1,506
			1,643	1	1,643	1,643	1	1,643
			1,402	1	1,402	1,402	1	1,402
			varies	5	457	varies	5	457
			varies	3	249	varies	3	249
		24,137			35,379			59,516
			varies	7	4,642	varies	7	4,642
varies	2	1,802	varies	5	2,916	varies	7	4,718
varies	8	3,326				varies	8	3,326
			varies	8	6,384	varies	8	6,384
			varies	8	1,549	varies	8	1,549
			2,320	1	2,320	2,320	1	2,320
			varies	4	1,313	varies	4	1,313
			1,243	1	1,243	1,243	1	1,243
			244	1	244	244	1	244
			110	1	110	110	1	110
			152	1	152	152	1	152
			varies	8	4,074	varies	8	4,074
			varies	5	2,944	varies	5	2,944
			varies	13	3,168	varies	13	3,168
varies	7	4,200				varies	7	4,200
varies	4	3,299				varies	4	3,299
varies	7	3,288				varies	7	3,288
varies	2	2,575				varies	2	2,575
								49,549
			1,763	1	1,763	1,763	1	1,763
1,258	1	1,258				1,258	1	1,258
			1,022	1	1,022	1,022	1	1,022
1,385	1	1,385				1,385	1	1,385
			1,535	1	1,535	1,535	1	1,535
1,785	1	1,785				1,785	1	1,785
803	1	803				803	1	803
416	1	416				416	1	416
								9,967

		MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
Ch. 74 Requirements		ROOM NFA <sup>1</sup>	# OF RMS	area totals	Comments
				8,200	# of RMS based on FTE Students w/o NWFC
		1,200	3	3,600	Assumed use - 25% Population - 5 times/week
		150	3	450	
		1,500	1	1,500	Assumed use - 25% Population - 5 times/week
		1,500	1	1,500	
		200	1	200	
		75	6	450	
		500	1	500	
				70,600	# of non-Ch.74 RMS based on FTE Students w/o NWFC
No. Students	Ch.74 sf /Student				
50	275	6,875	1	6,875	4,125 DESE Shop Min. Area
30	150	1,875	1	1,875	1,875 DESE Shop Min. Area
50	225	5,625	1	5,625	3,375 DESE Shop Min. Area
50	150	3,750	1	3,750	1,875 DESE Shop Min. Area
50	125	3,125	1	3,125	1,875 DESE Shop Min. Area
30	125	1,875	1	1,875	1,875 DESE Shop Min. Area
30	110	2,200	1	2,200	2,200 DESE Shop Min. Area
30	75	1,500	1	1,500	1,500 DESE Shop Min. Area
50	225	5,625	1	5,625	3,375 DESE Shop Min. Area
40	150	3,000	1	3,000	2,250 DESE Shop Min. Area
40	125	2,500	1	2,500	1,875 DESE Shop Min. Area
30	200	4,000	1	4,000	4,000 DESE Shop Min. Area
30	110	2,200	1	2,200	2,200 DESE Shop Min. Area
30	200	3,000	1	3,000	3,000 DESE Shop Min. Area
40	110	2,200	1	2,200	2,200 DESE Shop Min. Area
30	200	3,000	1	3,000	3,000 DESE Shop Min. Area
30	150	2,250	1	2,250	2,250 DESE Shop Min. Area
640				54,600	Chapter 74 sub-totals
		1,200	5	6,000	Assumed use - 50% Population - 5 times/week
		2,000	5	10,000	Assumed use - 50% Population - 5 times/week
			16,000	non-Chapter 74 sub-totals	

Proposed Space Summary - Somerville High School - Schematic Design

2/2/2017: SD rev1

Somerville High School	Existing Conditions		
ROOM TYPE	ROOM NFA <sup>1</sup>	# OF RMS	area totals
HEALTH & PHYSICAL EDUCATION			37,772
Gymnasium	26,209	1	25,779
PE Alternatives	varies	2	2,439
Fitness Room			
Multi-Purpose Studio (dance, wrestling, aerobics, etc)			
Gym Storeroom	varies	6	1,698
Locker Rooms - Boys / Girls w/ Toilets	varies	3	4,199
Phys. Ed. Storage	varies	4	1,676
Athletic Director's Office	300	1	300
Athletic Storage	899	1	899
Health Instructor's Office w/ Shower & Toilet	varies	4	472
Trainer's Office	310	1	310
MEDIA CENTER			9,792
Media Center / Reading Room	varies	8	8,865
Computer Lab	927	1	927
AUDITORIUM / DRAMA			13,805
Auditorium	11,304	1	11,304
Stage	984	1	984
Auditorium Storage	1,046	1	1,046
Make-up / Dressing Rooms	369	1	369
Controls / Lighting / Projection	102	1	102
DINING & FOOD SERVICE			12,821
Cafeteria / Student Lounge / Break-out	8,491	1	8,491
Chair / Table Storage			
Scramble Serving Area			
Kitchen	3,639	1	3,639
Staff Lunch Room	691	1	691
MEDICAL			597
Medical Suite Toilet	46	1	46
Nurses' Office / Waiting Room	427	1	427
Interview Room	39	1	39
Examination Room / Resting	43	2	85

PROPOSED								
Existing to Remain/Renovated			New			Total		
ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals
		26,209			13,168			39,377
26,209	1	26,209				26,209	1	26,209
			2,468	1	2,468	2,468	1	2,468
			2,473	1	2,473	2,473	1	2,473
			776	1	776	776	1	776
			varies	12	5,766	varies	12	5,766
			267	1	267	267	1	267
			130	1	130	130	1	130
		-	570	1	570	570	1	570
			varies	2	397	varies	2	397
			321	1	321	321	1	321
		0			8,569			8,569
			varies	10	8,569	varies	10	8,569
		8,194			2,701			10,895
7,394	1	7,394				7,394	1	7,394
			2,130	1	2,130	2,130	1	2,130
570	1	570				570	1	570
			varies	3	571	varies	3	571
varies	2	230				varies	2	230
		0			12,148			12,148
			7,170	1	7,170	7,170	1	7,170
			464	1	464	464	1	464
			744	1	744	744	1	744
			varies	11	3,126	varies	11	3,126
			644	1	644	644	1	644
		0			1,310			1,310
			53	1	53	53	1	53
			varies	4	452	varies	4	452
			varies	3	334	varies	3	334
			471	1	471	471	1	471

	MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
Ch. 74 Requirements	ROOM NFA <sup>1</sup>	# OF RMS	area totals	Comments
			33,684	Locker Rooms based on Total Student Population w/o NWFC
	21,000	1	21,000	
	3,000	1	3,000	
	300	1	300	
	8,484	1	8,484	5.6 sf/student total
	500	1	500	
	150	1	150	
	250	1	250	
			8,569	Media Center size based on FTE Students w/o NWFC
	8,569	1	8,569	
			10,400	Auditorium size based on Total Student Population w/o NWFC
	7,500	1	7,500	2/3 Enrollment @ 10 SF/Seat - 750 seats MAX
	1,600	1	1,600	
	500	1	500	
	300	2	600	
	200	1	200	
			12,148	Cafeteria/Kitchen size based on Total Student Pop. w/o NWFC
	7,575	1	7,575	3 seatings - 15SF per seat
	529	1	529	
	600	1	600	
	2,815	1	2,815	1600 SF for first 300 + 1 SF/student Add'l
	629	1	629	20 SF/Occupant
			1,310	Sizes based on Total Student Population w/o NWFC
	60	1	60	
	250	1	250	
	100	3	300	
	100	7	700	

## ***Proposed Space Summary - Somerville High School - Schematic Design***

2/2/2017: SD rev1

Somerville High School		Existing Conditions	
ROOM TYPE	ROOM NFA <sup>1</sup>	# OF RMS	area totals
<b>ADMINISTRATION &amp; GUIDANCE</b>			<b>12,253</b>
General Office / Waiting Room / Toilet	varies	3	1,351
Teachers' Mail and Time Room			
Duplicating Room			
Records Room	168	1	168
Principal's Office w/ Conference Area	262	1	262
Principal's Secretary / Waiting			
House Master's Suite - HM1 (Beacon House)	221	4	883
House Master's Suite - HM2 (Elm House)	209	3	628
House Master's Suite - HM3 (Highland House)	191	3	574
House Master's Suite - HM4 (Broadway House)	204	3	612
CTE Director Office Suite	varies	5	1,309
<i>Each House Master Suite &amp; CTE Director Suite includes:</i>			
1 - Housemaster/CTE Director Office			
1 - Receptionist Desk / Waiting Area			
1 - Counselor Office			
1 - Conference Room			
Supervisory / Spare Office	varies	10	1,373
Wrap-around Coordinator Office			
Health / Wellness Supervisor Office			
Business Manager Office			
Registrar's Office			
Speech Therapy Office			
Student Resource Officer (SRO) Office			
Conference Room	varies	2	650
Guidance Office (Not In HM Suite)	varies	2	463
Guidance Waiting Room	527	1	527
Guidance Storeroom	35	1	35
Guidance Career Center	775	1	775
Records Room			
Teachers' Work Room	715	1	715
Mediation Waiting Room	180	1	180
Mediation Room	380	1	380
Mediation Office	222	1	222
Welcome Center (ELL)	varies	4	1,146
<b>CUSTODIAL &amp; MAINTENANCE</b>			<b>12,123</b>
Custodian's Office	49	1	49
Custodian's Workshop			
Custodian's Storage	2,466	1	2,466
Recycling Room / Trash			
Receiving and General Supply	421	1	421
Storeroom	varies	45	8,771
Network / Telecom Room	416	1	416
<b>OTHER</b>			<b>872</b>
School Store	varies	2	706
PTO Storage	166	1	166
Sub-Total <u>School Use</u> Net Floor Area (NFA)			<b>226,051</b>

[illegible]

	MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
Ch. 74 Requirements	ROOM NFA <sup>1</sup>	# OF RMS	area totals	Comments
			5,678	Sizes based on Total Student Population w/o NWFC
	758	1	758	
	100	1	100	
	200	1	200	
	200	1	200	
	375	1	375	
	125	1	125	
	150	1	150	
	150	2	300	
	120	1	120	
	450	1	450	
	150	8	1,200	
	100	1	100	
	100	1	100	
	529	1	529	
	214	1	214	
	758	1	758	
		</		

## ***Proposed Space Summary - Somerville High School - Schematic Design***


2/2/2017: SD rev1

[illegible]<sup>1</sup> Individual Room Net Floor Area (NFA)

Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

<sup>2</sup> Total Building Gross Floor Area (GFA)

Includes the entire building gross square footage measured from the outside face of exterior walls

<b>Architect Certification</b>	
I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.	
<b>Name of Architect Firm:</b>	Symmes, Maini & McKee Associates (SMMA)
<b>Name of Principal Architect:</b>	Alex Pitkin, AIA
<b>Signature of Principal Architect:</b>	
<b>Date:</b>	2/2/2017



**CDW CONSULTANTS, INC.**

*CIVIL & ENVIRONMENTAL ENGINEERS*

**PHASE II - LIMITED SUBSURFACE  
INVESTIGATION  
Relative to Oil & Hazardous Materials**

**Somerville High School  
81 Highland Avenue  
Somerville, Massachusetts**

Prepared for

Symmes Maini and McKee  
1000 Massachusetts Avenue  
Cambridge, Massachusetts

December 2016  
CDW Project # 1491.20

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## **1.0 INTRODUCTION**

CDW Consultants, Inc. (CDW), on behalf of our client, Symmes Maini and Mckee, has conducted a Phase II - Limited Subsurface Investigation (Phase II) of a portion of the Somerville High School, located at 81 Highland Avenue, Somerville, MA (Figure 1). The investigation consisted of the advancement of borings, the installation on monitoring wells and soil and groundwater sampling and analysis. The Phase II investigation was conducted in November of 2016.

The investigation was conducted in order to determine the presence or likely presence of hazardous substances or petroleum products on the property in areas of concern identified in CDW's Phase I Environmental Site Assessment report from November 2015.

### **1.1 Purpose**

The purpose of the investigation was to evaluate subsurface conditions at the Site in specific areas that will be undergoing Site and/or building demolition and new construction that may have been impacted by identified potential sources of contamination at the Site. This investigation was performed in accordance with Massachusetts General Law (MGL) Chapter 21E.

### **1.2 Site Description**

The Somerville High School includes 13.05 acres of land including roadways, parking lots, formal front lawn and landscaped areas. The Site contains one 360,000 square-foot building utilized as a high school. The Site building is connected to municipal water and sewer. The Site building is heated with #4 fuel oil, supplied by two 15,000-gallon underground storage tanks (USTs). There is a 1,000-gallon UST for the generator. The Site is bound by School Street to the west, railroad tracks and Medford Street to the north and Walnut Street to the east. City Hall abuts the Site to the west and Somerville public library abuts the Site to the east. Residential properties are located across Highland Avenue to the south.

