Mountview Middle School

270 Shrewsbury Street, Holden, Massachusetts

MSBA Feasibility Study

Preliminary Design Program (PDP)

JULY 24, 2012

MSBA

Massachusetts School Building Authority

40 Broad Street, Suite 500, Boston, MA 02111

OWNER

Town of Holden, MA

1204 Main Street, Starbard Building, Holden, MA 01520

Wachusett Regional School District

1745 Main Street, Jefferson, MA 01522

OPM

Gary Kaczmarek

Town of Holden

1384 Main Street, Holden, MA 01520

DESIGNER

Lamoureux Pagano & Associates, Inc.

108 Grove Street, Suite 300, Worcester, MA 01605

Prepared by:

LAMOUREUX · PAGANO

ASSOCIATES, ARCHITECTS

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3.1.1 INTRODUCTION

A. Narrative Summary

FEASIBILITY STUDY

A. Narrative Summary

In April of 2012, Lamoureux Pagano Associates (LPA) was selected by the Massachusetts School Building Authority (MSBA) and the Town of Holden, in association with the Wachusett Regional School District to conduct a feasibility Study for the Mountview Middle School. The Preliminary Design Program (PDP) portion of the study is included in this submission and will be followed, after MSBA review and approval, by the Preferred Schematic Report (PSR) to conclude the Feasibility Study phase. Upon approval of the Feasibility Study by the MSBA Board of Directors, the project will proceed into the Schematic Design phase.

The existing Mountview Middle School facility was originally built in 1967, with an addition constructed in 1989. The facility's deficiencies are detailed in the Statement of Interest (SOI) included as Appendix A, but can briefly be described as follows:

- Overcrowding, Small classroom size
- Lack of adequate spaces to support the District's Educational Program
- Out-of-date and failing mechanical, electrical, data, security and communication systems
- Lack of fire suppression system
- Lack of accessibility for disabled
- Inefficient exterior envelope systems
- Potential for presence of hazardous materials

The Feasibility Study is based on a 800-student Middle School configured for grades 6-8; a copy of the executed Design Enrollment Certification is attached under the Appendices section.

A narrative summary of the Town's Capital Budget Statement prepared by the Office of the Town Manager is attached.

This report is organized in accordance with MSBA Module 3 – Feasibility Study Guidelines (dated June 2010; updated November 2011). The Preliminary design program process included the determination of the Owner's needs, assessment of existing conditions, analysis/evaluation of alternatives, and recommendation of three (3) distinct alternatives for further study. As part of the Feasibility Study scope of work, the Owner also requested that LPA study and evaluate, in addition to the existing school site, one (1) additional town-owned site for potential New Construction; this work is presented in 3.1.6 Preliminary Evaluation of Alternatives.

A full Directory of the Feasibility Study participants follows. Throughout the course of the Study, many meetings were held with the Owner's Project Manager, Mountview School Building Committee, Town Boards/Officials/Committees, representatives of the School District, and other project stakeholders; copies of applicable meeting memos are included with various sections where relevant to that particular section.

An updated Project Schedule, prepared by the Owner's Project Manager, also follows and includes key milestones, including the November 14, 2012 MSBA Board of Directors meeting which has been targeted for approval to proceed with Schematic Design. Variances from the schedule included in the executed Feasibility Study Agreement include the following:

- Preliminary Design Program has been scheduled for August 15, 2012.
- Preferred Schematic Report has been scheduled for September 27, 2012.
- MSBA vote on Preferred Schematic Study and Report has been tentatively scheduled for November 14, 2012.
- Projected Town vote for Project Scope and Budget Agreement has been tentatively scheduled March 2013.

TOWN OF HOLDEN

MASSACHUSETTS

Nancy T. Galkowski
Town Manager

July 2012

Debt Statement

As of June 30, 2011, the total long-term debt outstanding for the Town of Holden was $50,950,578.24, of which $19,205,798.82 is considered to be inside the debt limit, and $31,744,779.42 to be outside the debt limit. This debt is comprised of $20,665,000 for school projects, $12,015,000 for the Public Safety Building, $1,375,000 for the municipal pool, $1,040,000 for an electrical substation, $240,000 for fire trucks, $3,120,000 for water projects and $12,495,578 for water/sewer/septic improvements through the Massachusetts Water Pollution Abatement Trust. In addition, the Town pays its share of a Wachusett Regional School District borrowing for renovations and expansion of the Wachusett Regional High School, an MSBA supported project. The project is debt excluded and the Town's share of the borrowing for FY 2012 was $1,180,546.

In March 2012, the Town of Holden borrowed an additional $200,000 to complete the Public Safety Building project, $300,000 for the Mountview Middle School feasibility study and $370,000 for a DPW truck and Fire Department self-contained breathing apparatus. These last two items are part of a Capital budget plan created by Town of Holden administration to manage the Town's assets over the next five years (see below).

The Town also has capital leases in the governmental type fund for the financing of an ambulance and DPW tractor. Both are due in 2014 and the Town currently owes $184,014 on the leases consisting of $177,194 in principal and $6,820 in interest.

Given the current portfolio outlined above, it is anticipated that a future borrowing for Mountview Middle School is within the Town's debt management capacity; the project would be contingent upon Town Meeting support and a subsequent ballot vote to exclude the debt from the limitations of Proposition 2 ½.

Infrastructure Investment Fund

The Town's Infrastructure Investment Fund (IIF) was established through special legislation to support qualifying capital projects as defined by the IIF Trustees. Currently, the IIF funds debt payments for the Public Safety Building and the Municipal Pool Facility.

Capital Program

The approved Capital Budget for FY 2013 includes the expenditure of $605,647 in cash and bonding $310,000. An additional $1,193,646 is recommended to be funded from other sources such as Chapter 90, the Water/Sewer Enterprise Fund, and the Recreation Revolving Fund. The total investment for capital acquisitions and improvements is $2,109,293. Both the Water-Sewer Enterprise Fund and the Recreation Revolving Fund are fully supported by user fees; expenditures from these sources do not impact the Town's General Fund.

The goal of the Capital Plan is to provide approximately 4% of Town resources for investment into our infrastructure and capital assets. The Capital Plan for FY 2013 expends an average of 4.48% over a five-year period from FY 2013 to FY 2017. Total investment during that period is $8,020,412. Town Meeting has supported the proposed Capital Plan; it is a fluid document which provides the ability to plan investments over time and to react to changes from year to year.

B. Project Directory

OWNER

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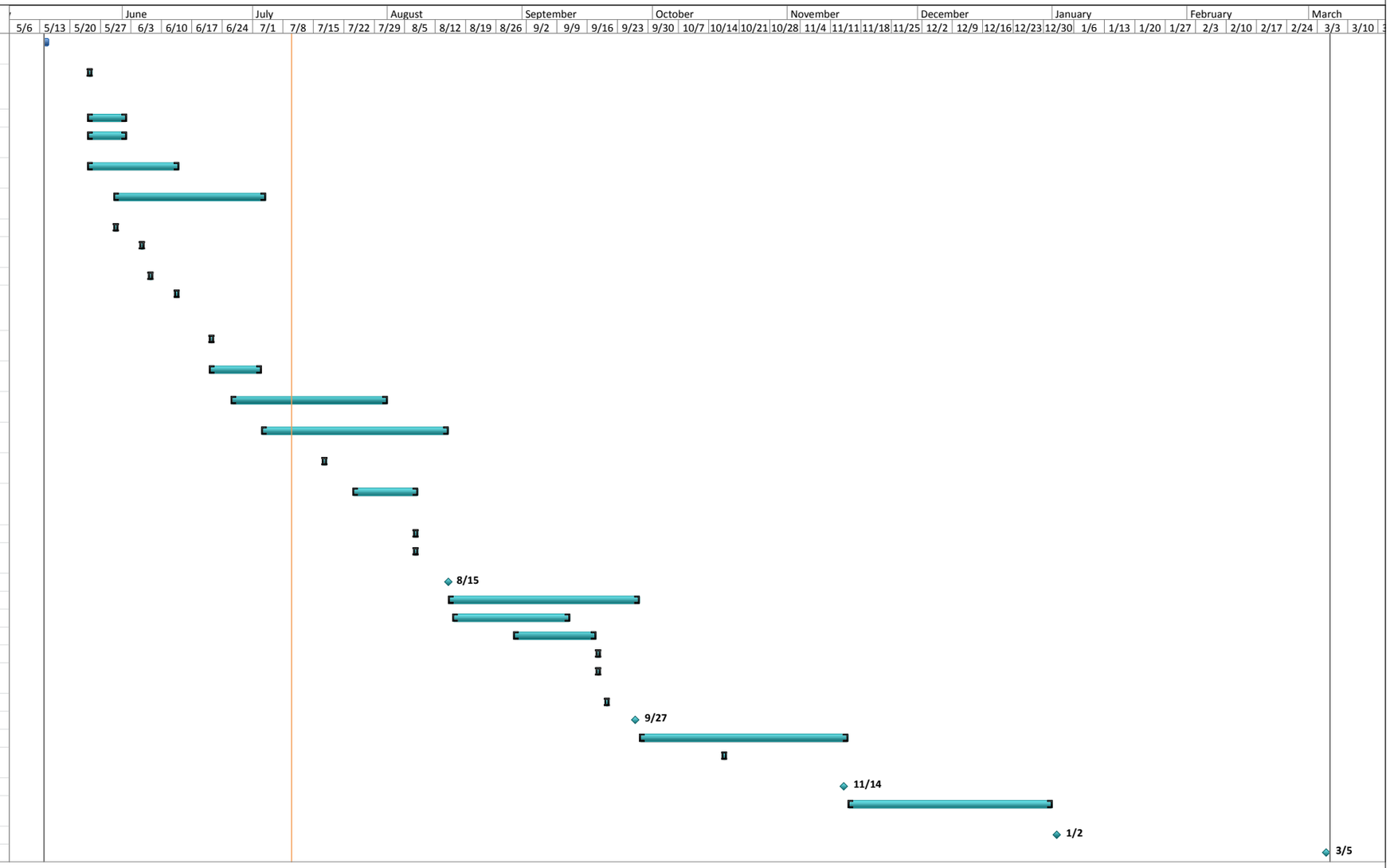
C. Updated Project Schedule

MOUNTVIEW MIDDLE SCHOOL
SCHEDULE

ID	Task Mode	Task Name	Duration	Start	Finish
1		PROJECT KICK-OFF MEETING	1 day	Mon 5/14/12	Mon 5/14/12
2		LPA AND CONSULTANTANT WALK THROUGH	1 day	Thu 5/24/12	Thu 5/24/12
3		INITIAL SPACE SUMMARY	7 days	Thu 5/24/12	Fri 6/1/12
4		EVALUATION OF EXISTING CONDITIONS	7 days	Thu 5/24/12	Fri 6/1/12
5		SITE DEVELOPMENT REQUIREMENTS	15 days	Thu 5/24/12	Wed 6/13/12
6		EVALUATION OF ALTERNATIVES	25 days	Wed 5/30/12	Tue 7/3/12
7		GEOTECHNICAL BORINGS	1 day	Wed 5/30/12	Wed 5/30/12
8		LPA TEACHER INPUT MEETING	1 day	Tue 6/5/12	Tue 6/5/12
9		TRAFFIC STUDY	1 day	Thu 6/7/12	Thu 6/7/12
10		ALTERNATIVE SITES MEETING WITH TOWN OFFICIALS	1 day	Wed 6/13/12	Wed 6/13/12
11		GREEN CHARRETTE MEETING	1 day	Thu 6/21/12	Thu 6/21/12
12		PROPOSED SPACE SUMMARY BY WRSD	8 days	Thu 6/21/12	Mon 7/2/12
13		LPA PRESENT PDP PROGRESS TO SBC	26 days	Tue 6/26/12	Tue 7/31/12
14		OPM REVIEW PDP PROGRESS SUBMITTALS CD	31 days	Tue 7/3/12	Tue 8/14/12
15		LPA PRESENTATION TO PUBLIC BOS, Fin Com Tour Building	1 day	Tue 7/17/12	Tue 7/17/12
16		LPA DELIVER PDP TO SBC FOR REVIEW	11 days	Tue 7/24/12	Tue 8/7/12
17		SBC VOTE ON PDP	1 day	Tue 8/7/12	Tue 8/7/12
18		SIGNED LOCAL ACTIONS APPROVAL CERT.	1 day	Tue 8/7/12	Tue 8/7/12
19		PDP TO MSBA	0 days	Wed 8/15/12	Wed 8/15/12
20		MSBA REVIEW PDP	32 days	Wed 8/15/12	Thu 9/27/12
21		LPA CREATE PSR	19 days	Thu 8/16/12	Tue 9/11/12
22		OPM REVIEW PSR SUBMITTALS	13 days	Thu 8/30/12	Mon 9/17/12
23		SBC VOTE ON PSR	1 day	Tue 9/18/12	Tue 9/18/12
24		SIGNED LOCAL ACTIONS APPROVAL CERT.	1 day	Tue 9/18/12	Tue 9/18/12
25		LPA PRESENT PSR TO SC	1 day	Thu 9/20/12	Thu 9/20/12
26		PSR TO MSBA	0 days	Thu 9/27/12	Thu 9/27/12
27		MSBA REVIEW PSR	34 days	Fri 9/28/12	Wed 11/14/12
28		FACILITIES ASSESSMENT SUBCOMMITTEE MEETING	1 day	Wed 10/17/12	Wed 10/17/12
29		MSBA BRD VOTE ON PSR	0 days	Wed 11/14/12	Wed 11/14/12
30		DEVELOP SCHEMATIC DESIGN PACKAGE AND BUDGET	33 days	Thu 11/15/12	Mon 12/31/12
31		SD SUBMITTALS DUE TO MSBA	0 days	Wed 1/2/13	Wed 1/2/13
32		MSBA BRD VOTE ON SD	0 days	Tue 3/5/13	Tue 3/5/13



Project: MMS FSSD SCHD 6/13/12
Date: Tue 7/10/12

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Progress

3.1.2 EDUCATIONAL PROGRAM

A. Narrative
B. Teaching Philosophy Statement
C. Supporting Documents

3.1.2 EDUCATIONAL PROGRAM

A. Narrative

Mountview Middle School educates over 764 students in grades six through eight. We use a teaming approach with two academic teams per each grade level breaking our students into two teams of approximately 125 students per team.

Students at Mountview take Mathematics, English Language Arts, Science, Social Studies and either a second block of English Language Arts in the sixth grade or take a foreign language in the seventh and eighth grades of either French or Spanish. Related Arts class for sixth graders includes Physical Education, Music (Band, Chorus and Orchestra) Grade 6 Seminar and Art. Students in the seventh and eighth grades take Related Arts classes consisting of alternating days of Physical Education and Music (Band, Chorus or Orchestra) and a second Related Arts class that meets daily consisting of either Health, Technology Education, Art and Graphic Arts. That final block of Related Arts courses meets daily for one quarter of the year and rotates at the end of each term.

Class sizes vary but typically range between 20-25 students, with up to 30 students in Related Arts classes and over 50 in our Performance Band and alternating Physical Education classes. The Wachusett Regional School Committee Guideline is for an average of 23 students per class.

Dr. Thomas A. Pandiscio, Superintendent of WRSD and Erik Githmark, Principal of Mountview Middle School, were instrumental in the programming and space planning facets of the study with the Design Team of Kathryn Crockett and William Senecal.

A staff and faculty survey was conducted, followed by an open meeting of staff, faculty and design team. Pertinent information obtained through the survey and meeting was used in the programming and space planning.

The Mountview School Building Committee, Superintendent Pandiscio, Principal Githmark and the Design Team toured the Sherwood Middle School, a middle school currently under construction in Shrewsbury, funded by MSBA.

B. Teaching Philosophy Statement

Mountview Middle School

3.1.2 EDUCATIONAL PROGRAM

Teaching Philosophy Statement

Teaching Philosophy Statement:

- The proposed Educational Program at Mountview Middle School will be configured for grades 6-8 and will be team based with two teams per grade.
- The District's recommended maximum class size for academic classes at the middle school level is 23 students.
- The scheduling method will use a seven-day rotating schedule with seven (7) periods per day: ELA (Double Block in the 6th grade), Science, History/Geography, Foreign Language (Grade 7+8 Students only) and Math plus a block of Physical Education/ Music and a block of Art/ Technology Education each day.
- Classrooms will be assigned to specific teachers where possible. Teachers will have one period each day for preparation, and require a work space in close proximity to Team classrooms, storage and staff/faculty rest rooms.
- There will be no provisions for either Kindergarten or Pre-K.
- Lunches will be served in three sittings (grades 6-8). Food is prepared onsite.
- Special Education will be inclusive for all grades with some individual "pull-out" tutoring done on an as-needed basis. Collaborative space is needed. Two ABA classrooms will be utilized in the new building to provide instruction in life skills to a group of at least 16 students.
- Technology will remain part of the Related Arts curriculum and will primarily focus on 21st Century Skills and STEM (Science, Technology, Engineering and Math) instruction through the utilization of two technology classrooms. The technology program is envisioned as being less of a traditional wood/metal shop vocational program and more of a technology/ engineering instructional setting.
- Adjacency between the Technology lab and a dedicated computer lab is needed for the STEM curriculum. Technology at typical classrooms should include an interactive LCD projector or whiteboard and multiple hard-wired Category 6 data drops (1 dedicated teacher plus 4-6 student locations).
- The entire school should have wireless data communications capability.
- Science: Science classrooms should be flexible-curriculum spaces containing safety cabinets, eyewash/deluge showers in all three grades. In the 8th grade only, we would require fume hoods, and gas.
- Music/Performing Arts: Chorus, Orchestra and Band should each have separate rooms as classes run concurrently. The Platform/Stage should have the means to be closed off from the main assembly space for use as an additional Music/ performance teaching space and to accommodate our students each year for their Spring Musical performances.
- Physical Education: The Gymnasium should be adjacent to the Platform/Stage and include a spectator seating area large enough for the entire student body (as well as for student sporting events). Enough space for three concurrent classes must be set aside to accommodate regular PE instruction and an adaptive PE program. School sports programs include soccer, cross country/ track, football, basketball, cheer, softball and baseball. A full size basketball court was requested for school team games. Locker rooms should have separated shower/changing stalls.
- Security and Visual Access Requirements: Police/Fire public safety booster radio, electronic access control, intrusion detection, and video surveillance systems are required.

C. Supporting Documents

- *Meeting Minutes*
  - *-SBC*
  - *-WRSDC*
  - *-OPM*
  - *-LPA*
- *Faculty Questionnaire Summary*
- *MMS Schedule*
- *Class Size Policy*
- *Fire Drill Plan*
- *Faculty & Staff*
- *Transportation Policies*
- *Diagrams*

Mountview School Building Committee
Meeting Minutes
June 12, 2012

6PM HMLD Building

Present: Chairman Paul Challenger, David White, Tom Pandiscio, Gary Kaczmarek, Margaret Watson, Erik Githmark, Jacquie Kelly, Peter Brennan

Absent: Nancy Galkowski, Chris Lucchesi, Mike Sherman

Others Present: Mike Pagano, LPA, Bill Senecal, LPA, Elizabeth Helder, Recording Secretary

1. OPM/Architect Update

LPA confirmed that a hazardous materials survey was completed on the outside of the building. An interior haz-mat survey will be conducted the week of June 18th. A Room Summary review will be conducted with the Superintendent on June 21st.

The Green Engineer Charette will be held at 9AM on June 21st. The meeting will be held in the Curriculum Center at the District offices in the downstairs conference room. This is the first of two charettes that are required as part of the PDP. School staff and faculty are invited to attend. Mr. White commented that many of the green engineering ideas (no idling buses, bike racks at school etc.) are already policies that exist within the District. He said he would have preferred to hold the meeting(s) when more Committee and community members could attend as they will want to provide environmental input about geothermal, LED lighting, sustainable building practices, etc. Mr. Pagano commented that staff may have input into the sustainable design of the building. Mr. Pagano said that the second meeting could be scheduled in the evening or on a Saturday to generate more interest in community involvement. Mr. Pagano added that no decisions would be made at the meeting: it is strictly an outreach/informational meeting to inform those attending what a green project entails. It is important to hold this meeting sooner than later in order to make the Feasibility Study deadline. Ms. Watson encouraged the Committee to invite the media to attend and place the time/date of the meeting or a press release in the paper. Mr. Githmark said that he could access the connect-ed phone system to inform parents about the meeting. Mr. White suggested that members of the Selectmen, Finance Committee and School Committee be invited to the meeting too.

Mr. Pandiscio asked about the timeline on the Room Summary. Mr. Pagano said it was limited to the work involved in the Module 3 – Feasibility Study and would need to be finished by the end of June because the MSBA deadline for this study is July 12th. The Preferred Schematic Design (PSD) is due to the MSBA on August 9th. The School Committee must vote to approve the PSD and the Superintendent and the Town Manager must sign the document.

Chairman Challenger asked if the PSD would be finished/ready to present to the School Committee at their scheduled meeting on July 23rd.

Dave White asked if the School Committee could vote to authorize the Superintendent to sign off on the final plan or have the final plan in the Superintendent's office for School Committee members to sign closer to the deadline date in August.

Dr. Pandiscio suggested that a preliminary PSD report be made to the School Committee on July 23rd for education/input purposes to bring them up to speed. Then the School Committee should call for a Special School Committee meeting the first week of August for a final plan presentation and vote. Ms. Watson commented it might be difficult to get a quorum the first week of August. Mr. Challenger also commented that 60% of the School Committee doesn't really have any interest in the project since they do not represent Holden. Dr. Pandiscio said he had confidence that a School Committee quorum would be achieved in August. He said he would make an announcement at the next School Committee meeting to gage consensus of how many members would be able to attend a Special Meeting in August.

Mr. Pagano will send Mr. Brennan the language of the standard vote that the MSBA requires of the School Committee and the Superintendent to authorize the PSD.

Mr. Challenger asked if the process was moving too fast in a very critical stage of the process.

Mr. Pagano said believed the answer was no. He said that he felt confident that a quality building would come from the fast-paced process. He said that the process would become more automatic once the PSD was filed.

The Mountview School Building Committee agreed to take a vote prior to the School Committee meeting on July 23rd in order to advise the School Committee which plan the MSBC supports.

It was a consensus of the Committee to direct the School Administration to work directly with LPA on the Room Summary. The final Room Summary proposal will return to the MSBC for approval. Dr. Pandiscio said that the School Administration will customize the Room Summary to fit the needs of the educational needs of the school and will not necessarily conform to the MSBA guidelines. These departures from the guidelines will need to be thoroughly justified to the MSBA.

The traffic study has been completed.

Jacquie Kelly will forward a Capital Budget Statement to LPA.

Mr. Kaczmarek said that a meeting had been scheduled for June 13th at 9AM with LPA, Town Engineering, Fire, and Police to review potential building sites and receive town input.

Mr. Kaczmarek said that he, Mr. Challenger, Mr. Githmark, and LPA conducted a walk-through of the Sherwood Middle School in Shrewsbury, MA on June 12, 2012 at 3PM. Mr. Senecal said another walk-through of the school will be held in September 2012. The school will be closer to substantial completion at that point. Mountview staff will be invited to attend.

Mr. Senecal said that it is very important the Committee commence with its Outreach Program sooner than later.

LPA and the Committee participated in a site review of potential building sites. Mr. Pagano said it had been determined that the west side of the Mountview school was filled in with construction debris from the I-190 connector project. Some type of soil improvement/mass excavation will have to occur if a new building is sited on this portion of the property.

The Committee discussed the 37-acres of Zottoli-owned land behind Dawson School. Mr. Pagano said that it was a large enough area and the soils are favorable. However, there are certain problems with the site. There are five property owners must sell their land to the Town to make the site work. He commented that it will nearly be impossible to get five property owners to agree to sell. It would be very costly and time consuming for the Town to engage in an eminent domain land taking. LPA estimated that it would cost $400,000-$500,000 to purchase the land. Mr. White disagreed saying the town spent 1M in 1997 to purchase the Mayo property and that was with a 50% discount. He said he felt it would cost closer to 2M to purchase the Zottoli property. Sundin spend 1.2 to purchase 20-acres on Salisbury Street for Winterberry Hollow. He said that if the Town could buy the Zottoli land for $400,000 he would make a motion to buy it tomorrow.

Motion by Dave White, seconded by Tom Pandiscio it was **UNANIMOUSLY VOTED TO NO LONGER CONSIDER THE ZOTTOLI PROPERTY ON SALISBURY STREET AS A POTENTIAL BUILDING SITE.**

The Committee considered the land off Malden Street/Chapel Street/Bullard Street. This land is owned by the Town. Mr. Pagano said the good things about the property are that is easily accessible from both Malden Street and Chapel Street, and shares a property line with the Mayo School. The land is large enough, but is divided by wetlands. He said the Holden Conservation Commission is very conservative and defends the wetland protection act stringently. There is also some farm land on site. The property can share fields/access and infrastructure with Mayo School. The land was donated by WPI to Holden Youth Sports Incorporated for playing field development. However, HYSI determined it was too costly to develop for sports purposes and the land reverted back to town ownership. Mr. Pagano said he has a history with the soil in the area, since LPA was the architect for the Mayo school. The soil at Mayo was poor; a dense, clay like play-dough that does not absorb water and turns to grease when wet. There is a good chance that soil on this land is similar.

Mr. Pagano said he was not very warm to this site explaining that he feels it will be too expensive to develop. However, he suggested allowing LPA to pursue the next level of exploration of the site for the PSD. Traffic Engineering, Landscape Architect, and soil prep/conservation/wetlands will be explored in order to continue this site as an option.

Motion by Tom Pandiscio seconded by Dave White, it was **UNANIMOUSLY VOTED TO DIRECT LPA TO CONTINUE TO PURSUE THE MALDEN STREET SITE.**

Margaret Watson said that Bullard Street was a highly trafficked road. She said it had not been developed to handle additional traffic. Adding traffic from another school on Bullard Street will mean that work would have to be done to Bullard Street.

Mr. White commented that Mountview sits on a highly trafficked Shrewsbury Street, which provides access to I-190/I-290. Moving the middle school to a new site will help alleviate 1/3 of the traffic on Shrewsbury Street in the morning.

OPM/Architect Update cont.

Mr. Senecal provided an update from the Massachusetts Department of Agricultural Resources (MDAR) concerning the agricultural farmland designation at the Mountview site. Barbara Hobson at MDAR said the MDAR really doesn't consider the site as farmland anymore. A garden can be planted on the Mountview site as a remediation to the designation.

The other two sites also contain some amount of agricultural land. However, it has been so long since the land was used as farmland, forests have grown up, and the land would be reclassified.

Dave White asked if LPA has determined how they would site a school on the existing site. Is there a case to purchase any abutting property to make the site more useable? Mr. Pagano said he was looking at multiple options to develop the site. Land acquisition is not a reimbursable expense.

Dave White inquired who owns the 28-acres in the back corner that abuts the current site. He said he thought the Zottoli family might own the land. He said the purchase of several acres in the back corner might help make the current site more usable. Mr. Kaczmarek will determine who owns the land. The Committee agreed to have Mr. White approach the owner and inquire if the owner would be interested in selling a portion of the land.

Mr. Senecal emailed the Committee on June 12th to forward an updated Summary of Deliverables.

The Committee is scheduled to meet on Tuesday, June 20th at 6PM at the HMLD.

2. Approval of Previous Minutes

Motion by Peter Brennan, seconded by Dave White, it was **VOTED 7-0-1 WITH 1 ABSTAINED TO APPROVE THE JUNE 5, 2012 MEETING MINUTES. (ABSTAINED: WATSON.)**

3. Adjournment

Motion by Dave White, seconded by Erik Githmark, it was **UNANIMOUSLY VOTED TO ADJOURN THE JUNE 12, 2012 MEETING AT 8PM.**

Mountview School Building Project
Green Engineering Charette Meeting Minutes
June 21, 2012

9AM School District Offices

Present: Gary Kaczmarek, OPM, Bill Senecal, LPA, Matt Brassard, Brassard Design & Engineering, Site Planners, Erik Githmark, Principal, Mountview School/MSBC, LPA, Brian McCarthy, Assistant Principal, Mountview School, Dennis Hyson, Head Custodian, Mountview School, Peggy Carlson, School Psychologist, Mountview School, Carrie Havey, The Green Engineer, Erik Ruoff, The Green Engineer, Nancy Galkowski, Town Manager/MSBC, Jacquie Kelly, Assistant Town Manager/MSBC, Margaret Watson, MSBC/School Committee, Azim Rawji, ART Engineering Corp., Kevin Seaman, Seaman Engineering, Karl Makela, Finance Committee, Tom Pandiscio, District Superintendent/MSBC, Peter Brennan, School Business Manager/MSBC, Daniel Castro, The Daily Holden (Press), Joanne Roy, The Landmark (Press) Paul Challenger, Chairman, MSBC (arrived 10:37AM), Elizabeth Helder, Recording Secretary

1. Green Engineer Charette

Mr. Senecal introduced Carrie Havey and Erik Ruoff, Project Engineers with the Green Engineer, LLP, a green building design consulting firm.

Mr. Senecal said that the Committee was in the process of evaluating the conditions of the existing school and conducting a site review of a parcel of land off Bullard Street and the existing school site for potential building sites in order to determine the best building option(s) for the Town. It is important to consider green/sustainable building design for either a renovation or new construction. The school will be designed for approximately 800 students and 50 faculty members.

Mr. Ruoff explained the triple bottom line considered when incorporating green design building principles: people, profit and planet. He said it is important to build a safe, healthy and productive school, be mindful of money, and make considerations that are good for the planet. A green design means it is safe and healthy, resource efficient, flexible and adaptable, and durable and maintainable. It is also important to build a school that will benefit the community for many years to come and adapt to changing uses and technology.

Items discussed were carbon footprint (water/materials/building systems/traffic/transport/ construction materials & techniques/solid waste). 90% of time is spent indoors and one half of the nations 115,000 schools have problems linked to indoor air quality. The benefits of a green school include a healthy, productive learning environment, improved teacher retention, financial savings hands on learning, while being friendly to the environment. While incremental costs are 1.5 to 2.4% higher to build green, green benefits are up to 8 times higher over a 20 year period

Mr. Ruoff and Ms. Havey explained the MA-CHPS = Massachusetts Collaborative for High Performance Schools green certification program. The program has been tailored for MA schools to design a green building and incorporate green policies in the whole building (green building + green teaching + green cleaning, etc.). Criteria involved in the MA-CHPS program include site, water, energy, materials & waste management, indoor air quality, operations and management and integration and innovation. A certain number of points must be obtained in these categories in order to qualify for MSBA reimbursement (Verified Status is 40 points/new - 35 points/ renovation and Verified Leader Status is 50 points new - 45 points/renovation).

LEED is another type of accredited national green building program that would also qualify the building project for green reimbursement from the MSBA.

Mr. Senecal said LPA is LEED's certified. However most schools it designs are MA-CHPS certified. He said the MA-CHPS process is very straightforward. The client picks the objectives or "points" the project wants to achieve and the project is built to those standards. Mr. Ruoff said that the documentation for MA-CHPS is more work up front. However, once the points are selected, the plan is easy to follow.

The Committee and LPA will discuss the two green certification programs at its next meeting in order to determine which one is the better fit for the Mountview project.

The group participated in an exercise to generate important building goals and ideas for the final building design. Suggestions included bringing the project in on time and on/under budget, obtaining a 2% MA-CHPS reimbursement, designing a green, energy efficient school with sunshine in every window and the ability to harvest the sunshine, construction of a "fabulous" looking windmill on the property, improved traffic flow, construction of a school that is an asset to the school and community, a final design that interacts with students and staff, a building that operates at a low, "off the grid" energy level, and is made from renewable materials.

The group reviewed the MA CHPS Project Checklist Matrix.

Mr. Brassard, Site Engineering Subcontractor commented that making the right choices at the beginning will help to integrate the whole process. He said that there are enough options available on the project checklist that will allow a successfully green designed school to be built on either site.

The group discussed potential hurdles regarding a possible renovation. Mr. Seaman, Mechanical Engineering Subcontractor discussed the current HVAC problems in the school involving the aging equipment. He said that the Sherwood Middle School in Shrewsbury, designed by LPA contained a dehumidifying system that will keep the building cooler while qualifying it for MA-CHPS points. Additionally, there are significant plumbing failures and hazardous waste materials in the building. Mold, mildew, and asbestos testing are ongoing.

Mr. Senecal said the shell of the building was not environmentally or structurally within code. The current roof will not support new HVAC system. There is no insulation in the building and an extreme lack of windows. The walls are rigid and there is no ceiling headroom, which will make renovation very difficult.

Mr. Rawji, Electrical Subcontractor informed the group that all electrical systems in the building are out of date/code and will require 100% replacement. The phone system is also obsolete.

Mr. Githmark reported that during the winter months, teachers are constantly blowing fuses and overloading the electrical system, which generate safety concerns. Many times the single outlet in each classroom is so hot, they must wait for it to cool down before it is usable. Mr. Rawji said new LED lighting and daylight harvesting will improve the energy requirements of the building significantly. His designs conform to MA-CHPS guidelines. Mr. Githmark also added that classroom size (too small) and control of air temperature and lack of air flow/movement are problems.

Town Manager Nancy Galkowski asked that energy costs be considered in the new building – with added technology, operating costs are bound to rise. Mr. Ruoff said this factor is taken into consideration. Energy costs can be contained through the purchase of energy star products. Ms. Galkowski also asked if there was a way to capture water on site for irrigation use. Mr. Brassard said stormwater could be connected to a drip irrigation system. Field irrigation would require a large amount of water storage and electrical service. Many times, the costs associated with such a request outweigh the benefits. The Green Engineering team will evaluate the request.

Narrative on the plans of the Committee stating its intent to pursue a green designed building will be required for the August 9th Feasibility submittal to the MSBA.

Mr. Ruoff and Ms. Havey agreed to provide an analysis of MA-CHPS vs. LEED certification criteria to the Committee prior to its next meeting.

The meeting ended at 10:54AM.

11/9/2010 WRSDC Minutes

Ad-Hoc Subcommittees

Member Watson, who is representing the School Committee on the Mountview Building Committee, gave a report on the first meeting of that building committee, held November 4th. The next meeting of this building committee is tentatively scheduled for November 16th. Member Watson also reported the results of the vote taken at the special Town Meeting held in Holden on November 8th, where attendees voted support of a feasibility study to be done in connection with the Mountview project. Member Jackson commented on the powerful PowerPoint presentation that was made at the special Town Meeting.

11/22/2010 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported on the November 16th meeting of the Mountview Building Committee. This building committee is expected to meet monthly and Member Watson will report to the full School Committee on a regular basis.

12/13/2010 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported the Mountview Building Committee will be meeting on December 16th.

1/10/11 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported on the December 16th Mountview Building Committee meeting and told that the Mountview Building Committee will meet next on January 11th.

1/25/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported on the January 11th Mountview Building Committee meeting and told that the Mountview Building Committee will meet the second and fourth Tuesdays of every month. When School Committee members were polled, it was agreed that copies of the Mountview Building Committee minutes will be available in the Reading File maintained at the

Central Office and that Member Watson will provide an oral summary about these building committee meetings at the regular School Committee meetings.

2/14/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported on the February 8th Mountview Building Committee meeting and told that the Mountview Building Committee will meet next on March 8th. She reminded members that copies of the Mountview Building Committee minutes will be available in the Reading File maintained at the Central Office

2/28/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported the Mountview Building Committee has not met since the last School Committee meeting; the next meeting will be held on March 8th.

3/14/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported on the March 8th meeting of the Mountview Building Committee, and noted the Building Committee will meet next on March 15th.

3/28/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson gave a report on the March 15th meeting of the Mountview Building Committee and announced the Building Committee will meet next on April 12th.

4/11/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported this building committee has not met since the last School Committee meeting. She reported that some members of the Mountview Building Committee appeared before the MSBA on April 4th regarding the Owner's Project Manager and the committee is awaiting action

from MSBA. This building committee will meet next on April 26th at 7:00 PM.

4/25/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported this building committee has not met since the last School Committee meeting; therefore, there is nothing to report.

5/25/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported this building committee will meet next on June 14, 2011.

6/13/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported this building committee has not met since the last School Committee meeting, and the next meeting has not yet been scheduled.

7/11/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported on the June 21st meeting of this building committee, which will meet next on July 12th. Member Watson reported that the Town of Princeton will not be sending middle school students to Mountview Middle School.

8/15/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

In Member Watson's absence, Superintendent Pandiscio reported on the status of this project.

9/12/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson and Superintendent Pandiscio reported on progress being made with this project. Superintendent Pandiscio reported on a September

12th conference call involving MSBA, the Town of Holden, and the District. Superintendent Pandiscio did comment that progress on this project is a "painfully slow process." The Mountview Building Committee is slated to meet on September 13th.

10/12/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported the Mountview Building Committee has not met since the last School Committee meeting. Superintendent Pandiscio reported a conference call with MSBA has been scheduled for October 14th.

10/25/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson referenced Superintendent Pandiscio's Mountview building project update which was in his October 20th Report. Superintendent Pandiscio explained how the 800 student enrollment number was arrived at. He also reported on meetings and conference calls he has participated in with MSBA and the Town of Holden.

Motion: To authorize Chair Duncan Leith, on behalf of the Wachusett Regional School District Committee, and Superintendent of Schools Thomas G. Pandiscio, on behalf of the Wachusett Regional School District, to sign the Design Enrollment Certification for the proposed project at the Mountview Middle School in Holden, Massachusetts.

(R. Imber)
(C. Bazinet)

Vote:
In favor:

Duncan Leith
Cynthia Bazinet
Carmelo Bazzano
Colleen Cipro
Lance Harris
Robert Imber
Stacey Jackson
Julianne Kelley
James Mason
Robert Pelczarski
Norman Plourde
Robert Remillard
Michelle Sciabarrasi
Dawn Torres-Gale

Athas Tsongalis
Margaret Watson

Opposed:
None

Motion passed unanimously.

11/15/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported on the October 26th meeting of the Mountview Building Committee.

11/28/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported the Mountview Building Committee has not met since the last School Committee meeting. The Building Committee is awaiting word from the MSBA about the proposed Project Manager.

12/13/2011 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported the Mountview Building Committee has a meeting scheduled for Tuesday, January 10th. Superintendent Pandiscio reported that the MSBA has approved Gary Kaczmarek as OPM.

1/9/2012 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported the Mountview Building Committee will meet on the January 10, 2012.

1/23/2012 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported on the January 10th meeting of this building committee. She reported progress is being made on the feasibility study agreement. The committee will meet next on January 24th.

2/13/2012 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported on the January 24th meeting of this building committee and announced the next meeting is scheduled for February 28, 2012. Member Watson explained that later in this meeting the School Committee will be asked to vote to authorize the Superintendent to execute and deliver the Feasibility Study Agreement between the Wachusett Regional School District and the Massachusetts School Building Authority. Superintendent Pandiscio reported a walk through for architects is scheduled for 1:00 PM on February 15, 2012.

2/27/2012 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported to date ten designers have submitted proposals for the Mountview project, following the February 15, 2012 walk through at Mountview Middle School. This building committee will meet next on February 28, 2012 at 6:00 PM at the Holden Municipal Light Department.

3/12/2012 WRSDC Minutes

Mountview Building Committee (M. Watson)

The Mountview Building Committee met on February 28th. Member Watson reported ten designers submitted proposals for the Mountview project, following the February 15, 2012 walk through at Mountview Middle School. The Designer Selection Panel will meet, at the MSBA offices in Boston, on March 27th. Nancy Galkowski, Paul Challenger, and Tom Pandiscio will sit on this panel, along with twelve others. The next meeting of this building committee is not expected to be scheduled until April.

3/26/2012 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson reported this building committee has not met since the last School Committee meeting. She reported that the Designer Selection Panel will meet at the MSBA offices in Boston on Tuesday, March 27th.

4/9/2012 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson and Superintendent Pandiscio gave an update on progress being made on this project.

4/30/2012 WRSDC Minutes

Mountview Building Committee (M. Watson)

Member Watson and Superintendent Pandiscio gave an update on progress being made on this project.

5/23/2012 WRSDC Minutes

Public Hearing

Paul Challenger, Mountview Building Committee Chair, addressed the School Committee

Mountview Building Committee (M. Watson)

Member Watson gave her report on the Mountview Building Committee.

OPM Meeting Minutes
May 14, 2012

10AM Mountview School Library

Present: Chairman Paul Challenger, Tom Pandiscio, Nancy Galkowski, Jacquie Kelly, Gary Kaczmarek, Erik Githmark

Absent: Peter Brennan, David White, Margaret Watson, Michael Sherman, Chris Lucchesi

Other Present: Elizabeth Helder, Recording Secretary, Mike Pagano, LPA, Bill Senecal, LPA, Lori Rose, Town of Holden, Peter Caruso, LPA, Mary Bulso, LPA, Carolyn Walsh, MSBA, Michael Lawson, MSBA, Chris Alles, MSBA

REF: **Kick Off Meeting**

1. MSBA

Chris Alles with the Massachusetts School Building Authority addressed the Preferred Design Schematic and Feasibility Schedule with the group. He said the MSBA had full confidence in the abilities of LPA. He said that the first stage of the Schematic Report would be due to the MSBA for their mid-July or August 9th meeting. The entire Design Schematic and Feasibility Study will be due in early February 2013 for review by the MSBA at their March 2013 meeting. Mr. Alles that if changes to the schedule were required that was ok. It is important to get the right project to the street. However, the sooner the project gets to the street, the cheaper it will be to produce. Mr. Pagano said that it seemed like a reasonable schedule to maintain.

Mr. Kaczmarek turned in the Designer Contract and a copy of his April 2012 OPM Report.

Mr. Alles reviewed the steps to the Preferred Schematic Design Vote. First step is to work on preliminary design program. He said having the MSBA in agreement with the budget is important. The Committee should know what is not included in the budget and what the MSBA will not pay for. Incentive Points are assigned for reimbursement when certain provisions/goals are met. The budget is locked in at the conclusion of schematic design review. Both Mr. Kaczmarek and Ms. Rose have been trained on the Pro-Pay System.

MSBA has overhauled its modules concept and it is now based on 8 modules with the first two already complete: money and enrollment. The third and fourth module will detail the preliminary design program with design, scope and substance. Mr. Alles asked that all modules and information used during the project be downloaded from the MSBA website.

Mr. Alles outlined the scope of the Facilities Assessment Subcommittee presentation. He said this was a new process for the MSBA. It is an opportunity for the project team to come to the MSBA and update them on the progress of the project. No votes are taken during the presentation. The presentation will allow the MSBA to head off any issues before taking a final vote. He said sometimes small design changes and sometimes large design changes are required. It is a required process that will occur on July 11, August 29 or Sept 12. The MSBA would like to do

sooner in case issues need to be addressed. The Facilities Assessment Subcommittee will meet May 23 or June 27. Mr. Alles encouraged members of the MSBC to attend to observe the process. Mike Pagano said it was a good process and would like to shoot for the July 11th review.

Mountview School Building Committee **May 14, 2012**
Meeting with MSBA cont.

Mike Pagano asked about the option to replace the school at the current site. He said there are a couple of problems with current site: wetlands and the west side of the property is currently classified as prime agricultural land. It may be difficult to override this classification. Additionally there is quite a bit of fill on site and the quality of fill and suitability to support a structure are an issue. LPA is suggesting that Committee look at alternative site. This search could postpone the schedule. Also, while the current building is 91,137 sq. feet of space the MSBA says that 128,000 sq. is satisfactory space for new building. However, the current building is insufficient size for academic support. Mr. Alles noted that the MSBA looks at academic space first before making a final decision on square footage. He said it was important to document existing conditions and how the school intends to deliver services in the future. The MSBA will work with Committee. Flexibility exists in a renovation situation. There is less flexibility in a new build.

The Commissioning Agent will be assigned after schematic design process is complete and the project is a project. MSBA covers 100% of agent's cost. Mr. Alles said the MSBA encourages communications from OPM with MSBA.

Mr. Pagano spoke about the architect who designed Mountview and about the quality of the building. He said he hoped that the building could be saved and brought into the modern world. However he said he was loosing sleep over trying to save the building and bring it into the 21st century for the next 50 years. While not a historical site it is a well-built building.

Mountview Principal Erik Githmark conducted a tour of the facility with members of LPA, the MSBA, Mr. Challenger and Mr. Kaczmarek.

The meeting ended at 11:30AM.

OPM Meeting Minutes
May 24, 2012

2:30PM Mountview School

Present: Gary Kaczmarek, OPM, Brian McCarthy, Assistant Principal, Dennis Hyson, Head Custodian, Bill Senecal, LPA, Mary Bulso, LPA, Chris Tutlis, Bolton DiMartino, (Structural Engineering), Kevin Seaman, Seaman Engineering, (HVAC), Lilly Barak, Sensible Solutions (Fire Protection), Elizabeth Helder, Recording Secretary

1. Tour of Mountview Middle School

Dennis Hyson, Head Custodian, Mountview Middle School took the group on a tour of the building. The engineers evaluated the existing equipment and observed the existing conditions in the kitchen, boiler room, sprinkler room, roof, third floor “attic crawl space”, storage room, elevator, courtyards, classrooms, and gym.

Mr. Kaczmarek will confirm with Chris Alles if it is necessary for the OPM or LPA to attend the MSBA Facility Assessment Subcommittee meeting on July 11, 2012 if the project has not yet turned in any documentation to the MSBA to assess.

The meeting ended at 5PM.

Mountview School Building Project
OPM Meeting Minutes
June 13, 2012

8:30AM Memorial Hall

Present: Gary Kaczmarek, OPM, Dennis Lipka, Growth Development Director, George Sherrill, Police Chief, Jim Robinson, Light Department Manager, Mark Elbag, Water/Sewer Superintendent, Pam Harding, Town Planner, Jim Zingarelli, DPW Engineer, Bill Senecal, LPA, Matt Brassard, Brassard Design & Engineering, Site Planners, LPA, Elizabeth Helder, Recording Secretary

1. Site Assessment Meeting

Mr. Senecal introduced the two sites being considered as potential middle school building sites: the current site at Mountview Middle School and town-owned land off Bullard/Malden/Chapel Street abutting Mayo School. He said that the meeting was to flush out major obstacles to the two potential building sites.

A Traffic Study has been completed at Mountview. Mr. Lipka said the Town would like to review the results of the traffic study.

The group discussed the two sites being considered.

Chief Sherrill said it will be important to have more emergency vehicle access to the current site. Currently there is no access from Chapel Street, unless the Town takes the land by eminent domain. Mr. Lipka said there is an abandoned house site/foundation on Chapel Lane that could be used for access. However, the land abuts wetlands. Mr. Senecal said he would rather hit anything but wet, adding that "wetlands were like a hole in the center of the earth."

Jim Robinson said an additional temporary feed would be added to Mountview during construction. While there is electric service in the area, there is currently no power to the land being considered.

Mark Elbag said he would need to check on the current water pressure feeding Mountview School. There is plenty of water on Bullard Street, which has a 12-inch main. Mr. Lipka said there was the possibility to put a pump station at the intersection of Malden/Wachusett & Chapel Streets for the Mayo site. There will be a significant amount of site work involved for water/sewer because of the large amounts of open space/wetlands/conservation/topography in Holden. Existing pump stations will also be investigated for sewer flow and capacity as well as the possibility of a gravity feed. LPA will generate flow estimations within the next several weeks. Mr. Lipka suggested studying the flow prior to the 4th of July week when capacity will drop significantly because residents go on vacation. Mayo School sewer is pumped. Mr. Lipka said that there will definitely be costs for the Town above the 8% the MSBA will reimburse for site work. Mr. Senecal said the tradeoff for using the current school site is that will cause disruption for 2-years while school is in progress while the new school is built. Additionally it will cause the loss of the recreation fields for the school and town. Another significant expense in using the Mountview site will be the excavation of construction debris that is 30 feet deep, which makes up most of the fields/usable land space.

Town Department Site Assessment Discussion cont.

Ms. Harding said that the wetlands behind the Mayo site are classified as an endangered species habitat. She did not know what the endangered species was.

Mr. Lipka commented that the District has a bad taste in its mouth from the renovation of the high school. Mr. Senecal said that there is almost zero chance that the Mountview School can be renovated. There is absolutely nothing in the school that meets educational or safety code. Although it is a solidly built building, it is technically and structurally obsolete.

Mr. Kaczmarek said NSTAR has indicated they would be willing to run a gas piping to Mountview at no cost if the Town covers the cost to provide Police detail and final paving.

The meeting ended at 9:28AM.

OWNER/ARCHITECT INTER-DEPARTMENTAL REVIEW

6 June 2012

ATTENDANCE: Jim Robinson, Holden Municipal Lighting Dept
George Sherrill, Chief of Police
Dennis Lipka, Growth Management Officer & Bldg Commissioner
Pam Harding, Town Planning & Conservation Commissioner
Mark Elbag, Dept of Public Works
Jim Zingarelli, Senior Civil Engineer, DPW
William Senecal, Project Architect, LPA
Matt Brassard, Brassard Design & Engineering
Gary Kaczmarek, Owner's Project Mgr
Elizabeth Helder, OPM Recording Secretary

ITEM:	DESCRIPTION:	RESPONSIBILITY:
6.13.12.1	General purpose for meeting: 1. Review existing Mountview School site and available site located off Bullard Street adjacent to the existing Leroy E. Mayo Elementary School. 2. Initial feedback from town department on any specific requirements and observations of existing conditions in particular at current Mountview School Site.	
6.13.12.2	Bill Senecal gave brief outline of tasks and timeline required of LPA for the feasibility study through town appropriations in 2013. 1. LPA major tasks to study several scenarios for the construction of a new middle school including: a. No work to existing building if current building and site meet MSBA guidelines and Wachusett Regional Districts educational goals. b. Renovations to existing to comply with guidelines and goals. c. New school building on existing site. d. Alternate sites for new school including adaption to an existing building within the town as well as a new site on land available in the town. 2. LPA reported that to date the following sites and construction methods have been reviewed and supported by the Mountview School Building Committee. a. Renovation to the existing school. b. Construction of a new school on existing site. c. Study construction of a new school on an alternate site owned by the town adjacent to the Mayo school on Bullard Street.	

	Other sites and buildings were considered throughout the town with only the aforementioned being voted on by the SBC for study.	
6.13.12.3	LPA reported that the following studies are underway or completed on the existing school site and building. 1. Borings and site investigation 2. Traffic study 3. Hazmat investigation (underway)	
6.13.12.4	LPA reported that appropriate studies will be conducted at the Bullard Street site.	LPA
6.13.12.5	LPA explained that the 1st submission phase of the study (PDP) is due by 7/9/12 and the input from the town departments will be to provide information on existing utilities, basic site planning input from Fire, Police and Town planning. The 2nd submission to MSBA will be on 8/9/12 and will provide a preferred site recommendation from the studies outlined in 6.13.12.2.2. above. The departments will assist in the final review of the preferred site in light of their respective discipline.	
6.13.12.6	Each of the town departments gave initial reactions as follows: 1. Existing Mountview School site and building a. Police Chief asked for a 2nd means of accessing the site. Concerned that Shrewsbury Street could become blocked under certain scenarios and the school not be accessible. His preferred solution would be access off of Chapel Street. Chief Sherrill said that this 2nd point would also be important to the Fire Chief. Dennis Lipka said there is a parcel of tax title land on Chapel Street which adjoins the site, however, the area is very wet. Matt Brassard will study the area. b. Light and Power (HMLD) reported ample power available. c. Sewer and water available as reported from DPW. Possibility that new town water tanks may preclude need for fire pump (now located in current school) BDE to follow up. d. Gary reported that he has been in contact with NStar relative to a new gas service and was informed that existing main is approximately ½ mile from site and that NStar would bring new service to school. 2. Malden Street Site a. Police Chief voiced similar request for minimum of 2	LPA/BDE BDE LPA/BDE

	distinct accent points to the site. They would like to have the existing Mayo school's driveways tied into the new schools vehicular system to achieve a 2nd access point for the existing school. He reiterated the desire of Fire Chief for the same design. Several locations for access from Chapel and Malden Streets are available. Matt to study. b. HMLD indicated that a brand new power substation has just been completed within a 1/4 mile of the site and power will be no problem. c. Water available with sufficient pressure. Sewer connections possible by: 1. Forced main up to Bullard Street 2. Gravity line down Malden Street 3. Gravity line to Chapel Street Each option requires study by Matt and LPA. d. Natural gas not available in this area of the town. e. Pam reported that there is a protection zone for endangered species but was unsure as to the exact location on the site. Matt to investigate.	**LPA/BDE**
6.13.12.6	LPA and BDE will need to contact the participants for specific information as the study goes forward. All departments and participants are welcome to contact LPA and BDE.	**ALL**
Memo by:	Bill Senecal/dgm	
cc:	Mike Pagano	

1209/Minutes/Owner/1209MO-Mtg 6-6-12

Mountview Middle School

Holden, MA

PROGRAM MEETING MINUTE #1 21 June 2012

ATTENDANCE: Tom Pandiscio, Wachusett Regional Superintendent
Erik Githmark, Mountview Middle Principal
Bill Senecal, LPA
Katie Crockett, LPA

OBJECTIVE: Establish preliminary program requirements sufficient for Feasibility Study Space Summary Template.

DISCUSSION:	REMARKS
GENERAL ISSUES ▪ 800 students ▪ Middle School grades 6,7,8 ▪ District guidelines: 23 students per classroom ▪ Generally organized into 2 teams per grade ▪ Other curriculum components: Art, Technology, Music, Physical Education ▪ The School will not be used as an emergency center ▪ Double height, 15" wide lockers	
TEAM COMPOSITION (2 per grade level) ▪ Generally distinct groups of instructional spaces to reinforce a "school within a school" structure ▪ 5 classrooms; one each for: ELA, Math, Foreign Language, History/Geography ▪ 1 Science Lab ▪ 1 Science Prep Room ▪ 1 Inclusion Special Ed. Classroom (1/2 size) ▪ General Storage ▪ Common Room (for tutorials, team projects, group presentations, etc.) ▪ Toilet Rooms positioned for easy access	
SPECIAL EDUCATION PROGRAM ▪ Inclusion SPED (see Team Composition above) ▪ (4) ½ size classrooms dispersed throughout the school easily accessed by all students to support: Speech, Reading, Language, and Occupational Therapy/ Physical Therapy (OT/PT) ▪ (2) Full size classrooms with adjacent toilet to service self-contained SPED (autism spectrum, etc.) to be located near Nurse, and Main Administration	

▪ Common Rooms (for tutorials – see Team Composition above)	
ART/MUSIC/TECHNOLOGY/DRAMA ▪ (3) Art Rooms organized as 1 per grade ▪ (1) Tech Ed Graphic Arts classroom (1500sf) adjacent to Art classrooms ▪ (2) Tech Ed STEM classrooms (1500sf ea) ▪ (1) Band Room for 40 students ▪ (1) Orchestra Room 12-15 students ▪ (1) Chorus for 40 – 50 students ▪ (1) Stage area for Drama for 80 students ▪ Musical instrument storage near main entrance so that students can drop off upon entering the school ▪ Music suite to be acoustically separated from balance of the school	
MEDIA CENTER ▪ Include one classroom sized space for book storage and distribution. Fit up as a typical classroom for future use flexibility. ▪ Decentralized media instruction is planned through the use of interactive white boards, individual technology devices, etc. including at Team Common Rooms ▪ Meetings to be held in the cafeteria, conference room, and/or common rooms	LPA to discuss with MSBA
PHYSICAL EDUCATION ▪ (3) teaching stations required (7500-8000sf) ▪ Health instruction to take place in the gym (no need for separate classrooms) ▪ Assembly for full school (900) with bleachers and stackable chairs ▪ Projection Screen, audio visual ▪ Drama stage adjacent ▪ Locker Rooms for changing (showers not required) ▪ (2) PE Offices ▪ Equipment Storage ▪ Significant community use for voting, athletics, etc.	District to develop supporting narrative
CAFETERIA ▪ (3) seatings required to keep grades separated ▪ Dishwash facility required ▪ Kitchen ▪ Primarily lunch program (no breakfast or extended day)	Colburn Guyette recommendation

▪ Design to accommodate community meetings (sight lines, audio/visual, etc.) for 20 – 50 people	
ADMINISTRATION ▪ Primarily centralized administration near main entry, ▪ Include (2) guidance offices near conference room ▪ Visibility to entry and lobby important ▪ Vestibule configured to force visitors through the administration waiting area before entering the school (between school start and close hours) ▪ Nurse suite: (4) beds, space for daily medication/test requirements, exam room, toilet room ▪ Possibly satellite administration offices depending on final design considerations (near secondary entrance, to support each grade, etc.) ▪ (3) Teacher Planning Rooms (one per grade) with table and chairs for 8, near classrooms	
MECHANICAL/ELECTRICAL/PLUMBING REQUIREMENTS ▪ Each instructional space (including common rooms) to have interactive white board ▪ All science rooms to have sinks, 8th grade science rooms to all have gas connections and fume hoods ▪ Sinks not required at general classrooms ▪ Sinks at Self-contained SPED classrooms ▪ Air conditioning required at: - Administration - Self-contained SPED (year round classrooms) - (2) additional classrooms (summer program) - Technology Education classrooms - IT/server rooms ▪ Security system ▪ Wireless throughout; hardwiring for printers, copiers, etc. ▪ Emergency power for water pumps, cafeteria heat and lighting, life safety, selective kitchen equipment including coolers/freezers ▪ Lightning protection	LPA to confirm
SITE FEATURES ▪ Separate parent pick up/drop off and bus vehicular circulation ▪ 14 busses ▪ # Parent pick up cars	

▪ Currently 30-40 student walkers ▪ Faculty/staff parking: 80 ▪ Visitor parking: 15 ▪ Athletic fields - Baseball - Softball/field hockey - Soccer - Basketball court - (2) tennis courts (optional for school use) - currently heavy community use ▪ No school recess	District to confirm

1209/Worksheet/Program/#1

IDENTIFICATION

General Classroom

GENERAL

- Number of Students in Classes

  - 21-26, 23, 24-26,

- Are there special requirements (i.e. limited access, off hours, etc.) for accessing this space?

STORAGE

- Describe any special storage needs or desires.

  - Book shelves (3)
  - Material storage (2)
  - Teacher's storage with locks (2)

FINISHES

- Describe any particular floor, wall, and ceiling finish material requirements.

  - Easy clean, sturdy floors
  - Tackable wall.

SPECIALTIES

- Describe any marker board, tack board or display requirements or suggestions.

  - Smart Board (2)
  - VCR/DVD Player
  - White boards (2)
  - Tack boards (2)

EQUIPMENT

- Describe any special requirements

FURNISHINGS

- **Workstations** – Check all applicable and indicate desired type and quantity.
  - Desks: 28,1 teacher desk(3)
  - Tables: 1 work table, group tables
  - Computers: 5(2), 1 laptop
  - Tablet Chairs:
  - Stools: 2
  - Other (Describe special requirements)

MECHANICAL

- **PLUMBING –** Describe any special requirements for plumbing fixtures or systems
  - sink
- **HVAC** – Describe any special requirements for heating, ventilation and air conditioning.
  - Natural ventilation (2)
  - Heating

ELECTRICAL

- **Power** – Describe any special power requirements
- **Kiln and necessary ventilation**
- **Data Communications** – Describe the use of computers and television in your space including ideal locations and quantities.
  - Smart board needs to be located where most students can see it easily(3)

- Work computer to the side
- Bigger space for computers
- Access to internet

EXISTING CONDITIONS

- What teaching/learning strategies do you use, or would like to use, that are not supported by your existing conditions?
  - Circles, small groups(2), you need space where students can read and discuss without noise interference

FUTURE CONSIDERATIONS

- Describe any future trends you anticipate that might affect the design of your space.
  - Team teaching space (2)
  - Bigger hallway
  - Library with books and resources
  - Teacher's bathroom on every floor
  - Bigger stage with seating

IDENTIFICATION

Arts and Music

GENERAL

- Number of Students in Classes

  - 18-24, 24, 20-25, 25-7

- Are there special requirements (i.e. limited access, off hours, etc.) for accessing this space?

STORAGE

- Describe any special storage needs or desires.

  - Shelving for art equipment & supplies
  - Display board storage for free standing display's for art shows
  - Clay storage space
  - Closet for supplies/teachers personal items/materials
  - Student work storage
  - Drawers
  - Cabinets
  - Cabinets that would be able to fit the folder/music of approximately students.

FINISHES

- Describe any particular floor, wall, and ceiling finish material requirements.

  - Easy clean surfaces
  - Tackable wall (2)
  - 3-level step risers built into floor (chorus)

SPECIALTIES

- Describe any marker board, tack board or display requirements or suggestions.

  - 4 Display board
  - Smart board and projector (4)
  - White Boards (3)
  - Tack Boards
  - Black chalk board
  - Locking display cases
  - Movable free standing art display boards for art shows

EQUIPMENT

- Describe any special requirements
  - Adobe illustrator & Photoshop
  - Digital camera (2)
  - Color printer and scanner (2)
  - Copier for student use

FURNISHINGS

- Workstations
  - Desks: 1 student desk, 1 teacher desk (4), 1 computer desk
  - Tables: enough for 25, tables for student computers
  - Computers: 1 teacher computer (2), 1 student computer (2), 25-28 Macs newer than current PCS
  - Tablet Chairs: 25-28 chairs
  - Stools: least 25, 5, 1
  - Other (Descrie special requirements):
    - 2 pottery wheels

- Printing press station
- Paper cutter station
- Counter space for supplies and drying racks
- Kiln in closet/workstation with equipment
- Counter
- Piano (chorus)
- 80 normal chairs (chorus)

MECHANICAL

- PLUMBING – Describe any special requirements for plumbing fixtures or systems
  - 2 deep art sinks (2)
- HVAC – Describe any special requirements for heating, ventilation and air conditioning.
  - Venting for Kiln
  - Ventilation for computer overheat (2)
  - Heat
  - AC

ELECTRICAL

- **Power**
  - Power for Kiln (2)
  - More outlets
  - Floor outlets
- Data Communications – Describe the use of computers and television in your space including ideal locations and quantities.
  - Enough for 2 computers and plugs on all walls
  - Wireless Internet
  - Computer maintenance for multiple users

EXISTING CONDITIONS

- What teaching/learning strategies do you use, or would like to use, that are not supported by your existing conditions?
  - Need kiln, pottery wheels, small printmaking press
  - Need studio space for hand-drawing/cutting/measuring, and silk screening

FUTURE CONSIDERATIONS

- Describe any future trends you anticipate that might affect the design of your space.
  - Natural light
  - Flexible design for possible expansion (chorus)

IDENTIFICATION

Science

GENERAL

- Number of Students in Classes
  - 17-22, 21, 24
- Are there special requirements (i.e. limited access, off hours, etc.) for accessing this space?
  - Weekend access to set up models

STORAGE

- Describe any special storage needs or desires.
  - Material storage (1)
  - Teacher's storage with locks (1)
  - Open Shelving
  - Drawers big (deep) enough for maps and posters, rock samples and other materials.
  - Equipment storage

FINISHES

- Describe any particular floor, wall, and ceiling finish material requirements.
  - Easy clean, durable surfaces
  - Rounded edges
  - Green color finishes

SPECIALTIES

- Describe any marker board, tack board or display requirements or suggestions.
  - Smart Board (2)
  - VCR/DVD Player
  - White Board (2) Sliding (1) with magnetic (1)
  - Tack boards (2) Sliding (1)

EQUIPMENT

- Describe any special requirements

FURNISHINGS

- Workstations
  - Desks: 1 teacher desk(2)
  - Tables: Rounded lab tables, Demo table
  - Computers:
  - Tablet Chairs:
  - Stools:
  - Other (Describe special requirements): Step ladder to reach items on top of cabinets.

MECHANICAL

- PLUMBING – Describe any special requirements for plumbing fixtures or systems
  - Sinks(3)
  - Hot and cold water
  - Larger washing station
- HVAC – Describe any special requirements for heating, ventilation and air conditioning.
  - Ventilation

ELECTRICAL

- **Power**
  - Floor outlets enough for power to reach every table (2)

- Kiln and necessary ventilation

- Data Communications – Describe the use of computers and television in your space including ideal locations and quantities.
  - ❖ Preparing for possible tablet integration to teaching method
  - ❖ Wireless internet access
  - ❖ Printers compatible with all devices including computers, tablets, and smart phones.
  - ❖ More computers
  - ❖ Web access

EXISTING CONDITIONS

- What teaching/learning strategies do you use, or would like to use, that are not supported by your existing conditions?
  - ❖ Larger classroom
  - ❖ Safe nature trail
  - ❖ Black out curtains to demonstrate Earth Sun Moon concepts
  - ❖ Web-seminars-video interactive seminars online
  - ❖ U shaped tables for mini group discussions

FUTURE CONSIDERATIONS

- Describe any future trends you anticipate that might affect the design of your space.
  - ❖ New technology – Ipads, personal headset access, video displays at each desk, e books(2)
  - ❖ Green house

MOUNTVIEW TIME SCHEDULE
2011/2012

Monday, Wednesday, Friday

8:10 – 8:20	Homeroom
8:20 – 9:10	Period 1
9:10 – 10:00	Period 2
10:00 – 10:50	Period 3
10:50 – 11:38	Period 4

First Lunch	Second Lunch	Third Lunch
11:38 – 12:08 Lunch	11:38 – 12:10 Period 5	11:38 – 12:42 Period 5
12:08 – 1:12 Period 5	12:10 – 12:40 Lunch	12:42 – 1:12 Lunch
	12:40 – 1:12 Period 5	

1:12 – 2:00	Period 6
2:00 – 2:45	Period 7
2:45 – 2:50	Homeroom
2:50	Dismissal

Lunch –
terms 1 & 4 - grade 6, 7, 8
term2 – grade 8, 6, 7
term 3 – grade 7, 8, 6

Tuesday, Thursday

8:10 – 8:20	Homeroom
8:20 – 9:00	Period 1
9:00 – 9:40	Period 2
9:40 – 10:20	Period 3
10:20 – 11:00	Period 4
11:00 – 11:38	Activity Period (Extra-Curricular Activities)

First Lunch	Second Lunch	Third Lunch
11:38 – 12:08 Lunch	11:38 – 12:10 Period 5	11:38 – 12:42 Period 5
12:08 – 1:12 Period 5	12:10 – 12:40 Lunch	12:42 – 1:12 Lunch
	12:40 – 1:12 Period 5	

1:12 – 2:00	Period 6
2:00 – 2:45	Period 7
2:45 – 2:50	Homeroom
2:50	Begin Dismissal Process

Two-Hour Delay Schedule

10:20-10:45	Block 1
10:45-11:10	Block 2
11:10-11:35	Block 3
11:35-1:12	Block 4 w/ regular lunch schedule
1:12-1:45	Block 5
1:45-2:15	Block 6
2:15-2:45	Block 7

Early Release Schedule

8:20-9:00	Block 1
9:00-9:40	Block 2
9:40-10:20	Block 3
10:20-11:00	Block 4
11:00-11:35	Block 5

Class periods are listed on Building Use Calendar.

POLICY RELATING TO EDUCATION

CLASS SIZE

The Wachusett Regional District School Committee, having high expectations for both students and teachers, recognizes the correlation between class size and achievement.

Class size shall promote maximum student achievement. In all cases safety concerns shall be paramount in determining class size. The Wachusett Regional School Committee recognizes the importance of the availability of room space, the grade level of the students and financial resources in a given fiscal year in determining suitable class size.

The following are Class Size Guidelines:

K-2
The recommended maximum class size for Kindergarten through grade 2 is 19 students.

Grades 3 – 5
The recommended maximum class size for grades three through five is 22 students.

Middle School
The recommended maximum class size for academic classes is 23 students.

High School
The recommended maximum class size for academic classes is 23 students.

Courses in music, drama, physical education, and non-academic subjects are excluded from the provisions of this policy.

The number of students assigned to any class shall not exceed the number of seats in the classroom, the number of stations in a laboratory or art room, or the number of computer stations in a computer or learning laboratory.

In special circumstances including, but not limited to, advanced placement courses, fieldwork, clinical experience, cooperative education, special needs or developmental education, or in the implementation of programs under federal or state regulations, the provisions of this policy shall not apply.

First Reading: 02/23/04
Second Reading: 03/08/04

WRSDC Policy 3510

FIRE DRILL PLAN-MOUNTVIEW MIDDLE SCHOOL

FIRE DRILL PLAN--MOUNTVIEW MIDDLE SCHOOL

Designated areas - Athletic Fields at sides and rear of the building,
All Homeroom Teachers should establish a designated "Homeroom Meeting Point" outside of the building in roughly the area of their primary exit for the classroom. In the event that an evacuation occurs during a change of classes, all students will report to their designated "Homeroom Meeting Point."

Attendance Taking: Faculty members should bring a class list when evacuating the building. Take attendance immediately recording either "All Present" or record the names of missing students. Send all attendance slips to front of building for either Erin Litchfield (East Side) or Carleen Smith (West Side)

FIRST/LOWER LEVEL:

Room 100 - Through west corridor--out west exit (old building,)
Alternate -Through Rooms 101 and 102--through west corridor--out first west exit (new building,)

Room 101 - Through west corridor--out west exit (old building,)
Alternate - Through room 102--through west corridor--out first west exit (new building,)

Room 102 - Through west corridor--out first west exit (new building,)
Alternate - Through room 101--through west corridor--out west exit (old building,)

Room 103 - Through west corridor--out first west exit (new building,)
Alternate-- Through south corridor--through west corridor--out west exit (old building,)

Room 104 - Through room 106 to 107 to the outside

Alternate— Through west corridor out second west exit.

Room 105 - Through 106 to 107 to the outside.

Alternate-- Through west corridor--out second west exit (new building,)

Room 106 – To 107 to outside

Alternate-- Through west corridor--out second west exit (new building.)

Room 107 – Directly outside.

Alternate-- Through north corridor--through east corridor-- out second east exit (new building.)

Room 108 – Into room 107 and directly outside.

Alternate – Through east corridor--out second east exit (new building.)

PE ACTIVITY--Through east corridor--out second east exit (new building.) - Room

Alternate - Through west corridor--out second west exit (new building.)

Room 109 - Through east corridor--out first east exit (new building.)
Alternate - Through room 103--through west corridor-- out first west exit (new building.)

Room 110 - Through east corridor--out first east exit (new building.)
Alternate - Through rooms III & l12--through east corridor-- out east exit (old building.)

Room 111 - Through east corridor--out east exit (old building.)
Alternate - Through room 110--through east corridor-- out first east exit (new building.)

Room 112 - Through east corridor--out east exit.
Alternate - Through rooms 111 & 110--through east corridor-- out east exit (new building.)

Offices A, B- Through west corridor--out west exit.

C, & D.
Alternate - Through west corridor--out first west exit (new building.)

MAIN/SECOND LEVEL

Room 200 - Through west corridor--down west stairwell--out west exit (old building.)
Alternate - Through room 201--through west corridor--down west stairwell--out west exit (new building.)

Room 201 - Through west corridor--down west stairwell--out west exit (old building.)
Alternate - Through west corridor--down west stairwell--out west exit (new building.)

Room 202 - Through west corridor--down west stairwell--out west exit (new building.)
Alternate - Through rooms 201 & 200--through west corridor--down west stairwell--out west exit (old building.)

Room 203- Through west corridor--down west stairwell--out west exit (new building,)
Alternate - Through south corridor--through west corridor--down west stairwell--out west exit (old building.)

Room 204 - Through west corridor--down west stairwell--out west exit (new building,)
Alternate - Through rooms 205, 206 & 207--through north corridor--through east corridor--down the east stairwell--out east exit (new building,)

Room 205 - Through west corridor--down west stairwell--out west exit-(new building,)

Alternate - Through rooms 206 & 207--through north" corridor--through east corridor--down east stairwell--out east exit (new building,)

Room 206 - Through west corridor--down west stairwell--

out west exit (new building,)

Alternate - Through room 207--through north corridor--
through east corridor--down east stairwell--
out east exit (new building,)

Room 207 - Through north corridor--through east corridor down east stairwell-
-out east exit (new building,)

Alternate - Through room 206--through west corridor--down
west stairwell--out west exit (new building,)

Room 208 - Through north corridor--through east corridor--
down east stairwell--out east exit (new building,)

Alternate - Through rooms 207 & 206--through west corridor--
down west stairwell--out west exit,

Room 209 - Through east corridor--down east stairwell--
out east exit (new building,)

Alternate - Through rooms 208~ 207 & 206--through west
corridor--down west stairwell--out west exit
(new building,)

Room 210 - Through east corridor--down east stairwell--
out east exit (new building,)

Alternate - Through rooms 209,208,207 & 206--through
west corridor--down west stairwell--out west
exit (new building,)

Faculty - Through east corridor--down east stairwell--
Workroom out east exit (new building,)

Alternate - Through east corridor--down east stairwell--
out east exit (old building,) -

Room 211 - Through south corridor--through east corridor--
down the east stairwell--out east exit (old building

Alternate - Through room203--through west corridor--down
west stairwell--out west exit (new building,)

Room 212 - Through east corridor--down east stairwell--
out east exit (old building,)

Alternate - Through east corridor--down east stairwell--
out east exit (new building,)

Room 213 - Through east corridor--down east stairwell--
out east exit (old building,)

Alternate - Through room 212--through east corridor--down

east stairwell--out east exit (new building,)

Guidance - Through east corridor--down east stairwell--
out east exit (old building,)
Alternate - Through east corridor--down east stairwell--
out east exit (new building,)

<u>UPPER/THIRD LEVEL:</u>

Room 300 - Through west corridor--down west stairwell--
out west exit (old building,)
Alternate - Through rooms 301 & 302--through west corridor--
down west stairwell--out west exit (new building,)

Room 301 - Through west corridor--down west stairwell--
out west exit (old building,)
Alternate - Through room 302--through west corridor--
down west stairwell--out west exit (new building,)

Room 302 - Through west corridor--down west stairwell--out
west exit (new building,)
Alternate - Through rooms 301 & 300--down west stairwell--
out west exit (old building,)

Room 303 down west stairwell--out west exit (old building,)
Alternate - down corridor past room 300 exit outside of room 100

Room 304 - Through west corridor--down west stairwell--
out west exit (new building,)
Alternate - Through rooms 306 & 3Q7--through north corridor--
through east corridor--down east stairwell--out
east exit (new building,)

Room 305 - Through west corridor--down west stairwell--
out west exit (new building,)
Alternate Through room 311--through east corridor--down
east stairwell~-out east exit (new building,)

Room 306 - Through west corridor--down west stairwell--
out west exit (new building,)
Alternate - Through room 307--through north corridor--
through east corridor--down east stairwell--
out east exit (new building,)

Room 307 - Through west corridor--down west stairwell--

out west exit (new building,)

Alternate - Through north corridor--through east corridor--
down east stairwell--out east exit (new building,)

Room 308 - Through north corridor--through east corridor--
down east stairwell--out east exit (new building,)

Alternate - Through rooms 309 & 310--through east corridor--
down east stairwell~-out east exit (new building,)

Room 309 - Through east corridor--down east stairwell--out
east exit (new building,)

Alternate - Through rooms 308, 307 & 306--through west
corridor--down west stairwell--out west exit
(new building,)

Room 310 - Through east corridor--down east stairwell--
out east exit (new building,)

Alternate - Through rooms 309, 308, 307 & 306--through
west corridor--down west stairwell--out west
exit (new building,)

Room 311 - Through east corridor--down east stairwell--
out east exit (new building,)

Alternate - Through room 305--through west corridor--down
west stairwell--out west exit (new building,)

Room 312 - Through east corridor--down east stairwell--
out east exit (new building,)

Alternate - Through rooms 314 & 315--through east corridor--
down east stairwell--out east exit (old building,)

Room 313 - Through east corridor--down east stairwell--
out east exit (new building,)

Alternate - Through south corridor--through east corridor--
down east stairwell--out east exit (old building.)

Room 314 - Through east corridor--down east stairwell--
out east exit (old building,)

Alternate - Through room 312--through-east corridor--down
east stairwell--out east exit (new building,)

FIRE DRILL PLAN MOUNTVIEW MIDDLE SCHOOL (continued)

Room 315 - Through east corridor--down east stairwell--
out east exit (old building.)

Alternate - Through rooms 314 & 312--through east corridor--

down east stairwell--out east exit (new building.)

LIBRARY - Down west stairwell--out west exit (old building,)
Alternate - Down east stairwell--out east exit (old building.)

CAFETERIA - Out east exit.
Alternate - Out exit to courtyard.

GYMNASIUM - Out west exit.
Alternate - Out exit to courtyard.

LOCKER ROOMS - Through gym--out west exits.
Alternate - Out exits to courtyard.

CHANGE OF CLASS - In the event of a fire while a change of class is in progress} students should proceed in an orderly manner to the nearest available exit~ and then immediately to their homeroom station. Homeroom teachers will take a count and report the attendance to the front of the building. Homeroom teachers should establish a pre-determined “Homeroom Meeting Point”.

2011-2012 FACULTY & STAFF

C. Erik Githmark, Principal
Karen Hughes, Assistant Principal Brian McCarthy, Assistant Principal
Margaret Carlson, School Psychologist
Melissa Kroscozka, School Nurse
Beth Rinaldo, Front Desk Secretary Carleen Smith, Office Secretary

Grade 6 Gold

Language Arts	Melissa Johnson	103
Language Arts	David Fredette	102
Geography	Robert Champlin	100
Mathematics	Lisa O'Connor	101
Science	Lorraine Neilan	105

Grade 6 Blue

Language Arts	Patricia Munzner	109
Language Arts	Lisa Swalec	110
Geography	Tracy Field	111
Mathematics	Tracy Lawrence	112
Science	Kenneth Ambach	108

Grade 6 Gold & Blue

Grade 6 Seminar	Elisabeth Hughes	106
Art	Alexis McConnell	305

Grade 7 Gold

Language Arts	Jill Poulin	208
Ancient History	Diana Pahl	202
Mathematics	Scott Hill	200
Science	Jason Tyler	209

Grade 7 Blue

Language Arts	Kelley Nosel	207
Ancient History	William Turgeon	205
Mathematics	Matt James	201
Science	Wayne Boisselle	206

Grade 7 World Languages

French	Kathleen Ambach	210
Spanish	Corrine Emge	203

Grade 8 Gold

Language Arts	Caroline Hagenbuch	312
World History	Debra Mudge	300
Mathematics	Herb Ridley	302
Science	Dawn Smith	308

Grade 8 Blue

Language Arts	Jennifer Tellier	314
World History	Michael Smith	301
Mathematics	Melissa Tooley	310
Science	Megan Hughes	309

Grade 8 World Languages

French	Janet Foley	303
Spanish	Lynn Hanley	313

Related Arts

Art	Alison Aliskevicz	307
Graphic Arts	Carolyn McGrath	106
Technology Ed.	Douglas George	107
Physical Ed.	Krissy Teevens	Gym
Physical Ed.	Ashley Eydenberg	Gym
Health	Asia Snyder	211
Chorus	Brendan Ferrari	213
Band	George Paradis	212
String Orch.	Susan Torode	304

Special Education

Grade 6	Karen Therrien	104
Instruct. Aide	Claudia Eddy	
Instruct. Aide	Paula Plumley	
Instruct. Aide 6/7	Sarah Hughes	
Grade 7	Charlotte Cote	204
Instruct. Aide	JoAnn Conor	
Instruct. Aide	Lynn Brothers	
Grade 8	Kimberly Nash	310
Instruct. Aide	Jane Todd	
Instruct. Aide	Rachael Phaneuf	

Library Aide	Dawn Rooke
Tech. Assist.	David McKenney

Speech Pathologist Jeri Taronis
Reading Specialist Carla Brooks
ELL Tutor Andrea Caspari

Custodial Staff

Dennis Hyson, Head Custodian
Alexander Connolly
Don Peterson
Joseph Jakubiak
Matthew Sullivan

Food Services/Cafeteria Staff

Sandra DeMaio, Manager
Hazel Hooper
Tomoko Meyer
Margaret Barton
Linda Shamlian

POLICY RELATING TO SUPPORT OPERATIONS

TRANSPORTATION ROUTES AND SERVICES

Students will be entitled to transportation to and from school at the expense of the District when such transportation conforms with applicable provisions of the Massachusetts General Laws.

The District will transport students living at least one and one-half miles from school and students with special needs for whom transportation must be provided.

No student will be required to walk more than one mile to a bus stop.

Exceptions to these guidelines may be made at the discretion of the Superintendent.

First Reading:	09/16/96
Second Reading:	10/15/96
Amendment First Reading:	11/10/09
Amendment Second Reading:	11/23/09

WRDSC Policy 7210

POLICY RELATING TO SUPPORT OPERATIONS

RIDERSHIP

Students will be entitled to transportation to and from school at the expense of the public schools when such transportation conforms with applicable provisions of the Massachusetts General Laws.

With written approval of principal, parent volunteers may ride if space is available.

Exceptions to these guidelines may be made at the discretion of the Superintendent.

First Reading:	03/27/95
Second Reading:	04/10/95
Amendment First Reading:	11/13/95
Amendment Second Reading	11/27/95
Re-amendment First Reading:	09/10/07
Re-amendment Second Reading:	10/09/07

WRSDC Policy 7211

POLICY RELATING TO SUPPORT OPERATIONS

CONTRACT TRANSPORTATION SERVICES

The major purpose of the Wachusett Regional School District transportation services is to transport eligible students to and from school in an efficient, safe, and economical manner.

BID SPECIFICATIONS

The Wachusett Regional School District shall contract for transportation services. Contracts will be awarded on a competitive bid basis. The District shall make every effort to encourage the participation of Wachusett Regional School District vendors with successful transportation experience. Contractors will be held responsible for the safe operation of school buses and will comply with all applicable state laws and regulations, including but not limited to:

1. Specifications for school bus design and equipment
2. Inspection of buses
3. Qualifications and examinations of bus drivers
4. Driving regulations
5. Small vehicle requirements, if applicable
6. Insurance coverage
7. Adherence to local regulations and directives as specified in bid contracts
8. A driver training program in coordination and cooperation with District staff
9. Bus storage and primary vehicular maintenance within the Wachusett Regional School District with verification process of payment for all property and excise taxes
10. Any bus 7 or more years old shall be inspected and signed off by the District annually

BUS SCHEDULE

The District, working with the bus contractor and other appropriate administrators, will be responsible for determining bus schedules, routes, stops, and all other matters relative to the transportation program.

BUS DRIVER EXAMINATION AND TRAINING

The District will reserve the right to approve or disapprove persons employed by the bus contractor to drive school transportation vehicles.

1. Courtesy and care will be required of all drivers.

2. Each driver will file with school officials a medical certificate and proof of freedom from tuberculosis.

3. No person under 21 years nor over 70 years of age and only persons of high character will be allowed to operate school buses.

4. Only persons who are properly licensed by the state and have completed the annual driver training program will be permitted to drive school buses.

5. The contractor will furnish the District with a list of names of drivers and their safety records for the last three years.

6. In case of any change of bus drivers, the contractor will notify school officials as soon as possible.

7. The contractor, prior to employment of new drivers, will provide the District with a written CORI check for each driver recommended.

8. The District will approve, in writing, all candidates for driver positions, prior to hiring.

9. The driver training program shall address new, experienced and substitute drivers. The trainers of the program shall be approved by the District. School-based educational personnel shall be used wherever possible.

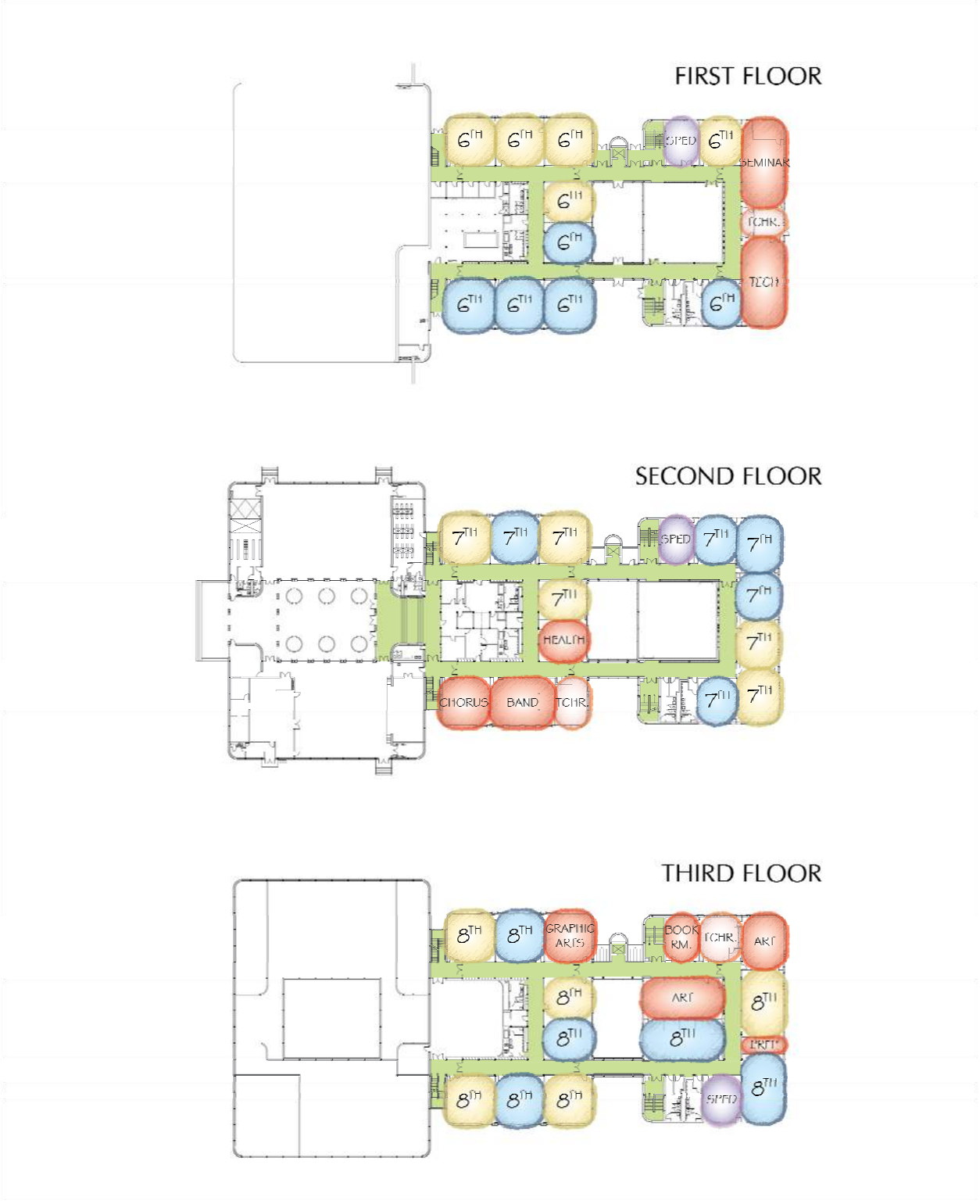
10. The District may require drug testing of bus drivers and/or other personnel under employ of the contractor, at the District's discretion, within the laws of the Commonwealth.