The Site is located on the Boston North United States Geological Survey (USGS) 1987 Quadrangle Map at the following approximate location and elevation:



Universal Transverse Mercator (UTM) Zone 19 Coordinates	
4694684.0	UTM Y (Meters)
327379.9	UTM X (Meters)
Latitude/Longitude	
42.3872000 - 42° 23' 19.32''	Latitude (North)
71.0970000 - 71° 5' 49.20''	Longitude (West)
Elevation	
101	Feet above sea level

Only portions of the school property identified in the Phase I Environmental Site Assessment as potential sources of subsurface contamination were subject to this investigation.

## 2.0 PREVIOUS SITE STUDIES

CDW completed a Phase I Environmental Site Assessment (ESA) in November 2015. The Phase I report included a Site reconnaissance, document research of the Site and surrounding area, an environmental database review, and review of documents obtained from the City of Somerville.

The Somerville Free School, which is now City Hall, was constructed in 1852. The B wing, was English High School, constructed in 1895. Additions were added to the B wing in 1917 to accommodate more students. The A and D wings were completed by 1929. In 1956 there was a fire in the auditorium. In 1988 the E wing containing the gym and technical classrooms were finished. In 2006, the health careers addition was completed in 2006 between the D and E Wings.

The Site is currently connected to city water and sewer utilities. There are two 15,000-gallon fuel oil USTs and one 1,000-gallon UST located on the property. The two 15,000-gallon #4 fuel oil USTs are located near the loading dock for the main kitchen. The 1,000-gallon diesel UST is located in a grassy area near the gym for the generator located on the gym roof. A pump room located off the gym transfers the fuel to the generator from the UST.

No evidence of inappropriate dumping or suspect waste disposal pits were observed during the Site inspection. Additionally, there were no areas of disturbed soil or distressed vegetation. No visible evidence of oil or hazardous material releases were seen at the Site.

Historical Recognized Environmental Condition (HREC)s and Controlled Recognized



Environmental Condition (CRECs) were identified during the assessment.

Recognized Environmental Concerns (RECs) were identified during the assessment. They were:

- Potential contamination from the current 15,000 gallon fuel oil underground storage tanks.
- Potential contamination from the current 1,000 gallon diesel fuel underground storage tank for the generator.
- Residual contamination from multiple releases of fuel oil in the boiler room and overfills during deliveries.
- Potential contamination from the hydraulic fluid reservoirs and elevator fluid reservoirs.
- Potential/undocumented floor drain discharges. Though floor drains discharge to the sewer system, the infrastructure is old and may be deteriorated.
- Potential/undocumented grease trap discharges. Though grease traps are connected to the sewer system, the infrastructure may be deteriorated.
- Potential/undocumented acid tank discharges. Though grease traps are connected to the sewer system, the infrastructure may be deteriorated.
- Coal ash and clinkers were observed in soil in the excavated area in the boiler room, and outside the building during a foundation coating investigation.
- Potential environmental impacts from unknown discharges or spills from activities in the automotive repair shop.
- Potential impacts to soil in the vicinity of the fuel oil burner discharge to the chimney. The brick at the discharge point is stained.

### **3.0 PHASE II SUBSURFACE INVESTIGATION**

Based upon the results of the Phase I ESA, CDW conducted a limited subsurface investigation of the Site. The investigation consisted of the advancement of seven (7) soil borings, installation of six (6) monitoring wells, and soil and groundwater sampling and analysis. Figure 2 depicts the locations of the soil borings and monitoring wells installed by CDW. Soil boring logs are included in Appendix A.



### **3.1 Topography and Hydrogeologic Features**

The Site is located 101 feet above sea level, and the topography is generally hilly. According to the Massachusetts Bedrock Map, the bedrock at the Site consists of Cambridge Argillite and quartzite. There are no bedrock outcrops at the Site.

Surface soils at the Site consist of urban land according to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS).

The nearest surface water body to the site is the Mystic River which is located approximately 1 mile to the east/northeast. The Somerville water supply comes from the MWRA. The MWRA system obtains its water primarily from the Quabbin Reservoir in western Massachusetts and Wachusett Reservoir in Clinton Massachusetts. All of Somerville's wastewater discharges into the MWRA Sewer System. There are no designated drinking water resource areas within a half-mile of the site.

Soils at the Site during drilling were observed to be primarily urban fill. The Site is located within the FEMA Flood Zone X, an area of minimal flood hazard higher than the elevation of the 0.2-percent-annual-chance flood.

Groundwater is located approximately 13-21 feet below ground surface. A groundwater elevation survey was performed. Groundwater gauging data points to flow in a northern direction.

### **3.2 Soil Borings and Monitoring Well Installation**

In November of 2016, CDW conducted a limited subsurface investigation of the Site. The investigation consisted of the advancement of soil borings, installation of groundwater monitoring wells, and soil and groundwater sampling and analysis. The soil borings were advanced by a hollow stem auger drill rig, and a Geoprobe direct push machine. For the hollow stem auger drill rig, soil samples were obtained at two foot intervals, and classified on-site. For the Geoprobe, soil samples were collected successively, and classified on-site. CDW's subcontractor, Technical Drilling Services, Inc. of Sterling, Massachusetts completed the advancement of the soil borings. CDW's subcontractor, Spectrum Analytical, Inc. of Agawam, Massachusetts, completed the laboratory sample analyses.



On November 3 and 4, 2016, CDW advanced seven (7) soil borings at the Site. The selection of the locations of the borings was based upon the potential source of contamination due to possible on-site presence of contaminants from USTs and drains, substandard fill, and other historic activities that may have impacted the site, which may be encountered during construction. Borings B-1 and B-2 were installed in the parking area located northwest and downslope from the high school. Borings B-3 and B-4 were installed in the parking area located northwest and downslope from the high school, by the loading dock. Borings B-5 and B-6 were installed along the northern edge of the site, downslope from the high school by the retaining wall and smoke stack. Figure 2 depicts the locations of CDW's borings and monitoring wells.

Soils encountered during drilling were generally urban fill consisting of sand and silt, with occasional trace gravel. No boulders or bedrock were encountered during drilling. Groundwater during drilling was observed at depths ranging from approximately 13 to 21 feet below surface grade.