LEGAL REFS.: Highway Safety Program Standard No. 17
M.G.L. 90:7B; 90:8A 1/2

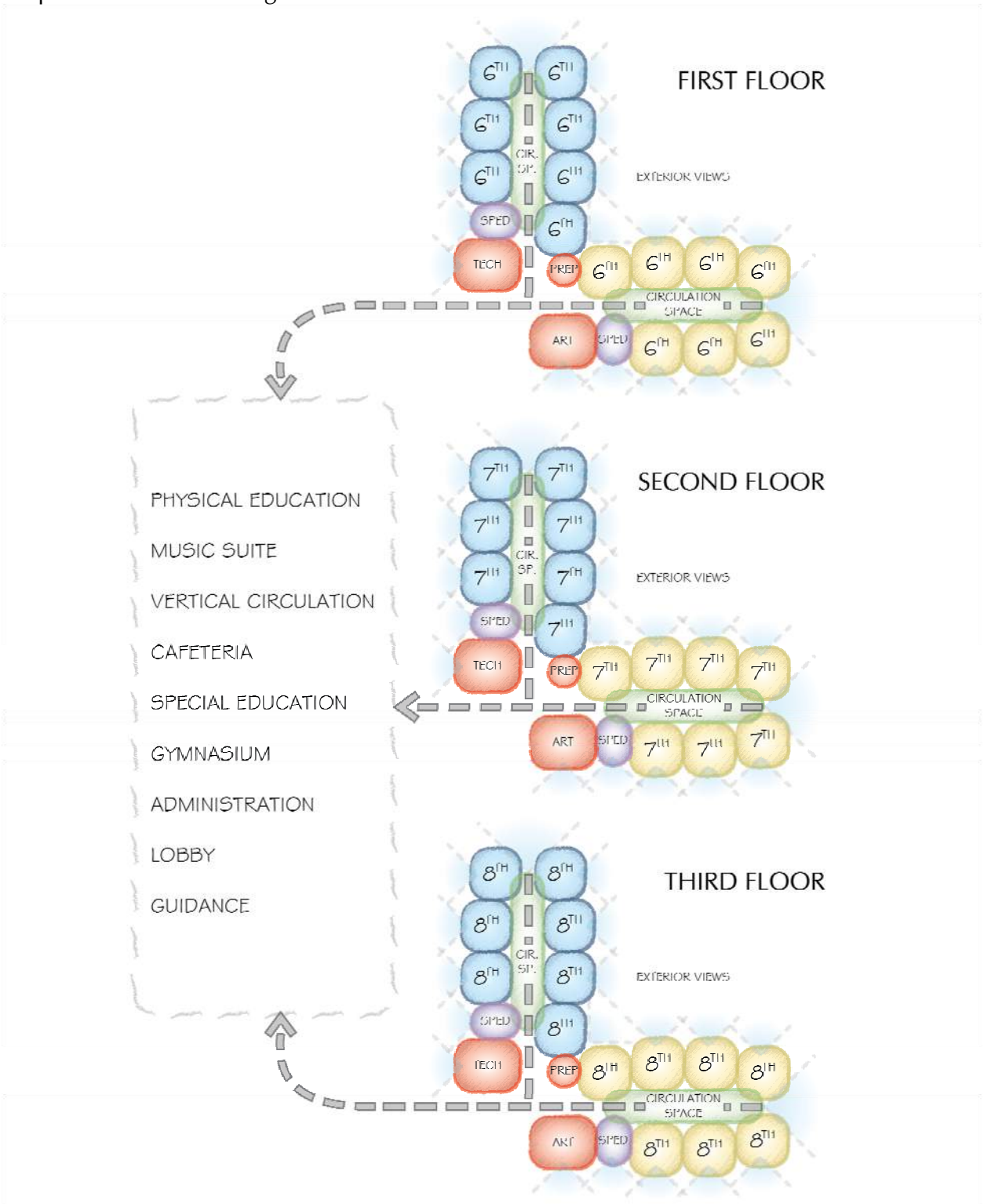
First Reading:	01/23/95
Second Reading:	02/13/95
Amendment First Reading:	06/10/02
Amendment Second Reading:	07/08/02
Re-Amendment First Reading:	03/14/05
Re-Amendment Second Reading:	04/11/05
Re-Amendment First Reading:	09/10/07
Re-Amendment Second Reading:	10/09/07

WRSDC Policy 7222

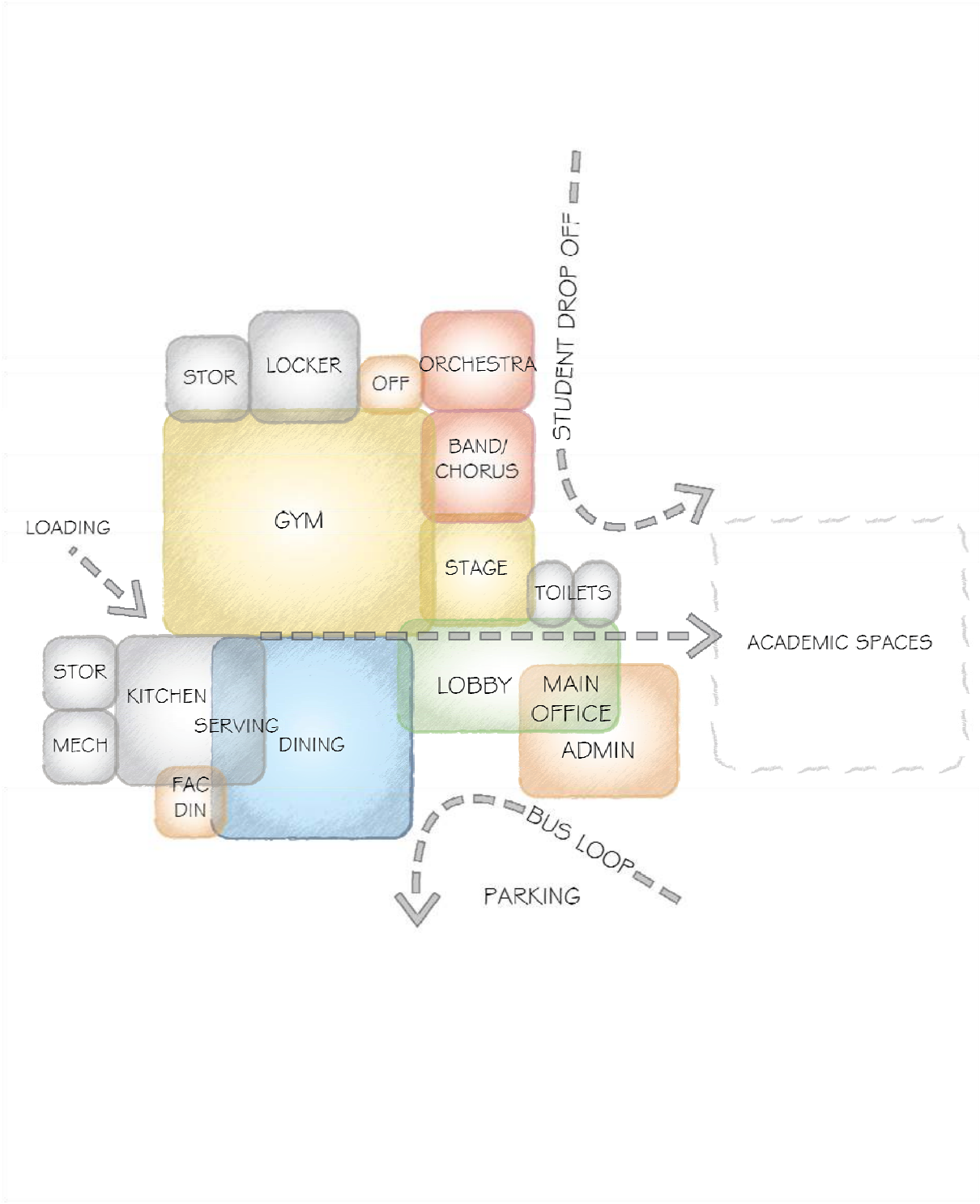
Existing Conditions Academic Wing Diagram



Proposed Academic Wing



Proposed Assembly/Public Wing Diagram

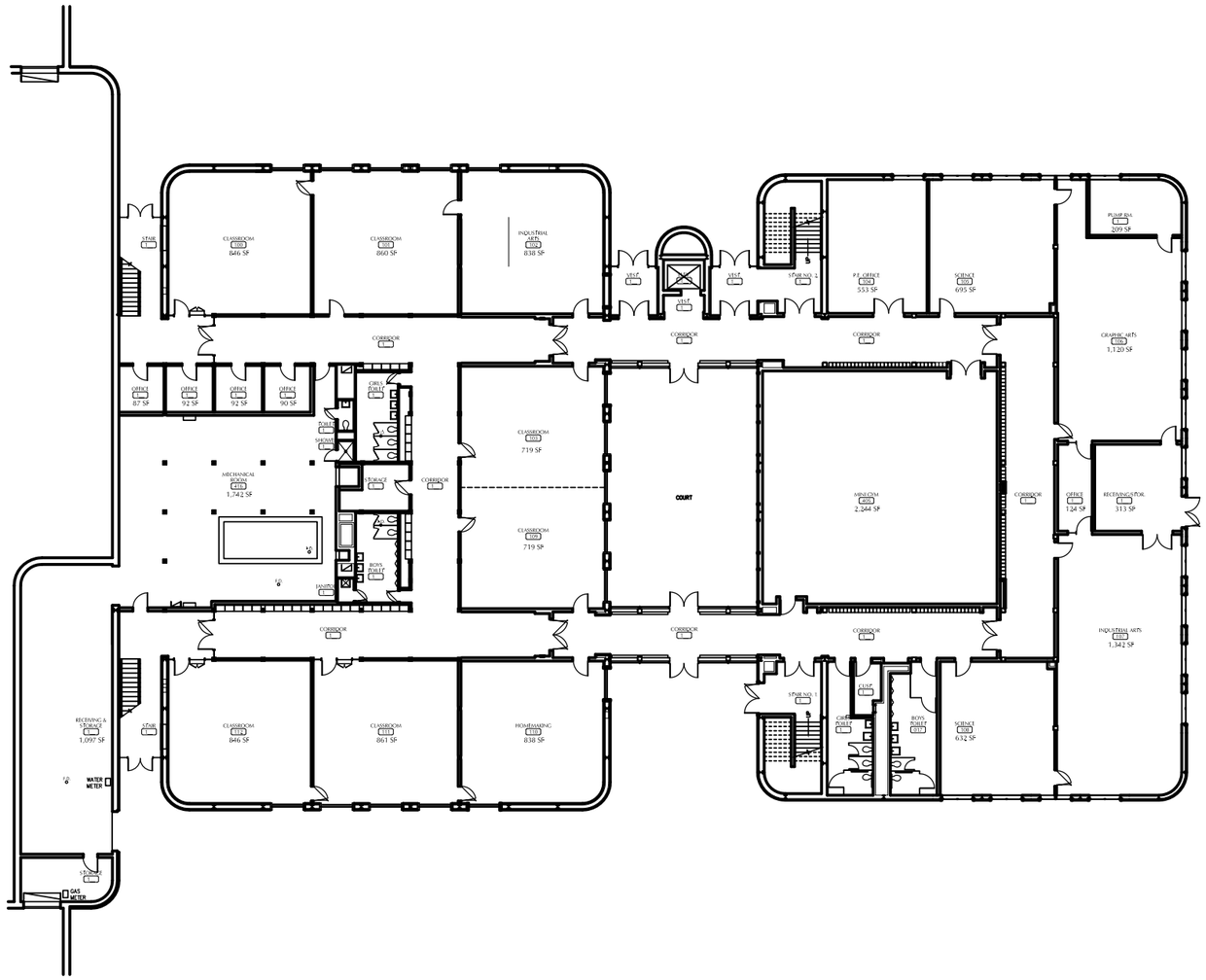


3.1.3 INITIAL SPACE SUMMARY

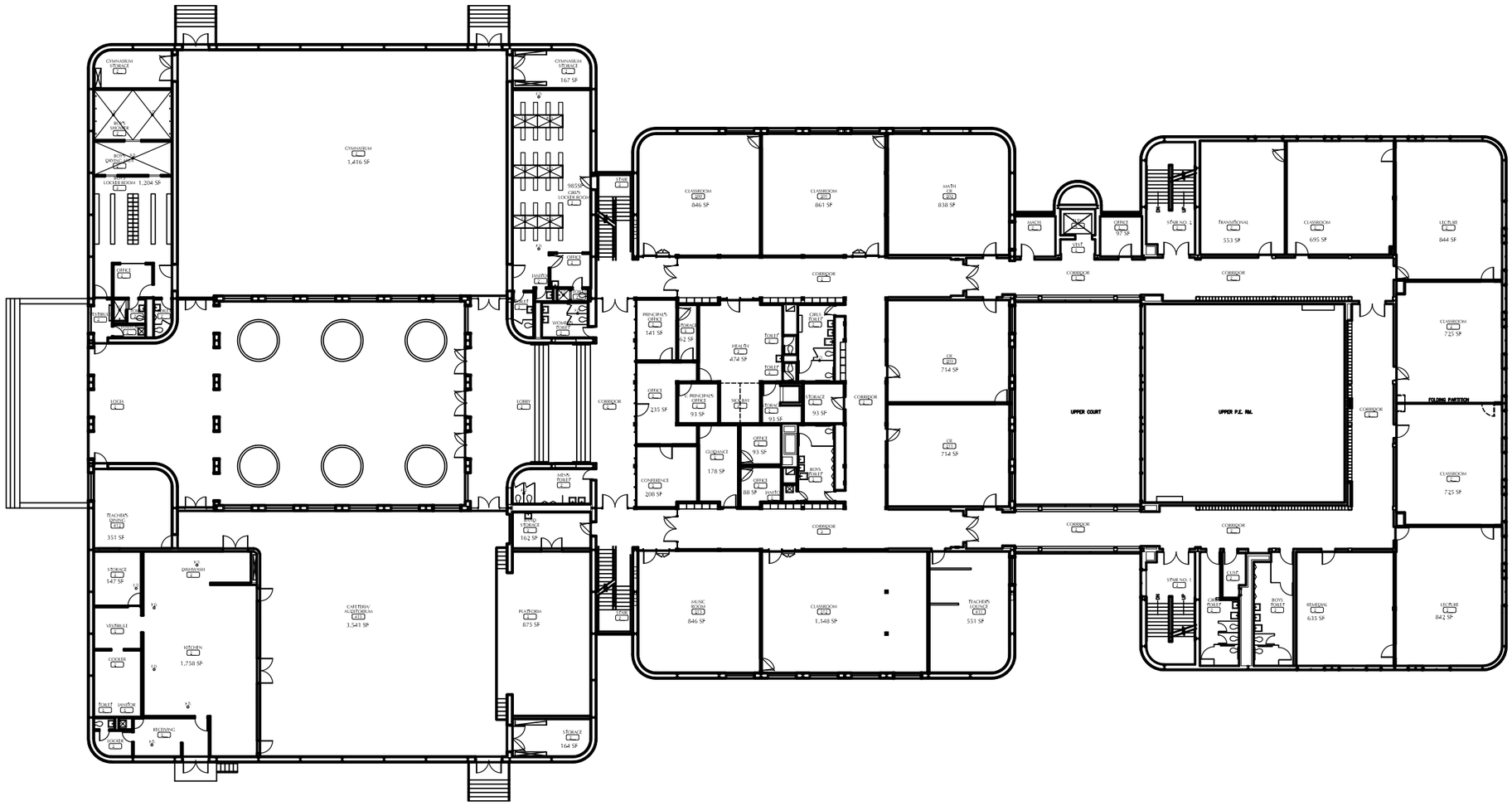
A. Floor Plans of Existing Facility
B. MSBA Space Summary Template
C. Narrative for Variance

3.1.3 INITIAL SPACE SUMMARY

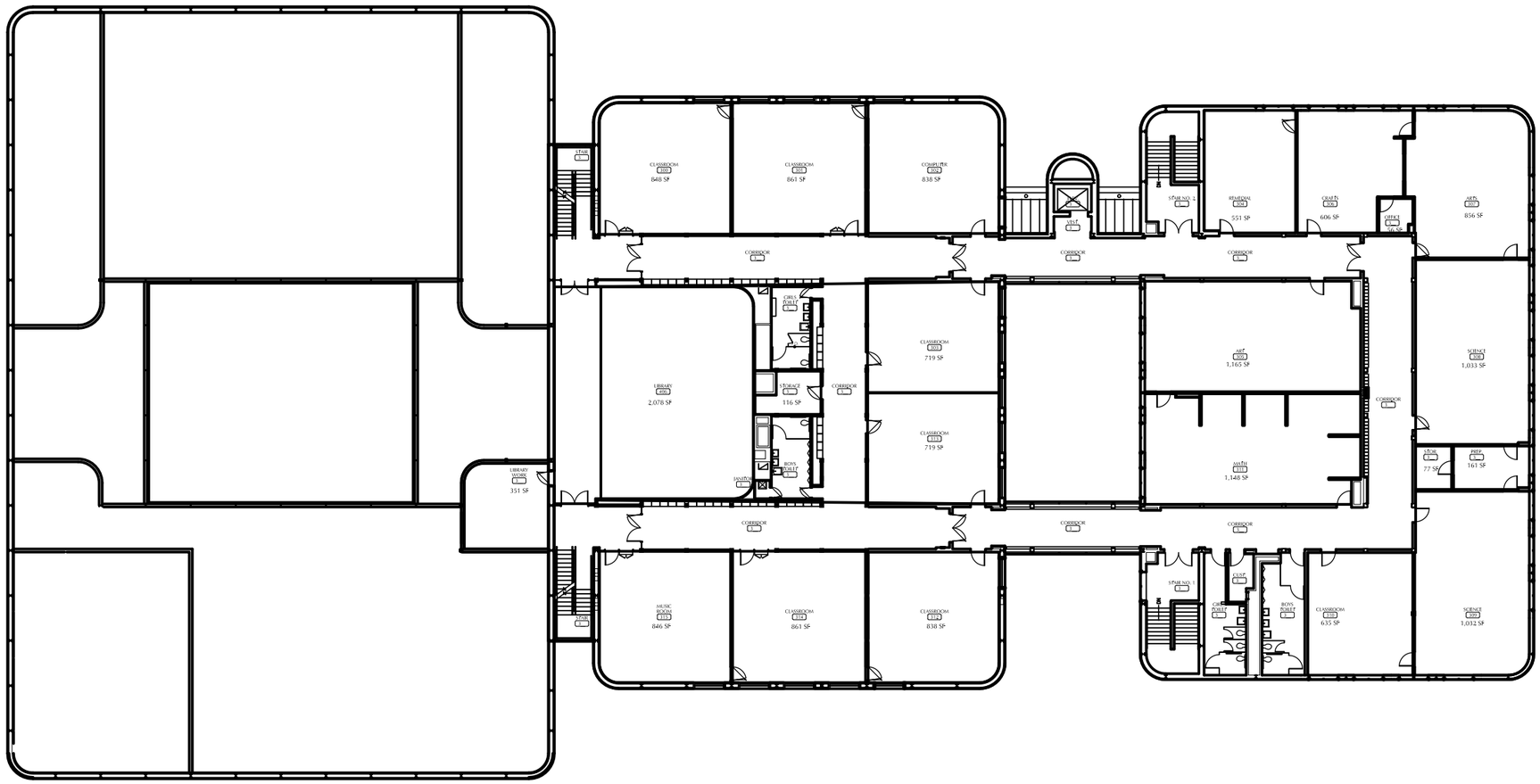
A. Floor Plans of Existing Facility


CLASSROOM 846 SF
CLASSROOM 860 SF
INDUSTRIAL ARTS 838 SF
PUMP RM. 209 SF
P.E. OFFICE 553 SF
SCIENCE 695 SF
CORRIDOR
OFFICE 87 SF
OFFICE 92 SF
OFFICE 92 SF
OFFICE 90 SF
GIRLS TOILET
BOYS TOILET
MECHANICAL ROOM 1,742 SF
STORAGE
CLASSROOM 719 SF
COURT
GYM/GYM 2,244 SF
GRAPHIC ARTS 1,120 SF
OFFICE 124 SF
RECEIVING/STOR. 313 SF
INDUSTRIAL ARTS 1,342 SF
RECEIVING & STORAGE 1,097 SF
CLASSROOM 846 SF
CLASSROOM 861 SF
HOMEMAKING 838 SF
SCIENCE 632 SF
WATER METER
GAS METER

0 15' 30'


GYMNASIUM STORAGE
GYMNASIUM 1,416 SF
GYMNASIUM STORAGE 167 SF
LOCKER ROOM 1,204 SF
GIRLS LOCKER ROOM 985SF
OFFICE
STAIR
CLASSROOM 846 SF
CLASSROOM 861 SF
MATH 838 SF
MAGIC
ART
OFFICE 97 SF
STAIR NO. 3
TRANSITIONAL 553 SF
CLASSROOM 695 SF
LECTURE 864 SF
CLASSROOM 725 SF
CORRIDOR
LOBBY
PRINCIPAL'S OFFICE 141 SF
STORAGE 93 SF
HEALTH 474 SF
TOILET
GIRLS TOILET
OFFICE 235 SF
PRINCIPAL'S OFFICE 93 SF
SECRETARY
STORAGE 93 SF
GUIDANCE 178 SF
OFFICE 93 SF
CONFERENCE 208 SF
OFFICE 88 SF
VESTS
BOYS TOILET
MEN'S TOILET
AV 714 SF
OT 714 SF
UPPER COURT
UPPER P.E. PAL
FOLDING PARTITION
TEACHERS LOUNGE 351 SF
AUDIO STORAGE 162 SF
STORAGE 147 SF
DRAMA/MUSIC
CAFETERIA/ AUDITORIUM 3,541 SF
PLATFORM 873 SF
VESTIBULE
KITCHEN 1,758 SF
COOKER
TOILET
VESTIBLE
RECEIVING
LOCKER
STORAGE 164 SF
MUSIC ROOM 846 SF
CLASSROOM 1,348 SF
TEACHERS LOUNGE 551 SF
STAIR NO. 1
CAFE
GIRLS TOILET
BOYS TOILET
RESTROOM 635 SF
LECTURE 842 SF

0 15' 30'


STAIR 1
CLASSROOM 305 848 SF
CLASSROOM 304 861 SF
CLASSROOM 303 838 SF
CORRIDOR
VEST.
STAIR NO. 3
REMEDIAL 304 551 SF
CRAFTS 306 606 SF
OFFICE 1
ART 307 856 SF
GIRLS TOILET
LIBRARY 308 2,078 SF
STORAGE 116 SF
CLASSROOM 313 719 SF
MAT 1,165 SF
SCIENCE 309 1,033 SF
LIBRARY WORK 351 SF
JANITOR
BOYS TOILET
CLASSROOM 315 719 SF
MATH 310 1,148 SF
STOR. 77 SF
PREP 161 SF
MUSIC ROOM 311 846 SF
CLASSROOM 312 861 SF
CLASSROOM 313 838 SF
STAIR NO. 1
ELEC.
GIRLS TOILET
BOYS TOILET
CLASSROOM 315 635 SF
SCIENCE 309 1,032 SF
0
15'
30'

B. MSBA Space Summary Template

Proposed Space Summary - Middle Schools

Mountview Middle School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
CORE ACADEMIC SPACES			**25,145**			**0**			**35,310**			**35,310**			**36,560**	
(List classrooms of different sizes separately)																
Classroom - General				0	0	0	910	30	27,300		30	27,300	950	28	26,600	850 SF min - 950 SF max
Classroom - General 100,112, 200, 300, 315	846	5	4,230	0	0	0	0	0	0		0	0				
Classroom - General 101	860	1	860	0	0	0	0	0	0		0	0				
Classroom - General 111,201,301,314	861	4	3,444	0	0	0	0	0	0		0	0				
Classroom - General 103,109,303,313	719	4	2,876	0	0	0	0	0	0		0	0				
Classroom - General 102,110,202,312	838	4	3,352	0	0	0	0	0	0		0	0				
Classroom - General 203	714	1	714	0	0	0	0	0	0		0	0				
Classroom - General 207,208	725	2	1,450	0	0	0	0	0	0		0	0				
Classroom - General 311	1,148	1	1,148	0	0	0	0	0	0		0	0				
Classroom - General 210	635	1	635	0	0	0	0	0	0		0	0				
Small Group Seminar (20-30 seats) / Resource 106	1,120	1	1,120	0	0	0	0	0	0		0	0	500	2	1,000	
Science Classroom / Lab			0	0	0	0	1,200	6	7,200		6	7,200	1,200	7	8,400	1 period / day / student
Science Classroom / Lab 105	695	1	695	0	0	0	0	0	0		0	0				
Science Classroom / Lab 108	632	1	632	0	0	0	0	0	0		0	0				
Science Classroom / Lab 206	842	1	842	0	0	0	0	0	0		0	0				
Science Classroom / Lab 209	844	1	844	0	0	0	0	0	0		0	0				
Science Classroom / Lab 308	1,033	1	1,033	0	0	0	0	0	0		0	0				
Science Classroom / Lab 309	1,032	1	1,032	0	0	0	0	0	0		0	0				
Prep Room/Storage 213	161	1	161	0	0	0	135	6	810		6	810	80	7	560	
Storage 212	77	1	77	0	0	0	0	0	0		0	0				
SPECIAL EDUCATION			**2,671**			**0**			**7,520**			**7,520**			**9,060**	
(List classrooms of different sizes separately)																
Self-Contained SPED				0	0	0	1,200	2	2,400		2	2,400	950	6	5,700	assumed 8% of pop. in self-contained SPED
SPED 104	635	1	635	0	0	0	0	0	0		0	0				
SPED 204	553	1	553	0	0	0	0	0	0		0	0				
SPED 310	551	1	551	0	0	0	0	0	0		0	0				
Resource Rooms	90	3	270	0	0	0	0	0	0		0	0				
Resource Rooms	56	1	56	0	0	0	0	0	0		0	0				
Psychologist 306	606	1	606	0	0	0	0	0	0		0	0				
Self-Contained SPED Toilet				0	0	0	60	2	120		2	120	60	6	360	
Resource Room				0	0	0	500	6	3,000		6	3,000	500	4	2,000	1/2 size Genl. Clrm.
Small Group Room / Reading				0	0	0	500	4	2,000		4	2,000	500	2	1,000	1/2 size Genl. Clrm.
ART & MUSIC			**4,423**			**0**			**7,550**			**7,550**			**4,400**	
Art Classroom 307	856	1	856	0	0	0	1,200	3	3,600		3	3,600	1,200	2	2,400	assumed use - 50% population 2 times / week
Art Workroom 305	1,165	1	1,165	0	0	0	100	3	300		3	300	150	2	300	
Chorus 213	1,143	1	1,143	0	0	0	1,200	1	1,200		1	1,200	1,500	1	1,500	assumed use - 50% population 2 times / week
Orchestra	351	1	351	0	0	0	800	1	800		1	800				
Band							1,400	1	1,400		1	1,400				
Instrument Storage	62	1	62	0	0	0	250	1	250		1	250				
Music Practice / Ensemble 212	846	1	846	0	0	0	0	0	0		0	0	200	1	200	
Music (behind caf)	351	1	351	0	0	0	0	0	0		0	0				
VOCATIONS & TECHNOLOGY			**1,655**			**0**			**4,500**			**4,500**			**6,400**	
Tech Clrm. - (E.G. Drafting, Business)				0	0	0	1,500	1	1,500		1	1,500	1,200	2	2,400	Assumed use - 25% Population - 5 times/week
Tech 107	1,342	1	1,342	0	0	0	0	0	0		0	0				
Tech Shop - (E.G. Consumer, Wood)	313	1	313	0	0	0	1,500	2	3,000		2	3,000	2,000	2	4,000	Assumed use - 25% Population - 5 times/week
HEALTH & PHYSICAL EDUCATION			**10,653**			**0**			**12,500**			**12,500**			**8,400**	
Gymnasium				0	0	0	8,000	1	8,000		1	8,000	6,000	1	6,000	
Mini Gymnasium	2,244	1	2,244	0	0	0	0	0	0		0	0				
Gymnasium	4,619	1	4,619	0	0	0	0	0	0		0	0				
Gym Storeroom	167	2	334	0	0	0	250	1	250		1	250	150	1	150	
Health Instructor's Office w/ Shower & Toilet	122	1	122	0	0	0	0	0	0		0	0	250	1	250	
Health Instructors Office-Boys							125	1	125	125	1	125				
Health Instructor's Office -Girls	102	1	102	0	0	0	125	1	125		1	125				
Health 211	714	1	714	0	0	0	0	0	0		0	0				
Health Instructor's Office 007	553	1	553	0	0	0	0	0	0		0	0				
Locker Rooms - Girls w/ Toilets	883	1	883	0	0	0	1,000	1	1,000		1	1,000				

Proposed Space Summary - Middle Schools

Mountview Middle School	Existing Conditions			PROPOSED									MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
				Existing to Remain/Renovated			New			Total						
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	Comments
Locker Rooms - Boys w/ Toilets	1,082	1	1,082	0	0	0	1,000	1	1,000		1	1,000	1,000	2	2,000	
Stage							1,600	1	1,600	1,600	1	1,600				
Stage Storage							400	1	400	400	1	400				
MEDIA CENTER			**2,429**			**0**			**4,850**			**4,850**			**4,980**	
Media Center / Reading Room				0	0	0	950	1	950		1	950	4,980	1	4,980	
Media Center / Reading Room 230	2,078	1	2,078	0	0	0	0	0	0		0	0				
Common Room							650	6	3,900		6	3,900				
Media Storage	351	1	351	0	0	0	0	0	0		0	0				
DINING & FOOD SERVICE			**6,659**			**0**			**7,750**			**7,750**			**10,167**	
Cafetorium / Dining	3,541	1	3,541	0	0	0	4,500	1	4,500		1	4,500	6,000	1	6,000	2 seatings - 15SF per seat
Stage	875	1	875	0	0	0	0	0	0		0	0	1,600	1	1,600	
Chair / Table / Equipment Storage	164	1	164	0	0	0	450	1	450		1	450	467	1	467	
kitchen Storage	147	1	147	0	0	0	0	0	0		0	0				
Kitchen	1,932	1	1,932	0	0	0	2,500	1	2,500		1	2,500	2,100	1	2,100	1600 SF for first 300 + 1 SF/student Add'l
Staff Lunch Room			0	0	0	0	300	1	300		1	300	300			
MEDICAL			**567**			**0**			**670**			**670**			**710**	
Medical Suite Toilet				0	0	0	60	1	60		1	60	60	1	60	
Nurses' Office / Waiting Room	474	1	474	0	0	0	250	1	250		1	250	250	1	250	
Nurse Storage	93	1	93	0	0	0	0	0	0		0	0				
Examination Room / Resting				0	0	0	90	4	360		4	360	100	4	400	
ADMINISTRATION & GUIDANCE			**2,336**			**0**			**3,550**			**3,550**			**3,600**	
General Office / Waiting Room / Toilet	338	1		0	0	0	450	1	450		1	450	500	1	500	
Teachers' Mail and Time Room				0	0	0	100	1	100		1	100	100	1	100	
Duplicating Room				0	0	0	150	1	150		1	150	200	1	200	
Records Room				0	0	0	200	1	200		1	200	200	1	200	
Principal's Office w/ Conference Area	161	1	161	0	0	0	300	1	300		1	300	375	1	375	
Principal's Secretary / Waiting			0	0	0	0	0	0	0		0	0	125	1	125	
Assistant Principal's Office - AP1	141	1	141	0	0	0	150	1	150		1	150	150	1	150	
Assistant Principal's Office - AP2	93	1	93	0	0	0	150	1	150		1	150	150	1	150	
Supervisory / Spare Office			0	0	0	0	150	1	150		1	150	150	1	150	
Conference Room	178	1	178	0	0	0	350	1	350		1	350	350	1	350	
Guidance Office	93	1	93	0	0	0	150	2	300		2	300	150	4	600	
Guidance Waiting Room			0	0	0	0	100	1	100		1	100	100	1	100	
Guidance Storeroom			0	0	0	0	50	1	50		1	50	50	1	50	
Guidance Conference Room							200	1	200	200	1	200				
Storage 205	695	1	695	0	0	0	0	0	0		0	0				
Storeage	90	1	90	0	0	0	0	0	0		0	0				
Admin Storage	62	1	62	0	0	0	0	0	0		0	0				
Teachers' Work Room	537	1	537	0	0	0	300	3	900		3	900	550	1	550	
Teachers' Work Room	124	1	124	0	0	0	0	0	0		0	0				
Teachers' Prep Room	162	1	162	0	0	0	0	0	0		0	0				
CUSTODIAL & MAINTENANCE			**1,951**			**0**			**2,076**			**2,076**			**2,075**	
Custodian's Office	160	1	160	0	0	0	150	1	150		1	150	150	1	150	
Custodian's Workshop	355	1	355	0	0	0	250	1	250		1	250	250	1	250	
Custodian's Storage			0	0	0	0	375	1	375		1	375	375	1	375	
Recycling Room / Trash			0	0	0	0	400	1	400		1	400	400	1	400	
Receiving and General Supply	742	1	742	0	0	0	367	1	367		1	367	367	1	367	
Storeroom	97	1	97	0	0	0	534	1	534		1	534	534	1	534	
Storeroom	77	1	77	0	0	0	0	0	0		0	0				
Storeroom	93	1	93	0	0	0	0	0	0		0	0				
Storeroom	114	1	114	0	0	0	0	0	0		0	0				
Storeroom	313	1	313	0	0	0	0	0	0		0	0				
				0	0	0	0	0	0		0	0			-	
OTHER			**116**			**0**			**200**			**200**			**200**	
Other (Specify)											0	0				
Network / Telecom Room	116	1	116					1	200		1	200	200	1	200	
Total Building Net Floor Area (NFA)			**58,605**			**0**			**86,476**			**86,476**			**86,552**	

Proposed Space Summary - Middle Schools

Mountview Middle School	Existing Conditions		
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals
Proposed Student Capacity / Enrollment			
Total Building Gross Floor Area (GFA)[2]			91,137
Grossing factor (GFA/NFA)			**1.56**

PROPOSED								
Existing to Remain/Renovated			New			Total		
ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals	ROOM NFA[1]	# OF RMS	area totals
					127,984			127,984
					1.48			**1.48**

MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM NFA[1]	# OF RMS	area totals	Comments
		800	
		128,000	
		1.48	

[1] **Individual Room Net Floor Area (NFA)** ecific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** ootage measured from the outside face of exterior walls

Architect Certification

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.

Name of Architect Firm: Lamoureux Pagano & Associates, Inc.

Name of Principal Architect: Michael A. Pagano

Signature of Principal Architect: Michael Pagano

Date: 2-Aug-12

C. Narrative for Variances

LPA, working with the District in accordance with the Educational Program, prepared the Proposed Space Summary in general accordance with MSBA's guidelines. There are, however, some variances as follows:

- **General Classrooms:** Thirty General Classrooms are proposed (two more than MSBA guidelines), based on ten per grade level, to support the District's team teaching curriculum. Currently there are twenty-three General Classrooms.

- **Science Classrooms:** Six Science Classrooms are proposed (one less than MSBA guidelines), based on two per grade level, to support the District's team teaching curriculum. Currently there are six Science Classrooms.

- **Science Prep Rooms:** Six Science Prep Rooms are proposed (one less than MSBA guidelines), based on one Prep Room per Science Classrooms. Currently there is one Prep Room.

- **Self-Contained SPED Classrooms/Toilets:** Two Self-Contained SPED (ABA) Classrooms/Toilets are proposed (four less than MSBA guidelines), based on the District's requirements. Currently there are no Self-Contained SPED Classrooms.

- **Art Classroom:** Three Art Classrooms are proposed (one more than MSBA guidelines) based on one per grade to support the District's Teaching Curriculum. (See attached "Related Arts Space Summary" by WRSD.)

- **Stage Storage:** A dedicated Stage Storage space is proposed for Drama Club. Currently there is no Storage Space for a program involving 80 students in after school activities.

- **Gymnasium:** The proposed Gymnasium is based on 3 teaching stations and a 50' x 84' basketball court, with limited spectator seating, for use during school sports events, and is 2,000 SF larger than MSBA guidelines. The District also requested that the Gymnasium (instead of a "Cafetorium") be utilized as a multi-use assembly space, due to concern that lunchtime Cafeteria activity will disrupt use of the Stage/Platform as an educational space (Music Classroom). The proposed fold-out spectator seating, facing the Stage/Platform, is also intended to double as seating for bulk of the student body (600-students) assemblies. The two existing Gymnasiums currently total 6,863 SF. (See attached "Related Arts Space Summary" by WRSD.)

- **Gymnasium Storage:** The proposed Gymnasium Storage space is sized to support existing program requirements. Currently the school utilizes two storage locations to support the athletic program.

- **Cafeteria:** The proposed Cafeteria is based on three seatings of (each grade) 300 students (grade size fluctuation) and, as noted above, is intended primarily as a dining space. The proposed size is 1,500 SF less than MSBA guidelines.

- **Media Center Archive:** The proposed Media Center is 950 SF, which will be used to archive existing books, periodicals, etc. (See attached "Related Arts Space Summary" by WRSD.)

- **Music:** The proposed music suite contains three assembly rooms (band, orchestra and chorus which is one additional space over MSBA guidelines to complement the music curriculum of the middle school. (See attached "Related Arts Space Summary" by WRSD.)

- **Medical Suite Toilets:** Two separate toilets (male and female) are proposed to comply with Plumbing Code.

- **Teachers' Work Room:** Three smaller Teachers' Work Rooms are proposed (two more than MSBA guidelines), based on one per grade level.

- **Administration and Guidance:** The proposed number of Guidance Counselors is two (2 less than MSBA Guidelines) and the addition of a separate Guidance Conference Room. Currently there is one Guidance Office.

A graphic showing the existing vs. proposed program spaces follows in this section.

Wachusett Regional School District

Holden, Paxton, Princeton, Rutland, Sterling

July 2012

As the Wachusett Regional District makes plans to renovate or to replace the Mountview Middle School, it is important to examine the needs of students in the 21st Century. We know that schooling in the 21st century will need to be process oriented and skill driven. Access to information and the ability to manipulate it and to use it to solve real problems will be of paramount importance. The modern school will need to be designed and equipped to provide students with seamless and constant access to information across a variety of media. Each classroom and educational space should provide this ready access to information, and do so in a manner that is current and flexible enough to meet the personal needs of both students and faculty. One size will not fit all in a digital world that is becoming increasingly personalized and less standard. What is the role of the Media Center in a modern school in which the entire learning environment is centered on media?

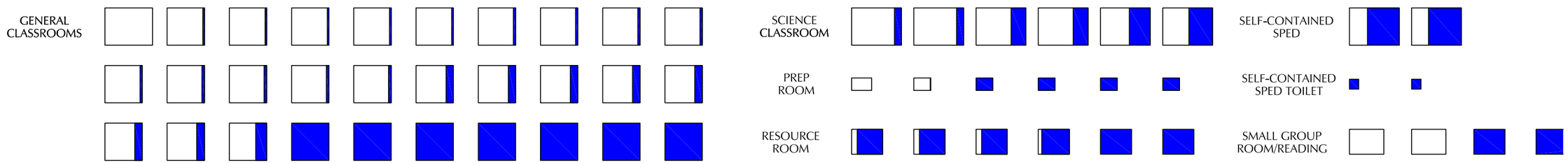
In order to answer this question it is important to examine the current uses of the Media Center and determine their relevance and their utility in a renewed space. At Mountview, the Media Center is used to perform computer research by groups of students who visit on a daily basis. It is anticipated that this use will be eliminated as we add a wireless network and equip students with personal electronic devices. In this new environment students will conduct their research from their classrooms. Moreover, we envision that the six common spaces designated to teams would be furnished and equipped as "Internet Cafes" that would serve as decentralized research facilities that will meet the research needs of our student teams. A visit to the Media Center will not be relevant to the work that teachers and students are doing in their classrooms and in the common areas.

A second use of the Media Center is to house a limited print collection. We see little utility to add to this collection at this time but do believe that, once weeded of outdated materials, the existing collection will be of educational use. The final use of this space is to host various meetings or gathering, such as workshops or parent meetings. It would be our intention to house such meetings in other common team areas that we plan to locate throughout the building.

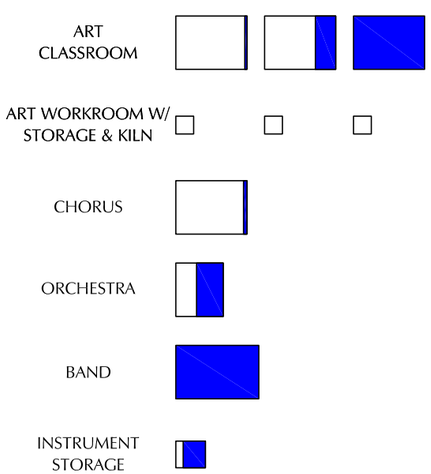
All of this leads to a design recommendation to build a relatively small Media Center, one that is just large enough to house the print collection. We would also recommend that even this space be built with an eye toward possible renovation and repurposing. The research capability and meeting utilization of the current site can be realized elsewhere in the school plant with improved function.

Thomas G. Pandiscio, Ed.D.
Superintendent of Schools

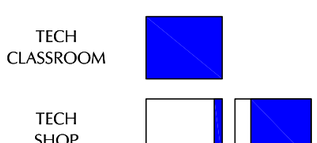
GENERAL CLASSROOM CLUSTERS



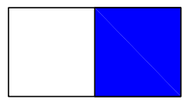
ART & MUSIC



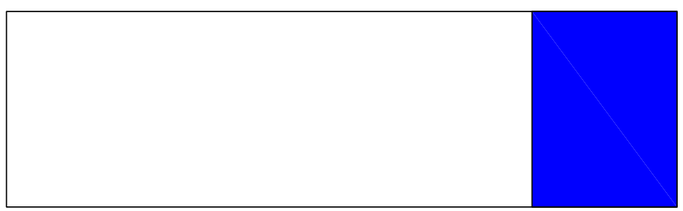
VOCATION & TECHNOLOGY



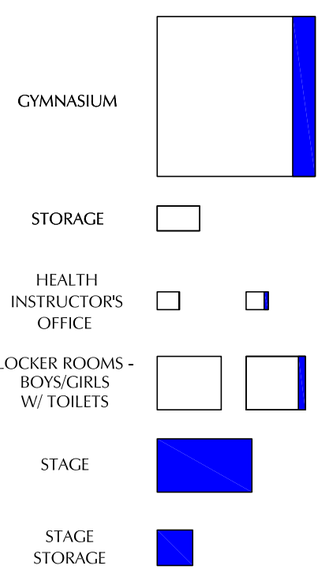
MEDIA CENTER/READING ROOM



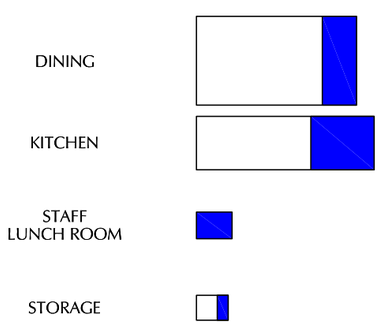
CIRCULATION, MECHANICAL, TOILETS, PARTITIONS ETC.



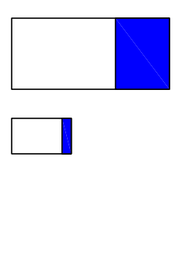
PHYSICAL EDUCATION



DINING & FOOD SERVICE



ADMINISTRATION



CUSTODIAL & MAINTENANCE

	TOTAL BUILDING AREA EXISTING	91,137 S.F.
	TOTAL BUILDING AREA PER MSBA/PROPSED GUIDELINE	127,984 S.F.

3.1.4 EVALUATION OF EXISTING CONDITIONS

A. Legal Title to the Property
B. Determination of Historical Registrations
C. Determination of Development Restrictions
D. Evaluation of Building Code Compliance
E. Evaluation of AAB Rules & Regulations
F. Evaluation of Significant Structural, Environmental, Geotechnical or other Physical conditions
G. Determination for Need and Schedule for Soils Exploration & Geotechnical Evaluation
H. Environmental Site Assessments
I. Assessment of the Facility for the Presence of Hazardous Materials

3.1.4 EVALUATION OF EXISTING CONDITIONS

A. Legal Title to the Property

4647

313

See Plan Book 297, Plan 112
See Deed in Book 4702, Page 231. To Confirm

COMMONWEALTH OF MASSACHUSETTS

WORCESTER, SS. TOWN OF HOLDEN

ORDER OF TAKING

A meeting of the Board of Selectmen of the Town of Holden was held on the 7th day of February, 1966, and

WHEREAS the Board of Selectmen of the said Town of Holden having determined and adjudged that common convenience and necessity required the construction of a junior high school for the benefit of the Town, and

WHEREAS at a special Town Meeting of said Town of Holden held on the 11th day of December, 1965, in accordance with law the following Article was inserted in the Warrant for said meeting:

ARTICLE 2

To see if the Town will vote to raise and appropriate, transfer from available funds, or borrow a sum of money and authorize the Selectmen to purchase or take by eminent domain a parcel of land of about 30 acres with the buildings located on Shrewsbury Street, in Holden, in fee for school purposes, from Maplewood Realty, Inc. of Worcester, Raymond I. and Anna E. Smith, Irene A. Anderson, the heirs of Cyrus and Thaddeus Chennery, Clarence F. and Clyde O. Carlson, and unknown owners, or act or do anything relative thereto, and

WHEREAS at said special Town Meeting of said Town of Holden it was voted by a standing vote of 295 in the affirmative and 22 in the negative that the Town vote to transfer from available funds the sum of $48,800 and authorize the Selectmen to purchase or take by eminent domain - in fee - for school

purposes the following parcels of land located on the northerly side of Shrewsbury Street:

Parcel A. 9,590 square feet, more or less, with the buildings thereon located near Shrewsbury Street and owned by Irene A. Anderson.

Parcel B. A parcel of land consisting of 11.893 acres, more or less, located near Shrewsbury Street and owned by Clarence F. Carlson and Clyde O. Carlson.

Parcel C. A parcel of land consisting of 3.273 acres, more or less, located near Shrewsbury Street and claimed by Clarence F. Carlson and Clyde O. Carlson, the heirs of Thaddeus Chennery, the heirs of Cyrus Chennery, and unknown persons.

Parcel D. A parcel of land consisting of 28.9 acres, more or less, on Shrewsbury Street and owned by Raymond I. Smith and Anna E. Smith.

Parcel E. .132 acres, more or less, located on Mount View Drive and owned by Maplewood Realty, Inc. of Worcester as shown on plan recorded at Worcester District Registry of Deeds, Plan Book 201, Plan 25.

All parcels are shown on a plan of land in Holden, dated September 8, 1965, by Thompson-Liston Associates.

Now, therefore, it is ORDERED that in accordance with the vote of said Town of Holden for the purpose of constructing a junior high school that the following described parcels of land located off Shrewsbury Street in said Holden be and is hereby taken in fee.

Parcel #1, on the northerly side of Shrewsbury Street in Holden, Massachusetts, owned by Irene A. Anderson:

BEGINNING at the southeasterly corner of the parcel herein described, said point of beginning being 294.95 feet southwesterly of (measured on the northerly line of Shrewsbury Street) the tangent point of a curve leading northeasterly to Mount View Drive, the radius of which is 20.0 feet;

THENCE running S 71° 12' 35" W, by the northerly line of Shrewsbury Street, 137.00 fee t to a point;

THENCE running N 9° 12' 45" W, 160.0 feet to a point;

THENCE running N 71° 12' 35" E, 137.0 feet to a point;

THENCE running S 9° 12' 45" E, 160.0 feet to the point of beginning.

The last three (3) described lines by land of Clarence F. Carlson.

Said Parcel #1 contains 21,619 square feet of land, all as shown on plan entitled, Plan of Land in Holden, Massachusetts, to be taken by the Town of Holden for school purposes and being designated as Parcel #1, drawn by Thompson-Liston Associates, Inc., and dated February 14, 1966, and recorded herewith.

Parcel #2, on the northerly side of Shrewsbury Street in Holden, Massac husetts, owned by Clarence F. Carlson and Clyde O. Carlson, husband and wife:

BEGINNING at the southeasterly corner of the parcel herein described in the northerly line of Shrewsbury Street, said point of beginning being 148.88 feet southwesterly of (measured on the northerly line of said Shrewsbury Street) the tangent point of a curve leading northwesterly to Mount View Drive, the radius of which is 20.0 feet;

THENCE running S 71° 12' 35" W, by the northwesterly line of Shrewsbury Street, 146.07 feet to a point;

THENCE running N 9° 12' 45" W, 160.0 feet to a point;

THENCE running S 71° 12' 35" W, 137.0 feet to a point;

THENCE running S 9° 12' 45" E, 160.0 feet to a point in the northerly line of Shrewsbury Street;

The last three (3) lines being by Parcel #1 and land of Irene A. Anderson.

THENCE running S 71° 12' 35" W, by the northwesterly line of Shrewsbury Street, 3.59 feet to a Worcester County

Highway Monument at the tangent point of a curve, the radius of which is 2687.18 feet;

THENCE running southwesterly by the northerly line of Shrewsbury Street, and by a curve to the right, the radius of which is 2687.18 feet, 26.41 feet to a point;

THENCE running N 9° 12' 45" W, by land of one Terris, 199.89 feet to a stone bound;

THENCE running S 73° 16' 10" W, by land of said Terris, 136.82 feet to a point;

THENCE running N 9° 10' 10" W, by land of one Eicholz, 122.44 feet to a stone bound;

THENCE running S 75° 28' 05" W, still by land of said Eicholz, 136.86 feet to a point on a stone wall at land of Mrs. Raymond Smith;

THENCE running N 9° 07' 40" W, by said stone wall and land of said Smith, 188.08 feet to a corner of stone walls;

THENCE running N 88° 08' 35" E, by a stone wall and Parcel #3 on a plan hereafter referred to, 243.97 feet to a point;

THENCE running N 8° 15' 25" W, 157.76 feet to a point;

THENCE running N 6° 28' 25"W, 322.09 feet to a point;

THENCE running N 3° 58' 20" W, 164.49 feet to a corner of walls;

THENCE running S 87° 24' 20" W, 209.10 feet to a corner of walls;

The last four (4) described lines being by a stone wall and Parcel #3 on a plan hereafter referred to;

THENCE running N 0° 53' W, 140.17 feet to a point;

THENCE running N 2° 10' 10" W, 235.76 feet to a point;

THENCE running N 0° 30' 05" W, 89.25 feet to a corner of walls;

The last three (3) described lines being by a stone wall and land of one Ray;

THENCE running N 87° 40' 05" E, 344.61 feet to a corner of walls;

THENCE running S 13° 22' 50" E, 1487.53 feet to the point of beginning.

THENCE running southeasterly by said curve to the left, 24.44 feet to a point in the northerly line of Shrewsbury Street;

THENCE running westerly by the northerly line of Shrewsbury Street, and by a curve to the right, the radius of which is 579.70 feet, 66.18 feet to the point of beginning.

Said parcel contains 12.593 acres of land, all as shown on Parcel #4 on a plan entitled, Plan of Land in Holden, Massachusetts, to be taken by the Town of Holden for school purposes and being designated as Parcel #4, drawn by Thompson-Liston Associates, Inc., dated February 14, 1966, to be recorded herewith.

Parcel #5, located on Mount View Drive owned by Maplewood Realty, Inc., of Worcester and bounded and described as follows:

BEGINNING at the southeasterly corner of the parcel herein described, said point of beginning being 916.43 feet northwesterly of (measured on the westerly line of Mount View Drive), the tangent point of a curve leading southwesterly to Shrewsbury Street, the radius of which is 20.0 feet.

THENCE running northwesterly by land of Melvin R. Gray et ux. and by a curve to the left, the radius of which is 20.0 feet, 31.42 feet to the westerly end of said curve;

THENCE running S 72° 04' 20" W, by land of said Gray 121.29 feet to a point at land of Clarence F. and Clyde O. Carlson ;

THENCE running N 13° 22' 50" W, by land of said Carlson, 40.13 feet to a point at land of Walter R. Barys et ux;

THENCE running N 72° 04' 20" E, by land of said Barys, 118.11 feet to the tangent point of a curve leading northeasterly to Mount View Drive, the radius of which is 20.0 feet;

THENCE running northeasterly by land of said Barys and by said curve to the left, 31.42 feet to a point in the westerly line of Mount View Drive;

THENCE running S 17° 55' 40" E, by the westerly line of Mount View Drive, 80.0 feet to the point of beginning.

Said parcel contains 0.132 acres of land, all as shown on a plan entitled Plan of Land in Holden, Massachusetts, to be taken by the Town of Holden for school purposes, and being designated as Parcel #5 , drawn by Thompson-Liston Associates, Inc., and dated February 14, 1966, to be recorded herewith.

Said parcels of land are taken in fee for school purposes from the following persons; the following awards

for damages are made:

PARCEL #1 - Irene A. Anderson, $17,000
PARCEL #2 - Clarence F. Carlson and Clyde O. Carlson, husband and wife, $14,000
PARCEL #3 - Owners unknown, Clarence F. Carlson, Heirs of Thaddeus ~~Chenery~~ Chenery, and heirs of Cyrus ~~Chenery~~ Chenery, $3,000
PARCEL #4 - Raymond Smith and Anna E. Smith, husband and wife, $14,000
PARCEL #5 - Maplewood Realty, Inc., $750

If there are any trees or other structures affixed, the owners may remove the same within thre e (3) months from the date of this taking.

IN WITNESS WHEREOF the inhabitants of the Town of Holden acting by its Board of Selectmen have caused the corporate seal of the Town of Holden to be hereto affixed and these presents signed on its behalf by said Board of Selectmen, who sign in their representative capacity and not individually, this 7th day of February, 1966.

Raymond N. Hayes
Joseph D. Harrington
Edward C. Hall

COMMONWEALTH OF MASSACHUSETTS

WORCESTER, SS. February 7, 1966.

Then personally appeared the above-named Raymond N. Hayes, Joseph D. Harrington, Edward C. Hall, Selectmen and acknowledged the foregoing to be the free act and deed of the Town of Holden, before me,

Paul L. Hinckley
Notary Public
My commission expires
March 19, 1972.
PAUL L. HINCKLEY

Recorded March 9, 1966 at 11h. 52m. A. M.

Gould Title Company

Real Estate Title Services

Larry E. Salem, Esquire
Nicole S. Trani, Esquire

90 Front Street, Suite C202
Worcester, MA 01608
Tel: (508) 754-1871
Fax: (508) 754-7079
lsalem@gouldtitle.com

PRELIMINARY TITLE REPORT

Prepared for:

Stephen F. Madaus, Esq.
Mirick O'Connell

We have examined the records as indexed in the Registries of Deeds and Probate for the County of Worcester (Worcester District) since September 10, 1936, November 21, 1945, February 7, 1966, October 16, 1944, October 27, 1944 and September 23, 1953

for the Premises described in a Order of Taking

by Town of Holden

against Irene A. Anderson et als

dated February 7, 1966 **and recorded in Book** 4647, **Page** 313

Title appears to be in Town of Holden

and is free from encumbrances of record during the period examined, except:

Highway Location in Shrewsbury Street by the Worcester County Commissioners vs. Town of Holden dated March 25, 1997 and recorded in Book 18733, Page 281 (see Plan Book 714, Plan 52);

Sewer Order by the Town of Holden (Board of Selectmen) vs. Mount View School et als dated November 25, 1974 and recorded in Book 5653, Page 311, as affected by Sewer Assessment Order recorded in Book 5867, Page 280 (no assessment due);

Rights of American Telephone & Telegraph Company under instrument recorded in Book 1736, Page 121 as recited in Book 3535, Page 58, if affects locus;

Rights of others in portions of Mount View Drive;

Possible lien for utility charges under M.G.L. c. 164, sections 58B-58F.

Note: For accuracy of description we rely on plan recorded in Plan Book 297, Plan 112, locus being Parcels 1-5 thereon.

Run Through: May 24, 2012
Reference: #11540-1
Location: Shrewsbury St. and Mount View Dr.
Holden, MA

Nicole A. Frain

*Bankruptcy indices are no longer available in the Worcester District Registry of Deeds' computer system; therefore this examination does not include possible bankruptcies.

B. Determination of Historical Registrations

LPA researched the National Register of Historic Places and MACRIS sites for information relative to the existing and proposed site. The existing Mountview Middle School building on Shrewsbury Street is not listed as being historically significant.

In summary, it is LPA's understanding that there are no historical restrictions on any of the proposed sites or buildings.

Massachusetts Cultural Resource Informati

MACRIS

MHC Home | MACRIS Home

Results

Get Results in Report Format

PDF Spreadsheet

Below are the results of your search, using the following search criteria:
Town(s): Holden
Street No: 270
Street Name: shrewsbury
Resource Type(s): Building

For more information about this page and how to use it, click here

No Results Found.

New Search New Search – Same Town(s) Previous

MHC Home | MACRIS Home

C. Determination of Development Restrictions

BRASSARD DESIGN + ENGINEERING

June 28, 2012

Mr. William Senecal
Lamoureux Pagano Architects
108 Grove Street
Worcester, MA 01605

RE: Mountview Middle School – Feasibility Study
Initial Evaluation of Alternatives – Site Analysis

Dear Bill:

Per your request, Brassard Design & Engineering, Inc. (BDE) has completed initial evaluations of potential development sites with regard to the Mountview Middle School project. This included an evaluation of the current school site and an alternate site that was proposed by the Town of Holden. The sites have been identified and are referenced herein as:

1. Site Evaluation - Existing Mountview Middle School
2. Site Evaluation - Malden Street

The evaluations focused on elements of each site that may affect their redevelopment and/or development potential including:

- Property location and configuration
- Zoning conditions
- Easements and property limitations
- Access potential
- Topography, slopes, and orientation
- Tree cover and vegetation
- Soils
- Environmental resources
- Utility system conditions

Information was obtained from multiple sources including:

- Massachusetts GIS data
- Municipal GIS data
- Record property survey data (Mountview School only)
- Natural Resources Conservation Service soil data
- On-site visual observations

1. SITE EVALUATION – EXISTING MOUNTVIEW MIDDLE SCHOOL

Property Location & Configuration

The subject site (Site) includes three parcels located just west of the intersection of Shrewsbury Street, Doyle Road, and Mount View Drive. The primary parcel, where the existing middle school building is located, is designated as Holden Assessor's Parcel ID 201-62 (270 Shrewsbury Street), with an area of 15.2 acres. The second parcel is designated as Parcel ID 200-18, with an area of 12.6 acres. A third, small (0.5 acre), frontage parcel (ID 201-59) is located along the Shrewsbury Street frontage. The three parcels are contiguous and effectively represent a single 28.3 acre development site.

The entire Site is bounded by residential properties. Small (1/3 acre) single family lots line the eastern and northern sides of the primary parcel, and somewhat larger (1/2 to 1-1/2 acre) border the Site to the south and west. A single large parcel (10-acres) is located to the northeast and is developed as a single family lot.

The primary parcel is generally rectilinear (1,500FT± x 450FT±) and oriented north-south in terms of its length. The adjacent parcel is more evenly dimensioned (850FT± x 650FT±) and aligned with the primary parcel.

Zoning Conditions

The Site lies within the Residence-2 (R-2) zoning district and is subject to the dimensional controls associated with that district. No overlay districts or other special zoning conditions are present that will affect the development of the Site.

Easements and other Property Limitations

Based on record survey data, and on municipal assessors maps, there do not appear to be any existing easements or similar encumbrances associated with the Site.

A portion of the property in the vicinity of the existing westerly athletic fields, as described in a later section, includes record soils designated as "Prime Farmland". Under certain circumstances this can result a potential property encumbrance or restriction to development/conversion per Commonwealth of Massachusetts Executive Order 193. As authorized by the Order, the Massachusetts Department of Agricultural Resources (MDAR) has the ability to prohibit the use of state funds for conversion of these lands to other uses. Based on letter (attached) from the MDAR, made a decision based on the recorded soils being essentially fill as part of previous site development effort, use of these soils for agriculture is not feasible, and therefore the associated restriction has been lifted and not applicable to this project.

Access Potential

The Site is currently accessed via two curb cuts on Shrewsbury Street. Three additional potential access points could be created under certain site redevelopment conditions.

The Site is connected to Mount View Drive by a 150FT± existing undeveloped right of way located approximately 1,000FT north of the intersection of Mount View Drive and Shrewsbury Street. Making this connection would require minimal effort in terms of site work, as the grade change across that is fairly minor. However, because Mount View is not a through-street this connection would not likely benefit the Site in terms of overall access or traffic flow.

A second access point onto Shrewsbury Street exists in the form of a 50FT x 230FT segment of Parcel 200-18, located approximately 850FT to the west of the existing site entrance, and 750FT to the east of the intersection of Chapel Street and Shrewsbury Street. This potential access point is also undeveloped. Although there is a notable grade change between this area and the developed portion of the Site, it could be possible to achieve an access drive in this location, depending on the configuration of the development program pursued for the Site. The position of the access point relative to the grade and curvature of Shrewsbury Street is a factor that warrants further study, as sight and stopping distance limitations to the east of the entrance could present a constraint for development of this access.

A third option for an additional access point includes pursuit of a connection to Chapel Lane, which is an undeveloped right of way located off of the northwest corner of Parcel 200-18. As with the above option, connection to this area could involve substantial site grading but appears to be feasible/practical. One significant obstacle exists in that connection to Chapel Lane could only be achieved by crossing over an abutting parcel not under the control of the town. The access drive would need to cross over a portion of either Parcel 200-7 (the large abutting parcel noted previously), or over a portion of Parcel 200-9, which is a small undeveloped frontage lot on Chapel Lane. Although this option presents difficulty with regard to ownership, it would afford a secondary access point that connects to a through-street completely separate from the Site's main access on Shrewsbury Street.

Existing Development

The majority of the Site is currently developed and is the location of the existing Mountview Middle School building and facilities. The school building is positioned on the

easterly side of the Site, set back from the street frontage by approximately 400FT, and offset from the abutting residential properties to the east by approximately 150FT.

Parking and access areas are somewhat limited and generally ring the building with single-loaded and parallel parking (striped and non-striped) spaces for approximately 75-100 vehicles, exclusive of non-paved informal parking areas.

Athletic playing fields are positioned to the north and west of the school. The northerly fields include a softball field and small soccer practice fields. Tennis courts, a baseball field, and a full-sized soccer field are located to the west.

The 400FT x 500FT northerly section of the primary parcel is undeveloped, and includes a well-developed woodland trail network. Although a portion of this area is somewhat steeply sloped (10-15%+), a substantial portion of the area could add as much as 2 acres± to the currently developed portion of the Site. Similarly, areas to the north and west of the larger athletic fields are undeveloped and also include a trail system. Due to the terrain and environmental constraints noted in the following sections, the majority of the westerly area could not be easily developed and should not be considered as a potential project expansion area. But a relatively small area (1 acre±), or a portion thereof, could possibly be utilized by extending the existing fill slope on the northerly section of Parcel 200-18.

Topography, slopes and orientation

The original terrain of the Site generally sloped moderately downward from east to west. As part of the original development effort and subsequent redevelopment/additions, a substantial fill was placed on the westerly side of the Site resulting in a plateau condition. Currently, the developed portion of the Site is broad and relatively flat (2-5% slopes).

The northern section of the primary parcel, referenced above as a potential expansion zone, pitches down to the north with fairly moderate slopes (6-8%) except as noted previously. The area west and north of the larger athletic fields are steeply sloped at the limits of the fill placement and beyond at 25-40%, significantly limiting potential expansion.

The combination of the mature woodland and the width of the steep slope (100FT+) constitutes a substantial physical and visual buffer between the developed portion of the Site and the residential properties to the west.

Due to the broad, flat terrain that has been established across developed portion of the Site, relatively unobstructed southern/western exposure is available. However, because the Site is elevated above the surrounding properties and due to lack of mature tree

growth on interior areas mitigation for the effects of prevailing westerly winds should be considered in future design efforts.

Tree cover and vegetation

The developed portion of Site is completely cleared, with a mature wooded buffer along the easterly and southerly property lines. The Site includes little landscape planting, which is limited to street trees lining the access drives and shrub plantings across the front of the school building. One isolated stand of mature deciduous trees is positioned about 150FT to the west of the rear corner of the school building. Future design efforts should include consideration for working these well-established trees into the development scheme.

Although relatively narrow, the wooded buffer along the southerly side of Parcel 200-18 includes a mature stand of white pine which could offer a solar screen for parking, depending on the future site design program.

The northern and western undeveloped sections of the Site include mature woodland consisting of a clustered mix of evergreen and deciduous tree growth with light to moderate underbrush. A well-established trail network circulates throughout, running close to and/or connecting with abutting properties.

Soils

Based on National Resources Conservation Service (NRCS) data, the soils on the Site include the following NRCS Map Units listed in order of contributing area:

420B, 421B&C, 422B&C, Canton
- Parent material is gravelly loamy sand
- well drained
- >6FT to groundwater
- >5FT to ledge
- erosive concern is low (substratum)

651, Udorthents
- Smoothed/graded soil presumably underlain by surrounding soil map units
- Well drained
- >6FT to groundwater
- >5FT to ledge
- erosive concern is low (substratum)

The soils surrounding the developed portions of the Site are dominated by varying types of Canton soils. The primary features include well-drained, well graded soils with few fines, relatively low groundwater table, with minimal presence of shallow ledge. None of the soil conditions are likely to represent a constraint in terms of bearing capacity, stormwater management, or general site construction. However, because the site has been previously disturbed, a robust geotechnical exploration should be undertaken to verify the actual subsurface conditions present.

Environmental Resources and Hydrology

A bordering vegetated wetland resource area is centrally located on the western edge of the Site. A discharge channel runs to the north from this area toward an existing culvert on Chapel Lane. A 100-foot buffer zone associated with the wetland area and channel establishes a jurisdictional area that extends as much as 250FT onto the Site. The presence of this jurisdictional area will affect potential redevelopment schemes that extend into the westerly portion of the Site.

A second wetland area is located across Shrewsbury Street off of the southeast corner of the Site. The associated buffer zone for this area appears to extend onto a small portion of the nearby property corner, but is unlikely to affect future development options.

Runoff generated by the open areas of the Site drain overland to the north and west and is not combined with runoff from the adjacent properties to the east and south, which appears to be diverted around the Site by open channel conveyances and/or general grading conditions. Runoff from the majority of the developed/paved areas of the Site, and presumably the building roof area is collected in a closed pipe drainage network which directs flow to a pipe outfall located on the slope beyond the northerly end of the full-sized soccer field.

Utility System Conditions

- Water
  Based on information provided by the Holden Water & Sewer Department, adequate water service in terms of system availability, flow, and pressure is available at the Site. Water mains are located in both Mount View Drive and in Shrewsbury Street. Record plans indicate that an 8" water service extends across the easterly side of the site connecting to both the Mount View Drive and Shrewsbury Street water mains. Due to the installation date (1987) the service main can be presumed to be in good condition. Apparent damage to an existing

PIV at the rear of the Site will need to be corrected as part of any Site improvement scheme.

- Sewer
  The existing school building is connected to the municipal sanitary sewer located in Mount View Drive via an 8" service pipe. Depending on the course of the project (i.e., renovation, new construction) the existing service pipe may need to be replaced in order to accommodate changes in building location and/or elevation. Even if construction of a new building is pursued on the westerly side of the site, it is likely that a replacement connection to the Mount View Drive system via a gravity connection can be achieved, although this will need to be verified as the project progresses.

  Based on a maximum student enrollment of 800 and a teacher/staff count of 50, the estimated daily sewage flow generated by the project will be 17,000GPD (310CMR 15.203, Title 5, 20GPD/pers). Because the sewage flow is an expansion of an existing discharge, it is very unlikely that capacity of the municipal sewer accepting the flow will be affected.

- Stormwater
  Because existing runoff flow patterns, as previously described, generally direct stormwater runoff to the north westerly side of the Site, it can be assumed that any upgraded or replacement stormwater management system will include an overland discharge point or points which will maintain the existing surface hydrology of the Site. So although municipal storm drain systems are present in Shrewsbury Street and Mount View Drive, it is unlikely that connection from the main portion of the Site to those systems would be pursued under any development scheme. If a secondary access drive was established at Shrewsbury Street as previously described, then at least a portion of the drive would include stormwater infrastructure which would make a connection to the municipal system at that location.

  Because the existing stormwater management system does not include elements that correspond to currently required performance standards for water quality and peak flow control, the existing system would likely be substantially altered or replaced as part of a renovation or new construction project. Any portion of the existing system that was designated to remain should be evaluated for compliance with currently accepted design practice and/or improved to meet the requirements of the MA DEP Stormwater Standards. The degree to which this is required will correspond to the level of overall site improvement that is pursued.

The well-drained soils on the Site and probability of deep groundwater and ledge conditions are conducive to substantial use of groundwater infiltration as a primary stormwater management method. On-site exploration of soils will be required to fully assess this potential and to advance a general stormwater management strategy.

- Power
  Based on informal information provided by the Town of Holden, there do not appear to be any deficiencies in the power or tele-communication capacity in the vicinity of the Site. This assumption should be verified as the project progresses by the Electrical Engineering Consultant.

- Gas
  Based on informal information provided by The Town of Holden, although gas service is not currently available to the existing middle school, it is located in relatively close proximity to the Site. It can be presumed that an extension of this service to the Site is feasible/practical. This assumption should be verified as the project progresses by the Mechanical Engineering Consultant.

- Underground Storage Tank
  The existing school utilizes a 10,000GAL underground fuel storage tank, located in a lower parking area to the west of the existing building. The tank should be evaluated for re-use or replacement as part of any improvement scheme.

2. EVALUATION OF EXISTING CONDITIONS – MALDEN STREET

Property Location & Configuration

The subject site (Site) includes a single parcel located directly east of the intersection of Chapel Street and Malden Street; the primary portion of the parcel being offset from these streets by residential frontage lots bordering each. A portion of the Site also nears Bullard Street to the east. The Site is designated as Holden Assessor's Parcel ID 150-43, with an area of 72 acres.

The entire Site is bounded by residential properties except to the southeast where it abuts the Mayo Elementary School property. The residential properties generally ½ acre frontage lots, with some exceptions, and are roughly 50% developed.

The primary parcel can be considered in two main sections including an 18 acre section situated to the north of the Mayo Elementary School (the "East Section"), and a 54 acre section to the west (the "West Section"). Both properties are generally quadrilateral in configuration, with the West Section aligned along a southwest-northeast axis, consistent with the alignment of Chapel Street and Malden Street.

Zoning Conditions

The Site lies within the Residence-1 (R-1) zoning district and is subject to the dimensional controls associated with that district. No overlay districts or other special zoning conditions are present that will affect the development of the Site.

Easements and other Property Limitations

Based on record survey data, and on municipal assessors maps, there do not appear to be any existing easements or similar encumbrances associated with the Site.

A portion of the property in the central to the West Section, as described in a later section, includes record soils designated as "Farmland of Statewide Importance". Under certain circumstances this can result a potential property encumbrance or restriction to development/conversion per Commonwealth of Massachusetts Executive Order 193. As authorized by the Order, the Massachusetts Department of Agricultural Resources (MDAR) has the ability to prohibit the use of state funds for conversion of these lands to other uses. Based on information obtained from the MDAR, because the area in question is heavily forested it is very unlikely that it would ever be converted to an agricultural use is highly unlikely, and therefore the associated restriction would not apply to this project. It is possible that the MDAR would suggest/recommend some minor mitigation in the form of an educational component oriented toward agriculture.

Access Potential

The Site currently includes no developed access points, although roadway frontage is available in three locations. Additionally, it may be possible to merge with the existing Mayo School access drive that connects to Bullard Street.

A possible access point, and presumably the primary access for the Site, is located on Malden Street, approximately 1,300FT north of the intersection with Chapel Street. Introduction of the Site's access drive at this point could result in perceived disruption to the adjacent single family lots, but no physical or dimensional barriers for a connection are apparent.

A secondary access point may be possible at a frontage connection point on Chapel Street, approximately 1,000FT south of the intersection with Malden Street. Two potential restrictive conditions are present at this location. The access point is proximate to a wetland resource area which would require definition/delineation to verify that adequate non-wetland area is available for the connection. Also, because the access point is slightly offset (south) from the intersection of Brice Circle and Chapel Street, it is likely that this access would be reserved for emergency use only and not as an ordinary Site entry.

An additional frontage connection point onto Chapel exists, approximately 600FT south of the intersection with Malden Street. However, this area is completely separated from the West Section by a substantial wetland resource area and utilization of this connection is not practical.

As noted above, a connection from the Site to the existing Mayo School site driveway could be achieved, providing that the East Section can be accessed from the West Section (i.e., the primary development site) by crossing a wetland resource area as described in below (see "Environmental Resources and Hydrology"). Depending on the conditions of the development, this could potentially function as an emergency access or general secondary access.

Existing Development

The Site is currently undeveloped, although some trails have been established across the southerly section of the Site, including wooden footbridge/footpath construction which remains in good condition.

Topography, slopes and orientation

The East Section and West Section of the Site are topographically distinct and are separated by a wetland system that bisects the Site from north to south. The East Section slopes uniformly from EL. 790± at the eastern property boundary to EL.740± at the bisecting wetland area. The terrain is generally uniform with even slopes transitioning from approximately 8% to the east and reducing to 2-3% to the west, across approximately 900FT.

The main topographic feature of the West Section is a broad and relatively flat wooded knoll, measuring roughly 150-200FT east to west and 400FT± north to south, peak EL. 752+. It is located about 100FT west of the bisecting wetland and abuts the northerly Site boundary. The terrain drops off from the knoll somewhat steeply to the west (10-15%) for about 200FT, then moderates, sloping more gradually down to a second and separate wetland system that separates the main portion of the Site from its southwesterly corner. The terrain undulates slightly to the south, finally sloping up to a minor knoll at the southerly Site boundary.

With the exception of the relatively limited area of moderately steep slopes west of the main knoll, none of the topographic conditions presents a particular design constraint. The conditions on the knoll appear to be ideally suited for development.

Tree cover and vegetation

The Site is completely wooded with mature tree growth which varies with the terrain and soil conditions across the Site. The East Section primarily includes deciduous tree growth with a predominance of oak in some areas with generally moderate to heavy underbrush. Conversely, the West Section is dominated by evergreen trees, primarily white pine, with light to moderate undergrowth.

The moderate grades and somewhat dense woodland conditions could afford opportunities in the design process for selective clearing and cutting and careful grade manipulation for the purpose of retaining some of the mature tree growth and incorporating it into the site program.

Soils

Based on National Resources Conservation Service (NRCS) data, the soils on the Site include the following NRCS Map Units:

71A&B, Ridgebury - within central wetland system

- fine sandy loam

- extremely stony
- poorly drained
- 0-6″ to groundwater
- >5FT to ledge
- erosive concern is moderate
- generally unsuitable for building construction

73A, Whitman – southwesterly wetland system

- loam
- extremely stony
- very poorly drained
- +12, – 6" to groundwater
- >5FT to ledge
- erosive concern is moderate
- generally unsuitable for building construction

307B, Paxton – easterly boundary of East Section

- fine sandy loam
- extremely stony
- well-drained, but typically with a restrictive layer at an 18-30" depth
- >18-30" to groundwater (typically perched)
- >5FT to ledge
- suitable for building construction with measures taken to manage groundwater
- erosive concern is slight-moderate depending on slope

312B, Woodbridge – lower slope of West Section knoll, mid-slope Eastern Section

- fine sandy loam
- extremely stony
- moderately well drained, restrictive soil layers
- >18-30" to groundwater (typically perched)
- >5FT to ledge
- suitable for building construction with measures taken to manage groundwater
- erosive concern is moderate

421B, 422B, Canton – West Section knoll and west edge of East Section

- fine sandy loam
- very/extremely stony
- well drained
- >6FT to groundwater
- >5FT to ledge
- adequate for building construction
- erosive concern is low-moderate (substratum)

In general, what are likely to be the primary development areas of the Site include Canton, Paxton, and Woodbridge soils, listed in order of preference for building construction. Proper management of groundwater, perched or otherwise, in areas of

Paxton and Woodbridge soils will be required for building or roadway construction. Special considerations will be required for road base or other related construction where the project crosses Ridgebury or Whitman soils relative to soil stability and groundwater management.

Environmental Resources and Hydrology

As briefly noted in previous sections, the east and west sections of the Site are bisected by a substantial wetland resource area. This area is a woodland swamp with no apparent primary hydraulic channel. Its general width in the vicinity of a possible crossing location should be determined to facilitate future planning and design efforts.

In addition to the project constraints associated with a bordering vegetated wetland, this area is also designated as a "priority habitat" area by the Natural Heritage and Endangered Species Program (NHESP - MA Div. of Fisheries and Wildlife). The habitat area in the vicinity of the Site generally matches the 100-FT buffer zone of this wetland area, based on DEP wetland designation. The particular species is/are not known at this time and an inquiry has been made to NHESP for further identification information. Depending on what species is/are associated with the habitat, some form of mitigation or specific design elements may be required for the project.

A second wetland system extends across the southwesterly portion of the Site, effectively cutting off the most southwesterly upland area from development. This area is also a woodland swamp, but not likely to be affected by the development of the Site.

Utility System Conditions

- Water
  Based on information provided by the Holden Water & Sewer Department, adequate water service in terms of system availability, flow, and pressure is available at the Site. 8" water mains are located in both Malden Street and Chapel Street, making the installation of a looped service main possible.

- Sewer
  There are municipal sewer infrastructure systems available within reasonable proximity to the Site. Based on municipal GIS topography, it appears that the only opportunity to discharge sewer from the Site via gravity flow would be to make a connection from the primary development area to Malden Street. Currently, no sewer infrastructure exists in that location. Alternatives for making a connection that should be evaluated could include:

- *Extension of the municipal system from the existing Malden Street pump station*
  This would include installation of approximately 2,000FT of gravity sewer along Malden Street, to the northeast of the existing pump station, providing an opportunity to discharge sewage from the site via gravity flow. However, depending on the actual inflow elevation of the existing pump station, this might not be feasible due to the downward grade change (6FT±) along this route immediately adjacent to the pump station location. These elevations would need to be studied in more detail to assess the viability of this option.

- *Connection to the municipal system via force main conveyance*
  This would include collection of sewage from the site in a gravity pipe network and directing flow to an on-site pump station that would convey flow to either an existing municipal pump station or to a nearby gravity collection pipe network. The selected connection point would be influenced by several factors including but not limited to dosing frequency, municipal infrastructure capacity, and pumping capacity of the associated municipal pump station.

The anticipated 17,000GPD of sewage generated at the Site would represent a new increase in flow to the area regardless of the selected connection point and method. Further evaluation of potential impacts to municipal infrastructure, and assessment of the feasibility for possible municipal infrastructure improvements is required to make a final recommendation on this issue.

- <u>Stormwater</u>
  Stormwater discharges from the Site will be managed on-site with no connection to municipal stormwater infrastructure. There are several stormwater conveyance routes that currently collect stormwater runoff from the existing Site, including the centrally located wetland system that discharges runoff to a broad woodland swamp located off-site to the south, and the southwesterly wetland system that flows to a roadway culvert under Malden Street. The stormwater management system for the project should be designed to mimic the existing hydrology of the Site and function in accordance with the requirements of the MA DEP Stormwater Standards.

- <u>Power</u>
  Based on informal information provided by the Town of Holden, there do not appear to be any deficiencies in the power or tele-communication capacity in the vicinity of the Site. This assumption should be verified as the project progresses by the Electrical Engineering Consultant.

- Gas
  Based on informal information provided by The Town of Holden, provision for gas service to the Site does not appear to be feasible.

Please contact us at your convenience if additional information is required to supplement the above evaluation of the development sites. It is our understanding that a more thorough interpretation of the information will be completed for the next project phase for a preferred site or sites. We look forward to assisting LPA in those efforts.

Sincerely,
BRASSARD DESIGN & ENGINEERING, INC.

Matthew T. Brassard, PE

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

Department of Agricultural Resources
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MDAR MASSACHUSETTS DEPARTMENT OF AGRICULTURAL RESOURCES

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Secretary

GREGORY C. WATSON
Commissioner

June 14, 2012

William S. Senecal, Architect
Lamoureux Pagano Associates Architects, Inc.
108 Grove Street, Suite 300
Worcester, MA 01605

RE: Mountview Middle School - Holden, Executive Order #193 Determination

Dear Mr. Senecal:

I've reviewed the Custom Soil Resources Report for Mountview Middle School prepared by the U.S.D.A. Natural Resources Conservation Service. The NRCS report indicates that the site contains approximately 16 +/- acres of prime farmland, predominantly located in the area of the existing recreational fields. Although, the soil survey classifies the area as Canton fine sandy loam, 3-8% slope, which is considered prime farmland, anecdotal information indicates that the area where the recreational fields are located contains soil material from off-site. In addition, the intent of the Department's Agricultural Lands Mitigation Policy is to preserve prime and/or state agricultural soils in situations where their long term use and agricultural viability is assured. Since the area reportedly containing prime agricultural soils is currently in recreational use, it is highly unlikely that these areas will be returned to active agricultural use. It is my determination therefore that although the site may contain agricultural soils, no on-site or off-site mitigation is required under the Agricultural Lands Mitigation Policy. I would like to suggest that the school consider establishing a community garden, create a small scale agricultural project or incorporate an agricultural education component into their curriculum to increase student and faculty awareness of the importance of agriculture.

Thank you for the opportunity to comment of this proposed project and please feel free to contact me with any questions.

Sincerely,

Barbara L. Hopson
Land Use Administrator

D. Evaluation of Building Code Compliance

Introduction: The Mountview Middle School is a 3-story building originally constructed in 1966. An addition was constructed in 1989, and a mechanical system renovation was performed in 1997.

Applicable Codes: Alterations, renovations and additions to the existing Mountview Middle School building are subject to the 8th Edition Massachusetts (MA) State Building Code. The following is a list of codes that apply to the 8th Edition MA State Building Code:

- 2009 International Building Code (IBC)
- 2009 International Existing Building Code (IEBC)
- 2009 International Energy Conservation Code (IECC)
- 2009 International Mechanical Code (IMC)
- 2009 International Fire Code (IFC)
- 780 CMR - MA Amendments to the IBC
- 527 CMR - MA Fire Prevention Regulations and MGL Chapter 148 Section 26G – Sprinkler Protection
- 527 CMR 12.00: MA Electrical Code (2011 National Electrical Code)
- 521 CMR - MA Architectural Access Board Regulations
- 248 CMR - MA Plumbing Code
- 524 CMR - MA Elevator Code (2004 ASME A17.1)

International Existing Building Code:

The 2009 International Existing Building Code (IEBC), which has been adopted and amended by Massachusetts, provides for 3 separate compliance methods:

- Prescriptive Compliance Method
- Work Area Compliance Method
- Performance Compliance Method

This report is based on the Work Area Compliance Method which is, in LPA's opinion, the most likely and best option for the potential scope of work. The Work Area Method further classifies alterations to existing buildings depending on the proposed scope of work as follows:

- Level 1 alterations include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment of fixtures that serve the same purpose. Level 1 alterations shall comply with the provisions of Chapter 6 of the IEBC.

- Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment. Level 2 alterations shall comply with the provisions of Chapters 6 and 7 of the IEBC.
- Level 3 alterations apply where the work area exceeds 50% of the aggregate area of the building. Level 3 alterations shall comply with the provisions of Chapters 6, 7 and 8 of the IEBC.

For purposes of this report, it is assumed that the scope of work in the existing building will trigger the threshold for Level 3 compliance and that any new addition will a) be separated from the existing building by a fire wall, and b) will comply with the code for new construction.

Occupancy Classification: The Occupancy of the existing building is classified as Educational Group "E" use. Assembly areas (such as Cafeteria, Gymnasium, Media Center, etc.) that are accessory to the Group "E" use are **not** considered to be separate occupancies except when applying the occupancy requirements of Chapter 11. Other non-Assembly areas other than Group "E" use (such as offices and storage rooms) are subject to the requirements of Section 508 Mixed Use.

Construction Type: Based on LPA's observations and review of available construction drawings, the existing building is primarily masonry construction with only partially protected steel frame. Accordingly, it is Construction Type IIB.

Height/Area Limitations: If an addition is constructed, existing portions of the building are not required to meet height/area requirements for new construction provided that the new addition is separated by a fire wall in accordance with MA State Building Code. If an addition is constructed that is **not** separated, however, both the existing and new areas are subject to height/area requirements for new construction. Section 503.1 refers to Table 503 for allowable height/area limitations as follows (note that these are the **maximum** allowable areas per floor and are based on 100% open perimeter, and fire sprinkler system throughout the building):

MA Building Code Reference	Use Group "E"; Construction Type "IIB"	
	Height	Area
Table 503 Tabular Value	55'; 2-story	14,500 SF
504.2 Automatic Sprinkler System Increase	20'; 1-story	

MA Building Code Reference	Use Group "E"; Construction Type "IIB"	
	Height	Area
506.2 Frontage Increase (assumes 100% of perimeter has at least 30' wide open space)		10,875 SF
506.3 Automatic Sprinkler System Increase (assumes full fire sprinkler system throughout and more than 1-story above grade plane)		29,000 SF
Total Allowable Height/Area Limitations	**75'; 3-story**	**54,375 SF**

Fire Resistance Ratings: The following table summarizes the required Fire-Resistance Ratings for Building Elements of Type IIB Construction, based on Table 601 and other applicable code provisions:

Building Element - Construction Type "IIB"	Fire Resistance Rating (in hours)	Notes
Primary structural frame	0	
Bearing walls – Interior	0	
Bearing walls – Exterior	0 (see notes)	Not less than per Table 602
Nonbearing walls and partitions - Exterior	0 (see notes)	Not less than per Table 602
Floor construction and secondary members	0	
Roof construction and secondary members	0	
Existing Exit Stairways	0	780 CMR 1016.1 Ex. 4 and IEBC 703.2.1 Ex. 6
New Exit Stairways	1	780 CMR 1016.1 Ex. 4
Existing MEP Shafts	0	IEBC 703.2.1 Ex. 6
New MEP Shafts	1	780 CMR 708.1 Ex. 3 and 708.4
New and Existing Corridors	0	780 CMR Table 1018.1
New Furnace Rooms with equipment over 400,000 BTU	1; or provide automatic fire-extinguishing	780 CMR Table 508.2.5 Incidental Accessory Occupancies
New Boiler Rooms with equipment over 15		

Building Element - Construction Type "IIB"	Fire Resistance Rating (in hours)	Notes
PSI and 10 HP	system	
New Laboratories or Vocational Shops		
New Laundry or Trash Rooms		
Emergency Electrical Room	2	No rating is required when fully sprinklered; however a 2-HR rating is still required for the emergency feeder-circuit wiring
Rooms Containing Fire Pumps in non-high rise buildings	2	

Exterior Wall Rating: Exterior walls of a new addition will need to comply with the requirements of Table 602 – Fire-Resistance Rating Requirements for Exterior Walls Based on Fire Separation Distance (FSD). Existing exterior walls are not required to comply with the requirements for new construction. The following table summarizes exterior wall fire-resistance ratings for various FSD conditions in a Use Group "E" building of Type IIB Construction:

Fire Separation Distance (in feet)	Fire-Resistance Rating (in hours)
X<5	1
5≤X<10	1
10≤X<30	0
X≥30	0

Vertical Openings: All existing vertical openings connecting two or more floors must be enclosed with 1-hour rated construction and approved opening protectives, unless the openings meet one of the exceptions in IEBC 703.2.1. New vertical openings are required to comply with 780 CMR 708.2. The existing stairs in the original building are open to the Corridors, but will not require enclosure provided an automatic fire sprinkler system is installed throughout the building.

Finishes: Interior finishes of Walls and Ceilings in Use Group "E" exits and corridors, as well as all new interior finishes, must comply with the following (IEBC 803.3 and IBC Table 803.9):

Building Component	Sprinklered	Unsprinklered
Exit Stair	Class B	Class A
Exit Access Corridors	Class C	Class B
Rooms and Enclosed Spaces	Class C	Class C

New Floor Finishes: If the building is equipped throughout with an automatic sprinkler system, traditional floor coverings such as wood, vinyl, carpeting, and other resilient floor coverings passing the DOC FF-1 pill test are allowed throughout the building, including all exits, exit passageways and exit access corridors (780 CMR 804.4.1). If the building is not equipped with an automatic sprinkler system, Class II materials are required in exit enclosures, exit passageways, and corridors (780 CMR 804.4.1).

Means of Egress: The means of egress including the number of exits and egress capacity must be sufficient for the number of occupants on all floors (IEBC MA Amendment Section 102.2.2.1). As shown in the following table and detailed calculations at the end of this report, the existing building is compliant with egress requirements.

Floor	Occupant Load	Number of Exits		Exit Capacity with FP	Exit Capacity without FP	Notes
		Required	Provided			
1st Floor	760			2,253	1,622	
2nd Floor	1,673			4,840	3,534	
3rd Floor	678			1,160	774	

Accessibility: **MA Building Code 780 CMR** requires that accessibility for persons with disabilities comply with 521 CMR Architectural Access Board (AAB) Regulations. 521 CMR 3.3 Existing Buildings regulates jurisdiction for renovations/alterations to existing buildings, based on 1) the full and fair cash value of the building, and 2) the cost of the work done over a 36-month period. If the cost of the work exceeds 30% of the **full and fair cash value of the building**, the entire building must be made fully accessible. The full and fair cash value of the building is defined as *the assessed valuation of a building (not including the land) as recorded in the Assessor's Office of the municipality at the time the building permit is issued as equalized at*

100% valuation, and is based upon MA Department of Revenue's (DOR) determination of the particular city's or town's assessment ratio. The FY 2011 assessed value of Mountview Middle School (building only) is $7,582,800 (based on Vision Appraisal data accessed via the Town's website). The Town of Holden's Assessment Ratio, per the MA DOR online Bureau of Local Assessment Proposed 2012 Equalization Study, is 0.95. Accordingly, **the full and fair cash value of the building is $7,981,895** ($7,582,800/0.95). 30% of $7,981,895 is **$2,394,568**. Since a comprehensive renovation will likely cost greater than $2,394,568, this report assumes that the entire building will be required to comply fully with 521 CMR accessibility requirements for new construction.

If full compliance with 521 CMR is thought to be impracticable, an application for Variance may be made to the AAB. Variances have typically been granted only when the applicant can prove that "the cost of compliance would be excessive without substantial benefit to persons with disabilities". Nevertheless, it is often worthwhile to request a variance when facing substantial modifications and their associated costs; the AAB may accept reasonable compliance alternatives that satisfy the intent of the regulations at much lower cost.

The following table includes provisions of 521 CMR applicable to the Mountview Middle School:

521 CMR SECTION:	DESCRIPTION:
3.00	JURISDICTION ▪ If the work performed amounts to greater than **$2,394,568,** then the entire building is required to comply with 521 CMR. ▪ If the work is performed over a period of time, the total cost of such work in any 36 month period is added together in applying 521 CMR 3.3 Existing Buildings. ▪ Non-occupiable spaces are exempt.
4.00	APPEAL AND VARIANCE ▪ If full compliance with 521 CMR is thought to be impracticable, an application for Variance may be made to the AAB.
12.00	EDUCATIONAL FACILITIES ▪ Administrative spaces, instructional spaces, and areas open to students or the general public shall comply with 521 CMR. ▪ Amphitheaters, lecture halls and classrooms shall comply with 521 CMR 14.00 PLACES OF ASSEMBLY. ▪ Libraries: At least 5% (but not less than one) of tables, study carrels, computer workstations and fixed seating must be accessible (clear 36" aisle, clear floor space, 27" h. x 30" w. x 19" d. knee clearance, 28-34" table/counter height).

<table>
<tr><th>521 CMR SECTION:</th><th>DESCRIPTION:</th></tr>
<tr><td></td><td>

Libraries: Checkout areas must comply (36" min. counter height/length). Card catalogs must comply (36" min. height).
Libraries: Security device must not impede accessible route.
Libraries: Stack aisles must be min. 36" clear; 42" preferred. Height is unrestricted.
Kitchens in classrooms must comply with 521 CMR 32.00 KITCHENS.
Sinks at classrooms and labs: At least 5% (but not less than one) in each classroom or lab must be accessible (clear 36" aisle, clear floor space, 27" h. x 30" w. x 19" d. knee clearance, 28-34" table/counter height). At least 50% of storage shelf space must be accessible (within forward and side reach). Controls and operating mechanisms must comply with 521 CMR 39.00 CONTROLS.
Recreational Facilities must comply with 521 CMR 19.00 RECREATIONAL FACILITIES.

</td></tr>
<tr><td>14.00</td><td>PLACES OF ASSEMBLY

Fixed seating (if applicable): Number of accessible wheelchair spaces is required per the table below:

<table>
<tr><th>Total Seating</th><th>Wheelchair Spaces</th></tr>
<tr><td>4-25</td><td>1</td></tr>
<tr><td>26-50</td><td>2</td></tr>
<tr><td>51-300</td><td>4</td></tr>
<tr><td>301-500</td><td>6</td></tr>
<tr><td>500+</td><td>6, one additional space for each total seating capacity increase of 100</td></tr>
</table>

Accessible wheelchair spaces must be 36" w. x 60" l., level and comply with 521 CMR 29.00 FLOOR SURFACES. Accessible wheelchair spaces must be provided in more than one location. Companion seats, designated by signage, must be provided next to each accessible wheelchair space.
Additionally, 1% of fixed seats must be aisle seats with no armrests on the aisle side, and be identified by signage.
Permanently installed assistive listening systems are required in assembly spaces that 1) accommodate more than 50 persons, or 2) have both an audio-amplification system and fixed seating.
Other assembly spaces may be provided with a portable assistive listening system (minimum number of receivers equal to at least 4% of the total number of seats).
Access to performing areas (i.e. stage) must be within the place of assembly.
Box office ticket counters must be accessible (portion of counter must be 36" l. min.; 36" h. max.).
Dressing rooms must comply with 521 CMR 33.00 DRESSING, FITTING AND CHANGING ROOMS.

</td></tr>
</table>

521 CMR SECTION:	DESCRIPTION:
17.00	RESTAURANTS ▪ 521 CMR 17.00 applies to the Middle School Cafeteria. ▪ At least 5% of tables must be accessible. Accessible tables must be distributed throughout the space. A 36" min. clear aisle is required between accessible tables. Knee clearance of at least 27" h. x 30" w. x 19" d. is required. Tops of tables must be within 28-34" h. ▪ All dining areas (raised, sunken, outdoor, etc.) must be accessible. ▪ Food service lines must have 36" wide aisles. ▪ Tray slides must be mounted no higher than 34". ▪ Self-service shelves and dispensing devices for tableware, dishes, condiments, food and beverages, as well as vending areas/machines, must comply with *zone of reach* per 521 CMR 5.00 DEFINITIONS. ▪ Cash register transaction counters must be mounted no higher than 36". ▪ TV's, if provided, must have closed caption decoders.
19.00	RECREATIONAL FACILITIES ▪ Gymnasiums, weightlifting rooms, locker rooms and all associated spectator areas must be accessible. ▪ Locker rooms must have a 36" clear *accessible route* around all lockers. ▪ At least 5% of lockers must be accessible (operable with a closed fist; mounted no higher than 42" h.). ▪ If locker benches are provided, there must be a 36" wide aisle between benches/lockers and a 5' turning diameter nearby.
20.00	ACCESSIBLE ROUTE ▪ An accessible route shall provide a continuous unobstructed path connecting accessible spaces and elements inside and outside a facility. ▪ Elevator or vertical platform lift access is required between the main Lobby and 2nd floor academic level (the existing *inclined wheelchair lift* is allowed only 1) to provide access to a performing area (stage) in an assembly use, or 2) in an existing building where no other work is being performed and no other alternative is available. ▪ Objects (display cases, public telephones, overhead conduits, stair stringers, etc.) in excess of 4" d., between the heights of 27-80", are not allowed to protrude into the *accessible route*. ▪ *Accessible routes* to exterior courtyards or logias (open to student use) must be provided.
21.00	CURB CUTS ▪ Whenever sidewalks, walkways, or curbs on streets and ways are constructed, reconstructed, or repaired, curb cuts are required. ▪ Slope of curb cuts (1:12 max.; cross slope max. 1:50) and transitions (1/2" max.) should be verified. ▪ Curb cuts may not allow accumulating water, ice or debris; some regarding is required.

<table>
<tr><th>521 CMR SECTION:</th><th>DESCRIPTION:</th></tr>
<tr><td>22.00</td><td>WALKWAYS
Walks, sidewalks, courts, plazas and other pedestrian walkways must be at least 48" wide excluding curb stones.
Walkways with running slope in excess of 1:20 (5%) are ramps (except that at sidewalks on streets with natural topography exceeding 1:20 (5%), ramps are not required).
Cross slope may not exceed 1:50 (2%).
Level changes greater than1/2" require a curb cut, walkway, ramp, elevator or platform lift.</td></tr>
<tr><td>23.00</td><td>PARKING AND PASSENGER LOADING ZONES
Number of accessible spaces shall be provided per table below:<table><tr><th>Total Parking in Lot</th><th>Required Minimum Number of Accessible Spaces</th></tr><tr><td>15-25</td><td>1</td></tr><tr><td>26-50</td><td>2</td></tr><tr><td>51-75</td><td>3</td></tr><tr><td>76-100</td><td>4</td></tr><tr><td>151-150</td><td>5</td></tr><tr><td>151-200</td><td>6</td></tr><tr><td>201-300</td><td>7</td></tr><tr><td>301-400</td><td>8</td></tr><tr><td>401-500</td><td>9</td></tr><tr><td>501-1000</td><td>2% of total</td></tr><tr><td>1000+</td><td>20 plus 1 for each 100 over 1000</td></tr></table>
There are a total of 70 existing parking spaces, based on review of existing site plans and online aerial imagery.
A total of 3 accessible parking spaces are required. 1 of these must be van accessible parking spaces.
Accessible spaces must be located with 200' of the closest accessible entrance, or an accessible drop-off area must be provided within 100' of the entrance.
Accessible parking spaces must be at least 8' wide plus a 5' (8' at van-accessible) access aisle. Sidewalks adjacent to accessible parking spaces must have curb cuts at access aisles.
Accessible parking spaces must be at least the same as adjacent spaces in accordance with MA Building Code or local zoning.
Slope shall not exceed 1:50 (2%) in any direction.
Spaces must be marked by high-contrast painted lines.
Accessible parking spaces must be identified by signage, located at the head of the space and not more than 10' away. Tops of signs may be between 5-8' high.
Passenger loading zones must provide an access aisle at least 5' x 20', adjacent and parallel to the vehicle pull-up space. At passenger loading zones, a minimum of 9'-6" vertical clearance is required. Slope may not exceed 1:50 (2%) in any direction.</td></tr>
</table>

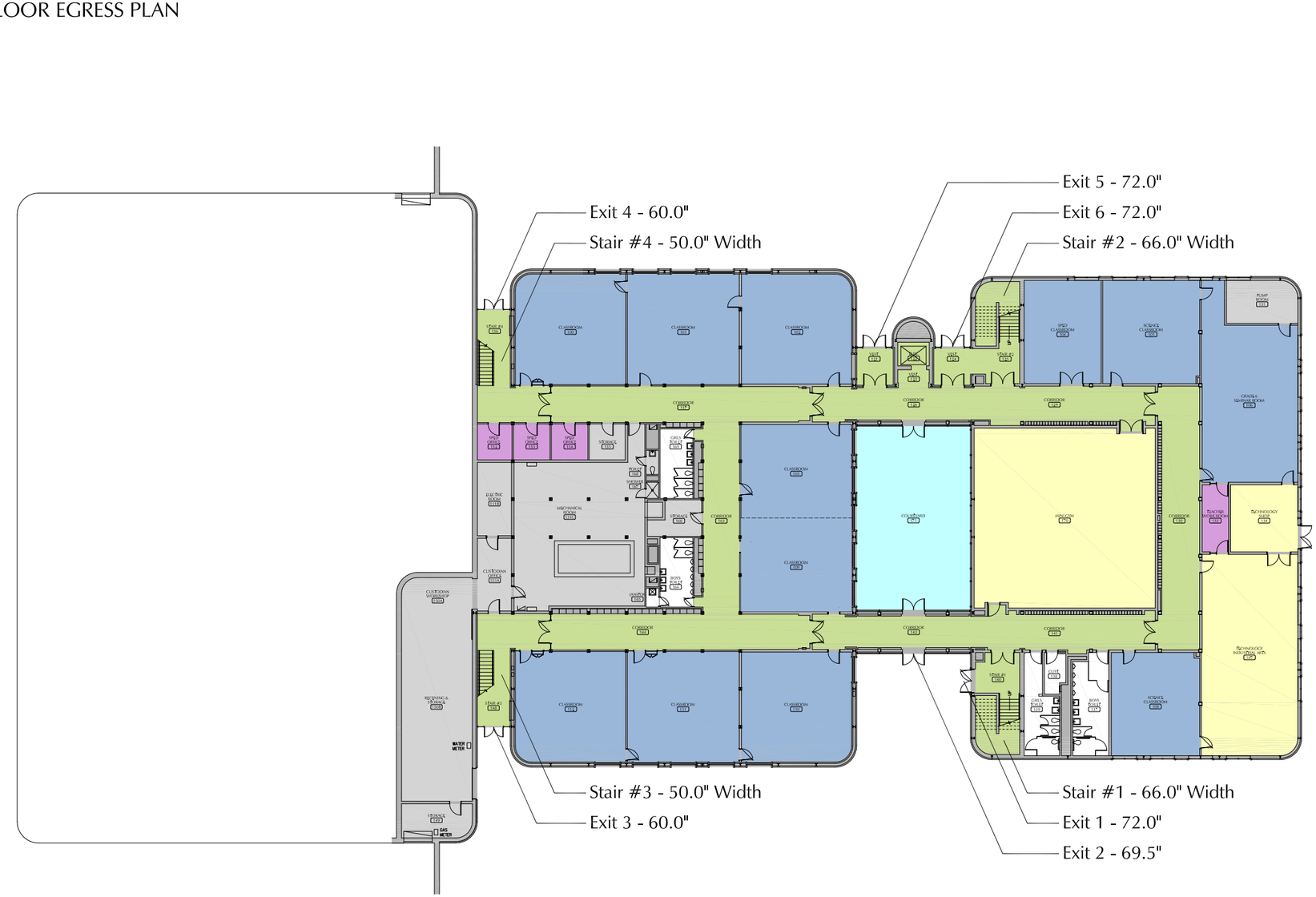
521 CMR SECTION:	DESCRIPTION:
24.00	RAMPS ▪ Any part of an accessible route with a slope greater than 1:20 (5%) shall be considered a ramp and shall comply with the requirements of 521 CMR 24.00
25.00	ENTRANCES ▪ All public entrances must be accessible. Public entrances are those other than service, loading or employee use only. ▪ Vestibule doors must have 48" plus door swing width between them. ▪ Mats ½" or less must be secured (all edges). Mats ½" to ½" must have beveled edges. Mats over ½" must be recessed. Grate openings may not exceed ½" space in direction of travel. ▪ Non-accessible entrances must have signage indicating the location of the accessible entrance.
26.00	DOORS AND DOORWAYS ▪ 1966 Original Building: Numerous door openings (including most classrooms with adjacent Teacher closets) have inadequate maneuvering clearances. ▪ 1989 Additions/Renovations: Most door openings are AAB-compliant.
27.00	STAIRS ▪ 1966 Original Building: Handrail size/profile of wood railing appears to be AAB-compliant but should be field verified. ▪ 1989 Additions/Renovations: Handrail size/profile and extensions appear to be AAB-compliant.
28.00	ELEVATORS: ▪ Key operation of existing elevator is non-compliant. ▪ Clear inside car dimensions, control location/height, presence of Braille controls, handrails, etc., should be verified. ▪ 2-way emergency communication system inside car is required.
30.00	PUBLIC TOILET ROOMS ▪ 1966 Original Building: Public toilet rooms are typically non-compliant. ▪ 1989 Additions/Renovations: Public toilet rooms appear to be typically compliant. ▪ Showers and other bathing facilities (including toilet rooms) at locker rooms must be accessible.
32.00	KITCHENS: ▪ The main Cafeteria Kitchen is not open to the public and therefore is not required to comply with accessibility requirements. Food service lines and transaction areas at the Kitchen/Cafeteria, however, must comply with 17.00 RESTAURANTS. ▪ Non-commercial kitchens in classrooms must comply with this section.
36.00	DRINKING FOUNTAINS: ▪ Existing drinking fountains should be verified to ensure that they meet the spout height requirement of 36" (max.).
37.00	PUBLIC TELEPHONES ▪ If provided, pay phones must be accessible, hearing-aid compatible and be equipped with volume control. ▪ If three or more public phones are provided together, one must be a text telephone.

521 CMR SECTION:	DESCRIPTION:
39.00	CONTROLS ▪ Controls and operating mechanisms in accessible spaces must be accessible with regard to clear floor space, height, location and operation.
40.00	ALARMS ▪ Emergency warning systems, if provided, must have both audible/visual alarms complying with 40.00 Alarms.
41.00	SIGNAGE ▪ Permanent rooms/spaces must be designated by signage complying with 41.00 Signage.

Other: Specific structural, mechanical/electrical and energy requirements are addressed in other evaluations and assessments included as part of this Feasibility Study package.

FEASIBILITY STUDY

FIRST FLOOR EGRESS PLAN



NORTH

0 16' 32'

LEGEND

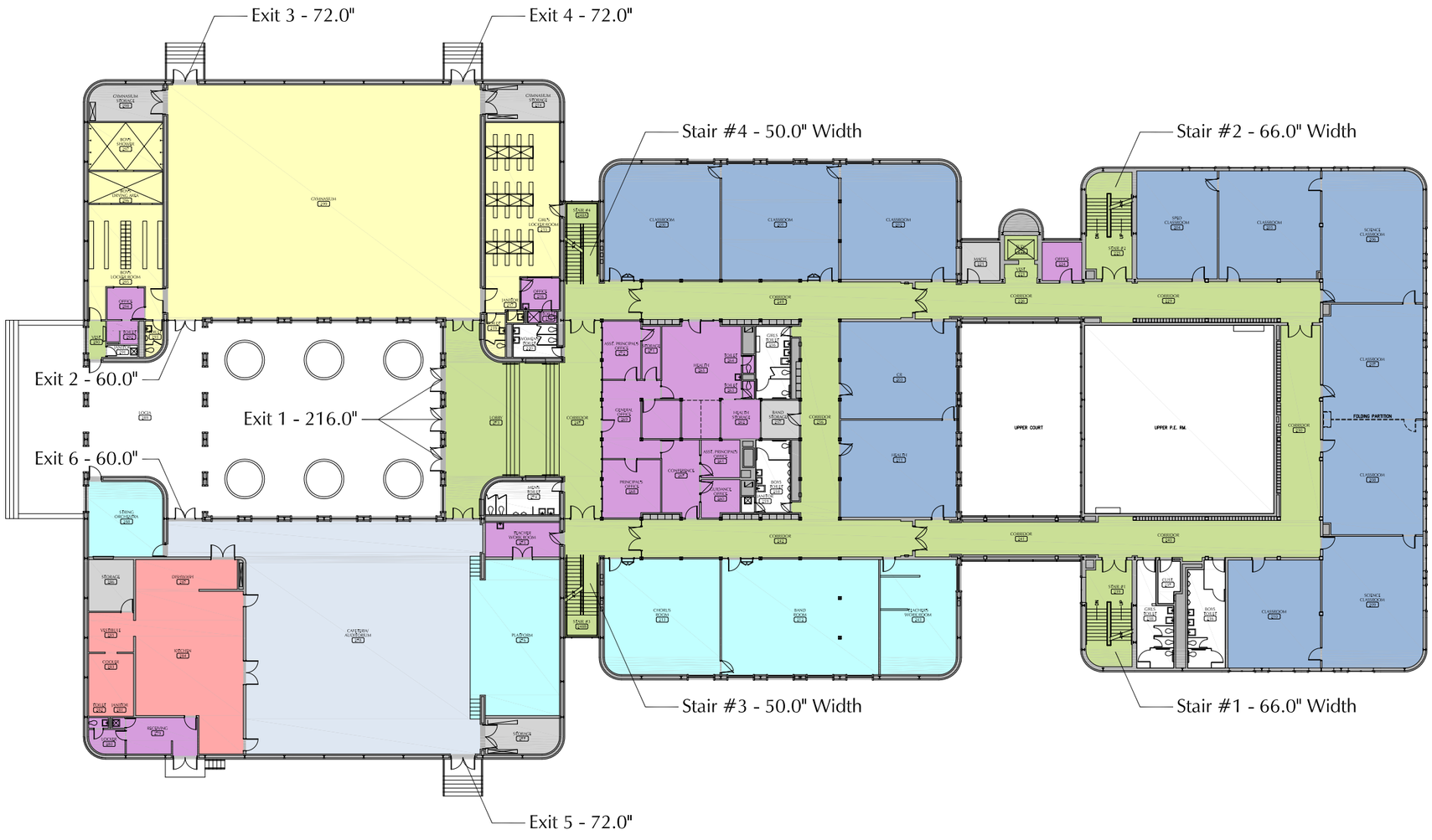
Assembly without Fixed Seats (Chairs Only)	7	N.S.F./Occ.
Assembly without Fixed Seats (Tables & Chairs)	15	N.S.F./Occ.
Classrooms	20	N.S.F./Occ.
Educational - Shops & Labs; Exercise/Locker Rooms	50	G.S.F./Occ.
Office Areas	100	G.S.F./Occ.
Commercial Kitchen	200	G.S.F./Occ.
Storage/Mechanical	300	G.S.F./Occ.
Circulation	N/A	
Other	N/A	

Mountview Middle School
270 Shrewsbury Street, Holden, MA 01520

FEASIBILITY STUDY

3.1.4 EVALUATION OF EXISTING CONDITIONS
D. Evaluation of Building Code Compliance

SECOND FLOOR EGRESS PLAN



NORTH

0 16' 32'

LEGEND

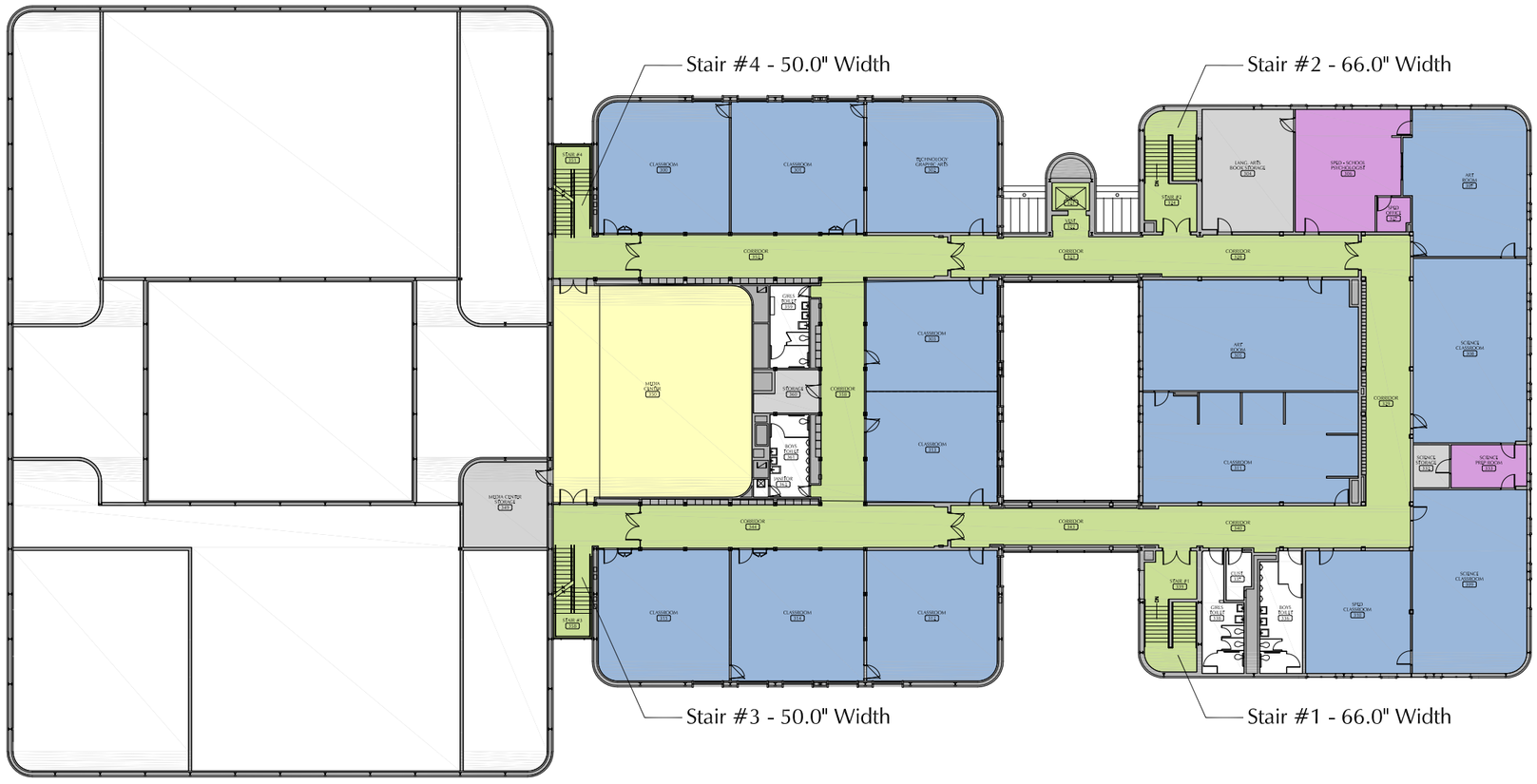
Assembly without Fixed Seats (Chairs Only)	7	N.S.F./Occ.
Assembly without Fixed Seats (Tables & Chairs)	15	N.S.F./Occ.
Classrooms	20	N.S.F./Occ.
Educational - Shops & Labs; Exercise/Locker Rooms	50	G.S.F./Occ.
Office Areas	100	G.S.F./Occ.
Commercial Kitchen	200	G.S.F./Occ.
Storage/Mechanical	300	G.S.F./Occ.
Circulation	N/A	
Other	N/A	

FEASIBILITY STUDY

THIRD FLOOR EGRESS PLAN

NORTH

0 16' 32'



LEGEND

Assembly without Fixed Seats (Chairs Only)	7	N.S.F./Occ.
Assembly without Fixed Seats (Tables & Chairs)	15	N.S.F./Occ.
Classrooms	20	N.S.F./Occ.
Educational - Shops & Labs; Exercise/Locker Rooms	50	G.S.F./Occ.
Office Areas	100	G.S.F./Occ.
Commercial Kitchen	200	G.S.F./Occ.
Storage/Mechanical	300	G.S.F./Occ.
Circulation	N/A	
Other	N/A	

3rd FLOOR EXIT CAPACITY - WITHOUT FIRE SPRINKLER SYSTEM							
Exit	**Stair Width (inches)**	**Stair Exit Allowance (inches/ occupant)**	**Stair Capacity (occupants)**	**Door Width (inches)**	**Door Exit Allowance (inches/ occupant)**	**Door Capacity (occupants)**	**Exit Capacity (occupants)**
Stair #1	66.0	0.30	220	72.0	0.20	360	220
Stair #2	66.0	0.30	220	72.0	0.20	360	220
Stair #3	50.0	0.30	167	72.0	0.20	360	167
Stair #4	50.0	0.30	167	72.0	0.20	360	167
Total			**773**			**1,440**	**774**
3rd Floor Occupant Load = 678 < 774; Exit Capacity complies.							

E. Evaluation of AAB Rules & Regulations

MA Building Code 780 CMR 3404.18 requires that accessibility for persons with disabilities comply with 521 CMR Architectural Access Board (AAB) Regulations. 521 CMR 3.3 Existing Buildings regulates jurisdiction for renovations/alterations to existing buildings, based on 1) the full and fair cash value of the building, and 2) the cost of the work done over a 36-month period.

If the cost of the work is less than 30% of the full and fair cash value of the building, and less than $100,000, only the work being performed must comply with 521 CMR. If the cost of the work is less than 30% of the full and fair cash value of the building, and more than $100,000, the work being performed must comply with 521 CMR; also, an accessible public entrance and an accessible toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) must also be provided in compliance with 521 CMR. In either case, the cost of certain types of work (i.e. alteration work consisting solely of mechanical/electrical alterations, hazardous material abatement or retrofit of automatic sprinkler systems not involving alteration of any elements or spaces required to be accessible; roof or window repair/replacement or masonry repair work; septic system repairs, site utility and landscaping work) are exempt from the calculation of cost.

If the cost of the work exceeds 30% of the full and fair cash value of the building, the entire building is required to comply with 521 CMR. The Mountview Middle School (building only) is assessed at $7,582,800 (based on Town of Holden Assessor's data); 30% of $7,582,800 is $2,274,840. While a Base Repair and Minimum Renovation Option may not trigger full compliance, the cost of a the Moderate and Full Renovation/Addition Options would almost certainly exceed $2,274,840 and the entire building would then be required to comply fully with 521 CMR accessibility regulations for new construction.

If full compliance with 521 CMR is thought to be impracticable, an application for Variance may be made to the AAB. Variances have typically been granted only when the applicant can prove that "the cost of compliance would be excessive without substantial benefit to persons with disabilities". Nevertheless, it is often worthwhile to request a variance when facing substantial modifications and their associated costs. The AAB has, in the past, accepted reasonable compliance alternatives that satisfy the intent of the regulations at much lesser cost than would be incurred for full compliance.

521 CMR also addresses other specific sections as follows:

12.00 EDUCATIONAL FACILITIES:

- Administrative spaces, instructional spaces, and areas open to students or the general public shall comply with 521 CMR.
- Amphitheaters, lecture halls and classrooms shall comply with 521 CMR 14.00 PLACES OF ASSEMBLY.
- Libraries: At least 5% (but not less than one) of tables, study carrels, computer workstations and fixed seating must be accessible (clear 36" aisle, clear floor space, 27" h. x 30" w. x 19" d. knee clearance, 28-34" table/counter height).
- Libraries: Checkout areas must comply (36" min. counter height/length). Card catalogs must comply (36" min. height).
- Libraries: Security device must not impede *accessible route*.
- Libraries: Stack aisles must be min. 36" clear; 42" preferred. Height is unrestricted.
- Kitchens in classrooms must comply with 521 CMR 32.00 KITCHENS.
- Sinks at classrooms and labs: At least 5% (but not less than one) in each classroom or lab must be accessible (clear 36" aisle, clear floor space, 27" h. x 30" w. x 19" d. knee clearance, 28-34" table/counter height). At least 50% of storage shelf space must be accessible (within forward and side reach). Controls and operating mechanisms must comply with 521 CMR 39.00 CONTROLS.
- Recreational Facilities must comply with 521 CMR 19.00 RECREATIONAL FACILITIES.

14.00 PLACES OF ASSEMBLY:

- Permanently installed assistive listening systems are required in assembly spaces that 1) accommodate more than 50 persons, or 2) have both an audio-amplification system and fixed seating. These spaces, based on the proposed Educational Program, include the Gymnasium/Auditorium and Cafeteria.
- Other assembly spaces may be provided with a portable assistive listening system (minimum number of receivers equal to at least 4% of the total number of seats).
- Access to performing areas (i.e. stage or platform) must be within the place of assembly.

19.00 RECREATIONAL FACILITIES:

- Gymnasium, locker rooms and all associated spectator areas must be accessible.
- Locker rooms must have a 36" clear *accessible route* around all lockers.
- At least 5% of lockers must be accessible (operable with a closed fist; mounted no higher than 42" h.).
- If locker benches are provided, there must be a 36" wide aisle between benches/lockers and a 5' turning diameter nearby.

20.00 ACCESSIBLE ROUTE:

- Cafeteria stage performing level is not accessible.
- *Accessible route* to exterior courtyard (open to student use) is compliant.
- Objects (display cases, public telephones, overhead conduits, stair stringers, etc.) in excess of 4" d., between the heights of 27-80", are not allowed to protrude into the *accessible route*.

21.00 CURB CUTS:

- Slope of curb cuts shall be 1:12 max.; cross slope max. 1:50; transitions (½" max.).
- Curb cuts may not allow accumulating water, ice or debris.

22.00 WALKWAYS:

- Walks, sidewalks, courts, plazas and other pedestrian walkways must be at least 48" wide excluding curb stones.
- Walkways with running slope in excess of 1:20 (5%) are *ramps* (except that at sidewalks on streets with natural topography exceeding 1:20 (5%), ramps are not required).
- Cross slope may not exceed 1:50 (2%).
- Level changes greater than½" require a curb cut, walkway, ramp, elevator or platform lift.

23.00 PARKING AND PASSENGER LOADING ZONES:

- Number of required accessible spaces shall be per the table below:

Total Parking in Lot	Required Minimum Number of Accessible Spaces
15-25	1
26-50	2
51-75	3
76-100	4
101-150	5
151-200	6
201-300	7
301-400	8
401-500	9
501-1000	2% of total
1000+	20 plus 1 for each 100 over 1000

- There are a total of 68 existing parking spaces, based on observations, review of existing site plans and online aerial imagery. Requested parking quantity is for 125 spaces.
- A total of 5 accessible parking spaces will be required. One in every 8 parking spaces, but not less than one, must be van accessible.
- Accessible spaces must be located with 200' of the closest accessible entrance, or an accessible drop-off area must be provided within 100' of the entrance.
- Accessible parking spaces must be at least 8' wide plus a 5' (8' at van-accessible) access aisle. Sidewalks adjacent to accessible parking spaces must have curb cuts at access aisles.
- Accessible parking spaces must be at least the same length as adjacent spaces in accordance with MA Building Code or local zoning.
- Slope shall not exceed 1:50 (2%) in any direction.
- Spaces must be marked by high-contrast painted lines.
- Accessible parking spaces must be identified by signage, located at the head of the space and not more than 10' away. Tops of signs may be between 5' to 8' high.
- Passenger loading zones must provide an access aisle at least 5' x 20', adjacent and parallel to the vehicle pull-up space. At passenger loading zones, a minimum of 9'-6" vertical clearance is required. Slope may not exceed 1:50 (2%) in any direction.

24.00 RAMPS:

- Existing exterior ramp does not comply; handrails are discontinuous (interrupted by pilaster).

25.00 ENTRANCES:

- All public entrances must be accessible. Public entrances are those other than service, loading or employee use only.
- Vestibule doors must have 48" plus door swing width between them.
- Mats ½" or less must be secured (all edges). Mats ½" to ½" must have beveled edges. Mats over ½" must be recessed. Grate openings may not exceed ½" space in direction of travel.
- Non-accessible entrances must have signage indicating the location of the accessible entrance.

26.00 DOORS AND DOORWAYS:

- Most door openings in the 1966 Building and all doors in the 1987 Addition have inadequate maneuvering clearances and compliant lever-type hardware.

27.00 STAIRS:

- Nosings in the 1966 Building appear to exceed the dimensional limits required by AAB, and will require modifications.
- Handrails are compliant in both the 1966 Building and 1987 Addition in terms of height (less than the 34-38" above nosing required by AAB), have proper extensions and are continuous. Handrail size/profile in 1966 Building are not AAB-compliant.
- While not an accessibility issue, guardrail openings in the 1966 Building exceed the allowable for new construction. Modifications to other stair components will require that guardrails be upgraded to comply with current MA Building Code.

28.00 ELEVATORS:

- The existing inclined lift located at the main entry lobby does not comply with 521 CMR per Exception 28.12.4.b. It should be noted that the existing elevator installed in the 1987 Addition complies with 521 CMR.

30.00 PUBLIC TOILET ROOMS:

- Public toilet rooms are typically non-compliant due to inadequate maneuvering clearances, stall size, fixture types, lack of grab bars, controls, etc. Public toilet rooms are compliant in the 1987 Addition.
- Showers and other bathing facilities (including toilet rooms) at locker rooms must be accessible.

32.00 KITCHENS:

- The main Cafeteria Kitchen is not open to the public and therefore is not required to comply with accessibility requirements. Food service lines and transaction areas at the Kitchen/Cafeteria, however, must comply with 17.00 RESTAURANTS.

36.00 DRINKING FOUNTAINS:

- Drinking fountains are required to have spout height of 36" (max.).

37.00 PUBLIC TELEPHONES:

- If provided, pay phones must be accessible, hearing-aid compatible and be equipped with volume control.
- If three or more public phones are provided together, one must be a text telephone.

39.00 CONTROLS:

- Controls and operating mechanisms in accessible spaces must be accessible with regard to clear floor space, height, location and operation.

40.00 ALARMS:

- Emergency warning systems, if provided, must have both audible/visual alarms complying with 40.00 Alarms.

41.00 SIGNAGE:

- Permanent rooms/spaces must be designated by signage complying with 41.00 Signage.

It should be noted that the 1987 Addition complies with 521 CMR, whereas, certain conditions within the 1966 Building will require some renovation or variances to comply.

Assessors Online Database For Holden, MA

New Search | Print | Google Map | Log Out

270 SHREWSBURY ST

Click to enlarge

MBLU :	201/ 62/ / / /
Location:	270 SHREWSBURY ST
Owner Name:	HOLDEN TOWN OF
Account Number:	1

SEARCH FOR SIMILAR SALE PROPERTIES

Parcel Value

Item	Current Assessed Value	FY 2011 Assessed Value
Improvements	7,582,800	7,582,800
Land	295,900	308,600
Total:	**7,878,700**	**7,891,400**

Owner of Record

HOLDEN TOWN OF
TOWN HALL
HOLDEN, MA 01520

Ownership History

Owner Name	Book/Page	Sale Date	Sale Price
HOLDEN TOWN OF	4647/313A	3/9/1966	

Land Use (click here for a list of codes and descriptions)

Land Use Code	Land Use Description
934C	IMPRVD EDU MDL-94

Land Line Valuation

Size	Zone	Assessed Value

MASSACHUSETTS DEPARTMENT OF REVENUE

BUREAU OF LOCAL ASSESSMENT

PROPOSED 2012 EQUALIZATION STUDY

June 1, 2012

HOLDEN

Class	Assessed Value	Assessment Ratio	Estimated Full Value
Residential	$1,726,046,735	0.95	$1,816,891,300
Open Space	0		0
Commercial	59,631,065	0.95	62,724,800
Industrial	24,772,300	0.95	26,076,100
Personal Property	27,632,500	1.00	27,632,500
Total Real/Personal Property	$1,838,082,600	0.95	$1,933,324,700
Estimated Growth		1.25%	24,166,600
Proposed Equalized Valuation			$1,957,491,300
Chapter 121A			
2012 Final Equalized Valuation			

(LA-19)

F. Evaluation of Significant Structural, Environmental, Geotechnical or other Physical Conditions

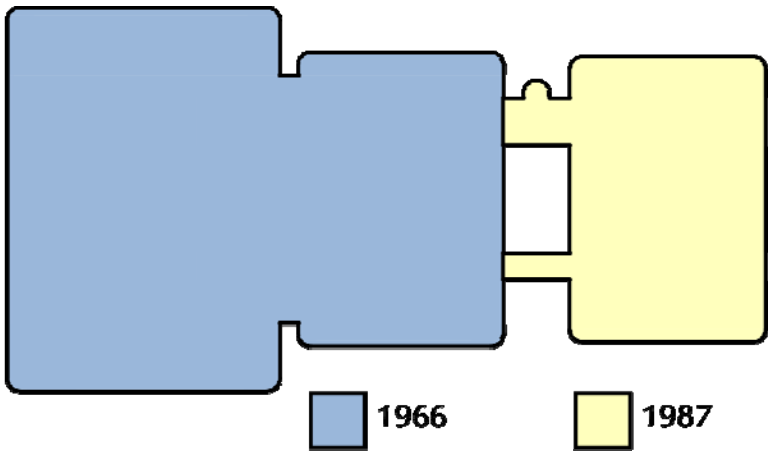
- *Architectural*
- *Traffic*
- *Structural*
- *Fire Protection*
- *HVAC/Plumbing*
- *Electrical*

GENERAL

History: Mountview Middle School was built in phases over a period of approximately 46 years. The construction timeline is indicated below:

- Original Building constructed as Mountview Middle School; drawings dated 1966 were prepared by Martin-Williams Architects, Worcester, MA.
- Addition drawings dated 1987 were prepared by Alderman & MacNeish, Springfield, MA.
- Mechanical alteration drawings dated 1997 by Ganteaume McMullen Inc., Boston, MA and Lamoureux Pagano & Associates, Inc., Worcester, MA

Refer to the following plan graphic showing the various construction dates:



EXTERIOR ENVELOPE

Roof:

- The Original Building roofing system is EPDM (rubber membrane) installed at time of addition (1987).
- The Addition is shown as an EPDM (rubber membrane) roofing system.
- Recommendations: Install new TPO (PVC) white roof.

Walls:

- Exterior walls of the original building typically consist of brick masonry attached to concrete masonry block inner wall, 2" rigid insulation and masonry block interior finish.
- Exterior walls of the Addition are brick masonry attached to concrete masonry block inner wall and finish. It is assumed that insulation was in the form of "core fill".
- Recommendations: No extraordinary measures need be taken other than minimal pointing and glazing on the exterior. Interior is in good condition; minor cracks can be filled and painted.

Aluminum Window/Storefront/Entrance Systems:

- Window systems at the Original Building were single glazed in metal frames. Window systems in the Addition are aluminum frames with 1" insulating glass units.

- Storefront systems at the Original Building similar to window system. Storefront systems in the Addition are aluminum frames with 1" insulating glass units.
- Recommendations: All windows and storefronts to be replaced with thermally broken aluminum frames, insulating low-e glass. Additional venting area to be added at each window unit with screens.

Miscellaneous Exterior Items:

- Exterior steel doors and frames for both the Original Building and Addition appear in good condition.
- There is one sectional overhead door.
- Unit ventilator louvers within the Addition (Original Building ducted system) appear to be in good condition.
- Recommendations: New insulated metal doors should be installed within the existing frames. Existing frames not grouted should be filled with insulating foam.

INTERIOR

Doors, Frames and Hardware:

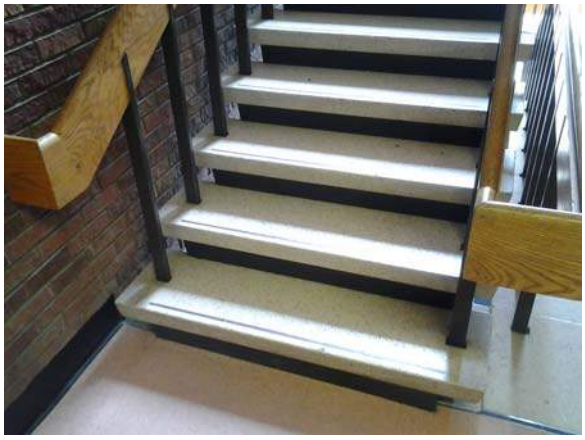
- Interior doors are typically solid core stained wood; there are also some painted hollow metal doors at Mechanical/Utility spaces.
- Frames are typically painted hollow metal.

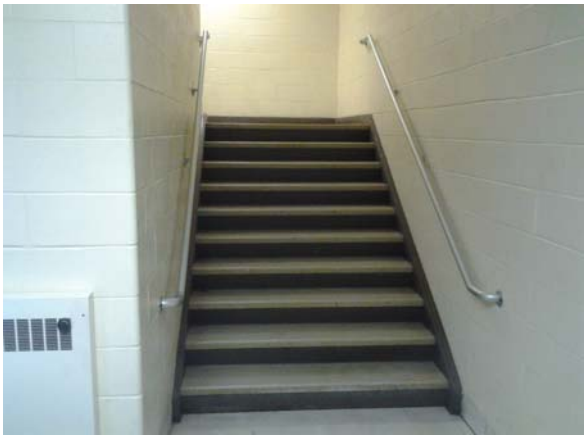
- Finish hardware at the Original Building and Addition typically has lever-type trim. Corridor doors have push bars.
- Assembly spaces (i.e. Auditorium, Gymnasiums, and Cafeteria) and exterior means of egress have panic hardware exit devices at most locations.
- Recommendations: All hardware to be replaced. Original Building hardware is handed to the respective door and replacement parts out of production. Changing all hardware will synchronize makers and functions.

Finishes:

- Classrooms: Classroom floors are typically 12″ x 12″ vinyl composition tile (VCT). Walls are generally painted CMU with a 5″ high glazed CMU base. Classroom ceilings are typically a suspended ACT system (either 2′ x 2′ or 2′ x 4′).

- Corridors: Corridor floors are typically 12″ x 12″ vinyl composition tile (VCT). Corridors walls vary. Corridor ceilings are typically either 2′ x 4′ or 2′ x 2′ ACT.





- Stairs: Stairs in the Original Building typically have steel channel stringers, precast terrazzo treads, steel risers, painted steel tube balusters and solid hardwood handrails. Stairs in the Addition have steel channel stringers, concrete-filled steel pans, steel risers, rubber tread/nosings and aluminum pipe handrails. Walls and ceilings are similar to those at Corridors.

- Toilet Rooms: Finishes at toilet rooms include ceramic mosaic floor tile, glazed CMU base, painted CMU walls and either suspended ACT or plaster ceilings. Toilet partitions are painted steel overhead-braced type.

- Cafeteria/Kitchen: Flooring at the kitchen is ceramic tile.

- Cafeteria/Auditorium: Flooring is 12″ x 12″ VCT with 8″ x 8″ wood parquet tile at the Platform; walls are painted CMU (sides), vertical hardwood slats (rear) and exposed brick masonry (Platform front); ceiling is 2′ x 2′ suspended ACT.

- Gymnasium: Flooring is tongue and groove hardwood with vented rubber angle perimeter base; walls are glazed/painted CMU. Ceilings at the Original Building Gymnasium and Locker Rooms are 2′ x 2′ perforated concealed-spline metal ACT system; ceilings at the Mini-Gym in the Addition are 2′ x 4′ ACT.

- Media Center: Flooring is carpet; base is 6″ vinyl; walls are exposed brick masonry; ceilings are 2′ x 2′ suspended ACT.

- Administration: Flooring is carpet or VCT; walls are painted CMU; ceiling is suspended ACT.

- Refer to the following table for full description of existing finishes by room name/number:

EXISTING ROOM FINISHES LEGEND

LOCATION	DESIGNATION	DESCRIPTION OF MATERIAL	NOTES
FLOOR	F1	12″ x 12″ Vinyl Composition Tile (VCT)	
	F2	Carpet	
	F3	Bluestone; sealed	
	F4	Tongue & Groove Wood Strip	
	F5	Ceramic Tile	
	F6	Ribbed Entry Mat	
	F7	Concrete; Sealed	
	F8	Wood	
	F9	Rubber Stair Tread	
	F10	Precast Terrazzo Stair Tread	
BASE	B1	6″ Vinyl	
	B2	4″ Vented Rubber	
	B3	6″ Concrete	
	B4	5″ Glazed Concrete Masonry Unit (CMU)	
	B5	4″ x 4″ Glazed Ceramic Tile	
	B6		
WALL	W0	Concrete Masonry Unit (CMU)	
	W1	Concrete Masonry Unit (CMU); Painted	
	W2	Vertical Hardwood Slats; Stained over Gypsum Board; Painted	
	W3	4″ x 4″ Glazed Ceramic Wall Tile	
	W4	Painted Particle Board	
	W5	Brick Masonry	
	W6	1″ x 2″ Ceramic Mosaic Tile	
	W7	Vinyl Wall Covering	
	W8	Gypsum Board; Painted	
CEILING	C0	2′ x 4′ Acoustical Ceiling Tile (ACT) System	
	C1	2′ x 2′ Acoustical Ceiling Tile (ACT) System	
	C2	1′ x 1′ Perforated Concealed-Spline Metal Acoustical Ceiling Tile (ACT) System	
	C3	Gypsum Board; Painted	
	C4	Exposed Structure	

ROOM FINISHES DATA

ROOM		FINISHES				
Room Name	**Room No.**	**Floor**	**Base**	**Wall**	**Ceiling**	**Notes**
Classroom	100	F1	B1	W1	C1	
Classroom	101	F1	B1	W1	C1	
Classroom	102	F1	B1	W1	C1	
Classroom	103	F1	B1	W1	C1	
SPED Classroom	104	F1	B4	W1	C0	
Science Classroom	105	F1	B4	W1	C0	
6th Grade Seminar Room	106	F1	B4	W1	C0	
Technology Industrial Arts	107	F7	B4	W1	C0	
Science Classroom	108	F1	B4	W1	C0	
Classroom	109	F1	B1	W1	C1	
Classroom	110	F1	B1	W1	C1	
Classroom	111	F1	B1	W1	C1	
Classroom	112	F1	B1	W1	C1	
Vestibule	121	F6	B4	W1, W5	C0	
Elevator	122	F2				
Vestibule	123	F1	B4	W1	C0	
Vestibule	124	F6	B4	W1, W5	C0	
Stair No. 2	125	F1, F9	B4	W1	C0, C3	
Corridor	126	F1	B4	W1	C0	
Corridor	129	F1	B4	W1	C0	
Corridor	130	F1	B4	W1	C0	
Pump Room	131	F7	B3	W1	C0	
Teacher Work Room	133	F1	B4	W1	C0	
Technology Shop	134	F7	B4	W1	C0	
Boys Toilet	137	F5	B4	W1	C3	
Custodian	138	F7	B4	W1	C3	
Girls Toilet	139	F5	B4	W1	C3	
Stair No. 1	140	F1, F9	B4	W1	C0, C3	
Corridor	141	F1	B4	W1	C0	
Corridor	143	F1	B4	W1	C0	
Corridor	144	F1	B4	W1, W6, W7	C1	
Stair No. 3	148	F1, F10	B1	W5, W6	C1, C3	
Storage	149	F7		W1	C4	
Custodian Workshop	150A	F7		W1	C4	

ROOM		FINISHES				
Room Name	**Room No.**	**Floor**	**Base**	**Wall**	**Ceiling**	**Notes**
Receiving & Storage	150B	F7		W1	C4	
Custodian Office	151A	F7	B1	W1, W8	C1	
Electric Room	151B	F7	B3	W0	C3	
Mechanical Room	151C	F7	B3	W0	C3	
SPED Office	152	F1	B1	W1	C0	
SPED Office	153	F1	B1	W1	C0	
SPED Office	154	F1	B1	W1	C0	
Storage	155	F1	B1	W1	C0	
Stair No. 4	156	F1, F10	B1	W5, W6	C1, C3	
Corridor	157	F1	B4	W1, W6, W7	C1	
Boys Toilet	164	F5		W3	C1	
Janitor	165	F5	B5	W3	C1	
Storage	166	F5	B5	W3	C1	
Shower	167	F5	B5	W3	C1	
Toilet	168	F5	B5	W3	C1	
Girls Toilet	169	F5	B5	W3	C1	
Mini-Gym	170	F4	B2	W1	C0	
Courtyard	171					
Classroom	200	F1	B1	W1	C1	
Classroom	201	F1	B1	W1	C1	
Classroom	202	F1	B1	W1	C1	
Classroom	203	F1	B1	W1	C1	
SPED Classroom	204	F1	B1	W1	C0	
Classroom	205	F1	B1	W1	C0	
Science Classroom	206	F1	B1	W1	C0	
Classroom	207	F1	B1	W1	C0	
Classroom	208	F1	B1	W1	C0	
Science Classroom	209	F1	B1	W1	C0	
Classroom	210	F1	B1	W1	C0	
Classroom	211	F1	B1	W1	C1	
Band Room	212	F1	B1	W1	C1	
Chorus Room	213	F1	B1	W1	C1	
Gym Storage	214	F1	B3	W0	C1	
Girls Locker Room	215	F5	B5	W3	C2	
Health Instructor Office	216	F5	B5	W3	C2	

ROOM		FINISHES				
Room Name	**Room No.**	**Floor**	**Base**	**Wall**	**Ceiling**	**Notes**
Janitor	217	F7	B1	W1	C1	
Toilet	218	F5	B5	W3	C2	
Toilet	219	F5	B5	W3	C2	
Women's Toilet	220	F5	B5	W3	C2	
Elevator Machine Room	221	F7	B3	W0	C4	
Elevator	222	F2				
Vestibule	223	F1	B4	W1	C0	
Office	224	F1	B1	W1	C1	
Stair No. 2	225	F1, F9	B4	W1	C0, C3	
Corridor	226	F1	B4	W1	C0	
Corridor	229	F1	B4	W1	C0	
Corridor	230	F1	W6	W6	C1	
Boys Toilet	236	F5	B5	W3	C0	
Custodian	237	F5	B5	W3	C0	
Girls Toilet	238	F5	B5	W3	C0	
Stair No. 1	239	F1, F9	B4	W1	C0, C3	
Corridor	240	F1	B4	W1	C0	
Corridor	241	F1	B4	W1	C0	
Corridor	242	F1	B4	W1, W6, W7	C1	
Teachers' Work Room	243	F1	B1	W1	C1	
Corridor	247	F1		W6	C1	
Stair No. 4	248A	F1, F10	B1	W5, W6	C1, C3	
Stair No. 3	248B	F1, F10	B1	W5, W6	C1, C3	
Corridor	249	F1	B4	W1, W6, W7	C1	
Corridor	256	F1	B4	W1, W6, W7	C1, C3	
Band Storage	257	F1	B1	W1	C1	
Boys Toilet	258	F5	B5	W3	C1	
Janitor	259	F5	B5	W3	C1	
Guidance Office	260	F1	B1	W1	C1	
Assistant Principal's Office	261	F1	B1	W1	C1	
Health Storage	262	F1	B1	W1	C1	
Toilet	263	F5	B5	W3	C1	
Toilet	264	F5	B5	W3	C1	
Health	265	F1	B1	W1	C1	

ROOM		FINISHES				
Room Name	**Room No.**	**Floor**	**Base**	**Wall**	**Ceiling**	**Notes**
Conference	267	F1	B1	W1	C1	
Principal's Office	268	F2	B1	W1	C1	
General Office	269	F1	B1	W1	C1	
Storage	271	F1	B1	W1	C1	
Assistant Principal's Office	272	F1	B1	W1	C1	
Lobby	273	F3	B1	W5	C1	
Men's Toilet	274	F5	B5	W3	C1	
Teachers' Work Room	275	F1	B1	W1	C1	
Platform	276	F4	B3	W1	C1	Par-quet
Storage	277	F1	B3	W1	C4	
Auditorium/Cafeteria	278	F1	B1	W1	C1	
Receiving	279	F5	B5	W3	C1	
Locker	280	F5	B5	W3	C1	
Janitor	281	F5	B5	W3	C1	
Toilet	282	F5	B5	W3	C1	
Cooler	283	F5	B5	W3	C2	
Kitchen	284	F5	B5	W3	C2	
Vestibule	285	F5	B5	W3	C2	
Storage	286	F5	B5	W3	C1	
Dishwash	287	F5	B5	W3	C2	
String Orchestra	288	F1	B1	W1	C1	
Logia	289	F7	B1	W5		
Vestibule	290	F5	B5	W1	C1	
Janitor	291	F5	B5	W3	C1	
Toilet	292	F5	B5	W3	C1	
Toilet	293	F5	B5	W3	C1	
Health Instructor Office	294	F5	B5	W3	C2	
Boys' Locker Room	295	F5	B5	W3, W4	C2	
Boy's Drying Area	296	F5	B5	W3	C2	
Boy's Shower	297	F5	B5	W3	C1	
Gymnasium Storage	298	F1	B3	W0	C1	
Gymnasium	299	F4	B2	W1	C2	
Classroom	300	F1	B1	W1	C1	
Classroom	301	F1	B1	W1	C1	
Technology/Graphic Arts	302	F1	B1	W1	C1	

ROOM		FINISHES				
Room Name	**Room No.**	**Floor**	**Base**	**Wall**	**Ceiling**	**Notes**
Classroom	303	F1	B1	W1	C1	
Language Arts Book Storage	304	F1	B1	W1	C1	
Art Room	305	F1	B1	W1	C1	
SPED School Psychologist	306	F1	B1	W1	C1	
Art Room	307	F1	B1	W1	C1	
Science Classroom	308	F1	B1	W1	C1	
Science Classroom	309	F1	B1	W1	C1	
SPED Classroom	310	F1	B1	W1	C1	
Classroom	311	F1	B1	W1	C1	
Classroom	312	F1	B1	W1	C1	
Classroom	313	F1	B1	W1	C1	
Classroom	314	F1	B1	W1	C0	
Classroom	315	F1	B1	W1	C0	
Elevator	321	F1	B1	W1	C0	
Vestibule	322	F1	B1	W1	C0	
Corridor	323	F1	B1	W1	C0	
Stair No. 2	324	F1	B1	W1	C0	
SPED Office	327	F1	B1	W1	C0	
Corridor	328	F1	B1	W1	C0	
Corridor	329	F1	B1	W1	C0	
Science Storage	332	F1	B1	W1	C0	
Science Prep Room	333	F1	B1	W1	C0	
Boy's Toilet	336	F5	B5	W3	C1	
Custodian	337	F5	B5	W3	C1	
Girl's Toilet	338	F5	B5	W3	C1	
Stair No. 1	339	F9	B4	W1	Plaster	
Corridor	340	F1	W6	W6	C1	
Corridor	343	F1	W6	W6	C1	
Corridor	344	F1	W6	W6	C1	
Media Center Storage	349	F1	B1	W5	C1	
Media Center	350	F1	B1	W5	C1	
Stair No. 3	351	F10				
Corridor	352	F1	B4	W1	C0	
Corridor	358	F1	B4	W1	C0	
Girl's Toilet	359	F5	B5	W3	C1	
Storage	360	F1	B1	W1	C1	

ROOM		FINISHES				
Room Name	**Room No.**	**Floor**	**Base**	**Wall**	**Ceiling**	**Notes**
Boy's Toilet	361	F5	B5	W3	C1	
Janitor	362	F5	B5	W3	C1	

- Recommendations: Terrazzo flooring and glazed/painted CMU wall finishes used in the Original 1966 Building finishes were well chosen for their durability and have been well maintained over the years. Under either a Base Repair or Addition/Renovation option, these finishes should continue to serve as intended with minor repairs and regular maintenance. In an Addition/Renovation option, certain alterations (i.e. new partitions, door openings, plumbing fixtures, electrical/data systems, etc.) will make it more cost-effective to cover or furr over, rather than attempt to match, the existing terrazzo and glazed CMU finishes with ceramic tile or another low-maintenance material. With the exception of existing terrazzo, LPA recommends replacement of all existing carpet and VCT with new floor finishes. Acoustically, the existing cellular metal deck performs poorly, especially at Classrooms; LPA recommends the addition of a new ACT ceiling system throughout.

Specialties (millwork, toilet partitions, lockers, chalk/marker/tack boards, etc.):

- Existing millwork is typically wood panel with stained finish and plastic laminate countertops. Classrooms typically have a built-in teacher's wardrobe cabinet with full-height doors.
- Toilet partitions are mostly painted metal, although some solid plastic partitions have been added.
- Lockers are typically painted steel. Corridor lockers are single-tier 9" wide x 72" high; boys athletic lockers are ventilated double-tier 15" wide x 36" high; and girls athletic lockers are ventilated single-tier 9" wide x 72" high. The lockers have been periodically repainted.
- Classrooms have a mix of chalkboards, marker boards, and tackable surfaces.
- Recommendations: Under a Base Repair Option, the existing millwork, lockers and visual display boards could remain with minor cosmetic and functional repairs; however the scope of plumbing work would likely require at least partial replacement of toilet partitions. Under an Addition/Renovation option, LPA recommends replacement of all millwork, toilet partitions, lockers and visual display boards.

STRUCTURAL, FIRE PROTECTION, HVAC, PLUMBING and ELECTRICAL: Refer to consulting engineer existing conditions reports on the following pages.

Nitsch Engineering

Traffic Impact & Access Study

Mountview Middle School
Holden, MA

June, 2012

Prepared for:

Lamoureux Pagano Associates
108 Grove Street, Suite 300
Worcester, MA 01605

Submitted by:

Nitsch Engineering
186 Lincoln Street, Suite 200
Boston, MA 02111

Nitsch Engineering Project #9111

Executive Summary

Building better communities with you.

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INTRODUCTION

Nitsch Engineering has been retained by Lamoureux Pagano Associates to prepare a qualitative assessment of the parent pick-up/drop-off, bus circulation, parking, and site circulation for the proposed reconstruction of the Mountview Middle School (MVMS) in Holden, Massachusetts. The school is located at the southeast corner of the Town between the intersections of Shrewsbury Street at Doyle Road/Mountview Drive and Shrewsbury Street at Chapel Street/Holden Street. Figure 1 shows an aerial image of the school location.

Figure 1 – School Location

As seen in Figure 1, MVMS is located on Shrewsbury Street near the signalized intersection of Shrewsbury Street at Doyle Road/Mountview Drive. The school zone is surrounded primarily by residential uses to the east, west, and south. The speed limit on Shrewsbury Street is 35 miles per hour (mph) posted in both the eastbound and westbound directions. School zone speed limit signs of 20 mph are also posted for school pick-up and drop-off periods. The average daily traffic on Shrewsbury Street is approximately 15,000 vehicles.

In its Statement of Interest to the Massachusetts School Building Authority (MSBA), the Town cited overcrowding as one (1) of the purposes of the school reconstruction. MVMS had an enrollment of 761 students as of October 1, 2008, for a building designed for a capacity of 600 students. The proposed school is expected to adequately accommodate students that are currently enrolled and the supporting staff. School authorities project that the enrollment will remain level in the future.

EXISTING CONDITIONS

On June 7th, 2012, Nitsch Engineering conducted a field reconnaissance of the study area intersections, reviewed site access and egress conditions, inventoried parking supply, and conducted parking counts at MVMS. The following section is a summary of the existing conditions as observed during the site visits.

Intersections

Nitsch Engineering completed an assessment of the intersections that serve the existing MVMS site. These are:

- Shrewsbury Street at East School Driveway; and
- Shrewsbury Street at West School Driveway.

Both the intersections are unsignalized.

Shrewsbury Street and East School Driveway

This is a three-legged intersection with Shrewsbury Street approaching from the east and west, and East School Driveway approaching from the north. East School Driveway is a one-way exit onto Shrewsbury Street. The intersection is located 300 feet from the signalized intersection of Shrewsbury Street and Doyle Road.

Shrewsbury Street consists of an 11.5-foot lane and a 6-foot shoulder in the eastbound direction, and a 12-foot lane and a 4.9-foot shoulder in the westbound direction. Five (5)-foot-wide sidewalks are present on both sides of Shrewsbury Street. There is no sidewalk on East School Driveway. A double-yellow centerline separates two-way travel on Shrewsbury Street. Single white edge lines separate the traveled way from the shoulder on both sides. Advance pavement markings include “YIELD” to pedestrians, and “SCHOOL SLOW” imprints to the east of the intersection. A crosswalk is marked on East School Driveway with pedestrian ramps at both ends. Parking is prohibited on both sides of Shrewsbury Street.

Looking East on Shrewsbury Street

Looking West on Shrewsbury Street

The pavement and sidewalks on Shrewsbury Street are in moderate condition with minor cracks. Signing includes a flashing school zone speed limit sign to the east of the intersection, and a symbolic yield to pedestrians sign to the west of the intersection on Shrewsbury Street. An “Exit Only” and “Do Not Enter” signs are present on East School Driveway. During the site visit, a large puddle was seen on the East

School Driveway, which could be a hindrance to pedestrians walking along the northerly sidewalk on Shrewsbury Street.

Puddle on East School Driveway

Looking at East School Driveway

Shrewsbury Street and West School Driveway

This is a three-legged intersection with Shrewsbury Street approaching from the east and west, and West School Driveway approaching from the north. West School Driveway is a one-way entrance only from Shrewsbury Street.

Looking East on Shrewsbury Street

Looking West on Shrewsbury Street

Looking at West School Driveway

Crosswalk between East & West School Dwy

Sidewalks are present on both sides of Shrewsbury Street. A double-yellow centerline separates two-way travel. Single white edge lines separate the traveled way from the shoulder on the west side of the intersection. Advance pavement markings include “YIELD” to pedestrians, “SCHOOL SLOW” imprints to the west of the intersection. There are two (2) crosswalks at the intersection – one (1) on West School Driveway and the other on Shrewsbury Street between the East School Driveway and West School Driveway. A single yellow centerline separates the traffic on West School Driveway headed to the front of the school, and the administrative/visitor parking vehicles headed to the back of the school.

The pavement and the sidewalk are in moderate condition with minor cracks. Signing includes a flashing school zone speed limit sign to the west of the intersection, and a symbolic yield to pedestrians sign opposite to the West School Driveway entrance on Shrewsbury Street.

Sight Distance

Stopping Sight Distance (SSD) is the distance necessary for a vehicle traveling at the design speed to stop before reaching a stationary object in its path. Intersection Sight Distance (ISD) is the minimum visibility needed at an intersection to allow drivers to perceive the presence of potentially conflicting vehicles. The Project Development and Design Guide[1] was used to establish the recommended SSD and ISD. The sight distances measured during the June 2012 site visit are as shown in Table 1.

Table 1 – Sight Distance Evaluation

Intersection	Speed Limit	Stopping Sight Distance	Intersection Sight Distance (ISD)		
	Speed[1] (mph)	Recommended (Feet)	Recommended (Feet)	EB Available (Feet)	WB Available (Feet)
Shrewsbury Street/East School Dwy					
Shrewsbury St. Eastbound (Downgrade)	20 (35)	116 (257)			
Shrewsbury St. Westbound (Upgrade)	20 (35)	115 (250)			
Left turn from East School Dwy	20 (35)		225 (390)	450 appx**	>500
Right turn from East School Dwy	20 (35)		195 (335)	450 appx**.	>500
Shrewsbury Street/West School Dwy					
Shrewsbury St. Eastbound (Downgrade)	20 (35)	116 (257)			
Shrewsbury St. Westbound (Upgrade)	20 (35)	115 (250)			
Left turn from West School Dwy	20 (35)		225 (390)	325 appx**	>500
Right turn from West School Dwy	20 (35)		195 (335)	325 appx**	>500

1. Speed based on reduced speed limit of 20 mph for a School Zone. At other times, speed is based on 35 mph posted speed limit on Shrewsbury Street and is shown in parenthesis; ** Approximate values, to be verified by a survey

The posted speed limit on Shrewsbury Street is 35 mph for which the recommended SSD is 257 feet and ISD is 390 feet. The recommended SSD and ISD for a school zone with a speed limit of 20 mph are 116 feet and 225 feet, respectively. As seen in Table 1, the available ISD at the East School Driveway intersection exceeds the recommended ISD in both directions on Shrewsbury Street. The available ISD at the West School Driveway looking left at westbound traffic is more than required but looking right at eastbound traffic is slightly less than the recommended value for the 35 mph design speed. This may be one of the reasons why the existing site is designed to have a clockwise traffic pattern. Vehicles enter from the West School Driveway and exit from the East School Driveway as is further discussed in the Circulation section.

[1] Project Development and Design Guide, Massachusetts Highway Department, 2006

Parking

Nitsch Engineering conducted a parking inventory during the site visit on June 7, 2012. Figure 2 shows the location of parking lots on the site. The availability of parking spaces, utilization and recommendation for the proposed school are included in this section.

Figure 2 – Parking

As seen in Figure 2, there are five (5) parking lots within the school site – lot P1 is used by administrative staff and visitors, P2 is reserved parking for administrators, P3 consists of parking for teachers and visitors, P4 represents the overflow parking for teachers, and P5 is handicap parking only. Handicap accessible parking spaces are also available in lot P2. The following is the parking utilization of the lots as observed during the site visit on June 7, 2012:

Table 2 – Parking Utilization

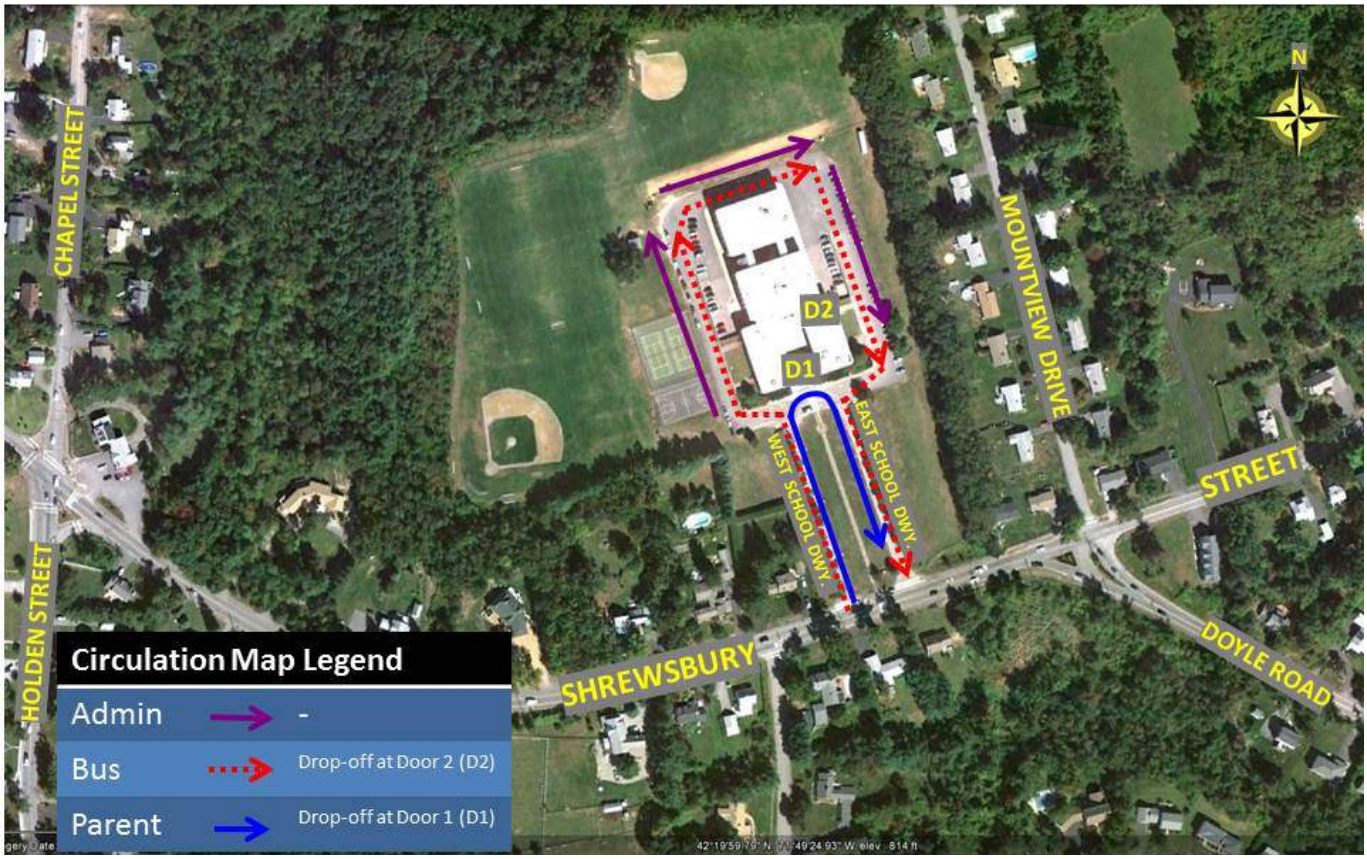
Lot Description	Percentage Of General Spaces Occupied	Available		Occupied	
		General	Handicap	General	Handicap
Lot P1 (Teachers/Administrators)	68%	38	0	26	0
Lot P2 (Administrators)	89%	9	0	8	0
Lot P3 (Teachers/Visitors)	86%	21	2	18	0
P4 (unmarked spaces, Teachers/Visitors)	-	-	-	14*	-
Lot P5 (Handicap Accessible Spaces)	0%	0	4	0	0
Total	76%	68	6	52	0
*Vehicles marked in unmarked spaces, not counted towards Total					

As seen in Table 2, there is reserve parking available in lot P1 (east of the building); however, the teachers' entrance is located on the west side of the building where there is no reserve parking except the handicap accessible spaces. As a result, teachers park on the grass along the periphery of the fields (P4) for easy access into the building.

There were two (2) handicap accessible spaces available in P3; however, neither had an access aisle as required by the American for Disabilities Act (ADA). A 5-foot-wide access aisle is required for an accessible space. Two (2) spaces can share a common access aisle per the ADA. The ADA requires a minimum of three (3) accessible spaces for parking lots with 51-75 spaces. By these standards, the existing school has more accessible spaces than the required minimum.

Circulation

Figure 3 – Circulation



As seen in Figure 3, parent drop-offs take place in front of the school building (D1). Vehicles enter from the West School Driveway and exit from the East School Driveway. Buses enter from the West School Driveway and loop around the school building to drop off children at the southeast entrance to the building (D2). Teachers and administrative staff use the same circulation path as buses.

The circulation at the existing school is contrary to what normal driver expectation would be, which is to flow counter-clockwise around the building. Nitsch Engineering anticipates that the limited sight distance at the West School Driveway looking onto Shrewsbury Street west, and the proximity of East School Driveway to the traffic signal at Doyle Road/Mountview Drive may be one of the reasons for this design. Due to the flow pattern, children get dropped off on the opposite side of the school entrance, which increases the service time for each drop-off. Additionally, the flow is confusing to new drivers as there are no pavement markings or signs to indicate the direction of traffic flow.

Traffic Volumes

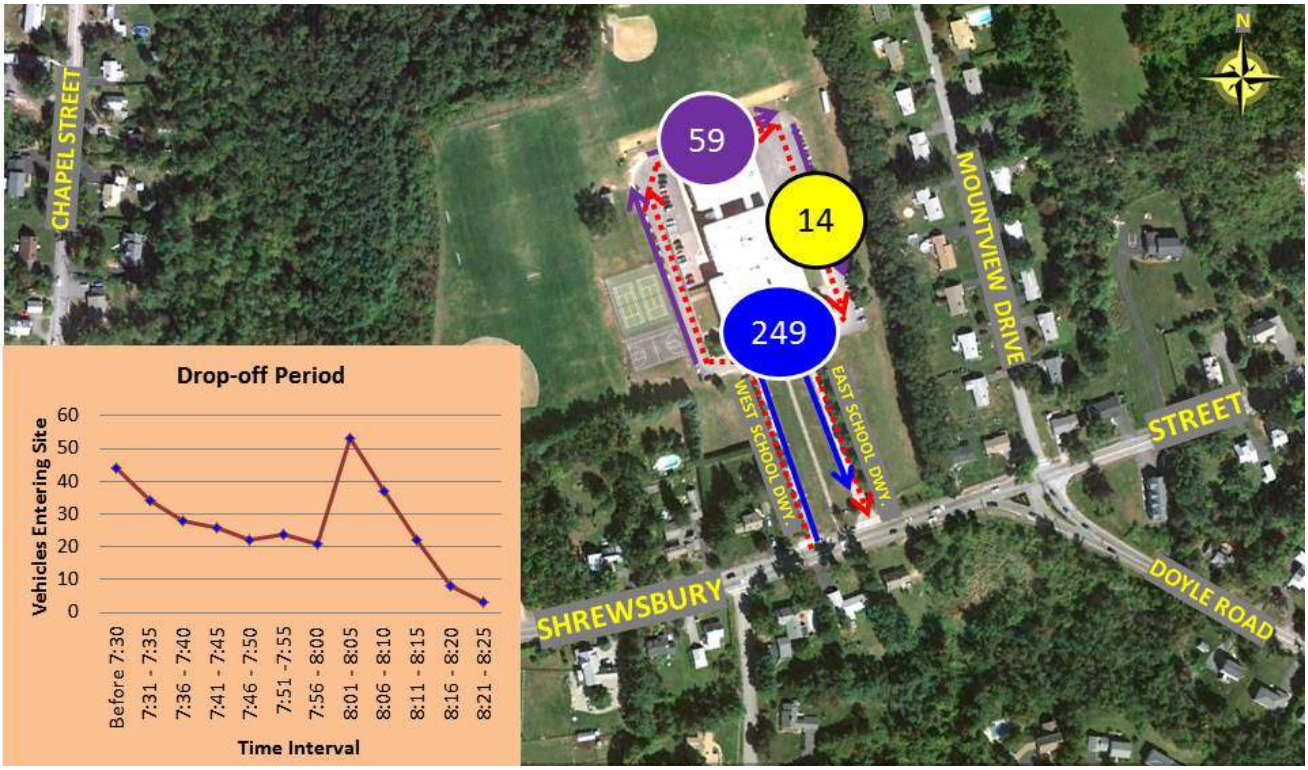
Automatic Turning Recorders (ATRs) were installed on Wednesday, June 6 and Thursday, June 7, 2012, to collect volume of vehicles, classification, and speed data on Shrewsbury Street. Precision Data Inc., a sub-consultant of Nitsch Engineering for traffic counts, collected the data for 48-hours on Shrewsbury Street using pneumatic tubes. The following is a summary of the data collected:

Table 3 – Shrewsbury Street Traffic Volumes

Location	Morning Peak (AM)		Midday peak (Afternoon) (PM)		Daily (vpd)[2]
	Period	Volume (vph)[1]	Period	Volume (vph)	
Shrewsbury Street EB	7:15-8:15	736	2:30-3:30	490	7,617
Shrewsbury Street WB	7:30-8:30	407	2:30-3:30	576	7,638
1 vph: vehicles per hour; 2 vpd vehicles per day					

As seen in Table 3, the daily traffic on Shrewsbury Street is approximately 15,300 vehicles with a 50-50 distribution in the eastbound and westbound directions. The AM or morning peak period is between 7:15 am and 8:30 am, which coincides with the school start time at 7:55 am. The midday peak period was between 2:30 and 3:30 pm, which coincides with the school release time at 2:30 pm. The peak volume on Shrewsbury Street is about 1150 vehicles during the morning peak hour, which is 7.5% of the daily traffic. In addition to the ATR counts, we counted the number of vehicles that entered the school site during the morning peak period, shown in the figure below.

Figure 4 – Site Volumes, Morning



As seen in Figure 4, a total of 322 vehicles entered the site between 7:00 am and 8:25 am. Of these, 59 vehicles were those of administrators, teachers or visitors, 14 were school buses and 249 were drop-off vehicles. The majority of vehicles entered the site between 7:55 am and 8:10 am. During the midday peak hour, there were far fewer vehicles onsite with a maximum of 21 cars observed waiting to pick-up students at 2:55 pm. A majority of the pick-up vehicles and buses exited the site by 3:07 pm.

Speed Data

In addition to the ATR data, speed data was also collected on Shrewsbury Street. The speed data was collected simultaneously with the ATR counts. Table 4 shows the speed on the roadway over the course of the day.

Table 4 – Speed Data

	Shrewsbury Street, between Doyle Road and East School Driveway	
	Eastbound	**Westbound**
Average Speed (mph)	27	28
85th Percentile/Design Speed (mph)	31	32
10 mph Pace Speed	23-32	24-33

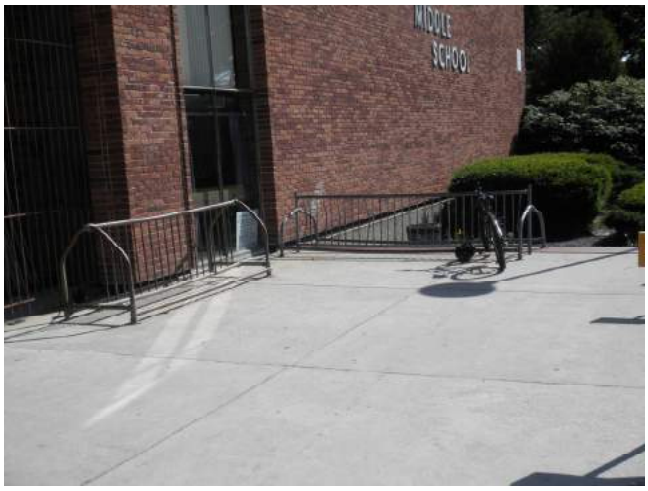
As shown in Table 4, the average speed on Shrewsbury Street was 27 mph in the eastbound direction and 28 mph in the westbound direction. The 85th percentile speed was 31 mph in the eastbound direction and 32 mph in the westbound direction, which is below the posted speed limit of 35 mph. The 10-mile pace speed of vehicles in the eastbound direction was 23-32 mph and the pace speed in the westbound direction was 24-33 mph. The pace speed indicates the range of speed in which a majority of vehicles travel. The pace in both directions is lower than the speed limit indicating that a majority of drivers comply with the speed limit.

Flashing school zone speed limit signs of 20 mph are installed on Shrewsbury Street approximately 105 feet east of East School Driveway and 105 feet west of West School Driveway. The school zone speed limit signs inform drivers that the normal legal speed limit has been reduced to 20 mph during those times when the sign is flashing. However, their current location does not give drivers sufficient time to reduce their vehicle speed. Per Section 7B.15 of the Manual on Uniform Traffic Control Devices (MUTCD), *"the beginning point of a reduced school speed limit zone should be at least 200 feet in advance of the school grounds, a school crossing, or other school related activities."*

Additionally, Nitsch Engineering did not observe 'End School Zone' signs on Shrewsbury Street that should be installed in conjunction with the reduced speed limit signs per the MUTCD (Section 7B.15, 04).

Pedestrians and Bicyclists

Nitsch Engineering observed 13 school children walking to school in the morning. A crossing guard was present until 8:05 am assisting children who crossed Shrewsbury Street. While no data was collected, Nitsch Engineering observed that many more children walked from school in the afternoon when compared to the morning. Children who biked to school were far fewer than children who walked, with only one (1) bicyclist observed riding to school in the morning. Bicycle racks provided in front of the school remained largely empty.



Bicycle Racks in front of school

Service Time and Queuing:

The design of the parent drop-off loop is such that children getting dropped off must walk around the vehicle to enter the school. Service time is the time interval from when a vehicle stops in front of the school to when it leaves after dropping off a student. The service time at MVMS is an average of 12.6 seconds, based on 16 drop-off observations. Longer service time usually results in longer queues. A preferred design would be one where drop-off takes place on the school side, which would reduce queuing on and offsite.

Queuing during the morning peak hour peaked at 8:00 am when queues from the parent drop-off queue blocked vehicles from entering the West School Driveway. Additionally, buses that were unable to enter due to the queues temporarily blocked the eastbound traffic on Shrewsbury Street, which resulted in stagnant traffic extending approximately 700 feet from West School Driveway. The backup was temporary and dissipated quickly. A majority of vehicles exiting from East School Driveway turned left at the intersection with Shrewsbury Street causing merging delays to through traffic waiting for the green signal at the intersection of Shrewsbury Street and Doyle Road. During the midday peak hour, queues from pick-up vehicles were contained onsite and did not block traffic on Shrewsbury Street.

CONCLUSIONS & RECOMMENDATIONS

Based on the existing conditions at the Mountview Middle School, the following are Nitsch Engineering's recommendations for the future design of the site:

1. Design the site to have a counter-clockwise traffic flow, such that students get dropped off on the school side of the driveway;

2. Provide pavement markings and signs indicating the direction of onsite vehicle flow;

3. Design parking lots so that teachers and administrators have sufficient marked spaces in proximity to the entrance most used by them;

4. Provide access aisle for handicap parking spaces;

5. Maintain separate parent drop-off and bus drop-off loops similar to the existing condition to reduce conflicts;

6. Remove and relocate the flashing school zone signs 200 feet from the school entrance on both sides;

7. Provide ‘End School Zone’ signs for traffic in both directions;

8. Provide sufficient queuing space onsite to avoid spillover onto Shrewsbury Street; and

9. Keep the exit for the school driveway as far east within the project site as possible to increase sight distance for vehicles approaching from the west.

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Mountview Middle School
Existing Structural Conditions
Holden, Massachusetts
June 2012

Introduction:
The Mountview Middle School is a 91,000 ft^2 brick veneered building that is being investigated for a possible renovation and addition to support an increasing student population, as well as address the aging condition of the building. The original 55,000 ft^2 building was constructed in 1966 and a 36,000 ft^2 addition was built in 1987. The building underwent a renovation in 1997, but structural modification to the building was limited. It is our understanding that the goal of a renovation and addition will be to finish with an approximately 128,000 ft^2 building. Another possibility being considered is to abandon this school, and build a new school on either the same site or a new site. Should an entirely new building be constructed, it will be designed in accordance to the building code requirements for new construction. This report will describe the general conditions of the existing structure, as well as establish structural guidelines, in accordance with the Massachusetts State Building Code, that must be followed during a building renovation and addition.

General:
This report presents the results of our Massachusetts State Building Code (MSBC) Structural review of the Mountview Middle School in Holden, Massachusetts. Our review has been completed in conformance with Chapter 34 of the Eighth Edition of the Massachusetts State Building Code, which became effective August 6, 2010 and the International Existing Building Code, 2009 Edition.

Basis of the Report:
- This report is based on the visible observations during our site visit on May 24, 2012.
- Original Construction Drawings ST-1 through ST-4, "Martin & Williams, Architects" dated June 1, 1966.
- Addition Construction Drawings S1 & S2, "Alderman & MacNeish Architects and Engineers" dated December 24, 1987.
- Renovation Construction Drawing S-1, "Ganteaume & McMullen, Inc." dated February 12, 1997.

Our observations of the existing building were limited to what was readily visible. We did not evaluate strengths of materials, remove finishes, or take measurements; therefore, we are unable to comment on any structural capacities or deficiencies of the existing structural systems.

Building Description:
The school consists of three rectangular brick veneered buildings in a row that are connected by corridors. The first building is a single-story structure housing the gymnasium, auditorium/cafeteria and entry lobby. The second building is a three-story building housing the administration, classrooms and media center. The third building is a three-story addition housing classrooms and a small gymnasium; refer to Figure 1 for general building layout. The two original 1966 buildings were built without an expansion joint separating the structures. The 1987 addition was also built without a structural expansion joint since the existing 1966 columns were used to support the connecting corridor framing. Regular maintenance has included re-roofing the building, patching roof leaks, and general maintenance. The interior and exterior of the

building are in generally good condition with normal wear and aging. The main structural elements of the school include:

- 1966 Building
  - Concrete foundation walls and spread footings.
  - 4" Concrete slabs on grade.
  - Steel wide flange columns (W6 & W8) with 9"x9" fire shells at W6 columns. Columns are typically spaced on 10 foot grids along exterior wall and interior corridors and spaced at 20 or 30 foot modules elsewhere.
  - Composite steel beams at floors with 5" one-way formed concrete slab over the beams.
  - 10" Concrete 1-way slab at Auditorium Stage.
  - Roof framed with steel beams, long span joists, and 3" metal roof deck.
  - Unreinforced concrete masonry partitions on slabs.
  - Brick veneer backed up by unreinforced concrete masonry walls.

- 1987 Classroom Addition
  - Concrete foundation walls and spread footings.
  - 5" & 6" Concrete slabs on grade.
  - Steel wide flange (W8's) columns with 10½"x10½" fire shells at select columns.
  - Floors frames with steel beams, K-Joists, and 4" concrete slab on metal deck.
  - Roof framed with steel beams, steel K-Joists, and 1 ½" metal roof deck.
  - Concrete masonry unit (CMU) partitions on slabs (reinforcing only noted at curved corner walls, elevator walls, and curved window walls, otherwise not noted on structural plans, assume unreinforced).
  - Brick backed up by unreinforced concrete masonry walls.

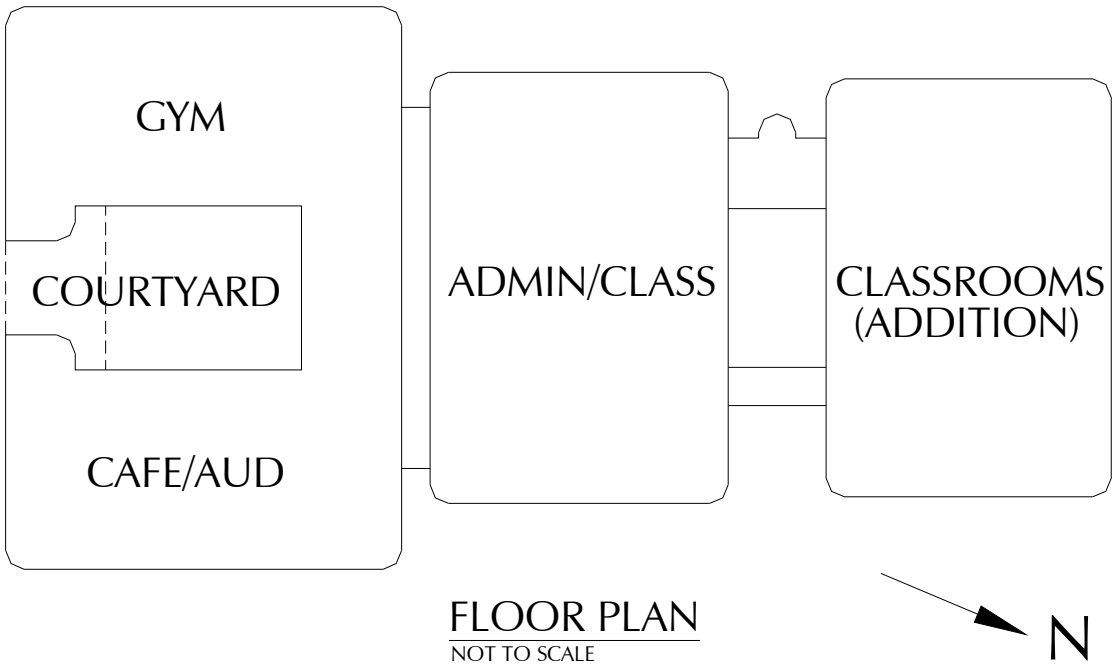

Figure 1-Plan

Existing Conditions:

General Exterior:
The exterior walls of the building are 4" brick veneer backed up by unreinforced concrete masonry units (CMU). The brick veneer bears on a steel channel built into the concrete frost walls at the entire perimeter of the 1966 building. The exterior walls show some signs of minor deterioration (minor thermal cracking) due to the age of the building, but are generally in good condition. The steel channel at the base of the walls was not galvanized, but is in surprisingly generally good condition. Some deterioration to the channel was noted in areas where the channel is located adjacent to sidewalks where snow/rain/debris is allowed to accumulate. It should be noted that there are no joints thermal joints in the brick veneer of the original 1966 building, but the brick is in generally good condition. Caulked expansion joints at the addition building are aging and will need to be repaired as part of general maintenance.

Exterior concrete retaining walls are deteriorating and need to be repaired. The concrete at the top of the wall is spalling at several locations, exposing the rusting reinforcing. We would recommend repairing these walls as part of regular maintenance.

General Interior:
In general, the interior of the building appears to be in good condition, but is showing signs of wear. There are some signs of water staining at ceiling tiles throughout the building, which could be caused by roof leaks or mechanical problems within the building. If the building undergoes a full renovation, we recommend inspecting the metal roof deck for damage and replacing damaged deck. Since the water damage was not excessive, we suspect this is not a school wide problem and may require nothing more than a routine inspection after the ceilings are removed.

There are several vertical cracks at the interior CMU walls, especially within the 1987 Addition. This was noticeable within the Auditorium, Gymnasium, Addition Stairwell, Addition Connector, and at a classroom within1966 building. In general, the cracks appear to be thermal cracks attributed to lack of masonry control joints and lack of wall reinforcing. We would recommend repairing the cracks by repointing the walls with stepped cracks, and saw-cutting masonry control joints at the vertical cracks and caulking the joints.

Gymnasium/Auditorium Building (1966)
The one-story Gymnasium and Auditorium Building, with a small basement, consists of:

- Foundations:
    - Concrete foundation walls and spread footings.
    - 4" Concrete slab on grade.
- Columns:
    - Steel wide flange columns.
- Floor:
    - 10" Concrete one way slab at Auditorium Stage over small basement.
- Roof:
    - Steel beams and long span joists (36" LA Joists).
    - 3" Steel roof deck.
- Walls:
    - 8" CMU backup walls at the exterior walls.
    - 4" Brick veneer.
    - Interior CMU partitions.

Figure 2-Gym/Auditorium with Entry Logia

The Gymnasium and Auditorium Building serves as the main entrance to the building with a brick arched logia at the front of the building and a courtyard that leads to the main entrance of the building. The Gymnasium and Auditorium/Cafeteria flank the central courtyard. Both the exterior of the building and the courtyard exterior wall are two-story high brick veneered masonry walls with brick arches at the window openings.

Snow loads for the original design are not noted on the original construction drawings, but rough calculations indicate that the design snow load was approximately 30 pounds per square foot (psf), which is less than the current Building Code load of 42 psf. If the renovation option is chosen, and the roof structure is altered, the existing members in the areas of the alteration will need to be reviewed with modified current snow loads to verify their adequacy. Typically, renovations to roof structures similar to this roof will require supplemental framing at any new mechanical units, fire protection systems, or new construction that would increase the design load on the existing structure.

Lateral loads (wind & seismic) are resisted by unreinforced masonry walls. The walls would not be adequate for new construction, but may remain unchanged as long as the building does not undergo substantial renovation. Under a substantial renovation, new walls or bracing systems would need to be installed to adequately brace Code mandated loads. One item of concern is the lack of expansion joints between the three buildings. Due to the lack of expansion joints, substantial renovation to any portion of the three buildings will require a full seismic review of all of the structurally attached buildings. Since there is no dedicated seismic force resisting system other than unreinforced masonry walls, the building will likely need new reinforced masonry shear walls or structural steel braces at each building. As part of any renovation, seismic restraints would need to be installed at the top of interior CMU partitions that divide the classrooms since they are currently a hazard by not being adequately connected to the floor and roof diaphragms.

Administration & Classroom Building (1966):

The two-story gymnasium, auditorium and cafeteria building consists of:

- Foundations:
  - Concrete foundation walls and spread footings.
  - Interior spread footings.
  - 4” Concrete slab on grade.
- Columns:

    - Steel wide flange columns with fire shell at select locations.
- Floors:
    - Composite steel beams.
    - One-way concrete slabs, supported on steel beams.
- Roof:
    - Steel beams and long span joists (32” LA Joists).
    - 3” Steel roof deck.
- Walls:
    - 8” CMU backup walls at the exterior walls.
    - 4” Brick veneer.
    - Interior CMU partitions.

Figure 3-Administration & Classroom Building

The Administration and Classroom Building is located between the other two buildings and is structurally connected to both of them. The Interior and exterior condition of the building appears to be consistent with the rest of the building. The building appears to have been well maintained and in generally good condition.

The first and second floor is framed with a 5” concrete one-way formed slab supported on composite steel framing. In general, the floor beams are spaced at 10 feet apart to match the column lines. The slabs appeared to be in good condition based on the condition of the flooring materials, since the ceilings and flooring obscured the slab.

The roof is framed with steel beams, long span steel joists, and metal roof deck. The roof beams are typically spaced between 10 feet apart with 3” roof deck. The exposed steel beams and roof deck appear to be in good condition, with minimal indication of water leaks. There were no design snow loads indicated on the existing Structural Drawings, but based on previous experience with buildings of this age and checking a few existing beams, we would expect the design load to be 30 psf, which is less than the current snow load of 42 psf for Holden. This

could be a concern if renovations involved modifying the roofs or installing new roof equipment since the steel deck spans would require supplementary steel to support the added loads.

The interior and exterior walls are typically unreinforced CMU walls. The exterior walls and walls along column lines are typically built around the steel columns and steel framing at the roof or floor level. At the first and second floor, spandrel beams were omitted to allow the CMU to pass by the floor, and angles were installed to close off the space between the floor and wall.

Lateral loads (wind & seismic) are resisted by unreinforced masonry walls. The walls would not be adequate for new construction, but may remain unchanged as long as the building does not undergo substantial renovation. Under a substantial renovation, new walls or bracing systems would need to be installed to adequately brace Code mandated loads.

Classroom Building (1987):

The three-story classroom building consists of:

- Foundations:
  - Concrete foundation walls and spread footings.
  - Interior spread footings.
  - 5" & 6" Concrete slab on grade.
- Columns:
  - Steel W8 wide flange columns with fire shell at select locations.
- Floors:
  - Steel beams and joist framing.
  - Steel deck and 4" concrete slab.
- Roof:
  - Steel beams and steel K Joists.
  - 1 ½" steel roof deck.
- Walls:
  - 8" CMU backup walls at the exterior walls.
  - 4" Brick veneer.
  - Interior CMU partitions.

Figure 4-Classroom Building Addition

The 1987 Classroom building is structurally attached to the Administration/Classroom building by connecting the floor and roof beams to existing columns at the two new corridors. The floor, roof, and walls were separated with a construction joint, but since the steel framing is connected, they should be considered structurally attached. Similar to the rest of the building, the Classroom Building is in generally good condition. There are several locations within the building that the masonry has developed stepped cracks near the ends of walls, typically at window openings. See Figure 5. We would recommend repointing the masonry to repair the cracks as part of any renovation.

Figure 5- Stepped Masonry Cracks

The floors are framed with steel beams, joists, metal deck, and a 4" concrete slab. The floors do not show signs of deterioration or deflection problems. The floors were designed for live loads that match current Building Code requirements and should be able to continue supporting specified loads.

The roof is framed with steel beams, joists, and metal deck. The roof was noted to have been designed for a snow load of 35 psf, and the design accounted for 105 psf of snow drift at the low roof. The current design snow load for Holden is 42 psf. Renovation work at the roof would require reviewing the affected members with modified current Building Code loads, which are slightly higher.

Lateral loads (wind & seismic) are resisted by CMU walls. The original Structural Drawings do not indicate the CMU walls reinforcing, except at elevators, curved corners, and arched windows, so we are assuming the walls are unreinforced. The walls would not be adequate for new construction, but may remain unchanged as long as the building does not undergo substantial renovation. Under a substantial structural renovation, new walls or bracing systems would need to be installed to adequately brace Code mandated loads. As part of any renovation, seismic restraints would need to be installed at the top of interior CMU partitions that divide the classrooms since they are currently a hazard by not being adequately connected to the floor and roof diaphragms.

Building Code Review- Structural:

This review presents our interpretation of the structural requirements of the International Existing Building Code, as modified by the Massachusetts State Building Code. In general, the provisions of The International Existing Building Code are intended to maintain or increase public safety, health, and general welfare in existing buildings by permitting repair, alteration, addition,

and/or change of use without requiring full compliance with the code for new construction except where otherwise specified.

Assumptions:
In order to review the requirements of the Building Code for a renovation to the Mountview Middle School, the scope of the project must be defined. For this review we are assuming that a Renovation/Addition would include:

- Complete renovation to interior finishes (Painting, flooring, wall finishes, etc.)
- New mechanical systems throughout building, including new mechanical rooftop units if the roof is capable of supporting the loads.
- Demolition of interior partitions in the Administration and Classroom areas of the building.
- Demolition of portions of the Gymnasium/Auditorium Building and Renovating and Adding new floor space to both the Gymnasium and Auditorium.
- Reroof the entire building.
- 38,000 ft^2 +/-, structurally isolated Classroom addition.

Building Codes:

- Massachusetts State Building Code, 8^{th} Edition.
- International Building Code, 2009 Edition (IBC).
- International Existing Building Code, 2009 Edition (IEBC).

Classification of Work: Level 3 (IEBC Section 405) Work area will exceed 50% of the aggregate area of the building.

Structural Requirements associate with Level 3 Work:

Level 3 Work is the highest level of Alteration and the Work must conform to the Structural requirements of Levels 1, 2, & 3.

Level 1 Structural Requirements:

606.2 Addition or replacement of roofing or replacement of equipment: Where addition or replacement of equipment results in additional dead loads, structural components supporting such reroofing or equipment shall comply with the gravity load requirements of the International Building Code.

- There are several exceptions that are permitted by the IEBC. One exception is "Structural elements where the additional dead load from roofing or equipment does not increase the force in the element by more than 5 percent." Based on our initial review, general reroofing work will not increase the force in the element by more than 5 percent. But, new equipment or modification of roof openings will increase the forces in elements by more than 5 percent and will require a review the element in accordance with the IBC.

606.2.1 Wall anchors for concrete and masonry buildings: Where a permit is issued for reroofing more than 25 percent of the roof area of a building assigned to Seismic Design Category B, C, D, E or F with a structural system consisting of concrete or reinforced masonry walls with a flexible roof diaphragm or unreinforced masonry walls with any type of roof diaphragms, the work shall include installation of wall anchors at the roof line to resist the reduced International Building Code level seismic forces as specified in the IEBC.

- The existing walls throughout the building are unreinforced masonry walls and will need to conform to the requirements of this section. Based on our review, exterior walls appear to be built around and attached to the steel beams at the roof level, but

the interior partitions do not appear to be adequately connected to the roof diaphragm and will need to be modified. This pertains to both the 1966 & 1987 Buildings.

606.3.1 Bracing for unreinforced masonry bearing wall parapets: Where a permit is issued for reroofing for more than 25 percent of the roof area of a building that is assigned to Seismic Design Category B, C, D, E or F that has parapets constructed of unreinforced masonry, the work shall include the installation of parapet bracing to resist the reduced International Building Code seismic forces specified.

- Work area exceeds 25 percent of the roof area, but there are no unreinforced masonry parapets that require structural bracing.

606.3.2 Roof diaphragms resisting wind loads in high wind regions: Where roofing materials are removed from more than 50 percent of the roof diaphragm of a building or section of a building located where the basic wind speed is greater than 90 mph or in a special wind region, as defined in Section 1609 of the International Building Code, roof diaphragms and connections that are part of the main wind-force resisting system shall be evaluated for the wind loads specified in the International Building Code, including wind uplift. If the diaphragms and connections in their current condition do not comply with these wind provisions, they shall be replaced or strengthened in accordance with the loads specified in the International Building Code.

- Roof diaphragm connections would need to be reviewed as part of the reroofing work. Based on the original construction drawings, the diaphragms appear to be adequately connected to the steel framing.

Level 2 Structural Requirements:

707.2 New structural elements: New structural elements in alterations, including connections and anchorage, shall comply with the International Building Code (IBC).

- New structural elements will comply with the IBC.

707.3 Minimum design loads: The minimum design loads on existing elements of a structure that do not support additional loads as a result of an alteration shall be the loads applicable at the time the building was constructed.

- Renovation will not change the minimum design loads on the structure. Existing design loads do not appear to be noted on existing 1966 drawings and will need to be computed prior to modifying existing elements. Design live loads for 1987 Building appear to conform to current minimum design live loads, except the roof snow load, which will be reviewed locally during design.

707.4 Existing structural elements carrying gravity loads: Alterations shall not reduce the capacity of the existing gravity load-carrying structural elements unless it is demonstrated that the elements have the capacity to carry the applicable design gravity loads required by the International Building Code. Exceptions include structural elements whose stress is not increased by more than 5 percent.

- Design loads will be reviewed, but should remain unchanged at the existing structure. Structural elements will be reviewed at altered areas of the structure.

707.5 Existing structural elements resisting lateral loads: Any existing lateral load-resisting structural element whose demand-capacity ratio with the alteration considered is more than 10 percent greater that its demand-capacity ratio with the alteration ignored shall comply with the structural requirements specified in Section 807.4.

- The existing unreinforced concrete masonry walls provide lateral support for the building. Modifications to the existing building to change wall locations or details will

likely increase the demand capacity of the walls by more than 10% and will require an analysis and most likely new structural elements to resist the Code mandated loads. New elements may include reinforced CMU shear walls or structural steel bracing.

707.6 Voluntary improvement of the seismic force-resisting system: Alterations to existing structural elements or addition of new structural elements that are not otherwise required by this chapter and are initiated for the purpose of improving the performance of the seismic force-resisting system of an existing structure or the performance of seismic bracing or anchorage of existing nonstructural elements shall be permitted, providing that an engineering analysis is submitted demonstrating the following:

- The altered structure and the altered nonstructural elements are no less conforming with the provisions of this code with respect to earthquake design than they were prior to the alteration.
- New structural elements are detailed and connected to the existing structural elements as required by Chapter 16 of the International Building Code.
- New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by Chapter 16 of the International Building Code.
- The alterations do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severs.

- It would be our intention to present improvement options to the Owner as part of a renovation to be included in future work. Existing unreinforced masonry walls do not conform to the current Building Code for new construction to resist seismic loads and could be enhanced with a dedicated seismic force-resisting system, if feasible.

Level 3 Structural Requirements:

807.2 New structural elements: New structural elements shall comply with Section 707.2.

- New structural elements will comply with the IBC, per 707.2.

807.3 Existing structural elements carrying gravity loads: Existing structural elements carrying gravity loads shall comply with 707.4.

- Design loads will be reviewed, but should remain unchanged at the existing structure.

807.4 Structural alterations: All structural elements of the lateral-force-resisting system undergoing Level 3 structural alterations or buildings undergoing Level 2 alterations as triggered by Section 707.5 shall comply with this section.

- Alterations to the building structure will be reviewed for conformance to this section. If the building undergoes a renovation/addition that includes demolition and modification of the existing structure, the building will need to be analyzed to support the code mandated loads. Should the Gymnasium & Auditorium undergo substantial demolition and new construction, each of the Buildings lateral-force-resisting systems will need to be reviewed and likely upgraded.

807.4.1 Evaluation and analysis: An engineering evaluation and analysis that establishes the structural adequacy of the altered structure shall be prepared by a registered design professional and submitted to the code official.

- Renovation to the interior finishes and systems is acceptable without a detailed analysis, but if interior partitions or portions of the building are subject to demolition, an analysis will need to be completed. It should be understood that the existing lateral force resisting system was not designed or detailed In accordance with the

current seismic code in mind. Any substantial renovation will likely require a new seismic system (ie. Steel bracing, reinforced CMU shear walls, etc.).

807.4.2 Substantial structural alteration: Where more than 30 percent of the total floor area and roof areas of the building or structure have been or are proposed to be involved in structural alterations within a 12-month period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the International Building Code for wind loading and with the reduced International Building Code level seismic forces as specified in Section 101.5.4.2 for seismic loading. For seismic considerations, the analysis shall be based on one of the procedures specified in Section 101.5.4. The areas to be counted toward the 30 percent shall be those areas tributary to the vertical load-carrying components, such as joists, beams, columns, walls and other structural components that have been removed, added or altered, as well as areas such as mezzanines, penthouses, roof structures and in-filled courts and shafts.

- Based on preliminary planning, not more than 30 percent of the total floor area of the building will be structurally altered, so the building will not need to comply with the reduced IBC level seismic forces, but will be reviewed with the Code mandated loads for alterations and renovations to less than 30 percent of the building structure.

807.4.3 Limited structural alteration: Where not more than 30 percent of the total floor and roof areas of the building are involved in structural alteration within a 12-month period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the loads applicable at the time of the original construction or of the most recent substantial structural alteration as defined by Section 807.4.2. Any existing structural element whose demand-capacity ratio with the alteration considered is more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall comply with the reduced International Building Code level seismic forces as specified in Section 101.5.4.2. For the purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with sections 1609 and 1613 of the International Building Code with Massachusetts Amendments. For purposes of this section, comparisons of demand-capacity ratios and calculation of design lateral loads, forces, and capacities shall account for the cumulative effects of additions and alterations since original construction.

- Based on preliminary planning, the three Buildings will be reviewed for with the loads at time of original construction and will likely need structural modifications to resist the Code mandated loads due to the substantial renovation at the Gymnasium and Auditorium.

Conclusions and Recommendations:

The purpose of this report is to identify any structural deficiencies and liabilities that will need to be addressed during any substantial renovation, which we understand, is being considered. The report is based on the premise that the existing building will remain in use as a school, and room live loads will not change. We have reviewed the existing Mountview Middle School in accordance to Chapter 34 of the Massachusetts State Building Code, Eighth Edition and the International Existing Building Code, 2009 Edition. We have reviewed the general conditions of the building, as well as the structural modifications that will need to be addressed as part of the renovation to increase the public safety of the building. This report, in its entirety, shall be used as the basis for the renovation. The following items are meant to highlight conditions or deficiencies noted in the report, but do not limit the work required.

General Information:

- Existing main building area is 91,000 ft^2.
  - 55,000 ft^2 building built in 1966.
  - 36,000 ft^2 addition built in 1987.

- The proposed renovation/addition will produce a finished building of approximately 130,000 ft^2.
- The existing roof membrane should be reviewed for regular maintenance or replacement.
- Any structural work associated with the renovation/addition shall conform to the International Existing Building Code, as amended by the Massachusetts State Building Code, and specifically any additional requirements for Level 3 work.
- Should the renovation project be abandoned and an entirely new building be considered, the new building design shall be in accordance with the Massachusetts State Building Code, current edition.

Existing Conditions:

- Steel Channel at base of 1966 brick veneer requires cleaning and painting, in general, and further maintenance at location near grade where the channel is rusting and deteriorating.
- Exterior masonry veneer requires regular maintenance. Caulked joints between the 1966 & 1987 Classroom buildings have aged and needs to be replaced. General brick repointing is required at a few locations, but in general the exterior brick is in good condition.
- Vertical cracks (thermal and shrinkage cracks) at the CMU backup walls require repointing or maintenance to create masonry control joints at several locations in the 1966 Buildings.
- Stepped cracks at the CMU backup wall in the 1987 building require repointing.
- Metal roof deck should be inspected after ceilings or roofing and insulation are removed in areas of the building that show signs of water leaks during a full renovation.

Structural Requirements for Renovation/Addition:

- Geotechnical exploration will be required for any new construction, as well as any structural foundation work to the existing building.
- Roof snow loads:
    - Original: Unknown at 1966 Buildings, computations of existing framing estimate at 30 psf. 1987 Addition snow load was 35 psf.
    - Renovation: 42 psf plus drift caused by any additions or new roof elements.
    - Additions: In accordance with Massachusetts State Building Code.
- Lateral load resisting system requires significant modification to conform to current Code requirements.
    - New shear walls or bracing systems are required to provide a regularly spaced and organized system layout, in accordance with accepted engineering practices.
        - Existing interior and exterior bearing walls can remain in service as unreinforced masonry shear walls, but will need to be adequately connected to the roof diaphragm to avoid being a seismic hazard.
        - New shear walls/braces will require structural attachment to the existing diaphragms, as well as new foundations to resist the Code mandated loads.
- Unreinforced masonry partitions (interior) are built-up to the underside of the framing, but are not adequately connected to the roof diaphragms to resist seismic loads. We recommend remedial action be taken during the construction phase to install new anchors at the roof to secure the masonry walls to the diaphragms for in- and out-of-plane loads required by the Building Code.

Based on our review of the existing conditions, as well reviewing Chapter 34 of the Massachusetts State Building Code, it is our professional opinion that the existing building is capable of being structurally renovated and reused as a school, but will require significant

upgrading of the seismic force-resisting system and installing new structural framing to support new equipment or loads.

While it may be structurally possible to renovate the building, it may not be financially feasible due to the extent of the renovations required. Should the Town of Holden choose to renovate the building, it should be done with the understanding that structural upgrades noted in this report will only bring the building up to the minimum standards of the Building Code for existing buildings, and will not meet the Building Code requirements for new buildings. The requirements noted in this report will not increase the gravity load capacity of the structure, which will limit the flexibility of any renovation.

Christopher Tutlis, PE
Bolton & Dimartino, Inc.

Mountview Middle School Holden, MA
Existing Conditions – Fire Protection
6-27-12

BUILDING DESCRIPTION

General: The Mount View Middle School is located at 270 Shrewsbury St, Holden, Ma. It is a 3-level, 3-wing building of non-combustible, steel, concrete and brick construction with flat roofs. Gross building area is approximately 122,750 square feet (including the original, 1967 building and a 1989 addition). The "ground-floor" is at grade level in the middle and rear-(addition)-wings, and does not exist under the 1st-floor front-wing. The highest floor-level is 23'8" above grade. Because there is an 8'6" high space between the upper-floor ceiling and roof deck, the highest roof level is 39'4" above-grade elevation. The building is set back from Shrewsbury St approximately 400 ft.

Ceilings: Ceilings are hung, acoustical-tile through-out, including the gymnasiums. Thus any new FP distribution piping and branches could be run concealed.

Layout:

The front-wing of the building has a "1st-floor" only, and contains the gymnasium / locker rooms, dual-purpose-cafeteria-auditorium, kitchen / stage, and support spaces (storage, etc) for the above.

The middle-wing of the building contains 3 levels, all containing primarily classrooms and offices..

The rear-wing is the 1989 addition, and also contains 3 levels that include a smaller,P.E. activities gym, industrial arts, graphic arts, and classrooms.

Hazard Levels:

Classrooms, offices, hallways, gymnasiums, and auditoriums are generally considered "Light hazard" relative to fire-suppression. Light Hazard areas require the lowest level of sprinkler protection. A gas supply is planned for the Science classrooms, however, raising their hazard level to "ordinary hazard – group 2".

All storage rooms at Mt V MS are quite small (well under 1,000 sqft), with materials stored under 12' high. Storage area shelving we saw was all under 30" deep (aisle to aisle), which helps keep the hazard rating lower. Most of these areas would be considered "miscellaneous storage", and designed as an ordinary hazard occupancy.

Two storage issues of concern include:

- In the ground-floor storage room across from the mechanical room, we noted a paint-storage shelving area, with several (or more) cans of paint thinner. Though we did not examine every can, in general, where there are paint thinners, there are also oil-based paints. Oil-based paints and thinners are both highly combustible,

and if stored on open shelves, will create an extra-hazard" rating for this room. To minimize Fire Protection installation costs, all oil-based paints and thinners must be stored in listed flammable storage cabinets.

- Several storage rooms utilize plastic shelving. Plastics are also highly combustible, and will create an "extra-hazard" rating in these storage rooms. To minimize Fire Protection installation costs, all plastic shelving should be replaced with metal shelving.

Other "Ordinary hazard" areas would include (group 1) the main kitchen, kitchen service areas, and (group 2) densely packed storage-areas, and the stage.

Other than the correctable storage-issues noted above, we did not identify any other areas that would be considered "Extra hazard".

In front of the stage, is a wood-framed, stage "extension", with a concealed, combustible space below. This stage extension would require sprinklers below it as well as above it, resulting in exposed piping in a prime viewing-area To minimize fire Protection installation costs, as well as to improve aesthetics, this stage extension should be removed OR replaced with one built of non-combustible materials.

Storage:

Storage is a critical issue that should be addressed as part of any renovation or new construction. When a building has insufficient storage space, other spaces not intended or designed for storage can end up being used for storage.

Storage height is another important aspect of the storage issue. Sprinklers require between 18" and 3' clearance between the sprinkler deflector and the top of storage (depending on the type of sprinkler and type of stored material). Several storage rooms have stored materials stacked up to a foot or less below the ceiling/roof structure. These stored materials would obstruct a sprinkler's water flow, potentially keeping it from reaching the fire. This would be a code violation.

If a new Fire Protection system is to be installed, it is important that the use of every room to be sprinkled be clearly defined. Storage rooms require a higher level of sprinkler protection than offices, classrooms, electrical rooms or non-combustible mechanical spaces, so it is important that storage be confined to designated storage rooms, and not leak into other spaces having a lesser level of protection.

A storage plan should both include an assessment of "who needs to store what" and "how much should be stored", as well as an assessment of available storage areas, and the maximum storage height permitted in each space.

The Mt View MS does not currently have any listed flammable storage cabinets. Per Dennis Hyson, head custodian for Mt. View MS, approximately 4 years ago the school district made a comprehensive inspection of all storage rooms and disposed of a great many materials deemed to be hazardous. The intent was to change-over to using non-hazardous materials where-ever possible. Thus art and industrial arts areas use ***only*** water-based paints (so no thinners), and do ***not*** use or any solvents or other flammables. Dennis was uncertain if any flammables are used in science labs. This will be investigated further during the preliminary schematic report (PSR) phase.

Flammability standards: 527 CMR (State Fire prevention code) sets flammability requirements for furniture, and window coverings (drapes, blinds, etc). We noted several classrooms and offices with curtains that appeared to be "home-made". These would likely not meet any flammability standards. We noted 1 storage area next to the stage that contained many stacks of plastic chairs. When burned, plastic can give off volumes of toxic smoke. Existing furniture (especially plastics) should be reviewed for flammability, and replaced if it is not flame resistant.

Existing Fire Protection: There is an existing fire protection system in the 1989 addition (rear-wing) only. This system uses 2, combined, sprinkler/stand-pipe risers, 1 located in each stairwell. Half of each floor is fed from 1 riser, and the other half from the other riser. Each floor, therefore, has 2 floor-valves / tamper switches. We did not observe any floor-valve flow switches.

Based on the 1989 construction document pipe sizes, it appears that the ground floor and 1st floor sprinkler systems were both designed as "light hazard", and the upper level (science, art, and home-making rooms) was designed as "ordinary hazard". Current use is similar, so minimal piping revisions are expected.

The addition FP system is fed from an 8" FP service entering the building in the NW corner, with an 8" double-check-valve back-flow preventor. This fire service room also contains a fire-pump and jockey pump. The main, diesel fire pump was replaced in 2007, and the jockey pump was replaced in 2003.

There are pressure gages on the building-side of the back-flow preventor only, so existing city-water-pressure at the FP service entrance is unknown. The system-pressure gage readings indicate a fire-pump output of approximately 150 psi, which would be more than sufficient for expanding the existing FP system to the remainder of the building and to an addition.

Because the school is set well back from Shrewsbury St, there are 2 hydrants on school property – one in the front and one in the back. The rear hydrant is within 100' of the Fire Dept Connection, meeting Holden Fire Dept requirements.

SEAMAN ENGINEERING CORPORATION
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June 29, 2012

Mr. Michael Pagano, AIA
Lamoureux • Pagano Assoc., Arch.
108 Grove Street, Suite 300
Worcester, MA 01605

Re: Mechanical Systems Survey at the Mountview Middle School in Holden, MA

Dear Mr. Pagano:

The following is a summary report outlining our observations and comments regarding the status of the HVAC, plumbing and fire suppression systems at the Mountview Middle School in Holden, MA.

SITE INSPECTION

In May 2012 we performed site inspections of the existing building. Our observations along with review of the original contract documents and information provided by facility personnel regarding the current building operating status were used extensively in assembling this report.

GENERAL

The building is a 3-story structure with a lower/ground floor level which varies in its below grade depth but for the most part is above grade. The original portion of the building which housed an auditorium, cafeteria, kitchen, classrooms, offices, gyms, etc… was constructed in circa 1966. A 3-story addition to the classroom wing was constructed circa 1988 and encompassed science, home economics and general classrooms.

The building is primarily constructed of masonry brick/block and steel. Many windows in the 1966 portion of the structure are single glazing type with some sections being replaced with double pane insulated type glazing. The 1988 portion of the building has double pane insulating glazing.

PLUMBING

Fixtures:

The existing buildings plumbing systems appear adequate in quantity for the current occupancy use however, many surveyed, did not comply with ADA or MA accessibility codes. Bathrooms failed compliance on numerous levels including the lack of accessible fixtures and the absence of proper wheelchair space.

Existing water closets are of the wall mount flush valve type most of which were not of the water conserving 1.6 gallon per flush type as required by current code. The lavatory sinks are of the wall hung style, but also fail accessibility compliance on several levels. Urinals in the classroom wing appear adequate in number to accommodate current code requirements.

Boys' locker rooms have showers of a gang configuration and girls' locker rooms have individual stalls. Each shower has an individual valve control although central mixing valves were sued at one time. All locker room showers have been deactivated and are no longer used.

In the kitchen there is one (1) double-bowl preparation sink and one (1) 3-bowl pot/scullery sink as well as a hand wash sink which will typically satisfy Board of Health requirements for a kitchen area. The kitchen also had a Hobart #C-44A dishwasher with prewash area with hand spray. Both the dishwasher discharge and the 3-bowl sink discharge go to separate grease traps located under a floor hatch prior to entering the buildings sewer system.

Several plumbing deficiencies noted in the kitchen area were as follows:

- The food preparation sink is not indirectly wasted as required by the plumbing code. Indirect waste configuration limits the possibility of waste water backing up into the food prep. sink.
- The hose spray fixtures located in the kitchen does not appear to have check valves installed on each supply. Check valves are required to prevent cold water and hot water from migrating between the two systems.
- Current code and regulations would require an exterior grease trap be provided to intercept all waste from the kitchen fixtures and floor drains.
- A clothes washer located in the kitchen area discharges to a depressed floor slab area drain. This unit should discharge to a trapped sanitary standpipe.

It appears most of the fixtures are original vintage many of which are not of the water saving type. Apparently maintenance is routinely performed on faucets, toilet fill valves, etc.. as needed.

Cold Water Service:

A 4" water service feeds the buildings domestic water needs. The 4" line enters a storage room on the lower level. The 4" service runs thru a water meter then reduces to a 3" line prior to splitting to two (2) reduced pressure zone (RPZ) backflow preventers and then rejoining to a 3" line to support the buildings domestic water needs. The service appears to have been upgraded within the last several years with the backflow preventers. The domestic water piping is distributed throughout the building primarily routed above ceilings.

Water Service Entrance

According to facility personnel, the piping system has had various failures over time. Ironically, they noted that the newer 1988 portion of the building has experienced more failures than the 1966 portion. Due to the age of much of the water piping within the 1966 portion of their building there is a high probability that the water service could have lead containing solder in the fittings. Although not a large source of lead contamination it should be tested and monitored and/or corrected if found to be a problem. With the age of the piping and the high failure rate noted a complete replacement of the domestic water system during any substantial renovation is highly recommend.

Domestic Hot Water Service:

The domestic hot water needs of the building are primarily supported by an oil-fired water heater installed in 2003. The water heater is a Bock #120E unit with a storage capacity of 119-gallons and a maximum input capacity of 155,000 BTUH. This water heater replaced an old indirect fired storage tank which had utilized the heating plant boiler water to generate domestic hot water. According to the facility personnel, the current water heater is inadequately sized to support the current building fixture load and as such there are times when they run out of hot water. If the showers are to be reactivated a larger water heater and/or additional storage capacity shall be required. Being that the water heater is at the end of its useful life and appears to be short on capacity its replacement should be considered during any renovation project.

There is no mixing valve located on the main hot water supply to temper the water for general building use. As such the water heater is set to deliver a constant hundred and 120°F water supply. Current code would require differing water temperatures at different types of fixtures. Restrooms bathroom sinks must not discharge hot water at a temperature exceeding 110-112°F for safety reasons, whereas the service fixtures (janitor's sinks, kitchenette sinks, etc..) are required to have hot water temperatures in excess of 120°F for sanitation reasons. A central mixing valve could with local mixing valves or adjustable stop mixing fixtures would be required to achieve this level of control.

Storage of hot water below hundred and 130° F can lead to bacteria growth within the system. As such, to prevent this we recommend keeping domestic hot water tank temperatures at 140° F thereby requiring the central mixing valve. This elevated tank temperature may help the current school by yielding more short-term capacity for peak load conditions.

Domestic Water Heater

There are two (2) recirculation pumps on the domestic hot water system, which are required since there are fixtures located beyond 100 feet of the hot water source. The building code requires hot water to be available within 100 feet of any hot water consuming fixture.

Drainage Systems:

The roof is drained via an internal roof leader system connecting to underground storm drainage piping leading to a storm water system. With the exception of some visible water stains on the ceilings of unknown origin, we noticed no outward signs of storm drainage system failure.

Most of the sanitary drainage piping is concealed from view however, what we were able to see was primarily cast iron hub & spigot type. The sanitary sewer lines run below the slab and exit the building to a municipal sewer system. We noticed no outward signs of sanitary system failure.