### **3.3 Soil Screening and Laboratory Samples**

Soil samples were collected continuously from samples from each boring and field-screened with a photoionization detector (PID) using the headspace method. The soil headspace screening results are provided on the boring logs in Appendix A. The PID is an instrument used to quantify total organic volatiles (TOVs) that ionized at or below 10.6 electron volts (a range which includes gasoline and some fuel oil organics). The detection limit for the instrument is 1 parts per million (ppm).

The sampling plan was developed to investigate the types of compounds that may have been released from current or previous site uses and activities, or from a release related to the current USTs. One soil sample from each of 7 borings was selected and submitted for laboratory analysis for extractable petroleum hydrocarbons (EPH), polynuclear aromatic hydrocarbons (PAHs), volatile petroleum hydrocarbons (VPH) and total priority pollutant metals (PP13). The samples submitted for laboratory analysis were collected from depths between 5 and 15 feet below the ground surface. The samples were preserved by ice, refrigeration and methanol, as appropriate, prior to laboratory analysis, and delivered to the laboratory accompanied by an appropriate chain of custody record.



### **3.4 Groundwater Sampling**

All newly installed monitoring wells were sampled as part of the Phase II investigation. On November 11, 2016, CDW personnel collected groundwater samples from all six (6) of the monitoring wells. At least three well volumes of water were removed from each well prior to sampling, which was performed with dedicated bailers. The samples were submitted to Spectrum Analytical for analysis for EPH including VOCs, PAHs, and dissolved PP13 metals. The groundwater gauging data are included in Table 1.

## **4.0 NATURE AND EXTENT OF CONTAMINATION**

CDW evaluated the results of the field observations, soil and groundwater sampling, and laboratory analysis conducted for this subsurface investigation. In addition, the laboratory analysis results were compared with applicable Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, Reportable Concentrations.

### **4.1 Soil and Groundwater Classifications**

The selection of a soil classification of RCS-1, as defined in the MCP, 310 CMR 40.0361(1) (a), for the comparison of Reportable Concentrations, is applicable to the Site because all of the soil sample locations are located within the boundaries of a school. There are no groundwater resource areas within 0.5 miles of the Site. There are no Zone 2 Approved Wellhead Protection Areas or Interim Wellhead Protection Areas (IWPA) within 0.5-miles of the Site. Also, there are no residential private wells within 500 feet of the Site.

The selection of a groundwater classification of RCGW-2, as defined in the MCP, 310 CMR 40.0362, for the purpose of identifying MCP Reportable Concentrations, was based upon the following criteria:

- Groundwater at the Site is not located in a current or potential drinking water source area.

The results of the laboratory analytical testing of soil and groundwater samples were evaluated and compared with current Reportable Concentrations. Copies of the laboratory reports are included in Appendix B.



## **Soil Sample Analysis Results**

Soil samples were analyzed for EPH, PAH, target VOCs compounds, and PP13 metals. One soil sample per boring was collected during drilling and screened with a PID using the headspace method. No readings exceeded 0.4 parts per million by volume (ppmv); therefore, all samples were below the instrument detection limits, or non-detect. The results of the headspace screening for CDW's investigation are summarized in the boring logs in Appendix A.

The laboratory analysis results of soil samples collected during CDW's subsurface investigation contained detectable concentrations of several metals in all eight samples. None of the metals identified exceeded the applicable MCP Reportable Concentrations. The presence of metals on-site is consistent with naturally occurring minerals due to geologic or ecologic processes; furthermore, the concentrations do not appear to have been mobilized, placed, or transferred to the environment as a result of a release at the Site.

The laboratory analysis results of soil samples collected during CDW's subsurface investigation contained detectable concentrations of arsenic in one sample, and naphthalene in another sample. None of these results exceeded the applicable MCP Reportable Concentrations.

Analytical test results from all other compounds within the testing program were below their respective laboratory detection limits. The results of all soil analyses are summarized in Table 2.

## **Groundwater Sample Analysis Results**

Groundwater samples were analyzed for EPH, PAH, target VOCs compounds, and dissolved PP13 metals. The dissolved metals nickel, thallium, and zinc were detected in the groundwater samples. The detected concentration was below the applicable Reportable Concentration for GW-2 classified groundwater. One groundwater sample contained detectable concentrations of the following VOC compounds: 2-Butanone (MEK) and Acetone. None of these results exceeded the applicable MCP Reportable Concentrations. No EPH, or PAHs compounds were detected in groundwater. The results of groundwater analyses are included in Table 3.





## 5.0 CONCLUSIONS & RECOMMENDATIONS

Based upon our research, subsurface testing, and site observations, CDW is presenting our conclusions and a summary of the key observations upon which these conclusions are based. From this study, CDW has made the following observations:

- The Site study area for this Phase II Investigation consists of a portion of the Somerville High School in Somerville, Massachusetts that was identified as having one or more potential areas of soil or groundwater contamination. This investigation focused on subsurface testing in areas of the school property that are proposed for demolition and new construction.
- Soil boring advancement was completed on November 4, 2016. A total of seven (7) soil borings were advanced. The borings were advanced to depths of between 15 and 25 feet below grade. Soils on site were generally urban fill consisting of sand and silt, with occasional trace gravel. Groundwater was encountered at depths between 13 to 21 feet. Groundwater monitoring wells were installed in six of the borings.
- Soil sample headspace screening indicated non-detect concentrations of VOCs in the soil samples. Metals were detected in several of the samples analyzed at concentrations consistent with those found in natural soils. Arsenic, and naphthalene were detected in two of the samples analyzed. No EPH, PAH, or VPH compounds were detected in any soil samples.
- A low concentration of a dissolved metals (nickel, thallium, and zinc) was detected in multiple groundwater monitoring wells, below applicable Reportable Concentrations. One groundwater sample contained detectable concentrations of the following VOC compounds: 2-Butanone (MEK) and Acetone. No EPH or PAH compounds were detected in any groundwater samples.