According to the original contract documents it appears that the acid waste from the science rooms joins with other sanitary waster before exiting the building. In addition, no signs of acid neutralization were found unless built into millwork. Per current codes this waste must be treated by acid neutralizing tank(s) prior to discharge to the municipal sewer system. Any renovation project must address this improper configuration. Many of the lab sinks and fixtures have been disabled and are no longer used.

Gas Service:

According to facility personnel a 500-gallon underground LP tank was abandoned in place due to a leak in the piping from the tank to the building. The tank still contains propane and should be properly decommissioned and removed. An above ground liquid propane (LP) gas service tank located adjacent to the building supports the oil-fired boiler pilot lights.

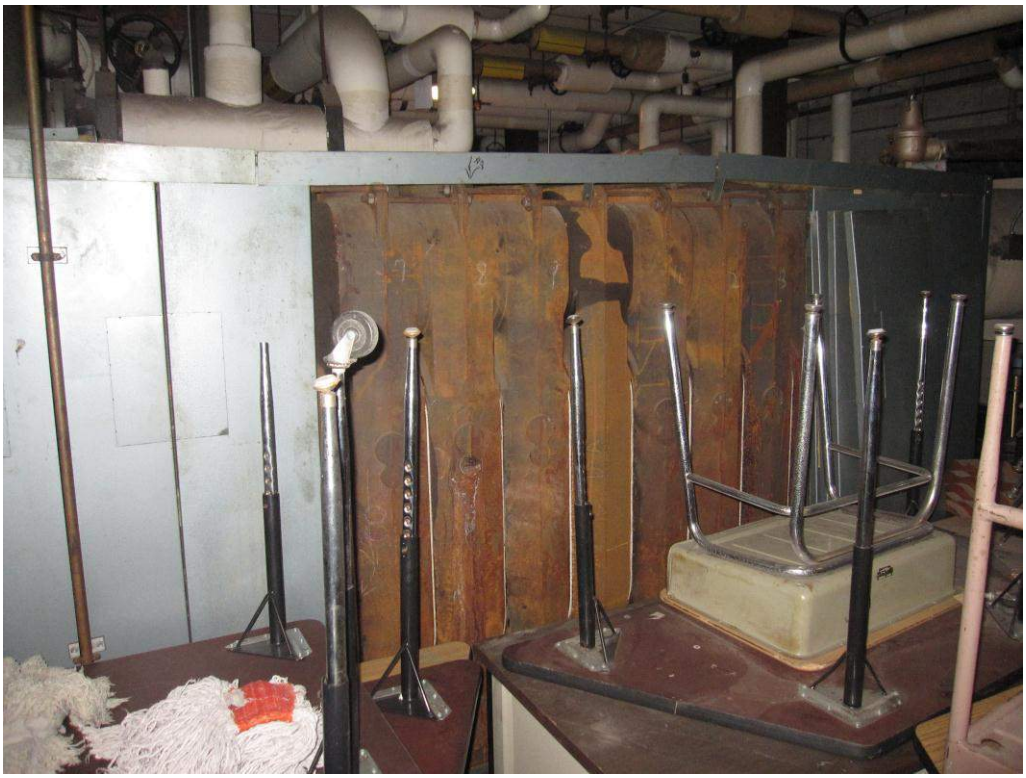
<u>HVAC</u>

Boilers:

The buildings heating and domestic hot water requirements are currently served by two (2) 1988 vintage H.B. Smith cast iron sectional hot water boilers. The boilers have a Power Flame burner with Auto Flame combustion control. All units discharge into a common breeching prior to entering a masonry chimney. The internal condition of the chimney is unknown.

The existing cast iron boilers have been plagued with numerous cracked sections over the years. Typically this is caused by low flow and/or low water return temperature thru the boilers. Based on the pumping, piping and control arrangement it appears that this may be the cause at this site. As such, if not replaced, we recommend retrofitting each boiler loop with boiler primary pumps to insure constant flow thru each boiler. In addition piping and mixing valve arrangement at the boiler would be modified to accommodate this work.

The H.B. Smith boilers are of 1988 vintage and as such are approximately 75% thru their useful expected service life of 30 years as defined in the American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE) Applications Handbook. As such, any substantial renovations should include consideration of replacement of the boiler plant.



Boiler with Cracked Section

2 fuel oil is supplied from a 10,000 gallon underground fuel oil tank located behind the building adjacent to the girls locker room. The tank was installed in 1999 and as such should be in fairly good condition and of the double wall fiberglass type. The tank is equipped with a Veeder-Root leak and level monitoring system. Fuel oil transfer pumps located in the boiler room circulate fuel oil between the tank and the oil burners.

Combustion air for the boiler room is supplied from ductwork connecting a vertical masonry shaft adjacent to the flue up to the roof.

Current control performs simple boiler enabling/disabling and hot water reset control.

Hydronic Distribution:

Hot water from the heating plant is distributed to the building via a supply and return distribution system which runs above ceilings and below slabs to serve the heating terminal units. The

system circulates hot water to fin-tube radiation, classroom unit ventilators and heating & ventilating units located throughout the building as well as partial radiant floor heat in the classrooms section of the school. According to facility personnel the underslab radiant heat system has been plagued with failures.

The boiler room has five (5) end suction floor mounted pumps serving the heating circulation zones. The zones they serve are as follows (note: P-# are arbitrary):

- P-1: 1988 Building 1st & 2nd floor North - 3HP
- P-2: 1988 Building 3rd floor North - 3HP
- P-3: Spare for P-1 & P-2 - 3 HP
- P-4: 1966 Building – 7.5 HP (pump replaced in 2007)
- P-5: Cafeteria & Kitchen area 7.5 HP (original pump)

Pumps P-1 thru P-3

The pumps appear to be operational however many show signs of bearing assembly and motor changes which would be expected for pumps of this age. P-5 has certainly exceeded its useful service life as well as many of the 1988 building pumps are approaching the end of the useful service life as defined in ASHRAE. As such, pumps should be considered as serious candidates for replacement during any substantial renovation.

System water expansion is accommodated through the use of a large captive air type expansion tanks. The major drawback with captive air tanks is that the air will naturally migrate into the

water over time in essence oxygenating the water and rendering the tank ineffective. This in turn increases the amount of air in the system which can cause air binding and accelerated corrosion of ferrous components. In addition, someone must manually purge the tank of water on a regular scheduled basis to insure its effectiveness. During any significant renovation project we would recommend replacing the captive air tanks with bladder type tanks. A bladder tank creates a physical separation between the air and water used to control system water expansion whereas captive air tanks have no such separation.

Captive Air Expansion Tank

Ventilation:

Classroom unit ventilators are located throughout the 1988 classroom wing. These units are located along exterior walls and each has an outdoor air louver and associate control dampers to allow outdoor air to enter the classroom space through the unit ventilator. During occupied periods, the unit fans run continuous to provide space ventilation and pneumatic dampers modulate airflow across the heating coil to maintain space temperature.

The current configuration of these unit ventilators has resulted in numerous comfort complaints by occupants. The primary issue being the unit ventilators have no hot water control valve to stop or slow the flow of hot water through a unit when a space reaches temperature. Therefore the units tend to radiate heat into the space regardless of whether there is a heating load are not so long as the system heating pumps are on. The dampers in the units are not tight enough to prevent this overheating. Current unit ventilator control logic used today would incorporate two-way valves in addition to damper control so as to lower the flow through the coils as space heating demand drops. This prevents overheating as well as sleeves on pump energy.

The units still being operational is a testimant to good maintenance. Although in fair condition all have exceeded their expected service life of 20 years as defined by ASHRAE. As such, any substantial renovation should include replacement of these units.

Classroom exhaust in the 1988 building is supported by multiple in-line and roof exhaust fans supporting individual classrooms via above ceiling ductwork and vertical duct chases. The ventilation rates appear to comply with outdated ventilation standards and will most likely need to be increased during a renovation project to support new ventilation standards. Most fans have the ability for 2-speed control although it is unclear if the current pneumatic control system operates them in this way as originally intended.

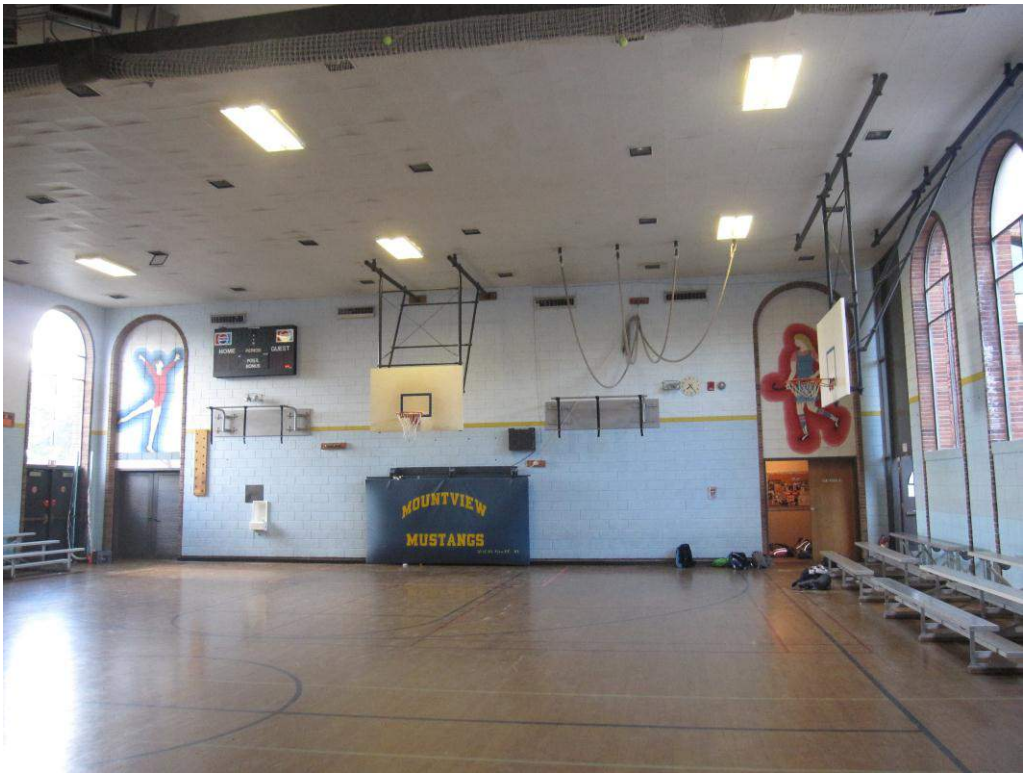
The 1966 classroom and office wing is ventilated through the use of two (2) central air handlers located within an attic penthouse space. These air handlers were replaced in 1999 with variable air volume (VAV) style units that incorporate variable frequency drive fan speed control. These air handlers supply and return air from most all the classrooms within the 1966 wing. The air handlers are designed to operate with a ratio of 80% outdoor air as opposed to 20% return air with much of the return air being passively relieved through a roof vent. This ratio of outdoor air to the classrooms appears to meet the current outdoor air ventilation standards however, current energy codes would typically require and justify energy recovery heat reclaim on these systems.

Air supply to each classroom and office space group is controlled with VAV terminal boxes with hot water reheat coils. In addition, original control drawings reflect motorized dampers on the return duct connections to most rooms. According to these control drawings the return dampers were intended to control to maintain a classroom space pressure at positive .05” w.g..

Being that there is no active return or exhaust air fan the current system relies on space pressure to push the air through the return duct and out of the building. Depending on the duct configuration and losses this is typically and ineffective way to control the movement of air and building space pressure.

The gym and cafeteria are all served by ducted heating and ventilation units. These units have exceeded their useful expected service life as defined by ASHRAE and as such should be replaced during a renovation project. The units serving the cafeteria is located above a stage area and according to school personnel is too noisy to operate during a production. The gymnasium

unit is located above the old girls locker room and a storage room area and has service panels removed on it. Neither was operating during our inspection.



Gymnasium – Supply Grilles on Wall High

The kitchen area, boys locker room and girls locker room are all supported by individual ducted horizontal style classroom unit ventilators are located above the ceilings. These units provide 100% outdoor make up air to the spaces to accommodate the respective space exhaust rates. The space is exhausted through centrifugal roof exhaust fans.

The kitchen hood over the cook line does not comply with current code and NFPA 96 standards. The hood does not have the proper filter configuration, no grease cup and it's not of welded construction. In addition, the compliant constriction of the exhaust duct and the fan on the roof may not comply with required NFPA 96 and UL 762 listings for kitchen hood duty. As such, the hood system should be serious candidate for replacement during a renovation project.

Kitchen Hood

In general, all building restrooms appear to have ducted exhaust systems although it was unknown if they are operational. The systems should be replaced during a renovation to support new ventilation requirements for areas such as these as well as to insure future reliability.

If you have any questions regarding this report please do not hesitate to call.

Sincerely,
Seaman Engineering Corporation

Kevin R. Seaman P.E. LEED® AP
President

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Existing Electrical Systems Review
Mountview Middle School
Holden, MA

Date: June 25, 2012
Prepared by: Azim Rawji, P.E.

SUMMARY

ART has completed site surveys and reviewed available drawings for the existing Mountview Middle School building in Holden, Massachusetts. We have developed a Good/Fair/Poor rating system for the various electrical systems.

The rating system was developed to give a concise, overall assessment for each system. In general, a system rated "Good" typically is up to date with current codes and well suited for current and future space intent. A "Fair" rated system may have some equipment in need of replacement or portions not suited for current or future space programming. Systems that are rated "Poor," are not well served for current or future space programming, and are outdated or obsolete.

Most of the systems included in this study were found to have poor or fair overall ratings. There are many reasons for this, including the age and systems that do not meet current code requirements. The rating system takes into account the condition of the electrical systems as well as the types of systems, sizing and applicability for their respective spaces.

The Massachusetts State Building Code 780 CMR requires all buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein which are regulated by the State Building Code to be maintained in a safe, operable and sanitary condition. All service equipment, means of egress, devices and safeguards which are required by the State Building Code in a building or structure, or which were required by a previous statute in a building or structure, when erected, altered or repaired, shall be maintained in good working order.

The majority of the electrical systems in the building are either outdated or obsolete. It is unknown whether any of the existing systems have been maintained or tested per the manufacturer's recommendations or system standards.

BUILDING ELECTRICAL SYSTEMS

1. Electrical Service:

   The building has two electric services rated 800A, 208Y/120V, 3-Phase, 4-Wire for the 1966 building and 600A, 208Y/120V, 3-Phase, 4-Wire for the 1987 addition. The main switchboards are located in the garage/workshop area on the lower level. The switchboards are fed from a utility company transformer located on the exterior of the building. The utility company metering is off of the padmount transformer and located on the exterior of the building. The transformer is fed from the utility company primary distribution system. The switchgear is by General Electric Company. The switchgear for the 1966 building is 45+ years old and at the end of its useful life. The switchgear for the 1987 building is 25+ years old and nearing the end of its useful life. The feeder circuits for both the switchboards utilize the conduit as the ground and do not have a dedicated grounding conductor. The integrity of the ground deteriorates with age and can render the feeder

   Rating: Poor

2. Normal Distribution

   The panelboards in the building are by General Electric Company. The panelboards are located throughout the building and are circuit breaker type. The panelboards in the original building are approximately 40+ years old and past their useful life; the panelboards in the addition are 25+ years old and nearing the end of their useful life. The branch circuit wiring is not suitable for today's electrical loads and there are frequent instances of circuit breakers tripping under load conditions. The feeders utilize the conduit as the ground and do not have a dedicated grounding conductor. The grounding can become ineffective due to rust and bad connections between conduits and boxes over time.

   Rating: Poor

3. General Purpose Power

   The general purpose power in the building is inadequate. Most of the classrooms have appear to have adequate receptacle outlets but the branch circuitry is not adequate. Additional outlets have been installed in some rooms over the years. The branch circuits utilize the conduit as the ground and do not have a dedicated equipment grounding conductor. The grounding can become ineffective due to rust and bad connections between conduits and boxes over time. The existing branch wiring will have to be replaced.

   Rating: Poor

4. Emergency /Standby Power

   The building is not equipped with a standby/emergency generator. As a general rule of thumb new schools have standby/emergency generator in the event of a power outage for the following primary reasons: 1) to provide emergency egress and exit lighting; 2) to provide heat in the building to keep the fire protection piping from freezing; 2) to provide power for freezer/cooler in the kitchen; 3) to provide power for lighting and heating in the

cafeteria/gym if it is to be used as a shelter; 4) to provide power for the Information Technology (IT) server equipment.

Rating: Poor

5. Egress & Exit Lighting

ART was unable to confirm that all emergency lighting functions properly as a complete emergency lighting test data was not available. NFPA 101 requires an annual test of the egress emergency lighting system. The egress lighting consists of self-contained battery backup lighting units located in the path of egress. The overall coverage appears to be inadequate; ART observed that emergency lighting was not installed in classrooms and at all the exit discharge leading to a public way. The majority of exit signs are lit by internal lamps, these tend to burnout often and can leave and area without lit exit signs. The exit signs do not comply with the graphics requirements in article 1011.5.1 of the State Building Code. The overall coverage of exit signs appears to be adequate.

Exit signs and emergency egress lighting must be provided with an emergency power backup to assure continued illumination for a duration of not less than 1½ hours in case of primary power loss. It does not appear that the exit signs comply with te power source requirements of article 1011.5.3 of the State Building Code.

6. Lighting & Controls

The lighting in the building is a mixture of fixtures with T8/T12, incandescent and metal halide lamps. Fluorescent fixtures with T12 lamps are in a majority of areas, these are older and less energy efficient. Due to their larger diameter, these light bulbs require more mercury vapor and phosphor to operate effectively. These bulbs are no longer manufactured. Prior to the 1978 ban on PCBs, the ballasts for T12 lamps incorporated a small capacitor that contained PCBs. After PCBs were banned, magnetic ballasts continued to be manufactured but only incorporated capacitors that did not use PCBs. The US Department of Energy has phased out the manufacturing and sale of magnetic ballasts. They are significantly less energy efficient than the alternative, electronic ballasts. The lighting is inefficient and does not meet current energy codes. Lighting control is primarily by wall mounted switches. Building perimeter lighting utilizes flood lights which produces light pollution and glare, is inefficient and inadequate.

Rating: Poor

7. Telecommunications Cabling Infrastructure

The telecommunications system comprises mostly of Category 5 cables for data and voice communications. The system is outdated and does not comply with the BICSI standards for telecommunications infrastructure. Telecommunications equipment is not installed in dedicated rooms or closets and does not comply with clearances required by the BICSI standards. The system is slow and barely meets current requirements.

Rating: Poor

8. Voice Communications Equipment

The communications equipment comprises of an Avaya voice PBX located in the administration office area. The system supports telephone handsets only in the administration offices. The system is inadequate for school wide communications.

Rating: Poor

9. Fire Alarm System

The fire alarm system is by Silent Knight. The fire alarm control panel is addressable and is located in the boiler room. A filer alarm annunciator is located in the vestibule of the side entrance on the lower level and a Knox box is located on the exterior. The fire alarm panel is in good condition. The visual signaling devices are inadequate and do not comply with NFPA-72 2010 standards for visual notification. The height and location manual pull stations does not comply with the State Building Code. Overall coverage of the automatic fire detection devices is poor. Additional automatic detection and signaling devices need to be installed to comply with NFPA-72 2010 standards and the State

Rating: Fair

10. Public Address and Clock Systems

The school communications system is by Dukane. The system comprises a main console with microphone and selector switches located in the administration office. Speakers are located in common areas and classrooms, the classrooms also have a telephone handset for communications. The system is obsolete and barely functions. The clock system is no longer in service.

Rating: Poor

11. Audio-Video Systems

The audio-video system comprises of interactive projector or interactive whiteboard located in each classroom. The system meets current programming needs. Future programming needs will require upgrades to the projectors and white boards. The school does not have a media distribution system integrated with the classroom audio-video system

Rating: Fair

12. Video Surveillance, Access Control & Intrusion Detection Systems

There is no video surveillance, access control system or intrusion detection system at the school.

Rating: Poor

G. Determination for Need & Schedule for Soils Exploration & Geotechnical Evaluation

Initial soil exploration was performed at the existing school site (see attached borings report).

Additional exploration will be conducted during the PSR phase of the study as well as exploration of the selected alternate Malden Street site.

YANKEE ENGINEERING & TESTING, INC.

June 5,, 2012

Mr. Mike Pagano
Lamoureux Pagano, Associates Inc.
108 Grove Street//Suite #1
Worcester, MA 01604

RE: Geotechnical Investigation Summary
Mt. View School
Holden, Massachusetts **Project # 94042**

Dear Mr. Pagano:

Per our agreement, Yankee Engineering & Testing Inc. has completed the geotechnical investigation for the above site. This letter is intended to provide a general overview of the subsurface conditions that will be formally present in the geotechnical report.

As directed, five (5) borings (B-1 to B-6 – excluding B-2) were completed. B-1 and B-3 were located along the top of the "fill" slope, to the west of the baseball/soccer fields, while B-4 was near the northeast corner. Borings B-5 and B-6 were along the east side of the fields (near the tennis courts) where the fill depth was expected to be limited.

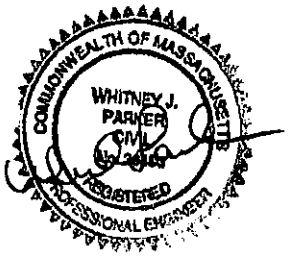
B-1, B-3, and B-4 showed mixed subsurface fill materials (which included loose soil, topsoils, and a peat layer at B-4) down to depths of 24, 21', and 18', respectively. The loose zones and topsoil evidence would indicate that the in-place fill is NOT suitable for foundation support.

B-5, near the northeast corner, showed at least 7'+ of fill (mixed with topsoil) however the boring was terminated at 7' due to auger refusal (boulder) and time limitations.
B-6 near the tennis courts indicated medium dense native tan sand/gravel (no fill).

In conclusion, the in-place unsuitable fill soils, beneath the baseball/soccer fields, appears to be 20'+ thick along the west side and negligible along the east side.

We appreciate this opportunity to be of service to you. Should you have any questions relative to this report, or require additional services, please do not hesitate to contact me at our Worcester office.

Very truly yours



Whitney J. Parker, P.E.
Director of Engineering Services
WJP/rap
enc.
r/work/project/94042/mt view intro 060512

Yankee Engineering & Testing, Inc.
10 Mason Street
Worcester Ma 01609
Phone: (508) 831-7404
Fax: (508) 831-7388

SOIL TEST BORING LOG

Project:	LP//Mt. View School	Boring #	**B - 3**
Location:	Holden, Massachusetts	Sheet #	1 of 1
Job No:	94042	Location:	NW corner
Date Start:	May 30, 2012	See Boring Location Plan	
Date End:	May 30, 2012	Elevation * :	existing

Drilling	Core	Casing	Sampler
Type	n/a	n/a	Split Spoon
Size	n/a	n/a	2" I.D.
Hammer	n/a	n/a	140 #
Fall	n/a	n/a	30"

Groundwater Observations

Date	Depth	Casing At		Stabilization Period	
05/30/12	no GW	n/a	Upon Completion of Boring		

Depth (ft.)	BORING SAMPLING DATA No.	Depth	Pen.	Rec.	Blows/6"	Strata Change	Sample Descriptions & Geotechnical Observations	Remarks
						1'	Topsoil/Subsoil	
							Dark brown silty sand/gravel/topsoil	fill
5'						4'		
	S - 1	5 - 7'	24"	6"	4 - 8		S1: Brown, damp, medium dense silty sand some gravel little topsoil	topsoil fill
					6 - 10			
10'						8'		
	S - 2	10 - 12'	24"	9"	8 - 8		S2: Dark brown, damp, medium dense m/f sand some black rock fragments appeared to have trace topsoil	fill
					7 - 8			
15'								
	S - 3	15 - 17'	24"	5"	10 - 7		S3: same as S2 but with little topsoil	fill
					7 - 15			
20'								
	S - 4	20-20.5'	7"	2"	23 - 50/1"	21'	S4: Same as S2	fill
							Auger refusal at depth of 21' within the fill due to suspected cobble/boulder.	
30'								

		Soil Composition Proportions		Cohesive (blows/ft)	Cohesionless (blows/ft)
Drilling Co.	Soil Exploration Services			0 - 2 = Very Soft	0 - 3 = Very Loose
Rig Type:	Acker B-27 Truck Mounted	Trace:	0%-10%	2 - 4 = Soft	4 - 9 = Loose
Driller:	Mr. Pat Goodale	Little:	10%-20%	5 - 8 = Med. Stiff	10 - 29 = Med. Dense
Helper:	Mr. Brian Hart	Some:	20%-35%	9 - 15 = Stiff	30 - 49 = Dense
Inspector:	Mr. Ken Nelson	And:	35%-50%	16 - 30 = Hard	50+/ft. = Very Dense
Client Rep.:	Town of Holden				

DRILLING NOTES & REMARKS	Refer to geotechnical report dated June 6, 2012 for additional information.
	* - No ground elevations listed on the provided site plan.

Yankee Engineering & Testing, Inc.
10 Mason Street
Worcester Ma 01609
Phone: (508) 831-7404
Fax: (508) 831-7388

SOIL TEST BORING LOG

Project:	LP//Mt. View School	Boring #	**B - 4**
Location:	Holden, Massachusetts	Sheet #	**1 of 1**
Job No:	94042	Location:	NE corner
Date Start:	May 30, 2012	See Boring Location Plan	
Date End:	May 30, 2012	Elevation * :	existing

Drilling	Core	Casing	Sampler
Type	n/a	n/a	Split Spoon
Size	n/a	n/a	2" I.D.
Hammer	n/a	n/a	140 #
Fall	n/a	n/a	30"

Groundwater Observations

Date	Depth	Casing At	Stabilization Period
05/30/12	no GW	n/a	Upon Completion of Boring

Depth (ft.)	BORING SAMPLING DATA No.	Depth	Pen.	Rec.	Blows/6"	Strata Change	Sample Descriptions & Geotechnical Observations	Remarks
						0.5'	Topsoil/Subsoil	
5'						4'	Light brown fine sand some gravel	fill
10'	S - 1	5 - 7'	24"	8"	3 - 3 6 - 7		S1: Brown, damp, medium dense m/f sand some gravel (asphalt chunk) trace topsoil	fill
15'	S - 2	10 - 12'	24"	7"	9 - 4 2 - 1	13'	S2: Same as S1 but loose	loose fill
20'	S - 3	15 - 17'	24"	13"	8 - 6 5 - w.o.h	18'	S3: tan, damp, loose, silty sand * black, moist, soft organic silts (peat)	fill 4"+ peat
30'	S - 4	20 - 22'	24"	11"	8 - 31 33 - 40	22'	S4: Gray, damp, very dense silty sand some gravel Boring terminated at depth of 22' in native silty sand/gravel due to auger refusal.	Native Soil

Drilling Co.	Soil Exploration Services
Rig Type:	Acker B-27 Truck Mounted
Driller:	Mr. Pat Goodale
Helper:	Mr. Brian Hart
Inspector:	Mr. Ken Nelson
Client Rep.:	Town of Holden

Soil Composition Proportions	
Trace:	0%-10%
Little:	10%-20%
Some:	20%-35%
And:	35%-50%

Cohesive (blows/ft)	Cohesionless (blows/ft)
0 - 2 = Very Soft	0 - 3 = Very Loose
2 - 4 = Soft	4 - 9 = Loose
5 - 8 = Med. Stiff	10 - 29 = Med. Dense
9 - 15 = Stiff	30 - 49 = Dense
16 - 30 = Hard	50+/ft. = Very Dense

DRILLING NOTES & REMARKS

Refer to geotechnical report dated June 6, 2012 for additional information.

* - No ground elevations listed on the provided site plan.

Yankee Engineering & Testing, Inc.
10 Mason Street
Worcester Ma 01609
Phone: (508) 831-7404
Fax: (508) 831-7388

SOIL TEST BORING LOG

Project:	LP//Mt. View School	Boring #	**B - 5**
Location:	Holden, Massachusetts	Sheet #	**1 of 1**
Job No:	94042	Location:	East Side
Date Start:	May 30, 2012	See Boring Location Plan	
Date End:	May 30, 2012	Elevation * :	existing

Drilling	Core	Casing	Sampler
Type	n/a	n/a	Split Spoon
Size	n/a	n/a	2" I.D.
Hammer	n/a	n/a	140 #
Fall	n/a	n/a	30"

Groundwater Observations

Date	Depth	Casing At	Stabilization Period
05/30/12	no GW	n/a	Upon Completion of Boring

Depth (ft.)	BORING SAMPLING DATA No.	Depth	Pen.	Rec.	Blows/6"	Strata Change	Sample Descriptions & Geotechnical Observations	Remarks
						1'	Topsoil/Subsoil	
5'								Fill
	S - 1	5 - 7'	24"	3"	3 - 5		S1: Brown, damp, medium dense	
					8 - 9	7'	m/f sand some gravel trace topsoil	
10'							Boring terminated at depth of 7' in "fill" due to auger refusal.	
15'								
20'								
30'								

Drilling Co.	Soil Exploration Services
Rig Type:	Acker B-27 Truck Mounted
Driller:	Mr. Pat Goodale
Helper:	Mr. Brian Hart
Inspector:	Mr. Ken Nelson
Client Rep.:	Town of Holden

Soil Composition Proportions	
Trace:	0%-10%
Little:	10%-20%
Some:	20%-35%
And:	35%-50%

Cohesive (blows/ft)	Cohesionless (blows/ft)
0 - 2 = Very Soft	0 - 3 = Very Loose
2 - 4 = Soft	4 - 9 = Loose
5 - 8 = Med. Stiff	10 - 29 = Med. Dense
9 - 15 = Stiff	30 - 49 = Dense
16 - 30 = Hard	50+/ft. = Very Dense

DRILLING NOTES & REMARKS

Refer to geotechnical report dated June 6, 2012 for additional information.

* - No ground elevations listed on the provided site plan.

Yankee Engineering & Testing, Inc.
10 Mason Street
Worcester Ma 01609
Phone: (508) 831-7404
Fax: (508) 831-7388

SOIL TEST BORING LOG

Project:	LP//Mt. View School	Boring #	**B - 6**
Location:	Holden, Massachusetts	Sheet #	1 of 1
Job No:	94042	Location:	SE Corner
Date Start:	May 30, 2012	See Boring Location Plan	
Date End:	May 30, 2012	Elevation * :	existing

Drilling	Core	Casing	Sampler
Type	n/a	n/a	Split Spoon
Size	n/a	n/a	2" I.D.
Hammer	n/a	n/a	140 #
Fall	n/a	n/a	30"

Groundwater Observations

Date	Depth	Casing At	Stabilization Period
05/30/12	no GW	n/a	Upon Completion of Boring

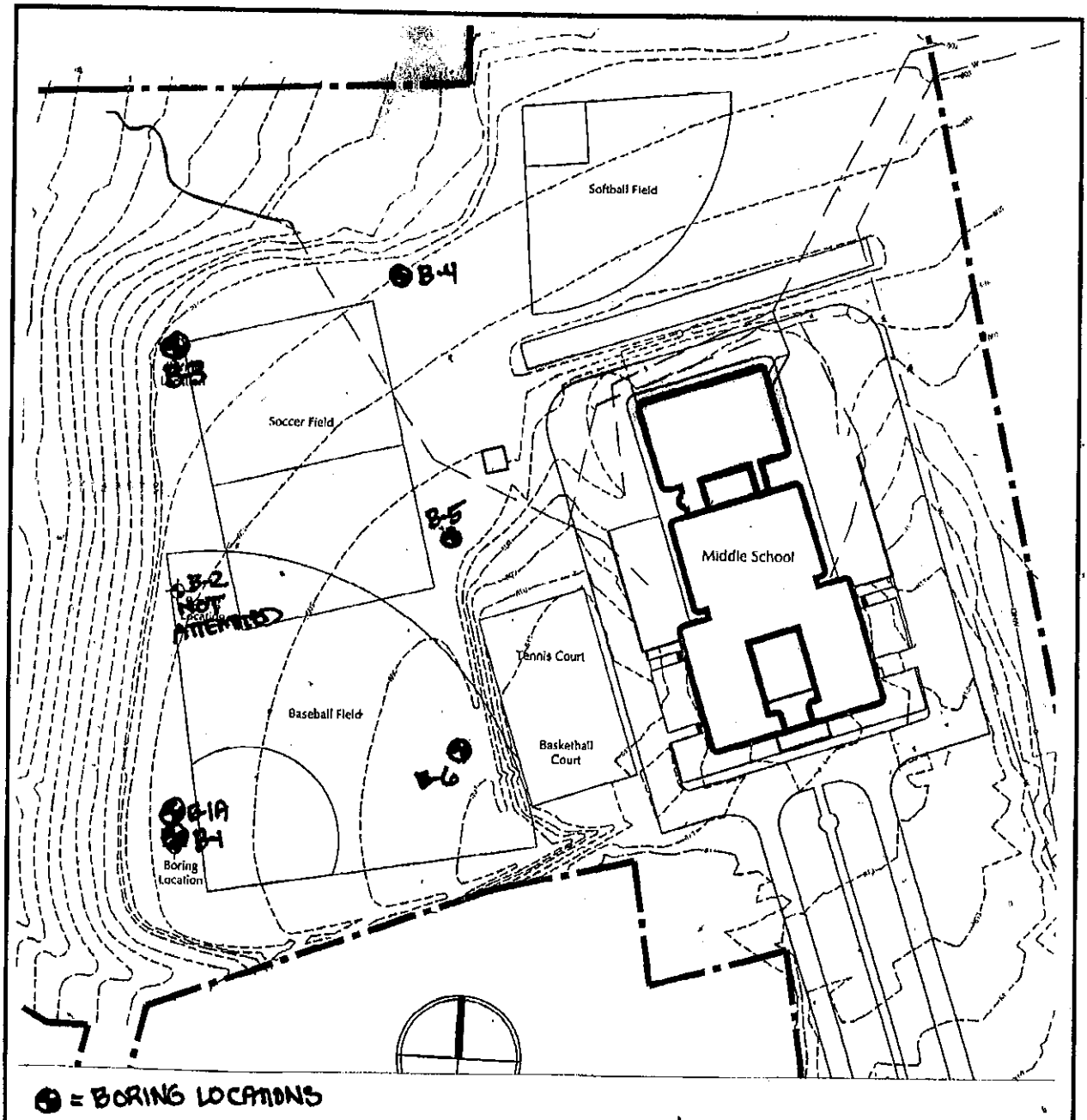
Depth (ft.)	BORING SAMPLING DATA No.	Depth	Pen.	Rec.	Blows/6"	Strata Change	Sample Descriptions & Geotechnical Observations	Remarks
						1'	Topsoil/Subsoil	
5'	S - 1	5 - 7'	24"	12"	4 - 19		S1: tan/gray, damp, dense f/m sand some gravel trace silt	native soil
					23 - 24			
10'	S - 2	10 - 12'	24"	0"	13 - 20	11'	S2: rock in sampler tip - no recovery	
					49 - 29			
	S - 3	12-12.5'	5"	5"	57		S3: tan, damp, very dense f/m sand some gravel little/trace silt	native soil
15'						15'		
	S - 4	15-15.6'	7"	6"	21 - 100/1"		S4: red/gray, damp, very dense	native soil
						15.6'	weathered ledge dust/fragments	
20'							Boring terminated at depth of 15.6' in native soil due to sampler spoon refusal.	
30'								

Drilling Co.	Soil Exploration Services
Rig Type:	Acker B-27 Truck Mounted
Driller:	Mr. Pat Goodale
Helper:	Mr. Brian Hart
Inspector:	Mr. Ken Nelson
Client Rep.:	Town of Holden

Soil Composition Proportions	
Trace:	0%-10%
Little:	10%-20%
Some:	20%-35%
And:	35%-50%

Cohesive (blows/ft)	Cohesionless (blows/ft)
0 - 2 = Very Soft	0 - 3 = Very Loose
2 - 4 = Soft	4 - 9 = Loose
5 - 8 = Med. Stiff	10 - 29 = Med. Dense
9 - 15 = Stiff	30 - 49 = Dense
16 - 30 = Hard	50+/ft. = Very Dense

DRILLING NOTES & REMARKS	Refer to geotechnical report dated June 6, 2012 for additional information.
	* - No ground elevation listed on the provided site plan.



Yankee Engineering & Testing, Inc. 10 Mason Street Worcester, MA 01609 Phone: (508) 831-7404 Fax: (508) 831-7388	**Project:** Mt. View School **Location:** Holden Massachusetts **Project #:** 94042 **Date:** June 7, 2012 **Client:** Lamoureux-Pagano Assoc.	
FROM: Schematic Site Plan	**BORING LOCATION PLAN** **FIGURE 2**	**Approx. Scale:** 1" = 150'

Yankee Engineering & Testing, Inc.
10 Mason Street
Worcester Ma 01609
Phone: (508) 831-7404
Fax: (508) 831-7388

SOIL TEST BORING LOG

Project:	LP//Mt. View School	Boring #	**B-1A**
Location:	Holden, Massachusetts	Sheet #	1 of 1
Job No:	94042	Location:	SW Corner
Date Start:	May 30, 2012	See Boring Location Plan	
Date End:	May 30, 2012	Elevation * :	existing

Drilling	Core	Casing	Sampler
Type	n/a	n/a	Split Spoon
Size	n/a	n/a	2" I.D.
Hammer	n/a	n/a	140 #
Fall	n/a	n/a	30"

Groundwater Observations

Date	Depth	Casing At	Stabilization Period
05/30/12	no GW	n/a	Upon Completion of Boring

Depth (ft.)	BORING SAMPLING DATA No.	Depth	Pen.	Rec.	Blows/6"	Strata Change	Sample Descriptions & Geotechnical Observations	Remarks
						1'	Topsoil/subsoil	
							Lt brown fine sand/gravel	fill
							initial boring attempt met boulder refusal at 5' so the boring was moved about 10' to the north	
5'						5'	*and continued yielding the following data*	
	S - 1	5 - 7'	24"	7"	8 - 6		S1: Brown, damp, medium dense	fill
					3 - 15		m/f sand some gravel little/trace silt	
							(few cobbles/boulders)	
10'								
	S - 2	10 - 12'	24"	2"	11 - 19		S2: Brown, damp, medium dense	fill
					12 - 12		silty sand little gravel trace topsoil	topsoil?
							limited recovery indicates blow counts may	
						14'	*have been increased due to rock obstruction.*	
15'								
	S - 3	15 - 17'	24"	9"	1 - 7		S3: Tan, damp, loose	fill
					2 - 3		m/f sand trace gravel trace silt	loose soil
							(very few cobbles)	
20'								
	S - 4	20 - 22'	24"	15"	5 - 7		S4: Same as S4 but medium dense	fill
					6 - 5			
						24'		
25'								
	S - 5	25 - 27'	24"	17"	12 - 30		S5: Tan/gray, damp, very dense	native
					28 - 32		f/m sand some gravel trace silt	soil
30'	S - 6	30 - 30.2'	2"	0"	50/2"		S6: no recovery (spoon refusal)	
							Boring terminated at 30.2' depth.	

Drilling Co.	Soil Exploration Services
Rig Type:	Acker B-27 Truck Mounted
Driller:	Mr. Pat Goodale
Helper:	Mr. Brian Hart
Inspector:	Mr. Ken Nelson
Client Rep.:	Town of Holden

Soil Composition Proportions	
Trace:	0%-10%
Little:	10%-20%
Some:	20%-35%
And:	35%-50%

Cohesive (blows/ft)	Cohesionless (blows/ft)
0 - 2 = Very Soft	0 - 3 = Very Loose
2 - 4 = Soft	4 - 9 = Loose
5 - 8 = Med. Stiff	10 - 29 = Med. Dense
9 - 15 = Stiff	30 - 49 = Dense
16 - 30 = Hard	50+/ft. = Very Dense

DRILLING NOTES & REMARKS	Refer to geotechnical report dated June 6, 2012 for additional information.
	* - No ground elevations listed on the provided site plan.

H. Environmental Site Assessments

PHASE I-ENVIRONMENTAL SITE ASSESSMENT

Mountview School
270 Shrewsbury Street
Holden, MA 01520

Prepared for:

Mr. Ammar Dieb
Universal Environmental Consultants, Inc.
12 Brewster Road
Framingham, MA 01702

Prepared by:

Lord Associates, Inc.
1506 Providence Highway, Suite 30
Norwood, Massachusetts 02062

Project # 1882

June 28, 2012

June 28, 2012

Mr. Ammar Dieb
Universal Environmental Consultants, Inc.
12 Brewster Road
Framingham, MA 01702

RE: Phase I Environmental Site Assessment
Mountview School
270 Shrewsbury Street
Shrewsbury, MA 01520

Dear Mr. Dieb:

Lord Associates, Inc. (LAI) has completed a Phase I Environmental Site Assessment of the referenced property (the "Site"). Environmental investigations were completed with consideration to standard industry practice, the ASTM E-1527 site assessment standard entitled "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process", applicable regulations as defined by Chapter 21E of the Massachusetts General Laws, and the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000). The purpose of this assessment was to identify "Recognized Environmental Conditions" as defined in ASTM E-1527-05, and to determine if additional investigation is warranted.

In conclusion of this Assessment, no Recognized Environmental Conditions were identified in conjunction with the Site.

Please refer to the attached report for specific details and findings of our assessment. We appreciate the opportunity to have provided our professional environmental consulting and analytical services.

Sincerely,
LORD ASSOCIATES, INC.

Ralph Tella, CHMM, LSP
Vice President

Scott Balboni
Environmental Scientist

Enc.: Phase I ESA

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose

Lord Associates, Inc. (LAI) has completed a Phase I Environmental Site Assessment for the Mountview School at 270 Shrewsbury Street in Holden, Massachusetts (the "Site"). The purpose of this assessment was to identify "Recognized Environmental Conditions" as defined in ASTM standard E1527-05 (the Standard), and to determine if additional investigation is warranted.

Recognized Environmental Conditions are defined as the presence or likely presence of any hazardous substances or petroleum products on the property under conditions that indicate an existing release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term Recognized Environmental Conditions is not intended to include *de minimis* conditions which generally do not present a material risk of harm to public health or the environment, and that generally would not be the subject of a notification and/or enforcement action if brought to the attention of appropriate governmental agencies.

The Phase I consisted of a Site reconnaissance and an assessment of the Site and surrounding properties for visual and/or olfactory evidence of the use, storage, and/or release of oil and/or hazardous material. The Phase I also included a review of federal, state, and local agency files regarding the history of the Site and surrounding area relative to the use, storage and/or release of oil and/or hazardous material.

Please note that an investigation for the presence of mold, asbestos and PCBs in building materials, lead-based paint, indoor air quality, or regulatory compliance is beyond the scope of work described by ASTM E 1527-05, therefore LAI did not explore those conditions.

1.2 Significant Assumptions

Factual information regarding operations, conditions, and other data provided by the Client, site contacts, third parties, and governmental agencies are assumed to be correct and complete.

1.3 Special Terms and Conditions

The Phase I ESA was conducted by LAI on behalf of Universal Environmental Consultants consistent with the agreed upon Scope of Work and LAI Standard Terms and Conditions. No other special terms and conditions were established in connection with these services.

2.0 SCOPE OF SERVICES

This assessment was performed following standard industry practice and with consideration to the ASTM E-1527-05 site assessment standard entitled "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The investigation included completion of the following tasks:

1. A field investigation was performed including a visual surficial inspection of the Site and abutting properties; and

2. The following agencies were contacted to inquire of past ownership, complaints, or violations concerning environmental issues at the Site and vicinity.

   - The Massachusetts Department of Environmental Protection (MADEP) (online)
   - The Holden Tax Assessor's Office
   - The Holden Health Department/Conservation Commission
   - The Holden Building/Engineering Department
   - The Holden Fire Prevention Office
   - FirstSearch Technology Corporation

3.0 SITE DESCRIPTION

3.1 Site Location and Parcel Legal Description

Information provided indicates that the Site consists of a single lot totaling 15.18 acres (661,240.8 sq. ft.) of land located on the north side of Shrewsbury Street in Holden, Massachusetts. The parcel on which Mountview School is located is listed as parcel identification number 201-62 by the Holden Assessor's Office. The owner on record is listed as the Town of Holden. A Site Locus Map is included as **Figure 1** and an Aerial Map is included as **Figure 2.**

Information provided indicates the Site longitude and latitude are approximately -71.823701° west and 42.332502° north, respectively. Universal Transverse Mercatur (UTM) coordinates are approximately 4,690,342.8 meters north by 267,353.8 meters east.

3.2 Site and Vicinity General Characteristics

The Site is approximately 15.18 acres and is located in a predominantly residential area of Holden, Massachusetts. The school is centrally-located on the parcel with asphalt parking lots existing to the east and west of the building. A softball field, two tennis courts, and a basketball court also exist at the Site. The northern portion of the Site is occupied by dense vegetation.

A baseball field borders the Site to the west. All other surrounding properties are used for residential purposes.

3.3 Current Property Use

The Site functions as a middle school with associated tennis courts, a basketball court, and softball field.

No noteworthy tenants occupy the Site and no environmentally significant operations are conducted at the Site. Considering the operations assessed at the Site, no environmental permits, registrations, or notifications appear to be required.

The Site is zoned as "R-15" according to Assessor's Office data.

3.4 Description of Improvements

The Site is improved with a three-story middle school, two wooden storage buildings, and two metal storage trailers. Asphalt parking surrounds the building on all sides in addition to a basketball court, tennis courts, and a softball field.

The total surface area of the Site building is 46,062 sq. ft., which comprises approximately 7% of the Site's surface area. A detailed Site description is presented in **Section 4.0**.

3.4.1 Wastewater

Wastewater generated on-Site is discharged to the local sewer system.

3.4.2 Water Supply

Water is supplied by the town of Holden. A connection date was not established.

3.4.3 Wells

No potable, irrigation, injection, or abandoned wells were observed or identified from the interviews or records reviewed.

3.4.4 Heating/Cooling System

Heat in the old building is provided by forced hot air to ceiling vents. Heat in the new building is provided forced hot water to univents. Therefore, the school maintains two separate boilers; one for each building.

The school does not maintain a centralized air conditioning system.

3.4.5 Solid Waste Disposal

A solid waste compactor and recycling dumpster are located east of the building.

3.4.6 Storage Tanks

The following petroleum storage tanks are located at the Site:

- 10,000-gallon fiberglass underground storage tank (UST) containing No. 2 fuel oil.
- 500-gallon steel liquefied petroleum gas (LPG) UST – not in use.
- Approximately 250-gallon steel LPG aboveground storage tank (AST)
- Approximately 500-gallon steel AST containing No. 2 fuel oil.

3.4.7 Transformers, Hydraulic Equipment and Other Potential Evidence of the Potential Use of Polychlorinated Biphenyls

Polychlorinated Biphenyls (PCBs) can be found in hydraulic-oil filled electrical equipment (such as motors and pumps), capacitors or transformers, and fluorescent light ballasts manufactured prior to July 2, 1979.

A pad-mounted transformer is located east of the school and appears to be in fair condition. Some rust was visible on top of the transformer but no staining was observed on the surrounding asphalt. No other evidence of the potential use of polychlorinated biphenyls (PCBs) was observed on the Site during the inspections.

3.5 Current Uses of Adjoining Properties

Residential properties surround the Site in all directions. No bulk fuel storage was observed on adjacent properties. The table below summarizes current abutting land usage.

Table 1
Area Land Usage

Usage	Orientation
Residential	North
Residential	South
Residential, Undeveloped	East
Baseball field, Residential	West

4.0 USER PROVIDED INFORMATION

A summary of user provided information is set forth below.

4.1 User Questionnaire

A User Questionnaire was provided to the Erik Githmark (School Principal) to assist the user and LAI in gathering information from the user that may be material to identifying RECs.

Table 2
Questionnaire

Inquiry	Response
Name and title	Erik Githmark, School Principal
Tenure with Site	Unknown
Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?	No
Are you aware of any Activity and Use Limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?	No, but a portion of the property was once classified as farmland
As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?	No
Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?	No
Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user:	
▪ Do you know the past uses of the property?	Yes, farmland
▪ Do you know of specific chemicals that are present or once were present at the property?	Not to my knowledge
▪ Do you know of spills or other chemical releases that have taken place at the property?	Not to my knowledge
▪ Do you know of any environmental cleanups that have taken place at the property?	Not to my knowledge

Inquiry	Response
As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?	No

4.2 Title Records

LAI did not review the property title.

4.3 Environmental Liens, Activity and Use Limitations

The owner has no knowledge of environmental liens, and the agency check revealed no listing for an Activity and Use Limitation in connection with the Site.

4.4 Specialized Knowledge

No specialized knowledge of Recognized Environmental Conditions was provided to LAI by the owner or client.

4.5 Commonly Known or Reasonably Ascertainable Information

No commonly known or reasonably ascertainable information regarding Recognized Environmental Conditions was provided to LAI by the owner or client.

4.6 Valuation Reduction for Environmental Issues

No information regarding the sale price of the Site in comparison to the expected value of the property was provided to LAI by the owner or client.

4.7 Owner, Property Manager, and Occupant Information

According to the Town of Holden Assessor's Office, the current owner of the Site properties is:

Town of Holden
Holden Town Hall
1196 Main Street
Holden, MA 01520

The Site does not maintain a management company and has no permanent occupants.

4.8 Reason for Performing Phase I Study

A Phase I ESA is being conducted in connection with the potential demolition of the Mountview School.

5.0 RECORD REVIEWS

A review of federal, state and local regulatory agency files was conducted in accordance with ASTM E-1527-05 standards to identify the use, generation, storage, treatment, disposal and/or release of oil and/or hazardous materials that may potentially impact the Site.

5.1 Municipal Offices

5.1.1 Assessor's Office

Lord Associates, Inc. visited the municipal Assessor's Office to obtain a property record card and parcel map.

5.1.2 Health Department/Conservation Commission

LAI made inquiries at the municipal health department but no documents relevant to this report were on-file. In addition, no wetlands violations were on-file at the local conservation commission.

5.1.3 Building/Engineering Department

LAI visited the Holden Building and Engineering Department in order to review former building/utility permits for the Site. The building commissioner was not available during LAI's visit and historical building permits were not reviewed. However, information was obtained indicating that the school discharges to the municipal sewer system.

5.1.4 Fire Prevention

LAI reviewed documents from the Holden Fire Department and discovered that a 10,000-gallon No. 2 fuel oil UST was removed from the Site on July 14, 1997 and replaced with a double walled 10,000-gallon fiberglass UST. A document reviewed indicates that no hazardous material release was observed during the tank removal.

5.2 Sanborn/Historical Map Review

Sanborn Fire Insurance Maps were not available for the Site.

5.3 Historical Aerial Photograph Review

Aerial photographs from 1966, 1971, 1972, 1992, 2001, and 2005 were reviewed through the Historic Aerials website (www.historicaerials.com) and a 2010 aerial photograph was

reviewed from Google Earth. The following table summarizes each aerial photograph as interpreted by LAI. A copy of the 2010 aerial photograph is included in **Appendix A**.

Table 3
Aerial Photographs

Map Year	Site Description	Area Description	
		Direction	**Description**
1966	Site appears undeveloped or possible farmland	North	Residential
		South	Residential
		East	Residential
		West	Undeveloped
1971 1972	A portion of the school is identifiable as well as the tennis and basketball courts	North	Residential
		South	Residential
		East	Residential
		West	Undeveloped
1992 2001 2005	The school appears in its current configuration	North	Residential
		South	Residential
		East	Residential
		West	Undeveloped

5.4 Radius Search for Properties of Environmental Concern

A radius search was conducted of federal and state-listed sites of potential environmental concern as outlined in ASTM E-1527 guidelines. The search was performed using software developed by First Search Technology Corporation. The FirstSearch report is included in **Appendix B.**

Table 4
State/Federal Listed Properties within a half-mile

Type of Site	Site Name/ Address	ID Number/ Status	Distance/ Direction	Elevation Difference
Spills	UST Leaking – 233 Shrewsbury St.	C90-0535/ Closed	0.03 SW	+3

Spills	Bell Atlantic – 203 Shrewsbury St.	2-0012658/ RAO	0.09 SW	-5
RCRAGN	Mt. Washington Veterinary Hosp. – 160 Shrewsbury St.	MV5088290419/ VSQG-FED	0.19 NW	-55

After careful review, all of the above state and federal-listed sites were judged to not represent a material threat of harm to the subject property.

5.5 Massachusetts Department of Environmental Protection Review

No files were available on the MADEP website regarding the Site.

5.6 Previous Reports

No previous reports were encountered during this assessment.

5.7 Physical Setting Sources

Hydrogeologic data for the Site is limited since no subsurface investigation was performed as part of this assessment. However, there is an observable decline in elevation from south to north and it is therefore inferred that groundwater at the Site flows to the north.

Information from MassGIS Priority Resource maps indicates that the Site is not located within an Interim Wellhead Protection Area (IWPA), Area of Critical Concern (ACEC), Protected Open Space, Zone II Aquifer, Wetlands, Sole Source Aquifer or Certified Vernal Pool. However, a small portion along the northwestern border of the Site is located within a Zone A Surface Water Body.

According to the USGS Bedrock Geologic Map of Massachusetts, local geologic conditions at the Site consist of the Fitchburg Complex of the Connecticut Valley Belt (Silurian to Devonian in age) made up of light-gray to white, medium-grained, weakly foliated muscovite-biotite granite and commonly contains white pegmatite bearing muscovite and tourmaline.

5.8 Historical Use Information

Research regarding historical land usage of the Site and surrounding properties was conducted using data obtained from historical aerial maps, parties familiar with the Site, and municipal officials. Based on information gathered through the course of this assessment, the following history of the Site has been prepared:

- The old section of the school was built in 1967. Prior to then, the Site was occupied by farmland. All information obtained indicates that the Site was

undeveloped prior to farming activities. The new section of the building was built in 1987 and the building footprint has since been unaltered.

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

On June 26, 2012, LAI personnel conducted on-Site inspections, which consisted of a visual examination of the Site and portions of adjacent properties and interviews with Site personnel. Areas were examined for surficial indications of releases of oil and/or hazardous materials (OHM).

Mr. Gary Kaczmarek, Project Manager from the Town of Holden, and Dennis Hyson, Maintenance personnel from the Mountview School, accompanied our personnel during the inspection. Photographs are included in **Appendix A** of this report.

6.2 Interior Inspection

The school, which consists of three levels (basement, first, and second floors), consists of two interconnected buildings: the old building, constructed in 1967, and the new building constructed in 1987. The basement of the building contains the boiler room, custodial workshop, fire suppression system room, and several classrooms. Located in the boiler room are two boilers, five circulators (three for the old building and two for the new building), hot water tank, and expansion tank. The custodial workshop contains several automatic tools, paint cans, handheld-sized gasoline canisters, cleaning tools, main electrical panels, water main, and defunct LPG line (See Exterior Inspection for more information). The Fire suppression system room contains a roughly 500-gallon AST storing No. 2 fuel oil. The fuel is provided to a burner which powers booster pumps that force water to the fire suppression system of the second floor.

The first floor of the building contains the cafeteria, kitchen, band room, main office, gymnasium, central courtyard, boys and girl's locker rooms, elevator machine room, and several classrooms. The elevator machinery, which is hydraulically driven, did not display any sign of leaking and appeared to be in good condition. A small handicapped escalator is located in the lobby of the building by the main office. It is electrically driven and does not use any hydraulics during operation.

The second floor of the building contains several classrooms and access to the roof. Several custodial closets and science labs are located on every floor. Mr. Hyson and Mr. Kaczmarek stated that there is no separate waste tank for the science labs and that all of the building's wastewater is discharged to the local sewer system.

6.3 Exterior Inspection

The school exterior is comprised of brick with a flat rubber membrane roof. The roof contains no significant features except for several ventilation fans and exhaust stack for the main boilers. In addition, the school consists of two stories with a partially submerged basement. The storage buildings, located next to the baseball field, are wooden structures used solely for sports equipment storage. Two metal trailers also store sports equipment.

Asphalt parking surrounds the school on all sides and ample parking is available to the east and west of the building. Located on the west side of the building is a tank pad, under which lies a 10,000-gallon fiberglass UST storing No. 2 fuel oil. The UST provides fuel to both of the school's boilers used for heating the building. Mr. Hyson stated that the tank was installed a few years ago. Associated vent piping was identified with the UST. Located near the northwest corner of the building are additional fill and vent pipes associated with the burner and fire suppression system for the second floor. Located along the northern façade of the building are bleed valves for the fire suppression system.

Several pertinent features are located east of the building including a defunct 500-gallon LPG UST, an approximately 250-gallon active LPG AST, trash compactor, recycling dumpster, electrical transformer (which appeared to be in fair condition), overhead electrical lines connecting to the building, and storm drain/surface water trench. Mr. Hyson indicated that the service line to the defunct LPG UST ruptured several years ago and the new 250-gallon LPG AST was installed in its place. Fuel in the active LPG tank is used to activate the school's main boilers. Mr. Hyson also stated that the storm drain/surface water trench collects excess storm water which is piped to a leaching system by the softball field.

Bordering the Site to the west is a baseball field. Residential properties surround the Site in every other direction.

7.0 INTERVIEWS

Mr. Gary Kaczmarek, Project Manager from the Town of Holden, and Dennis Hyson, Maintenance personnel from the Mountview School, accompanied our personnel during the inspection. They were interviewed and questioned of knowledge regarding environmental conditions or releases at the Site. Their additional comments are provided in **Section 6.0**, Site Reconnaissance.

8.0 SUMMARY OF FINDINGS AND CONCLUSION

8.1 Findings

Lord Associates, Inc. has completed a Phase I Environmental Site Assessment of the Site. This assessment was performed with consideration to standard industry practice and the ASTM E-1527-05 site assessment standard entitled "Standard Practice for Environmental

Site Assessments: Phase I Environmental Site Assessment Process". Our findings are presented below:

1. Information provided indicates that the Site consists of a single lot totaling approximately 15.18 acres (661,240.8 sq. ft.) of land located on the north side of Shrewsbury Street in Holden, Massachusetts. The Site parcel is designated as 201-62 by the Holden Assessor's Office.

2. The Site is occupied by the Mountview Middle School, a storage shed, two tennis courts, a basketball court, and a softball field. Asphalt parking lots border the school to the east and west. The northern portion of the Site is covered in dense vegetation.

3. The Mountview School was constructed in 1967 with an addition in 1987. Prior to the then, the Site was occupied by farmland.

4. Lord Associates, Inc. conducted an inspection of the Site consisting of a visual examination of the Site, immediate surrounding features, and abutting properties. The Site building is connected to municipal water and overhead electric lines. Heat in the old building is provided by forced hot air to ceiling vents and heat in the new building is provided by forced hot water to univents. Wastewater is discharged to the local sewer system. No evidence of releases or dumping of OHM was observed at the Site through the course of our inspection.

5. Several State and federally-listed sites were identified in the radius search of waste sites in the vicinity. Based on this information, the location, distance, and/or cleanup activities, it is our opinion that properties listed in the vicinity will not adversely impact the Site. Municipal file reviews did not reveal any significant environmental issues at the Site.

8.2 Conclusions

In conclusion of this Assessment, no Recognized Environmental Conditions were identified in conjunction with the Site.

Any exceptions to, or deletions from, ASTM Practice E1527 are described in **Section 9** of this report. Please note that an investigation for the presence of mold, asbestos and PCBs in building materials, lead-based paint, indoor air quality, or regulatory compliance is beyond the scope of work described by ASTM E 1527-05, therefore LAI did not explore those conditions.

9.0 RESTRICTIVE CONDITIONS

9.1 Limitations & Deviations

LAI recognizes the following limitations and/or deviations from the Standard with respect to this Phase I Environmental Site Assessment:

- LAI did not interview past owners of the Site;
- LAI did not interview owners of neighboring property;
- LAI did not review Title Records for the Site; and
- LAI did not conduct an evaluation of the purchase price of the Site compared to the fair market value.

9.2 Significance of Data Gaps

As described above, the deviations from the Standard constitute data gaps. However, it is our opinion that these data gaps do not raise reasonable concerns that would affect the ability to identify conditions indicative of a release or threatened release or Recognized Environmental Conditions (RECs) based upon other information collected during the course of the Phase I Environmental Site Assessment.

- Although the past owner and owners of neighboring property were not interviewed, site and surrounding area history does not indicate prior use involving oil and/or hazardous materials.
- In Massachusetts, all environmental liens and Activity and Use Limitations are identified on the MADEP sites database, which has been searched.
- Based on Site History, there is no reasonable indication that property value has been affected due to environmental concerns.

10.0 LIMITATIONS

No warranty, whether expressed or implied, is given with respect to this report or any opinions expressed herein. It is expressly understood that this report and the opinions expressed herein are based upon Site conditions, as they existed only at the time of assessment. Nothing in this report constitutes a legal opinion or legal service, and should not be relied upon as such.

The data reported and the findings, observations, and opinions expressed in the report are limited by the Scope of Work. The Scope of Work was performed based on budgetary, time, and other constraints imposed by the Client, and the agencies and persons reviewed.

In preparing this report, Lord Associates, Inc. has relied upon and presumed accurate certain information about the Site and adjacent properties provided by governmental agencies, the client and others identified in the report. Except as otherwise stated in the report, Lord Associates, Inc. has not attempted to verify the accuracy or completeness of any such information.

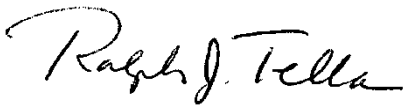
This report has been prepared on behalf of and for the exclusive use of the client, Universal Environmental Consultants and those immediate entities involved with the proximate financing of this project, solely for use in the environmental evaluation of the Site. Any reuse or reliance on this report by any other third party shall be done only with the written consent of LAI.

11.0 SIGNATURES AND ENVIRONMENTAL PROFESSIONAL STATEMENT

LAI declares that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312. LAI has the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. LAI has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

This report is dated this June 28, 2012 and is signed by individuals who are duly authorized to do so.

LORD ASSOCIATES, INC.



Ralph Tella, CHMM, LSP
Vice President

Scott Balboni
Environmental Scientist

APPENDIX A

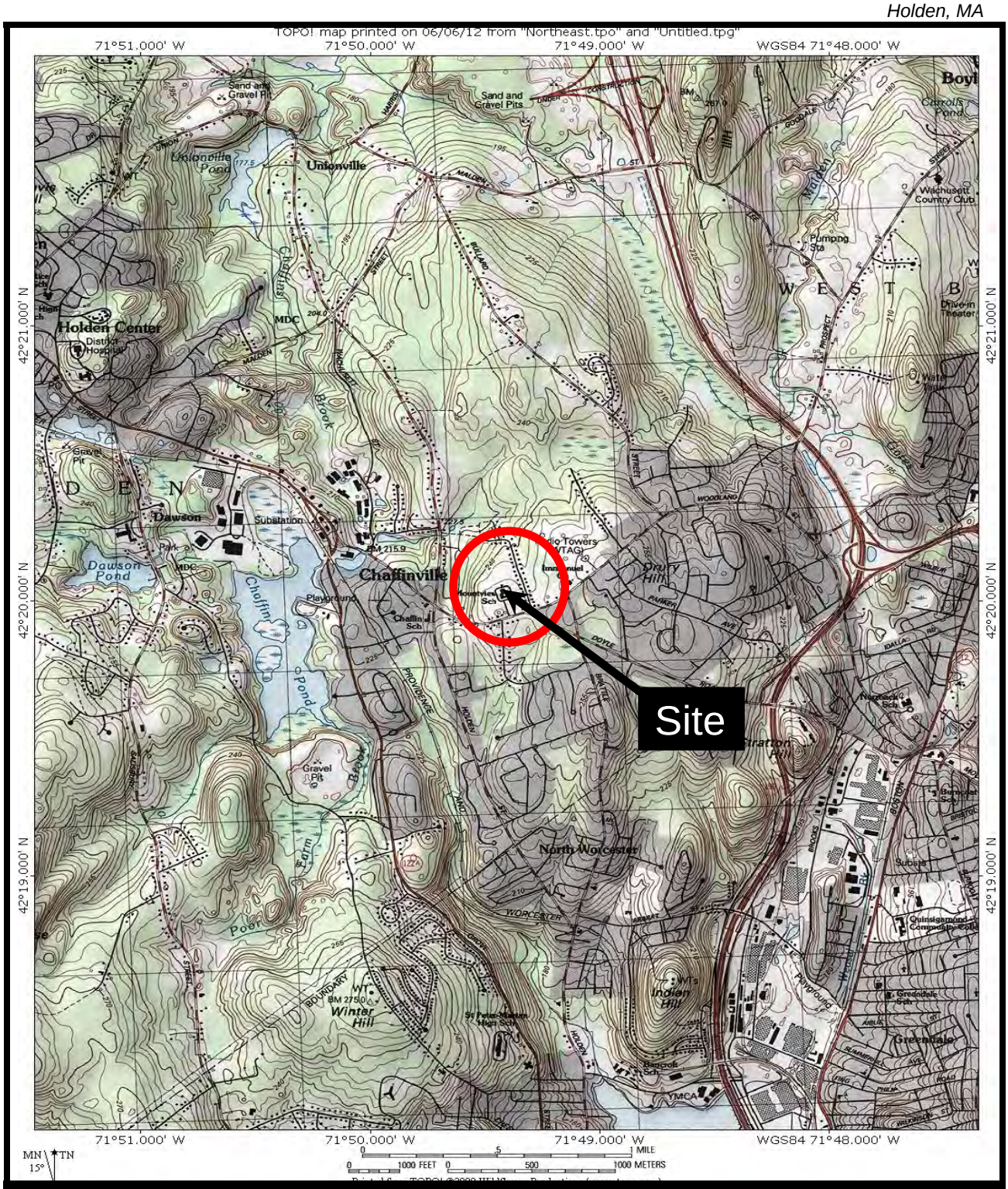


FIGURE 1

Site Locus

270 Shrewsbury Street
Holden, MA

Lord Associates, Inc.
1506 Providence Highway, Suite 30
Norwood, MA. 02062

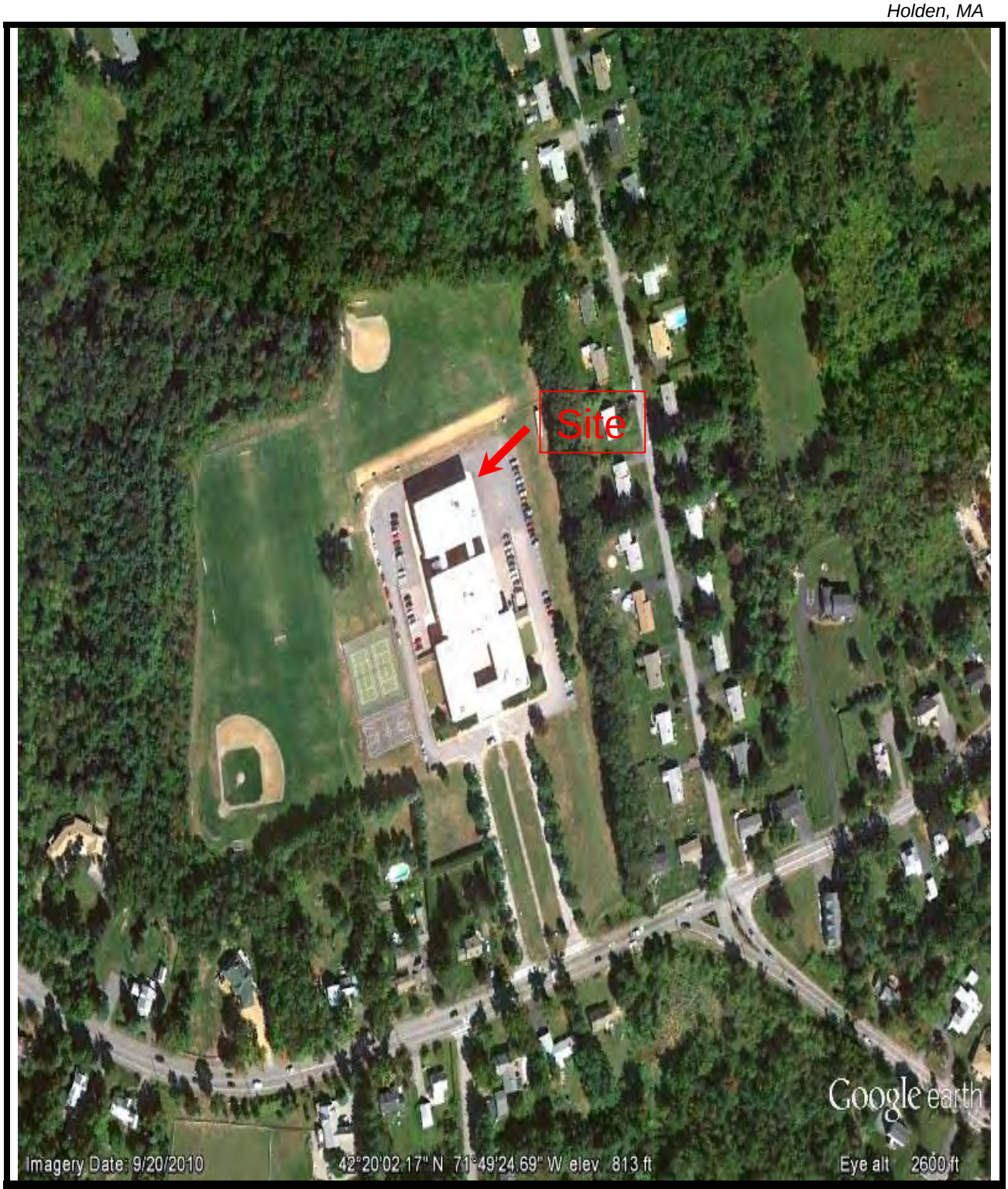
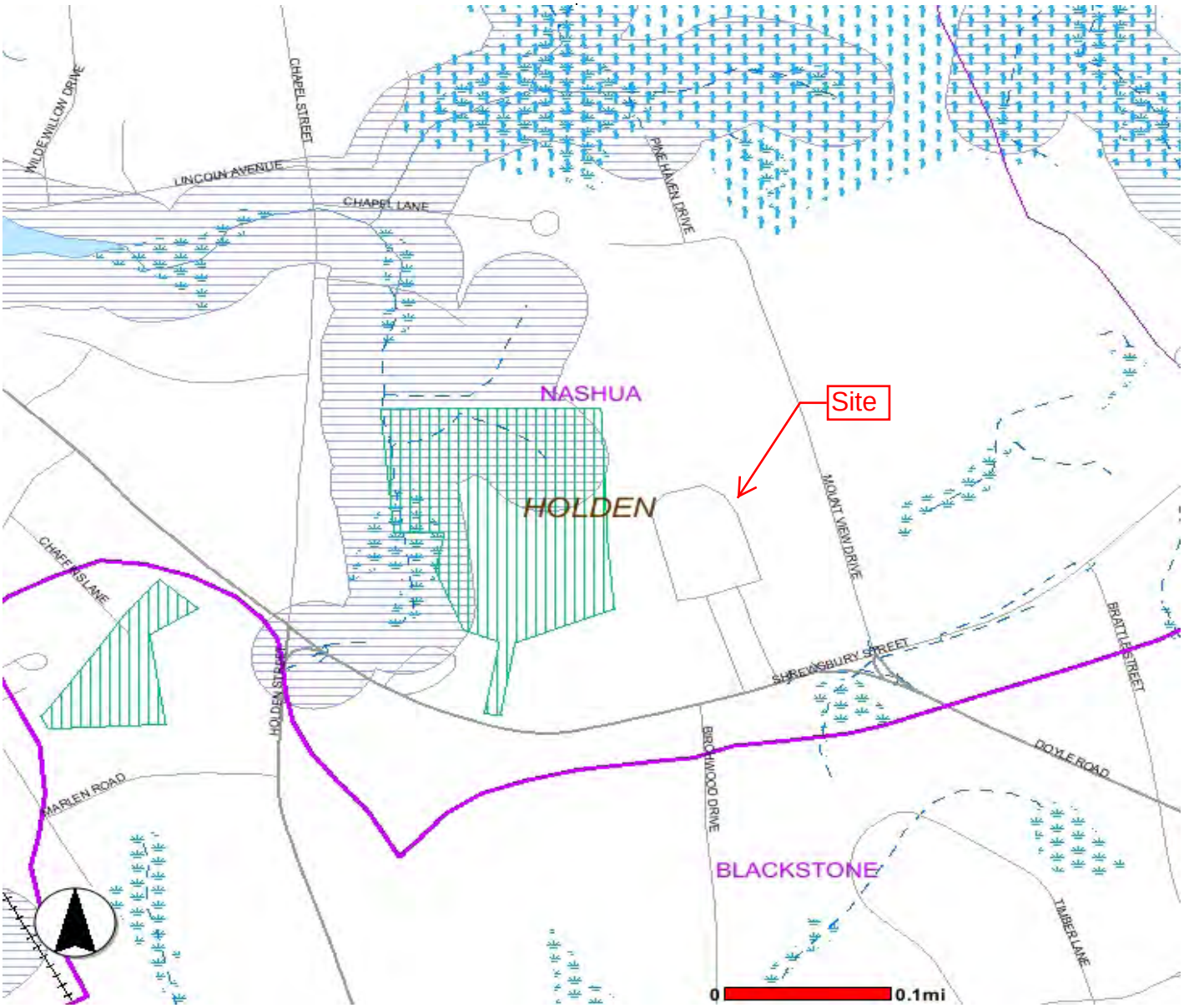


FIGURE 2

Aerial Photograph

270 Shrewsbury Street
Holden, MA

Lord Associates, Inc.
1506 Providence Highway, Suite 30
Norwood, MA. 02062



DEP MCP 21e Map Legend

- Zone IIs
- IWPAs
- Zone A
- Sole Source Aquifers
- Solid Waste Sites
- Protected Openspace
- ACECs
- NHESP Estimated Habitat of Rare Wildlife in Wetland Areas
- Certified Vernal Pools 2003 NHESP
- Subbasins
- Mass Major Basins
- DEP Region
- Town Arcs
- County Boundaries

Aquifers, By Yield
- HIGH YIELD
- MEDIUM YIELD

Non Potential Drinking Water Source Area
- HIGH YIELD
- MEDIUM YIELD

FEMA Floodplains
- 100 YEAR FLOODPLAIN

Public Water Supplies
- Community Groundwater
- Community Surface Water
- Emergency Surface Water
- Non Community

Hydrography
- WATER
- RESERVOIR
- WETLANDS
- SALTWATER WETLANDS
- FLATS,SHOALS

Rivers and Streams
- PERENNIAL
- INTERMITTENT
- SHORELINE
- MAN MADE SHORE
- DAM
- AQUEDUCT

EOT-OTP Roads
- LIMITED ACCESS HIGHWAY
- MULTI-LANE HWY, NOT LIMITED ACCESS
- OTHER NUMBERED HWY
- MAJOR ROAD - COLLECTOR
- MINOR STREET OR ROAD, RAMP

Tracks and Trails MHD
- TRACK
- TRAIL

Transmission Lines
- PIPELINE
- POWERLINE
- TRAIN

MASS GIS

LORD ASSOCIATES, INC.

1506 Providence Highway, Suite 30
Norwood, MA 02062-4647
(781) 255-5554

REFERENCE:
MASSACHUSETTS GIS
DEP PRIORITY RESOURCES MAP
http://maps.massgis.state.ma.us/21e/

NORTH

FIGURE 3: PRIORITY RESOURCES

270 Shrewsbury Street
Holden, MA

Photo #1:	Main entrance

Photo #2:	UST pad for 10,000-gallon tank

Photo #3:	Fill, vent, and exhaust pipes for booster pump burner

Photo #4:	Defunct 500-gallon LPG UST

Photo #5:	LPG AST east of building

Photo #6:	Electric transformer east of middle school

Photo #7:	Main boilers

Photo #8:	Circulators in boiler room

APPENDIX B

FirstSearch Technology Corporation

Environmental FirstSearch™ Report

Target Property:

270 SHREWSBURY ST

HOLDEN MA 01520

Job Number: 1882

PREPARED FOR:

Lord Associates, Inc.

1506 Providence Highway, Suite 30

Norwood, MA 02062

06-06-12

Tel: (781) 551-0470 *Fax: (781) 551-0471*

Environmental FirstSearch
Search Summary Report

Target Site: 270 SHREWSBURY ST
HOLDEN MA 01520

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	05-09-12	1.00	0	0	0	0	0	0	0
NPL Delisted	Y	05-09-12	0.50	0	0	0	0	-	0	0
CERCLIS	Y	04-30-12	0.50	0	0	0	0	-	0	0
NFRAP	Y	04-30-12	0.50	0	0	0	0	-	0	0
RCRA COR ACT	Y	03-13-12	1.00	0	0	0	0	0	0	0
RCRA TSD	Y	03-13-12	0.50	0	0	0	0	-	0	0
RCRA GEN	Y	03-13-12	0.25	0	0	1	-	-	7	8
Federal Brownfield	Y	05-01-12	0.50	0	0	0	0	-	0	0
ERNS	Y	04-13-12	0.15	0	0	0	-	-	6	6
Tribal Lands	Y	12-15-08	1.00	0	0	0	0	0	1	1
State/Tribal Sites	Y	03-20-12	1.00	0	0	0	0	10	0	10
State Spills 90	Y	03-20-12	0.25	0	2	0	-	-	13	15
State/Tribal SWL	Y	04-01-11	0.50	0	0	0	0	-	2	2
State/Tribal LUST	Y	03-20-12	0.50	0	0	0	0	-	0	0
State/Tribal UST/AST	Y	03-16-12	0.25	0	0	0	-	-	3	3
State/Tribal EC	Y	NA	0.50	0	0	0	0	-	0	0
State/Tribal IC	Y	03-20-12	0.25	0	0	0	-	-	0	0
State/Tribal VCP	Y	NA	0.50	0	0	0	0	-	0	0
State/Tribal Brownfields	Y	12-01-10	0.50	0	0	0	0	-	0	0
FI Map Coverage	Y	07-15-11	0.12	0	0	-	-	-	0	0
Federal IC/EC	Y	03-13-12	0.50	0	0	0	0	-	0	0
- TOTALS -				0	2	1	0	10	32	45

Environmental FirstSearch
Site Information Report

Request Date:	06-06-12	**Search Type:**	COORD
Requestor Name:	Scott Balboni	**Job Number:**	1882
Standard:	AAI		

Target Site: 270 SHREWSBURY ST
HOLDEN MA 01520

Demographics

Sites:	45	**Non-Geocoded:**	32	**Population:**	5206
Radon:	1.6 - 7.3 PCI/L				

Site Location

	Degrees (Decimal)	**Degrees (Min/Sec)**		**UTMs**
Longitude:	-71.823701	-71:49:25	**Easting:**	267353.785
Latitude:	42.332502	42:19:57	**Northing:**	4690342.824
Elevation:	811		**Zone:**	19

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 0 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel

Services:

	Requested?	Date
Fire Insurance Maps	No	
Aerial Photographs	No	
Historical Topos	No	
City Directories	No	
Title Search/Env Liens	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

TOTAL: 45 **GEOCODED:** 13 **NON GEOCODED:** 32 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
1	SPILLS	UST LEAKING C90-0535/CLOSED	233 SHREWSBURY ST HOLDEN MA 01520	0.03 SW	+ 3	1
2	SPILLS	BELL ATLANTIC 2-0012658/RAO	203 SHREWSBURY ST HOLDEN MA 01520	0.09 SW	- 5	2
3	RCRAGN	MT WACHUSETT VETERINARY HOSPIT MV5088290419/VSQG-FED	160 SHREWSBURY ST HOLDEN MA 01520	0.19 NW	- 55	3
4	STATE	BOTTCHER RESIDENCE 2-0013693/RAO	189 HOLDEN HOLDEN MA 01520	0.51 SW	- 61	5
5	STATE	RESIDENCE 2-0017661/TIER1D	45 SOMERSET LN HOLDEN MA 01520	0.56 SW	- 52	7
6	STATE	JOSEPH MUNER 2-0013769/RAO	450 S MAIN ST HOLDEN MA 01520	0.57 SW	- 68	9
7	STATE	DANIELS TRANSPORTATION 2-0013667/RAO	27 SHREWSBURY ST HOLDEN MA 01520	0.60 NW	- 104	11
8	STATE	HILLSIDE AUTO 2-0014252/TIERII	359 MAIN ST HOLDEN MA 01520	0.63 SW	- 71	13
9	STATE	FORMER MANDEL PROPERTY 2-0014253/RAO	525 MAIN ST HOLDEN MA 01520	0.69 NW	- 97	16
10	STATE	GEORGE LUDDY CHEVROLET 2-0010546/REMOPS	513 MAIN ST HOLDEN MA 01520	0.69 NW	- 94	19
11	STATE	STATE POLICE BARRACKS 2-0012547/REMOPS	RTE 122A MAIN ST HOLDEN MA 01520	0.75 NW	- 91	22
12	STATE	BELL PROPERTY 2-0013961/RAO	170 MAIN ST HOLDEN MA 01520	0.89 SW	- 34	25
13	STATE	MOBIL SERVICE STATION 01-EN3 1 2-0013791/RAONR	175 MAIN ST HOLDEN MA 01520	0.90 SW	- 41	28

Environmental FirstSearch
Sites Summary Report

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

TOTAL: 45 **GEOCODED:** 13 **NON GEOCODED:** 32 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	ERNS	RESIDENTIAL HOME NRC-566308/STORAGE TANK	1804 OAKWOOD HOLDEN MA 01520	NON GC	N/A	N/A
	RCRAGN	CLEANER IMAGE MAV000011969/VSQG-FED	160 RESERVOIR RD HOLDEN MA 01520	NON GC	N/A	N/A
	RCRAGN	ED WILSON MV5088291981/VSQG-FED	155 BAILEY ST HOLDEN MA 01520	NON GC	N/A	N/A
	RCRAGN	HOLDEN TOWN OF MV5088290258/VQG-MA	ADAMS RD HOLDEN MA 01520	NON GC	N/A	N/A
	RCRAGN	MARTEL MAURICE MAV000007471/VSQG-FED	21 MAYA RD HOLDEN MA 01520	NON GC	N/A	N/A
	RCRAGN	SMITH BROS PRINTING SERVICE MV5088293256/VSQG-FED	480 MAIN ST HOLDEN MA 01520	NON GC	N/A	N/A
	RCRAGN	WOODMEISTER MASTER BUILDERS MAC300009545/SGN	1 WOODMEISTER WAY HOLDEN MA 01520	NON GC	N/A	N/A
	ERNS	JEFFERSON PUBLIC SCHOOL NRC-823215/STORAGE TANK	1745 MAIN ST HOLDEN MA 01520	NON GC	N/A	N/A
	RCRAGN	CARL BOTTCHER CO MV5088295166/VSQG-FED	NEWELL RD HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	HYDRAULIC LINE RUPTURE 2-0017825/RAO	WOODRIDGE RD HOLDEN MA 01520	NON GC	N/A	N/A
	UST	STAELY HOMES INC 0-016262/REMOVED	SYCAMORE DR HOLDEN MA 01520	NON GC	N/A	N/A
	UST	SEWER PUMPING STATION 0-016274/REMOVED	N MAIN ST HOLDEN MA 01520	NON GC	N/A	N/A
	UST	LINCOLN AVE SEWER PUMPING STAT 0-016276/REMOVED	LINCOLN AVE HOLDEN MA 01520	NON GC	N/A	N/A
	SWL	LEAHY WASTE DISPOSAL SYSTEMS RE0134.004/PROPOSED	19 ELMWOOD AVE JEFFERSON MA 01522	NON GC	N/A	N/A
	SWL	HOLDEN LANDFILL SL0134.002/INACTIVE	NORTH OF PILGRIMS DR/MALDEN HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	C90-0237/CLOSED	SALISBURY ST HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	STATELY HOMES C90-0279/CLOSED	FOX HILL RD HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	ROLLOFF CONTAINER DUMPED C92-0392/CLOSED	OFF PHILLIPS RD HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	ROADWAY RELEASE 2-0012478/RAO	DOYLE RD HOLDEN MA 01520	NON GC	N/A	N/A
	ERNS	OLD COLONY PETROLEUM CO INC 217246/FIXED FACILITY	SERVICE STATION SITE HOLDEN MA 01520	NON GC	N/A	N/A

Environmental FirstSearch
Sites Summary Report

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

TOTAL: 45 **GEOCODED:** 13 **NON GEOCODED:** 32 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	SPILLS	OIL SHEEN ON BROOK C93-0331/CLOSED	BIRCHWOOD (NEAR) ST HOLDEN MA 01520	NON GC	N/A	N/A
	ERNS	PRIVATE RESIDENCE NRC-706348/FIXED	52 SANDY GLEN DR HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	FISH KILL C91-0243/CLOSED	MOUNTAINVIEW DR HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	DSI TRANSPORTS ROADWAY RELEASE 2-0014991/RAO	RTE 190 S MM 7 HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	DRUMS REPORTED C90-0645/CLOSED	RTE 31 (OFF MANNING ST.) HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	CENTRAL MASS DISPOSAL 2-0015014/RAO	PRINCETON and HIGH ST HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	ARRARAT ST EXIT 2-0010201/RAO	RTE 190 EXIT HOLDEN MA 01520	NON GC	N/A	N/A
	SPILLS	1.2 MI N OF CTR 2-0010968/RAO	WACHUSETT ST HOLDEN MA 01520	NON GC	N/A	N/A
	ERNS	D31477/UNKNOWN	UNKNOWN HOLDEN MA 01520	NON GC	N/A	N/A
	ERNS	UNKNOWN 425410/UNKNOWN (EPA REGIONS	BIRCHWOOD SECTION OF TOWN HOLDEN MA 01520	NON GC	N/A	N/A
	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTA BIA-01520	UNKNOWN MA 01520	NON GC	N/A	N/A
	SPILLS	OLD HOLDEN DUMP C91-0006/CLOSED	OFF RIVER BEHIND OLD DUMP S HOLDEN MA 01520	NON GC	N/A	N/A

Environmental FirstSearch
Site Detail Report

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

SPILLS

SEARCH ID: 13 **DIST/DIR:** 0.03 SW **ELEVATION:** 814 **MAP ID:** 1

NAME: UST LEAKING
ADDRESS: 233 SHREWSBURY ST
HOLDEN MA 01520
WORCESTER
CONTACT: SALVADORE, D
SOURCE: MA DEP

REV:
ID1: C90-0535
ID2:
STATUS: CLOSED
PHONE:

CASE CLOSED? YES
SPILL DATE:
DATE REPORTED: 19900829
SPILL NOTIFIER: F.D.

SPILL TIME:
REPORT TIME: 10:30AM
NOTIFIER PHONE:

SPILL DESCRIPTION:

INCIDENT: LEAK
MATERIAL SPILLED: 2 FUEL OIL
AMT RPTD SPILLED: UNKNOWN GALLONS
SOURCE OF SPILL: U.S.T.
PET/HAZ: PETROLEUM
PCB LEVEL: NONE

ACTUAL AMT SPILLED: UNKNOWN GALLONS
VIR/WASTE: VIRGIN

ENVIRONMENTAL IMPACT: SOIL

LUST?: NO
CONTRACTOR: NOT USED
DAYS/CLOSE: 1

SOIL CONTAMINATED?:
PREPARE REPORT:

Environmental FirstSearch
Site Detail Report

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

SPILLS

SEARCH ID: 12 **DIST/DIR:** 0.09 SW **ELEVATION:** 806 **MAP ID:** 2

NAME: BELL ATLANTIC
ADDRESS: 203 SHREWSBURY ST
HOLDEN MA 01520
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0012658
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LTBI:
DELETED:
CONFIRMED:
REMOVED:

LOCATION TYPE: ROADWAY,
SOURCE: PIPE;
CATEGORY: TWO HR
SITE DESCRIPTION:

CHEMICALS

HYDRAULIC OIL 15 GAL

SITE ACTIONS

LSP INVOLVED: N/A

ACT DATE: 2/10/1999
ACT USE LIMITATION:
ACT STATUS: ORAL APPROVAL OF PLAN
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

ACT DATE: 2/10/1999
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

ACT DATE: 3/31/1999
ACT USE LIMITATION:
ACT STATUS: RAO STATEMENT RECEIVED
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

ACT DATE: 3/31/1999
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

Environmental FirstSearch
Site Detail Report

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

RCRAGN

SEARCH ID: 1 **DIST/DIR:** 0.19 NW **ELEVATION:** 756 **MAP ID:** 3

NAME: MT WACHUSETT VETERINARY HOSPITAL
ADDRESS: 160 SHREWSBURY ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 2/1/12
ID1: MV5088290419
ID2: MA HAZ WASTE GENERATOR
STATUS: VSQG-FED
PHONE:

SITE INFORMATION

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WASTE PREVENTION - HAZARDOUS WASTE GENERATOR

VQG-MA= Very Small Quantity Generator of hazardous waste or waste oil (Less than 220 pounds or 27 gallons/month)

SQN-MA = Small Quantity Generator of waste oil (220 to 2,200 ponds or 27 to 270 gallons/month)

VSQG-FED = very small quantity generator - generates between 0-220 lbs/mo and no acutely hazardous waste, and < 2,200 lbs (250 gals) accumulated on-site (from RCRA)

SQG-FED - small quantity generator - generates between 220-2,200 lbs/mo or 0-2.2 lbs/mo acutely hazardous waste; and not > 13,200 lbs (1500 gals) accumulated on-site (from RCRA)

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 3 **DIST/DIR:** 0.51 SW **ELEVATION:** 750 **MAP ID:** 4

NAME: BOTTCHER RESIDENCE
ADDRESS: 189 HOLDEN
HOLDEN MA 01520
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013693
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LOCATION TYPE:
SOURCE:
CATEGORY: 120 DY
SITE DESCRIPTION:

CHEMICALS

LEAD 51500 MG/KG

SITE ACTIONS

LSP INVOLVED: TODD ALVING

LSP INVOLVED: LAWRENCE FELDMAN

ACT DATE: 2/14/2001
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 2/14/2001
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 3/21/2001
ACT USE LIMITATION:
ACT STATUS: CORRESPONDENCE ISSUED
ACT TYPE: NOTICE OF RESPONSIBILITY
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 3/21/2001
ACT USE LIMITATION:
ACT STATUS: FIELD WORK REQUESTED
ACT TYPE: COMPLIANCE AND ENFORCEMENT
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 5/21/2001
ACT USE LIMITATION:

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 3 **DIST/DIR:** 0.51 SW **ELEVATION:** 750 **MAP ID:** 4

NAME: BOTTCHER RESIDENCE
ADDRESS: 189 HOLDEN
HOLDEN MA 01520
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013693
ID2:
STATUS: RAO
PHONE:

ACT STATUS: IMMINENT HAZARD EVALUATION RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 10/25/2001
ACT USE LIMITATION:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 10/26/2001
ACT USE LIMITATION:
ACT STATUS: FEE RECEIVED-FMCRA USE ONLY
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 1/17/2002
ACT USE LIMITATION:
ACT STATUS: ANNIVERSARY LETTER SENT
ACT TYPE: NOTICE OF RESPONSIBILITY
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 2/13/2002
ACT USE LIMITATION:
ACT STATUS: FEE RECEIVED-FMCRA USE ONLY
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 2/14/2002
ACT USE LIMITATION:
ACT STATUS: RAO STATEMENT RECEIVED
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 2/14/2002
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 3/12/2003
ACT USE LIMITATION:
ACT STATUS: COMPREHENSIVE AUDIT
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 3 **DIST/DIR:** 0.51 SW **ELEVATION:** 750 **MAP ID:** 4

NAME: BOTTCHER RESIDENCE
ADDRESS: 189 HOLDEN
HOLDEN MA 01520
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013693
ID2:
STATUS: RAO
PHONE:

ACT DATE: 3/12/2003
ACT USE LIMITATION:
ACT STATUS: WRITTEN NOTICE OF AUDIT
ACT TYPE: AUDIT COMMUNICATION AND CORRESPONDENCE
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 7/14/2003
ACT USE LIMITATION:
ACT STATUS: NOA FINDING - NON - VIOLATIONS WITH FOLLOW-UP
ACT TYPE: AUDIT COMMUNICATION AND CORRESPONDENCE
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 7/14/2003
ACT USE LIMITATION:
ACT STATUS: INTERIM DEADLINE LETTER ISSUED
ACT TYPE: COMPLIANCE AND ENFORCEMENT
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 12/31/2003
ACT USE LIMITATION:
ACT STATUS: AUDIT FOLLOW-UP COMPLETION STATEMENT RECEIVED
ACT TYPE: AUDIT COMMUNICATION AND CORRESPONDENCE
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 12/31/2003
ACT USE LIMITATION:
ACT STATUS: REVISED STATEMENT OR TRANSMITTAL RECEIVED
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 1/21/2004
ACT USE LIMITATION:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

Environmental FirstSearch
Site Detail Report

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 10 **DIST/DIR:** 0.56 SW **ELEVATION:** 759 **MAP ID:** 5

NAME: RESIDENCE
ADDRESS: 45 SOMERSET LN
HOLDEN MA
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 10/29/10
ID1: 2-0017661
ID2:
STATUS: TIER1D
PHONE:

DETAILS NOT AVAILABLE

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 8 **DIST/DIR:** 0.57 SW **ELEVATION:** 743 **MAP ID:** 6

NAME: JOSEPH MUNER
ADDRESS: 450 S MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013769
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LTBI:
DELETED:

CONFIRMED:
REMOVED:

LOCATION TYPE: COMMERCIAL,
SOURCE: UST;
CATEGORY: 72 HR
SITE DESCRIPTION:

CHEMICALS

DIESEL FUEL

SITE ACTIONS

LSP INVOLVED: MICHAEL STILLER

ACT DATE: 4/6/2001
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 4/6/2001
ACT USE LIMITATION:
ACT STATUS: ORAL APPROVAL OF PLAN
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 6/4/2001
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

ACT DATE: 6/4/2001
ACT USE LIMITATION:
ACT STATUS: RAO STATEMENT RECEIVED
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 8 **DIST/DIR:** 0.57 SW **ELEVATION:** 743 **MAP ID:** 6

NAME: JOSEPH MUNER
ADDRESS: 450 S MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013769
ID2:
STATUS: RAO
PHONE:

ACT DATE: 6/14/2001
ACT USE LIMITATION:
ACT STATUS: CORRESPONDENCE ISSUED
ACT TYPE: NOTICE OF RESPONSIBILITY
RAO CLASS: A2 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 4 **DIST/DIR:** 0.60 NW **ELEVATION:** 707 **MAP ID:** 7

NAME: DANIELS TRANSPORTATION
ADDRESS: 27 SHREWSBURY ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013667
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LTBI:
DELETED:

CONFIRMED:
REMOVED:

LOCATION TYPE: COMMERCIAL,
SOURCE: SADDLETANK;
CATEGORY: TWO HR
SITE DESCRIPTION:

CHEMICALS

DIESEL FUEL 60 GAL

SITE ACTIONS

LSP INVOLVED: ROBERT BERGER

ACT DATE: 1/28/2001
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

ACT DATE: 1/28/2001
ACT USE LIMITATION:
ACT STATUS: ORAL APPROVAL OF PLAN
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

ACT DATE: 1/29/2001
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

ACT DATE: 2/8/2001
ACT USE LIMITATION:
ACT STATUS: CORRESPONDENCE ISSUED
ACT TYPE: NOTICE OF RESPONSIBILITY
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 4 **DIST/DIR:** 0.60 NW **ELEVATION:** 707 **MAP ID:** 7

NAME: DANIELS TRANSPORTATION
ADDRESS: 27 SHREWSBURY ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013667
ID2:
STATUS: RAO
PHONE:

ACT DATE: 3/22/2001
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

ACT DATE: 3/22/2001
ACT USE LIMITATION:
ACT STATUS: RAO STATEMENT RECEIVED
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

ACT DATE: 3/22/2001
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS: A1 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS BEEN REDUCED TO BACKROUND OR A THREAT OF A RELEASE HAS BEEN ELIMINATED

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 7 **DIST/DIR:** 0.63 SW **ELEVATION:** 740 **MAP ID:** 8

NAME: HILLSIDE AUTO
ADDRESS: 359 MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0014252
ID2:
STATUS: TIERII
PHONE:

SITE INFORMATION

STATUS: TIER 2 - A site/release receiving a total NRS score less than 350, unless the site meets any of the Tier 1 Inclusionary Criteria (CMR 40.0520(2)(a)). Permits are not required at Tier 2 sites/releases and response actions may be performed under the supervision of an LSP without prior DEP approval. All pre-1993 transition sites that have accepted waivers are categoricallyTier 2 sites.

LOCATION TYPE:
SOURCE:
CATEGORY: 120 DY
SITE DESCRIPTION:

CHEMICALS

TPH 18000 PPM
ETHYLBENZENE 128.6 PPM
TOLUENE 159.9 PPM

SITE ACTIONS

LSP INVOLVED: N/A

LSP INVOLVED: DOUGLAS HEELY

ACT DATE: 4/1/2002
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 4/1/2002
ACT USE LIMITATION:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 4/1/2002
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 4/1/2002
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS:

ACT DATE: 4/19/2002
ACT USE LIMITATION:
ACT STATUS: WRITTEN DENIAL OF PLAN

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 7 **DIST/DIR:** 0.63 SW **ELEVATION:** 740 **MAP ID:** 8

NAME: HILLSIDE AUTO
ADDRESS: 359 MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0014252
ID2:
STATUS: TIERII
PHONE:

ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 5/30/2002
ACT USE LIMITATION:
ACT STATUS: CORRESPONDENCE ISSUED
ACT TYPE: NOTICE OF RESPONSIBILITY
RAO CLASS:

ACT DATE: 8/23/2002
ACT USE LIMITATION:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 10/1/2002
ACT USE LIMITATION:
ACT STATUS: NOTICE OF ENFORCEMENT CONFERENCE
ACT TYPE: COMPLIANCE AND ENFORCEMENT
RAO CLASS:

ACT DATE: 2/21/2003
ACT USE LIMITATION:
ACT STATUS: MODIFIED REVISED OR UPDATED PLAN RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 3/3/2003
ACT USE LIMITATION:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 3/7/2003
ACT USE LIMITATION:
ACT STATUS: WRITTEN DENIAL OF PLAN
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 6/30/2003
ACT USE LIMITATION:
ACT STATUS: NOTICE OF ENFORCEMENT CONFERENCE
ACT TYPE: COMPLIANCE AND ENFORCEMENT
RAO CLASS:

ACT DATE: 10/6/2003
ACT USE LIMITATION:
ACT STATUS: TRANSMITTAL RECEIVED
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 10/6/2003
ACT USE LIMITATION:

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 7 **DIST/DIR:** 0.63 SW **ELEVATION:** 740 **MAP ID:** 8

NAME: HILLSIDE AUTO
ADDRESS: 359 MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0014252
ID2:
STATUS: TIERII
PHONE:

ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 1
RAO CLASS:

ACT DATE: 10/6/2003
ACT USE LIMITATION:
ACT STATUS: TIER 2 CLASSIFICATION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 10/15/2003
ACT USE LIMITATION:
ACT STATUS: MODIFIED REVISED OR UPDATED PLAN RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 10/23/2003
ACT USE LIMITATION:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 10/23/2003
ACT USE LIMITATION:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: PHASE 1
RAO CLASS:

ACT DATE: 10/23/2003
ACT USE LIMITATION:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 11/28/2003
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS:

ACT DATE: 12/1/2003
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS:

ACT DATE: 12/2/2003
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 2/18/2004

- More Details Exist For This Site; Max Page Limit Reached -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 5 **DIST/DIR:** 0.69 NW **ELEVATION:** 714 **MAP ID:** 9

NAME: FORMER MANDEL PROPERTY
ADDRESS: 525 MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0014253
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LOCATION TYPE:
SOURCE:
CATEGORY: 120 DY
SITE DESCRIPTION:

CHEMICALS

XYLENE 30.6 PPM
TPH 8100 PPM
BENZENE 8.1 PPM
TOLUENE 46.4 PPM
ETHYLBENZENE 6.8 PPM

SITE ACTIONS

LSP INVOLVED: TODD ALVING

LSP INVOLVED: THOMAS STEVENSON

LSP INVOLVED: N/A

ACT DATE: 4/1/2002
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS: C1

ACT DATE: 4/1/2002
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS: C1

ACT DATE: 4/1/2002
ACT USE LIMITATION:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS: C1

ACT DATE: 4/1/2002
ACT USE LIMITATION:
ACT STATUS: FEE RECEIVED-FMCRA USE ONLY
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS: C1

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 5 **DIST/DIR:** 0.69 NW **ELEVATION:** 714 **MAP ID:** 9

NAME: FORMER MANDEL PROPERTY
ADDRESS: 525 MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0014253
ID2:
STATUS: RAO
PHONE:

ACT DATE: 4/1/2002
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS: C1

ACT DATE: 4/2/2002
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS: C1

ACT DATE: 4/19/2002
ACT USE LIMITATION:
ACT STATUS: WRITTEN DENIAL OF PLAN
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS: C1

ACT DATE: 5/30/2002
ACT USE LIMITATION:
ACT STATUS: CORRESPONDENCE ISSUED
ACT TYPE: NOTICE OF RESPONSIBILITY
RAO CLASS: C1

ACT DATE: 2/24/2003
ACT USE LIMITATION:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS: C1

ACT DATE: 3/3/2003
ACT USE LIMITATION:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS: C1

ACT DATE: 3/7/2003
ACT USE LIMITATION:
ACT STATUS: WRITTEN DENIAL OF PLAN
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS: C1

ACT DATE: 3/2/2004
ACT USE LIMITATION:
ACT STATUS: NOTICE OF NON-COMPLIANCE ISSUED
ACT TYPE: COMPLIANCE AND ENFORCEMENT
RAO CLASS: C1

ACT DATE: 4/28/2004
ACT USE LIMITATION:
ACT STATUS: DELAY IN MEETING RA DEADLINE ORDERED OR APPROVED
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: C1

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 5 **DIST/DIR:** 0.69 NW **ELEVATION:** 714 **MAP ID:** 9

NAME: FORMER MANDEL PROPERTY
ADDRESS: 525 MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0014253
ID2:
STATUS: RAO
PHONE:

ACT DATE: 6/29/2004
ACT USE LIMITATION:
ACT STATUS: DELAY IN MEETING RA DEADLINE ORDERED OR APPROVED
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS: C1

ACT DATE: 7/12/2004
ACT USE LIMITATION:
ACT STATUS: TRANSMITTAL RECEIVED
ACT TYPE: TIER CLASSIFICATION
RAO CLASS: C1

ACT DATE: 7/12/2004
ACT USE LIMITATION:
ACT STATUS: TIER 2 CLASSIFICATION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS: C1

ACT DATE: 7/26/2004
ACT USE LIMITATION:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: PHASE 1
RAO CLASS: C1

ACT DATE: 7/26/2004
ACT USE LIMITATION:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: TIER CLASSIFICATION
RAO CLASS: C1

ACT DATE: 7/12/2006
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 2
RAO CLASS: C1

ACT DATE: 7/12/2006
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 3
RAO CLASS: C1

ACT DATE: 8/31/2007
ACT USE LIMITATION:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: PHASE 4
RAO CLASS: C1

ACT DATE: 9/19/2007
ACT USE LIMITATION:
ACT STATUS: TECHNICAL SCREEN AUDIT
ACT TYPE: PHASE 4

- More Details Exist For This Site; Max Page Limit Reached -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 6 **DIST/DIR:** 0.69 NW **ELEVATION:** 717 **MAP ID:** 10

NAME: GEORGE LUDDY CHEVROLET
ADDRESS: 513 MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0010546
ID2:
STATUS: REMOPS
PHONE:

SITE INFORMATION

STATUS: REMOPS - Remedy Operating Status

LTBI:
DELETED:

CONFIRMED:
REMOVED:

LTBI:
DELETED:

CONFIRMED:
REMOVED:

LOCATION TYPE: COMMERCIAL,
SOURCE: UNKNOWN;
CATEGORY: 120 DY
SITE DESCRIPTION: GROUNDWATER RELEASE; PETROLEUM PRESENT; COMMERCIAL SITE; RELEASE TO SOIL; UNKNOWN AS TO WHAT IS CONTAINED IN;

OTHER CONTAMINATION:
OTHER RELEASES:
OTHER PROBLEMS:
OTHER TYPE OF SITE:

CHEMICALS

TPH 10000 MG/KG
TPH 1000 MG/KG
TPH 73000 PPB
TPH 73000 UG/L
PETROLEUM

SITE ACTIONS

LSP INVOLVED: THOMAS ARMY

TS DATE: 11/7/1995
AUL RESTRICTION:
LSP: LEE LYMAN
RA STATUS: TRANSMITTAL RECEIVED
RAS TYPE: TIER CLASSIFICATION
RAO CLASS:

TS DATE: 12/5/1996
AUL RESTRICTION:
LSP:
RA STATUS: LINKED TO A TRANSITION SITE - OBSOLETE STATUS
RAS TYPE: FEND
RAO CLASS:

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 6 **DIST/DIR:** 0.69 NW **ELEVATION:** 717 **MAP ID:** 10

NAME: GEORGE LUDDY CHEVROLET
ADDRESS: 513 MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0010546
ID2:
STATUS: REMOPS
PHONE:

ACT DATE: 10/26/1994
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 10/26/1994
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 11/9/1994
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 12/1/1994
ACT USE LIMITATION:
ACT STATUS: CORRESPONDENCE ISSUED
ACT TYPE: NOTICE OF RESPONSIBILITY
RAO CLASS:

ACT DATE: 7/24/1995
ACT USE LIMITATION:
ACT STATUS: FEE RECEIVED-FMCRA USE ONLY
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 8/8/1995
ACT USE LIMITATION:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: RELEASE ABATEMENT MEASURE
RAO CLASS:

ACT DATE: 11/7/1995
ACT USE LIMITATION:
ACT STATUS: TRANSMITTAL RECEIVED
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 11/7/1995
ACT USE LIMITATION:
ACT STATUS: TIER 2 CLASSIFICATION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 11/7/1995
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 1

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 6 **DIST/DIR:** 0.69 NW **ELEVATION:** 717 **MAP ID:** 10

NAME: GEORGE LUDDY CHEVROLET
ADDRESS: 513 MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0010546
ID2:
STATUS: REMOPS
PHONE:

RAO CLASS:

ACT DATE: 8/11/1997
ACT USE LIMITATION:
ACT STATUS: SCOPE OF WORK RECEIVED
ACT TYPE: PHASE 2
RAO CLASS:

ACT DATE: 10/28/1997
ACT USE LIMITATION:
ACT STATUS: SCOPE OF WORK RECEIVED
ACT TYPE: PHASE 2
RAO CLASS:

ACT DATE: 10/19/1998
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 2
RAO CLASS:

ACT DATE: 10/19/1998
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 3
RAO CLASS:

ACT DATE: 10/19/1998
ACT USE LIMITATION:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: PHASE 4
RAO CLASS:

ACT DATE: 3/19/1999
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 4
RAO CLASS:

ACT DATE: 10/29/1999
ACT USE LIMITATION:
ACT STATUS: TRANSMITTAL RECEIVED
ACT TYPE: ACTIVITY AND USE LIMITATION
RAO CLASS:

ACT DATE: 11/23/1999
ACT USE LIMITATION:
ACT STATUS: PASSIVE OandM AND/OR MONITORING
ACT TYPE: RESPONSE ACTION OUTCOME - RAO
RAO CLASS:

ACT DATE: 11/23/1999
ACT USE LIMITATION:
ACT STATUS: RAO STATEMENT RECEIVED

- More Details Exist For This Site; Max Page Limit Reached -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 11 **DIST/DIR:** 0.75 NW **ELEVATION:** 720 **MAP ID:** 11

NAME: STATE POLICE BARRACKS
ADDRESS: RTE 122A MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0012547
ID2:
STATUS: REMOPS
PHONE:

SITE INFORMATION

STATUS: REMOPS - Remedy Operating Status

LTBI:
DELETED:

CONFIRMED:
REMOVED:

LOCATION TYPE: STATE,
SOURCE: UST;
CATEGORY: 72 HR
SITE DESCRIPTION:

CHEMICALS

GASOLINE 280 PPMV

SITE ACTIONS

LSP INVOLVED: N/A

LSP INVOLVED: CHARLES KLINGLER

LSP INVOLVED: ANTHONY ANDRONICO

ACT DATE: 12/9/1998
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 12/9/1998
ACT USE LIMITATION:
ACT STATUS: ORAL APPROVAL OF PLAN
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 12/10/1998
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS:

ACT DATE: 1/8/1999
ACT USE LIMITATION:
ACT STATUS: CORRESPONDENCE ISSUED
ACT TYPE: NOTICE OF RESPONSIBILITY
RAO CLASS:

ACT DATE: 1/26/1999

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 11 **DIST/DIR:** 0.75 NW **ELEVATION:** 720 **MAP ID:** 11

NAME: STATE POLICE BARRACKS
ADDRESS: RTE 122A MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0012547
ID2:
STATUS: REMOPS
PHONE:

ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 2/10/1999
ACT USE LIMITATION:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 6/7/1999
ACT USE LIMITATION:
ACT STATUS: STATUS REPORT RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 12/15/1999
ACT USE LIMITATION:
ACT STATUS: SCOPE OF WORK RECEIVED
ACT TYPE: PHASE 2
RAO CLASS:

ACT DATE: 12/15/1999
ACT USE LIMITATION:
ACT STATUS: TIER 2 CLASSIFICATION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 12/15/1999
ACT USE LIMITATION:
ACT STATUS: TRANSMITTAL RECEIVED
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 12/15/1999
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 12/15/1999
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 1
RAO CLASS:

ACT DATE: 2/6/2002
ACT USE LIMITATION:
ACT STATUS: RTN LINKED TO TCLASS VIA TIER CLASSIFICATION SUBMITTAL
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 11 **DIST/DIR:** 0.75 NW **ELEVATION:** 720 **MAP ID:** 11

NAME: STATE POLICE BARRACKS
ADDRESS: RTE 122A MAIN ST
HOLDEN MA 01520
WORCESTER
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0012547
ID2:
STATUS: REMOPS
PHONE:

ACT DATE: 3/8/2002
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 2
RAO CLASS:

ACT DATE: 3/8/2002
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 3
RAO CLASS:

ACT DATE: 4/23/2002
ACT USE LIMITATION:
ACT STATUS: RTN LINKED TO TCLASS VIA IRA COMPLETION STATEMENT
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 4/24/2002
ACT USE LIMITATION:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: PHASE 4
RAO CLASS:

ACT DATE: 1/7/2003
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: PHASE 4
RAO CLASS:

ACT DATE: 7/17/2003
ACT USE LIMITATION:
ACT STATUS: POST-RAO C STATUS REPORT RECEIVED (PH V-PRIOR TO 05 ONLY)
ACT TYPE: PHASE 5
RAO CLASS:

ACT DATE: 4/13/2004
ACT USE LIMITATION:
ACT STATUS: POST-RAO C STATUS REPORT RECEIVED (PH V-PRIOR TO 05 ONLY)
ACT TYPE: PHASE 5
RAO CLASS:

ACT DATE: 1/19/2005
ACT USE LIMITATION:
ACT STATUS: POST-RAO C STATUS REPORT RECEIVED (PH V-PRIOR TO 05 ONLY)
ACT TYPE: PHASE 5
RAO CLASS:

ACT DATE: 12/8/2005
ACT USE LIMITATION:
ACT STATUS: TIER 2 EXTENSION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

- More Details Exist For This Site; Max Page Limit Reached -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 2 **DIST/DIR:** 0.89 SW **ELEVATION:** 777 **MAP ID:** 12

NAME: BELL PROPERTY
ADDRESS: 170 MAIN ST
HOLDEN MA 01520
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013961
ID2:
STATUS: RAO
PHONE:

SITE INFORMATION

STATUS: RAO - (Response Action Outcome): a site/release where an RAO statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.

LTBI:
DELETED:

CONFIRMED:
REMOVED:

LOCATION TYPE: RESIDNTIAL,
SOURCE: PIPE;
CATEGORY: TWO HR
SITE DESCRIPTION:

CHEMICALS

2 FUEL 200 GAL

SITE ACTIONS

LSP INVOLVED: GLENN GORAL

ACT DATE: 8/27/2001
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 8/27/2001
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 8/27/2001
ACT USE LIMITATION:
ACT STATUS: ORAL APPROVAL OF PLAN
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 8/28/2001
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 2 **DIST/DIR:** 0.89 SW **ELEVATION:** 777 **MAP ID:** 12

NAME: BELL PROPERTY
ADDRESS: 170 MAIN ST
HOLDEN MA 01520
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013961
ID2:
STATUS: RAO
PHONE:

ACT DATE: 9/4/2001
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 9/6/2001
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 9/17/2001
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 9/28/2001
ACT USE LIMITATION:
ACT STATUS: CORRESPONDENCE ISSUED
ACT TYPE: NOTICE OF RESPONSIBILITY
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 10/3/2001
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 10/3/2001
ACT USE LIMITATION:
ACT STATUS: ORAL APPROVAL OF A MODIFIED PLAN
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 10/31/2001
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 10/31/2001
ACT USE LIMITATION:
ACT STATUS: WRITTEN PLAN RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 2 **DIST/DIR:** 0.89 SW **ELEVATION:** 777 **MAP ID:** 12

NAME: BELL PROPERTY
ADDRESS: 170 MAIN ST
HOLDEN MA 01520
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013961
ID2:
STATUS: RAO
PHONE:

RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 11/19/2001
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 11/26/2001
ACT USE LIMITATION:
ACT STATUS: WRITTEN APPROVAL OF PLAN
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 12/28/2001
ACT USE LIMITATION:
ACT STATUS: STATUS REPORT RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 4/11/2002
ACT USE LIMITATION:
ACT STATUS: STATUS REPORT RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 4/11/2002
ACT USE LIMITATION:
ACT STATUS: MODIFIED REVISED OR UPDATED PLAN RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 7/25/2002
ACT USE LIMITATION:
ACT STATUS: ANNIVERSARY LETTER SENT
ACT TYPE: NOTICE OF RESPONSIBILITY
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 8/30/2002
ACT USE LIMITATION:
ACT STATUS: TIER 2 CLASSIFICATION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS: A3 - A PERMANENT SOLUTION HAS BEEN ACHIEVED: CONTAMINATION HAS NOT BEEN REDUCED TO BACKROUND AND AN ACTIVITY AND USE LIMITATION (AUL) HAS BEEN IMPLEMENTED

ACT DATE: 8/30/2002

- More Details Exist For This Site; Max Page Limit Reached -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 9 **DIST/DIR:** 0.90 SW **ELEVATION:** 770 **MAP ID:** 13

NAME: MOBIL SERVICE STATION 01-EN3 11849
ADDRESS: 175 MAIN ST
HOLDEN MA 01520
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013791
ID2:
STATUS: RAONR
PHONE:

SITE INFORMATION

STATUS: RAONR - Response action outcome not required

LTBI:
DELETED:

CONFIRMED:
REMOVED:

LOCATION TYPE: COMMERCIAL,
SOURCE: UNKNOWN;
CATEGORY: 72 HR
SITE DESCRIPTION:

CHEMICALS

GASOLINE .72 INCH

SITE ACTIONS

LSP INVOLVED: CHRISTOPHE HENRY

ACT DATE: 6/25/2001
ACT USE LIMITATION:
LSP:
ACT STATUS: LINKED TO A TIER CLASSIFIED SITE
LINKED SITE ID: 2-0000753
ACT TYPE: RAO NOT REQUIRED
RAO CLASS:

ACT DATE: 3/6/1991
ACT USE LIMITATION:
ACT STATUS: TRANSMITTAL RECEIVED
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 3/17/1997
ACT USE LIMITATION:
ACT STATUS: TIER 2 CLASSIFICATION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 3/17/1997
ACT USE LIMITATION:
ACT STATUS: TIER 2 EXTENSION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 1/6/1998
ACT USE LIMITATION:

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 9 **DIST/DIR:** 0.90 SW **ELEVATION:** 770 **MAP ID:** 13

NAME: MOBIL SERVICE STATION 01-EN3 11849
ADDRESS: 175 MAIN ST
HOLDEN MA 01520
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013791
ID2:
STATUS: RAONR
PHONE:

ACT STATUS: TIER 2 EXTENSION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 1/5/1999
ACT USE LIMITATION:
ACT STATUS: TIER 2 EXTENSION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 1/12/2000
ACT USE LIMITATION:
ACT STATUS: TIER 2 EXTENSION
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 3/10/2000
ACT USE LIMITATION:
ACT STATUS: PERMIT OR TIER 2 EXTENSION DENIED
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 4/26/2001
ACT USE LIMITATION:
ACT STATUS: IRA ASSESSMENT ONLY
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 4/26/2001
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE DISPOSITION
RAO CLASS:

ACT DATE: 6/25/2001
ACT USE LIMITATION:
ACT STATUS: COMPLETION STATEMENT RECEIVED
ACT TYPE: IMMEDIATE RESPONSE ACTION
RAO CLASS:

ACT DATE: 6/25/2001
ACT USE LIMITATION:
ACT STATUS: REPORTABLE RELEASE UNDER MGL 21E
ACT TYPE: RELEASE NOTIFICATION
RAO CLASS:

ACT DATE: 6/25/2001
ACT USE LIMITATION:
ACT STATUS: LINKED TO A TIER CLASSIFIED SITE
ACT TYPE: RAO NOT REQUIRED
RAO CLASS:

ACT DATE: 6/25/2001

- Continued on next page -

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

STATE

SEARCH ID: 9 **DIST/DIR:** 0.90 SW **ELEVATION:** 770 **MAP ID:** 13

NAME: MOBIL SERVICE STATION 01-EN3 11849
ADDRESS: 175 MAIN ST
HOLDEN MA 01520
CONTACT:
SOURCE: MA DEP

REV: 3/20/12
ID1: 2-0013791
ID2:
STATUS: RAONR
PHONE:

ACT USE LIMITATION:
ACT STATUS: RTN LINKED TO TCLASS VIA IRA COMPLETION STATEMENT
ACT TYPE: TIER CLASSIFICATION
RAO CLASS:

ACT DATE: 5/2/2003
ACT USE LIMITATION:
ACT STATUS: FOLLOW UP OFFICE RESPONSE
ACT TYPE: SITE VISIT OR COMPLIANCE INSPECTION
RAO CLASS:

ACT DATE: 11/20/2006
ACT USE LIMITATION:
ACT STATUS: NOA FINDING - NO VIOLATIONS FOUND
ACT TYPE: AUDIT COMMUNICATION AND CORRESPONDENCE
RAO CLASS:

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

Target Property: 270 SHREWSBURY ST
HOLDEN MA 01520

JOB: 1882

Street Name	Dist/Dir	Street Name	Dist/Dir
Birchwood Dr	0.05 SE		
Chapel St	0.22 NW		
Doyle Rd	0.14 NE		
Holden St	0.22 NW		
Marlen St	0.23 SW		
Mountview Dr	0.15 NE		
Shrewsbury St	0.01 SW		
Westview Rd	0.25 SW		
Wildwood St	0.25 SW		

HISTORICAL FIRE INSURANCE MAPS

NO MAPS AVAILABLE

06-06-12
1882
270 SHREWSBURY ST
HOLDEN MA 01520

A search of FirstSearch Technology Corporation's proprietary database of historical fire insurance map availability confirmed that there are NO MAPS AVAILABLE for the Subject Location as shown above.

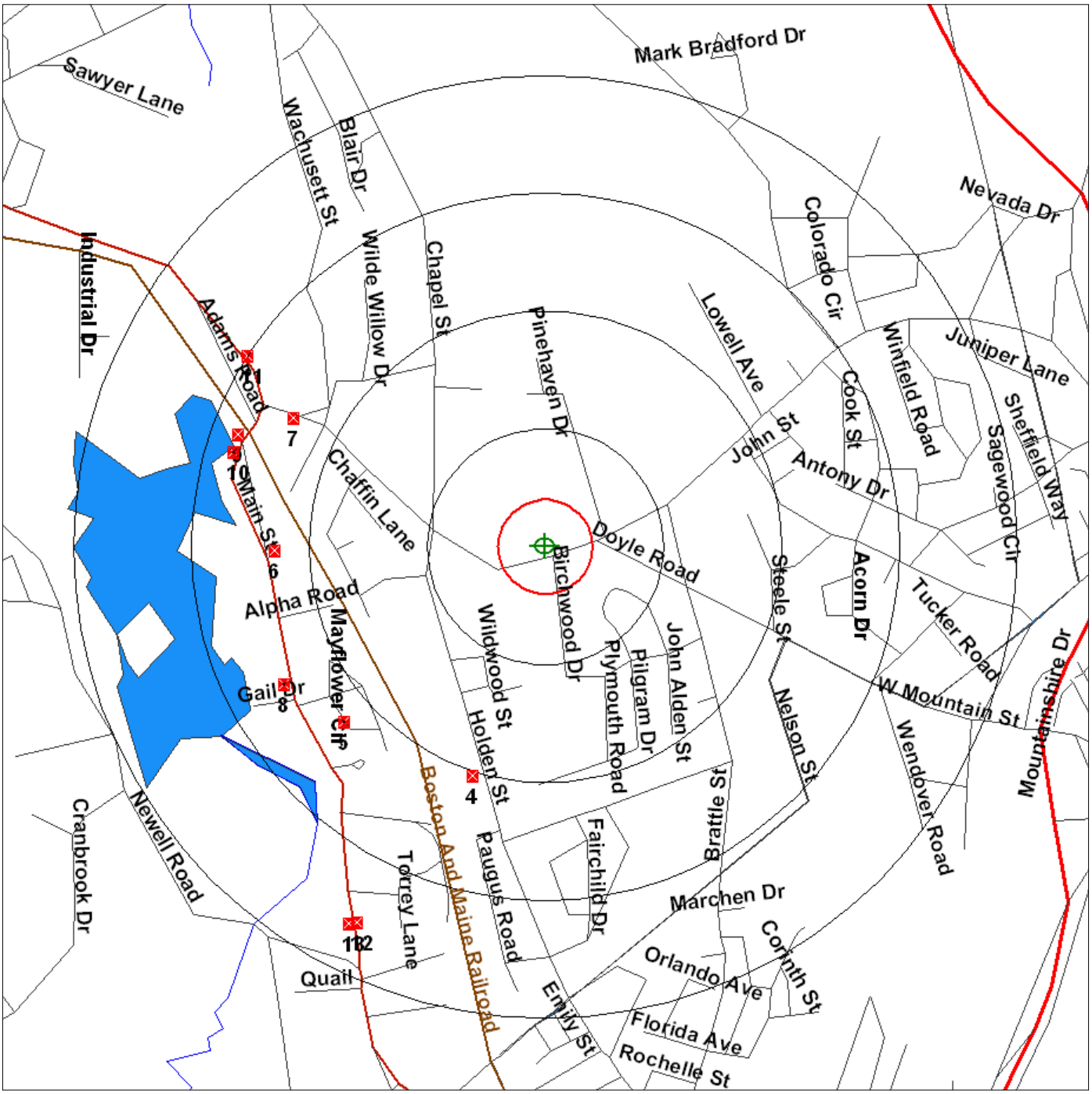
FirstSearch Technology Corporation's proprietary database of historical fire insurance map availability represents abstracted information from the Sanborn® Map Company obtained through online access to the U.S. Library of Congress via local libraries.

Environmental FirstSearch

1 Mile Radius

ASTM Map: NPL, RCRACOR, STATE Sites

270 SHREWSBURY ST, HOLDEN MA 01520



Source: 2005 U.S. Census TIGER Files

Target Site (Latitude: 42.332502 Longitude: -71.823701) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

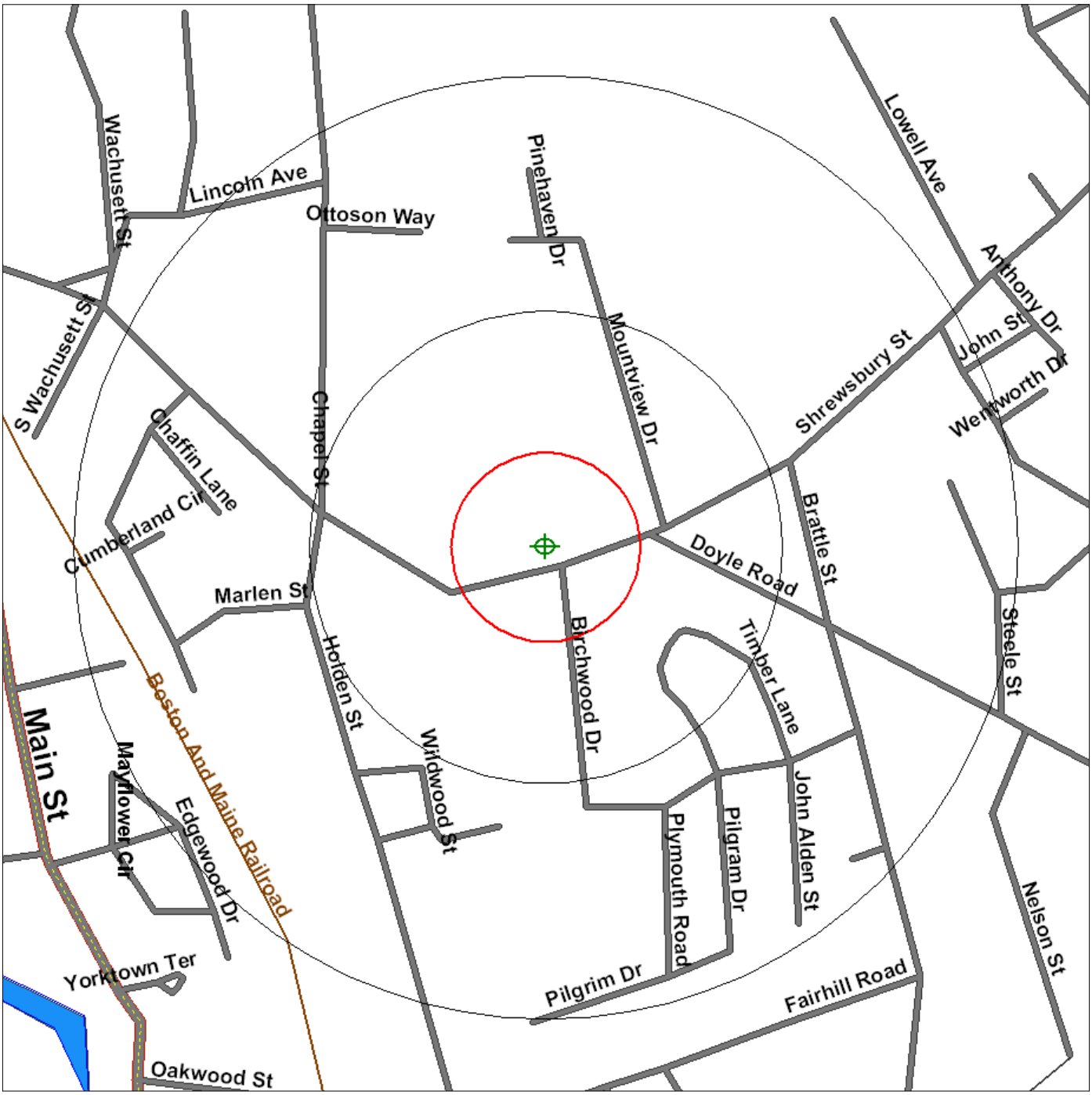
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM Map: CERCLIS, RCRATSD, LUST, SWL

270 SHREWSBURY ST, HOLDEN MA 01520



Source: 2005 U.S. Census TIGER Files

Target Site (Latitude: 42.332502 Longitude: -71.823701) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

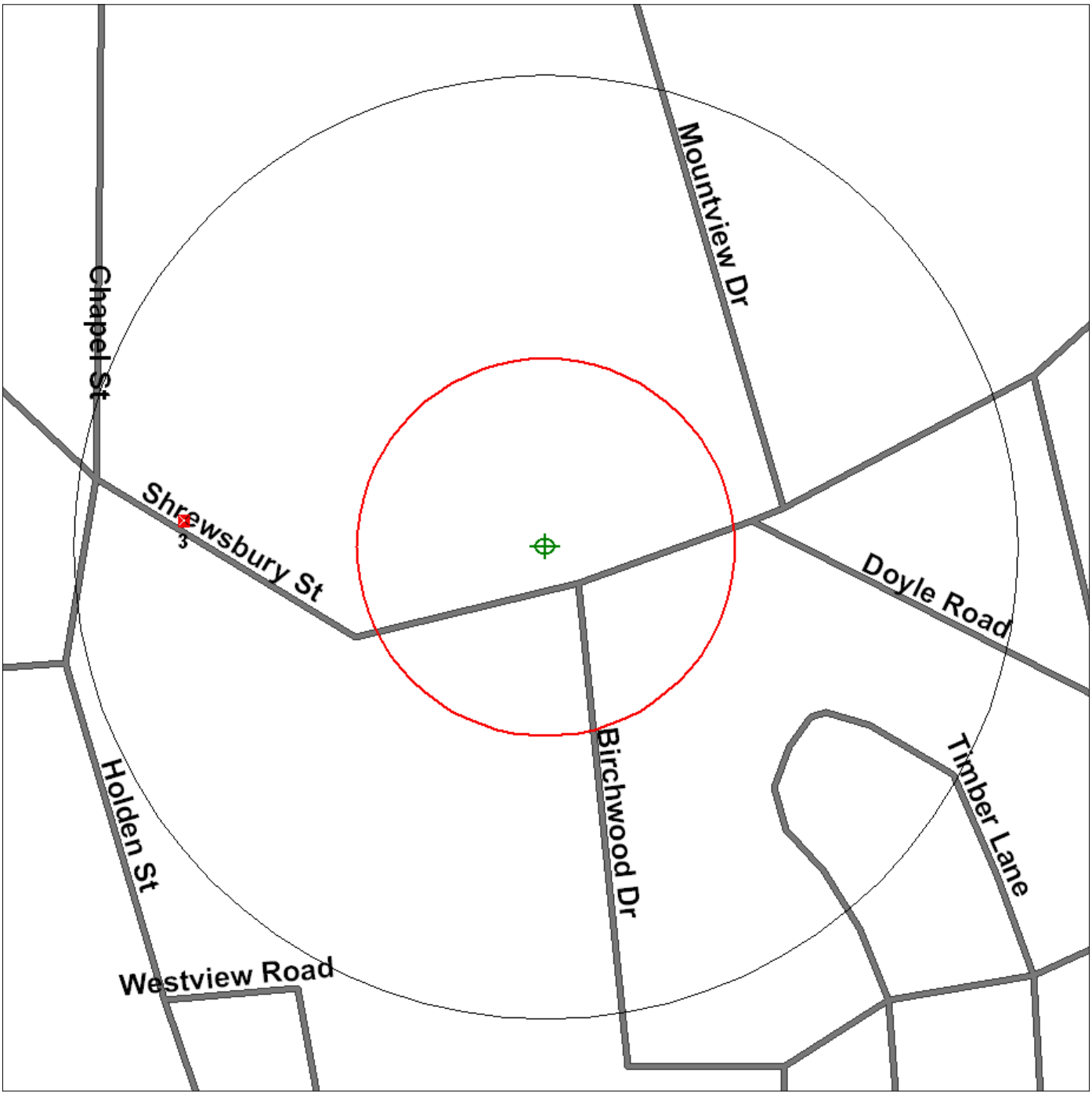
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

ASTM Map: RCRAGEN, ERNS, UST, FED IC/EC, METH LABS

270 SHREWSBURY ST, HOLDEN MA 01520



Source: 2005 U.S. Census TIGER Files

Target Site (Latitude: 42.332502 Longitude: -71.823701) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

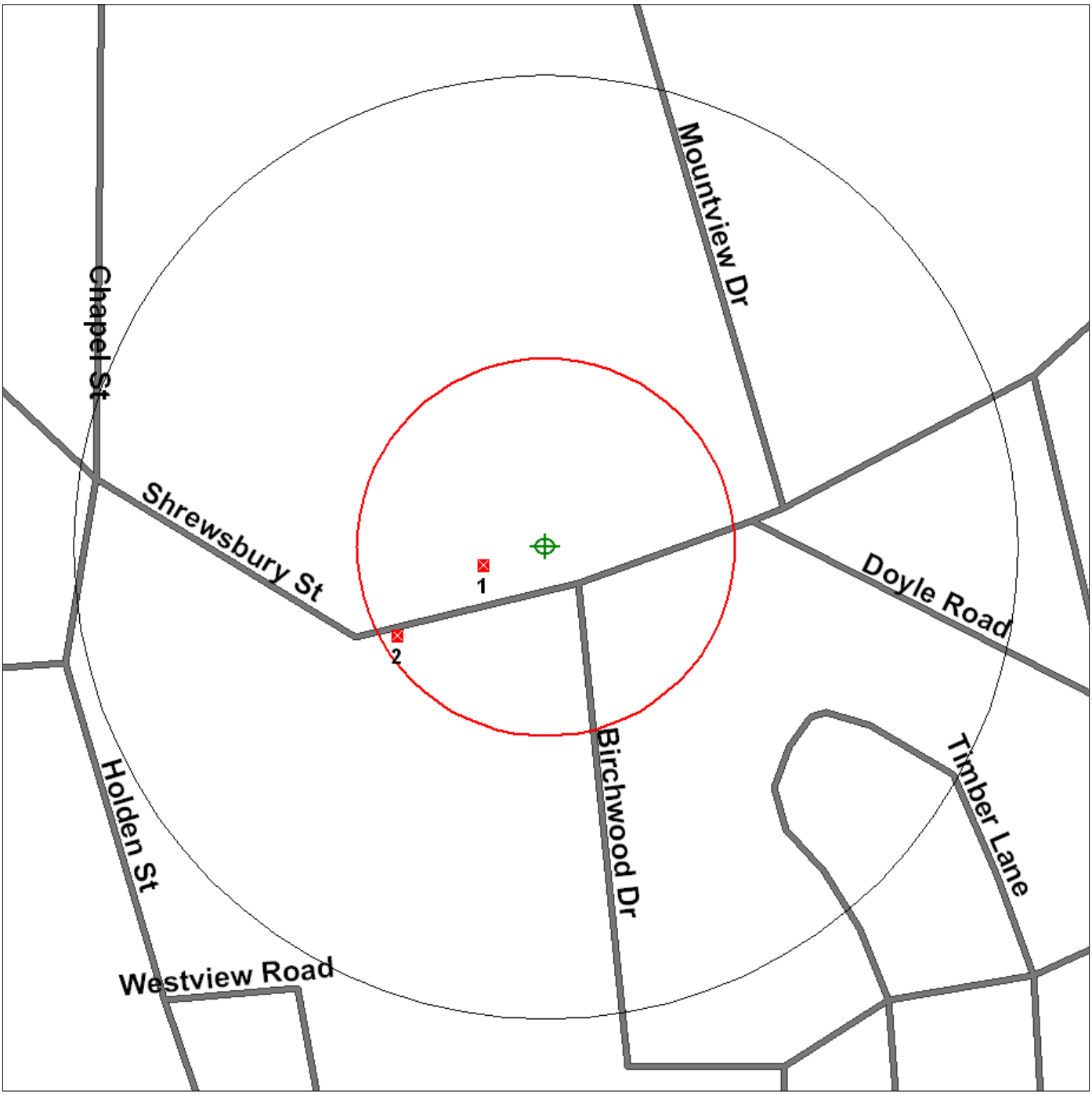
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

Non-ASTM Map: Spills 90

270 SHREWSBURY ST, HOLDEN MA 01520



Source: 2005 U.S. Census TIGER Files

Target Site (Latitude: 42.332502 Longitude: -71.823701) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

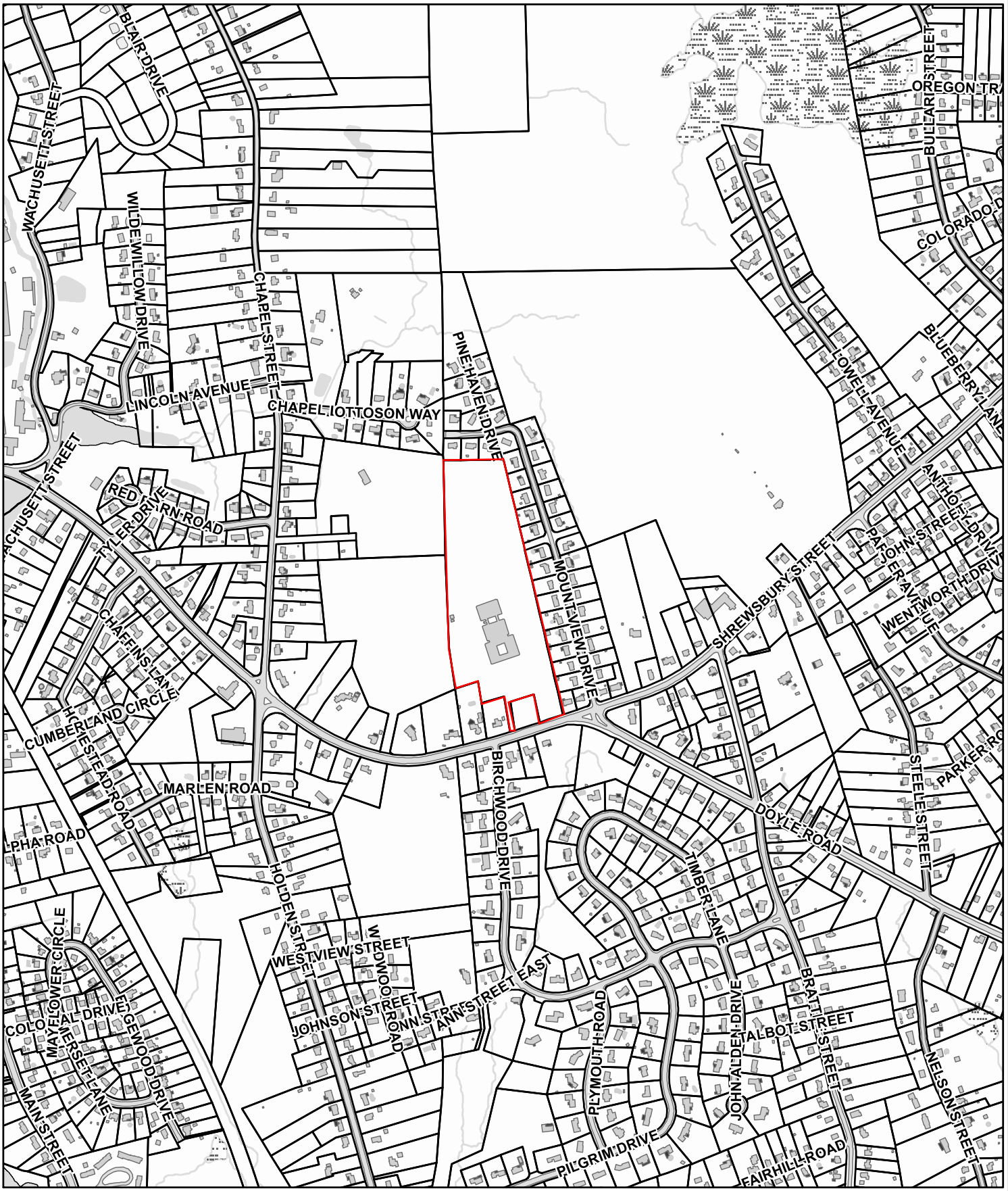
Triballand.....

National Historic Sites and Landmark Sites .....

Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

APPENDIX C



Town of Holden, Massachusetts

Geographic Information System

N
W E
S

0 600 1,200 2,400 Feet

Powered by Vision Government Solutions, Inc.

MBLU:	201/62/ / /
Location:	270 SHREWSBURY ST
Owner Name:	HOLDEN TOWN OF
Account Number:	1

Parcel Value

Item	Current Assessed Value	FY 2011 Assessed Value
Improvements	7,582,800	7,582,800
Land	295,900	308,600
Total:	**7,878,700**	**7,891,400**

Owner of Record

HOLDEN TOWN OF
TOWN HALL
HOLDEN, MA 01520

Ownership History

Owner Name	Book/Page	Sale Date	Sale Price
HOLDEN TOWN OF	4647/313A	3/9/1966	0

Land Use

Land Use Code	Land Use Description
934C	IMPRVD EDU MDL-94

Land Line Valuation

Size	Zone	Assessed Value
15.18 AC	R15	295,900

Construction Detail

Building # 1

STYLE Schools-Public	**MODEL** Commercial	**Grade** Average +20
Stories: 2	**Exterior Wall 1** Brick/Masonry	**Roof Structure** Flat
Roof Cover Tar & Gravel	**Interior Wall 1** Drywall	**Interior Floor 1** Tile A V R
Heating Fuel Oil	**Heating Type** Steam	**AC Type** None
Bldg Use PUB-SCHOOL MDL-94	**Total Bedrms** 00	**Total Baths** 0
1st Floor Use: 903C	**Heat/AC** NONE	**Frame Type** STEEL
Baths/Plumbing AVERAGE	**Ceiling/Wall** SUS-CEIL & WL	**Rooms/Prtns** AVERAGE
Wall Height 12	**%Comn Wall** 0	

Building Valuation

Living Area: 87,970 square feet **Year Built**: 1978 **Depreciation**: 19%

Extra Features

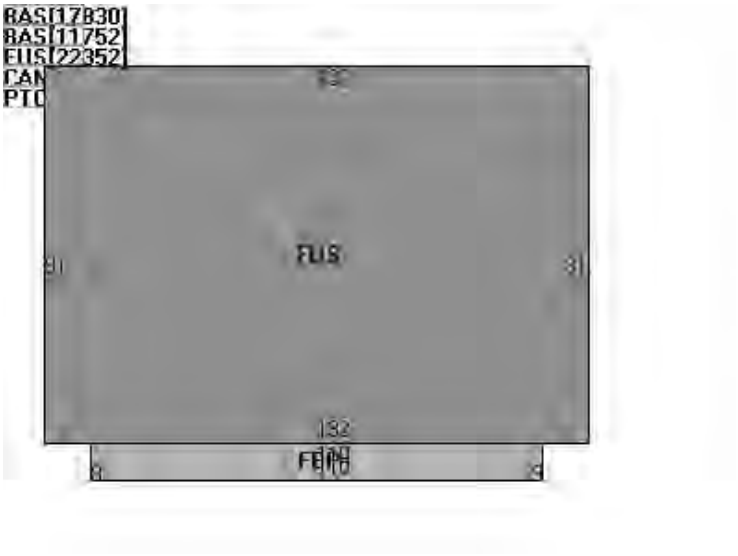
Code	Description	Units
No Extra Building Features		

Outbuildings

Code	Description	Units
PAV1	PAVING-ASPHALT |	20000 S.F.
TEN	TENNIS COURT |	7200 S.F.
TEN	TENNIS COURT |	7200 S.F.
TEN	TENNIS COURT |	[illegible]

TEN	TENNIS COURT |	8000 S.F.
	MISC |	1
	MISC |	1
SHD1	SHED FRAME |	160 S.F.

Building Sketch



Subarea Summary

Code	Description	Gross Area	Living Area
BAS	First Floor	41594	41594
CAN	Canopy	1678	0
FEP	Porch, Enclosed, Finished	990	0
FUS	Upper Story, Finished	46376	46376
PTO	Patio	1800	0

TOWN OF HOLDEN FIRE DEPARTMENT
1370 Main Street • Holden, Massachusetts 01520 • John Chandler, III., Fire Chief
PHONE (508) 210-5650 • FAX (508) 210-5657

June 26, 2012

Lord Associates

Attn: Scott Balboni

The following is information provided for a 21E request for the Mt. View Junior High School located at 270 Shrewsbury St. Holden, MA

After a search of department and computer files and to the best of my knowledge, the following information is supplied.

1, 10,000 Gal. 5/16 steel #2 fuel UST oil tank was installed on 9/8/1967 and removed on 7/14/1997, permit # 67-004. 1, 10,000 Gal. double walled fiberglass #2 fuel oil tank was installed On 7/26/1997. Permit # 97-001. There appears to have been no incident or reported hazardous material spill on removal of the steel tank. A copy of a letter found in the site file is enclosed for informational purposes.

Assistant Chief Alexander J. Belisle Jr.

Fire Prevention Division

June 5, 1998

UST Administrative Board
1 Ashburton Place
Room 1310
Boston, MA 02108-1618

Attention: Mr. Stuart Glass
Grant Manager

Dear Mr. Glass,

Included find a copy of bid proposal form which shows that Alternate No. 3 was only for the removal and replacement of 10,000 gallon fuel oil tank and piping at Mt. View School.

There was no clean up involved in the project as indicated in the tank closure report that has already been submitted.

Also be advised that a FP 290 was not required for this location since both the old tank and the new tank were strictly for No. 2 heating oil consumed on the premises. Reference included.

If you have any questions or need any additional information please feel free to call me at 508/829-0266.

Very truly yours,

Edward J. Stark, Jr.
Fire Chief

EJS:dc

Enclosures (2)

3.1.4 EVALUATION OF EXISTING CONDITIONS

I. Assessment of the Facility for the Presence of Hazardous Materials

REPORT
FOR
HAZARDOUS MATERIALS IDENTIFICATION
SURVEY
AT
MOUNTVIEW MIDDLE SCHOOL
HOLDEN, MASSACHUSETTS

PROJECT NO: 212 139.00

SURVEY DATES:
May-June 2012

SURVEY CONDUCTED BY:

UNIVERSAL ENVIRONMENTAL CONSULTANTS
12 BREWSTER ROAD
FRAMINGHAM, MA 01702

UEC universal environmental consultants

June 25, 2012

Mr. Mike Pagano
Lamoureux Pagano Associates
108 Grove Street
Worcester, MA 01605

Reference: **Hazardous Materials Identification Survey**
Mountview Middle School, Holden, MA

Dear Mr. Pagano:

Thank you for the opportunity for Universal Environmental Consultants (UEC) to provide professional services.

Enclosed please find the report for Hazardous Materials Identification Survey at the Mountview Middle School, Holden, MA.

21E Site assessment report will be submitted under a separate cover.

Please do not hesitate to call should you have any questions.

Very truly yours,

Universal Environmental Consultants

Ammar M. Dieb
President

UEC:\212 139\REPORT .DOC

Enclosure

ecs
WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

588 Silver Street, Agawam, MA 01001 tel 413.789.3530 fax 413.789.2776 www.ecsconsult.com

3-Year AHERA Asbestos Re-Inspection Management Plan Update

Mountview Middle School
270 Shrewsbury Street
Holden, Massachusetts

Wachusett Regional School District

Holden, Paxton, Princeton, Rutland, Sterling

September 2, 2011

James Covello, Facilities Manager K-8
Wachusett Regional School District
1745 Main Street
Jefferson, MA 01522

Dear Ms. Covello:

You are hereby appointed as the AHERA Designated Representative for the Wachusett Regional School District, effective immediately.

Should you have any further questions, kindly contact me at your convenience.

Very truly yours,

Thomas G. Pandiscio, Ed.D.
Superintendent of Schools

cc: Susan Sullivan, Director of Human Resources
Peter Brennan, Business Manager
Personnel File

Jefferson School
1745 Main Street, Jefferson, MA 01522
Telephone: (508) 829-1670 Facsimile: (508) 829-1680
www.wrsd.net

588 Silver Street, Agawam, MA 01001 tel 413.789.3530 fax 413.789.2776 www.ecsconsult.com

Mrs. Connie McEwan
K-8 Facilities Manager
Wachusett Regional School District
1745 Main Street
Holden, MA 01522

June 13, 2011
Project No. 01-215241.00.00
Document No. 40500

RE: 2011 3-Year AHERA Asbestos Re-Inspection and Management Plan Update
Mountview Middle School
270 Shrewsbury Street
Holden, Massachusetts

Dear Mrs. McEwan:

Environmental Compliance Services, Inc. (ECS) is pleased to submit the enclosed report of the three-year AHERA asbestos re-inspection and management plan update performed at the Mountview Middle School in the Town of Holden, MA. One copy of this document must be kept on file at the school, and one at a central location where all the Management Plans are preserved and can be accessed.

If you have any questions or concerns regarding this letter, please contact the undersigned.

Sincerely,
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Michael Grover
Project Manager/MA Asbestos Inspector #: AI000201

Christopher L. Godfrey
Senior Project Manager/MA Asbestos Management Planner #: MP000058

MG/CLG/kab
Attachments

TABLE OF CONTENTS

ATTACHMENT I

ASBESTOS MANAGEMENT PLAN UPDATE AND
AHERA 3 YEAR ACBM RE-INSPECTION

1.0 INTRODUCTION

1.1 BACKGROUND

The Clean Air Act of 1977 required the United States Environmental Protection Agency (USEPA) to develop standards to address the potential health aspects associated with adverse effects of asbestos exposure as an indoor contaminant. In October 1986 the USEPA promulgated the Asbestos Hazard Emergency Response Act (AHERA).

The AHERA regulations required that all local education agencies conduct inspections of each school building that they lease, own, or otherwise use as a school building in order to identify all locations or friable and non-friable asbestos containing building materials (ACBM). The original inspections were required to have been completed prior to October 12, 1988.

Any building leased or acquired on or after October 12, 1988 that is to be used as a school building shall be inspected for friable and non-friable ACBM prior to use as a school building. In the event of an emergency use of a building that has not been inspected for ACBM, the building shall be inspected within 30 days after commencement of such use.

The regulatory requirements are still in full force and effect for any private or public school system, a church affiliated school of any denomination, a school dedicated to the education of children with special needs, or a charter school. In the Commonwealth of Massachusetts the Division of Occupational Safety (DOS) Asbestos and Lead Program is responsible for enforcement of the AHERA regulations.

1.2 LOCAL EDUCATION AGENCY (LEA) RESPONSIBILITIES

A. The LEA is responsible for compliance with AHERA regulation 40 CFR Part 763. The following responsibilities must be adhered to. (Refer to above-mentioned regulation for full requirements and responsibilities):

1. The LEA must designate a person to ensure that all of the AHERA requirements are properly implemented. The Designated Person must receive adequate training to perform his/her duties.
2. The LEA must ensure that management plans are maintained in a central location as well as at each facility and such plans and records are available for inspection or review at all times.
3. The LEA must inform all workers, building occupants or their legal in writing at least once each school year about asbestos related activities, and the availability of the AHERA management plans for the school buildings.
4. The LEA must ensure proper accreditation for all persons who perform asbestos inspections, asbestos re-inspections, develop/update management plans, develop response actions, and perform required response actions including operations and maintenance activities that may disturb asbestos.
5. The LEA must provide training for all custodial and maintenance staff who regularly perform building maintenance where asbestos containing building materials (ACBM) are present. The training must be provided upon initial hire as well as updated annually.
6. The LEA must provide information (disclosure) to any workers who may perform short-term work and come in contact with asbestos in school buildings where ACBM or presumed ACBM are present.
7. The LEA must ensure that known ACBM or presumed ACBM are provided with warning labels in routine maintenance areas.

8. The LEA must ensure that periodic surveillance is performed at least once every six months, after a management plan is in effect, in all school buildings that it leases owns or otherwise uses that contains ACBM or presumed ACBM.
9. The LEA must ensure that once every three years, after a management plan is in effect, a re-inspection is performed in all school buildings that it leases owns or otherwise uses that contains ACBM or presumed ACBM.

1.3 ACCREDITATION

A. Local Education Agency (LEA)

LEA: Wachusett Regional School District
Address: Wachusett Regional School District
Buildings and Grounds Offices
1745 Main Street
Holden, MA 01522

B. Designated Person

JAMES Coutts
~~Mrs. Connie~~ McEwan
K-8 Facilities Manager

C. Asbestos Consultant

Current Firm: Environmental Compliance Services
Address: 588 Silver Street
Agawam, MA 01001
(413) 789-3530

Past Firm: HUB Testing Laboratory, Inc.
Address: 95 Beaver Street
Waltham, MA 02453
(781) 893-8330

D. Asbestos Inspector

Inspector: Mr. Michael Grover
License Number: AI000201
State: Massachusetts
Expiration Date: 29 May 2012

E. Asbestos Management Planner

Management Planner: Mr. Christopher L. Godfrey
License Number: AP000058
State: Massachusetts
Expiration Date: 6 March 2012

DESIGNATED PERSON STATEMENT

LOCAL EDUCATION AGENCY DESIGNATED PERSON STATEMENT

As Wachusett Regional School District's Designated Person, I certify, as required by 40 CFR Part 763.93(i), that the local Education Agency responsibilities, as stipulated by 763.84, have been or will be met.

JAMES COVELLO
DESIGNATED PERSON

(SIGNATURE)

1.4 INSPECTION HISTORY AND SCHEDULE

A. Original AHERA Inspection Management Plan

Report Date:	May 3, 1989
Prepared By:	HUB Testing Laboratories Inc.
Address:	Waltham, Massachusetts
Inspector:	Susan Boyle

B. Three Year Re-Inspections

Report Date:	October 1993
Prepared By:	Final Clearance Analysis, Inc.
Address:	Clinton, Massachusetts
Inspector:	Daniel L Mortell

Report Date:	January 2005
Prepared By:	HUB Testing Laboratories Inc.
Address:	Waltham, Massachusetts
Inspector:	Lynne Whitcraft, Inspector Number AI035007

Report Date:	January 2008
Prepared By:	Environmental Compliance Services (ECS)
Address:	Agawam, Massachusetts
Inspector:	Douglas Auvine, Inspector Number AI71861

Report Date:	June 2011
Prepared By:	Environmental Compliance Services (ECS)
Address:	Agawam, Massachusetts
Inspector:	Michael Grover, Inspector Number AI000201

2.0 THREE YEAR RE-INSPECTION

2.1 RE-INSPECTION PROCEDURES

This three-year asbestos re-inspection was conducted in accordance with the requirements of the following regulations:

United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) regulation (40 CFR Part 763, Section 763.85 (b)).

Mr. Michael Grover of Environmental Compliance Services performed the re-inspection on April 20, 2011. Mr. Grover is an accredited Asbestos Inspector in the Commonwealth of Massachusetts (License No. AI000201).

A. During the re-inspection the following required tasks were performed:

1. A visual re-inspection and re-assessment of all friable known or assumed asbestos-containing building materials (ACBM).
2. A visual re-inspection of ACBM that was previously considered non-friable to determine if the present condition of the material has made it friable.
3. Identification and assessment of any homogeneous area that contained new friable ACBM since the last inspection or re-inspection

Note: The limits of an AHERA inspection involve visible and accessible areas only. ACBM may exist in concealed chases, above fixed ceilings or concealed below floors. Additionally, material such as glue associated with chalk and tack-boards, flooring adhesives and mastics, and concealed thermal system insulation may contain asbestos and are presumed to be present.

2.2 LIMITED BUILDING DESCRIPTION

Mountview Middle School has three levels that consists of a older (original) building in the front half section with a newer section on the back section of the building..

3.0 RE-INSPECTION REPORT

3.1 REVIEW OF EXISTING RECORDS

An important part of this AHERA re-inspection involved checking documentation that was required to be present at the building being inspected as well as at the central location where all management plans are preserved.

Please see Appendix A for details of our findings.

3.2 RE-INSPECTION SUMMARY

The on-site portion of the re-inspection was documented on forms modeled based on examples provided by the United States Environmental Protection Agency (USEPA). A single form has been created which summarizes the inventory of materials by type, location, quantity and category. Each location of a given material type is provided and exposure assessment including friability, a previous condition assessment category consistent with AHERA rankings, a current assessment category ranking and notes regarding the current assessment. The forms also identify any previous recommendations from last recorded three year inspection and current recommendations based on the re-inspection.

Any newly identified materials are also recorded and identified as newly identified materials. Note, samples were collected of materials as part of the re-inspection. Any newly identified materials are presumed to contain asbestos.

The information obtained during this re-inspection was transmitted to Mr. Christopher L. Godfrey, an accredited Management Planner, so that response actions relative to the condition of the ACBM could be designed. Mr. Godfrey is a licensed Asbestos Management Planner in the Commonwealth of Massachusetts (License No. MP000058).

3.3 NEWLY IDENTIFIED ACBM MATERIAL

Newly identified materials not included in the previous three year inspection or the initial inspection include the following:

- White window glazing on the interior of the windows

The window glazing is located throughout the older (original) building on all exterior windows. The Material is Friable and applied along the seam of the glass where it insets into the metal window frame. Samples MV-1 and MV-3 indicate the presence of asbestos.

- Sink undercoating

The sinks are located throughout the building in classrooms. Material is non-friable and applied to underside of sinks to prevent condensation. Material is accessible beneath counter by opening cabinet doors. No samples were collected. Refer to assessment forms for specific information.

Any suspect material encountered during renovation/demolition that is not specifically identified in this report as a non-ACM should be assumed to contain asbestos unless sample results prove otherwise. AHERA inspections do not satisfy the requirements for the U.S. EPA survey requirements for compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP). A NESHAP survey should be performed prior to renovation or other planned disturbance within a building.

SUSPECT ACBM FOUND TO NOT CONTAIN ASBESTOS

- Brown Interior Window Frame Caulking

3.4 PHYSICAL ASSESSMENT OF ACBMS

During the inspection, suspect ACBM were separated into three USEPA categories. These categories are thermal system insulation (TSI), surfacing ACBM, and miscellaneous ACBM. TSI includes all materials used to prevent heat loss or gain or water condensation on mechanical systems. Examples of TSI are pipe insulation, boiler insulation, duct insulation, and mudded insulation on pipe-fittings. Surfacing ACBM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous materials include all ACBM not listed in TSI or surfacing, such as linoleum, vinyl asbestos flooring, and ceiling tiles.

Finally, all ACBM were quantified in linear and/or square footage depending on the nature of the material

All ACBM identified during the inspection and still remaining in the school were reassessed using the AHERA guidelines for assessment of ACBM. The assessment categories are listed as follows:

1. Damaged or significantly damaged TSI ACBM
2. Damaged friable surfacing ACBM
3. Significantly damaged friable surfacing ACBM
4. Damaged or significantly damaged friable miscellaneous ACBM
5. ACBM with potential for damage
6. ACBM with potential for significant damage
7. Any remaining friable ACBM or friable suspected ACBM

Material locations, assessments, and recommended response actions are listed in the Re-inspection forms located in Appendix B.

4.0 MANAGEMENT PLAN UPDATE

4.1 RECOMMENDED RESPONSE ACTIONS

OPERATIONS AND MAINTENANCE (O & M)

All ACBM in the school shall be managed in place in accordance with the original AHERA Operations and Maintenance (0 & M) Program. The condition of such materials will be monitored until all the ACBM have been removed from the building. A successful 0 & M Program includes the following elements:

a) Cleaning: All areas of the school where friable ACBM or friable suspected ACBM assumed to be ACM are present shall be cleaned at least once after the completion of the initial inspection. Additional cleaning may be necessary if the Management Planner makes a written recommendation indicating methods and frequency of such cleaning.

b) O & M Activities: The LEA shall ensure that the procedures described below are followed to protect building occupants from any 0 & M activities that may disturb known or assumed ACM:
   1. Restrict entry into the area either by physically isolating or by scheduling.
   2. Post warning signs to prevent entry by unauthorized persons.
   3. Shut off or temporarily modify the air-handling system.
   4. Shut off or temporarily modify the air-handling system.
   5. Use proper work practices and engineering controls such as wet methods, protective clothing, HEPA-vacuums, mini enclosures/glove bags etc., to inhibit spread of fibers.
   6. Place all asbestos debris and other contaminated materials in a sealed, leak-tight containers for disposal.

c) Minor Fiber Release Episodes: The LEA shall ensure that the procedures described below are followed in the event of a minor fiber release episode (i.e., disturbance of 3 linear/square feet or less of friable ACM):
   1. Saturate the debris using wet method.
   2. Place the debris in a sealed leak-tight container and clean the area.
   3. Repair the area of damaged ACBM with materials such as asbestos-free spackling, plaster or insulation or seal with an encapsulant.

d) Major Fiber Release Episode: The LEA shall ensure that the procedures described below are followed in the event of a major fiber release episode (i.e., disturbance of more than 3 linear/square feet of friable ACBM):
   1. Restrict entry into the area and post warning signs.
   2. Shut off or temporarily modify the air handling system to prevent spread of fibers to other areas of the school.
   3. **The response for any major fiber release episode must be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.**

The LEA shall notify the Massachusetts Department of Labor and Workforce Development of any major fiber release episode within twenty-four hours of its occurrence and, if necessary, provide written notification as required by applicable federal and/or state regulations.

4.2 PERIODIC SURVEILLANCE

At least once every six (6) months after a management plan is in place, the LEA shall conduct periodic surveillance in the school that contains ACBM or assumed to contain ACM. The person conducting periodic surveillance shall visually inspect all areas in the school that have been identified in the management plan as having ACBM, record the date of surveillance, his/her name, and any changes in the condition of the materials and submit the record to the LEA Designated Person for inclusion in the management plan.

Please see Appendix C for Periodic Surveillance Forms that may be used for conducting periodic surveillance.

4.3 PREVENTIVE MEASURES

The LEA shall institute appropriate preventive measures to eliminate the reasonable likelihood that the ACBM will become damaged, deteriorated or delaminated.

Please see Appendix D for preventive measures designed for various types of ACM that may exist in the school.

5.0 EPA CERTIFICATION REQUIREMENTS

The certificates and the licenses for the individuals (Michael Grover and Christopher L. Godfrey) involved in performing the re-inspection and updating the management plan are provided in Appendix E.

APPENDIX A

CHECKLIST FOR EXISTING RECORDS

CHECKLIST FOR EXISTING RECORDS

Local Education Agency (LEA):

Connie McEwan
K-8 Facilities Manager
Wachusett Regional School District
1745 Main Street, Holden, MA 01522

School Building:

Mountview Middle School
270 Shrewsbury Street
Holden, Massachusetts 01522

The following documentation is required to be present in both the LEA's Office as well as in a centralized location in the administrative office of the school. The information included in this checklist shall be verified to be present and complete as part of three year re-inspection.

	DOCUMENTATION	LOCATION	
		School	LEA Office
1	Original AHERA Inspection/Management Plan	N	Y
2	Three year Re-inspections (List Dates)	2008	2008
3	Notifications to Parents/Guardians and Teachers (yearly since last re- inspection)	N	N
4	Designated Person Identified and Proper Training (person must be named and have appropriate training)	N	N
5	Designated Person Periodic Surveillance (every six months since last re-inspection)	N	N
6	Record of Awareness Training for Maintenance Staff	N	N
7	Outside Vendor Awareness Notification	N	N
8	Warning Signs and Labels (required posting in Boiler room and mechanical spaces only)	Y	N/A
9	Record of Response Actions (includes any abatement done since last re-inspection)	N	Y

Inspector: Michael Grover AI000201

Date: 7 May 2011

APPENDIX B

AHERA RE-INSPECTION FORMS

Asbestos 3 Year Re-Inspection
Mountview Middle School
270 Shrewsbury Street
Holden, MA 01552

Inspector: Michael Grover AI000201	Inspection Date: 7 May 2011
ACBM Type: 12" x 12" Floor Tiles & Associated Mastic	Sample Number: Presumed

ACBM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friability	Previous Assessment Category	Current Assessment Category	Current Assessment Description	Previous Recommendation	Current Recommendation
Classrooms	40,000 SF	Miscellaneous	Non-friable	5	5	Good	Continue O & M	Continue O & M
Hallways	Included Above	Miscellaneous	Non-friable	5	5	Good	Continue O & M	Continue O & M
Gym Storage	Included Above	Miscellaneous	Non-friable	5	6	Damage/Broken Pieces	Continue O & M	Repair
Offices	Included Above	Miscellaneous	Non-friable	5	5	Good	Continue O & M	Continue O & M

AHERA Assessment Categories: 1 – Damaged or Significantly Damaged Thermal Systems Insulation (TSI); 2 – Damaged Friable Surfacing Asbestos containing Building Material (ACBM); 3- Significantly Damaged Friable Surfacing ACBM; 4 – Damaged or Significantly Damaged Friable Miscellaneous ACBM; 5 – ACBM with Potential for Damage; 6 – ACBM with the Potential for Significant Damage; 7 – Any Remaining Friable ACBM or Suspect ACBM.

Asbestos 3 Year Re-Inspection
Mountview Middle School
270 Shrewsbury Street
Holden, MA 01552

Inspector: Michael Grover AI000201	Inspection Date: 7 May 2011
ACBM Type: Thermal Systems Breaching Insulation	Sample Number: MV-8-11

ACBM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friability	Previous Assessment Category	Current Assessment Category	Current Assessment Description	Previous Recommendation	Current Recommendation
Mechanical Room	~240 Sq Ft	TSI	Friable	5	5	Good	Continue O & M	Continue O & M

AHERA Assessment Categories: 1 – Damaged or Significantly Damaged Thermal Systems Insulation (TSI); 2 – Damaged Friable Surfacing Asbestos containing Building Material (ACBM); 3- Significantly Damaged Friable Surfacing ACBM; 4 – Damaged or Significantly Damaged Friable Miscellaneous ACBM; 5 – ACBM with Potential for Damage; 6 – ACBM with the Potential for Significant Damage; 7 – Any Remaining Friable ACBM or Suspect ACBM.

Asbestos 3 Year Re-Inspection
Mountview Middle School
270 Shrewsbury Street
Holden, MA 01552

Inspector: Michael Grover AI000201	Inspection Date: 7 May 2011
ACBM Type: Wall and Ceiling Plaster	Sample Number: Presumed

ACBM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friability	Previous Assessment Category	Current Assessment Category	Current Assessment Description	Previous Recommendation	Current Recommendation
Classrooms	120,000 SF	Surfacing ACBM	Friable	5	5	Good	Continue O & M	Continue O & M
Hallways	Included Above	Surfacing ACBM	Friable	5	5	Minor cosmetic stress creaks	Continue O & M	Repair/Patch Damaged Areas
Offices	Included Above	Surfacing ACBM	Friable	5	5	Good	Continue O & M	Continue O & M
Gymnasium	Included Above	Surfacing ACBM	Friable	5	5	Good	Continue O & M	Continue O & M
Cafeteria	Included Above	Surfacing ACBM	Friable	5	5	Good	Continue O & M	Continue O & M
Library	Included Above	Surfacing ACBM	Friable	5	5	Good	Continue O & M	Continue O & M

AHERA Assessment Categories: 1 – Damaged or Significantly Damaged Thermal Systems Insulation (TSI); 2 – Damaged Friable Surfacing Asbestos containing Building Material (ACBM); 3- Significantly Damaged Friable Surfacing ACBM; 4 – Damaged or Significantly Damaged Friable Miscellaneous ACBM; 5 – ACBM with Potential for Damage; 6 – ACBM with the Potential for Significant Damage; 7 – Any Remaining Friable ACBM or Suspect ACBM.

Ashestos 3 Year Re-Inspection
Mountview Middle School
270 Shrewsbury Street
Holden, MA 01552

Inspector: Michael Grover AI000201	Inspection Date: 7 May 2011
ACBM Type: Covemolding Mastic	Sample Number: MV-1

ACBM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friability	Previous Assessment Category	Current Assessment Category	Current Assessment Description	Previous Recommendation	Current Recommendation
Classrooms in the Older Building Section	8,000 LF	Miscellaneous	Non-friable	5	5	Good	Continue O & M	Continue O & M
Hallways	Included Above	Miscellaneous	Non-friable	5	5	Good	Continue O & M	Continue O & M
Offices	Included Above	Miscellaneous	Non-friable	5	5	Good	Continue O & M	Continue O & M

AHERA Assessment Categories: 1 – Damaged or Significantly Damaged Thermal Systems Insulation (TSI); 2 – Damaged Friable Surfacing Asbestos containing Building Material (ACBM); 3- Significantly Damaged Friable Surfacing ACBM; 4 – Damaged or Significantly Damaged Friable Miscellaneous ACBM; 5 – ACBM with Potential for Damage; 6 – ACBM with the Potential for Significant Damage; 7 – Any Remaining Friable ACBM or Suspect ACBM.

Asbestos 3 Year Re-Inspection
Mountview Middle School
270 Shrewsbury Street
Holden, MA 01552

Inspector: Michael Grover AI000201	Inspection Date: 7 May 2011
ACBM Type: Fire Doors	Sample Number: Presumed

ACBM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friability	Previous Assessment Category	Current Assessment Category	Current Assessment Description	Previous Recommendation	Current Recommendation
Throughout	46 Doors	TSI	Friable	5	5	Good	Continue O & M	Continue O & M

AHERA Assessment Categories: 1 – Damaged or Significantly Damaged Thermal Systems Insulation (TSI); 2 – Damaged Friable Surfacing Asbestos containing Building Material (ACBM); 3- Significantly Damaged Friable Surfacing ACBM; 4 – Damaged or Significantly Damaged Friable Miscellaneous ACBM; 5 – ACBM with Potential for Damage; 6 – ACBM with the Potential for Significant Damage; 7 – Any Remaining Friable ACBM or Suspect ACBM.

Asbestos 3 Year Re-Inspection
Mountview Middle School
270 Shrewshury Street
Holden, MA 01552

Inspector: Michael Grover AI000201	Inspection Date: 7 May 2011
ACBM Type: Transite window sills and table tops	Sample Number: Presumed

ACBM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friability	Previous Assessment Category	Current Assessment Category	Current Assessment Description	Previous Recommendation	Current Recommendation
Classrooms	1,000 SF	TSI	Non-friable	5	5	Good	Continue O & M	Continue O & M

AHERA Assessment Categories: 1 – Damaged or Significantly Damaged Thermal Systems Insulation (TSI); 2 – Damaged Friable Surfacing Asbestos containing Building Material (ACBM); 3- Significantly Damaged Friable Surfacing ACBM; 4 – Damaged or Significantly Damaged Friable Miscellaneous ACBM; 5 – ACBM with Potential for Damage; 6 – ACBM with the Potential for Significant Damage; 7 – Any Remaining Friable ACBM or Suspect ACBM.

Ashestos 3 Year Re-Inspection
Mountview Middle School
270 Shrewsbury Street
Holden, MA 01552

Inspector: Michael Grover AI000201	Inspection Date: 7 May 2011
ACBM Type: Gray HVAC Duct Mastic	Sample Number: Presumed

ACBM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friability	Previous Assessment Category	Current Assessment Category	Current Assessment Description	Previous Recommendation	Current Recommendation
Throughout	unknown	Miscellaneous	Non-friable	5	5	Good	Continue O & M	Continue O & M

AHERA Assessment Categories: 1 – Damaged or Significantly Damaged Thermal Systems Insulation (TSI); 2 – Damaged Friable Surfacing Asbestos containing Building Material (ACBM); 3- Significantly Damaged Friable Surfacing ACBM; 4 – Damaged or Significantly Damaged Friable Miscellaneous ACBM; 5 – ACBM with Potential for Damage; 6 – ACBM with the Potential for Significant Damage; 7 – Any Remaining Friable ACBM or Suspect ACBM.

Asbestos 3 Year Re-Inspection
Mountview Middle School
270 Shrewsbury Street
Holden, MA 01552

Inspector: Michael Grover AI000201	Inspection Date: 7 May 2011
ACBM Type: 1x1 Spline Ceiling Tiles	Sample Number: Presumed

ACBM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friability	Previous Assessment Category	Current Assessment Category	Current Assessment Description	Previous Recommendation	Current Recommendation
Gymnasium	15,000 SF	Miscellaneous	Non-friable	5	5	Good	Continue O & M	Continue O & M

AHERA Assessment Categories: 1 – Damaged or Significantly Damaged Thermal Systems Insulation (TSI); 2 – Damaged Friable Surfacing Asbestos containing Building Material (ACBM); 3- Significantly Damaged Friable Surfacing ACBM; 4 – Damaged or Significantly Damaged Friable Miscellaneous ACBM; 5 – ACBM with Potential for Damage; 6 – ACBM with the Potential for Significant Damage; 7 – Any Remaining Friable ACBM or Suspect ACBM.

Asbestos 3 Year Re-Inspection
Mountview Middle School
270 Shrewsbury Street
Holden, MA 01552

Inspector: Michael Grover AI000201	Inspection Date: 7 May 2011
ACBM Type: Newly Identified Suspect Material – Sink Undercoating	Sample Number: Presumed

ACBM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friability	Previous Assessment Category	Current Assessment Category	Current Assessment Description	Previous Recommendation	Current Recommendation
Classrooms	Throughout	Miscellaneous	Non-friable	5	5	Good	Continue O & M	Continue O & M

AHERA Assessment Categories: 1 – Damaged or Significantly Damaged Thermal Systems Insulation (TSI); 2 – Damaged Friable Surfacing Asbestos containing Building Material (ACBM); 3- Significantly Damaged Friable Surfacing ACBM; 4 – Damaged or Significantly Damaged Friable Miscellaneous ACBM; 5 – ACBM with Potential for Damage; 6 – ACBM with the Potential for Significant Damage; 7 – Any Remaining Friable ACBM or Suspect ACBM.

Asbestos 3 Year Re-Inspection
Mountview Middle School
270 Shrewsbury Street
Holden, MA 01552

Inspector: Michael Grover AI000201	Inspection Date: 7 May 2011
ACBM Type: Newly Identified Suspect Material – White Interior Window Glazing	Sample Number: MV-1, MV-3

ACBM Inventory			Exposure Assessment				Response Action	
Location	Estimated Quantity	Material Category	Friability	Previous Assessment Category	Current Assessment Category	Current Assessment Description	Previous Recommendation	Current Recommendation
Throughout the Older Building Section	unknown	Miscellaneous	Friable	5	5	Good	Continue O & M	Continue O & M

AHERA Assessment Categories: 1 – Damaged or Significantly Damaged Thermal Systems Insulation (TSI); 2 – Damaged Friable Surfacing Asbestos containing Building Material (ACBM); 3- Significantly Damaged Friable Surfacing ACBM; 4 – Damaged or Significantly Damaged Friable Miscellaneous ACBM; 5 – ACBM with Potential for Damage; 6 – ACBM with the Potential for Significant Damage; 7 – Any Remaining Friable ACBM or Suspect ACBM.

ProScience Analytical Services, Inc

May 18, 2011

Chris Godfrey
Environmental Compliance Svcs Inc. HQ
588 Silver Street
Agawam, MA 01001

Dear Chris Godfrey,

The enclosed analytical results have been obtained by using the EPA/600/R-93/116 method. The "Visual Estimate" quantitative method is generally used for determining the percentage of asbestos and other components of the sample. "The Point Counting" method may also be used upon client request or at the analyst discretion. The Point Count method is usually recommended when the sample contains less than 10% asbestos by Visual estimate. Asbestos content less than 1% is recorded on the report as TR (trace).

The Quality Control data related to the samples analyzed is available upon client's written request. ProScience Analytical Services Inc., assumes no responsibility for potential sample contamination that may have occurred during the sample collection process or erroneous data provided by the client.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

All Laboratory records are retained for at least three years unless otherwise directed in writing by the client. The actual samples are retained for a period of two months and written request is necessary in order to be retained for a longer period of time. All analytical results and records are considered strictly confidential and will not be released under any circumstances to anyone except the actual client. The analytical results included in this report apply only to the items tested.

If you have any questions please contact the Laboratory Manager or the Laboratory Director.

Sincerely,

Valerica Stanca, Optical Asbestos Manager
Adrian Stanca, Laboratory Director

Enclosure: Version 2
LAB BATCH ID: B 75106 CLIENT PROJECT ID: 215241.00.06
Client Ref: Mountview School
NVLAP Lab Code 200090-0; CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; ME ID# LA-056; AIHA ID# 102754; VT ID# AL016876; PH ID# 218(TEM,PLM); RI ID# 186.

ProScience Analytical Services, Inc.

Client Name: Environmental Compliance Svcs Inc. HQ
PO #: N/A
Client Project #: 215241.00.06
Client Reference: Mountview School
Method: EPA/600/R-93/116

Batch: B75106
Date Sampled: N/A
Date Received: 5/13/2011
Date Analyzed: 5/16/2011
Date of Report: 5/18/2011

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
MV-1	White	2	0	0	0	0	0	0	0	0	0	0	0	98

Description: White internal window glazing
Location: Room 301
Comments:
Is asbestos present? Yes. Analyzed: Yes

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
MV-2	Black	0	0	0	0	0	0	0	0	0	0	0	0	100

Description: White window glazing
Location: Hallway by auditorium entrance
Comments:
Is asbestos present? No. Analyzed: Yes

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
MV-3	Gray	2	0	0	0	0	0	0	0	0	0	0	0	98

Description: White window glazing
Location: Room 312
Comments:
Is asbestos present? Yes. Analyzed: Yes

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
MV-4	Black	0	0	0	0	0	0	0	0	0	0	0	0	100

Description: Brown window frame caulking
Location: Room 312
Comments:
Is asbestos present? No. Analyzed: Yes

Sample ID	Color	Asbestos %						Non-Asbestos %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
MV-5	Black	0	0	0	0	0	0	0	0	0	0	0	0	100

Description: Brown window frame caulking
Location: Hallway by auditorium entrance
Comments:
Is asbestos present? No. Analyzed: Yes

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite
Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals
Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

* All results are in percentage.

Analyst: Robert West

ProScience Analytical Services, Inc.

PLM Asbestos Chain of Custody Record

LABORATORY/HEADQUARTERS
22 Cummings Park, Woburn, MA 01801
T:781-935-3212 F:781-932-4857

LABORATORY SERVICES
683 North Mountain Rd., Newington, CT 06111
T:860-953-1022 F:860-953-1030

☐ RUSH

Page 1 Of 1

Turn Around Time Requested

☐ Same day ☐ 24 Hour ☒ 48 Hour ☐ 72 Hour ☐ 4-6 Days

Client: Environmental Compliance Services, ECS

Address: 588 Silver Street, Agawam, MA. 01001

Phone / FAX Number: 413-789-3530 / 413-789-2776

Project Site/Project Job Number: Mountview School, 215341.00.06

Contact: Chris Godfrey / Mike Grover Work Request #

Relinquished by/date: 5-13-11 11:25

Received by/date:

Samples received: Analyzed:

Faxed, E-mailed, Verbal by/date: KR 5-17-11

Stop on first positive: Yes No

Analyzed by/date: 5/16/11 QC by/date: US 5/17/11

For Lab Use Batch # B75106

Lab ID	Field ID Sampled date	Description / Location	% Asb	Visual: Color	Visual: Homogeneity	Visual: Texture	Visual: Friable	Optical Properties: Morphology	Optical Properties: Extinction	Optical Properties: Sign of Elongation	Optical Properties: Birefringence	Optical Properties: Pleochroism	RI: ∥	RI: ⊥	Asbestos Percentage (%): Chrysotile	Asbestos Percentage (%): Amosite	Asbestos Percentage (%): Circle Type: Crocidolite	Tremolite	Anthophyllite	Actinolite	Non Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
	MV-1	Ft/Mastic Lm Cm Cvmm Pls/Plb Sh/Jc Pi Ct Ck (Glz) Gdb Description: White Internal window glazing Floor: ___ Rm/Location: RM 301	0	WH	N	H	N	W	W	+	L	Y	1.558	1.541	2												98
	MV-2	Ft/Mastic Lm Cm Cvmm Pls/Plb Sh/Jc Pi Ct Ck (Glz) Gdb Description: White window glazing Floor: ___ Rm/Location: Hallway By Aud entrance	0	BK	N	R	N																				100
	MV-3	Ft/Mastic Lm Cm Cvmm Pls/Plb Sh/Jc Pi Ct Ck (Glz) Gdb Description: White window glazing Floor: ___ Rm/Location: 312	0	LY	N	H	N	W	W	+	L	Y	1.557	1.542	2												98
	MV-4	Ft/Mastic Lm Cm Cvmm Pls/Plb Sh/Jc Pi Ct Ck Glz Gdb Description: Brown window frame caulking Floor: ___ Rm/Location: RM 312	0	BK	N	R	N																				100
	MV-5	Ft/Mastic Lm Cm Cvmm Pls/Plb Sh/Jc Pi Ct Ck Glz Gdb Description: Brown Window Frame Caulking Floor: ___ Rm/Location: Hallway By Aud entrance	0	BK	N	R	N																				100
		Ft/Mastic Lm Cm Cvmm Pls/Plb Sh/Jc Pi Ct Ck Glz Gdb Description: Floor: ___ Rm/Location:																									

US 5/17/11

Sample Description Key: Ft/Mastic=Floor tile and Mastic, Lm=Linoleum, Cm=Carpet mastic, Cvmm=Covemolding mastic, Pls=Plaster skim, Plb=Plaster base, Sh=Sheetrock, Jc=Joint Compound, Pi=Pipe insulation, Ct=Ceiling tile, Ck=Caulking, Glz=Glazing, Gdb=Glue daub

Comments:

APPENDIX C

PERIODIOC SURVEILANCE FORMS

AHERA ACBM/PACM PERIODIOC SURNEILLANCE FORM
Mountview Middle School
270 Shrewsbury Street
Holden, MA

Inspector:				Inspection Date:		
Material Description	Location	Previous Condition	Present Condition	Change in Condition	Damaged Quantity	Comments

Conditions : G = Good, D = Damaged, SD = Significantly Damaged

SF= Square Feet; LF = Linear Feet; Ea. = Each

AHERA ACBM/PACM PERIODIOC SURNEILLANCE FORM
Mountview Middle School
270 Shrewsbury Street
Holden, MA

Inspector:				Inspection Date:		
Material Description	Location	Previous Condition	Present Condition	Change in Condition	Damaged Quantity	Comments

Conditions : G = Good, D = Damaged, SD = Significantly Damaged

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Material Description	Location	Previous Condition	Present Condition	Change in Condition	Damaged Quantity	Comments

Conditions : G = Good, D = Damaged, SD = Significantly Damaged

SF= Square Feet; LF = Linear Feet; Ea. = Each

APPENDIX D

PREVENTITIVE MEASURES

PREVENTIVE MEASURES
FOR VARIOUS ASBESTOS-CONTAINING MATERIALS

A. SURFACING MATERIALS

"Surfacing Materials" means materials in a school building that are sprayed-on, troweled-on, or otherwise applied to surfaces. These include sprayed-on fireproofing materials on structural members, ceiling and wall plasters, or other materials applied to surfaces for acoustical, fireproofing, or other purposes.

Surfacing Materials are generally considered friable and can release asbestos fibers if damaged by impact, air erosion, vibration, and/or water intrusion. The following procedures, when properly implemented, will reduce the potential for fiber release:

1. Sprayed-on fire-proofing

   a) Identify the materials and post warning signs on the laid-in or glued-in ceiling tile. If the decking is not covered, place the sign on the wall.
   b) Maintain the materials in intact state and undamaged condition. During winter, pigeons, squirrels and other rodents tend to roost in boiler/machine rooms and dislodge sprayed-on fireproofing on the decking. Prevent such possibilities. Prevent water leakage. If the material is significantly damaged, removal is the best option. For minor damage, enclosure is a temporary solution. Encapsulation of damaged sprayed-on fireproofing material is not recommended.
   Train the custodial people who are responsible for care and maintenance of surfacing materials. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Ceiling and wall plaster

   a) Identify the materials and post warning signs.
   b) Maintain the materials in intact state and undamaged condition. Avoid storing/stacking on/near the materials to reduce contact damage.
   c) Prevent water leakage. If the material is significantly damaged, removal is the best option. For minor damage, repair or enclosure is a temporary solution.
   d) Train the custodial people who are responsible for care and maintenance of surfacing materials.

B. THERMAL SYSTEM INSULATION (TSI)

"Thermal System Insulation (TSI)" means insulating materials applied to pipes, pipe fittings, boilers, breechings, tanks, ducts, or other components to prevent process heat loss or gain, water condensation, or for other purposes (e.g., fire door insulation core).

TSI is generally considered friable ACM. This means it can be easily damaged, increasing the potential for fiber release. The following procedures, when properly implemented, will reduce the potential for fiber release:

Boiler and breeching insulation

a) Identify the locations and label the boiler. Warning signs should be posted outside the boiler room.

b) Reduce the likelihood of fiber release by ensuring that the insulation is not damaged. Avoid storing/stacking on/near the boiler to reduce contact damage.

c) Maintain the insulation in intact state and undamaged condition. Repair damaged areas as soon as possible to prevent further deterioration. If repair is not feasible due to extensive damage/deterioration, remove the material.

d) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Pipe, pipe-fittings, tank and duct insulation

Identify the locations and label the materials. Warning signs should be posted outside of rooms

a) that have TSI materials.

Reduce the likelihood of fiber release by ensuring that the materials are not damaged.

b) Avoid storing/stacking near the materials to reduce contact damage

c) Maintain all TSI materials in intact state and undamaged condition. Inspect the protective jackets for damage. Repair damaged areas as soon as possible to prevent further deterioration. If repair is not feasible due to extensive damage/deterioration, remove the material.

d) Train the custodial people who are responsible for care and maintenance of TSI. Please note that the repair/removal can only be performed by a licensed abatement contractor.

a) Fire door

b) Identify the locations and label the materials.

c) Since there may be a number of different types of fire doors throughout a building, fire door cores must be considered to have asbestos-containing interior insulation unless sample result prove otherwise. Prior to performing any maintenance on any door (lock change, drilling, etc.), the door should be surveyed by qualified personnel to rule out the existence of an asbestos core.

d) Train the custodial people who are responsible for care and maintenance of TSI.

Please note that the repair/removal can only be performed by a licensed abatement contractor.

C. MISCELLANEOUS MATERIALS

"Miscellaneous Materials" are all other asbestos-containing materials in a school building that do not fall under the categories of Surfacing Materials or TSI. These include floor tiles, floor tile and carpet mastic, gypsum wallboard and joint compound, ceiling tiles, glue daubs, transite panels, laboratory counter tops, wallbase and associated glue, window caulking and glazing compounds etc. The following maintenance procedures are recommended for these materials

1. Vinyl Asbestos Floor Tiles (VAT)

Vinyl Asbestos Floor Tiles (VAT) are considered non-friable, however routine maintenance procedures such as spray-buffing, burnishing, wet scrubbing, and stripping can generate asbestos fibers. Following procedures, when properly implemented, will reduce the potential of fiber release:

a) Do not sand, grind or abrade the tiles. Stripping of VAT should be done as infrequently as possible. When stripping becomes necessary, follow the appropriate work practices. Never perform dry stripping.

b) During spray-buffing or burnishing the floor, operate the machine at the lowest workable speed and use the least abrasive pad. Use a wet mop for routine cleaning whenever possible.

c) Routinely check whether chair and desk glides are in good condition and replace when necessary. Worn glides can gouge the floor and cause fiber release.

d) Place carpets/floor mats in all entrances to reduce abrasion of floor tiles by sand and pebbles. During winter, have parking lots and walkways swept to the extent possible to avoid the tracking of salt and ice-melting compounds into the school by the students.

Train the custodial people who are responsible for care and maintenance of VAT.

Please note that the repair/removal can only be performed by a licensed abatement contractor.

2. Gypsum wallboard and joint compound assembly

a) Since there may exist a number of different homogeneous assemblies in a building, all sheetrock/joint compound must be assumed to be ACBM unless sample result prove otherwise. If any specific areas are going to be disturbed, the material in that area should be sampled.

b) Reduce the likelihood of fiber release by avoiding cutting or drilling holes through the sheetrock panels.

3. Ceiling Tile and Glue Daubs

a) Reduce the likelihood of fiber release by limiting access to the area above the ceiling tiles. Maintain the ceiling tiles in undamaged condition. Replace any damaged or water-stained tile.

b) If the ceiling tiles are negative for asbestos, sample and analyze the glue daubs to ascertain whether these are asbestos-containing before the tiles are replaced.

4. Transite Panels, Laboratory Counter Tops, Window Caulking and Glazing Compounds

a) Reduce the likelihood of fiber release.

b) Maintain transite panels, lab tabletops and window caulking and glazing compounds in undamaged condition.

5. Carpet Glue, Blackboard/ Tack Board Glue, Sink Undercoating, Floor Tile Mastic, Baseboard and Mastic

a) Reduce the likelihood of fiber release by leaving base cove and carpets in place.

b) Maintain carpets and base cove in good condition. Sample and analyze the glue and the mastic to ascertain whether these are asbestos-containing if the renovation activities are going to impact the carpet and the baseboard.

APPENDIX E

AHERA TRANING CERTIFICATES

1.0 INTRODUCTION:

UEC has been providing comprehensive asbestos services since 2001 and has completed projects throughout New England. We have completed projects for a variety of clients including residential, commercial, industrial, municipal, and public and private schools. We maintain appropriate asbestos licenses and staff with a minimum of twenty years of experience.

UEC was contracted by Lamoureux Pagano Associates to conduct a determination survey for accessible Asbestos Containing Materials (ACM), Polychlorinated Biphenyls (PCB's) in caulking and other hazardous materials at the Mountview Middle School, Holden, MA.

The scope of work included the inspection of accessible ACM, collection of bulk samples from materials suspected to contain asbestos, determination of types of ACM found and cost estimates for remediation. Bulk samples analyses for asbestos were performed using the standard Polarized Light Microscopy (PLM) in accordance with EPA standard.

Bulk samples were collected by Massachusetts licensed asbestos inspectors Mr. Jason Becotte (AI-034963) and Mr. Leonard J. Busa (AI-030673) and analyzed by Massachusetts licensed laboratories Asbestos Identification Laboratory and EMSL, Woburn, MA.

The scope of work also included the collection of bulk samples from exterior caulking to be analyzed for the presence of PCB's. The samples were analyzed by a Massachusetts licensed laboratory EMSL, Cinnaminson, NJ.

Refer to samples results.

2.0 FINDINGS:

Asbestos:

A. <u>Number of Samples Collected</u>

The regulations for asbestos inspection are based on representative sampling. It would be impractical and costly to sample all materials in all areas. Therefore, representative samples of each homogenous area were collected and analyzed or assumed.

All suspect materials were grouped into homogenous areas. By definition a homogenous area is one in which the materials are evenly mixed and similar in appearance and texture throughout. A homogeneous area shall be determined to contain asbestos based on findings that the results of at least one sample collected from that area shows that asbestos is present in an amount greater than 1 percent in accordance with EPA regulations. However, all suspect materials that contain any amount of asbestos must be considered asbestos if it is scheduled to be removed per the Department of Environmental Protection (DEP) regulations.

No additional suspect and accessible ACM were found during this survey. However, hidden ACM may be found during any renovation or demolition activities.

May 24, 2012

Sixteen (16) bulk samples were collected from the following materials suspected of containing asbestos:

Location/ Type of Material

1. Window framing caulking at 1966 wing courtyard
2. Window glazing caulking at 1966 wing courtyard
3. Door framing caulking at 1966 wing courtyard
4. Window framing caulking at 1966 wing west

5. Window glazing caulking at 1966 wing west
6. Door framing caulking at 1966 wing west
7. Expansion joint caulking at 1987 wind west
8. Door framing caulking at 1987 wing west
9. Window framing caulking at 1987 wing west
10. Window glazing caulking at 1987 wing west
11. Expansion joint caulking at 1987 wind west
12. Window framing caulking at 1987 wing east
13. Window glazing caulking at 1987 wing east
14. Door framing caulking at 1987 wing east
15. Expansion joint caulking at 1987 wind east
16. Expansion joint caulking at 1987 wind east

June 19, 2012

Seventy five (75) bulk samples were collected from the following materials suspected of containing asbestos:

Location/ Type of Material

1. 2'x 4' Suspended acoustical ceiling tile type I at classroom 101
2. 2'x 4' Suspended acoustical ceiling tile type I at classroom 212
3. 2'x 4' Suspended acoustical ceiling tile type I at classroom 308
4. 2'x 4' Suspended acoustical ceiling tile type I at basement main corridor
5. 2'x 4' Suspended acoustical ceiling tile type I at classroom 208
6. New 2'x 4' suspended acoustical ceiling tile at classroom 211
7. New 2'x 4' suspended acoustical ceiling tile at classroom 110
8. 2'x 2' Suspended acoustical ceiling tile at boiler room
9. Older 2'x 2' suspended acoustical ceiling tile at men's room by lobby
10. Fireproofing at basement stairwell
11. Fireproofing at classroom 108
12. Fireproofing at classroom 209
13. Fireproofing at classroom 204
14. Fireproofing at third floor main corridor
15. Coating in metal clock box at original building classroom
16. White terrazzo floor at original building stairwell
17. White fire block over door at original building boy's room
18. Mineral wool in 1'x 1' metal ceiling tile at boy's locker room
19. Black glue in fiberglass ceiling batting insulation at boy's locker room
20. Rope at rip of boiler 2 at boiler room
21. Duct insulation off boiler 2 at boiler room
22. Duct insulation off boiler 1 at boiler room
23. Duct insulation from large header at rear of boiler 1 at boiler room
24. Duct insulation from large header at rear of boiler 2 at boiler room
25. Hard joint insulation above ceiling at classroom 112
26. Hard joint insulation above ceiling at classroom 200
27. Wood fire door insulation at basement boy's room
28. Wood fire door insulation at classroom 111
29. Hard grey interior window glazing caulking at classroom 212
30. Hard grey interior window glazing caulking at library
31. Damproofing on vertical steel column at classroom 212
32. Damproofing on vertical steel column at classroom 202
33. Grey caulking within metal entrance frame door system
34. Black door framing caulking on double door assembly at main corridor
35. Black door framing caulking on entrance door to classroom 312
36. Black door framing caulking on entrance door to classroom 109

37. Light colored door framing caulking on entrance door to classroom 310
38. Grey caulking between CMU and cement column at basement addition
39. Grey caulking between CMU and cement column at main corridor addition
40. Grey caulking between CMU and cement column at classroom 308 addition
41. Wall joint compound at classroom 208
42. Wall joint compound at classroom 304
43. Paper mastic on slab under hardwood floor at original gymnasium
44. Paper mastic on slab under hardwood floor at original gymnasium
45. Paper mastic on slab under hardwood floor at addition gymnasium
46. Paper mastic on slab under hardwood floor at addition gymnasium
47. Mastic for 9"x 9" wood floor tile at cafeteria stage
48. Old grey/white 12"x 12" vinyl floor tile at original gymnasium storage
49. Mastic for old grey/white 12"x 12" vinyl floor tile at original gymnasium storage
50. Old grey 12"x 12" vinyl floor tile at nurse office
51. Mastic for old grey 12"x 12" vinyl floor tile at nurse office
52. Old tan/red 12"x 12" vinyl floor tile at administration
53. Mastic for old tan/red 12"x 12" vinyl floor tile at administration
54. New white with beige/grey vinyl floor tile at classroom 110
55. Mastic for new white with beige/grey vinyl floor tile at classroom 110
56. New white with beige/grey vinyl floor tile at cafeteria
57. Mastic for new white with beige/grey vinyl floor tile at cafeteria
58. Mastic for new white with beige/grey vinyl floor tile at classroom 212
59. New white with beige/grey vinyl floor tile at classroom 301
60. Mastic for new white with beige/grey vinyl floor tile at classroom 301
61. New brown with white vinyl floor tile at basement main corridor
62. Mastic for new brown with white vinyl floor tile at basement main corridor
63. New brown with white vinyl floor tile at second floor main corridor
64. Mastic for new brown with white vinyl floor tile at second floor main corridor
65. New white with grey vinyl floor tile at classroom 209
66. Mastic for new white with grey vinyl floor tile at classroom 209
67. New white with grey vinyl floor tile at classroom 305
68. Mastic for new white with grey vinyl floor tile at classroom 305
69. New light pink with red/white vinyl floor tile at addition basement main corridor
70. Mastic for new light pink with red/white vinyl floor tile at addition basement main corridor
71. Carpet glue at library
72. White leveler under carpet at library
73. Brown adhesive for vinyl baseboard at orchestra by kitchen
74. White adhesive for thick vinyl baseboard at original building gymnasium
75. Large 8'x 8' metal fire door at entrance to receiving

B. <u>Sample Results</u>

May 24, 2012

Location/ Type of Material	**Sample Result**
1. Window framing caulking at 1966 wing courtyard	No Asbestos Detected
2. Window glazing caulking at 1966 wing courtyard	2% Asbestos
3. Door framing caulking at 1966 wing courtyard	8% Asbestos
4. Window framing caulking at 1966 wing west	No Asbestos Detected
5. Window glazing caulking at 1966 wing west	No Asbestos Detected
6. Door framing caulking at 1966 wing west	No Asbestos Detected
7. Expansion joint caulking at 1987 wind west	No Asbestos Detected
8. Door framing caulking at 1987 wing west	<1% Asbestos
9. Window framing caulking at 1987 wing west	No Asbestos Detected

10. Window glazing caulking at 1987 wing west	No Asbestos Detected
11. Expansion joint caulking at 1987 wind west	No Asbestos Detected
12. Window framing caulking at 1987 wing east	2% Asbestos
13. Window glazing caulking at 1987 wing east	No Asbestos Detected
14. Door framing caulking at 1987 wing east	2% Asbestos
15. Expansion joint caulking at 1987 wind east	No Asbestos Detected
16. Expansion joint caulking at 1987 wind east	No Asbestos Detected

June 19, 2012

Location/ Type of Material	**Sample Result**
1. 2'x 4' Suspended acoustical ceiling tile type I at classroom 101	No Asbestos Detected
2. 2'x 4' Suspended acoustical ceiling tile type I at classroom 212	No Asbestos Detected
3. 2'x 4' Suspended acoustical ceiling tile type I at classroom 308	No Asbestos Detected
4. 2'x 4' Suspended acoustical ceiling tile type I at basement main corridor	No Asbestos Detected
5. 2'x 4' Suspended acoustical ceiling tile type I at classroom 208	No Asbestos Detected
6. New 2'x 4' suspended acoustical ceiling tile at classroom 211	No Asbestos Detected
7. New 2'x 4' suspended acoustical ceiling tile at classroom 110	No Asbestos Detected
8. 2'x 2' Suspended acoustical ceiling tile at boiler room	No Asbestos Detected
9. Older 2'x 2' suspended acoustical ceiling tile at men's room by lobby	No Asbestos Detected
10. Fireproofing at basement stairwell	No Asbestos Detected
11. Fireproofing at classroom 108	No Asbestos Detected
12. Fireproofing at classroom 209	No Asbestos Detected
13. Fireproofing at classroom 204	No Asbestos Detected
14. Fireproofing at third floor main corridor	No Asbestos Detected
15. Coating in metal clock box at original building classroom	5% Asbestos
16. White terrazzo floor at original building stairwell	No Asbestos Detected
17. White fire block over door at original building boy's room	No Asbestos Detected
18. Mineral wool in 1'x 1' metal ceiling tile at boy's locker room	No Asbestos Detected
19. Black glue in fiberglass ceiling batting insulation at boy's locker room	No Asbestos Detected
20. Rope at rip of boiler 2 at boiler room	No Asbestos Detected
21. Duct insulation off boiler 2 at boiler room	No Asbestos Detected
22. Duct insulation off boiler 1 at boiler room	No Asbestos Detected
23. Duct insulation from large header at rear of boiler 1 at boiler room	No Asbestos Detected
24. Duct insulation from large header at rear of boiler 2 at boiler room	No Asbestos Detected
25. Hard joint insulation above ceiling at classroom 112	20% Asbestos
26. Hard joint insulation above ceiling at classroom 200	Not Analyzed
27. Wood fire door insulation at basement boy's room	30% Asbestos
28. Wood fire door insulation at classroom 111	Not Analyzed
29. Hard grey interior window glazing caulking at classroom 212	2% Asbestos
30. Hard grey interior window glazing caulking at library	Not Analyzed
31. Damproofing on vertical steel column at classroom 212	20% Asbestos
32. Damproofing on vertical steel column at classroom 202	Not Analyzed
33. Grey caulking within metal entrance frame door system	5% Asbestos
34. Black door framing caulking on double door assembly at main corridor	2% Asbestos
35. Black door framing caulking on entrance door to classroom 312	Not Analyzed
36. Black door framing caulking on entrance door to classroom 109	Not Analyzed
37. Light colored door framing caulking on entrance door to classroom 310	3% Asbestos
38. Grey caulking between CMU and cement column at basement addition	2% Asbestos
39. Grey caulking between CMU and cement column at main corridor addition	Not Analyzed
40. Grey caulking between CMU and cement column at classroom 308 addition	Not Analyzed
41. Wall joint compound at classroom 208	No Asbestos Detected
42. Wall joint compound at classroom 304	No Asbestos Detected
43. Paper mastic on slab under hardwood floor at original gymnasium	No Asbestos Detected

44. Paper mastic on slab under hardwood floor at original gymnasium	No Asbestos Detected
45. Paper mastic on slab under hardwood floor at addition gymnasium	No Asbestos Detected
46. Paper mastic on slab under hardwood floor at addition gymnasium	No Asbestos Detected
47. Mastic for 9"x 9" wood floor tile at cafeteria stage	5% Asbestos
48. Old grey/white 12"x 12" vinyl floor tile at original gymnasium storage	2% Asbestos
49. Mastic for old grey/white 12"x 12" vinyl floor tile at original gymnasium storage	10% Asbestos
50. Old grey 12"x 12" vinyl floor tile at nurse office	Not Analyzed
51. Mastic for old grey 12"x 12" vinyl floor tile at nurse office	Not Analyzed
52. Old tan/red 12"x 12" vinyl floor tile at administration	No Asbestos Detected
53. Mastic for old tan/red 12"x 12" vinyl floor tile at administration	No Asbestos Detected
54. New white with beige/grey vinyl floor tile at classroom 110	No Asbestos Detected
55. Mastic for new white with beige/grey vinyl floor tile at classroom 110	No Asbestos Detected
56. New white with beige/grey vinyl floor tile at cafeteria	No Asbestos Detected
57. Mastic for new white with beige/grey vinyl floor tile at cafeteria	No Asbestos Detected
58. Mastic for new white with beige/grey vinyl floor tile at classroom 212	No Asbestos Detected
59. New white with beige/grey vinyl floor tile at classroom 301	No Asbestos Detected
60. Mastic for new white with beige/grey vinyl floor tile at classroom 301	3% Asbestos
61. New brown with white vinyl floor tile at basement main corridor	No Asbestos Detected
62. Mastic for new brown with white vinyl floor tile at basement main corridor	No Asbestos Detected
63. New brown with white vinyl floor tile at second floor main corridor	No Asbestos Detected
64. Mastic for new brown with white vinyl floor tile at second floor main corridor	No Asbestos Detected
65. New white with grey vinyl floor tile at classroom 209	No Asbestos Detected
66. Mastic for new white with grey vinyl floor tile at classroom 209	No Asbestos Detected
67. New white with grey vinyl floor tile at classroom 305	No Asbestos Detected
68. Mastic for new white with grey vinyl floor tile at classroom 305	No Asbestos Detected
69. New light pink with red/white vinyl floor tile at addition basement main corridor	No Asbestos Detected
70. Mastic for new light pink with red/white vinyl floor tile at addition basement main corridor	No Asbestos Detected
71. Carpet glue at library	No Asbestos Detected
72. White leveler under carpet at library	No Asbestos Detected
73. Brown adhesive for vinyl baseboard at orchestra by kitchen	2% Asbestos
74. White adhesive for thick vinyl baseboard at original building gymnasium	No Asbestos Detected
75. Large 8'x 8' metal fire door at entrance to receiving	40% Asbestos

The following materials were either found or assumed to contain asbestos based on previous reports.