Based on the results of the subsurface investigation, CDW has the following recommendations:



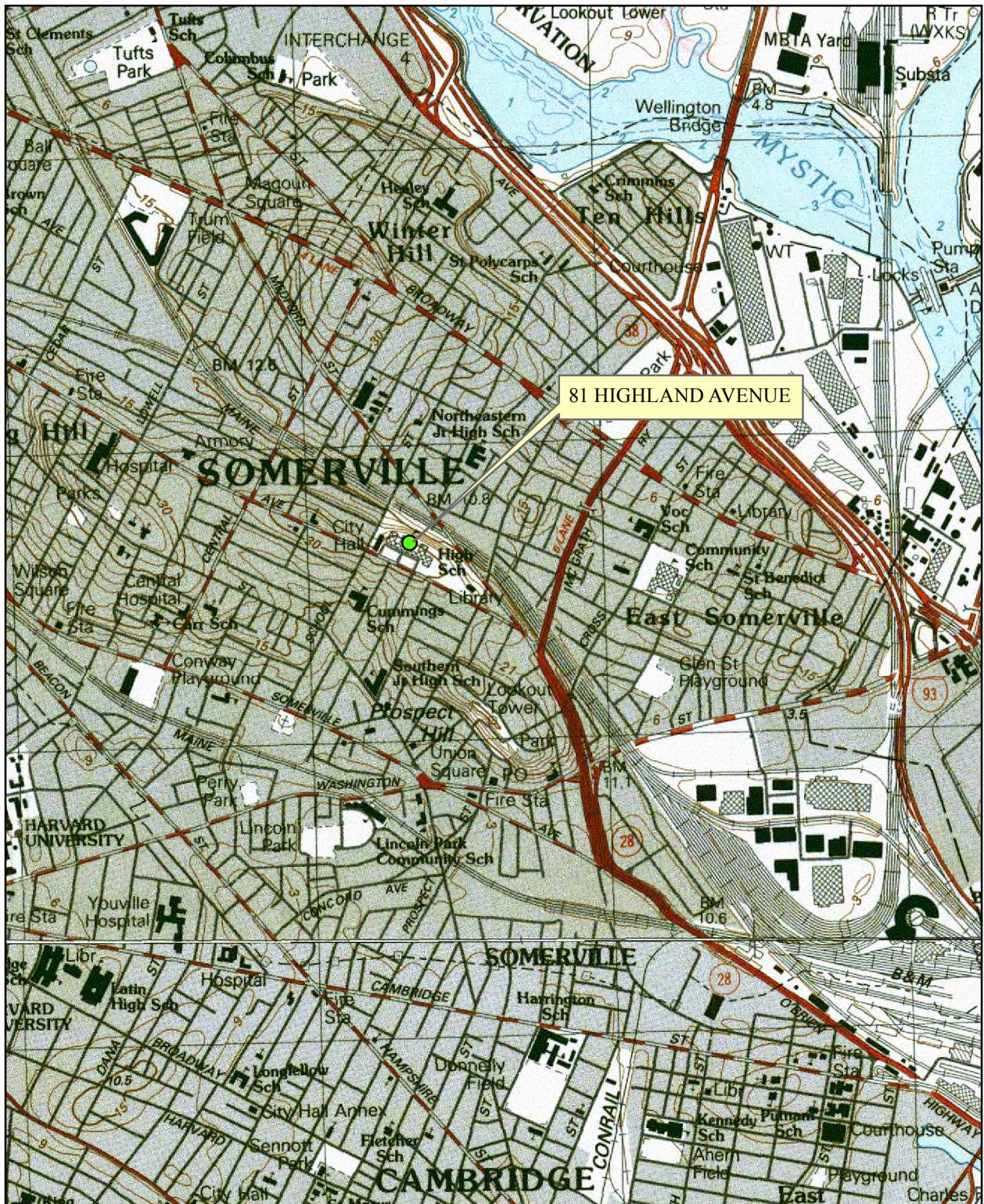
- The soils on the site contain certain metals below the MCP Reportable Concentrations. These soils are therefore not regulated by the MCP, and are not considered a remediation waste once excavated. The soils may be re-used on-site without restriction. Although the presence of the metals are consistent with natural background levels, reuse of these soils off-site needs to be evaluated such that the quality of the exported Site soils is acceptable to the destination site pursuant to MassDEP regulations and policies.
- The sampling and analytical program was specific to one or more areas of the Site where potential contamination could or occur. As such, contingency plans should be in place to manage any potentially contaminated soil that may be encountered during building demolition or new construction. CDW recommends that a contingency be factored into soil excavation planning to allow for evaluation, testing and disposal of any impacted soils discovered during construction that were not discovered during these limited investigation activities.
- Subsurface conditions immediately adjacent to and beneath the UST cannot be fully evaluated until the tank has been located and removed. In addition, historical research does not guarantee that all former Site use, storage and disposal practices have been properly recorded and/or are presently known. If evidence of a release to soil and/or groundwater is encountered, measures must be conducted to properly manage those conditions.

## **6.0 LIMITATIONS**

The findings are limited to the information available at the time of the investigation and the scope of services as defined. The results of the subsurface investigation performed on this Site form the basis for the findings and are representative of conditions at the time of the investigation. Where access to certain portions of the Site or the ability to perform subsurface testing was impeded, no conclusions or opinions can be made. No other conclusions, interpretations or recommendations are contained or implied in this report other than those expressed. Also, CDW makes no warranty, expressed or implied, on the accuracy of the work and information completed by others and upon which CDW has relied to prepare this report. No other use of this report is warranted without the written consent of CDW Consultants, Inc.

## FIGURES





## CDW CONSULTANTS, INC.

SOMERVILLE HIGH SCHOOL  
81 HIGHLAND AVENUE  
SOMERVILLE, MA

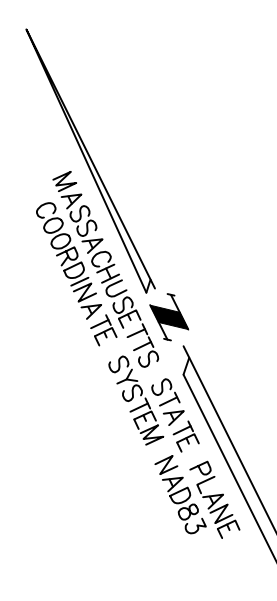
Figure 1 - Site Location

SOURCE: MASSGIS

SCALE: 1:20,000







SHEET:

**EX-1**

7 REV.



- ▶ Civil Engineering
- ▶ Land Surveying
- ▶ Transportation Engineering
- ▶ Structural Engineering
- ▶ Green Infrastructure
- ▶ Planning
- ▶ GIS

PROJECT #	10970
FILE:	ACAD-10970_TOP01.dwg
SCALE:	1"= 60'
DATE:	OCTOBER 7, 2015
PROJECT MANAGER:	ADD
FIELD BOOK:	607, 623 AND 630
DRAFTED BY:	TI
CHECKED BY:	ADD

REV.	COMMENTS	DATE
	REVISIONS	



## TABLES

**TABLE 1**  
**Groundwater Gauging Data**  
**Phase II Assessment**  
**Somerville High School**  
**Somerville, MA**

Well	Date	Depth to Water (ft TOC)	Depth to Bottom of Well (ft TOC)	Purge Volume (gallons)
CDW-1/MW-1	11/11/2016	15.69	21.57	5
CDW-2/MW-2	11/11/2016	20.61	22.02	3
CDW-3/MW-3	11/11/2016	17.85	19.55	3
CDW-4/MW-4	11/11/2016	13.64	15.10	3
CDW-6/MW-6	11/11/2016	DRY	19.58	DRY
CDW-7/MW-7	11/11/2016	19.70	23.50	5

1. Depth values are reported in feet below the top of the well casing.

**TABLE 2**  
**Soil Analytical Results**  
**Somerville High School**  
**Somerville, MA**

	B-1	B-2	B-3	B-4	B-5	B-6	B-7	DUP	RCS-1
<b>Date</b>	<b>11/3/2016</b>	<b>11/3/2016</b>	<b>11/3/2016</b>	<b>11/3/2016</b>	<b>11/4/2016</b>	<b>11/4/2016</b>	<b>11/4/2016</b>	<b>11/4/2016</b>	
<b>Time</b>	<b>10:37</b>	<b>11:42</b>	<b>14:05</b>	<b>16:06</b>	<b>9:30</b>	<b>10:21</b>	<b>11:27</b>	<b>11:27</b>	
<b>Depth</b>	<b>10-12'</b>	<b>15-17'</b>	<b>5-7'</b>	<b>10-12'</b>	<b>15-20'</b>	<b>5-10'</b>	<b>15-17'</b>	<b>15-17'</b>	
<b>MADEP EPH 5/2004 R (mg/kg)</b>									
C9-C18 Aliphatic Hydrocarbons	< 11.0	< 11.0	< 10.8	< 10.7	< 11.0	< 10.9	< 10.3	< 10.5	1,000
C19-C36 Aliphatic Hydrocarbons	< 11.0	< 11.0	< 10.8	< 10.7	< 11.0	< 10.9	< 10.3	< 10.5	3,000
C11-C22 Aromatic Hydrocarbons	< 11.0	< 11.0	< 10.8	< 10.7	< 11.0	< 10.9	< 10.3	< 10.5	1,000
Phenanthrene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	10
Anthracene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	1,000
Fluoranthene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	1,000
Pyrene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	1,000
Benzo (a) anthracene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	7
Chrysene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	70
Benzo (b) fluoranthene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	7
Benzo (k) fluoranthene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	70
Benzo (a) pyrene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	2
Indeno (1,2,3-cd) pyrene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	7
Benzo (g,h,i) perylene	< 0.365	< 0.366	< 0.359	< 0.357	< 0.365	< 0.364	< 0.344	< 0.348	1,000
<b>VOCs 8260 (ug/kg)</b>									
Naphthalene	< 51.8	< 54.7	< 45.6	< 44.8	94	< 46.5	< 43.5	< 38.5	--
<b>SW846 6010C (mg/kg)</b>									
Arsenic	< 2.51	< 2.40	3.22	< 2.60	< 2.51	< 2.45	< 2.49	< 2.50	20
Cadmium	< 0.522	< 0.501	< 0.518	< 0.542	< 0.522	< 0.511	< 0.518	< 0.520	70
Chromium	11.10	15.50	16.90	12.40	11.70	15.00	5.63	9.42	100
Copper	13.50	16.10	17.00	12.90	16.70	14.50	11.80	12.10	1,000
Nickel	9.09	13.10	12.70	10.40	10.80	12.20	5.45	7.38	600
Lead	5.23	6.07	7.21	5.31	6.58	7.42	4.24	4.97	200
Zinc	27.00	35.60	36.00	27.60	32.80	31.00	14.70	20.00	1,000
<b>SW846 7471B (mg/kg)</b>									
Mercury	< 0.0333	< 0.0294	< 0.0327	< 0.0291	< 0.0319	< 0.0294	< 0.0300	< 0.0307	20

**Notes:**

1. *Italicized* values are below laboratory method detection limits
2. RCS-1 is the reportable concentration for S-1 soils
3. µg/kg =micrograms per kilogram
4. mg/kg = milligrams per kilogram

**TABLE 3**  
**Groundwater Analytical Results**  
**Somerville High School**  
**Somerville, MA**

	B-1/MW-1	B-2/MW-2	B-3/MW-3	B-4/MW-4	B-7/MW-7	MA RCGW-2
<b>Date Sampled</b>	11/14/2016	11/14/2016	11/14/2016	11/14/2016	11/14/2016	
<b>Time Sampled</b>	8:37	9:17	11:47	12:35	11:11	
<b>EPA 8260 (µg/L)</b>						
2-Butanone (MEK)	10.9	< 2.0	< 2.0	< 2.0	< 2.0	--
Acetone	23.8	< 10.0	< 10.0	< 10.0	< 10.0	
All Other Compounds	<i>BDL</i>	<i>BDL</i>	<i>BDL</i>	<i>BDL</i>	<i>BDL</i>	--
<b>MADEP EPH (µg/L)</b>						
C9-C18 Aliphatic Hydrocarbons	< 105	< 108	< 115	< 106	< 114	5,000
C19-C36 Aliphatic Hydrocarbons	< 105	< 108	< 115	< 106	< 114	50,000
C11-C22 Aromatic Hydrocarbons	< 105	< 108	< 115	< 106	< 114	5,000
All Other Compounds	<i>BDL</i>	<i>BDL</i>	<i>BDL</i>	<i>BDL</i>	<i>BDL</i>	--
<b>EPA 6000/7000/200 (mg/L)</b>						
Arsenic	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.9
Chromium	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.3
Copper	< 0.0135	< 0.0135	< 0.0135	< 0.0135	< 0.0135	100
Nickel	0.0112	0.005	< 0.0050	< 0.0050	0.0182	0.2
Thallium	0.0083	0.0062	< 0.0050	0.0051	0.0073	
Lead	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	0.01
Zinc	0.0101	0.0075	0.0342	0.0092	0.012	0.9
Mercury	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.02

Notes:

1. µg/L = Micrograms per liter
2. mg/L = Milligrams per liter
3. *Italicized* values are below laboratory method detection limits.
4. RCGW-2 is the reportable concentration for GW-2 groundwater.
5. NA = Not Analyzed.