- Transite Window Sill
- Transite Counter Tops
- HVAC Duct Mastic
- Sink Undercoating
- Duct insulation
- Glue holding blackboards and tackboards

Polychlorinated Biphenyls:

PCB's are manmade chemicals that were widely produced and distributed across the country from the 1950s to 1977 until the production of PCB's was banned by the US Environmental Protection Agency (EPA) law which became effective in 1978. PCB's are a class of chemicals made up of more than 200 different compounds. PCB's are non-flammable, stable, and good insulators so they were widely used in a variety of products including: electrical transformers and capacitors, cable and wire coverings, sealants and caulking, and household products such as television sets and fluorescent light fixtures. Because of their chemical properties, PCB's are not very soluble in water and they do not break down easily in the environment. PCB's also do not readily evaporate into air but tend to remain as solids or thick liquids. Even though PCB's have not been produced or used in the country for more than 30 years, they are still present in the environment in the air, soil, and water and in our food. EPA requires that all construction waste including caulking must be disposed as PCB's if PCB's level exceed 50 mg/kg (ppm).

No sampling/analysis was performed at the 1987 wing since no PCB's was used after 1978. Refer to the attached site plan for locations of samples collected.

A. Number of Samples Collected

Six (6) bulk samples were collected from the following.

Location/ Type of Material

17. Window framing caulking at 1966 wing courtyard
18. Window glazing caulking at 1966 wing courtyard
19. Door framing caulking at 1966 wing courtyard
20. Window framing caulking at 1966 wing west
21. Window glazing caulking at 1966 wing west
22. Door framing caulking at 1966 wing west

B. Sample Results

Location/ Type of Material	Sample Result
17. Window framing caulking at 1966 wing courtyard	4.1 mg/kg
18. Window glazing caulking at 1966 wing courtyard	280 mg/kg
19. Door framing caulking at 1966 wing courtyard	3.1 mg/kg
20. Window framing caulking at 1966 wing west	3.4 mg/kg
21. Window glazing caulking at 1966 wing west	No PCB's Detected
22. Door framing caulking at 1966 wing west	2,100 mg/kg

3.0 OBSERVATION AND COST ESTIMATES:

A. OBSERVATIONS:

All ACM must be removed by a Massachusetts licensed asbestos abatement contractor under the supervision of a Massachusetts licensed project monitor prior to any renovation or demolition activities that might disturb the ACM.

1. Window glazing caulking at 1966 wing was found to contain asbestos.
2. Door framing caulking at 1966 wing was found to contain asbestos.
3. Window framing caulking at 1987 wing was found to contain asbestos.
4. Door framing caulking at 1987 wing was found to contain asbestos.
5. Coating in metal clock box was found to contain asbestos.
6. Hard joint insulation was found to contain asbestos.
7. Wood fire door insulation was found to contain asbestos.
8. Hard grey interior window glazing caulking was found to contain asbestos.
9. Damproofing on vertical steel column was found to contain asbestos.
10. Grey caulking within metal entrance frame door system was found to contain asbestos.
11. Light colored door framing caulking on entrance door was found to contain asbestos.
12. Grey caulking between CMU and cement column was found to contain asbestos.
13. Mastic for 9"x 9" wood floor tile was found to contain asbestos.
14. Old grey/white 12"x 12" vinyl floor tile and mastic were found to contain asbestos.
15. Mastic for new white with beige/grey vinyl floor tile was found to contain asbestos.
16. Brown adhesive for vinyl baseboard was found to contain asbestos.
17. Large 8'x 8' metal fire door was found to contain asbestos.
18. Transite window sill was assumed to contain asbestos.
19. Transite counter top was assumed to contain asbestos.
20. Duct insulation was assumed to contain asbestos.

21. HVAC duct mastic was assumed to contain asbestos.
22. Sink undercoating was assumed to contain asbestos.
23. Exterior Damproofing on outside and foundation walls was assumed to contain asbestos.
24. Sewer pipes were assumed to contain asbestos.
25. All remaining suspect materials were found not to contain asbestos.
26. Roofing and flashing material was assumed to contain asbestos. However, roofing material is not required to be removed by a licensed asbestos contractor prior to renovation or demolition.
27. Ballasts in light fixtures are new and were assumed not to contain PCB's.
28. Tubes in light fixtures were assumed to contain mercury.
29. Switches and thermostats were assumed to contain mercury.
30. Painted surfaces were assumed to contain lead based paint. However, lead abatement is not required prior to renovation or demolition.
31. PCB's samples results were found to exceed EPA limit of 50 mg/kg at samples collected of the 1966 window glazing caulking (280 mg/kg) and 1966 door framing caulking (2,100 mg/kg). Testing of the adjacent brick around doors and soil would have to be performed and an abatement plan would have to be prepared and submitted to the EPA should the scope of work requires the removal of the windows and doors. Additional testing of the interior caulking at original building is required.

B. COST ESTIMATES:

The cost includes removal and disposal of all accessible ACM and an allowance for removal of inaccessible or hidden ACM that may be found during the demolition or renovation project.

Location	Material	Approximate Quantity	Cost Estimate ($)
Various Locations	Mastic for New White with Beige/Grey Vinyl Floor Tile	30,000 SF	90,000.00
	Old Grey/White Vinyl Floor Tile	4,000 SF	16,000.00
	Hard Joint Insulation	250 Total	5,000.00
	Interior Windows (Original Building)	120 Total	12,000.00
	Fire Doors (Original Building)	150 Total	15,000.00
	Blackboards/Tackboards	125 Total	12,500.00
	Coating in Metal Boxes (Original Building)	20 Total	1,000.00
	Interior Door Caulking (Original Building)	65 Total	3,250.00
	Interior Door Caulking (Addition)	25 Total	1,250.00
	Grey Caulking between CMU and Cement Column	7,000 LF	35,000.00
	Damproofing on Steel Beams (Original Building)	Unknown	50,000.00
	HVAC Duct Mastic	Unknown	15,000.00
	Transite Counter Tops	20 Total	6,000.00
	Sinks	20 Total	500.00
	Miscellaneous and Hidden ACM	Unknown	50,000.00
Stage	Vinyl Floor Tile and Mastic	900 SF	4,500.00
Boiler Room	Duct Insulation	200 SF	4,000.00
Receiving	Metal Fire Door	1 Total	2,500.00
Various Locations	PCB's Abatement[1]	Unknown	250,000.00
	Soil Abatement[1]	Unknown	50,000.00
Exterior			
	Windows and Transite Sill	300 Total	30,000.00
	Doors	30 Total	3,000.00

Location	Material	Approximate Quantity	Cost Estimate ($)
Demolition Items			
	Damproofing on Foundation Walls[2]	500 Tons	50,000.00
	Damproofing on Walls[2]	2,500 Tons	250,000.00
	Sewer Transite Pipes	Unknown	25,000.00
Estimated Fees for Asbestos Design, Construction Monitoring and Air Sampling Services			56,000.00
Estimated Fees for additional PCB's Testing and Abatement Plan			17,500.00
Estimated Fees for Post PCB's Remediation Testing and Notifications			15,000.00
		Total Estimated Cost (Renovation):	**$ 745,000.00**
		Total Estimated Cost (Demolition):	**$ 1,070,000.00**

[1]: Abatement costs related to possible migration of PCB's in the masonry/brick and in soil.
[2]: Damproofing was assumed to exist on interior walls and foundations walls below grade may be removed using bulk loads instead of total abatement if walls are scheduled to be demolished.

4.0 DESCRIPTION OF SURVEY METHODS AND LABORATORY ANALYSES:

Asbestos:

Asbestos samples were collected using a method that prevents fiber release. Homogeneous sample areas were determined by criteria outlined in EPA document 560/5-85-030a.

Bulk material samples were analyzed using PLM and dispersion staining techniques with EPA method 600/M4-82-020.

Polychlorinated Biphenyls:

PCB's samples were analyzed in accordance with EPA 3540C/8082 method.

Inspected By:

Jason Becotte
Asbestos Inspector

Inspected By:

Leonard J. Busa
Asbestos Inspector

5.0 LIMITATIONS AND CONDITIONS:

This report has been completed based on visual and physical observations made and information available at the time of the site visits, as well as an interview with the Owner's representatives. This report is intended to be used as a summary of available information on existing conditions with conclusions based on a reasonable and knowledgeable review of evidence found in accordance with normally accepted industry standards, state and federal protocols, and within the scope and budget established by the client. Any additional data obtained by further review must be reviewed by UEC and the conclusions presented herein may be modified accordingly.

This report and attachments, prepared for the exclusive use of Owner for use in an environmental evaluation of the subject site, are an integral part of the inspections and opinions should not be formulated without reading the report in its entirety. No part of this report may be altered, used, copied or relied upon without prior written permission from UEC, except that this report may be conveyed in its entirety to parties associated with Owner for this subject study.

131202431

131202431

universal environmental consultants
12 Brewster Road
Framingham, MA 01702
Phone: 508.628.5486
Fax: 508.628.5488

CHAIN OF CUSTODY

BUILDING / SITE NAME: mountview middle school
TOWN / CITY: Holden
WORK AREA: exterior
STATE: MA

Analysis Type	Turnaround Time (x) 6-8 Hr	12 Hr	24 Hr	48 Hr	72 hr
TEM / AHERA					
TEM / Level II					
TEM / Dust					
TEM / Bulk					
TEM / Water					
PLM (SA)				X	
Mold					
Other:					

Specific Project Notes

SAMPLE ID	MATERIAL DESCRIPTION	SAMPLE LOCATION	START	STOP	TIME	L/MIN	VOLUME
1	window caulk	1966 courtyard					
2	window glaze	" "					
3	door caulk	" "					
4	window caulk	1966 west					
5	window glaze	" "					
6	door caulk	" "					
7	expansion joint caulk	1987 west					
8	door caulk	1987 west					
9	window caulk	" "					
10	window glaze	" "					
11	expansion joint caulk	" "					
12	window caulk	1987 east					
13	window glaze	" "					
14	door caulk	" "					
15	expansion joint caulk	" "					
16	" " "	" "					

SAMPLED BY: Jason Berube 5-24-12 DATE/TIME:
RELINQUISHED BY: DATE/TIME:
RECEIVED BY: DATE/TIME:
RECEIVED IN LAB BY: DATE/TIME:

RECEIVED
MAY 24 2012
By SH 1430

EMSL Analytical, Inc.
7 Constitution Way, Suite 107, Woburn, MA 01801
Phone/Fax: (781) 933-8411 / (781) 933-8412
bostonlab@emsl.com

EMSL Order:	131202431
CustomerID:	UEC63
CustomerPO:	
ProjectID:	

Attn: **Jason Becotte**
Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702

Phone:	(508) 628-5486
Fax:	(508) 628-5488
Received:	05/24/12 2:30 PM
Analysis Date:	5/29/2012
Collected:	

Project: **Mountview Middle School; Exterior; Holden, MA**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1 *131202431-0001*	1966 Courtyard - Window Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
2 *131202431-0002*	1966 Courtyard - Window Glaze	Non-Fibrous Heterogeneous		98% Non-fibrous (other)	**2% Chrysotile**
3 *131202431-0003*	1966 Courtyard - Door Caulk	Brown Non-Fibrous Homogeneous		92% Non-fibrous (other)	**8% Chrysotile**
4 *131202431-0004*	1966 West - Window Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
5 *131202431-0005*	1966 West - Window Glaze	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	**None Detected**
6 *131202431-0006*	1966 West - Door Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
7 *131202431-0007*	1987 West - Expansion Joint Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
8 *131202431-0008*	1987 West - Door Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**<1% Chrysotile**

Reccomend T.E.M Analysis

Analyst(s)

Renaldo Drakes (16)

Renaldo Drakes, Laboratory Manager
or other approved signatory

Initial report from 05/29/2012 17:19:04

EMSL Analytical, Inc.
7 Constitution Way, Suite 107, Woburn, MA 01801
Phone/Fax: (781) 933-8411 / (781) 933-8412
bostonlab@emsl.com

EMSL Order:	131202431
CustomerID:	UEC63
CustomerPO:	
ProjectID:	

Attn: **Jason Becotte**
Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702

Phone:	(508) 628-5486
Fax:	(508) 628-5488
Received:	05/24/12 2:30 PM
Analysis Date:	5/29/2012
Collected:	

Project: **Mountview Middle School; Exterior; Holden, MA**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
9 *131202431-0009*	1987 West - Window Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
10 *131202431-0010*	1987 West - Window Glaze	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
11 *131202431-0011*	1987 West - Expansion Joint Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
12 *131202431-0012*	1987 East - Window Caulk	Black Non-Fibrous Homogeneous		98% Non-fibrous (other)	**2% Chrysotile**
13 *131202431-0013*	1987 East - Window Glaze	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
14 *131202431-0014*	1987 East - Door Caulk	Black Non-Fibrous Homogeneous		98% Non-fibrous (other)	**2% Chrysotile**
15 *131202431-0015*	1987 East - Expansion Joint Caulk	Brown Non-Fibrous Heterogeneous		100% Non-fibrous (other)	**None Detected**
16 *131202431-0016*	1987 East - Expansion Joint Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)

Renaldo Drakes (16)

Renaldo Drakes, Laboratory Manager
or other approved signatory

Initial report from 05/29/2012 17:19:04

CHAIN OF CUSTODY

STOP @ 1ST (+)
A2 → P

Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

Town/City: Holden, MA Building Name Mountview M.S.

	Sample	Result	Description of Material	Sample Location
A	1		2x4 SAT-I (small multiple hashmarks)	c'rm 101
A	2		2x4 SAT-I	c'rm 212
A	3		2x4 SAT-I	c'rm 308
A	4		2x2 SAT-I	Bsmt, mc
A	5		2x4 SAT-I	c'rm 208
	6		new 2.2 SAT	c'rm 211
	7		new 2.2 SAT	c'rm 110
	8		2.2 SAT	Boiler rm
	9		older 2.2 SAT (pinhole)	men's rm, Cobby
	10		Fireproofing (FP)	Bsmt s.w. by Phys. Ed
	11		FP	Bsmt c'rm 108
	12		FP	1ST FL c'rm 209
	13		FP	1ST FL c'rm 204
	14		FP	mc, 3rd fl by c'rm 305
	15		coating in metal check box	orig bldg random c'rm
	16		white terrazo floor	s.w. @ orig bldg
	17		white fire block over door	1ST FL boy's rm (orig bldg)
	18		mineral wool in 1x1 metal clg tile	Boy's Locker
	19		Black in F.G. clg batt	Boy's Locker
	20		rope @ ribs of boiler #2	Boiler rm

Reported By: Tom Bunn Date: 6/19/12 Due Date: 6/22/12

Received By: Michael Murray Date: 6/20/12

CHAIN OF CUSTODY

Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

Town/City: Holden, MA Building Name Mountview, M.S.

	Sample	Result	Description of Material	Sample Location
	21		Duct insul. directly off Boiler #2, rear	Boiler rm
	22		(DI) directly off rear Boiler #1	
B	23		(DI) from large header,	rear of Boilers by #1
B	24		(DI) from large header,	rear of Boilers by #2
C	25		(E) OFF EG	AC, c'rm 112
C	26		(E) OFF EG	AC, c'rm 200 (entering cmu)
D	27		wood FIRE DOOR insul	Bsmt Boy's rm (closet)
D	28		wood ED insul	c'rm 111 Entrance door
E	29		hard grey interior window glaze	c'rm 212
E	30		hard grey interior wind gl	Library
F	31		damperbeting on vertical steel column	c'rm 212
F	32		dp on vert steel column	c'rm 202
	33		grey caulk within metal Entrance frame	door system, c'rm 312
G	34		Black door fr caulk	d.d. ass'y, mc by 312
G	35		Black door fr caulk	Entrance door, c'rm 312
G	36		Black door fr caulk	" " ", c'rm 109
	37		Light colored door fr caulk	Entiance door c'rm 310 addition
H	38		grey caulk between cmu & cement column	Bsmt ADDITION Gym
H	39		grey caulk betwix cmu & column	mc by 209 ADDITION
H	40		grey caulk betwix cmu & column	c'rm 308 ADDITION

Reported By: Jean Buser Date: 6/19/12 Due Date: 6/22/12

Received By: Michael Young Date: 6/20/12

CHAIN OF CUSTODY

Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

Town/City: Holden, MA Building Name Mountview M.S.

	Sample	Result	Description of Material	Sample Location
I	41		Joint Compound (JC)	gyp dividing wall / rm 208
I	42		JC & gyp div. wall	ADDITION / rm 304
J	43		paper mastic on slab under hdwd fl	orig bldg Gym
J	44		paper mastic on slab under hdwd fl	orig bldg Gym
K	45		paper mastic on slab under hdwd fl	ADDITION Gym
K	46		paper mastic on slab under hdwd fl	ADDITION Gym
	47		mastic for 9x9 wood floor tile	cafe (STAGE)
L	48		12x12 old grey w/white	VT (orig) Gym storage
M	49		mastic #48	" "
L	50		12x12 old grey w/white VT	Nurse
M	51		mastic #50	" "
	52		12x12 old tan w/red VT	Admin
	53		mastic #52	" "
	54		new VT-I white with beige grey	rm 110
N	55		Black mastic #54	" "
	56		new VT-I	CAFE
N	57		BL mastic #56	" "
N	58		BL mastic for new VT-I	rm 212
	59		new VT-I	rm 301
N	60		BL mastic #59	" "

Reported By: Lee Busa Date: 06/9/12 Due Date: 6/22/12

Received By: Michael Mann Date: 6/10/12

CHAIN OF CUSTODY

Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702
Tel: (508) 628-5486 - Fax: (508) 628-5488
adieb@uec-env.com

Town/City: Holden, MA Building Name Mountview M.S.

	Sample	Result	Description of Material	Sample Location
	61		New VT-II (Brown w/white)	Bsmt mc by 110
O	62		Black mastic #61	" " "
	63		New VT-II	2nd FL mc by 300
O	64		BL mastic #63	" " "
	65		New VT-III (white w/grey)	c'rm 209
P	66		Black mastic #65	" "
	67		New VT-III	c'rm 305
P	68		BL mastic #67	" "
	69		New VT-II (Light pink w/red white)	Bsmt mc (addition)
	70		Black mastic #69	" " "
	71		carpet glue	Library
	72		white Leveler #71	" " by kitchen
	73		Brown adhesive for vinyl baseboard	orchestra
	74		white adhesive for Thick vinyl baseboard	acig bldg Gym
	75		Large 8'-8' metal Fire Door	ENTIANCE to Receiving

Reported By: Lou Busa Date: 6/19/12 Due Date: 6/22/12

Received By: Michael Munn Date: 6/20/12

Asbestos Identification Laboratory
165U New Boston St., Ste 271
Woburn, MA. 01801
Bulk Asbestos Analysis by Polarized Light Microscopy
EPA Method: 600/R-93/116

NVLAP®
Lab Code: 200919-0

June 21, 2012

Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702

RE: Batch 3647
Results of Asbestos Project: Mountview M.S. Holden, MA

Dear Ammar M. Dieb,

Asbestos Identification Laboratory has completed the analysis of the bulk samples Work Received: 6/20/2012 from your office. These results represent the bulk samples from the above-referenced project. :

The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration# PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations Department of Health Certification: AAL-121

Thank you Ammar M. Dieb for your business.

Michael Manning
Owner/Director
(781)932-9600

Asbestos Identification Laboratory
165U New Boston St., Ste 271
Woburn, MA. 01801
Bulk Asbestos Analysis by Polarized Light Microscopy
EPA Method: 600/R-93/116

NVLAP
Lab Code: 200919-0

Results Table

Sample ID	Lab ID	Material	Sample Location	Analytical Results
1	46228	2x4 SAT-I (small multiple hashmarks)	Crm 101	No Asbestos Detected
2	46229	2x4 SAT-I	Crm 212	No Asbestos Detected
3	46230	2x4 SAT-I	Crm 308	No Asbestos Detected
4	46231	2x2 SAT-I	Bsmt, mc	No Asbestos Detected
5	46232	2x4 SAT-I	Crm 208	No Asbestos Detected
6	46233	New 2.2 SAT	Crm 211	No Asbestos Detected
7	46234	New 2.2 SAT	Crm 110	No Asbestos Detected
8	46235	2.2 SAT	Boiler rm	No Asbestos Detected
9	46236	Older 2.2 SAT (pinhole)	Men's rm lobby	No Asbestos Detected
10	46237	Fireproofing (FP)	Bsmt s.w. by Phys. Ed	No Asbestos Detected
11	46238	FP	Bsmt crm 108	No Asbestos Detected
12	46239	FP	1st fl crm 209	No Asbestos Detected
13	46240	FP	1st fl crm 204	No Asbestos Detected
14	46241	FP	Mc, 3rd by crm 305	No Asbestos Detected
15	46242	Coating in metal clock box	Orig bldg random crm	Chrysotile=5%
16	46243	White terrazo floor	S.W. at orig bldg	No Asbestos Detected
17	46244	White fire block over door	1st fl boy's rm (orig bldg)	No Asbestos Detected
18	46245	Mineral wool in 1x1 metal clg tile	Boy's locker	No Asbestos Detected
19	46246	Black in F.G. clg batt	Boy's locker	No Asbestos Detected

Asbestos Identification Laboratory
165U New Boston St., Ste 271
Woburn, MA. 01801
Bulk Asbestos Analysis by Polarized Light Microscopy
EPA Method: 600/R-93/116

NVLAP®
Lab Code: 200919-0

Results Table

20	46247	Rope at ribs of boiler # 2	Boiler rm	No Asbestos Detected
21	46248	Duct insul. Directly off boiler # 2	Rear boiler rm	No Asbestos Detected
22	46249	D1 directly off rear boiler # 1	Boiler rm	No Asbestos Detected
23	46250	D1 from large header	Rear of boilers by # 1, boiler rm	No Asbestos Detected
24	46251	D1 from large header	Rear of boilers by # 2, boiler rm	No Asbestos Detected
25	46252	E off FG	AC, crm 112	Chrysotile=20%
26	46253	E off FG	AC, crm 200 (entering cmv)	Did Not Analyze
27	46254	Wood fire door insul	Bsmt boy's rm (closet)	Chrysotile=10% Amosite=20%
28	46255	Wood FD insul	Crm 111 entrance door	Did Not Analyze
29	46256	Hard grey interior window glaze	Crm 212	Chrysotile=2%
30	46257	Hard grey interior window glaze	Library	Did Not Analyze
31	46258	Damproofing on verticle steel column	Crm 212	Chrysotile=20%
32	46259	DP on vert steel column	Crm 202	Did Not Analyze
33	46260	Grey caulk within metal entrance frame door system	Crm 312	Chrysotile=5%
34	46261	Black door fr caulk	D.D. ass'y, mc by 312	Chrysotile=2%
35	46262	Black door fr caulk	Entrance door , crm 312	Did Not Analyze
36	46263	Black door fr caulk	Entrance door , crm 109	Did Not Analyze
37	46264	Light colored door fr caulk	Entrance door crm 310 addition	Chrysotile=3%
38	46265	Grey caulk between cmv & cement column	Bsmt addition gym	Chrysotile=2%
39	46266	Grey caulk betwix cmv & column	Mc by 209 addition	Did Not Analyze

Asbestos Identification Laboratory
165U New Boston St., Ste 271
Woburn, MA. 01801
Bulk Asbestos Analysis by Polarized Light Microscopy
EPA Method: 600/R-93/116

NVLAP
Lab Code: 200918-0

Results Table

40	46267	Grey caulk betwix cmv & column	Crm 308 addition	Did Not Analyze
41	46268	Joint Compound (JC)	Gyp dividing wall crm 208	No Asbestos Detected
42	46269	JC at gyp div. wall	Addition crm 304	No Asbestos Detected
43	46270	Paper mastic on slab under hdwd fl	Orig bldg gym	No Asbestos Detected
44	46271	Paper mastic on slab under hdwd fl	Orig bldg gym	No Asbestos Detected
45	46272	Paper mastic on slab under hdwd fl	Addition gym	No Asbestos Detected
46	46273	Paper mastic on slab under hdwd fl	Addition gym	No Asbestos Detected
47	46274	Mastic for 9x9 wood tile	Café (Stage)	Chrysotile=5%
48	46275	12x12 old grye w/white vt	(Orig) gym storage	Chrysotile=2%
49	46276	Mastic # 48	(Orig) gym storage	Chrysotile=10%
50	46277	12x12 old grye w/white vt	Nurse	Did Not Analyze
51	46278	Mastic # 50	Nurse	Did Not Analyze
52	46279	12x12 old tan w/red vt	Admin	No Asbestos Detected
53	46280	Mastic # 52	Admin	No Asbestos Detected
54	46281	New VT-I white with beige grey	Crm 110	No Asbestos Detected
55	46282	Black mastic # 54	Crm 110	No Asbestos Detected
56	46283	New VT-I	Café	No Asbestos Detected
57	46284	BL mastic # 56	Café	No Asbestos Detected
58	46285	BL mastic for new VT-I	Crm 212	No Asbestos Detected
59	46286	New VT-I	Crm 301	No Asbestos Detected

Asbestos Identification Laboratory
165U New Boston St., Ste 271
Woburn, MA 01801
Bulk Asbestos Analysis by Polarized Light Microscopy
EPA Method: 600/R-93/116

NVLAP®
Lab Code: 200919-0

Results Table

60	46287	BL mastic # 59	Crm 301	Chrysotile=3%
61	46288	New VT-II (brown w/white)	Bsmt mc by 110	No Asbestos Detected
62	46289	Black mastic # 61	Bsmt mc by 110	No Asbestos Detected
63	46290	New VT-II	2nd fl mc by 300	No Asbestos Detected
64	46291	BL mastic # 63	2nd fl mc by 300	No Asbestos Detected
65	46292	New VT-III (white w/grey)	Crm 209	No Asbestos Detected
66	46293	Black mastic # 65	Crm 209	No Asbestos Detected
67	46294	New VT-III	Crm 305	No Asbestos Detected
68	46295	BL mastic # 67	Crm 305	No Asbestos Detected
69	46296	New VT-IV (light pink w/red white)	Bsmt mc (addition)	No Asbestos Detected
70	46297	Black mastic # 69	Bsmt mc (addition)	No Asbestos Detected
71	46298	Carpet glue	Library	No Asbestos Detected
72	46299	White leveler # 71	Library	No Asbestos Detected
73	46300	Brown adhesive for vinyl baseboard	Orchestra by kitchen	Chrysotile=2%
74	46301	White adhesive for vinyl thick baseboard	Orig bldg gym	No Asbestos Detected
75	46302	Large 8'x8' metal fire door	Entrance to receiving	Chrysotile=20% Amosite=20%

Asbestos Identification Laboratory
165U New Boston St., Ste 271
Woburn, MA. 01801
Bulk Asbestos Analysis by Polarized Light Microscopy
EPA Method: 600/R-93/116

NVLAP
Lab Code: 200919-0

Results for Client Project: Mountview M.S. Holden, MA, Batch# 3647

Work Received: 6/20/2012 Date Sampled: 6/19/2012 Results Sent: 6/21/2012 3:03:24 PM

Field_ID: 1 Material: 2x4 SAT-I (small multiple hashmarks) Color: Gray Location: Crm 101 Sample# 46228 MNW=030 CEL=060 NON=010 None Detected

Field_ID: 2 Material: 2x4 SAT-I Color: Gray Location: Crm 212 Sample# 46229 MNW=030 CEL=060 NON=010 None Detected

Field_ID: 3 Material: 2x4 SAT-I Color: Gray Location: Crm 308 Sample# 46230 MNW=030 CEL=060 NON=010 None Detected

Field_ID: 4 Material: 2x2 SAT-I Color: Gray Location: Bsmt, mc Sample# 46231 MNW=045 CEL=045 NON=010 None Detected

Field_ID: 5 Material: 2x4 SAT-I Color: Gray Location: Crm 208 Sample# 46232 MNW=030 CEL=050 NON=020 None Detected

Field_ID: 6 Material: New 2.2 SAT Color: Gray Location: Crm 211 Sample# 46233 MNW=030 CEL=060 NON=010 None Detected

Field_ID: 7 Material: New 2.2 SAT Color: Gray Location: Crm 110 Sample# 46234 MNW=030 CEL=060 NON=010 None Detected

Field_ID: 8 Material: 2.2 SAT Color: Gray Location: Boiler rm Sample# 46235 MNW=045 CEL=045 NON=010 None Detected

Field_ID: 9 Material: Older 2.2 SAT (pinhole) Color: Gray Location: Men's rm lobby Sample# 46236 MNW=030 CEL=055 NON=015 None Detected

Field_ID: 10 Material: Fireproofing (FP) Color: Gray Location: Bsmt s.w. by Phys. Ed Sample# 46237 MNW=060 NON=040 None Detected

Field_ID: 11 Material: FP Color: Gray Location: Bsmt crm 108 Sample# 46238 MNW=065 NON=035 None Detected

Field_ID: 12 Material: FP Color: Gray Location: 1st fl crm 209 Sample# 46239 MNW=065 NON=035 None Detected

Field_ID: 13 Material: FP Color: Gray Location: 1st fl crm 204 Sample# 46240 MNW=070 NON=030 None Detected

Field_ID: 14 Material: FP Color: Gray Location: Mc, 3rd by crm 305 Sample# 46241 MNW=060 CEL=005 NON=035 None Detected

Field_ID: 15 Material: Coating in metal clock box Color: Black Location: Orig bldg random crm Sample# 46242 CEL=005 NON=090 ASBESTOS DETECTED CHR=005

Field_ID: 16 Material: White terrazo floor Color: Multi Location: S.W. at orig bldg Sample# 46243 NON=100 None Detected

Field_ID: 17 Material: White fire block over door Color: White Location: 1st fl boy's rm (orig bldg) Sample# 46244 NON=100 None Detected

Field_ID: 18 Material: Mineral wool in 1x1 metal clg tile Color: Yellow Location: Boy's locker Sample# 46245 MNW=098 NON=002 None Detected

Field_ID: 19 Material: Black in F.G. clg batt Color: Black Location: Boy's locker Sample# 46246 MNW=005 CEL=005 NON=090 None Detected

Field_ID: 20 Material: Rope at ribs of boiler # 2 Color: White Location: Boiler rm Sample# 46247FBG=050 SYN=045 NON=005 None Detected

Field_ID: 21 Material: Duct insul. Directly off boiler # 2 Color: White Location: Rear boiler rm Sample# 46248 CEL=020 NON=080 None Detected

Field_ID: 22 Material: D1 directly off rear boiler # 1 Color: White Location: Boiler rm Sample# 46249 SYN=020 NON=080 None Detected

Field_ID: 23 Material: D1 from large header Color: Gray Location: Rear of boilers by # 1, boiler rm Sample# 46250 MNW=030 CEL=010 NON=060 None Detected

Field_ID: 24 Material: D1 from large header Color: Gray Location: Rear of boilers by # 2, boiler rm Sample# 46251 MNW=010 CEL=030 NON=060 None Detected

Field_ID: 25 Material: E off FG Color: Gray Location: AC, crm 112 Sample# 46252 MNW=045 NON=035 ASBESTOS DETECTED CHR=020

Field_ID: 26 Material: E off FG Color: Location: AC, crm 200 (entering cmv) Sample# 46253 Did Not Analyze

Field_ID: 27 Material: Wood fire door insul Color: White Location: Bsmt boy's rm (closet) Sample# 46254 NON=070 ASBESTOS DETECTED CHR=010 AMO=020

Field_ID: 28 Material: Wood FD insul Color: Location: Crm 111 entrance door Sample# 46255 Did Not Analyze

Field_ID: 29 Material: Hard grey interior window glaze Color: Gray Location: Crm 212 Sample# 46256 NON=098 ASBESTOS DETECTED CHR=002

Field_ID: 30 Material: Hard grey interior window glaze Color: Location: Library Sample# 46257 Did Not Analyze

Field_ID: 31 Material: Damproofing on verticle steel column Color: Black Location: Crm 212 Sample# 46258 NON=080 ASBESTOS DETECTED CHR=020

Field_ID: 32 Material: DP on vert steel column Color: Location: Crm 202 Sample# 46259 Did Not Analyze

Field_ID: 33 Material: Grey caulk within metal entrance frame door system Color: Gray Location: Crm 312 Sample# 46260 NON=095 ASBESTOS DETECTED CHR=005

Field_ID: 34 Material: Black door fr caulk Color: Black Location: D.D. ass'y, mc by 312 Sample# 46261 NON=098 ASBESTOS DETECTED CHR=002

Field_ID: 35 Material: Black door fr caulk Color: Location: Entrance door , crm 312 Sample# 46262 Did Not Analyze

Field_ID: 36 Material: Black door fr caulk Color: Location: Entrance door , crm 109 Sample# 46263 Did Not Analyze

Field_ID: 37 Material: Light colored door fr caulk Color: Gray Location: Entrance door crm 310 addition Sample# 46264 NON=097 ASBESTOS DETECTED CHR=003

Field_ID: 38 Material: Grey caulk between cmv & cement column Color: Gray Location: Bsmt addition gym Sample# 46265 NON=098 ASBESTOS DETECTED CHR=002

Field_ID: 39 Material: Grey caulk betwix cmv & column Color: Location: Mc by 209 addition Sample# 46266 Did Not Analyze

Field_ID: 40 Material: Grey caulk betwix cmv & column Color: Location: Crm 308 addition Sample# 46267 Did Not Analyze

Field_ID: 41 Material: Joint Compound (JC) Color: White Location: Gyp dividing wall crm 208 Sample# 46268 NON=100 None Detected

Field_ID: 42 Material: JC at gyp div. wall Color: White Location: Addition crm 304 Sample# 46269 NON=100 None Detected

Field_ID: 43 Material: Paper mastic on slab under hdwd fl Color: Black Location: Orig bldg gym Sample# 46270 CEL=065 NON=035 None Detected

Field_ID: 44 Material: Paper mastic on slab under hdwd fl Color: Black Location: Orig bldg gym Sample# 46271 CEL=060 NON=040 None Detected

Field_ID: 45 Material: Paper mastic on slab under hdwd fl Color: Black Location: Addition gym Sample# 46272 NON=100 None Detected

Field_ID: 46 Material: Paper mastic on slab under hdwd fl Color: Black Location: Addition gym Sample# 46273 CEL=015 NON=085 None Detected

Field_ID: 47 Material: Mastic for 9x9 wood tile Color: Black Location: Café (Stage) Sample# 46274 NON=095 ASBESTOS DETECTED CHR=005

Field_ID: 48 Material: 12x12 old grye w/white vt Color: Multi Location: (Orig) gym storage Sample# 46275 NON=098 ASBESTOS DETECTED CHR=002

Field_ID: 49 Material: Mastic # 48 Color: Black Location: (Orig) gym storage Sample# 46276 NON=090 ASBESTOS DETECTED CHR=010

Field_ID: 50 Material: 12x12 old grye w/white vt Color: Location: Nurse Sample# 46277 Did Not Analyze

Field_ID: 51 Material: Mastic # 50 Color: Location: Nurse Sample# 46278 Did Not Analyze

Field_ID: 52 Material: 12x12 old tan w/red vt Color: Multi Location: Admin Sample# 46279 NON=100 None Detected

Field_ID: 53 Material: Mastic # 52 Color: Black Location: Admin Sample# 46280 NON=100 None Detected

Field_ID: 54 Material: New VT-I white with beige grey Color: Multi Location: Crm 110 Sample# 46281 NON=100 None Detected

Field_ID: 55 Material: Black mastic # 54 Color: Black Location: Crm 110 Sample# 46282 NON=100 None Detected

Field_ID: 56 Material: New VT-I Color: White Location: Café Sample# 46283 NON=100 None Detected

Field_ID: 57 Material: BL mastic # 56 Color: Black Location: Café Sample# 46284 NON=100 None Detected

Field_ID: 58 Material: BL mastic for new VT-I Color: Black Location: Crm 212 Sample# 46285 NON=100 None Detected

Field_ID: 59 Material: New VT-I Color: White Location: Crm 301 Sample# 46286 NON=100 None Detected

Field_ID: 60 Material: BL mastic # 59 Color: Black Location: Crm 301 Sample# 46287 NON=097 ASBESTOS DETECTED CHR=003

Field_ID: 61 Material: New VT-II (brown w/white) Color: Tan Location: Bsmt mc by 110 Sample# 46288 NON=100 None Detected

Field_ID: 62 Material: Black mastic # 61 Color: Black Location: Bsmt mc by 110 Sample# 46289 NON=100 None Detected

Field_ID: 63 Material: New VT-II Color: Gray Location: 2nd fl mc by 300 Sample# 46290 NON=100 None Detected

Field_ID: 64 Material: BL mastic # 63 Color: Black Location: 2nd fl mc by 300 Sample# 46291 CEL=005 NON=095 None Detected

Field_ID: 65 Material: New VT-III (white w/grey) Color: Multi Location: Crm 209 Sample# 46292 NON=100 None Detected

Field_ID: 66 Material: Black mastic # 65 Color: Black Location: Crm 209 Sample# 46293 CEL=003 NON=097 None Detected

Field_ID: 67 Material: New VT-III Color: Multi Location: Crm 305 Sample# 46294 NON=I00 None Detected

Field_ID: 68 Material: BL mastic # 67 Color: Black Location: Crm 305 Sample# 46295 CEL=005 NON=095 None Detected

Field_ID: 69 Material: New VT-IV (light pink w/red white) Color: Multi Location: Bsmt mc (addition) Sample# 46296 NON=100 None Detected

Field_ID: 70 Material: Black mastic # 69 Color: Black Location: Bsmt mc (addition) Sample# 46297 CEL=005 NON=095 None Detected

Field_ID: 71 Material: Carpet glue Color: Yellow Location: Library Sample# 46298 CEL=002 NON=098 None Detected

Field_ID: 72 Material: White leveler # 71 Color: White Location: Library Sample# 46299 NON=100 None Detected

Field_ID: 73 Material: Brown adhesive for vinyl baseboard Color: Brown Location: Orchestra by kitchen Sample# 46300 NON=098 ASBESTOS DETECTED CHR=002

Field_ID: 74 Material: White adhesive for vinyl thick baseboard Color: White Location: Orig bldg gym Sample# 46301
NON=100 None Detected

Field_ID: 75 Material: Large 8'x8' metal fire door Color: White Location: Entrance to receiving Sample# 46302
NON=060 ASBESTOS DETECTED CHR=020 AMO=020

End of Report

Legend (All sample results represent percentages EX: 001 = 1%) TR(Trace) = < 1%
Asbestos Minerals: Chrysotile=CHR, Amosite=AMO, Crocidolite=CRO, Actinolite=ACT, Tremolite=TRE, Anthophylite=ANT
Fibrous Materials: Fiberglass=FBG, Mineral Wool=MNW, Cellulose=CEL, Hair=HAR, Synthetic=SYN, Other=OTH, Non-Fibrous=NON

011202351

UEC universal environmental consultants

12 Brewster Road
Framingham, MA 01702

Phone: 508.628.5486
Fax: 508.628.5488

CHAIN OF CUSTODY

BUILDING / SITE NAME: Mountview middle school TOWN / CITY: Holden

WORK AREA: exterior STATE: MA

Analysis Type	Turnaround Time (x)				
	6-8 Hr	12 Hr	24 Hr	48 Hr	72 hr
TEM / AHERA					
TEM / Level II					
TEM / Dust					
TEM / Bulk					
TEM / Water					
PLM					
Mold					
Other:					

Specific Project Notes

Test for PCBs

10 day Turn around

SAMPLE ID	MATERIAL DESCRIPTION	SAMPLE LOCATION	START	STOP	TIME	L/MIN	VOLUME
17	window caulk	1966 courtyard					
18	window glaze	" "					
* 19	door caulk	" "					
20	window caulk	1966 west					
21	window glaze	" "					
22	door caulk	" "					
23	expansion joint caulk	1987 west					
24	door caulk	" "					
25	window caulk	" "					
26	window glaze	" "					
27	expansion joint caulk	" "					
28	expansion joint caulk	1987 east					
	*19 sample extracted w/out surrogate report with comment per Ammar. AKG 6/7						
		Samples Received in plastic, no ice per Ammar - Proceed with Analyses 5/25 11:22am -TA					
	*Per Ammar - do Notrum Samples 23 thru 28 JK 5/25						

SAMPLED BY: Jason Beattie 5-24-12 DATE/TIME:

RECEIVED BY: 5/25/12 DATE/TIME:

RELINQUISHED BY: DATE/TIME:

RECEIVED IN LAB BY: DATE/TIME:

RECEIVED MAY 24 2012 By 1430

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (856) 303-2500 Fax: (856) 858-4571 Email: jsmith@emsl.com

Attn: **Ammar Dieb**
Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702
Phone: (508) 628-5486
Fax: (508) 628-5488

6/8/2012

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 5/25/2012. The results are tabulated on the attached data pages for the following client designated project:

Mountview Middle School Holden MA

The reference number for these samples is EMSL Order #011202351. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director

The test results contained within this report meet the requirements of NELAC and/or the specific certification program that is applicable, unless otherwise noted.
NELAP Certifications: NJ 03036, NY 10896, PA 68-00367

The PCB samples were received in plastic containers and outside the temperature requirement.

EMSL Analytical, Inc.
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Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.emsl.com jsmith@emsl.com

EMSL Order: 011202351
CustomerID: UEC63
CustomerPO:
ProjectID:

Attn: **Ammar Dieb**
Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702

Phone: (508) 628-5486
Fax: (508) 628-5488
Received: 05/25/12 9:30 AM
Collected: 5/24/2012

Project: **Mountview Middle School Holden MA**

Analytical Results

Client Sample Description 17
1966 Courtyard
Collected: 5/24/2012 ***Lab ID:*** *0001*

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
3540C/8082A	Aroclor-1016	ND	0.53	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1221	ND	0.53	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1232	ND	0.53	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1242	ND	0.53	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1248	ND	0.53	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1254	4.1	0.53	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1260	ND	0.53	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1262	ND	0.53	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1268	ND	0.53	mg/Kg	6/5/2012	MB	6/6/2012	EH

Client Sample Description 18
1966 Courtyard
Collected: 5/24/2012 ***Lab ID:*** *0002*

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
3540C/8082A	Aroclor-1016	ND	18	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1221	ND	18	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1232	ND	18	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1242	ND	18	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1248	ND	18	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1254	280	18	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1260	ND	18	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1262	ND	18	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1268	ND	18	mg/Kg	6/5/2012	MB	6/7/2012	EH

Client Sample Description 19
1966 Courtyard
Collected: 5/24/2012 ***Lab ID:*** *0003*

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
3540C/8082A	Aroclor-1016	ND	0.54	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1221	ND	0.54	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1232	ND	0.54	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1242	ND	0.54	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1248	ND	0.54	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1254	3.1	0.54	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1260	ND	0.54	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1262	ND	0.54	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1268	ND	0.54	mg/Kg	6/5/2012	MB	6/6/2012	EH

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EMSL Order: 011202351
CustomerID: UEC63
CustomerPO:
ProjectID:

Attn: **Ammar Dieb**
Universal Environmental Consultants
12 Brewster Road
Framingham, MA 01702

Phone: (508) 628-5486
Fax: (508) 628-5488
Received: 05/25/12 9:30 AM
Collected: 5/24/2012

Project: **Mountview Middle School Holden MA**

Analytical Results

Client Sample Description 20
1966 West
Collected: 5/24/2012 ***Lab ID:*** *0004*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.70	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1221	ND	0.70	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1232	ND	0.70	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1242	ND	0.70	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1248	ND	0.70	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1254	3.4	0.70	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1260	ND	0.70	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1262	ND	0.70	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1268	ND	0.70	mg/Kg	6/5/2012	MB	6/6/2012	EH

Client Sample Description 21
1966 West
Collected: 5/24/2012 ***Lab ID:*** *0005*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	0.73	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1221	ND	0.73	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1232	ND	0.73	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1242	ND	0.73	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1248	ND	0.73	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1254	ND	0.73	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1260	ND	0.73	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1262	ND	0.73	mg/Kg	6/5/2012	MB	6/6/2012	EH
3540C/8082A	Aroclor-1268	ND	0.73	mg/Kg	6/5/2012	MB	6/6/2012	EH

Client Sample Description 22
1966 West
Collected: 5/24/2012 ***Lab ID:*** *0006*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date*	*Analyst*	*Analysis Date*	*Analyst*
3540C/8082A	Aroclor-1016	ND	100	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1221	ND	100	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1232	ND	100	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1242	ND	100	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1248	ND	100	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1254	2100	100	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1260	ND	100	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1262	ND	100	mg/Kg	6/5/2012	MB	6/7/2012	EH
3540C/8082A	Aroclor-1268	ND	100	mg/Kg	6/5/2012	MB	6/7/2012	EH

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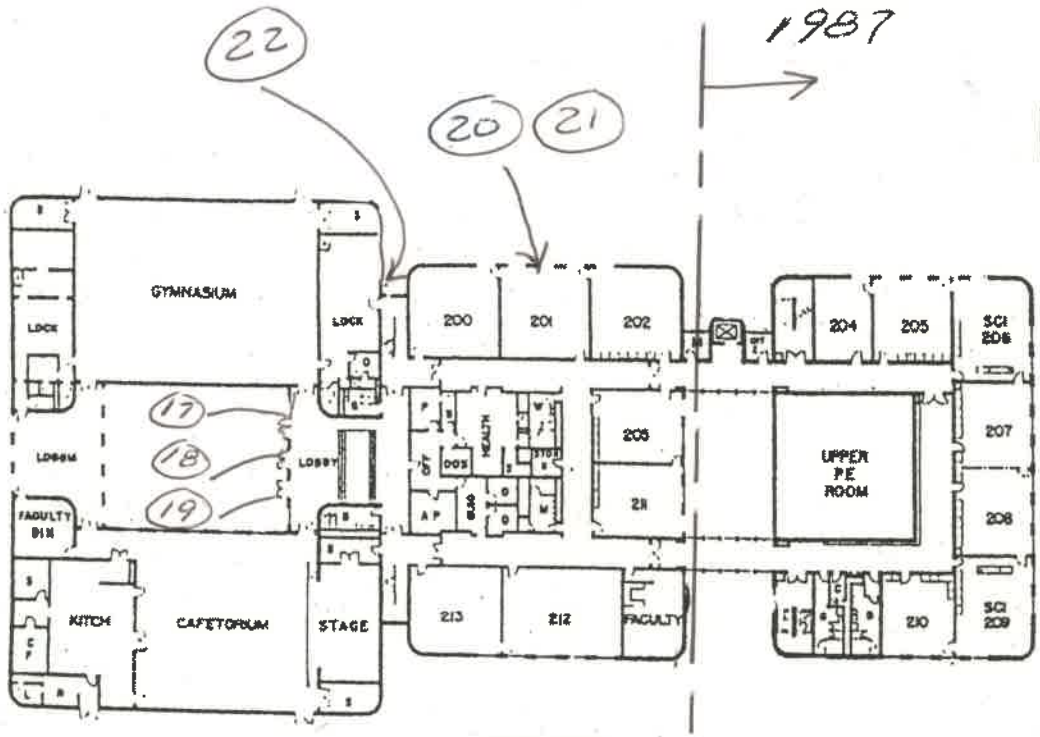
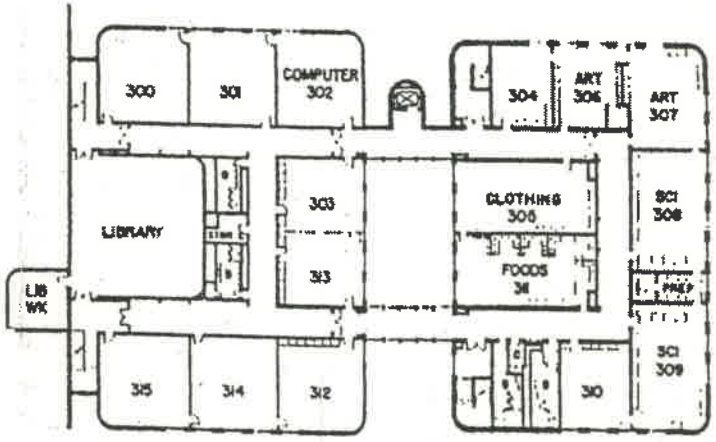
CustomerPO:	
ProjectID:	

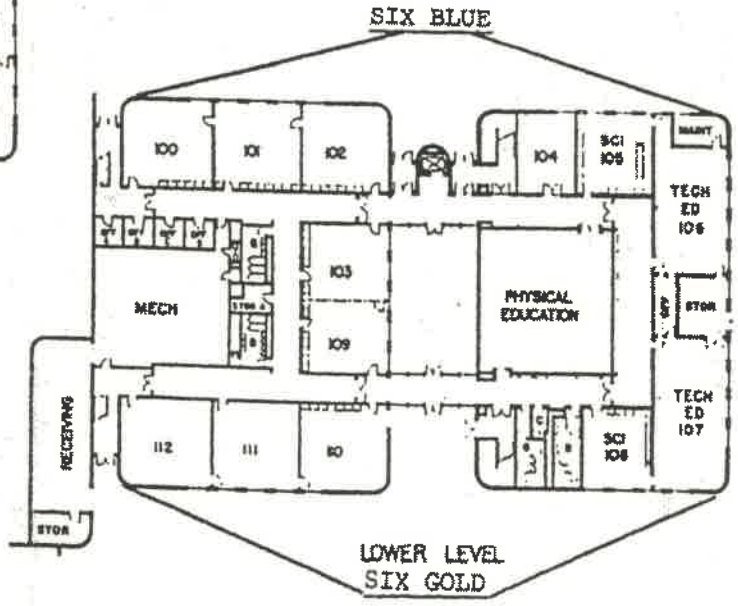
Definitions:

ND - indicates that the analyte was not detected at the reporting limit
RL - Reporting Limit





UPPER LEVEL



PCB's Samples

3.1.5 SITE DEVELOPMENT REQUIREMENTS

A. Narrative
B. Existing Site Plan
C. Existing/Proposed Site Program Template

3.1.5 SITE DEVELOPMENT REQUIREMENTS

A. Narrative

LPA discussed site development requirements with representatives of the District, Town Departments, Officials, and the School Building Committee. Needs are outlined in several meeting memos (refer to 3.1.2 Education Program section) and include the following:

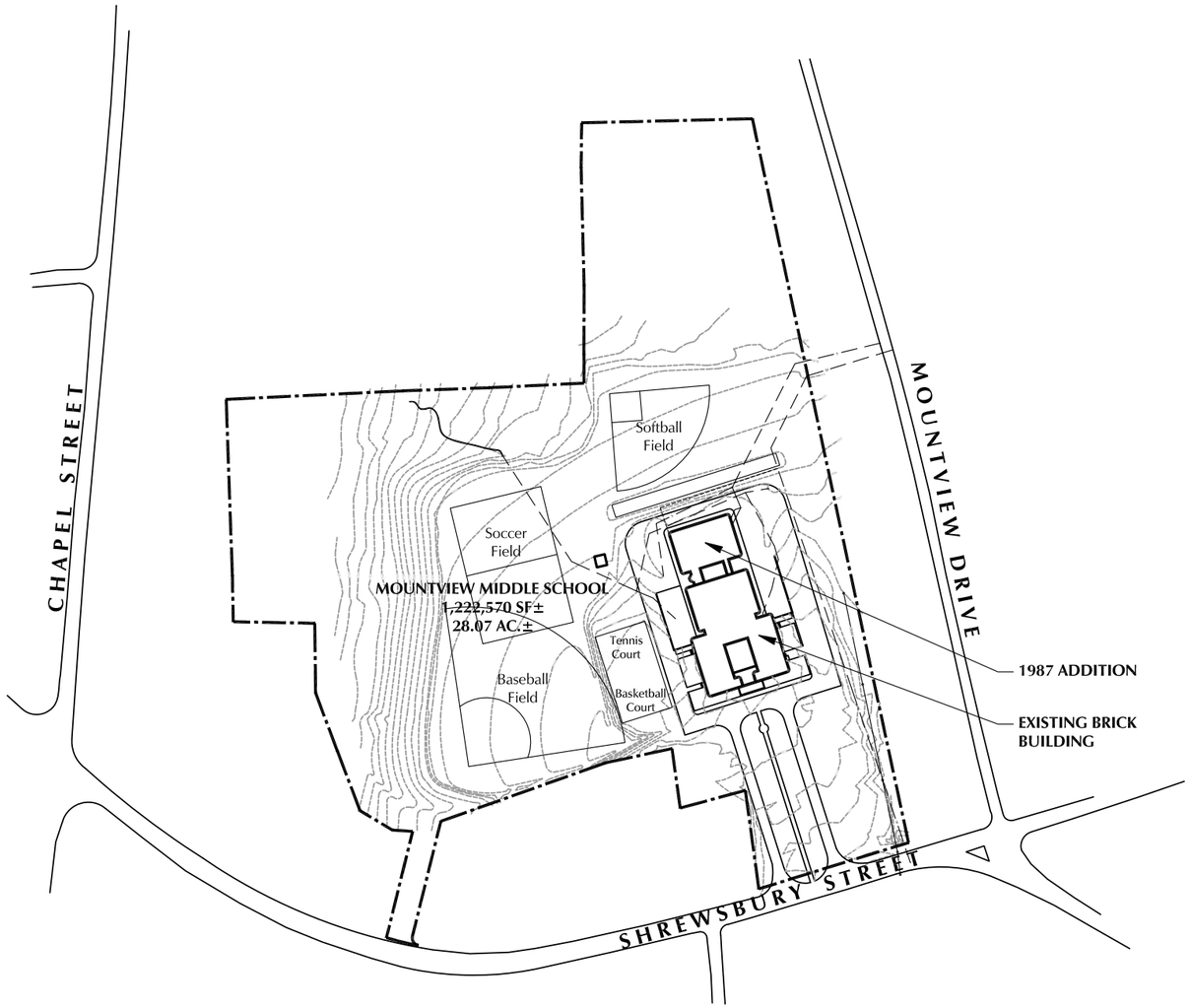
- Adequate space to support 800-student 128,000 SF Middle School.
- Bus queuing space for 12-14 buses.
- Parent pick-up/drop-off queuing space for up to 250 vehicles.
- Parking for 125 cars.
- Service/delivery area.
- Emergency vehicle access to full perimeter of building.
- Athletic fields including:
    - 1 full-size soccer/football/field hockey field
    - 1 Little League baseball field
    - 1 Softball field
    - 100' x 200' (approximately) practice field
    - 2 Tennis courts
    - 1 Basketball court
- Secondary site access (if possible).
- Exterior underground grease trap for Kitchen.
- Looped water supply (if possible).
- Site construction details in accordance with Town of Holden standards.

It is anticipated that opportunities for "green" site features and strategies will be incorporated, and MA-CHPS point goals set, as the project moves forward into the next phase.

A plan graphic comparison of existing/proposed site features is included in this section.

B. Existing Site Plan

3.1.5 SITE DEVELOPMENT REQUIREMENTS
B. Existing Site Plan



NORTH

0 150' 300'

NOTES:

Information compiled in this drawing was taken from several sources including, but not limited to:
1. Town of Holden Assessor Map
2. Mass GIS, USGS Topographic Maps
3. Google Map

Residential- R-15 Zoning Requirements

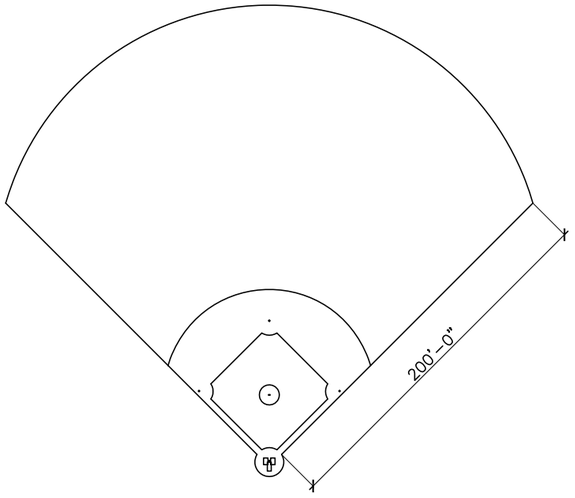
Lot Area Square Footage	1,222,570sf
Lot Frontage	80'
Front Yard	30'
Side Yard	20'
Rear Yard	20'
Maximum height	30'
Maximum building coverage	25%

NORTH

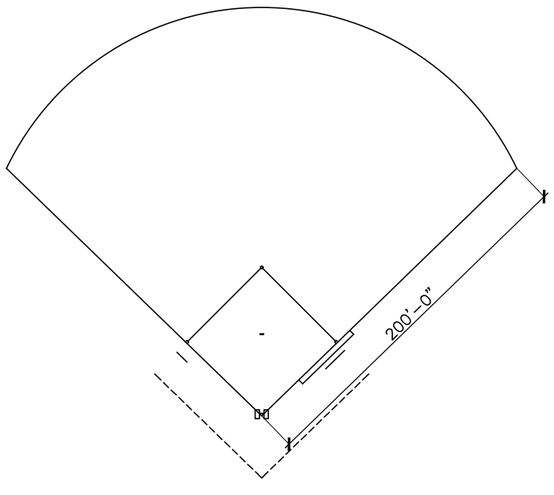

UTILITY PLAN - PART 1
SCALE: 1"=40'-0"
LEGEND
SHREWSBURY STREET
MIDDLE SCHOOL
THRUST BLOCK
VALVE BOX

C. Existing/Proposed Site Program Template

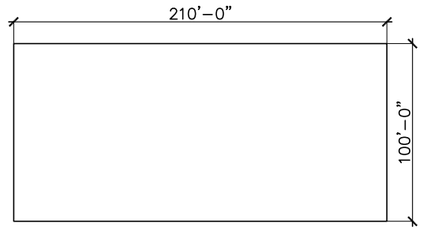
LITTLE LEAGUE
BASEBALL FIELD



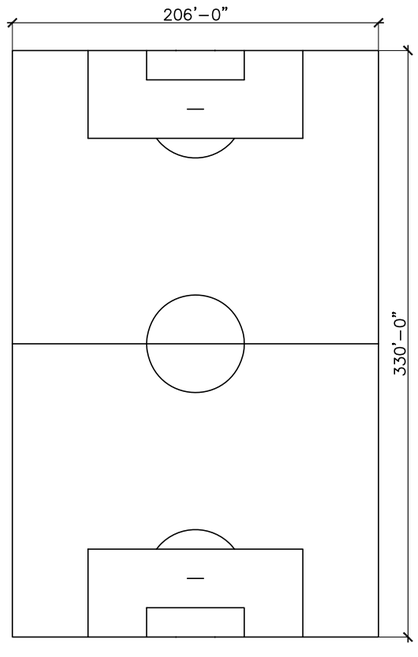
SOFTBALL FIELD



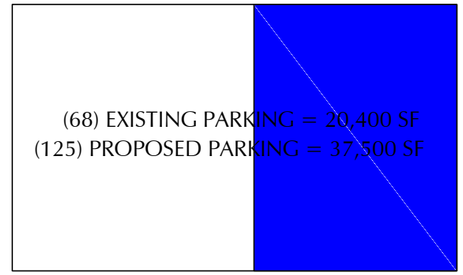
PRACTICE FIELD



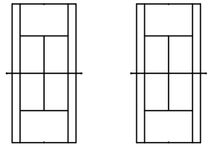
FOOTBALL / SOCCER /
FIELD HOCKEY



PARKING SPACE



TENNIS COURT



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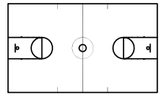
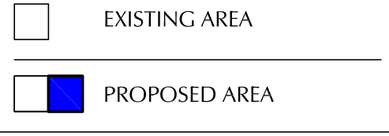




3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

A. Narrative
B. Base Repair Option
C. Renovation – Additions Option
D. New Construction on Existing Site Option
E. New Construction on Alternate Site Option
F. Recommended Alternatives for Further Development & Evaluation
G. Supporting Documents

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

A. Narrative

LPA, in conjunction with the Departments and Offices of the Town of Holden, the Wachusett Regional School District staff, the SBC and consulting engineers researched various alternatives and scenarios to fulfill the Educational Program requirements and provide for spaces within the MSBA guidelines.

1. **Analysis of School District's Student Assignment Practices**

   The WRSD School District's "Grade Assignment Policy" excerpted from the WRSD School District Agreement

   > *Section 11. ASSIGNMENT OF STUDENTS*
   > *11.1 Students in pre-kindergarten through grade eight (8) shall attend schools in their town of residence except as hereinafter provided.*
   > *11.2 The Committee may assign by a majority vote middle school students to a school in other than their town of residence after a favorable majority vote at an annual or special town meeting on the part of both sending and receiving Member Towns involved in such an assignment.*
   > *11.3 The committee may determine by a majority vote to assign pre-kindergarten through grade eight (8) pupils to schools in other than their town of residence in case of an emergency which prevents use of a building in whole or part, for enrollment in special education classes or with parental approval.*
   > *11.4 Parents may request attendance in any of the Member Town Schools, subject to approval of the Superintendent.*

2. **Tuition Agreement with Adjacent School Districts**

   WRSD does not have tuition agreements with adjacent school districts.

3. **Rental or Acquisition of Existing Buildings**

   LPA and the SBC reviewed several existing buildings for acquisition and with each being disqualified as follows:

   a. Electronic Controls Corp.: Existing building undersized.
   b. Jefferson Mills: Multiple mill buildings built over Asnebumskit Brook (tributary to Quinapoxet Reservoir).
   c. Reed Roll and Thread: Within industrial park, limited zoned industrial land within Holden; not desirable for school in industrial park and removal of industrial zoned land.
   d. 100 Industrial Drive: Same conclusion as c. above.

   There are no buildings available for rent or lease. The previous buildings were forwarded to LPA and the SBC by the office of "Growth Management" Town of Holden. Refer to section G. for plot plans of aforementioned existing buildings.

4. **Base Repair (No Build) Option**

   The Base Repair Option addresses minimum work required for repairs. This is defined and elaborated in Section B.

5. **Renovation/Addition Option**

   This option is presented in three levels of work; Minimum, Moderate and Heavy or Full Renovation with Additions. These are defined and elaborated in Section C.

6. **New Construction on the Existing Site Option**

   This option is to construct a new school on the existing site either to the west or north of the existing. The existing school would remain occupied during the construction and upon completion of the new school, the existing building would be demolished. With the removal of the school, new fields would be constructed. This option is more defined and elaborated in Section D.

7. **New Construction on Alternate Site Option**

   LPA and the SBC with the associate of the Growth Management Office of the Town of Holden explored the town for possible sites for the new school. These are defined and elaborated in Section E.

8. **Recommended Alternatives for Further Development** are identified in Section F.

9. **Supporting Documents** including consultant reports and cost estimate for the above options and scenarios are included in Section G.

B. Base Repair Option

The building is in compliance with the Building Code.

Codes the building is in compliance with:

a. Addition to building in 1987 upgrades: "Life/Safety" and AAB Requirements throughout the building.

b. Renovation and alterations to mechanical systems in 1997 brought the building up to 6th Edition Code Requirements.

Except for some new exit signage and lighting the building is in basic compliance. The following levels of renovation will determine the degree of upgrades required to meet current life safety code issues, energy costs, and AAB regulations.

C. Renovation/Addition Option

This option is presented in three levels of work; Minimum, Moderate and Heavy or Full Renovation with Additions. These are defined and elaborated upon as follows:

1. **Minimum Renovation:** The scope of this level of work is defined as providing site and building improvements, repair of broken systems (including those items specified in the Base Repair Option described earlier). Minimum code upgrades required.

   Items requiring repair:

   a. Provide new site signage for traffic control, repair drives and retaining walls.
   b. Faulty door hardware in original building. Replacement parts not available.
   c. Repairs to exposed existing steel channels at base of original masonry walls.
   d. Basic maintenance to existing masonry, repoint, seal as required.
   e. Interior painting as required (most existing interior painting in excellent condition).
   f. Structural work: refer to attached BDI report in section G.
   g. Fire Protection work: Refer to attached SS report in Section G.
   h. Plumbing and HVAC systems: Refer to attached SEC report in Section G.
   i. Electrical work: Refer to attached ART report in Section G.

2. **Moderate:** The scope of this level of work is defined as replacement of systems and components and minimum reconfiguration of space.

   Items within the Moderate renovation level are:

   a. All items listed in "Minimum Renovation" above.
   b. Replacement of all single glazed windows and storefronts (Energy Code).
   c. New roofing and additional insulation at roof level (Energy Code).
   d. Perform hazardous material removal as required for the scope of work.
   e. Remove existing oil tank. Install new natural gas service to building.
   f. Structural work: refer to attached BDI report in section G.
   g. Fire Protection work: Refer to attached SS report in section G.
   h. Plumbing and HVAC systems: Refer to attached SEC report in section G.
   i. Electrical work: Refer to attached ART report in section G.

3. **Heavy or Full Renovation with Additions:** The scope of this level of work is defined as complete replacement of all building systems, reconfiguration of existing spaces and construction of new additions required to meet the MSBA guidelines. Full code compliance to current building, mechanical and AAB codes.

   Items within Full Renovation with Additions:

   a. All work in Minimum Renovation level work and Moderate renovation work described above.
   b. Demolition of portions of the building as required to reconfigure or add additional classrooms, etc.

c. Construction of new interior partitioning and additions to the building as required to meet space requirement.
d. Provide new finishes including millwork, toilet partitions, lockers, tack and white boards, new floor finishes, suspended ceilings and repainting all interior spaces.
e. Replace all window systems.
f. Structural work: refer to attached BDI report in section G.
g. Fire Protection work: Refer to attached SS report in section G.
h. Plumbing and HVAC systems: Refer to attached SEC report in section G.
i. Electrical work: Refer to attached ART report in section G.

IMPACT

It is to be noted that the previously described Full Renovation/Addition level would substantially impact the students, faculty and staff due to simultaneous construction and occupancy of the school for an estimated duration of up to 24 months. Further study within the "PSR" portion of the Feasibility Study will ascertain specific requirements for phasing, temporary modular classrooms, etc. Minimum and Moderate levels could be achieved during summer vacation and not impact the occupants.

Neither Minimum nor Moderate levels of renovation would result in a facility which would comply with the MSBA guidelines for space requirements. The building would remain at 91,137 sf, falling short of the 128,000 sf within the guidelines. Although the full renovation/addition level offers the ability to expand the size of the building, the result would be a school with many undersized classrooms (reuse of existing), and a compromised layout for segregating the three grades into two teams each (WRSD educational model). The existing building would require 37,000 sf to meet the guidelines. Each of the three levels of renovation and the full renovation/addition option have initial cost estimates. Refer to attached AMF report "Study Cost Estimate" in section G.

D. New Construction on Existing Site Option

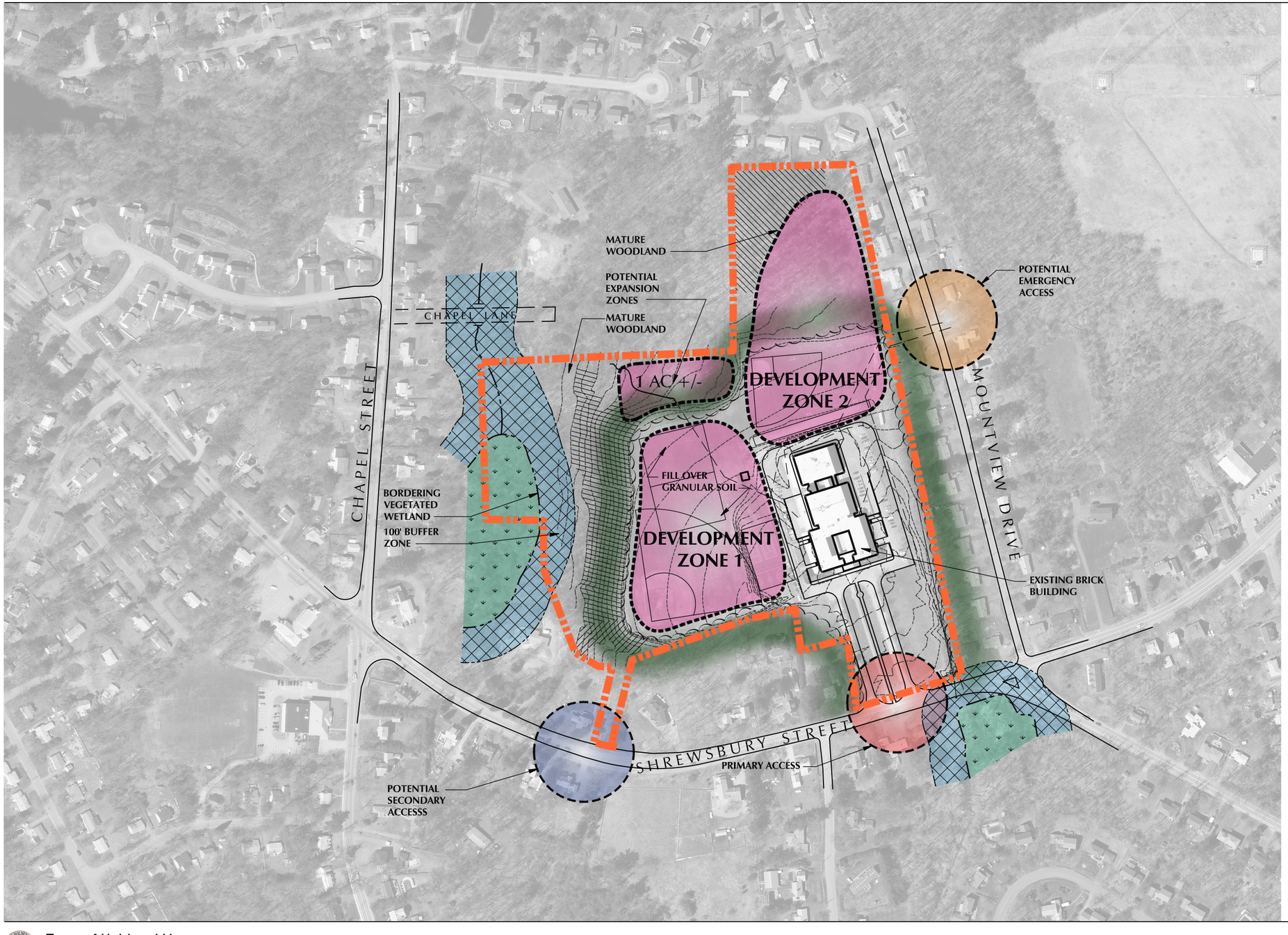
This option is to construct a new school on the existing site either to the west or north of the existing. The existing school would remain occupied during the construction and upon completion of the new school, the existing building would be demolished. With the removal of the school, new fields would be constructed. Major impact to the existing school functioning during construction would primarily be to traffic patterns, construction noise and loss of some fields.

The result would be a new 128,000 sf school meeting MSBA guidelines and WRSD educational objectives and requirements as stated elsewhere in this report.

The new school would provide:

a. All new utilities and services from existing street side locations.
b. New drives and parking.
c. Possible addition of a second means of egress. (May require additional land acquisition.)
d. New athletic fields.

Preliminary estimated cost for construction has been prepared for this option. Refer to attached AMF report "Study Cost Estimate" in section G.



NORTH

0 150' 300'

NOTES:

Information compiled in this drawing was taken from several sources including, but not limited to:
1. Town of Holden Assessor Map
2. Mass GIS, USGS Topographic Maps
3. Google Map

Residential- R-15 Zoning Requirements

Lot Area Square Footage	1,222,570sf
Lot Frontage	80'
Front Yard	30'
Side Yard	20'
Rear Yard	20'
Maximum height	30'
Maximum building coverage	25%

LEGEND

- Project Limit line
- Observed Wetlands
- 100′ wetland buffer
- Slopes > 15%

E. New Construction on Alternate Sites Option

LPA and the SBC with the associate of the Growth Management Office of the Town of Holden explored the town for possible sites for the new school.

The Town of Holden has limited open area that is not classified as follows:

a. Department of Conservation and Recreation (DCM) protected open space and watershed.
b. Division of Water Supply Protection (DWSP) protected open space and watershed.
c. DCM Watershed Protection Restrictions.
d. Wachusett Reservoir Watersheds.
e. City of Worcester Municipal Water Supply
f. Conservation and Agricultural Restrictions
g. Chapter 61 lands.
h. Water bodies and streams.
i. Aquifer.

The above represents 63% of town land area. Coupled with town area already developed for residential, business, industrial and government uses, the availability of sites for construction are few. Refer to the attached map "Town of Holden, Open Space Plan, Open Space Inventory".

The group studied three potential non-developed sites as candidates for a new school. Each site is of adequate size to net the approximate 16 acres required for a new building and associated athletic fields.

The sites that were studied and subsequently disqualified were:

a. **Site #1** – Land bordered by Salisbury Street (east), Providence and Worcester Railroad North, Bailey Road (west) and Dawson Elementary School (south). The parcel would be a combination of 5 pieces of land currently under separate private ownership, making land acquisition complicated. The terrain is the major disqualification for this parcel with an elevation change of 80 feet from Salisbury Street (main entrance) to the highest point of the site. The cost of grading the site to achieve the targeted 16 acres of buildable area plus acquisition fees were deemed too expensive, and thereby reason to disqualify the site.

b. **Site #2** is a parcel bordered by Bullard Street (east), Leroy E. Mayo School (north, Chapel Street (west) and private lands to the south. Similar to Site #1 there are 5 private ownerships required to obtain sufficient area to construct the new school and fields. Although the area is not subject to the extreme elevation changes as site #1, the presence of a swamp (bog) and associated stream effectively bisects the area. After required site grading, it appears that the fields would be remotely located from the school. For this reason and procurement of the site having five owners, the SBC voted to disqualify this site.

c. **Site #3** was the last site studied by the team. The site is located directly north of the Mayo School. Owned by the town and of sufficient size (70 acres), the parcel was selected to be studied as the alternate site for which the new school could be built on. Although the site is bisected by a wooded swamp and southern portions of the site are deemed wildlife habitat, there appears to be adequate area available for the school and fields. Refer to the attached BDE report "Mountview Middle School-Feasibility Study, Initial Evaluation of Alternatives" for a more detailed analysis of both the existing school site and Malden Street site (AKA Site #3).

For estimated construction costs for a new school and field construction for both existing and the new sites, refer to the attached AMF report "Study Cost Estimate" in section G.

BRASSARD DESIGN ENGINEERING

June 28, 2012

Mr. William Senecal
Lamoureux Pagano Architects
108 Grove Street
Worcester, MA 01605

RE: Mountview Middle School – Feasibility Study
Initial Evaluation of Alternatives – Site Analysis

Dear Bill:

Per your request, Brassard Design & Engineering, Inc. (BDE) has completed initial evaluations of potential development sites with regard to the Mountview Middle School project. This included an evaluation of the current school site and an alternate site that was proposed by the Town of Holden. The sites have been identified and are referenced herein as:

1. Site Evaluation - Existing Mountview Middle School
2. Site Evaluation - Malden Street

The evaluations focused on elements of each site that may affect their redevelopment and/or development potential including:

- Property location and configuration
- Zoning conditions
- Easements and property limitations
- Access potential
- Topography, slopes, and orientation
- Tree cover and vegetation
- Soils
- Environmental resources
- Utility system conditions

Information was obtained from multiple sources including:

- Massachusetts GIS data
- Municipal GIS data
- Record property survey data (Mountview School only)
- Natural Resources Conservation Service soil data
- On-site visual observations

1. SITE EVALUATION – EXISTING MOUNTVIEW MIDDLE SCHOOL

Property Location & Configuration

The subject site (Site) includes three parcels located just west of the intersection of Shrewsbury Street, Doyle Road, and Mount View Drive. The primary parcel, where the existing middle school building is located, is designated as Holden Assessor's Parcel ID 201-62 (270 Shrewsbury Street), with an area of 15.2 acres. The second parcel is designated as Parcel ID 200-18, with an area of 12.6 acres. A third, small (0.5 acre), frontage parcel (ID 201-59) is located along the Shrewsbury Street frontage. The three parcels are contiguous and effectively represent a single 28.3 acre development site.

The entire Site is bounded by residential properties. Small (1/3 acre) single family lots line the eastern and northern sides of the primary parcel, and somewhat larger (1/2 to 1-1/2 acre) border the Site to the south and west. A single large parcel (10-acres) is located to the northeast and is developed as a single family lot.

The primary parcel is generally rectilinear (1,500FT± x 450FT±) and oriented north-south in terms of its length. The adjacent parcel is more evenly dimensioned (850FT± x 650FT±) and aligned with the primary parcel.

Zoning Conditions

The Site lies within the Residence-2 (R-2) zoning district and is subject to the dimensional controls associated with that district. No overlay districts or other special zoning conditions are present that will affect the development of the Site.

Easements and other Property Limitations

Based on record survey data, and on municipal assessors maps, there do not appear to be any existing easements or similar encumbrances associated with the Site.

A portion of the property in the vicinity of the existing westerly athletic fields, as described in a later section, includes record soils designated as "Prime Farmland". Under certain circumstances this can result a potential property encumbrance or restriction to development/conversion per Commonwealth of Massachusetts Executive Order 193. As authorized by the Order, the Massachusetts Department of Agricultural Resources (MDAR) has the ability to prohibit the use of state funds for conversion of these lands to other uses. Based on letter (attached) from the MDAR, made a decision based on the recorded soils being essentially fill as part of previous site development effort, use of these soils for agriculture is not feasible, and therefore the associated restriction has been lifted and not applicable to this project.

Access Potential

The Site is currently accessed via two curb cuts on Shrewsbury Street. Three additional potential access points could be created under certain site redevelopment conditions.

The Site is connected to Mount View Drive by a 150FT± existing undeveloped right of way located approximately 1,000FT north of the intersection of Mount View Drive and Shrewsbury Street. Making this connection would require minimal effort in terms of site work, as the grade change across that is fairly minor. However, because Mount View is not a through-street this connection would not likely benefit the Site in terms of overall access or traffic flow.

A second access point onto Shrewsbury Street exists in the form of a 50FT x 230FT segment of Parcel 200-18, located approximately 850FT to the west of the existing site entrance, and 750FT to the east of the intersection of Chapel Street and Shrewsbury Street. This potential access point is also undeveloped. Although there is a notable grade change between this area and the developed portion of the Site, it could be possible to achieve an access drive in this location, depending on the configuration of the development program pursued for the Site. The position of the access point relative to the grade and curvature of Shrewsbury Street is a factor that warrants further study, as sight and stopping distance limitations to the east of the entrance could present a constraint for development of this access.

A third option for an additional access point includes pursuit of a connection to Chapel Lane, which is an undeveloped right of way located off of the northwest corner of Parcel 200-18. As with the above option, connection to this area could involve substantial site grading but appears to be feasible/practical. One significant obstacle exists in that connection to Chapel Lane could only be achieved by crossing over an abutting parcel not under the control of the town. The access drive would need to cross over a portion of either Parcel 200-7 (the large abutting parcel noted previously), or over a portion of Parcel 200-9, which is a small undeveloped frontage lot on Chapel Lane. Although this option presents difficulty with regard to ownership, it would afford a secondary access point that connects to a through-street completely separate from the Site's main access on Shrewsbury Street.

Existing Development

The majority of the Site is currently developed and is the location of the existing Mountview Middle School building and facilities. The school building is positioned on the easterly side of the Site, set back from the street frontage by approximately 400FT, and offset from the abutting residential properties to the east by approximately 150FT.

Parking and access areas are somewhat limited and generally ring the building with single-loaded and parallel parking (striped and non-striped) spaces for approximately 75-100 vehicles, exclusive of non-paved informal parking areas.

Athletic playing fields are positioned to the north and west of the school. The northerly fields include a softball field and small soccer practice fields. Tennis courts, a baseball field, and a full-sized soccer field are located to the west.

The 400FT x 500FT northerly section of the primary parcel is undeveloped, and includes a well-developed woodland trail network. Although a portion of this area is somewhat steeply sloped (10-15%+), a substantial portion of the area could add as much as 2 acres± to the currently developed portion of the Site. Similarly, areas to the north and west of the larger athletic fields are undeveloped and also include a trail system. Due to the terrain and environmental constraints noted in the following sections, the majority of the westerly area could not be easily developed and should not be considered as a potential project expansion area. But a relatively small area (1 acre±), or a portion thereof, could possibly be utilized by extending the existing fill slope on the northerly section of Parcel 200-18.

Topography, slopes and orientation

The original terrain of the Site generally sloped moderately downward from east to west. As part of the original development effort and subsequent redevelopment/additions, a substantial fill was placed on the westerly side of the Site resulting in a plateau condition. Currently, the developed portion of the Site is broad and relatively flat (2-5% slopes).

The northern section of the primary parcel, referenced above as a potential expansion zone, pitches down to the north with fairly moderate slopes (6-8%) except as noted previously. The area west and north of the larger athletic fields are steeply sloped at the limits of the fill placement and beyond at 25-40%, significantly limiting potential expansion.

The combination of the mature woodland and the width of the steep slope (100FT+) constitutes a substantial physical and visual buffer between the developed portion of the Site and the residential properties to the west.

Due to the broad, flat terrain that has been established across developed portion of the Site, relatively unobstructed southern/western exposure is available. However, because the Site is elevated above the surrounding properties and due to lack of mature tree growth on interior areas mitigation for the effects of prevailing westerly winds should be considered in future design efforts.

Tree cover and vegetation

The developed portion of Site is completely cleared, with a mature wooded buffer along the easterly and southerly property lines. The Site includes little landscape planting, which is limited to street trees lining the access drives and shrub plantings across the front of the school building. One isolated stand of mature deciduous trees is positioned about 150FT to the west of the rear corner of the school building. Future design efforts should include consideration for working these well-established trees into the development scheme.

Although relatively narrow, the wooded buffer along the southerly side of Parcel 200-18 includes a mature stand of white pine which could offer a solar screen for parking, depending on the future site design program.

The northern and western undeveloped sections of the Site include mature woodland consisting of a clustered mix of evergreen and deciduous tree growth with light to moderate underbrush. A well-established trail network circulates throughout, running close to and/or connecting with abutting properties.

Soils

Based on National Resources Conservation Service (NRCS) data, the soils on the Site include the following NRCS Map Units listed in order of contributing area:

420B, 421B&C, 422B&C, Canton
- Parent material is gravelly loamy sand
- well drained
- >6FT to groundwater
- >5FT to ledge
- erosive concern is low (substratum)

651, Udorthents
- Smoothed/graded soil presumably underlain by surrounding soil map units
- Well drained
- >6FT to groundwater
- >5FT to ledge
- erosive concern is low (substratum)

The soils surrounding the developed portions of the Site are dominated by varying types of Canton soils. The primary features include well-drained, well graded soils with few fines, relatively low groundwater table, with minimal presence of shallow ledge. None of the soil conditions are likely to represent a constraint in terms of bearing capacity, stormwater management, or general site construction. However, because the site has been previously disturbed, a robust geotechnical exploration should be undertaken to verify the actual subsurface conditions present.

Environmental Resources and Hydrology

A bordering vegetated wetland resource area is centrally located on the western edge of the Site. A discharge channel runs to the north from this area toward an existing culvert on Chapel Lane. A 100-foot buffer zone associated with the wetland area and channel establishes a jurisdictional area that extends as much as 250FT onto the Site. The presence of this

jurisdictional area will affect potential redevelopment schemes that extend into the westerly portion of the Site.

A second wetland area is located across Shrewsbury Street off of the southeast corner of the Site. The associated buffer zone for this area appears to extend onto a small portion of the nearby property corner, but is unlikely to affect future development options.

Runoff generated by the open areas of the Site drain overland to the north and west and is not combined with runoff from the adjacent properties to the east and south, which appears to be diverted around the Site by open channel conveyances and/or general grading conditions. Runoff from the majority of the developed/paved areas of the Site, and presumably the building roof area is collected in a closed pipe drainage network which directs flow to a pipe outfall located on the slope beyond the northerly end of the full-sized soccer field.

Utility System Conditions

- Water
  Based on information provided by the Holden Water & Sewer Department, adequate water service in terms of system availability, flow, and pressure is available at the Site. Water mains are located in both Mount View Drive and in Shrewsbury Street. Record plans indicate that an 8" water service extends across the easterly side of the site connecting to both the Mount View Drive and Shrewsbury Street water mains. Due to the installation date (1987) the service main can be presumed to be in good condition. Apparent damage to an existing PIV at the rear of the Site will need to be corrected as part of any Site improvement scheme.

- Sewer
  The existing school building is connected to the municipal sanitary sewer located in Mount View Drive via an 8" service pipe. Depending on the course of the project (i.e., renovation, new construction) the existing service pipe may need to be replaced in order to accommodate changes in building location and/or elevation. Even if construction of a new building is pursued on the westerly side of the site, it is likely that a replacement connection to the Mount View Drive system via a gravity connection can be achieved, although this will need to be verified as the project progresses.

  Based on a maximum student enrollment of 800 and a teacher/staff count of 50, the estimated daily sewage flow generated by the project will be 17,000GPD (310CMR 15.203, Title 5, 20GPD/pers). Because the sewage flow is an expansion of an existing discharge, it is very unlikely that capacity of the municipal sewer accepting the flow will be affected.

- Stormwater
  Because existing runoff flow patterns, as previously described, generally direct stormwater runoff to the north westerly side of the Site, it can be assumed that any

upgraded or replacement stormwater management system will include an overland discharge point or points which will maintain the existing surface hydrology of the Site. So although municipal storm drain systems are present in Shrewsbury Street and Mount View Drive, it is unlikely that connection from the main portion of the Site to those systems would be pursued under any development scheme. If a secondary access drive was established at Shrewsbury Street as previously described, then at least a portion of the drive would include stormwater infrastructure which would make a connection to the municipal system at that location.

Because the existing stormwater management system does not include elements that correspond to currently required performance standards for water quality and peak flow control, the existing system would likely be substantially altered or replaced as part of a renovation or new construction project. Any portion of the existing system that was designated to remain should be evaluated for compliance with currently accepted design practice and/or improved to meet the requirements of the MA DEP Stormwater Standards. The degree to which this is required will correspond to the level of overall site improvement that is pursued.

The well-drained soils on the Site and probability of deep groundwater and ledge conditions are conducive to substantial use of groundwater infiltration as a primary stormwater management method. On-site exploration of soils will be required to fully assess this potential and to advance a general stormwater management strategy.

- Power
  Based on informal information provided by the Town of Holden, there do not appear to be any deficiencies in the power or tele-communication capacity in the vicinity of the Site. This assumption should be verified as the project progresses by the Electrical Engineering Consultant.

- Gas
  Based on informal information provided by The Town of Holden, although gas service is not currently available to the existing middle school, it is located in relatively close proximity to the Site. It can be presumed that an extension of this service to the Site is feasible/practical. This assumption should be verified as the project progresses by the Mechanical Engineering Consultant.

- Underground Storage Tank
  The existing school utilizes a 10,000GAL underground fuel storage tank, located in a lower parking area to the west of the existing building. The tank should be evaluated for re-use or replacement as part of any improvement scheme.

2. EVALUATION OF EXISTING CONDITIONS – MALDEN STREET

Property Location & Configuration

The subject site (Site) includes a single parcel located directly east of the intersection of Chapel Street and Malden Street; the primary portion of the parcel being offset from these streets by residential frontage lots bordering each. A portion of the Site also nears Bullard Street to the east. The Site is designated as Holden Assessor's Parcel ID 150-43, with an area of 72 acres.

The entire Site is bounded by residential properties except to the southeast where it abuts the Mayo Elementary School property. The residential properties generally ½ acre frontage lots, with some exceptions, and are roughly 50% developed.

The primary parcel can be considered in two main sections including an 18 acre section situated to the north of the Mayo Elementary School (the "East Section"), and a 54 acre section to the west (the "West Section"). Both properties are generally quadrilateral in configuration, with the West Section aligned along a southwest-northeast axis, consistent with the alignment of Chapel Street and Malden Street.

Zoning Conditions

The Site lies within the Residence-1 (R-1) zoning district and is subject to the dimensional controls associated with that district. No overlay districts or other special zoning conditions are present that will affect the development of the Site.

Easements and other Property Limitations

Based on record survey data, and on municipal assessors maps, there do not appear to be any existing easements or similar encumbrances associated with the Site.

A portion of the property in the central to the West Section, as described in a later section, includes record soils designated as "Farmland of Statewide Importance". Under certain circumstances this can result a potential property encumbrance or restriction to development/conversion per Commonwealth of Massachusetts Executive Order 193. As authorized by the Order, the Massachusetts Department of Agricultural Resources (MDAR) has the ability to prohibit the use of state funds for conversion of these lands to other uses. Based on information obtained from the MDAR, because the area in question is heavily forested it is very unlikely that it would ever be converted to an agricultural use is highly unlikely, and therefore the associated restriction would not apply to this project. It is possible that the MDAR would suggest/recommend some minor mitigation in the form of an educational component oriented toward agriculture.

Access Potential

The Site currently includes no developed access points, although roadway frontage is available in three locations. Additionally, it may be possible to merge with the existing Mayo School access drive that connects to Bullard Street.

A possible access point, and presumably the primary access for the Site, is located on Malden Street, approximately 1,300FT north of the intersection with Chapel Street. Introduction of the Site's access drive at this point could result in perceived disruption to the adjacent single family lots, but no physical or dimensional barriers for a connection are apparent.

A secondary access point may be possible at a frontage connection point on Chapel Street, approximately 1,000FT south of the intersection with Malden Street. Two potential restrictive conditions are present at this location. The access point is proximate to a wetland resource area which would require definition/delineation to verify that adequate non-wetland area is available for the connection. Also, because the access point is slightly offset (south) from the intersection of Brice Circle and Chapel Street, it is likely that this access would be reserved for emergency use only and not as an ordinary Site entry.

An additional frontage connection point onto Chapel exists, approximately 600FT south of the intersection with Malden Street. However, this area is completely separated from the West Section by a substantial wetland resource area and utilization of this connection is not practical.

As noted above, a connection from the Site to the existing Mayo School site driveway could be achieved, providing that the East Section can be accessed from the West Section (i.e., the primary development site) by crossing a wetland resource area as described in below (see "Environmental Resources and Hydrology"). Depending on the conditions of the development, this could potentially function as an emergency access or general secondary access.

Existing Development

The Site is currently undeveloped, although some trails have been established across the southerly section of the Site, including wooden footbridge/footpath construction which remains in good condition.

Topography, slopes and orientation

The East Section and West Section of the Site are topographically distinct and are separated by a wetland system that bisects the Site from north to south. The East Section slopes uniformly from EL. 790± at the eastern property boundary to EL.740± at the bisecting wetland area. The terrain is generally uniform with even slopes transitioning from approximately 8% to the east and reducing to 2-3% to the west, across approximately 900FT.

The main topographic feature of the West Section is a broad and relatively flat wooded knoll, measuring roughly 150-200FT east to west and 400FT± north to south, peak EL. 752+. It is located about 100FT west of the bisecting wetland and abuts the northerly Site boundary. The terrain drops off from the knoll somewhat steeply to the west (10-15%) for about 200FT, then moderates, sloping more gradually down to a second and separate wetland system that separates the main portion of the Site from its southwesterly corner. The terrain undulates slightly to the south, finally sloping up to a minor knoll at the southerly Site boundary.

With the exception of the relatively limited area of moderately steep slopes west of the main knoll, none of the topographic conditions presents a particular design constraint. The conditions on the knoll appear to be ideally suited for development.

Tree cover and vegetation

The Site is completely wooded with mature tree growth which varies with the terrain and soil conditions across the Site. The East Section primarily includes deciduous tree growth with a predominance of oak in some areas with generally moderate to heavy underbrush. Conversely, the West Section is dominated by evergreen trees, primarily white pine, with light to moderate undergrowth.

The moderate grades and somewhat dense woodland conditions could afford opportunities in the design process for selective clearing and cutting and careful grade manipulation for the purpose of retaining some of the mature tree growth and incorporating it into the site program.

Soils

Based on National Resources Conservation Service (NRCS) data, the soils on the Site include the following NRCS Map Units:

71A&B, Ridgebury - within central wetland system

- fine sandy loam
- extremely stony
- poorly drained
- 0-6″ to groundwater
- >5FT to ledge
- erosive concern is moderate
- generally unsuitable for building construction

73A, Whitman – southwesterly wetland system
- loam
- extremely stony
- very poorly drained
- +12, – 6" to groundwater
- >5FT to ledge
- erosive concern is moderate
- generally unsuitable for building construction

307B, Paxton – easterly boundary of East Section
- fine sandy loam
- extremely stony
- well-drained, but typically with a restrictive layer at an 18-30" depth
- >18-30" to groundwater (typically perched)
- >5FT to ledge
- suitable for building construction with measures taken to manage groundwater
- erosive concern is slight-moderate depending on slope

312B, Woodbridge – lower slope of West Section knoll, mid-slope Eastern Section
- fine sandy loam
- extremely stony
- moderately well drained, restrictive soil layers
- >18-30" to groundwater (typically perched)
- >5FT to ledge
- suitable for building construction with measures taken to manage groundwater
- erosive concern is moderate

421B, 422B, Canton – West Section knoll and west edge of East Section
- fine sandy loam
- very/extremely stony
- well drained
- >6FT to groundwater
- >5FT to ledge
- adequate for building construction
- erosive concern is low-moderate (substratum)

In general, what are likely to be the primary development areas of the Site include Canton, Paxton, and Woodbridge soils, listed in order of preference for building construction. Proper management of groundwater, perched or otherwise, in areas of Paxton and Woodbridge soils will be required for building or roadway construction. Special considerations will be required for road base or other related construction where the project crosses Ridgebury or Whitman soils relative to soil stability and groundwater management.

Environmental Resources and Hydrology

As briefly noted in previous sections, the east and west sections of the Site are bisected by a substantial wetland resource area. This area is a woodland swamp with no apparent primary hydraulic channel. Its general width in the vicinity of a possible crossing location should be determined to facilitate future planning and design efforts.

In addition to the project constraints associated with a bordering vegetated wetland, this area is also designated as a "priority habitat" area by the Natural Heritage and Endangered Species Program (NHESP - MA Div. of Fisheries and Wildlife). The habitat area in the vicinity of the Site generally matches the 100-FT buffer zone of this wetland area, based on DEP wetland designation. The particular species is/are not known at this time and an inquiry has been made to NHESP for further identification information. Depending on what species is/are associated with the habitat, some form of mitigation or specific design elements may be required for the project.

A second wetland system extends across the southwesterly portion of the Site, effectively cutting off the most southwesterly upland area from development. This area is also a woodland swamp, but not likely to be affected by the development of the Site.

Utility System Conditions

- Water
  Based on information provided by the Holden Water & Sewer Department, adequate water service in terms of system availability, flow, and pressure is available at the Site. 8" water mains are located in both Malden Street and Chapel Street, making the installation of a looped service main possible.

- Sewer
  There are municipal sewer infrastructure systems available within reasonable proximity to the Site. Based on municipal GIS topography, it appears that the only opportunity to discharge sewer from the Site via gravity flow would be to make a connection from the primary development area to Malden Street. Currently, no sewer infrastructure exists in that location. Alternatives for making a connection that should be evaluated could include:

  - *Extension of the municipal system from the existing Malden Street pump station*
    This would include installation of approximately 2,000FT of gravity sewer along Malden Street, to the northeast of the existing pump station, providing an opportunity to discharge sewage from the site via gravity flow. However, depending on the actual inflow elevation of the existing pump station, this might not be feasible due to the downward grade change (6FT±) along this route immediately adjacent to the pump station location. These elevations would need to be studied in more detail to assess the viability of this option.

- *Connection to the municipal system via force main conveyance*
  This would include collection of sewage from the site in a gravity pipe network and directing flow to an on-site pump station that would convey flow to either an existing municipal pump station or to a nearby gravity collection pipe network. The selected connection point would be influenced by several factors including but not limited to dosing frequency, municipal infrastructure capacity, and pumping capacity of the associated municipal pump station.

The anticipated 17,000GPD of sewage generated at the Site would represent a new increase in flow to the area regardless of the selected connection point and method. Further evaluation of potential impacts to municipal infrastructure, and assessment of the feasibility for possible municipal infrastructure improvements is required to make a final recommendation on this issue.

- Stormwater
  Stormwater discharges from the Site will be managed on-site with no connection to municipal stormwater infrastructure. There are several stormwater conveyance routes that currently collect stormwater runoff from the existing Site, including the centrally located wetland system that discharges runoff to a broad woodland swamp located off-site to the south, and the southwesterly wetland system that flows to a roadway culvert under Malden Street. The stormwater management system for the project should be designed to mimic the existing hydrology of the Site and function in accordance with the requirements of the MA DEP Stormwater Standards.

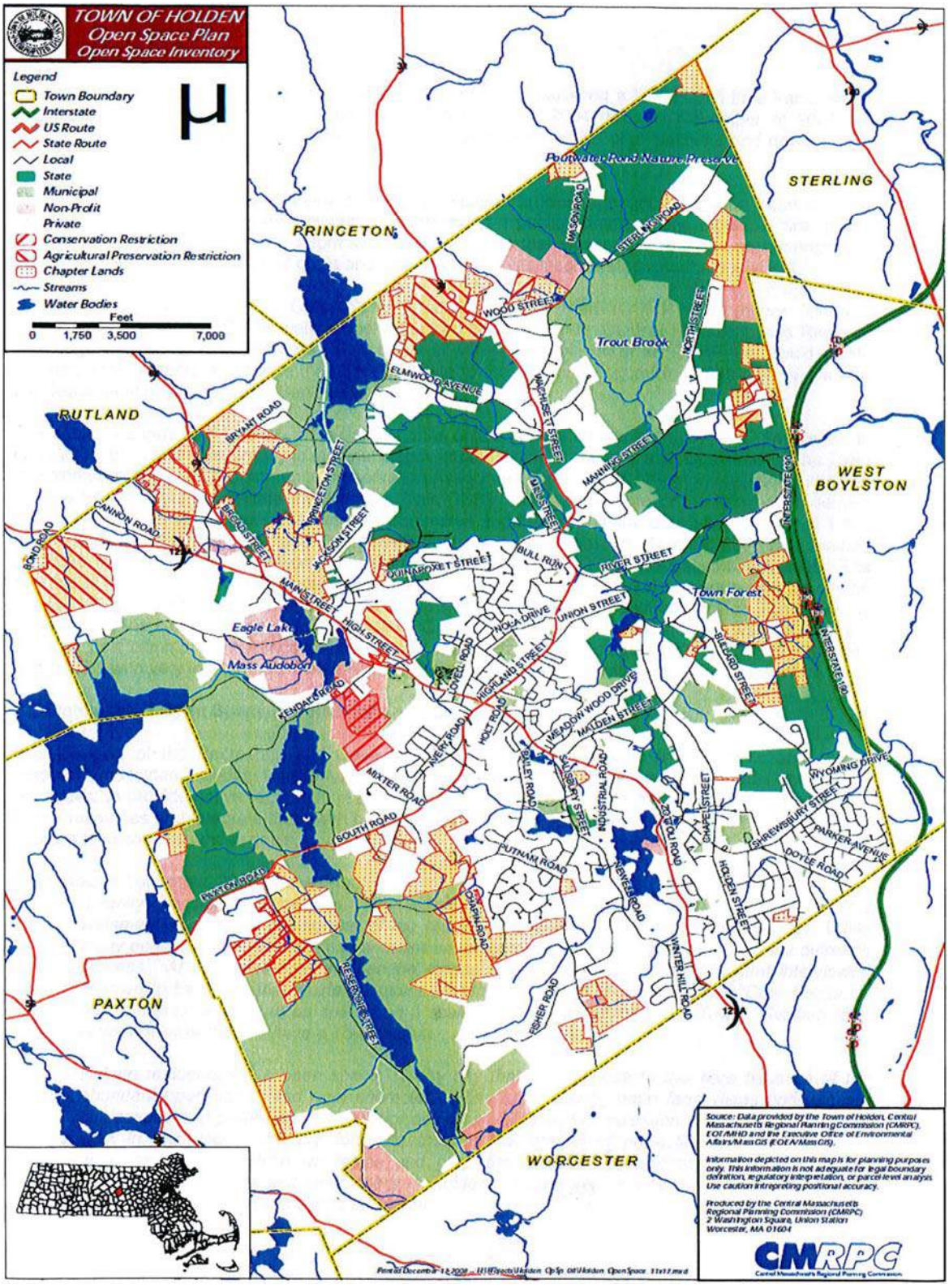
- Power
  Based on informal information provided by the Town of Holden, there do not appear to be any deficiencies in the power or tele-communication capacity in the vicinity of the Site. This assumption should be verified as the project progresses by the Electrical Engineering Consultant.

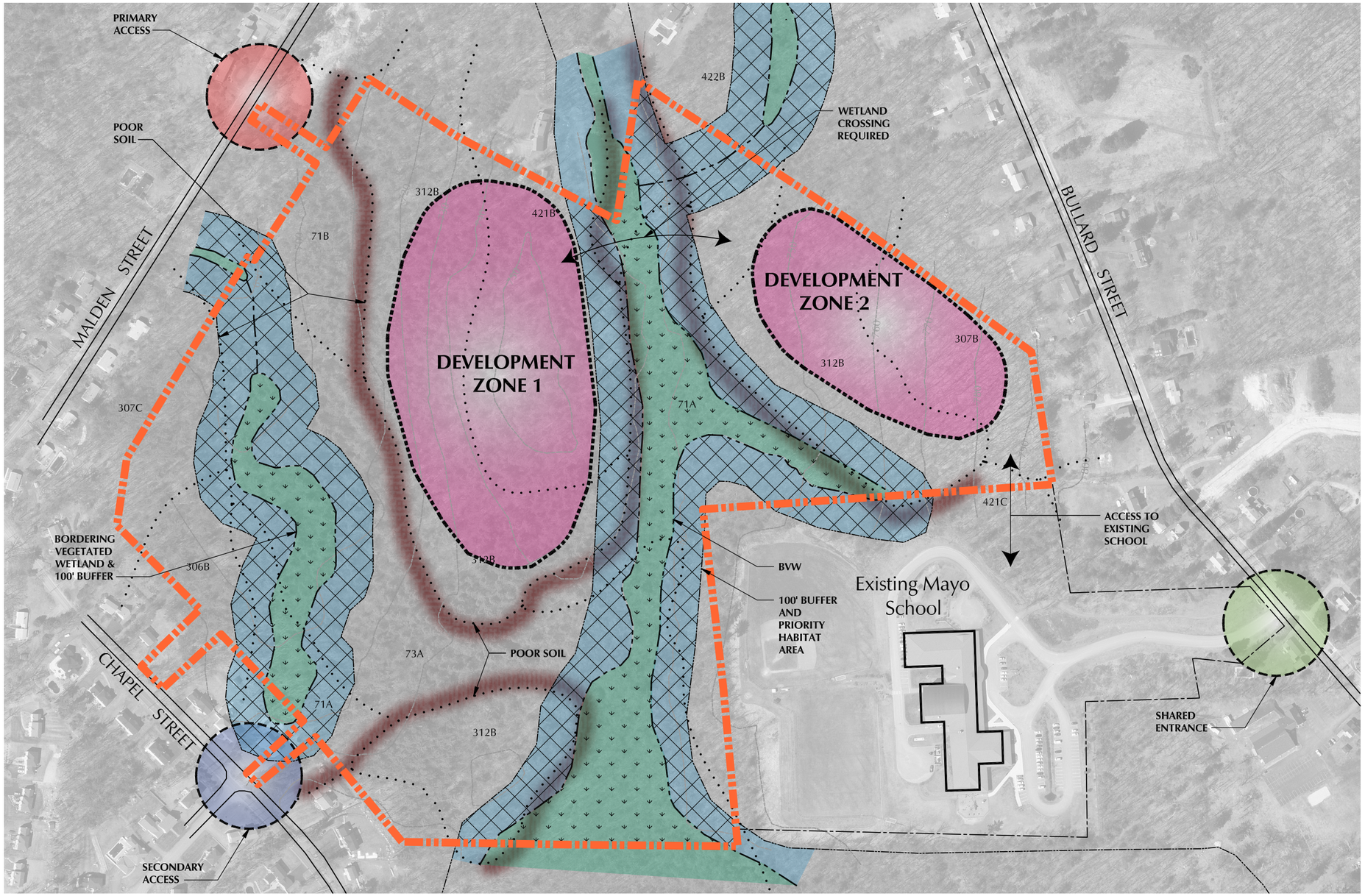
- Gas
  Based on informal information provided by The Town of Holden, provision for gas service to the Site does not appear to be feasible.

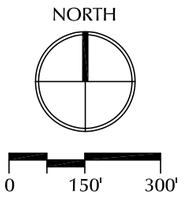
Please contact us at your convenience if additional information is required to supplement the above evaluation of the development sites. It is our understanding that a more thorough interpretation of the information will be completed for the next project phase for a preferred site or sites. We look forward to assisting LPA in those efforts.

Sincerely,
BRASSARD DESIGN & ENGINEERING, INC.

Matthew T. Brassard, PE


TOWN OF HOLDEN
Open Space Plan
Open Space Inventory
Legend
Town Boundary
Interstate
US Route
State Route
Local
State
Municipal
Non-Profit
Private
Conservation Restriction
Agricultural Preservation Restriction
Chapter Lands
Streams
Water Bodies
Feet
0 1,750 3,500 7,000
PRINCETON
STERLING
RUTLAND
WEST BOYLSTON
PAXTON
WORCESTER
Poutwater Pond Nature Preserve
Trout Brook
Eagle Lake
Mass Audubon
Town Forest
Source: Data provided by the Town of Holden, Central Massachusetts Regional Planning Commission (CMRPC), EOT/MHD and the Executive Office of Environmental Affairs/MassGIS (EOEA/MassGIS).
Information depicted on this map is for planning purposes only. This information is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. Use caution in interpreting positional accuracy.
Produced by the Central Massachusetts Regional Planning Commission (CMRPC)
2 Washington Square, Union Station
Worcester, MA 01604
CMRPC





NOTES:

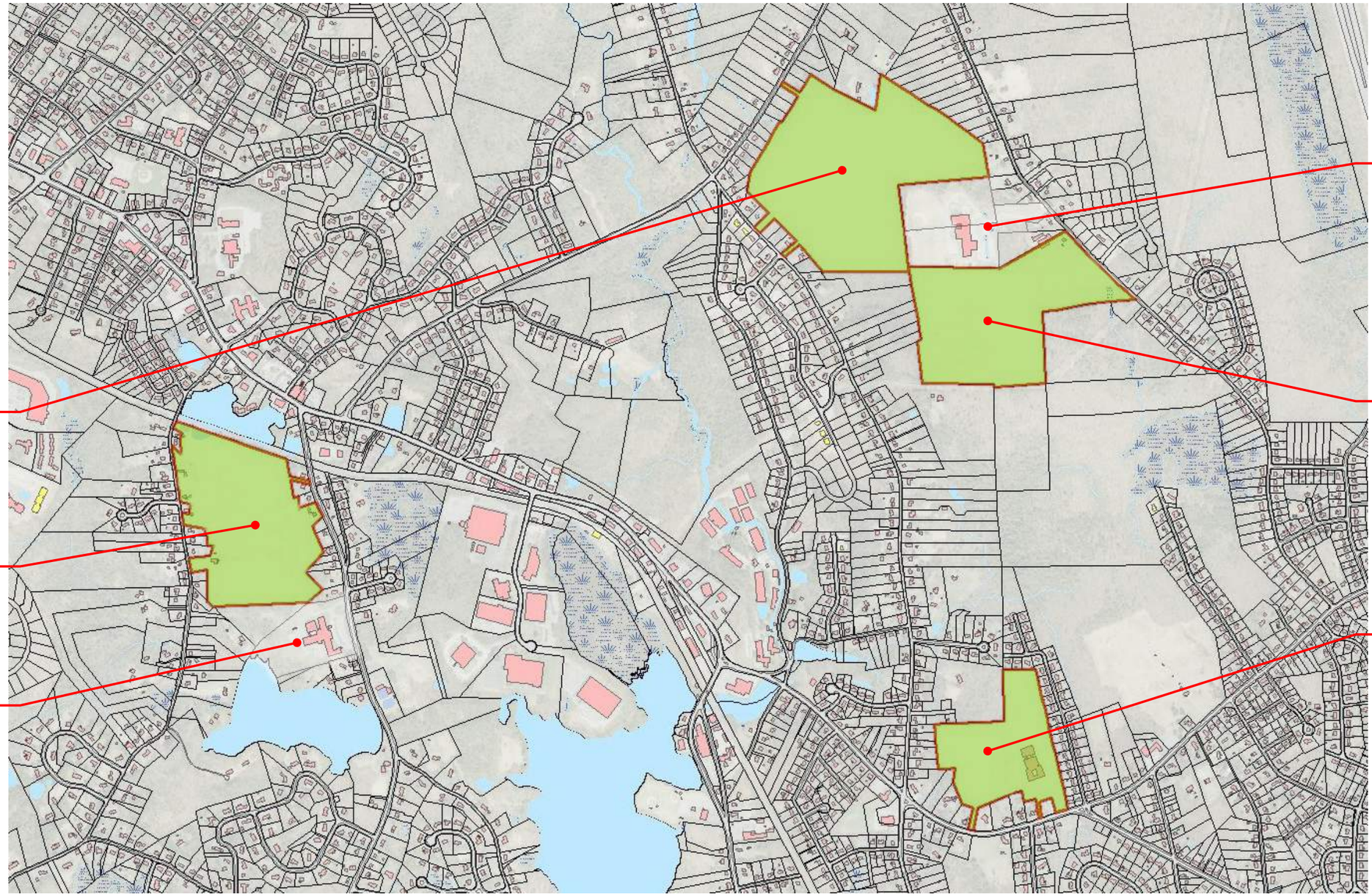
Information compiled in this drawing was taken from several sources including, but not limited to:
1. Town of Holden Assessor Map
2. Mass GIS, USGS Topographic Maps
3. Google Map

Residential- R-20 Zoning Requirements

Lot Area Square Footage	3,108,406sf
Lot Frontage	80'
Front Yard	30'
Side Yard	20'
Rear Yard	20'
Maximum height	30'
Maximum building coverage	25%

LEGEND

- Project Limit line
- Observed Wetlands
- 100' wetland buffer


NORTH
Mayo School
Site #2
Site #3
Site #1
Dawson School
Mountview
Middle School

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

F. Recommended Alternatives for Further Development and Evaluation

In conjunction with the SBC, LPA recommends that the following options be further developed during the Preliminary Schematic Report (PSR) phase of this Feasibility Study:

- Full Renovation/Addition Option
- New Construction on Existing Site Option
- New Construction on Alternate Site Option

G. Supporting Documents

- *Existing Disqualified Buildings*

- Electric Controls Corp.
- Jefferson Mills
- Reed Roll & Thread
- 100 Industrial Drive

- *Deed - Malden Street Site*

- *Consultant Reports*

- Site:
Brassard Design & Engineering (BDE)

- Structural:
Bolton & DiMartino, Inc. (BDI)

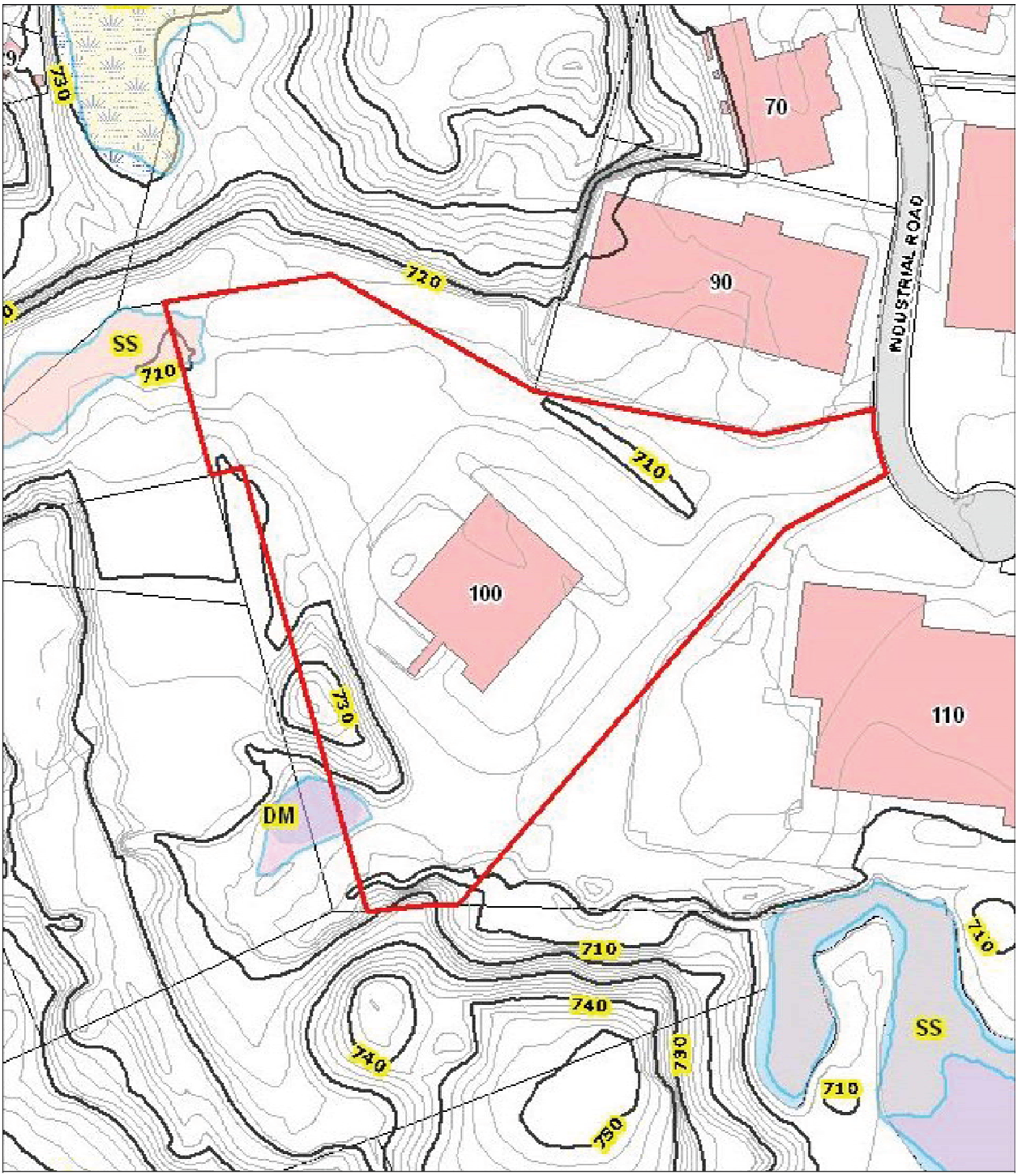
- Fire Protection:
Sensible Solutions (SS)

- HVAC & Plumbing:
Seaman Engineering Corp. (SEC)

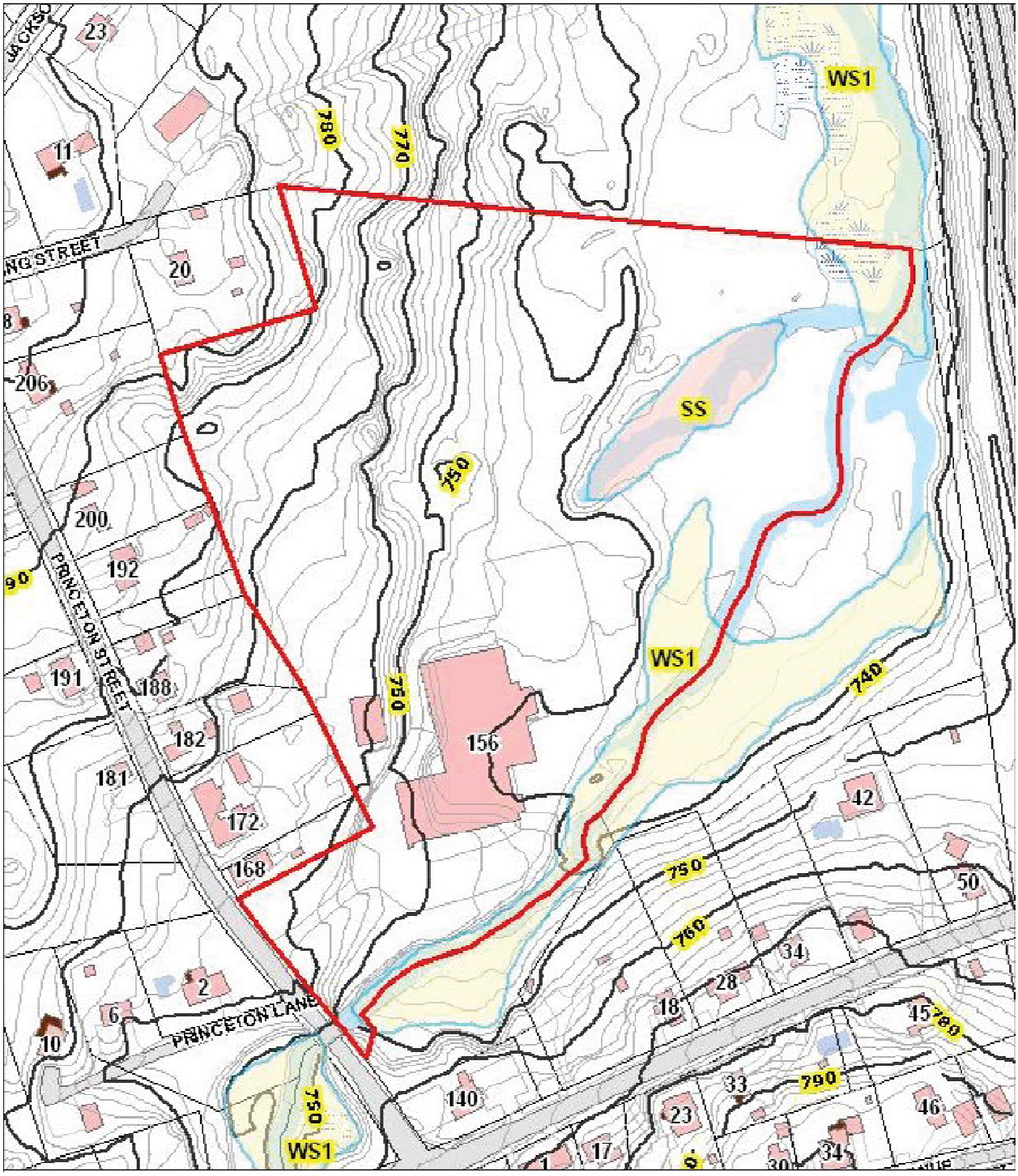
- Electrical:
ART Engineering Corp. (ART)

- Study Cost Estimate:
AM Fogarty & Assoc. (AMF)

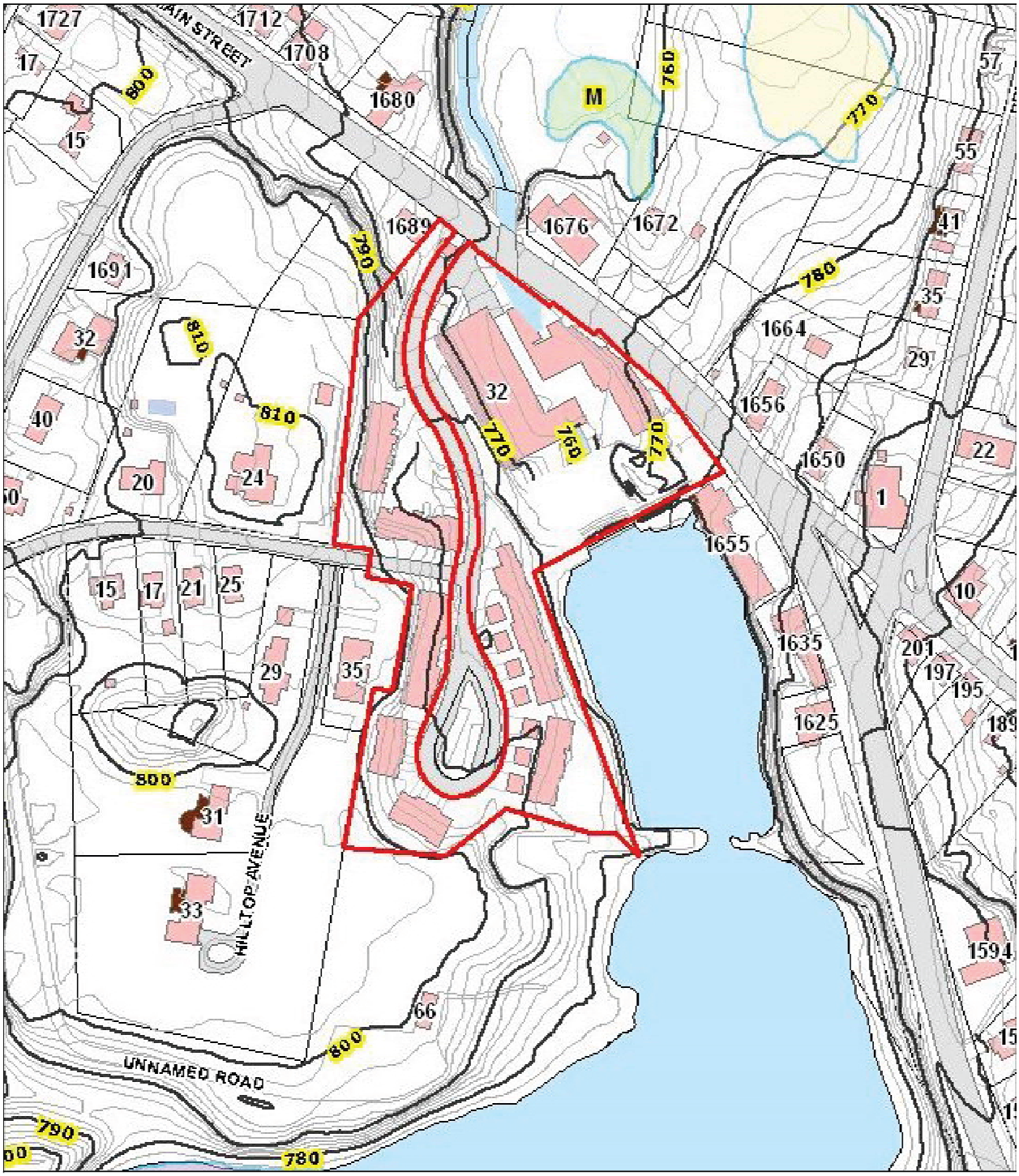
100 Industrial Drive



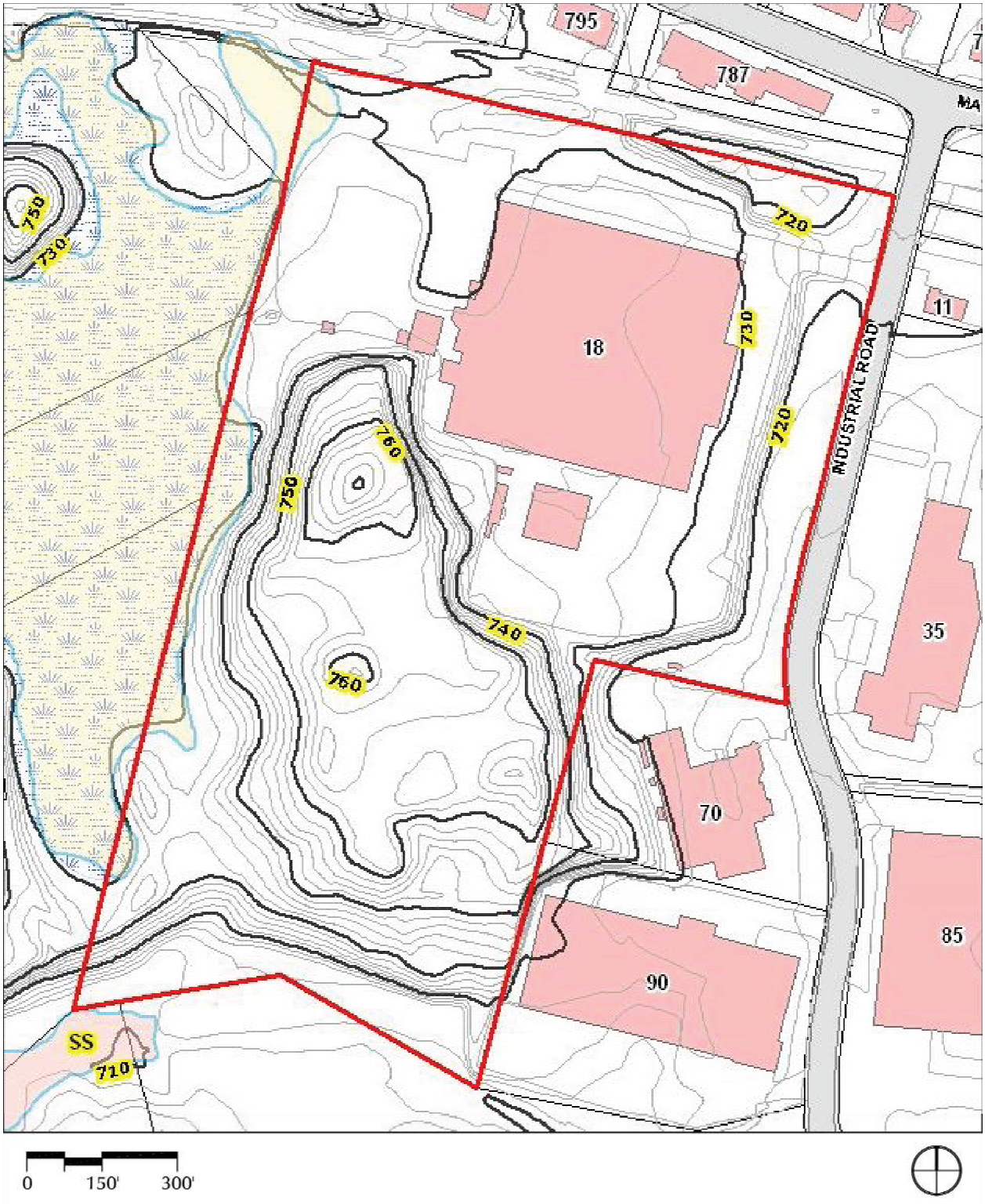
Electronic Controls Corporation



Jefferson Mills



Reed Roll and Thread



[SEAL]

COMMONWEALTH OF MASSACHUSETTS
LAND COURT
DEPARTMENT OF THE TRIAL COURT

Case No.: 05 TL 131648

JUDGMENT IN TAX LIEN CASE

Town of Holden

vs.

Holden Youth Sports, Inc.

This case came on to be heard and was argued by counsel, and thereupon, upon consideration thereof, it is

ADJUDGED and ORDERED that all rights of redemption are forever foreclosed and barred under the following deed(s) given by and/or the tax taking(s) made by the Collector of Taxes for the Town of Holden in Worcester County and said Commonwealth:

Land Type	Tax Taking Date	Book No.	Page No.	Document No.	Certificate of Title No.
Recorded	08/22/2003	31372	189		

By the Court: Deborah J Patterson

Attest:

Deborah J Patterson
Recorder

Entered: April 21, 2006

A TRUE COPY
ATTEST:
Deborah J. Patterson
RECORDER

Return To: Merrick, Louison & Costello
67 Batterymarch Street
Boston, MA 02110

BOOK 16926 PAGE 9

20828

FLETCHER TILTON & WHIPPLE, P.C.
TITLE NO. 4185

Fletcher, Tilton & Whipple, P.C.
370 Main Street
Worcester, Massachusetts 01608
Tel. (508) 7[illegible]21

QUITCLAIM DEED

WORCESTER POLYTECHNIC INSTITUTE, a Massachusetts not for profit corporation duly established and having a principal place of business at 100 Institute Road, Worcester, Worcester County, Massachusetts 01609

for consideration paid and in full consideration of less than One Hundred Dollars

grants to HOLDEN YOUTH SPORTS INC., a not for profit corporation with a principal place of business at 370 Main Street, Worcester, Massachusetts 01608

with QUITCLAIM COVENANTS

a certain parcel of land in Holden, Worcester County, Massachusetts being shown on "Plan of Land in Holden Prepared for Worcester Polytechnic Institute", dated August 14, 1989 and recorded with Worcester District Registry of Deeds Plan Book 625, Plan 59 and being a portion of a 80.78 acre parcel lying on the easterly line of Chapel Street bounded and described as follows:

BEGINNING at a point on the easterly line of Chapel Street at land now or formerly of Henry Esber;

THENCE N. 36° 05' 32" E. 151.48 feet by said land of Esber to Bound XX;

THENCE N. 08° 15' 16" E. 248.36 feet continuing by said Esber land and land now or formerly of John Canavan to Bound XXI;

THENCE N. 27° 12' 00" E. 631.35 feet by land now or formerly of Hendrickson, Hoyt, Howell, Bengtson, and Larson to Bound XXII;

THENCE N. 64° 15' 14" W. 183.08 feet by land now or formerly of Larson to a point on the southeasterly line of Malden Street;

THENCE N. 32° 18' 20" E. 252.47 feet by Malden Street to a point;

THENCE N. 31° 14' 20" E. 107.45 feet continuing by Malden Street to a point;

THENCE N. 31° 56' 16" E. 82.52 feet continuing by Malden Street to a point;

THENCE N. 31° 29' 42" E. 210.42 feet continuing by Malden Street to a point;

95 MAR 16 PM 1:35

Chapel St. Holden

WPPLMB666

THENCE N. 32° 06' 25" E. 150.16 feet continuing by Malden Street to a point;

THENCE N. 30° 40' 22" E. 222.47 feet continuing by Malden Street to a point at the most northerly corner of the premises;

THENCE S. 03° 00' 35' W. 37.92 feet to a point;

THENCE S. 42° 49' 50" E. 39.77 feet to a point;

THENCE S. 57° 29' 15" E. 326.79 feet to Bound XXV;

THENCE S. 17° 01' 56" W. 415.83 feet to Bound XXVI;

THENCE S. 62° 44' 27" E. 214.67 feet to a point;

THENCE S. 61° 10' 20" E. 143.78 feet to a point;

THENCE S. 67° 11' 35" E. 98.72 feet to a point;

THENCE S. 60° 26' 27" E. 91.96 feet to Bound XXVII;

THENCE N. 02° 18' 13" E. 174.67 feet to a point;

THENCE N. 02° 20' 21" E. 216.57 feet to Bound XXVIII, the preceeding six courses being by land now or formerly of John A. Larson et al;

THENCE S. 56° 24' 15" E. 52.34 feet to a point;

THENCE S. 56° 55' 16" E. 1,210.33 feet to Bound XXIX;

THENCE S. 10° 21' 54" E. 361.84 feet by land now or formerly of Albert L. Linderg to Bound XXX;

THENCE S. 83° 45' 50" W. 946.25 feet by land now or formerly of Harold E. Pierson to bound XXXI;

THENCE S. 07° 28' 29" E. 857.79 feet by land of said Pierson and land now or formerly of Milton L. Pearson to Bound XXXII;

THENCE S. 86° 24' 18" W. 1112.67 feet by land now or formerly of Edward Arthur Bishop to Bound XXXIII;

THENCE by a curve to the left with a radius of 1020.00 feet, 144.25 feet by the easterly line of Chapel Street to a point;

THENCE N. 45° 34' 04" W. 492.29 feet continuing by Chapel Street to a point;

THENCE by a curve to the right with a radius of 1980.00 feet, 261.77 feet continuing by Chapel Street to a point;

THENCE N. 37° 59' 34" W. 49.57 feet continuing by Chapel Street to the point of beginning.

EXCEPTING from the foregoing premises Lots 73, 74, 75, 76, 77, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, and 89 as shown on Plan Book 619, Plan 80.

BEING a portion of the premises conveyed to Holden Educational Holding Inc. by deed recorded in Book 12094, Page 28.

SUBJECT to the following restrictions which are for the benefit of the Inhabitants of the Town of Holden and shall be enforceable by and through the Board of Selectmen for the Town of Holden (the "Town").

a. The land conveyed by this deed shall be used solely for athletic fields or other recreational uses, unless consent for another use is agreed to by the Town. No later than fifteen (15) months from the date hereof, Holden Youth Sports, Inc., will present a development plan for athletic facilities on the land to the Board of Selectmen of the Town for the Board of Selectmen's review and approval. No development shall take place on the land without such approval, which will not be reasonably withheld.

b. If construction of the athletic facilities as approved by the Board of Selectmen is not commenced within thirty-six (36) months of the conveyance of the land, or if the construction of such athletic facilities is not substantially completed in the opinion of the Board of Selectmen within sixty (60) months of the conveyance, or by such later date as may be agreed to pursuant to Paragraph (c) below, then in either event, at the Town's option, Holden Youth Sports, Inc., shall convey the land to the Town. The Town may exercise its option by written notice given to Holden Youth Sports, Inc., by the Town Manager of the Town or, if there is no Town Manager at that time, by whomever shall be acting as the Chief Executive Officer of the Town;

c. If construction of the athletic facilities approved by the Board of Selectmen is commenced within thirty-six (36) months of the conveyance of the land, and is proceeding with reasonable diligence to completion, then Holden Youth Sports, Inc., may, within fifty-four (54) months of the conveyance, request an extension of the sixty (60) month period to complete the construction by giving notice to the Chairman

of the Board of Selectmen and the sixty (60) month period may be extended for such period as shall be agreed upon in writing by the Board of Selectmen which shall be recorded in the Worcester District Registry of Deeds. Approval of a request for an extension shall not be unreasonably withheld.

d. If Holden Youth Sports, Inc. desires at any time to convey or otherwise dispose of any portion or all of the land, then Holden Youth Sports, Inc., shall give written notice to the Town of its desire to convey, specifying the name and address of the proposed grantee, and a description of the land area involved. Within ninety (90) days of receipt of such notice from Holden Youth Sports, Inc., the Town shall have the right to acquire the land proposed to be conveyed or otherwise disposed of for the sum of one ($1.00) dollar, with such conveyance to the Town to be completed within sixty (60) days of the exercise of the Town's option;

This conveyance creates no new boundaries.

This conveyance does not constitute all or substantially all of the assets of the Grantor.

WITNESS my hand and seal this 8th day of March, 1995.

WORCESTER POLYTECHNIC INSTITUTE

By John Lott Brown President

By Robert W. Bailey V. Pres and Treas
Vice President & Treasurer

COMMONWEALTH OF MASSACHUSETTS

Worcester, ss. March 7, 1995

Then personally appeared the above-named John Lott Brown and Robert W. Bailey President and Treasurer, respectively and acknowledged the foregoing instrument to the free act and deed of Worcester Polytechnic Institute, before me,

Marcia E. Kwederis
Notary Public
My Commission Expires:

Marcia E. Kwederis
NOTARY PUBLIC
My Commission expires Jan. 25, 2002

WPPLMB666

ATTEST: WORC. Anthony J. Vigliotti, Register

BRASSARD DESIGN + ENGINEERING

June 28, 2012

Mr. William Senecal
Lamoureux Pagano Architects
108 Grove Street
Worcester, MA 01605

RE: Mountview Middle School – Feasibility Study
Design Alternatives – Site Work

Dear Bill:

As part of the feasibility study for the Mountview Middle School project, Brassard Design & Engineering, Inc. (BDE) has evaluated site construction implications associated with several project design alternatives as defined by Lamoureux Pagano Associates. The alternatives include:

1. Addition and Renovation
    a. Minimum Scope
    b. Moderate Scope
    c. Heavy Scope
2. New Construction – Existing Site
3. New Construction – Alternative Site

---

1. **Addition and Renovation**
The Addition and Renovation alternative includes varying degrees of correcting and/or improving operational and physical deficiencies in terms of site construction and site access.

    a. <u>Minimum Scope</u>
    The minimum scope of work this alternative would include work items relating to correcting physical deficiencies on the existing site that violate code requirements, or which affect the health and safety of the public. For the existing Mountview school site these would include the following:

        i. Striping/restriping portions of the existing parking lot and access drives to define or improve vehicle access and maneuvering. This would potentially include establishment of new or relocation of existing designated accessible parking spaces with updated signage;
        ii. Evaluation and potential remediation of the existing underground fuel storage tank;
        iii. Evaluation of and potential replacement of handrails at existing accessible ramp at main building entry;
        iv. Repair of damaged post indicator valve at rear of building.

b. Moderate Scope
The moderate scope of work for this alternative involves making practical/reasonable site improvements to the existing school property to achieve the objective of bringing the facility in line with desired programming goals. In addition to the site improvements included under the "minimum scope", the following improvements would be included under the 'moderate" Addition and Renovation alternative;

i. Repair, seal, and/or partially resurface and restripe the existing parking lot;
ii. Evaluate and selectively repair/replace existing sidewalks;
iii. Expand the pavement at the rear of the school building to increase parking availability;
iv. Update / upgrade existing parking and access signage and other informational signage;
v. Install an exterior grease trap on the cafeteria discharge pipe;
vi. Implementation of moderate landscaping improvements including addition of existing ornamental shrubs and installation of new trees, shrubs, and groundcover.

c. Heavy Scope
The heavy scope of work for this alternative involves making site improvements necessary to accommodate a substantial building addition, and to bring the site access facilities, utility systems, and athletic fields up to currently accepted standards for new construction;

i. Reconfiguration of the rear access drive and construction of additional parking facilities to replace spaces lost to the building construction and to augment the total parking count to meet the building programming needs;
ii. Removal and replacement of existing bituminous pavements;
iii. Construction of a new secondary access road along western side of the Site connecting to Chapel Lane including related stormwater mitigation;
iv. Reconstruction of the existing site entrance to replace and/or remove & reset existing curbing;
v. Relocation of existing water, sewer, and drainage utility systems at the rear of the existing building to accommodate building addition construction;
vi. Augmentation of existing stormwater system to include provisions for water quality treatment and to promote groundwater recharge per the MA DEP Stormwater Standards;
vii. Improvements to the existing athletic fields including installation of additional and replacement of existing perimeter fencing, general turf improvements and field irrigation, installation of new and replacement of existing playing field benches and other appurtenances;
viii. Campus-wide landscape/planting improvements.

2. **New Construction – Existing Site**
   New construction on the existing Mountview site would require a phased site demolition / site construction sequence that could involve the following general elements:

   a. Elimination of the westerly athletic field and establishment of the main building construction zone;
   b. Use of a portion of the northern athletic fields as a construction staging area;
   c. Possible stabilization of the remaining portion of the existing soccer field as an interim parking area for current middle school use;
   d. Potential reconfiguration of a portion of the existing access drives to establish a construction entrance;
   e. Construction of a new secondary access road along western side of the Site connecting to Chapel Lane including related stormwater mitigation;
   f. Construction of a new school building with all new utility service connections (or extension / reconfiguration of existing services) in Mount View Drive and Shrewsbury Street for:
      i. domestic water
      ii. fire protection
      iii. sanitary sewer
      iv. gas
      v. power and telecommunications

   g. Demolition of the existing school building;
   h. Construction of a new parking facility and new stormwater management systems in compliance with DEP stormwater management requirements including but not limited to provision for groundwater recharge and water quality treatment;
   i. Construction of a new athletic fields;
   j. Implementation of new landscape program including trees, shrubs, ground cover, irrigation system, and site lighting.

3. **New Construction – Alternative Site**
   New construction on an alternative site would include the same general elements as listed in the previous section but would not be a phased project and would also include additional elements related to site preparation:

   a. Establishment of major erosion and sedimentation control devices for internal and perimeter areas;
   b. Clearing and grubbing of trees, and stripping of topsoil for access and parking areas, building zone, and for athletic facility areas;
   c. Construction of new access drives providing looped building access and secondary/emergency access;
   d. Construction of new parking facilities;

e. Construction of new pedestrian access ways, walks, ramps, etc.;
f. Potential wetland roadway crossing and wetland replication;
g. Installation of new building utility service connections for:
    i. domestic water
    ii. fire protection
    iii. sanitary sewer
    iv. power and telecommunications

h. Construction of a stormwater management system in compliance with DEP stormwater management requirements including but not limited to provision for groundwater recharge and water quality treatment;
i. Construction of athletic fields including a baseball field with perimeter fencing, backstop and related appurtenances, a soccer field and perimeter fencing, and an additional practice field;
j. Implementation of new landscape program including trees, shrubs, ground cover, irrigation system, and site lighting.

The above is not intended to be an exhaustive list, but provides a general frame of reference for the scale of site construction necessary for each of the listed alternatives. If you have any questions or require additional information for any of the above sections, please contact us at your convenience. Thank you for the opportunity to provide our input.

Sincerely,
BRASSARD DESIGN & ENGINEERING, INC.

Matthew T. Brassard, PE

General Information

We have reviewed the four basic design options presented for the Mountview Middle School feasibility study by Lamoureux Pagano and Associates, and will present a description of each structural system. Also, we will present the basic structural scope and implications of each design option. The design options are:

1. No Build
2. Renovation
   a. Minimal Work: Maintenance to correct defective equipment.
   b. Moderate Work: Update equipment, modernize windows, and minimal reconfiguration of spaces.
   c. Full Renovation and Addition: Reconfiguration of spaces and additions to building.
3. New Construction- Existing Site
4. New Construction- Alternate Site

1. No Build Option

The "No-Build" option includes completing only regular building maintenance required to maintain the existing 91,000 ft^2 building. The "No-Build" does not include any renovation work, so this option will need to conform to Chapter 5 "Repairs" of the International Existing Building Code, 2009 Edition, as modified by the Massachusetts State Building Code, Eighth Edition.

Existing Structural Systems:

- Structural systems of the building will not be modified as part of the "No Build" option.

Structural Scope:

- Since the building will be undergoing regular maintenance as part of the "no-build" option, we would recommend general repair of steel channels at the base of the masonry walls in the 1966 building, especially at locations where the channel is in contact with grade and has deterioration.

Comments: As part of the "no-build" option, the work will be limited general maintenance and repairs and will only need to conform to Chapter 5, "Repairs" of the IEBC. We did not notice substantial structural damage, so repairs shall restore damaged elements to their predamage condition. Since the building will be undergoing regular maintenance as part of the "no-build" option, we would recommend general repair of steel channels at the base of the masonry walls in the 1966 building, especially at locations where the channel is in contact with grade and has deterioration. Repairing interior CMU walls with cracks is beyond the scope of "general maintenance", but should be included in future maintenance plans of the school district.

2-A. Renovation Option- Minimal Work to Defective Equipment

This renovation option includes completing regular building maintenance and updating damaged mechanical equipment. Renovating the building by updating the mechanical systems with fixtures that serve the same purpose, the "Renovation- Minimal Work" option will need to conform to Level 1 Work of the International Existing Building Code, 2009 Edition, as modified by the Massachusetts State Building Code, Eighth Edition.

Existing Structural Systems:

- 1966 Building (55,000 ft^2)
  - Concrete foundation walls and spread footings.
  - 4" Concrete slabs on grade.

- Steel columns, typically W6 & W8 wide flange shapes with fire shells on select columns. Column lines are typically spaced 10 feet apart.
- Floors framed with composite steel beams and 5" concrete one-way slabs spanning between beams.
- 10" Concrete 1-way slab at Auditorium Stage.
- Roof framed with steel beams, long span joists, and 3" metal roof deck.
- Unreinforced concrete masonry partitions on slabs.
- Brick veneer backed up by unreinforced concrete masonry walls.
- Lateral Force Resisting System: No designated system. Unreinforced masonry walls provide current resistance to lateral loads.

- 1987 Classroom Addition (36,000 ft^2)
  - Concrete foundation walls and spread footings.
  - 5" & 6" Concrete slabs on grade.
  - Steel columns, typically W8 wide flange shapes with fire shells on select columns.
  - Floor- 4" Concrete slab on form deck and steel beams and joists.
  - Roof- 1 ½" Steel deck on steel beams and joists.
  - Lateral Force Resisting System: No designated system. Unreinforced masonry walls provide current resistance to lateral loads.

Structural Scope:

- Repair of steel channels at the base of the masonry walls in the 1966 building, especially at locations where the channel is in contact with grade and has deterioration.
- Interior CMU walls with vertical and stepped cracks should be repointed or have sawn control joints installed and caulked as part of regular maintenance.

Comments: As part of the "Renovation-Minimal Work" option, the building will undergo little to no structural work and the renovation will be limited to replacing defective mechanical/electrical equipment with similar equipment. The renovation will be fairly limited and will only need to conform to Level 1 Work. Since the building will be undergoing regular maintenance as part of the "Renovation-Minimal Work" option, we would recommend repair of steel channels at the base of the masonry walls in the 1966 building, especially at locations where the channel is in contact with grade and has deterioration. Interior CMU walls with cracks should be repointed or have control joints sawn and caulked as part of regular maintenance.

2-B. Renovation Option- Moderate Work

This renovation option includes completing regular building maintenance (new roofing, new windows, re-point masonry, etc.) and updating the deficient mechanical systems, as well as some reconfiguring of the interior space. Re-roofing the building and updating the mechanical systems with fixtures that serve the same purpose, the "Renovation- Moderate Work" option will need to conform to Level 1 Work of the International Existing Building Code, 2009 Edition, as modified by the Massachusetts State Building Code, Eighth Edition. If reconfiguring the interior space includes modifying existing CMU walls or structural framing, the Work will need to conform to the requirements of at least Level 2 Work and possibly Level 3 Work.

Existing Structural Systems:

- Structural systems of the existing building are similar to "Renovation- Minimal Work" option.

Structural Scope:

- Anchorage of the roof diaphragm to the exterior masonry walls will need to be reviewed in accordance with the International Existing Building Code. Based on the existing drawings, the diaphragm (metal deck) is attached to steel framing at the exterior walls and the steel

beams are attached to the walls with anchors and by the masonry being built around the framing members.
- Install structural steel framing at top of existing masonry partitions at roof level to brace existing walls for out-of-plane seismic loads; including new steel beams and angle framing secured to the roof diaphragm at each existing partition at buildings undergoing renovation work.
- Remove 2-3 interior masonry partitions at buildings undergoing Level 2 or 3 Work, in each orthogonal direction, at each of the three building segments and replace with new reinforced masonry shear walls, including new strip footings.
- Install new framing at any new roof equipment.
- Repair of steel channels at the base of the masonry walls in the 1966 building, especially at locations where the channel is in contact with grade and has deterioration.
- Interior CMU walls with vertical and stepped cracks should be repointed or have sawn control joints installed and caulked as part of regular maintenance.

Comments: As part of the "Renovation-Moderate Work" option, the building will be re-roofed and existing mechanical/electrical equipment will be repaired or replaced with similar equipment. The renovation will be fairly limited and will only need to conform to Level 1 Work. As part of Level 1 structural work, masonry parapets and masonry wall anchorage need to conform to the International Existing Building Code. Based on our review, there are no masonry parapets that need to be corrected, and the roof diaphragm appears to be adequately connected to the exterior steel framing and attached to the exterior masonry walls. If interior CMU walls are removed or modified, the Level of Work could increase to Level 2 or 3, depending on the work, which would expand the structural review of the renovation and likely require upgrades to the seismic force-resisting system. Repair of steel channels at the base of the masonry walls in the 1966 building would need to be completed as part of this renovation also. Interior CMU walls with cracks should be repointed or have control joints sawn and caulked as part of regular maintenance.

2-C. Full Renovation and Addition Option

The "Full Renovation and Addition" option includes demolition and expansion of the existing Gymnasium and Cafeteria Building (1966), renovation of the existing Administration/Classroom Building (1966), renovation of the existing Classroom Building (1987) and addition of a structurally isolated Classroom Building. Due to the substantial renovation work involved within the existing building, the renovation portion of the "Addition and Renovation" option will need to conform to the International Existing Building Code for Level 3 Work, as modified by Chapter 34 of the Massachusetts State Building Code. The new construction portion of the project will need to conform to the International Building Code, as modified by the Massachusetts State Building Code.

Existing Structural Systems:
- Structural systems of the existing building are similar to "Renovation- Minimal Work" option.

New Addition Structural Systems:
- Foundations:
  - Interior concrete spread footings
  - Continuous reinforced concrete frost wall and footing at exterior walls
- Columns:
  - Wide flange steel column (W8) or steel tube column (HSS6x6)
- Framed Floors:
  - Wide flange composite steel beams
  - Composite metal deck
  - Concrete fill

- Roof:
    - Wide flange steel beams
    - Metal roof deck
- Lateral Force Resisting System:
    - Ordinary steel moment frames and concentrically braced steel frames

Structural Scope at Existing Buildings:

- Install structural steel framing at top of existing masonry partitions at roof level to brace existing walls for out-of-plane seismic loads; including new steel beams and angle framing secured to the roof diaphragm at each existing partition.
- Remove 2-3 interior masonry partitions, in each orthogonal direction, at the Administration/Classroom Building (1966) and Classroom Building (1987) and replace with new reinforced masonry shear walls, including new strip footings.
- Structurally isolate the existing Gymnasium/Cafeteria Building from the existing Administration/Classroom Building to facilitate demolition and addition to the Building. Install new structural framing and lateral-force-resisting system (reinforced CMU shear walls) at the limits of the Cafeteria and Gymnasium.
- Install new reinforced CMU wall and strip footing at existing building/demolition interface to close off existing space during construction and provide frost protection.
- Install new framing at any new roof equipment.
- Repair of steel channels at the base of the masonry walls in the 1966 building, especially at locations where the channel is in contact with grade and has deterioration.
- Interior CMU walls with vertical and stepped cracks should be repointed or have sawn control joints installed and caulked as part of regular maintenance.

Comments: From a structural point of view, the "Addition and Renovation" option is the most involved due to the significant renovation of the existing building, phasing of construction, and the integration of the new construction. At a minimum, the existing building will need to be brought into compliance with the International Existing Building Code, as modified by Chapter 34 of the MSBC to increase basic life safety to the minimum requirements of the Code. Also, any modifications to the existing room configurations or change in loading will require significant structural modification to the building.

It should be noted that the renovation will increase the life safety of the existing building, but it will not bring the existing building up to standards of the current Building Code due to lesser quality materials and design practices used at the time of original construction. Also, even though the renovation will extend the life of the existing building, the building should not be expected to last as long or perform as well as the newly constructed additions or a new building. Interior CMU walls with cracks should be repointed or have control joints sawn and caulked as part of regular maintenance. Existing metal roof deck will need to be reviewed after ceilings are removed to verify water damage or deteriorated conditions can be corrected due to previous water leaks.

3. New Construction- Existing Site

The "New Construction-Existing Site" option consists of building an entirely new 3-story school on the same site as the existing school using standard construction methods and materials.

Structural Systems:

- Foundations:
    - Interior concrete spread footings

  - Continuous reinforced concrete frost wall and footing at exterior walls
  - Foundation systems are assumed based on existing conditions and must be verified by a qualified Geotechnical Engineer
- Columns:
  - Wide flange steel column (W8) or steel tube column (HSS6x6)
- Framed Floors:
  - Wide flange composite steel beams
  - Composite metal deck
  - Concrete fill
- Roof:
  - Wide flange steel beams
  - Metal roof deck
- Lateral Force Resisting System:
  - Ordinary steel moment frames and concentrically braced steel frames

Comments: The "New Construction" option is the most flexible option, from a structural point of view. This option will also allow for increased life safety and more flexibility for sustainable design, relative to the "No-Build" or "Addition and Renovation" options. Construction materials and systems will be designed in compliance with the current Massachusetts State Building Code. Based on the proposed location of the new building, it appears that the foundation and other structural systems can be built prior to the demolition of the existing building.

4. New Construction- Alternate Site

The "New Construction- Alternate Site" option consists of building an entirely new 3-story school on an alternate site using standard construction methods and materials.

Structural Systems:

- Foundations:
  - Interior concrete spread footings
  - Continuous reinforced concrete frost wall and footing at exterior walls
  - Foundation systems are assumed and must be verified by a qualified Geotechnical Engineer
- Columns:
  - Wide flange steel column (W8) or steel tube column (HSS6x6)
- Framed Floors:
  - Wide flange composite steel beams
  - Composite metal deck
  - Concrete fill
- Roof:
  - Wide flange steel beams
  - Metal roof deck
- Lateral Force Resisting System:
  - Ordinary steel moment frames and concentrically braced steel frames

Comments: Similar to the Design Option #3, the "New Construction" option is the most flexible option, from a structural point of view. This option will also allow for increased life safety and more flexibility for sustainable design, relative to the "No-Build" or "Addition and Renovation" options. Construction materials and systems will be designed in compliance with the current Massachusetts State Building Code. Since the new construction will take place at an alternate site, the construction of the building will not impair the use of the existing Middle School.

Conclusions:

We have reviewed the four design options and it our professional opinion that all four options are structurally feasible, but both the “No-Build” and each of the “Renovation” options will require reusing the existing structure, which does not conform to current building code standards for seismic loads and will require structural upgrades during any substantial renovation. Since the existing building was constructed in 1966, prior to the development of current seismic requirements, the “Full Renovation and Addition” option will require substantial structural modifications just to meet the current Massachusetts State Building Code requirements for existing buildings to reduce seismic hazards caused by the unreinforced masonry walls throughout the building. The 1966 building, and 1987 addition, was built without expansion joints separating the different sections of the building, so any renovation that includes demolition or modification any portion of the existing structure will require a full seismic review of the existing building, and likely will require new reinforced masonry walls or steel bracing systems that conform to current seismic requirements. Both new construction options will allow use of the existing school while the new building is being constructed, and the new building will be designed to meet the current Massachusetts State Building Code.

Christopher Tutlis, PE
Bolton & DiMartino, Inc.

Mountview Middle School Holden, MA
Preliminary Evaluation of Alternatives – Fire Protection
6-27-12

WHY, WHEN, AND WHAT FIRE PROTECTION WORK IS REQUIRED?

The 1st automatic fire suppression system was patented in England in 1723, and consisted of a cask of water, a chamber of gunpowder, and a system of fuses. By the latter half of the 19th century, a multitude of fire protection devices and design methods had come into being, leading people to recognize the need for quality standards. The National Fire Protection Association (NFPA) was formed in 1896. NFPA design and installation standard 13 forms the basis of all US fire-sprinkler system design.

The purpose of NFPA 13 is to "provide a reasonable degree of protection for life and property from fire". Fire data collected over many years indicates that the chances of dying in a fire are reduced by 50-75%, and average property loss is reduced by 50-67% when sprinklers are present. NFPA feels this simple comparison understates the value of sprinklers, as it lumps all fires together – including those where the sprinkler system failed to operate due to an accidentally closed valve, or where the building hazard had changed without updating the sprinkler system accordingly.

Thus, a fire protection system can be expected to both save lives and reduce property damage in the event of a fire.

The Mass. State Building Code (MSBC) and Fire Prevention Regulations primarily define *where* fire protection systems are required and the required system components.

The current building code (8th edition) requires an NFPA-13-compliant fire protection system "through-out" any Educational (E)-use building over 12,000 sqft. The 8th edition also requires stairwell standpipes if a building's top floor-level is 30 ft or more above adjacent fire-department access (grade) level, and requires standpipes on both sides of stages over 1,000 sqft in size.

Any newly-constructed building (on the existing site or any new site) must meet current code. The currently proposed new-school floor-plan *would* require a sprinkler system thru-out, and *would* require 2, stage-standpipes, but *would not* require stairwell stand-pipes.

The "original" portion of Mt View MS, was constructed in the late 1960's, when there was ***no*** fire protection system requirement. The 1989 addition was built under the 5th Edition of the Mass State Building Code, which did have fire protection requirements – although they differ from current code. The 5th edition required a sprinkler system in the addition only. It also required stairwell stand-pipes in any E-use building with 3 or more stories. Thus, the rear-wing (addition) does have both a sprinkler system and stairwell stand-pipes.

Buildings constructed prior to a code requirements inception are generally "grand-fathered" and only need to be brought up to current code under certain conditions. For a renovated building, the requirements depend on the level of renovation, and whether any addition is built. Mass General Laws (MGL) 148, Section 26 G specifically states that a fire protection system must be installed through-out an existing building if ***either:***

1. Any addition if built that brings the aggregate building area (existing plus new) over 7,500 sqft. Since the existing school is already well over 7,500 sqft, an addition of any size would trigger a requirement for sprinklers through-out.

2. The building undergoes "major alterations". This phrase is not strictly defined in any codes, but the Mass. Dept. of Fire Services has issued guidelines to help local Fire Chiefs determine when a renovation is "major" or not. These guidelines have 2 groups of criteria (A and B), and state that if any 1 criteria from ***both*** groups is met, it can be reasonably inferred that the renovation is "major". The criteria are:

    a. **Group A – Does the renovation include:**

        i. The demolition or re-construction of ceilings or the installation of new hung ceilings.

        ii. The removal or installation of sub-flooring (not merely the installation or replacement of carpeting or finish flooring)

        iii. The demolition and/or re-construction or repositioning of walls or stairways or doorways.

        iv. The removal or relocation of a significant portion of the buildings HVAC, plumbing, or electrical systems, involving the penetrations of walls, floors, or ceilings.

    b. **Group B**

        i. Does the work affect 33% or more of the total building gross square footage?

        ii. Is the cost of the renovation 33% or more of the total assessed value of the building, as of the date of permit application?

This study addresses 4 different levels of renovation:

No Build: When a building remains "as is", the existing level of Fire Protection is required to be maintained, but the system does not need to be extended to any other parts of the building.

Minimal work – fix what is broken: This would fall either under the IEBC definition of "repairs" or a "level 1" renovation – "removal and replacement or covering of existing materials, elements, equipment or fixtures using new materials, elements, equipment or fixtures that serve the same purpose. In either case, per the IEBC, the existing level of Fire Protection is required to be maintained, but the system does not need to be extended to any other parts of the building.

Moderate work – update equipment and windows with minimal reconfiguration of spaces: This would fall under the IEBC definition of a level 2 renovation, which includes: reconfiguration of any spaces, the addition or elimination of any windows or doors, the reconfiguration or extension of any system, or installation of any additional equipment". This level of renovation involves 100% of the building area (for window replacement) and would involve ceiling replacement (for mechanical, electrical, and plumbing updating), so sprinklers will be required through-out the entire building.

Full renovation – reconfiguration and additions to building. This would fall under the IEBC definition of a level 3 renovation, which is, the work area exceeds 50% of the aggregate building area. Both because of the addition, and the re-configurations, this would certainly be considered "major alterations", and would require that all current FP code requirements be met by the existing building as well as any addition.

Miscellaneous Recommended FP work

1. Since current code would not require stairwell standpipes in either the existing or proposed new buildings, we recommend eliminating the existing stairwell hose stations if "renovation" is the chosen option. Standpipes require a much higher water-pressure and flow than a sprinkler system. Thus, depending on flow test results, eliminating the standpipes could potentially eliminate the need for fire pumps. This will be reviewed in more detail after the recommended flow test occurs.

2. Since the addition sprinkler system is over 20 years old, NFPA codes would require that either:

   A. all existing sprinklers be replaced, OR
   B. a representative sample of each sprinkler type be sent out for laboratory testing. All sprinklers of each type would then be replaced if any of it's test samples failed.

   As sprinklers are not that expensive, we recommend option 1 – simply replace them all.

3. The local fire department is changing their Fire Dept. Connection (FDC) standard from "2-1/2" Siamese" to "4" Storz". The existing Siamese FDC should be replaced with a 4" Storz, to maintain compatibility with the fire department requirements.

4. A 2010 FP inspection report noted 2 issues with the fire pump. These should be addressed in all of the renovation options (unless the flow test indicates the fire pumps can be eliminated).

Summary:

- The no-build option, minimal repair option, or level 1 renovation would all require that the existing level of FP protection be maintained. None of these options would require the FP system to be extended to the remainder of the building.

- A new FP system ***would*** be required through-out the building if the alternations are considered "major" or if any size addition is built. Both the "moderate" and "full" renovation options fall in this category.

- Any new school constructed on any site ***would*** require a new FP system thru-out.

FIRE PROTECTION WATER SUPPLIES

Existing Site: The Mt. View MS formerly obtained its water from a low-pressure tank located across the street from the school. In the year 2000, Holden made some major improvements to its water system. Among these improvements:

- the schools low-pressure water tank system was eliminated,
- a new 12" city water main was installed on Brattle St (about 500' east of the school). This 12" main is pumped from the city of Worcester' water system.
- The center-of-Holden water system was extended via a new 10" Main St. main to Chapel St., (about 500' west of the school). This 10" main is fed by a 16" main from the main pumping station and 1,010'-elevation-overflow storage tank.
- A new 8" line was run past the school that connects to both the 10" Main St main and 12" Brattle St. main.
- Although the Town has no flow test data for the school area, their computer modeling predicts over 1500 gpm flow available in front of the school.

Existing static pressure at the school is unknown. Based just on the elevation difference between the Town's main water storage tank (over-flow of 1,010 ft) and the school rear-grade elevation (807 ft), available static pressure would be 88 psi minus friction losses from others' town-water use. If friction losses are fairly minimal, it is possible the existing fire-pumps could be eliminated. ***A flow test is definitely recommended at the school to confirm available flow and pressure.***

Proposed Alternate Site:

One alternate site has been proposed – which borders Chapel St and Malden St. Both of these 2 streets have 8" water mains, fed from a 12" main on Bullard St. The Bullard St. main is fed from the same center-of-town, 1010'-overflow storage tank and pumping station as the existing school. The alternate site is at roughly the same elevation as the existing site (790'), so is expected to have roughly the same available static pressure. Though the alternate site is closer to the center-of-town storage tank, it has longer runs of 8" pipe, and is fed from only 1 direction. It is expected to have roughly comparable (perhaps slightly lower) flow and pressure than the existing site.

No significant FP cost difference is expected between a newly constructed building on the existing site or the alternate site.

If this alternate site is selected, it is strongly recommended that a flow test be provided prior to schematic design phase. Accurately knowing the available flow and pressure will permit a definitive determination of whether fire pumps are required or not.

PRELIMINARY RECOMMENDATIONS

The budget costs shown in Table 1 are based on building square-footage only.

The following general recommendations apply to ***all options*** being considered:

- no-build
- minimal work
- moderate renovation,
- renovation-addition,
- new-construction-existing site, and
- new-construction-alternate site.

Installation

- **Flow test:** Prior to schematic design, provide a flow-test utilizing the 2 hydrants on the existing school property (or 2 closest hydrants on Malden St for the alternate site).

- **General Storage issues:** Plan for all storage heights to be less than 12'. Review available storage areas and storage needs. Organize storage to keep it confined to designated storage rooms, with appropriate FP coverage.

- **Special Storage Issues:** Provide listed flammable storage cabinets for the storage of all flammable or combustible liquids or chemicals. Eliminate all plastic shelving, and replace it with metal shelving.

- **Standpipes:** Provide on both sides of the stage. Not required in the stairwells - so for renovation options, remove the existing stair-well hose-valves.

- **Flammability Standards:** Ensure that existing and new furniture and window coverings meet 527 CMR flammability standards.

- **Fire Signalling:** Connect new FP system alarms to a new central Fire Alarm Control Panel (FACP) (provided under electrical).

The sprinkler system recommendation varies by option:

- **Sprinkler system:**

    1. **No build and minimal renovation options:** Maintain the existing level of FP protection. Replace all existing sprinklers, replace the FDC, and test and repair the fire pump (if pump still needed based on flow test)

    2. **Moderate renovation or Major renovation / addition** Provide a new, NFPA 13 system through-out the original 1967 building and any additions. Replace all existing sprinklers, replace the FDC, and test and repair the fire pump (if pump still needed based on flow test). Remove the stage extension, or replace it with a non-combustible structure to eliminate the need for exposed piping to sprinklers below the platform.

    3. **New construction (any site):** Provide a new, NFPA 13 system through-out

Maintenance:

- **Training and inspections:** Train in-house personnel, and provide required monthly inspections using in-house inspectors

- **FP Maintenance Contract:** Provide additional code-required maintenance and testing of FP systems alarms and flow via maintenance contract.

SEAMAN ENGINEERING CORPORATION
30 Faith Ave. Auburn, MA 01501 508-832-3535 fx 508-832-3393

Date: June 29, 2012

To: William Senecal – Architect

Co: Lamoureux-Pagano Assoc. Architects, Inc. (via email)

From: Kevin Seaman. P.E. LEED® AP

Re: Mountview Middle School: **Feasibility Study HVAC & Plumbing Narrative – No Build Option**

The following narrative describes the proposed scope of work pertaining to the heating, ventilation and air conditioning (HVAC) systems and the plumbing systems at the Mountview Middle School for the No Build option. As noted in our earlier existing Mechanical conditions report, several of the HVAC systems and most of the plumbing systems within the existing building have exceeded their useful expected service life and as such have been proposed for replacement as described herein.

The recommendations are broken down into three (3) different levels of remediation as follows:

- Level #1: Minimum work required to repair broken items and meet current codes if the level of work would require such an upgrade to current code.
- Level #2: Implement various energy efficient measures and bring any code deficiencies up to current code standards.
- Level #3: Extensive renovation replacing all equipment, fixtures and such noted as antiquated or within 5-years of achieving their useful expected service life.

HVAC

Central Heating Plant:

Note: Natural gas availability to the site is still being reviewed however it is understood that natural gas service is available near the current project site. If the service cannot be extended to the site and underground LP tank(s) are required we highly recommend a hybrid system be used which can incorporate air source and/or geothermal based heat pumps. The below recommendations presume that adequate natural gas can be brought to the site.

Level #1:

1. Retrofit existing boilers with natural gas-fired burners. Although this is not required, current economic conditions have resulted in natural gas prices being so favorable when compared to #2 fuel oil that a savings of 50% or more can be obtained by switching fuel source to natural gas. So long as natural gas can be brought to the site for a reasonable cost, the payback can often be obtained in less than 1-year.

2. The existing cast iron boilers have been plagued with numerous cracked sections over the years. Typically this is caused by low flow and/or low water return temperature thru the boilers. Based on the pumping, piping and control arrangement it appears that this may be the cause at this site. As such, we recommend retrofitting each boiler loop with boiler primary pumps to insure constant flow thru each boiler. In addition piping and mixing valve arrangement at the boiler would be modified to accommodate this work.

3. Provide new dampers and controls to provide code required combustion air as well as boiler room ventilation.

4. Provide electronic/energy management system (EMS) control of boilers and associated boiler and system pumps, combustion air dampers as well as mixing valves to support the control required preventing further damage to the boilers as well as improving overall energy efficiency.

Level #2:

Same as level #1 although consideration of replacing at least one of the existing boilers with a new gas-fired condensing boiler as described in Level #3 below is recommended presuming natural gas can be brought to the site. Outdoor air reset water temp control shall utilize the condensing boiler at higher outdoor air temperatures and the non-condensing existing boiler at lower outdoor air temperatures. This would allow the more efficient condensing boiler to operate during most heating hours with the older boiler only coming on when heating loads are near peak and higher temperature hot water is required.

Level #3:

1. The buildings heating requirements would be satisfied via high efficiency (93%+) gas-fired condensing hot water boiler plant. Maximum design hot water supply temperature of between 140°F to 180°F depending on extent of heating terminal renovation. Pending final load calculations and system design, initially the boiler plant shall consist of two (2) new gas-fired condensing fire-tube style boilers each with a gross input capacity of 2,500,000 BTUH similar to Lochinvar Crest or equal by Aerco or Viessman. Boilers shall be located within the existing lower level mechanical room with combustion air and flue venting for the new boiler running up within the existing chimney to the roof. This option presumes the domestic hot water heater shall also be vented independently up the existing chimney.

2. Provide 2-pipe hydronic hot water system complete with end-suction system pumps as manufactured by Taco or Bell & Gossett rated for 400 GPM. Hydronic system shall connect to 2-pipe fan coil units, unit ventilators, unit heaters, coils and fin-tube radiation located throughout the building. All new terminals connected to the new system shall be designed to operate with a maximum water temperature of 140°F to maximize plant capacity. Pumps shall have premium efficient motors and be fitted with variable speed drives so that pump energy matches system flow demand.

Distribution and Ventilation:

Level #1:

1. Air handlers serving gymnasium and cafeteria appear to currently operate only if needed for heating and not for ventilation. The presumption is that the units are operational however they are noisy and as such are only operated on an as needed basis. As such it is recommended that the air handlers for these areas be replaced with new units preferably in a rooftop air handler configuration to support ease of access and reduce operational noise levels. Each unit would be fitted with fans, hot water coil, filters, dampers and EMS controls for intelligent IAQ ventilation control based on both occupancy and space load.
2. Repair and remediate existing fans and unit ventilators to insure proper operation.
3. Perform air balancing on all existing systems to achieve code required ventilation levels.

Level #2:

1. Same as #1 along with the below added items.
2. Replace existing kitchen hood and associated ductwork and fan with new constructed and listed for kitchen hood duty. Provide chemical based suppression system at all cook line equipment requiring such. Fit hood with energy saving smoke/heat detection system coupled to variable speed fan which shall also reset make-up air system volume.
3. Implement an EMS system which will control interface to and replace existing timeclocks and electro-pneumatic switches controlling air handling systems unit ventilator and fan occupied/unoccupied cycles is considered essential to achieve energy savings, improved air quality and set the school up for future conversion of other smaller localized HVAC systems.

Level #3:

1. In all existing classrooms currently having unit ventilators, replace with new unit ventilators sized and designed to provide the code required ventilation air and to support heating of the respective spaces. Units shall be controlled via an energy management system which shall automatically reduce ventilation levels during periods when the room is temporarily unoccupied as determined by room occupancy sensors in addition to normal occupied/unoccupied setback and shutdown routines.

2. Alternate to #1 above: In the 1987 structure if headroom for ductwork allows, in lieu of replacing the unit ventilators provide high efficiency packaged rooftop units to provide outdoor air and exhaust to the classroom spaces. Units shall utilize variable speed compressor technology for dehumidification control coupled with hot gas DX reheat and hot water coils tied to the central boiler plant. Units shall also be equipped with total energy recovery (ERU) wheels to utilize waste exhaust to temper incoming fresh air. In addition, units shall be provided with variable speed drive (VSD) supply fans which can modulate based on room ventilation demand. Units shall be as manufactured by Aaon, McQuay or Trane.

3. For the 1966 building classroom areas supported by two (2) central air handlers installed in 1997, provide two (2) roof mounted ERU ventilation units tied to the main return ducts of each of the air handlers. New ERU units shall pretreat outdoor air into each unit thereby reducing the heating energy costs and complying with current energy code requirements.

New units shall also be provided with variable speed compressor technology for dehumidification control coupled with hot gas DX reheat. Provide EMS controls for associated systems.

4. For other area as noted below rooftop air handling units are proposed to facilitate ease of service and economy. For areas requiring cooling, provide high efficiency packaged rooftop units which utilize variable speed compressor technology and hot water coils tied to the central boiler plant. Units supporting high occupancy areas shall be equipped with ERU wheels to utilize waste exhaust to temper incoming fresh air. In addition units shall be provided with variable speed drive (VSD) supply fans which can modulate based on load and ventilation demand. Units shall be as manufactured by Aaon, McQuay or Trane. Areas supported by such equipment shall be as follows:
    - Cafeteria – Unit with VSD and ERU (option for high efficiency cooling)
    - Media Center – Unit with VSD and ERU and high efficiency cooling
    - Office – Unit with VSD and high efficiency cooling (option for ERU)
    - Gymnasium – Unit with VSD
5. The computer classrooms as well as the MDF room shall be cooled via high efficiency ductless split units (one per room) with fan coil mounted within ceiling and condensing unit on roof.
6. Provide two (2) total energy recovery ventilators, one for the girls locker room and one for the boys locker room to support ventilation of these areas as manufactured by Greenheck model ERCH or equal by Aaon or McQuay. Units shall come compete with supply and exhaust fans, total energy recovery wheel, electric frost preheater and hot water coil. Units shall be ducted to exhaust and supply air to the respective locker room areas.
7. All other bathrooms not supported by these systems shall be exhausted by roof mounted centrifugal exhaust fans and/or local exhaust fans controlled by space occupancy sensors.
8. Replace existing kitchen hood and associated ductwork and fan with new constructed and listed for kitchen hood duty. Provide chemical based suppression system at all cook line equipment requiring such. Fit hood with energy saving smoke/heat detection system coupled to variable speed fan. Provide new roof mounted make-up air system which shall also have the ability reset make-up air system volume in unison with kitchen hood.
9. All classroom exhaust fans not supported by central air handlers or ERU systems noted above shall be replaced with new fans with premium efficiency motors. For fans serving multiple rooms, the branch ducts shall be fitted with control dampers and the fans shall be equipped with variable speed drives so as to modulate fan speed based on number of rooms which are occupied.

Controls:

All levels incorporate an EMS system. For Level #1, the EMS system shall control the boiler plant and associated pumps. For Level #2, the controls shall be expanded to all air handlers and central time clocks occupied/unoccupied control of unit ventilators. For Level #3, the systems extend to all HVAC equipment including individual classroom control.

1. The school shall incorporate a direct digital control (DDC) energy management system (EMS) that monitors and controls the HVAC equipment for efficient use. The system is designed on PC based architecture and adjustments are made on a graphics based presentation of building systems. The system also supports maintenance and record keeping needs of the facility. Occupancy of the school is based on the standard school year with occupied/unoccupied conditions based on current school day practice. This is an adjustable feature that can be made to reflect additional operating needs and use of the school building by staff or others.

2. The HVAC systems are generally operated on a school day basis coinciding with the occupied/unoccupied schedule of the standard 180-day school year. Adjustments can be made through the DDC system to allow for usage during periods other than the usual school operating periods.

3. Space temperature is monitored by individual space sensors that transmit data to the central monitoring and control station. Space conditions are adjustable through DDC system and can be modified to meet individual needs. Local control of space conditions is limited to predefined adjustments in space temperature and to facilitate a 3-hour occupied override feature.

4. All classroom systems shall incorporate space occupancy sensors to reset ventilation levels when room is unoccupied during a regularly scheduled occupied period. Systems serving high occupancy areas such as the cafetorium and library also include carbon dioxide (CO_2) indoor air quality (IAQ) sensors which optimize the fresh outdoor air ventilation levels in response to variations in space occupancies.

5. The building shall be connected to emergency power source for operation of heating boilers, pumps and other systems determined to be critical during loss of primary power.

Sustainable Opportunities:

Many of the proposed system and control sequences noted above minimize energy consumption however, further optimization may be obtained by investigating the use of more advanced efficient equipment. In addition, if natural gas is not available on site a hybrid system utilizing either air based heat pumps and/or geothermal based option could be considered. A geothermal chiller/heater could support building cooling loads in the summer as well as provide supplemental heating to the building by preheating both the heating water and domestic hot water thereby reducing the demand on the building fossil fuel boilers. A geothermal well field analysis as well as a life cycle cost would need to be performed to verify economic viability.

Two solar based options to consider would be passive solar wall design using air passing through a wall assembly facing South to preheat air and/or vacuum tube thermal solar panels mounted on the roof to directly supplement the building heating and domestic hot water systems.

Plumbing

Distribution & Conveying Systems

1. As noted in the conditions report, the water distribution system have been experiencing failures oddly more so in the newer 1987 section. This coupled with the age of the older 1966 piping make it probable that the piping may have some lead containing piping, fittings and/or solder. As such, we suggest the entire domestic water distribution system be replaced in its entirety. The new distribution system would consist of copper piping and lead-free fittings and products.

2. In the 1966 building, all sanitary sewer and rain water conductors located above the grade floor slab shall be replaced in their entirety. Underground waste piping shall be examined via camera inspection and if found to be in good condition shall be retained and reused. In the 1987 building most of the waste and storm piping should be in good condition and not need replacement. All waste from the science labs generating acidic waste shall be run through a passive acid neutralizing tank with outflow PH monitor.

3. All waste from the kitchen shall be piped to a large (1,000 gallon+/-) exterior grease trap prior to discharge to the municipal sewer system.

Domestic Hot Water

1. If natural gas is brought to the building or if fuel oil is removed and an LP tank supplied, a high efficiency (93%+) gas-fired condensing boiler/water heaters shall be used to support the buildings domestic hot water needs. Water heater(s) shall be located in the existing lower level boiler room with flue gas and combustion air venting up through the existing chimney and combustion air chase ways.

2. Duel water tempering valve stations shall be provided at the water heater to maintain water heater temperatures above 140°F to prevent bacterial growth in the tank while delivering 125°F water to service fixtures for sanitation and 110°F hot water to public lavatory sinks and other student and public use fixtures to prevent scalding.

3. A recirculating 70°F tempered water loop shall be provided to support the emergency shower eyewash fixtures in the science and chemistry labs.

Fixtures

Planned renovations will most likely require removal of the existing fixtures. Once removed the fixtures shall be replaced with code compliant water conserving fixtures. In addition, to achieve improved MA-CHPS compliance and further water savings we highly recommend ultra low flush water closets and urinals be utilized. The ultra low flush water closets use 1.28 gallons per flush as opposed to the 1.6 gallon per flush allowed by today's code and the urinals use 1 pint (0.13 gallons) per flush as opposed to the current 1 gallon per flush allowed. The combination of these two can result in substantial savings overtime. Sample data sheets of these 2 fixtures with an automated flush valve option are attached to this report.

Lavatory faucets shall be of the low flow metered type controlled by either a wired or battery powered sensor operated faucet. Use of these faucets promotes good hygiene as well as water conservation.

Sustainable Opportunities:

Many of the proposed fixtures and control sequences noted above minimize water usage and conserve energy however, further optimization may be obtained by investigating the use of storm water recovery systems. These systems collect, filter and utilize storm water to supply water to water closets and urinals throughout the building. A life cycle evaluation must be performed to ascertain the initial first costs, annual operating costs and projected savings associated with such a system.

End of HVAC Narrative

SEAMAN ENGINEERING CORPORATION
30 Faith Ave. Auburn, MA 01501 508-832-3535 fx 508-832-3393

Date: June 29, 2012

To: William Senecal – Architect

Co: Lamoureux-Pagano Assoc. Architects, Inc. (via email)

From: Kevin Seaman. P.E. LEED® AP

Re: Mountview Middle School: **Feasibility Study HVAC & Plumbing Narrative – Additions & Renovations Option**

The following narrative describes the proposed scope of work pertaining to the heating, ventilation and air conditioning (HVAC) systems and the plumbing systems at the Mountview Middle School for the Additions & Renovations option. As noted in our earlier existing Mechanical conditions report, several of the HVAC systems and most of the plumbing systems within the existing building have exceeded their useful expected service life and as such have been proposed for replacement as described herein.

HVAC

Central Heating Plant:

Note: Natural gas availability to the site is still being reviewed however it is understood that natural gas service is available near the current project site. If the service cannot be extended to the site and underground LP tank(s) are required we highly recommend a hybrid system be used which can incorporate air source and/or geothermal based heat pumps. The below recommendations presume that adequate natural gas can be brought to the site.

1. The buildings heating requirements would be satisfied via high efficiency (93%+) gas-fired condensing hot water boiler plant. Maximum design hot water supply temperature of between 140°F to 180°F depending on extent of heating terminal renovation in existing structure. Pending final load calculations and system design, initially the boiler plant shall consist of two (2) new gas-fired condensing fire-tube style boilers each with a gross input capacity of 3,000,000 BTUH similar to Lochinvar Crest or equal by Aerco or Viessman. Boilers shall be located within the existing lower level mechanical room with combustion air and flue venting for the new boiler running up within the existing chimney to the roof. This option presumes the domestic hot water heater shall also be vented independently up the existing chimney.

2. Provide 2-pipe hydronic hot water system complete with end-suction system pumps as manufactured by Taco or Bell & Gossett rated for 500 GPM. Hydronic system shall connect to 2-pipe fan coil units, unit ventilators, unit heaters, coils and fin-tube radiation located throughout the building. All new terminals connected to the new system shall be designed to operate with a maximum water temperature of 140°F to maximize plant capacity. Pumps

shall have premium efficient motors and be fitted with variable speed drives so that pump energy matches system flow demand.

Distribution and Ventilation:

1. In the 1987 structure provide high efficiency packaged rooftop units to provide outdoor air and exhaust to the classroom spaces. Units shall utilize variable speed compressor technology for dehumidification control coupled with hot gas DX reheat and hot water coils tied to the central boiler plant. Units shall also be equipped with total energy recovery (ERU) wheels to utilize waste exhaust to temper incoming fresh air. In addition, units shall be provided with variable speed drive (VSD) supply fans which can modulate based on room ventilation demand. Units shall be as manufactured by Aaon, McQuay or Trane.

2. For the 1966 building classroom areas supported by two (2) central air handlers installed in 1997, provide two (2) roof mounted ERU ventilation units tied to the main return ducts of each of the air handlers. New ERU units shall pretreat outdoor air into each unit thereby reducing the heating energy costs and complying with current energy code requirements. New units shall also be provided with variable speed compressor technology for dehumidification control coupled with hot gas DX reheat. Provide EMS controls for associated systems.

3. In the proposed addition classrooms provide total energy recovery ventilators to support multiple classrooms as manufactured by Aaon or equal by McQuay or Greenheck. Units shall come compete with supply and exhaust fans on variable speed drives, total energy recovery wheel, digital scroll compressors, hot gas reheat coil for dehum. cycle and hot water coil (heat pump if no natural gas). Each units shall be rated to provide the minimum amount of outside air required for all the space supported. Units shall be ducted to supply and exhaust air from each space with each space having its own VAV control box on the supply branch and zone damper on the return/exhaust branch. Distribution shall connect to displacement style diffusers in each classroom space. Units shall provided tempered and dehumidified air to all the classroom spaces.

4. For other area as noted below rooftop air handling units are proposed to facilitate ease of service and economy. For area requiring cooling, provide high efficiency packaged rooftop units which utilize variable speed compressor technology and hot water coils tied to the central boiler plant. Units supporting high occupancy areas shall be equipped with ERU wheels to utilize waste exhaust to temper incoming fresh air. In addition units shall be provided with variable speed drive (VSD) supply fans which can modulate based on load and ventilation demand. Units shall be as manufactured by Aaon, McQuay or Trane. Areas supported by such equipment shall be as follows:

    - Cafeteria – Unit with VSD and ERU (option for high efficiency cooling)
    - Media Center – Unit with VSD and ERU and high efficiency cooling
    - Gymnasium – Unit with VSD
    - Office – Unit with VSD with high efficiency cooling (option for ERU) supporting variable air volume boxes with reheat coils.

5. The computer classrooms as well as the MDF room shall be cooled via high efficiency ductless split units (one per room) with fan coil mounted within ceiling and condensing unit on roof.

6. In all addition classrooms, provide multi-tier high output fin–tube radiation in each room. Radiation shall be piped and controlled so that each room shall have its own temperature control zone.

7. Provide two (2) total energy recovery ventilators, one for the girls locker room and one for the boys locker room to support ventilation of these areas as manufactured by Greenheck model ERCH or equal by Aaon or McQuay. Units shall come compete with supply and exhaust fans, total energy recovery wheel, electric frost preheater and hot water coil. Units shall be ducted to exhaust and supply air to the respective locker room areas.

8. All other bathrooms not supported by these systems shall be exhausted by roof mounted centrifugal exhaust fans and/or local exhaust fans controlled by space occupancy sensors.

9. Replace existing kitchen hood and associated ductwork and fan with new constructed and listed for kitchen hood duty. Provide chemical based suppression system at all cook line equipment requiring such. Fit hood with energy saving smoke/heat detection system coupled to variable speed fan. Provide new roof mounted make-up air system which shall also have the ability reset make-up air system volume in unison with kitchen hood.

10. All classroom exhaust fans not supported by central air handlers or ERU systems noted above shall be replaced with new fans with premium efficiency motors. For fans serving multiple rooms, the branch ducts shall be fitted with control dampers and the fans shall be equipped with variable speed drives so as to modulate fan speed based on number of rooms which are occupied.

Controls:

1. The school shall incorporate a direct digital control (DDC) energy management system (EMS) that monitors and controls the HVAC equipment for efficient use. The system is designed on PC based architecture and adjustments are made on a graphics based presentation of building systems. The system also supports maintenance and record keeping needs of the facility. Occupancy of the school is based on the standard school year with occupied/unoccupied conditions based on current school day practice. This is an adjustable feature that can be made to reflect additional operating needs and use of the school building by staff or others.

2. The HVAC systems are generally operated on a school day basis coinciding with the occupied/unoccupied schedule of the standard 180-day school year. Adjustments can be made through the DDC system to allow for usage during periods other than the usual school operating periods.

3. Space temperature is monitored by individual space sensors that transmit data to the central monitoring and control station. Space conditions are adjustable through DDC system and

can be modified to meet individual needs. Local control of space conditions is limited to predefined adjustments in space temperature and to facilitate a 3-hour occupied override feature.

4. All classroom systems shall incorporate space occupancy sensors to reset ventilation levels when room is unoccupied during a regularly scheduled occupied period. Systems serving high occupancy areas such as the cafetorium and media center shall also include carbon dioxide (CO_2) indoor air quality (IAQ) sensors which optimize the fresh outdoor air ventilation levels in response to variations in space occupancies.

5. The building shall be connected to emergency power source for operation of heating boilers, pumps and other systems determined to be critical during loss of primary power.

Sustainable Opportunities:

Many of the proposed system and control sequences noted above minimize energy consumption however, further optimization may be obtained by investigating the use of more advanced efficient equipment. In addition, if natural gas is not available on site a hybrid system utilizing either air based heat pumps and/or geothermal based option could be considered. A geothermal chiller/heater could support building cooling loads in the summer as well as provide supplemental heating to the building by preheating both the heating water and domestic hot water thereby reducing the demand on the building fossil fuel boilers. A geothermal well field analysis as well as a life cycle cost would need to be performed to verify economic viability.

Two solar based options to consider would be passive solar wall design using air passing through a wall assembly facing South to preheat air and/or vacuum tube thermal solar panels mounted on the roof to directly supplement the building heating and domestic hot water systems.

Plumbing

Distribution & Conveying Systems

1. As noted in the conditions report, the water distribution system have been experiencing failures oddly more so in the newer 1987 section. This coupled with the age of the older 1966 piping make it probable that the piping may have some lead containing piping, fittings and/or solder. As such, we suggest the entire domestic water distribution system be replaced in its entirety. The new distribution system would consist of copper piping and lead-free fittings and products. The new system would be sized to support both the existing building and new additions.

2. In the 1966 building, all sanitary sewer and rain water conductors located above the grade floor slab shall be replaced in their entirety. Underground waste piping shall be examined via camera inspection and if found to be in good condition shall be retained and reused. In the 1987 building most of the waste and storm piping should be in good condition and not need replacement. The addition(s) shall be tied into new sanitary and storm system mains

located outside of the building envelope. All waste from the science labs generating acidic waste shall be run through a passive acid neutralizing tank with outflow PH monitor.

3. All waste from the kitchen shall be piped to a large (1,000 gallon+/-) exterior grease trap prior to discharge to the municipal sewer system.

Domestic Hot Water

1. A high efficiency (93%+) gas-fired condensing boiler/water heaters shall be used to support the buildings domestic hot water needs. Water heater(s) shall be located in the existing lower level boiler room with flue gas and combustion air venting up through the existing chimney and combustion air chase ways.

2. Duel water tempering valve stations shall be provided at the water heater to maintain water heater temperatures above 140°F to prevent bacterial growth in the tank while delivering 125°F water to service fixtures for sanitation and 110°F hot water to public lavatory sinks and other student and public use fixtures to prevent scalding.

3. A recirculating 70°F tempered water loop shall be provided to support the emergency shower eyewash fixtures in the science and chemistry labs.

Fixtures

Planned renovations and additions will most likely require removal of the existing fixtures. Once removed the fixtures shall be replaced with code compliant water conserving fixtures. In addition, to achieve improved MA-CHPS compliance and further water savings we highly recommend ultra low flush water closets and urinals be utilized in both the renovation and addition areas. The ultra low flush water closets use 1.28 gallons per flush as opposed to the 1.6 gallon per flush allowed by today's code and the urinals use 1 pint (0.13 gallons) per flush as opposed to the current 1 gallon per flush allowed. The combination of these two can result in substantial savings overtime.

Lavatory faucets shall be of the low flow metered type controlled by either a wired or battery powered sensor operated faucet. Use of these faucets promotes good hygiene as well as water conservation.

Sustainable Opportunities:

Many of the proposed fixtures and control sequences noted above minimize water usage and conserve energy however, further optimization may be obtained by investigating the use of storm water recovery systems. These systems collect, filter and utilize storm water to supply water to water closets and urinals throughout the building. A life cycle evaluation must be performed to ascertain the initial first costs, annual operating costs and projected savings associated with such a system.

End of Narrative

SEAMAN ENGINEERING CORPORATION
30 Faith Ave. Auburn, MA 01501 508-832-3535 fx 508-832-3393

Date: June 29, 2012

To: William Senecal – Architect

Co: Lamoureux-Pagano Assoc. Architects, Inc. (via email)

From: Kevin Seaman. P.E. LEED® AP

Re: Mountview Middle School: **Feasibility Study HVAC & Plumbing Narrative – New Construction Option**

The following narrative describes the proposed scope of work pertaining to the heating, ventilation and air conditioning (HVAC) systems and the plumbing systems at the Mountview Middle School for the New Construction option.

HVAC

Central Heating Plant:

Note: Natural gas availability to the site or sites being investigated is still being reviewed however it is understood that natural gas service is available near the current school site. If the final site proposed does not have natural gas as an option and underground LP tank(s) are required we highly recommend a hybrid system be used which can incorporate air source and/or geothermal based heat pumps. The below recommendations presume that adequate natural gas can be brought to the site.

1. The buildings heating requirements would be satisfied via high efficiency (93%+) gas-fired condensing hot water boiler plant. Maximum design hot water supply temperature of 140°F shall be utilized obtain maximum boiler efficiency. Pending final load calculations and system design, initially the boiler plant shall consist of two (2) new gas-fired condensing fire-tube style boilers each with a gross input capacity of 3,000,000 BTUH similar to Lochinvar Crest or equal by Aerco or Viessman.

2. Provide 2-pipe hydronic hot water system complete with end-suction system pumps as manufactured by Taco or Bell & Gossett rated for 500 GPM. Hydronic system shall connect to 2-pipe fan coil units, unit heaters, coils and fin-tube radiation located throughout the building. All new terminals connected to the new system shall be designed to operate with a maximum water temperature of 140°F to maximize plant capacity. Pumps shall have premium efficient motors and be fitted with variable speed drives so that pump energy matches system flow demand.

Distribution and Ventilation:

1. For most all classroom areas provide total energy recovery ventilators to support multiple classrooms areas as manufactured by Aaon or equal by McQuay or Greenheck. Units shall

come compete with supply and exhaust fans on variable speed drives, total energy recovery wheel, digital scroll compressors, hot gas reheat coil for dehum. cycle and hot water coil (heat pump if no natural gas). Each units shall be rated to provide the minimum amount of outside air required for all the space supported. Units shall be ducted to supply and exhaust air from each space with each space having its own VAV control box on the supply branch and zone damper on the return/exhaust branch. Distribution shall connect to displacement style diffusers in each classroom space. Units shall provided tempered and dehumidified air to all the classroom spaces.

2. For most all classroom spaces, provide high efficiency packaged rooftop units to provide outdoor air and exhaust to the classroom spaces. Units shall utilize variable speed compressor technology for dehumidification control coupled with hot gas DX reheat and hot water coils tied to the central boiler plant. Units shall also be equipped with total energy recovery (ERU) wheels to utilize waste exhaust to temper incoming fresh air. In addition, units shall be provided with variable speed drive (VSD) supply fans which can modulate based on room ventilation demand. Air distribution to the classroom spaces shall be via displacement style diffusers. Units shall be as manufactured by Aaon, McQuay or Trane.
3. For other area as noted below rooftop air handling units are proposed to facilitate ease of service and economy. For area requiring cooling, provide high efficiency packaged rooftop units which utilize variable speed compressor technology and hot water coils tied to the central boiler plant. Units supporting high occupancy areas shall be equipped with ERU wheels to utilize waste exhaust to temper incoming fresh air. In addition units shall be provided with variable speed drive (VSD) supply fans which can modulate based on load and ventilation demand. Units shall be as manufactured by Aaon, McQuay or Trane. Areas supported by such equipment shall be as follows:
    - Cafeteria – Unit with VSD and ERU (option for high efficiency cooling)
    - Media Center – Unit with VSD and ERU and high efficiency cooling
    - Gymnasium – Unit with VSD
    - Office – Unit with VSD with high efficiency cooling (option for ERU) supporting variable air volume boxes with reheat coils.
4. The computer classrooms as well as the MDF room shall be cooled via high efficiency ductless split units (one per room) with fan coil mounted within ceiling and condensing unit on roof.
5. In all classrooms, exterior offices, etc… provide multi-tier high output fin–tube radiation in each room. Radiation shall be piped and controlled so that each room shall have its own temperature control zone.
6. For the locker rooms areas provide two (2) total energy recovery ventilators, one for the girls locker room and one for the boys locker room to support ventilation of these areas as manufactured by Greenheck model ERCH or equal by Aaon or McQuay. Units shall come compete with supply and exhaust fans, total energy recovery wheel, electric frost preheater

and hot water coil. Units shall be ducted to exhaust and supply air to the respective locker room areas.

7. All other bathrooms not supported by these systems shall be exhausted by roof mounted centrifugal exhaust fans and/or local exhaust fans controlled by space occupancy sensors.

8. The kitchen hood system(s) shall include energy saving smoke/heat detection system coupled to variable speed fan(s). These systems shall be interlocked to new roof mounted make-up air system(s) which shall also have the ability reset make-up air system volume in unison with kitchen hood demand.

Controls:

1. The school shall incorporate a direct digital control (DDC) energy management system (EMS) that monitors and controls the HVAC equipment for efficient use. The system is designed on PC based architecture and adjustments are made on a graphics based presentation of building systems. The system also supports maintenance and record keeping needs of the facility. Occupancy of the school is based on the standard school year with occupied/unoccupied conditions based on current school day practice. This is an adjustable feature that can be made to reflect additional operating needs and use of the school building by staff or others.

2. The HVAC systems are generally operated on a school day basis coinciding with the occupied/unoccupied schedule of the standard 180-day school year. Adjustments can be made through the DDC system to allow for usage during periods other than the usual school operating periods.

3. Space temperature is monitored by individual space sensors that transmit data to the central monitoring and control station. Space conditions are adjustable through DDC system and can be modified to meet individual needs. Local control of space conditions is limited to predefined adjustments in space temperature and to facilitate a 3-hour occupied override feature.

4. All classroom systems shall incorporate space occupancy sensors to reset ventilation levels when room is unoccupied during a regularly scheduled occupied period. Systems serving high occupancy areas such as the cafetorium and library also include carbon dioxide (CO_2) indoor air quality (IAQ) sensors which optimize the fresh outdoor air ventilation levels in response to variations in space occupancies.

5. The building shall be connected to emergency power source for operation of heating boilers, pumps and other systems determined to be critical during loss of primary power.

Sustainable Opportunities:

Many of the proposed system and control sequences noted above minimize energy consumption however, further optimization may be obtained by investigating the use of more advanced

efficient equipment. In addition, if natural gas is not available on site a hybrid system utilizing either air based heat pumps and/or geothermal based option could be considered. A geothermal chiller/heater could support building cooling loads in the summer as well as provide supplemental heating to the building by preheating both the heating water and domestic hot water thereby reducing the demand on the building fossil fuel boilers. A geothermal well field analysis as well as a life cycle cost would need to be performed to verify economic viability.