To:	Karl Brown	Date:	1/25/17
From:	SMMA	Project No.:	15070
Project:	Somerville High School		
Re:	Space Summary Review Comments		
Distribution:	PMA (MF)		

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## Memorandum

Karl,

SMMA, PMA and the District have completed an initial pass through the MSBA review comments for the space summary (dated January 4, 2017), and have developed the following list of proposals regarding some of the area assumptions that were noted therein by the MSBA. We would appreciate MSBA's review and consideration of the proposals listed below in advance of final resolution of the allowable/reimbursable building net area, as well as the final building gross area.

For each of the proposals listed below, we have excerpted the text from the MSBA space summary review as a way of organizing the comments. Proposal text is indicated in bold red italics:

**Total Building Gross Floor Area** – The District is proposing a total of 377,192 gsf (including the 9,088 mechanical space) which exceeds the MSBA guidelines by 34,244gsf. The proposed area has increased by 3,819 gsf since the PSR submittal. The grossing factor with the mechanical space is 1.54, and 1.50 exclusive of the 9,088 gsf in mechanical space. Using the eligible Total Building Net Floor Area shown above and a grossing factor of 1.50, the allowable Total Building Gross Floor Area is 351,449 gsf.

***The District respectfully requests that the MSBA reconsider this exclusion; 963CMR 2.06(b) states "These standards and guidelines were developed by the Authority for determining maximum size and costs related to new construction and should not be used for assessing safety standards or educational adequacy of existing facilities that were constructed in accordance with the standards and guidelines that prevailed at the time of construction. The Authority shall consider Proposed Projects on a case-by-case basis and in some cases different square footages may be determined at the discretion of the Authority." The existing site constraints and topography challenges in conjunction with the need to maintain and incorporate two distinct and separate existing structures into the footprint make a 1.50 grossing factor nearly impossible to attain without jeopardizing vital education program components and adjacencies. Not only does the existing square footage to be maintained comprise 20.3% of the total GSF, but the central location of those existing spaces is critical to project phasing which further restricts opportunities for efficiencies in this area. Furthermore, the vertical circulation within the proposed building as necessitated by site limitations imposed by re-use of these existing buildings and additional constraints imposed by the Massachusetts***



To: Karl Brown  
Date: 1/25/17  
Page No: 2

*Historical Commission is not a traditional approach for a new high school building and carries with it additional vertical circulation needs which are necessary to satisfy modern building code standards. While new construction options which could have achieved a 1.50 grossing factor were investigated as part of the project's Feasibility study, the overall costs of these options was substantially higher than Somerville's preferred option with a 1.54 grossing factor. In summary, we do not feel that it would be appropriate to place a new construction 1.50 grossing factor restriction on Somerville's project due to each of the aforementioned extenuating circumstances and respectfully request that the MSBA reconsider this exclusion.*

**Total Building Gross Floor Area** – The District is proposing a total of 377,192 gsf (including the 9,088 mechanical space) which exceeds the MSBA guidelines by 34,244gsf. The proposed area has increased by 3,819 gsf since the PSR submittal. The grossing factor with the mechanical space is 1.54, and 1.50 exclusive of the 9,088 gsf in mechanical space.

*The District is proposing to modify the northern elevation for the Mechanical Support Area (representing 7,084 gsf) located at the Parking Level. The design of that wall would change from a series of louvers surrounded by exterior wall construction to a series of openings with ornamental metal grillage infill for security purposes. By adjusting the design of this exterior wall, the Mechanical Support Area at this level will effectively become an exterior space, and materially no different than an exterior roof area or the exterior vehicular ramp that is currently located on the northern elevation of the Lower Level in the existing building. The air handling units in this space would be provided with weatherproof enclosures and mounted on concrete pads, the ductwork feeding them would need to be both insulated and weatherproofed, a gravel surface would replace the continuous concrete slab on grade, and the drainage design for that area of the building would be revised accordingly. Omitting the 7,084 gsf for the Mechanical Support Area from the building total area would reduce it to 370,108 gsf, resulting in a revised overall grossing factor of 1.51.*

**Media Center** – The District is proposing a total of 7,750 nsf which is 819 nsf below the MSBA guidelines. *The proposed area in this category has increased by 250 nsf since the PSR submittal. The MSBA takes no issue with the proposed area in this category.*

*The District proposes re-designating a portion of the adjacent stair on the third floor as part of the Media Center nsf. This approach is being proposed due to the need to pass through the stairwell enclosure at that level in order to enter the Media Center from the eastern portion of the third floor. The stairwell enclosure - while fire rated - is planned to incorporate doors on magnetic hold opens as well as glazed borrowed lite openings with rated opening protections, so that the stairwell feels as open and part of the Media Center as possible on the third and fourth floor. This re-designation would increase the nsf of the Media Center space category by 819 nsf to the MSBA recommended size of 8,569 nsf. and acknowledge the desired openness and access proposed by the District.*



**Auditorium / Drama** - The District is proposing a total of 10,895 nsf which exceeds the MSBA guidelines by 495 nsf. *The proposed area in this category has increased by 95 nsf since the PSR submittal. As noted in the PSR review, this overage is due to a stage that is 530 nsf larger than MSBA guidelines. The majority of this area (all but the stage) is located in the renovated 1929 portion of the existing building. Based on analysis of the District's space needs as described in the District's educational program and constraints of the existing building, the MSBA takes no issue with the proposed area in this category. However, 495 nsf of new construction area in this category will be considered ineligible for funding by MSBA.*

***The District proposes two revisions to the current assumptions associated with the Auditorium / Drama space category:***

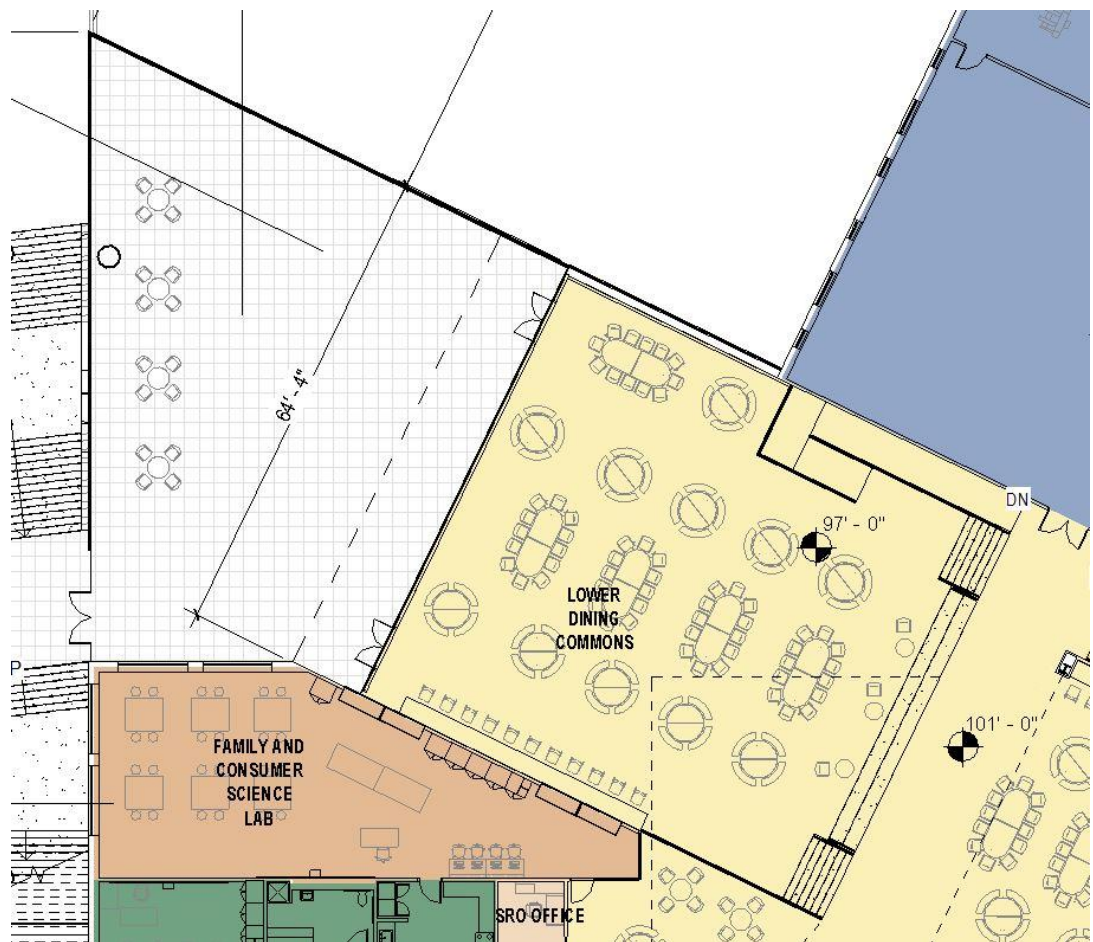
- The District respectfully requests that the MSBA reconsider the designation of the additional stage area (beyond the MSBA guidelines) as non-reimbursable. While the stage itself (as stated accurately by MSBA) is part of the new addition construction vs. renovation, the particular size of the stage is a direct result of the existing building geometry with which the District is working. Due to the width of the existing D Wing building, the dimension of the proposed stage is wider than it would be for a new construction auditorium. Likewise, due to the existing elevation change between the auditorium and the gymnasium, the stage does not have any immediate circulation behind it that can be utilized for back stage movement from stage-left to stage-right. The added stage area behind the back drop curtain is also a direct result of existing conditions with which the District is working. The sum total of the additional stage width and depth from the two renovation-related challenges noted here is 530 nsf, which the District is proposing be treated as reimbursable net area.***
- The District proposes re-designating the ramped hallways at the southern edge of the auditorium as Auditorium nsf instead of circulation space as they are currently being accounted for. The need for the ramped circulation space is present as a result of re-purposing an existing flat-floored space to have a raked condition for the auditorium seating. Because the ramped areas are located wholly within the renovated portion of the building, the District believes that the area should be reimbursable. The ramped hallways represent a total of 1,092 nsf, which the District is proposing be treated as reimbursable net area.***

***The two revisions noted above would increase the nsf of the Auditorium / Drama space category by 1,092 nsf, resulting in a revised total net area of 11,987 nsf for this category.***



**Dining & Food Service** – The District is proposing a total of 12,760 nsf which exceeds the MSBA guidelines by 612 nsf. The proposed area in this category has increased by 825 nsf since the PSR submittal. *The MSBA takes no issue with the proposed area in this category, which is located in the new portion of the building. However, 612 nsf of area in this category will be considered ineligible for funding by MSBA.*

*The District proposes reducing the overall size of the project by 612 gsf by moving the western-most exterior wall of the Dining Commons east approximately 10 feet. Additionally, the line of demarcation between the Dining Commons and the surrounding hallway circulation would be adjusted so that the Dining Commons itself would be reduced to a size of 7,170 nsf, allowing the overall Dining & Food Service space category to become the MSBA recommended size of 12,148 nsf. The total gross building area for the project would become 376,580 gsf as part of this proposal.*



**Medical** – The District is proposing a total of 1,195 nsf which is 115 nsf below the MSBA guidelines. *The proposed area in this category has decreased by 115 nsf since the PSR submittal. In the response to these review comments, please verify that the proposed square footage is sufficient to deliver the District's programmatic needs.*

*The District proposes re-designating a portion of the adjacent Health Suite (which is operated by an entity that is not associated with SHS/SPS) as part of the Medical Suite nsf. While this space is not operated by the SHS nursing staff, the presence of the Health Suite provides the resources of a teen health center, and allows for the layout efficiency present in the Medical Suite itself by not having to reproduce some resources – such as mental health services. This re-designation would increase the nsf of the Medical space category by 115 nsf, to the MSBA recommended total size of 1,310 nsf. This adjustment would also reduce the size of the Health Suite by 115 nsf, resulting in a revised size of 1,002 nsf.*





**Custodial & Maintenance** – The District is proposing a total of 2,574 nsf which is 244 nsf below the MSBA guidelines. The proposed area in this category has increased by 156 nsf since the PSR submittal. *The MSBA takes no issue with the proposed area.*

*The District proposes re-designating a portion of the wide hallway immediately inside the loading dock on the lower level as part of the Storeroom nsf. This approach is proposed given the likely utilization of the indicated wide hallway space as a temporary holding area for deliveries as well as trash pickup/removal. This re-designation would increase the nsf of Storeroom space by 244 nsf, resulting in the overall Custodial & Maintenance space category increasing to the MSBA recommended size of 2,818 nsf.*