Two solar based options to consider would be passive solar wall design using air passing through a wall assembly facing South to preheat air and/or vacuum tube thermal solar panels mounted on the roof to directly supplement the building heating and domestic hot water systems.

Plumbing

Distribution & Conveying Systems

1. The new distribution system would consist of copper piping and lead-free fittings and products.

2. Sanitary and storm system mains will discharge to outside of the building envelope. It is anticipated that on-site storm water retention shall be implemented. All waste from the science labs generating acidic waste shall be run through a passive acid neutralizing tank with outflow PH monitor.

3. All waste from the kitchen shall be piped to a large (1,000 gallon+/-) exterior grease trap prior to discharge to the municipal sewer system. This exterior trap is in addition to the interior grease traps required by the plumbing code.

Domestic Hot Water

1. A high efficiency (93%+) gas-fired condensing boiler/water heaters shall be used to support the buildings domestic hot water needs. Water heater(s) shall be located in a central boiler room and be direct vented to the exterior of the building.

2. Duel water tempering valve stations shall be provided at the water heater to maintain water heater temperatures above 140°F to prevent bacterial growth in the tank while delivering 125°F water to service fixtures for sanitation and 110°F hot water to public lavatory sinks and other student and public use fixtures to prevent scalding.

3. A recirculating 70°F tempered water loop shall be provided to support the emergency shower eyewash fixtures in the science and chemistry labs.

Fixtures

To achieve improved MA-CHPS compliance and further water savings we highly recommend ultra low flush water closets and urinals be utilized throughout the building. The ultra low flush water closets use 1.28 gallons per flush as opposed to the 1.6 gallon per flush allowed by today's code and the urinals use 1 pint (0.13 gallons) per flush as opposed to the current 1 gallon per flush allowed. The combination of these two can result in substantial savings overtime.

Lavatory faucets shall be of the low flow metered type controlled by either a wired or battery powered sensor operated faucet. Use of these faucets promotes good hygiene as well as water conservation.

Sustainable Opportunities:

Many of the proposed fixtures and control sequences noted above minimize water usage and conserve energy however, further optimization may be obtained by investigating the use of storm water recovery systems. These systems collect, filter and utilize storm water to supply water to water closets and urinals throughout the building. A life cycle evaluation must be performed to ascertain the initial first costs, annual operating costs and projected savings associated with such a system.

End of Narrative

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Recommendations – Electrical Systems
Mountview Middle School
Holden, MA

Date: June 25, 2012
Prepared by: Azim Rawji, P.E.

The systems included in our study were found to have fair or poor overall ratings. There are many reasons for this, including the age and systems and that they do not meet current code requirements. The majority of the electrical systems in the building are either obsolete or outdated; however, these systems are functioning as originally designed and operate under "grandfathered" code conditions. Our report makes note of one critical code compliance concern; that of the existing emergency/standby power and the fire alarm system.

We have categorized each of our recommendations and discussion points into the following options:

1. No Build

   At the time of the survey, the existing egress lighting, exit signage and fire alarm system installed throughout the structure may comply with the code at the time but would not comply with the requirements of the current State Building Code. These systems would have to be upgraded/replaced to meet current life safety codes. The following upgrades are recommended:

   - Test existing egress lighting and install new to provide adequate coverage.
   - Provide new exit signs with LED lamp source and self-contained battery.
   - Augment the existing fire alarm system to provide proper coverage and provide new automatic fire detection and signaling devices.
   - The existing public address system is obsolete and the clock system is non-functional. These systems may be replaced at the Owner's discretion.

2a. Renovation – Minimal Work

The following upgrades are recommended:

- Test existing egress lighting and install new to provide adequate coverage.
- Provide new exit signs with LED lamp source and self-contained battery.
- Augment the existing fire alarm system to provide proper coverage and provide new automatic fire detection and signaling devices.
- Provide new public address and clock system.

2b. Renovation – Moderate Work

B. Electrical Service:

- Provide power for new temporary classrooms to facilitate renovation of the structure in phases.
- Upgrade electrical service and provide new main switchgear and distribution equipment.
- The existing service will remain operational; and the existing panelboards will be replaced during subsequent renovation phases.
- Once all the existing panelboards are replaced, the existing service will be disconnected and removed.

C. Lighting & Controls:

- Provide new light fixtures with high efficient fluorescent and LED lamps.
- Provide new lighting control system including occupancy sensors and daylight harvesting.

D. Emergency Egress and Exit Lighting:

- Test existing emergency egress lighting and install new to provide adequate coverage.
- Provide new exit signs with LED lamp source and self-contained battery.

E. Fire Alarm:

- Provide new voice evac fire alarm system.
- Provide new automatic detection and signaling devices.

F. Public Address/Clock System:

- Provide new public address and clock system.

G. Data Communications:

- Provide new telecommunications cabling infrastructure per the BICSI standards.
- Utilize Category 6 horizontal cabling and optical fiber backbone cabling infrastructure.
- Install telecommunications equipment in dedicated rooms.

2c. Renovation – Full

A. Electrical Service:

- Provide power for new temporary classrooms to facilitate renovation/addition of the structure in phases.
- Upgrade electrical service and provide new main switchgear and distribution equipment.
- The existing service will remain operational; and the existing panelboards will be replaced during subsequent renovation phases.
- Once all the existing panelboards are replaced, the existing service will be disconnected and removed.

B. Lighting & Controls:

- Provide new light fixtures with high efficient fluorescent and LED lamps.
- Provide new central lighting control system including occupancy sensors and daylight harvesting.
- Integrate lighting controls with HVAC system to optimize energy performance of the building.

C. Standby Power:

- Provide standby generator, transfer and distribution equipment.

D. Emergency Egress and Exit Lighting:

- Provide new emergency egress lighting and connect to central emergency battery source.
- Provide new exit signs with LED lamp source and connect to central battery source.

E. Fire Alarm:

- Provide new voice evacuation fire alarm system.
- Provide new automatic detection and signaling devices.

F. Public Address/Clock System:

- Provide new public address and clock system.

G. Data Communications Infrastructure:

- Provide new telecommunications cabling infrastructure per the BICSI standards.
- Utilize Category 6 horizontal cabling and optical fiber backbone cabling infrastructure.
- Install telecommunications equipment in dedicated rooms.

H. Data Communications Equipment:

- Provide new servers and storage.
- Provide new wired and wireless data communications equipment.
- Provide new VoIP telephone system.
- The VOIP telephone system shall be integrated with the public address system.
- Provide telephone handsets in administration offices and in classrooms.

I. Audio-Video Systems:

- Provide new media distribution system.
- Provide new audio-video systems in classrooms and common areas.
- Provide new sound system in the gym/cafetorium.

J. Security Systems:

- Provide new video surveillance system.
- Provide new access control system.
- Provide new intrusion detection system.
- The video surveillance, access control and intrusion detection systems shall be integrated under one unified platform.

3. New Building on Existing/New Site:

A. Electrical Service:

- Provide new electrical service and provide new main switchgear and distribution equipment.

B. Lighting & Controls:

- Provide new light fixtures with high efficient fluorescent and LED lamps.
- Provide new central lighting control system including occupancy sensors and daylight harvesting.
- Integrate lighting controls with HVAC system to optimize energy performance of the building.

C. Emergency/Standby Power:

- Provide emergency/standby generator, transfer and distribution equipment.
- Emergency equipment shall be located in 2-hour rated rooms and emergency feeders shall be 2-hour rated.
- Provide emergency power to emergency egress and exit lighting.
- Provide standby power to boilers, hot water pumps, kitchen freezer/cooler, IT server equipment, and other owner designated standby equipment.

D. Emergency Egress and Exit Lighting:

- Provide new emergency egress lighting.
- Provide new exit signs with LED lamp source.

E. Fire Alarm:

- Provide new voice evacuation fire alarm system.
- Provide new automatic detection and signaling devices.

F. Public Address/Clock System:

- Provide new public address and clock system.

G. Data Communications Infrastructure:

- Provide new telecommunications cabling infrastructure per the BICSI standards.
- Utilize Category 6 horizontal cabling and optical fiber backbone cabling infrastructure.
- Install telecommunications equipment in dedicated rooms.

H. Data Communications Equipment:

- Provide new servers and storage.
- Provide new wired and wireless data communications equipment.
- Provide new VoIP telephone system.
- The VOIP telephone system shall be integrated with the public address system.
- Provide telephone handsets in administration offices and in classrooms.

I. Audio-Video Systems:

- Provide new media distribution system.
- Provide new audio-video systems in classrooms and common areas.
- Provide new sound system in the gym/cafetorium.

J. Security Systems:

- Provide new video surveillance system.
- Provide new access control system.
- Provide new intrusion detection system.
- The video surveillance, access control and intrusion detection systems shall be integrated under one unified platform.

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"Construction Cost Consultants"

Mountview Middle School
Holden, MA
Study Cost Estimate
6-Jul-12

MINIMUM RENOVATION

		ALLOWANCE		TOTAL
ADDITION				
RENOVATION	1	LS		**$500,000**
BUILDING DEMOLITION				
SITEWORK				**n/a**
TEMPORARY TRAILORS				**n/a**
HAZARDOUS WASTE REMOVAL				**n/a**
TOTAL DIRECT COST				$500,000
GENERAL CONDITIONS			10%	$50,000
GENERAL REQUIREMENTS			3%	$16,500
P&P BOND & INSURANCE			2%	$11,330
FEE			3%	$17,335
DESIGN CONTINGENCY			12%	$71,420
GMP CONTINGENCY			3%	$19,998
ESCALATION (summer 2013)			7%	$46,661
TOTAL CONSTRUCTION COST				$733,243
COST PER SF				**$5.96**

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MODERATE RENOVATION

	GSF	0	COST PER S.F.	TOTAL
ADDITION				
RENOVATION	91,137	GSF	$70.76	**$6,448,854**
BUILDING DEMOLITION				
SITEWORK				**$484,655**
TEMPORARY TRAILORS				**n/a**
HAZARDOUS WASTE REMOVAL				**$300,000**
TOTAL DIRECT COST				$7,233,509
GENERAL CONDITIONS		10%		$723,351
GENERAL REQUIREMENTS		3%		$238,706
P&P BOND & INSURANCE		2%		$159,137
FEE		3%		$238,706
DESIGN CONTINGENCY		12%		$954,823
GMP CONTINGENCY		3%		$238,706
ESCALATION (summer 2013)		7%		$556,980
TOTAL CONSTRUCTION COST				$10,343,918
COST PER SF				**$113.50**

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RENOVATION AND ADDITION

	GSF		COST PER S.F.	TOTAL
ADDITION	46,205	GSF	$225.00	**$10,396,125**
RENOVATION	95,137*	GSF	$147.35	**$14,018,437**
BUILDING DEMOLITION	19,532	GSF	$7.50	**$146,490**
SITEWORK				**$3,362,165**
TEMPORARY TRAILORS				**n/a**
HAZARDOUS WASTE REMOVAL				**$745,000**

TOTAL DIRECT COST				$28,668,217
GENERAL CONDITIONS	30	MOS	$75,000	$2,250,000
GENERAL REQUIREMENTS		3%		$927,547
P&P BOND & INSURANCE		2%		$618,364
FEE		3%		$927,547
DESIGN CONTINGENCY		12%		$3,710,186
GMP CONTINGENCY		3%		$927,547
ESCALATION (summer 2013)		7%		$2,164,275

TOTAL CONSTRUCTION COST				$40,193,682
COST PER SF				**$284.37**

*Includes Logia

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NEW CONSTRUCTION - NEW SITE

	GSF		COST PER S.F.	TOTAL
NEW CONSTRUCTION	128,000	GSF	$225.62	**$28,879,731**
RENOVATION		N/A		
BUILDING DEMOLITION		N/A		
SITEWORK				**$5,118,288**
TEMPORARY TRAILORS				**n/a**
HAZARDOUS WASTE REMOVAL				**n/a**
TOTAL DIRECT COST				$33,998,019
GENERAL CONDITIONS	24	MOS	$75,000	$1,800,000
GENERAL REQUIREMENTS		3%		$1,073,941
P&P BOND & INSURANCE		2%		$737,439
FEE		3%		$1,128,282
DESIGN CONTINGENCY		12%		$4,648,522
GMP CONTINGENCY		3%		$1,301,586
ESCALATION (summer 2013)		7%		$3,037,034
TOTAL CONSTRUCTION COST				$47,724,822
COST PER SF				**$372.85**

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NEW CONSTRUCTION - EXISTING SITE

	GSF		COST PER S.F.	TOTAL
NEW CONSTRUCTION	128,000	GSF	$225.62	**$28,879,360**
RENOVATION		N/A		
BUILDING DEMOLITION	95,137*	GSF	$5.00	**$475,685**
SITEWORK				**$3,362,165**
TEMPORARY TRAILORS				**n/a**
HAZARDOUS WASTE REMOVAL				**$1,070,000**
TOTAL DIRECT COST				$33,787,210
GENERAL CONDITIONS	27	MOS	$75,000	$2,025,000
GENERAL REQUIREMENTS		3%		$1,074,366
P&P BOND & INSURANCE		2%		$716,244
FEE		3%		$1,074,366
DESIGN CONTINGENCY		12%		$4,297,465
GMP CONTINGENCY		3%		$1,074,366
ESCALATION (summer 2013)		7%		$2,506,855
TOTAL CONSTRUCTION COST				$46,555,873
COST PER SF				**$363.72**

*Includes Logia

Prepared by: A. M. Fogarty & Associates, Inc.

PROJECT:	Mountview Middle School	NO. OF SQ. FT.:	128,000
LOCATION:	Holden, MA	COST PER SQ. FT.:	$225.62
CLIENT:	Lamoureux - Pagano Associates, Architects		
DATE:	06-Jul-12		

NEW CONSTRUCTION
MIDDLE SCHOOL

No.: 12043

SUMMARY

	TOTAL	PERCENT OF PROJECT	COST PER SF
A. SUBSTRUCTURE			
A10 - FOUNDATIONS			
A1010 STANDARD FOUNDATIONS	651,364	2%	5.09
A1020 SPECIAL FOUNDATIONS	0	0%	0.00
A1030 SLAB ON GRADE	582,685	2%	4.55
A20 - BASEMENT CONSTRUCTION			
A2010 BASEMENT EXCAVATION	0	0%	0.00
A2020 BASEMENT WALLS	0	0%	0.00
B. SHELL			
B10 - SUPERSTRUCTURE			
B1010 FLOOR CONSTRUCTION	2,156,608	7%	16.85
B1020 ROOF CONSTRUCTION	2,169,860	8%	16.95
B20 - EXTERIOR ENCLOSURE			
B2010 EXTERIOR WALLS	4,889,711	17%	38.20
B2020 EXTERIOR WINDOWS	1,312,653	5%	10.26
B2030 EXTERIOR DOORS	79,956	0%	0.62
B30 - ROOFING			
B3010 ROOF COVERINGS	1,292,040	4%	10.09
B3020 ROOF OPENINGS	28,700	0%	0.22
C. INTERIORS			
C10 - INTERIOR CONSTRUCTION			
C1010 PARTITIONS	1,795,662	6%	14.03
C1020 INTERIOR DOORS	255,485	1%	2.00
C1030 FITTINGS	627,380	2%	4.90
C20 - STAIRS			
C2010 STAIR CONSTRUCTION	199,030	1%	1.55
C2020 STAIR FINISHES	18,600	0%	0.15
C30 - INTERIOR FINISHES			
C3010 WALL FINISHES	643,515	2%	5.03
C3020 FLOOR FINISHES	940,877	3%	7.35
C3030 CEILING FINISHES	742,326	3%	5.80
D. SERVICES			
D10 - CONVEYING			
D1010 ELEVATORS & LIFTS	115,500	0%	0.90
D1010 ESCALATORS & MOVING WALKS	0	0%	0.00
D1090 OTHER CONVEYING SYSTEMS	0	0%	0.00
D20 - PLUMBING			
D2010 PLUMBING	1,344,000	5%	10.50

Mountview Middle School - New Construction	TOTAL	PERCENT OF PROJECT	COST PER SF
D30 - HVAC			
D3010 HVAC	3,584,000	12%	28.00
D40 - FIRE PROTECTION			
D4010 SPRINKLERS	536,000	2%	4.19
D4020 STANDPIPES	0	0%	0.00
D4030 FIRE PROTECTION SPECIALTIES	0	0%	0.00
D4090 OTHER FIRE PROTECTION SYSTEMS	0	0%	0.00
D50 - ELECTRICAL			
D5010 ELECTRICAL SERVICE & DISTRIBUTION	3,200,000	11%	25.00
D5020 LIGHTING & BRANCH WIRING	0	0%	0.00
D5030 COMMUNICATION & SECURITY	0	0%	0.00
D5090 OTHER ELECTRICAL SYSTEMS	0	0%	0.00
E. EQUIPMENT & FURNISHINGS			
E10 - EQUIPMENT			
E1010 COMMERCIAL EQUIPMENT	400,000	1%	3.13
E1020 INSTITUTIONAL EQUIPMENT	0	0%	0.00
E1030 VEHICULAR EQUIPMENT	0	0%	0.00
E1090 OTHER EQUIPMENT	348,150	1%	2.72
E20 - FURNISHINGS			
E 2010 FIXED FURNISHINGS	905,030	3%	7.07
E2020 MOVABLE FURNISHINGS	0	0%	0.00
F. SPECIAL CONSTRUCTION & DEMOLITION			
F10 - SPECIAL CONSTRUCTION			
F1010 SPECIAL STRUCTURES	0	0%	0.00
F1020 INTEGRATED CONSTRUCTION	0	0%	0.00
F1030 SPECIAL CONSTRUCTION SYSTEMS	0	0%	0.00
F1040 SPECIAL FACILITIES	0	0%	0.00
F1050 SPECIAL CONTROLS & INSTRUMENTATION	0	0%	0.00
F20 - SELECTIVE BUILDING DEMOLITION			
F2010 BUILDING ELEMENTS DEMOLITION	0	0%	0.00
F2020 HAZARDOUS COMPONENTS ABATEMENT	0	0%	0.00
G. BUILDING SITEWORK			
G10 - SITE PREPARATION			
G1010 SITE CLEARING	10,000	0%	0.08
G1020 SITE DEMOLITION & RELOCATIONS	0	0%	0.00
G1030 SITE EARTHWORK	0	0%	0.00
G1040 HAZARDOUS WASTE REMEDIATION	0	0%	0.00
G20 - SITE IMPROVEMENTS			
G2010 ROADWAYS	0	0%	0.00
G2020 PARKING LOTS	0	0%	0.00
G2030 PEDESTRIAN PAVING	0	0%	0.00
G2040 SITE DEVELOPMENT	35,100	0%	0.27
G2050 LANDSCAPING	2,500	0%	0.02

Mountview Middle School - New Construction	TOTAL	PERCENT OF PROJECT	COST PER SF
G30 - SITE MECHANICAL UTILITIES			
G3010 WATER SUPPLY	0	0%	0.00
G3020 SANITARY SEWER	8,500	0%	0.07
G3030 STORM SEWER	0	0%	0.00
G3040 HEATING DISTRIBUTION	0	0%	0.00
G3050 COOLING DISTRIBUTION	0	0%	0.00
G3060 FUEL DISTRIBUTION	0	0%	0.00
G3090 OTHER SITE MECHANICAL UTILITIES	0	0%	0.00
G40 - SITE ELECTRICAL UTILITIES			
G4010 ELECTRICAL DISTRIBUTION	4,500	0%	0.04
G4020 SITE LIGHTING	0	0%	0.00
G4030 SITE COMMUNICATIONS & SECURITY	0	0%	0.00
G4090 OTHER SITE ELECTRICAL UTILITIES	0	0%	0.00
G90 - OTHER SITE CONSTRUCTION			
G9010 SERVICE AND PEDESTRIAN TUNNELS	0	0%	0.00
G9090 OTHER SITE SYSTEMS	0	0%	0.00
TOTAL DIRECT COST	28,879,731	100%	225.62

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
A. SUBSTRUCTURE				
A10 - FOUNDATIONS				
A1010 STANDARD FOUNDATIONS				
033000 CAST IN PLACE CONCRETE				
Wall Footing 1' X 3' (1636 LF):				
4000 psi, NW, (incl. placement)	182	CY	146.00	26,572
Formwork	3,272	SFCA	6.50	21,268
Rebar	12,285	LBS	1.09	13,391
**unit cost $336.43*				
Column Footing (122 ea):				
4000 psi, NW, (incl. placement)	352	CY	148.00	52,096
Formwork	5,184	SFCA	8.00	41,472
Rebar	16,340	LBS	1.09	17,811
**unit cost $316.42*				
Foundation Frost Wall 1'-4" x 4'0" Deep (1636 LF):				
4000 psi, NW, (incl. placement)	322	CY	155.00	49,910
Formwork	13,088	SFCA	11.00	143,968
Brick shelf	1,636	LF	12.00	19,632
Reinforcing steel	43,470	LBS	1.09	47,382
**unit cost $810.22*				
16" Elevator Mat	6	CY	575.00	3,450
Elevator Pit Wall	6	CY	775.00	4,650
Elev. sump pit	1	LS	1,500.00	1,500
Piers & pilasters	35	CY	775.00	27,125
Equipment pads	1	LS	4,000.00	4,000
Interior wall footing 1' x 2'	15	CY	345.00	5,175
Interior found. wall	32	CY	800.00	25,600
Stage stair (2 flts)	36	LFR	85.00	3,060
Stage ramp	200	SF	6.00	1,200
072100 INSULATION				
2" Rigid ext. found. insul w/prot.bd	6,544	SF	2.60	17,014
071000 DAMPPROOF., WATERPROOF. & CAULKING*				
Dampproof frost wall	6,544	SF	1.90	12,434
Elev. pit waterproofing	1	LS	4,100.00	4,100
310000 EARTHWORK				
Foundation Earthwork:				
Foundation excavation	2,600	CY	7.00	18,200

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Foundation backfill (on site mat'l)	1,500	CY	8.00	12,000
Perimeter foundation drain	1,636	LF	26.50	43,354
Ledge removal - allow	1	LS	25,000.00	25,000
Misc. Earthwork	1	LS	10,000.00	10,000
				651,364
A1030 SLAB ON GRADE				
310000 EARTHWORK				
12" Gravel base @SOG	2,349	CY	22.00	51,678
Excavate plumbing trenches	1	LS	5,000.00	5,000
033000 CAST IN PLACE CONCRETE				
5" Slab on Grade:				
4000 psi, NW, (incl. placement)	987	CY	146.00	144,102
6x6 W1.4 X W1.4	63,414	SF	1.02	64,682
Control Joint	3,171	LF	3.10	9,829
Trowel Finish	63,414	SF	1.25	79,268
*unit cost $4.70				
Thicken slab @ cols & CMU	50	CY	225.00	11,250
072100 INSULATION				
2" Rigid Slab Insul.	63,414	SF	2.92	185,169
072616 BELOW GRADE VAPOR RETARDER				
Stegro vapor barrier	63,414	SF	0.50	31,707
				582,685
TOTAL A10 FOUNDATIONS				1,234,048
A20 - BASEMENT CONSTRUCTION				
A2010 BASEMENT EXCAVATION		N/A		
				0
TOTAL A20 - BASEMENT CONSTRUCTION				0
B. SHELL				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
B10 - SUPERSTRUCTURE				
B1010 FLOOR CONSTRUCTION				
051200 STRUCTURAL STEEL				
T.S. brace frame (1 lbs/sf)	35	TONS	3,450.00	120,750
T.S. column (2 lbs/sf)	71	TONS	3,250.00	230,750
Wide flange beam (10 lbs/sf)	352	TONS	3,075.00	1,082,400
H.S.S. beam	10	TONS	3,225.00	32,250
Moment connection	50	EA	750.00	37,500
Shear stud (10/100)	7,036	EA	5.30	37,291
033000 CAST IN PLACE CONCRETE				
3 1/2" NW Deck fill	70,362	SF	3.85	270,894
053100 STEEL DECKING				
2" x 20 Ga. comp deck	70,362	SF	2.70	189,977
072100 INSULATION				
Spray on fireproofing	70,362	SF	2.20	154,796
				2,156,608
B1020 ROOF CONSTRUCTION				
051200 STRUCTURAL STEEL				
T.S. brace frame (1 lbs/sf)	38	TONS	3,450.00	131,100
T.S. column (2 lbs/sf)	76	TONS	3,250.00	247,000
Wide flange beam (10 lbs/sf)	380	TONS	3,075.00	1,168,500
H.S.S. beam	22	TONS	3,225.00	70,950
Moment connection	30	EA	750.00	22,500
Galv. RTU dunnage - allow	10	TONS	3,150.00	31,500
Galv. TS roof screen support	25	TONS	3,300.00	82,500
Entry canopy frame	2,500	SF	20.00	50,000
033000 CAST IN PLACE CONCRETE				
3 1/2" NW Conc. Deck fill -roof	1,500	SF	6.00	9,000
053100 STEEL DECKING				
1 1/2" x 20 Ga Typ. Flat roof deck	58,400	SF	2.55	148,920
2" x 20 Ga. Comp deck	1,500	SF	2.70	4,050
3" x 18 Ga acoustical roof deck - gym	7,600	SF	7.15	54,340

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
1 1/2" x 20 Ga canopy roof deck	2,500	SF	2.25	5,625
072100 INSULATION				
Spray-on Fireproofing	59,500	SF	2.25	133,875
090007 PAINTING*				
Paint steel canopy structure	2,500	SF	4.00	10,000
				2,169,860
TOTAL B10 SUPERSTRUCTURE				4,326,468

B20 - EXTERIOR ENCLOSURE

B2010 EXTERIOR WALLS

040001 MASONRY*				
12" CMU backup - gym	5,051	SF	22.00	111,122
Masonry Veneer:				
Brick veneer - 60% of exterior	38,625	SF	30.00	1,158,750
Precast window head	2,050	LF	65.00	133,250
Precast window sill - typ	1,950	LF	45.00	87,750
Precast trim allowance	1	LS	150,000.00	150,000
Misc. Masonry detailing	1	LS	50,000.00	50,000
Masonry flashing	2,400	LF	9.00	21,600
Building staging - 100%	65,000	SF	2.00	130,000
054000 COLD FORMED METAL FRAMING				
3" Soffit framing	3,500	SF	5.25	18,375
1/2" Dens glass sheathing -soffit	3,500	SF	3.00	10,500
8" x 16 Ga stud @ typ	59,325	SF	9.80	581,385
1/2" Dens glass sheathing-ext. wall	59,352	SF	2.75	163,218
050001 MISCELLANEOUS & ORNAMENTAL IRON*				
Downspout boot - canopy	4	EA	650.00	2,600
Galv, loose lintel	2,050	LF	32.00	65,600
*Relieving angle carried w/Structure				
071000 DAMPPROOF., WATERPROOF. & CAULKING*				
Control joint - allow	500	LF	9.50	4,750
071326 AIR & VAPOR BARRIERS				
Adhered air & vapor barrier - wall	59,352	SF	3.10	183,991

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Adhered air & vapor barrier - soffit	3,500	SF	3.10	10,850
072100 INSULATION				
3" Icyene - wall	59,352	SF	3.20	189,926
3" Rigid Insul - wall	59,352	SF	2.85	169,153
*Excludes soffit insulation				
074213 PERFORMED CLADDING				
Alum. Panel:				
Canopy ceiling	2,500	SF	25.00	62,500
Soffit panel - typical - 12"	3,500	SF	25.00	87,500
Wall panel - 40% ext.	24,350	SF	55.00	1,339,250
Equip roof screen	1,500	SF	32.00	48,000
092116 GYPSUM WALLBOARD				
1 Lyr 5/8" gyp @ ext. wall	50,000	SF	2.05	102,500
101400 IDENTIFYING DEVICES (EXT. BLD MTD SIGNAGE)				
24" Alum bldg mtd letter - allow	21	EA	340.00	7,140
				4,889,711
B2020 EXTERIOR WINDOWS				
061000 ROUGH CARPENTRY				
P.T. - perim blocking	10,500	LF	4.10	43,050
071326 AIR & VAPOR BARRIERS				
Flex flashing - perim	10,500	LF	7.50	78,750
071000 DAMPPROOF., WATERPROOF. & CAULKING*				
Exterior sealants - perim.	10,500	LF	6.25	65,625
080001 METAL WINDOWS*				
Curtain wall - 7"	3,500	SF	88.00	308,000
Typ. alum. window - 4 1/2"	10,958	SF	66.00	723,228
109000 MISCELLANEOUS SPECIALTIES				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Alum louvers - allow	200	SF	65.00	13,000
Sun screen (3'6")	300	LF	195.00	58,500
Int. light shelf	150	LF	150.00	22,500
				1,312,653
B2030 EXTERIOR DOORS				
061000 ROUGH CARPENTRY				
P.T. - perim blocking - HM open	160	LF	4.10	656
071000 DAMPPROOF., WATERPROOF. & CAULKING*				
Exterior sealants - perim. HM open	160	LF	6.25	1,000
080001 METAL WINDOWS*				
7' Alum. Doors (Incl. Hardware):				
Main entry - dbl	2	PR	7,150.00	14,300
Rear lobby - dbl	1	EA	7,150.00	7,150
Café - dbl	2	PR	7,150.00	14,300
Stair hall egress - dbl	2	PR	7,150.00	14,300
Auto opener - allow	1	PR	4,200.00	4,200
Classroom - sgl		N/A		
081113 HOLLOW METALWORK				
Insulated HM Doors and Frame (Incl. Hdw):				
Roof stair - sgl	2	EA	1,800.00	3,600
Receiving - dbl	1	EA	2,400.00	2,400
Elec/mech rm - sgl	1	EA	950.00	950
Elec/mech rm - dbl	1	EA	2,000.00	2,000
Storage- sgl	1	EA	950.00	950
Storage - dbl	1	EA	2,000.00	2,000
Gym - dbl	2	EA	5,500.00	11,000
083323 SPECIAL DOORS				
OH Doors		N/A		
087100 DOOR HARDWARE		With Doors		
090007 PAINTING*				
Paint HM Door & frame - sgl	4	EA	100.00	400
Paint HM Door & frame - dbl	5	EA	150.00	750
				79,956

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
TOTAL B20 - EXTERIOR ENCLOSURE				6,282,320
B30 - ROOFING				
B3010 ROOF COVERINGS				
061000 ROUGH CARPENTRY				
Typ. Flat roof edge blocking (3 BF/LF)	7,200	BF	3.20	23,040
Base flashing blocking (3 BF/LF)	2,250	BF	3.20	7,200
Mechanical equip blocking	1	LS	10,000.00	10,000
070002 ROOFING AND FLASHING*				
PVC roof - canopy	2,500	SF	10.00	25,000
PVC roof w/ 6" rigid insul	70,000	SF	11.85	829,500
Green roof sys.		n/a		
1/2" Gyp prot. bd w/glass mat facing	70,000	SF	1.55	108,500
Poly vapor barrier	70,000	SF	0.35	24,500
Tapered insul premium - allow	10,000	SF	4.00	40,000
Base flashing	750	LF	32.00	24,000
Membrane flashing	1	LS	25,000.00	25,000
Walkway paver (2'x2')	200	EA	24.00	4,800
Aluminum Trim & Flashing:				
Canopy roof fascia	300	LF	35.00	10,500
Typical roof fascia and projection	2,500	LF	50.00	125,000
Misc. flashing	1	LS	35,000.00	35,000
				1,292,040
B3020 ROOF OPENINGS				
077200 ROOF ACCESSORIES				
Elevator vent	1	EA	500.00	500
Roof guardrail		NIC		
*Mechanical equip screen is included with B1020 & B2010				
075423 ROOFING & FLASHING*				
Skylights	1	LS	25,000.00	25,000
Roof hatch	1	EA	3,200.00	3,200
Stage vent		N/A		
				28,700
TOTAL B30 ROOFING				1,320,740

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
C. INTERIORS				
C10 - INTERIOR CONSTRUCTION				
C1010 PARTITIONS				
040001 MASONRY*				
8" CMU elev. shaft wall	1,656	SF	22.00	36,432
8" CMU - 14' kitchen/mech	3,500	SF	18.00	63,000
050001 MISCELLANEOUS & ORNAMENTAL IRON*				
CMU angle brace frame - 4' 0C	150	EA	75.00	11,250
Loose lintels	200	LF	22.00	4,400
061000 ROUGH CARPENTRY				
Interior blocking	128,000	GSF	0.50	64,000
Misc. rough carpentry	128,000	GSF	0.50	64,000
072100 INSULATION				
Firestopping	128,000	GSF	0.35	44,800
081113 HOLLOW METALWORK				
Interior H.M Windows, Sidelites and Transoms :				
Classroom sidelight (50 ea)	700	SF	35.00	24,500
Admin sidelight (10 ea)	70	SF	35.00	2,450
7' sidelight -allow	200	SF	35.00	7,000
4' window -allow	300	SF	35.00	10,500
Misc. window/sidelight & transom	300	SF	35.00	10,500
083323 SPECIAL DOORS				
Access panels	1	LS	15,000.00	15,000
080002 GLASS AND GLAZING*				
Glass & Glazing - HM Frame:				
Classroom sidelight	700	SF	14.00	9,800
Admin sidelight	70	SF	14.00	980
7' sidelight -allow	200	SF	14.00	2,800
4' window -allow	300	SF	14.00	4,200
Misc. window/sidelight & transom	300	SF	14.00	4,200
*Excludes fire rated stair hall glazing				
090007 PAINTING*				
Paint window/sidelight & transom	1,570	SF	5.00	7,850
092116 GYPSUM WALLBOARD				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
1 Lyr 5/8" gyp @ ext. wall frame		w/B2010		
Drywall partitions and assemblies	128,000	GSF	11.00	1,408,000
*Partitions include sound attenuation, tape & joint compound finish				
				1,795,662
C1020 INTERIOR DOORS				
081113 HOLLOW METALWORK 081416 WOOD AND PLASTIC DOORS				
Interior Door, Frame, Hds., Glass & Glazing:				
Media ctr - dbl	2	EA	2,500.00	5,000
Typ. classroom - sgl	50	EA	1,100.00	55,000
Interconnecting classroom - sgl	31	EA	850.00	26,350
Storage - sgl	12	EA	700.00	8,400
Storage - dbl	6	EA	1,250.00	7,500
Toilet rm - sgl user	9	EA	950.00	8,550
Locker rm - sgl	4	EA	950.00	3,800
Stair/corridor - dbl	9	EA	3,500.00	31,500
Mech/elec. - sgl	8	EA	800.00	6,400
Mech/elec. - dbl	2	EA	1,600.00	3,200
Office - sgl	8	EA	1,100.00	8,800
Kitchen - sgl	2	EA	1,200.00	2,400
Kitchen - dbl	2	EA	2,250.00	4,500
Music class - sgl	2	EA	1,500.00	3,000
Stage - sgl	1	EA	1,800.00	1,800
Stage - dbl	1	EA	3,600.00	3,600
Gym - dbl	2	EA	3,600.00	7,200
087100 DOOR HARDWARE		With Doors		
080001 METAL WINDOWS*				
Aluminum (Frame, Door, Glass, Glazing and Hdw):				
Vest - dbl	2	PR	6,500.00	13,000
Main office -sgl	2	EA	3,200.00	6,400
Aluminum Storefront:				
Vestibule 10'	200	SF	70.00	14,000
Main office 7'	300	SF	70.00	21,000
083323 SPECIAL DOORS				
Dish drop window		N/A		
Servery grille		N/A		
Main office security grate		N/A		
090007 PAINTING*				
Paint door frame - sgl	105	EA	75.00	7,875

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Paint door frame - dbl	46	EA	135.00	6,210
				255,485

C1030 FITTINGS

050001 MISCELLANEOUS & ORNAMENTAL IRON*

Gym equip. support & frame	1	LS	5,000.00	5,000
OT/PT swing support	1	LS	1,500.00	1,500
Misc. metals	128,000	GSF	0.50	64,000

062000 FINISH CARPENTRY

Utility & closet shelving	1	LS	7,500.00	7,500
Typ. window sill/apron (nic cw-gym)	1,826	LF	30.00	54,780
Built - in corridor benches - allow	50	LF	300.00	15,000
Proscenium trim @ stage front panel	1	LS	10,000.00	10,000
Misc. wood trim	128,000	GSF	0.50	64,000
Custom Casework:				
Admin desk	1	LS	7,500.00	7,500
Circulation desk	1	LS	10,000.00	10,000

102113 COMPARTMENTS & CUBICLES

Solid Plastic Toilet Rm. Partitions (8 Rms):				
Std. partition	8	EA	1,150.00	9,200
HC partition	8	EA	1,350.00	10,800
Urinal screen	8	EA	275.00	2,200
Locker Rm Partitions (2 RMS):				
Std. partition	2	EA	1,150.00	2,300
HC partition	2	EA	1,350.00	2,700
Urinal screen	2	EA	275.00	550
Changing stall w/bench	5	EA	1,500.00	7,500

102813 TOILET & BATH ACCESSORIES

Toilet Accessories	1	LS	45,000.00	45,000
Janitor shelf	3	EA	200.00	600

*Excludes classroom accessories

101100 MARKERBOARDS & TACKBOARDS

5' Smart board		NIC		
Markerboards 4' h	3,600	SF	18.00	64,800
Tackboards 4' h	3,600	SF	13.00	46,800
Display cases - allow	1	LS	20,000.00	20,000
Class/mtg space flag pole - allow	50	EA	35.00	1,750

105113 METAL LOCKERS

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Locker rm bench	7	EA	800.00	5,600
109000 MISCELLANEOUS SPECIALTIES				
Gym lockers	100	EA	270.00	27,000
Metal corridor locker (12"x15"x48")	450	EA	225.00	101,250
Kitchen staff locker - allow	6	EA	225.00	1,350
Wall & corner guards - allow	1	LS	5,000.00	5,000
Fire extinguisher and cab - allow	8	EA	450.00	3,600
Cubicle curtain track w/ curtain - health off.	2	EA	1,200.00	2,400
101400 IDENTIFYING DEVICES				
Building directory - allow	1	EA	5,000.00	5,000
Dedication plaque	1	EA	3,500.00	3,500
Door signage plaque	128,000	GSF	0.15	19,200
106000 OPERABLE PARTITION		N/A		
				627,380
TOTAL C10 - INTERIOR CONSTRUCTION				2,678,527
C20 - STAIRS				
C2010 STAIR CONSTRUCTION				
050001 MISCELLANEOUS & ORNAMENTAL IRON*				
Metal Pan Stair w/Rails:				
Roof access - allow	1	FLT	25,000.00	25,000
Monumental lobby	2	FLT	28,000.00	56,000
Stair hall switch back	4	FLT	25,000.00	100,000
Roof access stair gate	1	EA	1,500.00	1,500
Interior Rails:				
Stage ramp wall rail	20	LF	95.00	1,900
Stage ramp guard rail	20	LF	225.00	4,500
Lobby guardrail		N/A		
Stage stairs wall rail	12	LF	115.00	1,380
033000 CAST IN PLACE CONCRETE				
Conc stair pan fill	7	FLTS	1,250.00	8,750
				199,030
C2020 STAIR FINISHES				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
090005 RESILIENT FLOORING*				
Rubber treads and risers - full flt.	7	FLT	1,100.00	7,700
Rubber stair landing tile	300	SF	6.00	1,800
062000 FINISH CARPENTRY				
090007 PAINTING*				
Paint stair & rails	7	FLTS	1,300.00	9,100
				18,600
TOTAL C20 - STAIRS				217,630
C30 - INTERIOR FINISHES				
C3010 WALL FINISHES				
071000 DAMPPROOF., WATERPROOF. & CAULKING*				
Joint sealants - interior	128,000	GSF	0.55	70,400
098400 ACOUSTICAL WALL TREATMENT				
Tectum Wall Panel:				
2" Gymnasium	1,400	SF	20.00	28,000
Fabric Wrapped Acoustical Panels - Allow:				
Stage	500	SF	27.00	13,500
Café	750	SF	27.00	20,250
Corridor	500	SF	27.00	13,500
Music class rm	500	SF	27.00	13,500
Music practice rm		N/A		
IMC	300	SF	27.00	8,100
090002 TILE*				
Ceramic Wall Tile:				
8' toilet rm	4,360	SF	14.00	61,040
4' Wainscot janitor closet @ mop sink	300	SF	14.00	4,200
7'4" Wainscot corridor/stair hall - allow	12,000	SF	16.00	192,000
090007 PAINTING*				
Vinyl wall covering		NIC		
Interior painting- walls	128,000	GSF	1.55	198,400
092116 GYPSUM WALLBOARD				
FRP Panel:				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Kitchen - 10' *Includes Section 09770	2,500	SF	8.25	20,625
				643,515

C3020 FLOOR FINISHES

033000 CAST IN PLACE CONCRETE

Sealed Concrete	1,406	SF	0.95	1,336

090002 TILE*

Kitchen:				
Quarry floor tile - mud set	4,642	SF	17.00	78,914
Quarry tile base	275	LF	8.00	2,200
Toilet Room (sgl user):				
Ceramic floor tile - thin set	750	SF	15.00	11,250
Ceramic base	379	LF	6.00	2,274
Waterproof - upper floor	500	SF	7.00	3,500
Marble threshold	12	EA	50.00	600
Toilet Room (multi user):				
Ceramic floor tile - thin set	1,766	SF	15.00	26,490
Ceramic base	545	LF	6.00	3,270
Waterproof - upper floor	754	SF	7.00	5,278
Marble threshold /saddle	55	LF	30.00	1,650
Locker/Toilet Room:				
Ceramic floor tile - thin set	1,463	SF	15.00	21,945
Ceramic base	228	LF	6.00	1,368
Marble threshold /saddle	2	EA	65.00	130
Janitor Closet (3 EA):				
Ceramic floor tile - thin set	93	SF	15.00	1,395
Ceramic base	55	LF	6.00	330
Waterproof - upper floor	93	SF	7.00	651
Marble threshold	3	EA	50.00	150
Porcelain Tile:				
Entry / lobby tile	5,214	SF	18.00	93,852
Porcelain base	482	LF	7.00	3,374

090005 RESILIENT FLOORING*

Gym base	352	LF	2.50	880
Resilient sports floor at gym	7,569	SF	19.00	143,811
Café linoleum sheet-hvy duty	728	SY	82.00	59,696
Linoleum sheet - corridor	2,224	SY	82.00	182,368
Linoleum tile - classroom	7,180	SF	5.75	41,285
Rubber base	15,500	LF	2.20	34,100
Concrete moisture barrier	128,000	SF	1.00	128,000

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
095000 WOOD FLOOR				
Stage wood flooring - maple *Includes 6 mil poly, resilient pads, sealant & finish	1,700	SF	15.00	25,500
096800 CARPET				
Admin carpet	399	SY	42.00	16,758
Media ctr carpet	941	SY	42.00	39,522
124813 MATS				
Main Entry: Recessed alum entrance mat	200	SF	45.00	9,000
				940,877
C3030 CEILING FINISHES				
092116 GYPSUM WALLBOARD				
Gyp ceiling - toilet rm	2,516	SF	8.00	20,128
2 Hr. gyp ceiling	1,500	SF	13.00	19,500
Typ. gyp ceiling	5,000	SF	8.00	40,000
Stage acoustical reflector	750	SF	25.00	18,750
Gyp soffits & light coves	1	LS	50,000.00	50,000
090003 ACOUSTICAL TILE*				
Ceiling System:				
Music classroom	2,000	SF	5.50	11,000
Admin.	111,415	SF	4.75	529,221
MR Kitchen	4,642	SF	5.00	23,210
090007 PAINTING*				
Paint gyp ceiling	9,016	SF	0.85	7,664
Paint gyp soffits & light coves	1	LS	10,000.00	10,000
Paint exposed structure - gym	7,569	SF	1.50	11,354
Paint exposed structure - mech/elec.	1,500	SF	1.00	1,500
				742,326
TOTAL C30 - INTERIOR FINISHES				2,326,718
D. SERVICES				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
D10 - CONVEYING				
D1010 ELEVATORS & LIFTS				
140001 ELEVATORS*				
Stage lift		N/A		
Passenger elevator	3	STOP	37,000.00	111,000
050001 MISCELLANEOUS & ORNAMENTAL IRON*				
Elev. framing	1	EA	3,000.00	3,000
Elev. pit ladder	1	EA	1,500.00	1,500
				115,500
TOTAL D10 - CONVEYING				115,500
D20 - PLUMBING				
D2010 PLUMBING				
220001 PLUMBING*				
Plumbing	128,000	GSF	10.50	1,344,000
				1,344,000
TOTAL D20 - PLUMBING		/SF		1,344,000
D30 - HVAC				
D3010 HVAC				
230001 HVAC*				
HVAC	128,000	GSF	28.00	3,584,000
				3,584,000
TOTAL D30 - HVAC	$28.00	/sf		3,584,000
D40 - FIRE PROTECTION				

DESCRIPTION	QUANTITY		UNIT	UNIT COST	TOTAL
D4010 SPRINKLERS					
210001 FIRE SUPPRESSION*					
Fire pump			NIC		
8" Check valve assembly	1		LS	8,600.00	8,600
6" Wet valve alarm assembly	1		EA	4,500.00	4,500
4" Check valve	1		EA	2,200.00	2,200
Siamese connection	1		EA	1,200.00	1,200
Sprinkler sys - wet	128,000		GSF	4.00	512,000
Test , drawings, misc gc	1		LS	7,500.00	7,500
					536,000
TOTAL D40 - FIRE PROTECTION	$4.19	/sf			536,000
D50 - ELECTRICAL					
D5010 ELECTRICAL SERVICE & DISTRIBUTION					
260001 ELECTRICAL*					
Electrical	128,000		GSF	25.00	3,200,000
					3,200,000
TOTAL D50 - ELECTRICAL	$25.00	/sf			3,200,000
E. EQUIPMENT & FURNISHINGS					
E10 - EQUIPMENT					
E1010 COMMERCIAL EQUIPMENT					
114000 FOOD SERVICE EQUIPMENT					
Kitchen equipment & casework	1		LS	400,000.00	400,000
					400,000
E1090 OTHER EQUIPMENT					
113100 APPLIANCES					
Staff kitchen refrigerator	3		EA	1,000.00	3,000
Staff kitchen microwave	3		EA	500.00	1,500
Medical office refrigerator w/ice	1		EA	1,000.00	1,000

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Stackable washer and dryer - kitchen		NIC		
Life Skill Rm/Care Classroom - Allow:				
Dishwasher		NIC		
Refrigerator		NIC		
Range		NIC		
Range hood		NIC		
116600 ATHLETIC & SPORTS EQUIPMENT				
Basketball backstops - electric	6	EA	9,500.00	57,000
Wall padding - 6'	1,250	SF	15.00	18,750
Motorized gym divider curtain	1,900	SF	18.00	34,200
Volley ball court equip.	1	EA	700.00	700
Scoreboard		w/Electrical		
Folding bleachers	1	LS	40,000.00	40,000
PT floor mats		NIC		
116143 STAGE DRAPERY				
Stage curtains	1	LS	30,000.00	30,000
115213 PROJECTION SCREENS				
Projection screen - stage	1	EA	10,000.00	10,000
119000 MISC. EQUIPMENT				
Metal storage shelving		NIC		
Book security equipment		NIC		
Kiln	1	LS	3,500.00	3,500
116100 THEATRE EQUIPMENT				
Audio & video	1	LS	30,000.00	30,000
Dimming, stage, rigging	1	LS	40,000.00	40,000
115300 LABORATORY EQUIPMENT				
Science Lab equipment	5	EA	7,500.00	37,500
Science Prep rm appliance	3	EA	5,000.00	15,000
Science fume hood	4	EA	6,500.00	26,000
				348,150
TOTAL E10 - EQUIPMENT				748,150

E20 - FURNISHINGS

E 2010 FIXED FURNISHINGS

129000 MISC. FURNISHINGS

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Meco shade - manual	10,958	SF	5.25	57,530
Int. office/class window shades	1	LS	7,500.00	7,500
123553 CLASSROOM CASEWORK				
Architectural casework	128,000	SF	2.50	320,000
Casework (Epoxy Counter w/Wood Cabinets):				
Art room	2	EA	20,000.00	40,000
Science room	6	EA	60,000.00	360,000
Prep room	3	EA	15,000.00	45,000
Tech room	5	EA	15,000.00	75,000
				905,030
E2020 MOVABLE FURNISHINGS		NIC		
				0
TOTAL E20 - FURNISHINGS				905,030

PROJECT: Mountview Middle School
LOCATION: Holden, MA
CLIENT: Lamoureux - Pagano Associates, Architects
DATE: 06-Jul-12

No.: 11100

EXISTING SITEWORK

SUMMARY

	TOTAL	PERCENT OF PROJECT	COST PER SF
G. BUILDING SITEWORK			
G10 - SITE PREPARATION			
G1010 SITE CLEARING	76,825	2%	0.00
G1020 SITE DEMOLITION & RELOCATIONS	175,000	5%	0.00
G1030 SITE EARTHWORK	285,335	8%	0.00
G1040 HAZARDOUS WASTE REMEDIATION	0	0%	0.00
G20 - SITE IMPROVEMENTS			
G2010 ROADWAYS	803,068	24%	0.00
G2020 PARKING LOTS	0	0%	0.00
G2030 PEDESTRIAN PAVING	121,503	4%	0.00
G2040 SITE DEVELOPMENT	279,225	8%	0.00
G2050 LANDSCAPING	375,000	11%	0.00
G30 - SITE MECHANICAL UTILITIES			
G3010 WATER SUPPLY	170,895	5%	0.00
G3020 SANITARY SEWER	104,404	3%	0.00
G3030 STORM SEWER	643,500	19%	0.00
G3040 HEATING DISTRIBUTION	0	0%	0.00
G3050 COOLING DISTRIBUTION	0	0%	0.00
G3060 FUEL DISTRIBUTION	43,750	1%	0.00
G3090 OTHER SITE MECHANICAL UTILITIES	0	0%	0.00
G40 - SITE ELECTRICAL UTILITIES			
G4010 ELECTRICAL DISTRIBUTION	154,560	5%	0.00
G4020 SITE LIGHTING	94,100	3%	0.00
G4030 SITE COMMUNICATIONS & SECURITY	35,000	1%	0.00
G4090 OTHER SITE ELECTRICAL UTILITIES	0	0%	0.00
G90 - OTHER SITE CONSTRUCTION			
G9010 SERVICE AND PEDESTRIAN TUNNELS	0	0%	0.00
G9090 OTHER SITE SYSTEMS	0	0%	0.00
TOTAL	3,362,165	100%	0.00

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
G. BUILDING SITEWORK				
G10 - SITE PREPARATION				
G1010 SITE CLEARING				
311000 SITE PREPARATION & CLEARING				
Erosion control	4,500	LF	3.65	16,425
Drain inlet protection - allow	8	EA	50.00	400
Construction entrance and staging	1	LS	10,000.00	10,000
Misc. site preparation	1	LS	50,000.00	50,000
				76,825
G1020 SITE DEMOLITION & RELOCATIONS				
311000 SITE PREPARATION & CLEARING				
Site Preparation	700,000	SF	0.25	175,000
				175,000
G1030 SITE EARTHWORK				
310000 EARTHWORK				
Cut and Fill	25,500	CY	7.00	178,500
Site Rough Grading	25,900	SY	0.65	16,835
Ledge Removal - allowamce	2,000	CY	45.00	90,000
*Site utilities include excavation & backfill				
				285,335
G1040 HAZARDOUS WASTE REMEDIATION		N/A		
				0
TOTAL G10 - SITE PREPARATION				**537,160**
G20 - SITE IMPROVEMENTS				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
G2010 ROADWAYS				
320000 PAVEMENT, CURBING & EDGING				
4 1/2" Vehicular Bituminous Pavement:				
New Parking and drive	17,000	SY	26.00	442,000
12" Gravel base @ drive	5,824	CY	19.50	113,568
Granite curb - straight	5,300	LF	29.50	156,350
Granite curb - radial	2,600	LF	29.50	76,700
Tactile warning paver at HC Cut	6	EA	325.00	1,950
Traffic signage	1	LS	5,000.00	5,000
Misc. pavement markings	1	LS	7,500.00	7,500
				803,068
G2020 PARKING LOTS				
*Included with G2010				
				0
G2030 PEDESTRIAN PAVING				
320000 PAVEMENT, CURBING & EDGING				
4" Concrete pavement	12,000	SF	4.25	51,000
8" Gravel base @ walk	300	CY	21.00	6,300
3" Bituminous walk	1,500	SY	23.00	34,500
8" Gravel base @ walk	333	CY	21.00	6,993
Specially Entry Pavement	3,500	SF	6.00	21,000
8" Gravel base @ walk	90	CY	19.00	1,710
				121,503
G2040 SITE DEVELOPMENT				
323100 SITE IMPROVEMENTS				
6" Concrete dumpster pad	500	SF	10.00	5,000
Dumpster enclosure	85	LF	65.00	5,525
Dumpster gate	1	EA	2,500.00	2,500
Baseball Fields	2	EA	60,000.00	120,000
Fencing	1	LS	60,000.00	60,000
Bollards @ transformer/generator	6	EA	550.00	3,300
Vehicular access gate	2	EA	2,200.00	4,400
Bike rack - allow	5	EA	450.00	2,250

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Bench - allow	10	EA	1,800.00	18,000
Trash receptacle - allow	3	EA	1,250.00	3,750
Flag pole	1	EA	4,500.00	4,500
Misc. site improvements	1	LS	50,000.00	50,000
				279,225

G2050 LANDSCAPING

329000 LANDSCAPING

Landscaping - allow	1	LS	100,000.00	100,000
Loam and Seed disturbed area	50,000	SY	5.50	275,000
Irrigation system		NIC		
				375,000

TOTAL G20 - SITE IMPROVEMENTS	**1,578,796**

G30 - SITE MECHANICAL UTILITIES

G3010 WATER SUPPLY

330000 UTILITIES

Site connection	1	LS	7,500.00	7,500
4" Domestic	25	LF	51.00	1,275
6" Fire service line	200	LF	58.00	11,600
10" Main	1,200	LF	89.00	106,800
Hydrant	5	EA	1,850.00	9,250
10" Gate valve	4	EA	1,150.00	4,600
6" Gate valve	2	EA	850.00	1,700
4" Gate valve	1	EA	670.00	670
Ledge removal	500	CY	55.00	27,500
				170,895

G3020 SANITARY SEWER

330000 UTILITIES

Grease trap (5,000 gal)	1	EA	7,000.00	7,000
8" PVC Sanitary main	1,200	LF	48.00	57,600
6" Cast Iron	42	LF	62.00	2,604
Sanitary manhole	3	EA	2,500.00	7,500
Clean out	4	EA	550.00	2,200
Ledge removal	500	CY	55.00	27,500

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
				104,404
G3030 STORM SEWER				
330000 UTILITIES				
Storm Sewer:				
Site Drainage :				
Area drain	7	EA	1,250.00	8,750
Drainage manhole	18	EA	2,250.00	40,500
Catch basin	25	EA	2,250.00	56,250
24" RCP	1,500	LF	56.00	84,000
12" RCP	2,500	LF	38.00	95,000
18" RCP	2,000	LF	46.00	92,000
15" RCP	500	LF	42.00	21,000
Water quality structure	3	EA	12,000.00	36,000
Detention Systems	5,000	SF	20.00	100,000
Ledge removal - allow	2,000	CY	55.00	110,000
				643,500
G3060 FUEL DISTRIBUTION				
330000 UTILITIES				
Fuel Distribution:				
Gas main trenching and backfill	1,200	LF	25.00	30,000
Ledge removal	250	CY	55.00	13,750
				43,750
G3090 OTHER SITE MECHANICAL UTILITIES		N/A		
				0
TOTAL G30 - SITE MECHANICAL UTILITIES				**962,549**

G40 - SITE ELECTRICAL UTILITIES

G4010 ELECTRICAL DISTRIBUTION

260000 ELECTRICAL*

SPARE OR EMPTY RACEWAYS
PVC Underground:

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
4"	5,000	LF	14.20	71,000
GROUNDING:				
Ground rod 3/4"x10'	1	EA	77.00	77
Bare copper wire #1/0	25	LF	3.30	83
330000 UTILITIES				
Transformer pad	1	EA	2,000.00	2,000
Emergency generator pad (15'x30')	1	EA	2,500.00	2,500
Conc. ductbank	1,200	LF	42.00	50,400
Tele/data duct bank	750	LF	38.00	28,500
*Primary cabling - By Others				
				154,560
G4020 SITE LIGHTING				
260000 ELECTRICAL*				
Parking light pole	20	EA	3,500.00	70,000
Pedestrian lighting	12	EA	1,800.00	21,600
Flag pole lighting	1	LS	2,500.00	2,500
				94,100
G4030 SITE COMMUNICATIONS & SECURITY				
330000 UTILITIES				
Security Cameras	10	EA	3,500.00	35,000
				35,000
G4090 OTHER SITE ELECTRICAL UTILITIES		N/A		0
				0
TOTAL G40 - SITE ELECTRICAL UTILITIES				**283,660**
G90 - OTHER SITE CONSTRUCTION		N/A		
TOTAL G90 - OTHER SITE CONSTRUCTION				**0**

PROJECT: Mountview Middle School
LOCATION: Holden, MA
CLIENT: Lamoureux - Pagano Associates, Architects
DATE: 06-Jul-12

No.: 11100

NEW SITEWORK

SUMMARY

	TOTAL	PERCENT OF PROJECT	COST PER SF
G. BUILDING SITEWORK			
G10 - SITE PREPARATION			
G1010 SITE CLEARING	87,875	2%	0.00
G1020 SITE DEMOLITION & RELOCATIONS	405,000	8%	0.00
G1030 SITE EARTHWORK	560,000	11%	0.00
G1040 HAZARDOUS WASTE REMEDIATION	0	0%	0.00
G20 - SITE IMPROVEMENTS			
G2010 ROADWAYS	1,592,606	31%	0.00
G2020 PARKING LOTS	0	0%	0.00
G2030 PEDESTRIAN PAVING	135,723	3%	0.00
G2040 SITE DEVELOPMENT	279,225	5%	0.00
G2050 LANDSCAPING	540,000	11%	0.00
G30 - SITE MECHANICAL UTILITIES			
G3010 WATER SUPPLY	211,345	4%	0.00
G3020 SANITARY SEWER	132,554	3%	0.00
G3030 STORM SEWER	846,550	17%	0.00
G3040 HEATING DISTRIBUTION	0	0%	0.00
G3050 COOLING DISTRIBUTION	0	0%	0.00
G3060 FUEL DISTRIBUTION	43,750	1%	0.00
G3090 OTHER SITE MECHANICAL UTILITIES	0	0%	0.00
G40 - SITE ELECTRICAL UTILITIES			
G4010 ELECTRICAL DISTRIBUTION	154,560	3%	0.00
G4020 SITE LIGHTING	94,100	2%	0.00
G4030 SITE COMMUNICATIONS & SECURITY	35,000	1%	0.00
G4090 OTHER SITE ELECTRICAL UTILITIES	0	0%	0.00
G90 - OTHER SITE CONSTRUCTION			
G9010 SERVICE AND PEDESTRIAN TUNNELS	0	0%	0.00
G9090 OTHER SITE SYSTEMS	0	0%	0.00
TOTAL	5,118,288	100%	0.00

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
G. BUILDING SITEWORK				
G10 - SITE PREPARATION				
G1010 SITE CLEARING				
311000 SITE PREPARATION & CLEARING				
Erosion control	7,500	LF	3.65	27,375
Drain inlet protection - allow	10	EA	50.00	500
Construction entrance and staging	1	LS	10,000.00	10,000
Misc. site preparation	1	LS	50,000.00	50,000
				87,875
G1020 SITE DEMOLITION & RELOCATIONS				
311000 SITE PREPARATION & CLEARING				
Site Preparation	1,350,000	SF	0.30	405,000
				405,000
G1030 SITE EARTHWORK				
310000 EARTHWORK				
Cut and Fill	50,000	CY	7.00	350,000
Site Rough Grading	150,000	SY	0.65	97,500
Ledge Removal - allowamce	2,500	CY	45.00	112,500
*Site utilities include excavation & backfill				
				560,000
G1040 HAZARDOUS WASTE REMEDIATION		N/A		
				0
TOTAL G10 - SITE PREPARATION				**1,052,875**
G20 - SITE IMPROVEMENTS				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
G2010 ROADWAYS				
320000 PAVEMENT, CURBING & EDGING				
4 1/2" Vehicular Bituminous Pavement:				
New Parking and drive	37,496	SY	26.00	974,896
12" Gravel base @ drive	12,480	CY	19.50	243,360
Granite curb - straight	9,200	LF	29.50	271,400
Granite curb - radial	3,000	LF	29.50	88,500
Tactile warning paver at HC Cut	6	EA	325.00	1,950
Traffic signage	1	LS	5,000.00	5,000
Misc. pavement markings	1	LS	7,500.00	7,500
				1,592,606
G2020 PARKING LOTS				
*Included with G2010				
				0
G2030 PEDESTRIAN PAVING				
320000 PAVEMENT, CURBING & EDGING				
4" Concrete pavement	15,000	SF	4.25	63,750
8" Gravel base @ walk	370	CY	21.00	7,770
3" Bituminous walk	1,500	SY	23.00	34,500
8" Gravel base @ walk	333	CY	21.00	6,993
Specially Entry Pavement	3,500	SF	6.00	21,000
8" Gravel base @ walk	90	CY	19.00	1,710
				135,723
G2040 SITE DEVELOPMENT				
323100 SITE IMPROVEMENTS				
6" Concrete dumpster pad	500	SF	10.00	5,000
Dumpster enclosure	85	LF	65.00	5,525
Dumpster gate	1	EA	2,500.00	2,500
Baseball Fields	2	EA	60,000.00	120,000
Fencing	1	LS	60,000.00	60,000
Bollards @ transformer/generator	6	EA	550.00	3,300
Vehicular access gate	2	EA	2,200.00	4,400
Bike rack - allow	5	EA	450.00	2,250

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Bench - allow	10	EA	1,800.00	18,000
Trash receptacle - allow	3	EA	1,250.00	3,750
Flag pole	1	EA	4,500.00	4,500
Misc. site improvements	1	LS	50,000.00	50,000
				279,225

G2050 LANDSCAPING

329000 LANDSCAPING

Landscaping - allow	1	LS	100,000.00	100,000
Loam and Seed disturbed area	80,000	SY	5.50	440,000
Irrigation system		NIC		
				540,000

TOTAL G20 - SITE IMPROVEMENTS 2,547,554

G30 - SITE MECHANICAL UTILITIES

G3010 WATER SUPPLY

330000 UTILITIES

Site connection	1	LS	7,500.00	7,500
4" Domestic	25	LF	51.00	1,275
6" Fire service line	200	LF	58.00	11,600
10" Main	1,500	LF	89.00	133,500
Hydrant	5	EA	1,850.00	9,250
10" Gate valve	4	EA	1,150.00	4,600
6" Gate valve	2	EA	850.00	1,700
4" Gate valve	1	EA	670.00	670
Ledge removal	750	CY	55.00	41,250
				211,345

G3020 SANITARY SEWER

330000 UTILITIES

Grease trap (5,000 gal)	1	EA	7,000.00	7,000
8" PVC Sanitary main	1,500	LF	48.00	72,000
6" Cast Iron	42	LF	62.00	2,604
Sanitary manhole	3	EA	2,500.00	7,500
Clean out	4	EA	550.00	2,200
Ledge removal	750	CY	55.00	41,250

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
				132,554
G3030 STORM SEWER				
330000 UTILITIES				
Storm Sewer:				
Site Drainage :				
Area drain	7	EA	1,250.00	8,750
Drainage manhole	20	EA	2,250.00	45,000
Catch basin	30	EA	2,250.00	67,500
24" RCP	1,800	LF	56.00	100,800
12" RCP	3,000	LF	38.00	114,000
18" RCP	2,500	LF	46.00	115,000
15" RCP	1,000	LF	42.00	42,000
Water quality structure	3	EA	12,000.00	36,000
Wet land crossing	1	LS	30,000.00	30,000
Detention Systems	7,500	SF	20.00	150,000
Ledge removal - allow	2,500	CY	55.00	137,500
				846,550
G3060 FUEL DISTRIBUTION				
330000 UTILITIES				
Fuel Distribution:				
Gas main trenching and backfill	1,200	LF	25.00	30,000
Ledge removal	250	CY	55.00	13,750
				43,750
G3090 OTHER SITE MECHANICAL UTILITIES		N/A		
				0
TOTAL G30 - SITE MECHANICAL UTILITIES				**1,234,199**

G40 - SITE ELECTRICAL UTILITIES

G4010 ELECTRICAL DISTRIBUTION

260000 ELECTRICAL*

SPARE OR EMPTY RACEWAYS

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
PVC Underground:				
4"	5,000	LF	14.20	71,000
GROUNDING:				
Ground rod 3/4"x10'	1	EA	77.00	77
Bare copper wire #1/0	25	LF	3.30	83
330000 UTILITIES				
Transformer pad	1	EA	2,000.00	2,000
Emergency generator pad (15'x30')	1	EA	2,500.00	2,500
Conc. ductbank	1,200	LF	42.00	50,400
Tele/data duct bank	750	LF	38.00	28,500
*Primary cabling - By Others				
				154,560
G4020 SITE LIGHTING				
260000 ELECTRICAL*				
Parking light pole	20	EA	3,500.00	70,000
Pedestrian lighting	12	EA	1,800.00	21,600
Flag pole lighting	1	LS	2,500.00	2,500
				94,100
G4030 SITE COMMUNICATIONS & SECURITY				
330000 UTILITIES				
Security Cameras	10	EA	3,500.00	35,000
				35,000
G4090 OTHER SITE ELECTRICAL UTILITIES		N/A		
				0
				0
TOTAL G40 - SITE ELECTRICAL UTILITIES				**283,660**
G90 - OTHER SITE CONSTRUCTION		N/A		
TOTAL G90 - OTHER SITE CONSTRUCTION				**0**

PROJECT: Mountview Middle School
LOCATION: Holden, MA
CLIENT: Lamoureux - Pagano Associates, Architects
DATE: 06-Jul-12

No.: 11100

MODERATE SITEWORK

SUMMARY

	TOTAL	PERCENT OF PROJECT	COST PER SF
G. BUILDING SITEWORK			
G10 - SITE PREPARATION			
G1010 SITE CLEARING	10,000	2%	0.00
G1020 SITE DEMOLITION & RELOCATIONS	15,000	3%	0.00
G1030 SITE EARTHWORK	0	0%	0.00
G1040 HAZARDOUS WASTE REMEDIATION	0	0%	0.00
G20 - SITE IMPROVEMENTS			
G2010 ROADWAYS	0	0%	0.00
G2020 PARKING LOTS	0	0%	0.00
G2030 PEDESTRIAN PAVING	25,000	5%	0.00
G2040 SITE DEVELOPMENT	5,000	1%	0.00
G2050 LANDSCAPING	20,000	4%	0.00
G30 - SITE MECHANICAL UTILITIES			
G3010 WATER SUPPLY	211,345	44%	0.00
G3020 SANITARY SEWER	0	0%	0.00
G3030 STORM SEWER	0	0%	0.00
G3040 HEATING DISTRIBUTION	0	0%	0.00
G3050 COOLING DISTRIBUTION	0	0%	0.00
G3060 FUEL DISTRIBUTION	43,750	9%	0.00
G3090 OTHER SITE MECHANICAL UTILITIES	0	0%	0.00
G40 - SITE ELECTRICAL UTILITIES			
G4010 ELECTRICAL DISTRIBUTION	154,560	32%	0.00
G4020 SITE LIGHTING	0	0%	0.00
G4030 SITE COMMUNICATIONS & SECURITY	0	0%	0.00
G4090 OTHER SITE ELECTRICAL UTILITIES	0	0%	0.00
G90 - OTHER SITE CONSTRUCTION			
G9010 SERVICE AND PEDESTRIAN TUNNELS	0	0%	0.00
G9090 OTHER SITE SYSTEMS	0	0%	0.00
TOTAL	484,655	100%	0.00

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
G. BUILDING SITEWORK				
G10 - SITE PREPARATION				
G1010 SITE CLEARING				
311000 SITE PREPARATION & CLEARING				
Misc. site preparation	1	LS	10,000.00	10,000
				10,000
G1020 SITE DEMOLITION & RELOCATIONS				
311000 SITE PREPARATION & CLEARING				
Remove pavement at new utilities	1	LS	15,000.00	15,000
				15,000
G1030 SITE EARTHWORK				
310000 EARTHWORK				
*Site utilities include excavation & backfill				
				0
G1040 HAZARDOUS WASTE REMEDIATION		N/A		
				0
TOTAL G10 - SITE PREPARATION				**25,000**
G20 - SITE IMPROVEMENTS				
G2010 ROADWAYS				
320000 PAVEMENT, CURBING & EDGING				
				0

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
G2020 PARKING LOTS				
*Included with G2010				
				0
G2030 PEDESTRIAN PAVING				
320000 PAVEMENT, CURBING & EDGING				
Pavement patch	1	LS	25,000.00	25,000
				25,000
G2040 SITE DEVELOPMENT				
323100 SITE IMPROVEMENTS				
Gas Pad	1	LS	5,000.00	5,000
				5,000
G2050 LANDSCAPING				
329000 LANDSCAPING				
Loam and Seed disturbed area	1	LS	20,000.00	20,000
				20,000
TOTAL G20 - SITE IMPROVEMENTS				**50,000**
G30 - SITE MECHANICAL UTILITIES				
G3010 WATER SUPPLY				
330000 UTILITIES				
Site connection	1	LS	7,500.00	7,500
4" Domestic	25	LF	51.00	1,275
6" Fire service line	200	LF	58.00	11,600
10" Main	1,500	LF	89.00	133,500
Hydrant	5	EA	1,850.00	9,250
10" Gate valve	4	EA	1,150.00	4,600
6" Gate valve	2	EA	850.00	1,700
4" Gate valve	1	EA	670.00	670

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Ledge removal	750	CY	55.00	41,250
				211,345
G3020 SANITARY SEWER				
330000 UTILITIES				
				0
G3030 STORM SEWER				
330000 UTILITIES				
				0
G3060 FUEL DISTRIBUTION				
330000 UTILITIES				
Fuel Distribution:				
Gas main trenching and backfill	1,200	LF	25.00	30,000
Ledge removal	250	CY	55.00	13,750
				43,750
G3090 OTHER SITE MECHANICAL UTILITIES		N/A		
				0
TOTAL G30 - SITE MECHANICAL UTILITIES				**255,095**
G40 - SITE ELECTRICAL UTILITIES				
G4010 ELECTRICAL DISTRIBUTION				
260000 ELECTRICAL*				
SPARE OR EMPTY RACEWAYS				
PVC Underground:				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
4"	5,000	LF	14.20	71,000
GROUNDING:				
Ground rod 3/4"x10'	1	EA	77.00	77
Bare copper wire #1/0	25	LF	3.30	83
330000 UTILITIES				
Transformer pad	1	EA	2,000.00	2,000
Emergency generator pad (15'x30')	1	EA	2,500.00	2,500
Conc. ductbank	1,200	LF	42.00	50,400
Tele/data duct bank	750	LF	38.00	28,500
*Primary cabling - By Others				
				154,560
G4020 SITE LIGHTING				
260000 ELECTRICAL*				
				0
G4030 SITE COMMUNICATIONS & SECURITY				
330000 UTILITIES				
				0
G4090 OTHER SITE ELECTRICAL UTILITIES		N/A		
				0
				0
TOTAL G40 - SITE ELECTRICAL UTILITIES				**154,560**
G90 - OTHER SITE CONSTRUCTION		N/A		
TOTAL G90 - OTHER SITE CONSTRUCTION				**0**

PROJECT:	Mountview Middle School	NO. OF SQ. FT.:	123,000
LOCATION:	Holden, MA	COST PER SQ. FT.:	$70.76
CLIENT:	Lamoureux - Pagano Associates, Architects		
DATE:	06-Jul-12		

MODERATE - RENOVATION

SUMMARY

	TOTAL	PERCENT OF PROJECT	COST PER SF
A. SUBSTRUCTURE			
A10 - FOUNDATIONS			
A1010 STANDARD FOUNDATIONS	105,000	1%	0.85
A1020 SPECIAL FOUNDATIONS	0	0%	0.00
A1030 SLAB ON GRADE	35,000	0%	0.28
A20 - BASEMENT CONSTRUCTION			
A2010 BASEMENT EXCAVATION	0	0%	0.00
A2020 BASEMENT WALLS	0	0%	0.00
B. SHELL			
B10 - SUPERSTRUCTURE			
B1010 FLOOR CONSTRUCTION	246,936	3%	2.01
B1020 ROOF CONSTRUCTION	101,000	1%	0.82
B20 - EXTERIOR ENCLOSURE			
B2010 EXTERIOR WALLS	132,500	2%	1.08
B2020 EXTERIOR WINDOWS	464,692	5%	3.78
B2030 EXTERIOR DOORS	105,776	1%	0.86
B30 - ROOFING			
B3010 ROOF COVERINGS	1,195,850	14%	9.72
B3020 ROOF OPENINGS	15,000	0%	0.12
C. INTERIORS			
C10 - INTERIOR CONSTRUCTION			
C1010 PARTITIONS	701,180	8%	5.70
C1020 INTERIOR DOORS	124,800	1%	1.01
C1030 FITTINGS	233,140	3%	1.90
C20 - STAIRS			
C2010 STAIR CONSTRUCTION	33,600	0%	0.27
C2020 STAIR FINISHES	10,000	0%	0.08
C30 - INTERIOR FINISHES			
C3010 WALL FINISHES	73,000	1%	0.59
C3020 FLOOR FINISHES	183,000	2%	1.49
C3030 CEILING FINISHES	429,500	5%	3.49
D. SERVICES			
D10 - CONVEYING			
D1010 ELEVATORS & LIFTS	25,000	0%	0.20
D1010 ESCALATORS & MOVING WALKS	0	0%	0.00
D1090 OTHER CONVEYING SYSTEMS	0	0%	0.00
D20 - PLUMBING			
D2010 PLUMBING	100,000	1%	0.81

Mountview Middle School - Moderate Renovation	TOTAL	PERCENT OF PROJECT	COST PER SF
D30 - HVAC			
D3010 HVAC	869,000	10%	7.07
D40 - FIRE PROTECTION			
D4010 FIRE PROTECTION	270,000	3%	2.20
D50 - ELECTRICAL			
D5010 ELECTRICAL	2,952,000	34%	24.00
E. EQUIPMENT & FURNISHINGS			
E10 - EQUIPMENT			
E1010 COMMERCIAL EQUIPMENT	0	0%	0.00
E1020 INSTITUTIONAL EQUIPMENT	0	0%	0.00
E1030 VEHICULAR EQUIPMENT	0	0%	0.00
E1090 OTHER EQUIPMENT	30,000	0%	0.24
E20 - FURNISHINGS			
E 2010 FIXED FURNISHINGS	60,000	1%	0.49
E2020 MOVABLE FURNISHINGS	0	0%	0.00
F. SPECIAL CONSTRUCTION & DEMOLITION			
F10 - SPECIAL CONSTRUCTION			
F1010 SPECIAL STRUCTURES	0	0%	0.00
F1020 INTEGRATED CONSTRUCTION	0	0%	0.00
F1030 SPECIAL CONSTRUCTION SYSTEMS	0	0%	0.00
F1040 SPECIAL FACILITIES	0	0%	0.00
F1050 SPECIAL CONTROLS & INSTRUMENTATION	0	0%	0.00
F20 - SELECTIVE BUILDING DEMOLITION			
F2010 BUILDING ELEMENTS DEMOLITION	206,936	2%	1.68
F2020 HAZARDOUS COMPONENTS ABATEMENT	0	0%	0.00
G. BUILDING SITEWORK			
G10 - SITE PREPARATION			
G1010 SITE CLEARING	0	0%	0.00
G1020 SITE DEMOLITION & RELOCATIONS	0	0%	0.00
G1030 SITE EARTHWORK	0	0%	0.00
G1040 HAZARDOUS WASTE REMEDIATION	0	0%	0.00
G20 - SITE IMPROVEMENTS			
G2010 ROADWAYS	0	0%	0.00
G2020 PARKING LOTS	0	0%	0.00
G2030 PEDESTRIAN PAVING	0	0%	0.00
G2040 SITE DEVELOPMENT	0	0%	0.00
G2050 LANDSCAPING	0	0%	0.00
G30 - SITE MECHANICAL UTILITIES			
G3010 WATER SUPPLY	0	0%	0.00
G3020 SANITARY SEWER	0	0%	0.00
G3030 STORM SEWER	0	0%	0.00
G3040 HEATING DISTRIBUTION	0	0%	0.00
G3050 COOLING DISTRIBUTION	0	0%	0.00
G3060 FUEL DISTRIBUTION	0	0%	0.00
G3090 OTHER SITE MECHANICAL UTILITIES	0	0%	0.00
G40 - SITE ELECTRICAL UTILITIES			
G4010 ELECTRICAL DISTRIBUTION	0	0%	0.00
G4020 SITE LIGHTING	0	0%	0.00

Mountview Middle School - Moderate Renovation	TOTAL	PERCENT OF PROJECT	COST PER SF
G4030 SITE COMMUNICATIONS & SECURITY	0	0%	0.00
G4090 OTHER SITE ELECTRICAL UTILITIES	0	0%	0.00
G90 - OTHER SITE CONSTRUCTION			
G9010 SERVICE AND PEDESTRIAN TUNNELS	0	0%	0.00
G9090 OTHER SITE SYSTEMS	0	0%	0.00
TOTAL	8,702,910	100%	70.76

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
A. SUBSTRUCTURE				
A10 - FOUNDATIONS				
A1010 STANDARD FOUNDATIONS				
033000 CAST IN PLACE CONCRETE				
New foundation at shear wall brace frame	1	LS	75,000.00	75,000
Misc. Foundation repairs - ALLOWANCE	1	LS	30,000.00	30,000
				105,000
A1020 SPECIAL FOUNDATIONS		N/A		0
				0
A1030 SLAB ON GRADE				
033000 CAST IN PLACE CONCRETE				
Patch and Repair slab at :				
Patch at shear wall	1	LS	25,000.00	25,000
Misc. slab patching	1	LS	10,000.00	10,000
				35,000
TOTAL A10 FOUNDATIONS				**140,000**
A20 - BASEMENT CONSTRUCTION		N/A		
A2010 BASEMENT EXCAVATION		NOT USED		0
TOTAL A20 - BASEMENT CONSTRUCTION				**0**
B. SHELL				
B10 - SUPERSTRUCTURE				
B1010 FLOOR CONSTRUCTION				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
051200 STRUCTURAL STEEL FRAMING				
Seismic lateral restraints	103,468	GSF	2.00	206,936
Structurally isolate gym café building	1	LS	40,000.00	40,000
				246,936
B1020 ROOF CONSTRUCTION				
051200 STRUCTURAL STEEL FRAMING				
Galv. roof top equip. support - allow	10	TONS	3,800.00	38,000
Reinforce roof at mechanical	15	TONS	4,200.00	63,000
				101,000
TOTAL B10 SUPERSTRUCTURE				**347,936**
B20 - EXTERIOR ENCLOSURE				
B2010 EXTERIOR WALLS				
042001 MASONRY*				
Masonry Restoration:				
Cut and point allowance	5,000	SF	25.00	125,000
090009 PAINTING*				
Misc. Exterior painting	1	LS	7,500.00	7,500
				132,500
B2020 EXTERIOR WINDOWS				
061000 ROUGH CARPENTRY				
7 1/2" P.T. - perim. blocking	4,200	SF	4.10	17,220
071000 DAMPPROOF., WATERPROOF. & CAULKING*				
Window and door caulking	4,200	LF	8.00	33,600

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
080005 METAL WINDOWS*				
Alum. window and storefront	103,468	GSF	4.00	413,872
				464,692
B2030 EXTERIOR DOORS				
061000 ROUGH CARPENTRY				
7 1/2" P.T. - perim. blocking	110	LF	4.10	451
081100 METAL DOORS AND FRAMES				
Receiving - dbl	1	EA	2,500.00	2,500
Receiving - sgl	1	EA	1,500.00	1,500
Stage - sgl	1	EA	1,800.00	1,800
Gym storage - sgl	1	EA	1,200.00	1,200
084000 ENTRANCES, STOREFRONTS & CURTAIN WALLS				
Exist. Opening Alum. Doors, Frames, Glass, Glazing & Hdw:				
Alum. storefront @ entries	350	SF	72.00	25,200
Alum Entry Door - dbl	9	EA	6,850.00	61,650
New exterior sealants perim.	450	LF	5.50	2,475
Auto opener	1	EA	4,500.00	4,500
Replace Overhead Coiling Doors:				
Loading dock	1	EA	4,500.00	4,500
				105,776
TOTAL B20 - EXTERIOR ENCLOSURE				**702,968**
B30 - ROOFING				
B3010 ROOF COVERINGS				
070002 ROOFING AND FLASHING*				
Demo Roofing and Flashing	55,000	SF	1.75	96,250
New PVC Roofing System	55,000	SF	15.00	825,000
076200 FLASHING AND SHEET METAL				
Aluminum Flashing:				
Gravel stop and fascia	3,200	LF	30.00	96,000
Base flashing	800	LF	32.00	25,600

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Perim. blocking	4,000	LF	12.00	48,000
Roof blocking @ mech equip.	1	LS	20,000.00	20,000
Walkway pads	1	LS	10,000.00	10,000
Misc. flashing	1	LS	75,000.00	75,000
				1,195,850

B3020 ROOF OPENINGS

077200 ROOF ACCESSORIES

Replace roof ladders - allow	2	EA	2,500.00	5,000
Misc. roof accessories	1	LS	10,000.00	10,000
				15,000

TOTAL B30 ROOFING **1,210,850**

C. INTERIORS

C10 - INTERIOR CONSTRUCTION

C1010 PARTITIONS

042001 MASONRY*

Interior Masonry Partitions - shear wall	123,000	GSF	2.50	307,500
Cut & patch @ mep	123,000	GSF	0.35	43,050
Patch, chases and misc masonry	123,000	GSF	0.25	30,750

050001 MISCELLANEOUS & ORNAMENTAL IRON*

Angle brace frame - 4' 0C	500	EA	98.00	49,000
Loose lintels	240	LF	22.00	5,280

061000 ROUGH CARPENTRY

Misc. Rough Carpentry	123,000	GSF	0.50	61,500

071000 DAMPPROOF., WATERPROOF. & CAULKING*

Joint sealants	123,000	GSF	0.20	24,600

081113 HOLLOW METAL DOORS AND FRAMES

Misc. Interior Windows	500	SF	45.00	22,500

088000 GLAZING*

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Misc. Interior Windows	500	SF	14.00	7,000
092900 GYPSUM BOARD ASSEMBLIES				
Fit -up selected areas	10,000	GSF	15.00	150,000
				701,180
C1020 INTERIOR DOORS				
081100 METAL DOORS AND FRAMES				
Fit -up selected areas	10,000	GSF	3.00	30,000
084000 ENTRANCES, STOREFRONTS & CURTAIN WALLS				
Alum Vestibule Door - dbl	8	EA	6,850.00	54,800
Aluminum storefront sidelight and transom	500	SF	70.00	35,000
083100 ACCESS DOORS AND PANELS				
Access panels	1	LS	5,000.00	5,000
				124,800
C1030 FITTINGS				
050001 MISCELLANEOUS & ORNAMENTAL IRON*				
Renovation:				
Misc. metals	123,000	GSF	0.25	30,750
101100 VISUAL DISPLAY BOARDS				
Replace Marker and Tackboards:				
Marker board - 12'	4,200	SF	19.00	79,800
Tack Board - 4'	3,800	SF	14.00	53,200
Display cases	1	LS	20,000.00	20,000
Smart board - 6'		NIC		
104400 FIRE PROTECTION SPECIALTIES				
Science rm fire extinguisher & access	4	EA	450.00	1,800

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Fire extinguisher and cabinet	8	EA	375.00	3,000
101400 SIGNAGE				
Int. ADA signage	123,000	GSF	0.08	9,840
109000 MISCELLANEOUS SPECIALTIES				
Health office cubicle w/track	2	EA	2,000.00	4,000
Misc. specialties	123,000	GSF	0.25	30,750
				233,140
TOTAL C10 - INTERIOR CONSTRUCTION				**1,059,120**
C20 - STAIRS				
C2010 STAIR CONSTRUCTION				
050001 MISCELLANEOUS & ORNAMENTAL IRON*				
AAB Stair Hall Modifications:				
Stair rail modification	8	EA	4,200.00	33,600
				33,600
C2020 STAIR FINISHES				
090006 RESILIENT FLOORING*				
Rubber tread and riser	8	FLT	1,250.00	10,000
				10,000
TOTAL C20 - STAIRS				**43,600**
C30 - INTERIOR FINISHES				
C3010 WALL FINISHES				
062000 FINISH CARPENTRY				
Carpentry:				
Allow millwork at fit-up area	10,000	GSF	0.50	5,000

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
090009 PAINTING*				
Renovation:				
Paint at selected areas	40,000	GSF	1.70	68,000
				73,000
C3020 FLOOR FINISHES				
090006 RESILIENT FLOORING*				
Linoleum :				
Corridor/Classroom	10,000	SF	8.00	80,000
4" Vinyl wall base-allow	1	LS	3,000.00	3,000
Allow for patching at new structure	1	LS	100,000.00	100,000
				183,000
C3030 CEILING FINISHES				
092900 GYPSUM BOARD ASSEMBLIES				
Misc. Gyp soffits	10,000	GSF	0.80	8,000
095100 ACOUSTICAL CEILINGS*				
2x2 ACT typical	10,000	SF	4.75	47,500
Patch Replace ceilings at new electrical	123,000	GSF	3.00	369,000
090009 PAINTING*				
Misc. Painting	1	LS	5,000.00	5,000
				429,500
TOTAL C30 - INTERIOR FINISHES				**685,500**

D. SERVICES

D10 - CONVEYING

D1010 ELEVATORS & LIFTS

142424 HYDRAULIC ELEVATORS*

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Wheelchair lift and patch	1	LS	25,000.00	25,000
				25,000

D1010 ESCALATORS & MOVING WALKS

D20 - PLUMBING

D2010 PLUMBING

220000 PLUMBING*

Replace hot water tanks and pumps	1	LS	75,000.00	75,000
Minor plumbing rework at new fit-up	1	LS	25,000.00	25,000
				100,000

TOTAL D20 - PLUMBING	**$0.81**	**/sf**		**100,000**

D30 - HVAC

D3010 HVAC

230000 HVAC*

Replace existing boilers and controls	1	LS	165,000.00	165,000
Replace existing kitchen ventilation	1	LS	55,000.00	55,000
DDC Control upgrade	123,000	GSF	3.00	369,000
Rework HVAC at fit-up	10,000	GSF	28.00	280,000
				869,000

TOTAL D30 - HVAC	**$7.07**	**/SF**		**869,000**

D40 - FIRE PROTECTION

D4010 FIRE PROTECTION

210000 FIRE SUPPRESSION

Original building	39,000	GSF	5.00	195,000
Fire Pump	1	LS	75,000.00	75,000
				270,000

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
TOTAL D40 - FIRE PROTECTION	**$6.92**	**/SF**		**270,000**
D50 - ELECTRICAL				
D5010 ELECTRICAL				
260000 ELECTRICAL*				
Replace electrical system	123,000	GSF	24.00	2,952,000
				2,952,000
TOTAL D50 - ELECTRICAL	**$24.00**	**/SF**		**2,952,000**
E. EQUIPMENT & FURNISHINGS				
E10 - EQUIPMENT				
E1010 COMMERCIAL EQUIPMENT				
114000 FOOD SERVICE EQUIPMENT				
Replace kitchen hood and ansul suppression	1	LS	30,000.00	30,000
				30,000
TOTAL E10 - EQUIPMENT				**30,000**
E20 - FURNISHINGS				
103468 CASEWORK				
New casework at fit-up area	10,000	GSF	6.00	60,000
				60,000
E2020 MOVABLE FURNISHINGS		NIC		
				0
				0

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
TOTAL E20 - FURNISHINGS				**60,000**
F. SPECIAL CONSTRUCTION & DEMOLITION				
F10 - SPECIAL CONSTRUCTION				
F1010 SPECIAL STRUCTURES		N/A		
				0
F1020 INTEGRATED CONSTRUCTION				
F20 - SELECTIVE BUILDING DEMOLITION				
F2010 BUILDING ELEMENTS DEMOLITION				
024116 STRUCTURE DEMOLITION				
Interior Demolition	103,468	GSF	2.00	206,936
				206,936
F2020 HAZARDOUS COMPONENTS ABATEMENT				
022820 ASBESTOS REMEDIATION				
Hazardous waste removal	see summary page			
				0
TOTAL F20 - SELECTIVE BUILDING DEMOLITION				**206,936**
G. BUILDING SITEWORK	SEE SITEWORK ESTIMATE			
G10 - SITE PREPARATION				

PROJECT:	Mountview Middle School	NO. OF SQ. FT.:	103,468
LOCATION:	Holden, MA	COST PER SQ. FT.:	$147.35
CLIENT:	Lamoureux - Pagano Associates, Architects		
DATE:	06-Jul-12		

MAJOR - RENOVATION

SUMMARY

	TOTAL	PERCENT OF PROJECT	COST PER SF
A. SUBSTRUCTURE			
A10 - FOUNDATIONS			
A1010 STANDARD FOUNDATIONS	105,000	1%	1.01
A1020 SPECIAL FOUNDATIONS	0	0%	0.00
A1030 SLAB ON GRADE	67,500	0%	0.65
A20 - BASEMENT CONSTRUCTION			
A2010 BASEMENT EXCAVATION	0	0%	0.00
A2020 BASEMENT WALLS	0	0%	0.00
B. SHELL			
B10 - SUPERSTRUCTURE			
B1010 FLOOR CONSTRUCTION	246,936	2%	2.39
B1020 ROOF CONSTRUCTION	101,000	1%	0.98
B20 - EXTERIOR ENCLOSURE			
B2010 EXTERIOR WALLS	132,500	1%	1.28
B2020 EXTERIOR WINDOWS	464,692	3%	4.49
B2030 EXTERIOR DOORS	105,776	1%	1.02
B30 - ROOFING			
B3010 ROOF COVERINGS	1,195,850	8%	11.56
B3020 ROOF OPENINGS	15,000	0%	0.14
C. INTERIORS			
C10 - INTERIOR CONSTRUCTION			
C1010 PARTITIONS	890,830	6%	8.61
C1020 INTERIOR DOORS	424,204	3%	4.10
C1030 FITTINGS	310,261	2%	3.00
C20 - STAIRS			
C2010 STAIR CONSTRUCTION	33,600	0%	0.32
C2020 STAIR FINISHES	10,000	0%	0.10
C30 - INTERIOR FINISHES			
C3010 WALL FINISHES	667,263	4%	6.45
C3020 FLOOR FINISHES	959,227	6%	9.27
C3030 CEILING FINISHES	608,297	4%	5.88
D. SERVICES			
D10 - CONVEYING			
D1010 ELEVATORS & LIFTS	25,000	0%	0.24
D1010 ESCALATORS & MOVING WALKS	0	0%	0.00
D1090 OTHER CONVEYING SYSTEMS	0	0%	0.00
D20 - PLUMBING			
D2010 PLUMBING	827,744	5%	8.00

Mountview Middle School - Major Renovation	TOTAL	PERCENT OF PROJECT	COST PER SF
D30 - HVAC			
D3010 HVAC	2,897,104	19%	28.00
D40 - FIRE PROTECTION			
D4010 FIRE PROTECTION	592,340	4%	5.72
D50 - ELECTRICAL			
D5010 ELECTRICAL	2,586,700	17%	25.00
E. EQUIPMENT & FURNISHINGS			
E10 - EQUIPMENT			
E1010 COMMERCIAL EQUIPMENT	0	0%	0.00
E1020 INSTITUTIONAL EQUIPMENT	0	0%	0.00
E1030 VEHICULAR EQUIPMENT	0	0%	0.00
E1090 OTHER EQUIPMENT	472,500	3%	4.57
E20 - FURNISHINGS			
E 2010 FIXED FURNISHINGS	885,908	6%	8.56
E2020 MOVABLE FURNISHINGS	0	0%	0.00
F. SPECIAL CONSTRUCTION & DEMOLITION			
F10 - SPECIAL CONSTRUCTION			
F1010 SPECIAL STRUCTURES	0	0%	0.00
F1020 INTEGRATED CONSTRUCTION	0	0%	0.00
F1030 SPECIAL CONSTRUCTION SYSTEMS	0	0%	0.00
F1040 SPECIAL FACILITIES	0	0%	0.00
F1050 SPECIAL CONTROLS & INSTRUMENTATION	0	0%	0.00
F20 - SELECTIVE BUILDING DEMOLITION			
F2010 BUILDING ELEMENTS DEMOLITION	620,808	4%	6.00
F2020 HAZARDOUS COMPONENTS ABATEMENT	0	0%	0.00
G. BUILDING SITEWORK			
G10 - SITE PREPARATION			
G1010 SITE CLEARING	0	0%	0.00
G1020 SITE DEMOLITION & RELOCATIONS	0	0%	0.00
G1030 SITE EARTHWORK	0	0%	0.00
G1040 HAZARDOUS WASTE REMEDIATION	0	0%	0.00
G20 - SITE IMPROVEMENTS			
G2010 ROADWAYS	0	0%	0.00
G2020 PARKING LOTS	0	0%	0.00
G2030 PEDESTRIAN PAVING	0	0%	0.00
G2040 SITE DEVELOPMENT	0	0%	0.00
G2050 LANDSCAPING	0	0%	0.00
G30 - SITE MECHANICAL UTILITIES			
G3010 WATER SUPPLY	0	0%	0.00
G3020 SANITARY SEWER	0	0%	0.00
G3030 STORM SEWER	0	0%	0.00
G3040 HEATING DISTRIBUTION	0	0%	0.00
G3050 COOLING DISTRIBUTION	0	0%	0.00
G3060 FUEL DISTRIBUTION	0	0%	0.00
G3090 OTHER SITE MECHANICAL UTILITIES	0	0%	0.00
G40 - SITE ELECTRICAL UTILITIES			
G4010 ELECTRICAL DISTRIBUTION	0	0%	0.00
G4020 SITE LIGHTING	0	0%	0.00

Mountview Middle School - Major Renovation	TOTAL	PERCENT OF PROJECT	COST PER SF
G4030 SITE COMMUNICATIONS & SECURITY	0	0%	0.00
G4090 OTHER SITE ELECTRICAL UTILITIES	0	0%	0.00
G90 - OTHER SITE CONSTRUCTION			
G9010 SERVICE AND PEDESTRIAN TUNNELS	0	0%	0.00
G9090 OTHER SITE SYSTEMS	0	0%	0.00
TOTAL	15,246,041	100%	147.35

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
A. SUBSTRUCTURE				
A10 - FOUNDATIONS				
A1010 STANDARD FOUNDATIONS				
033000 CAST IN PLACE CONCRETE				
New foundation at shear wall brace frame	1	LS	75,000.00	75,000
Misc. Foundation repairs - ALLOWANCE	1	LS	30,000.00	30,000
				105,000
A1020 SPECIAL FOUNDATIONS		N/A		0
				0
A1030 SLAB ON GRADE				
033000 CAST IN PLACE CONCRETE				
Patch and Repair slab at :				
Bathroom Renovations	2,500	SF	10.00	25,000
Café and Kitchen Rework	750	SF	10.00	7,500
Patch at shear wall	1	LS	25,000.00	25,000
Misc. slab patching	1	LS	10,000.00	10,000
				67,500
TOTAL A10 FOUNDATIONS				**172,500**
A20 - BASEMENT CONSTRUCTION		N/A		
A2010 BASEMENT EXCAVATION		NOT USED		0
TOTAL A20 - BASEMENT CONSTRUCTION				**0**
B. SHELL				
B10 - SUPERSTRUCTURE				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
B1010 FLOOR CONSTRUCTION				
051200 STRUCTURAL STEEL FRAMING				
Seismic lateral restraints	103,468	GSF	2.00	206,936
Structurally isolate gym café building	1	LS	40,000.00	40,000
				246,936
B1020 ROOF CONSTRUCTION				
051200 STRUCTURAL STEEL FRAMING				
Galv. roof top equip. support - allow	10	TONS	3,800.00	38,000
Reinforce roof at mechanical	15	TONS	4,200.00	63,000
				101,000
TOTAL B10 SUPERSTRUCTURE				**347,936**
B20 - EXTERIOR ENCLOSURE				
B2010 EXTERIOR WALLS				
042001 MASONRY*				
Masonry Restoration:				
Cut and point allowance	5,000	SF	25.00	125,000
090009 PAINTING*				
Misc. Exterior painting	1	LS	7,500.00	7,500
				132,500
B2020 EXTERIOR WINDOWS				
061000 ROUGH CARPENTRY				
7 1/2" P.T. - perim. blocking	4,200	SF	4.10	17,220
071000 DAMPPROOF., WATERPROOF. & CAULKING*				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Window and door caulking	4,200	LF	8.00	33,600
080005 METAL WINDOWS*				
Alum. window and storefront	103,468	GSF	4.00	413,872
				464,692
B2030 EXTERIOR DOORS				
061000 ROUGH CARPENTRY				
7 1/2" P.T. - perim. blocking	110	LF	4.10	451
081100 METAL DOORS AND FRAMES				
Receiving - dbl	1	EA	2,500.00	2,500
Receiving - sgl	1	EA	1,500.00	1,500
Stage - sgl	1	EA	1,800.00	1,800
Gym storage - sgl	1	EA	1,200.00	1,200
084000 ENTRANCES, STOREFRONTS & CURTAIN WALLS				
Exist. Opening Alum. Doors, Frames, Glass, Glazing & Hdw:				
Alum. storefront @ entries	350	SF	72.00	25,200
Alum Entry Door - dbl	9	EA	6,850.00	61,650
New exterior sealants perim.	450	LF	5.50	2,475
Auto opener	1	EA	4,500.00	4,500
Replace Overhead Coiling Doors:				
Loading dock	1	EA	4,500.00	4,500
				105,776
TOTAL B20 - EXTERIOR ENCLOSURE				**702,968**
B30 - ROOFING				
B3010 ROOF COVERINGS				
070002 ROOFING AND FLASHING*				
Demo Roofing and Flashing	55,000	SF	1.75	96,250
New PVC Roofing System	55,000	SF	15.00	825,000
076200 FLASHING AND SHEET METAL				
Aluminum Flashing:				
Gravel stop and fascia	3,200	LF	30.00	96,000

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Base flashing	800	LF	32.00	25,600
Perim. blocking	4,000	LF	12.00	48,000
Roof blocking @ mech equip.	1	LS	20,000.00	20,000
Walkway pads	1	LS	10,000.00	10,000
Misc. flashing	1	LS	75,000.00	75,000
				1,195,850

B3020 ROOF OPENINGS

077200 ROOF ACCESSORIES

Replace roof ladders - allow	2	EA	2,500.00	5,000
Misc. roof accessories	1	LS	10,000.00	10,000
				15,000

TOTAL B30 ROOFING **1,210,850**

C. INTERIORS

C10 - INTERIOR CONSTRUCTION

C1010 PARTITIONS

042001 MASONRY*

Interior Masonry Partitions - shear wall	103,468	GSF	2.50	258,670
Cut & patch @ mep	103,468	GSF	0.35	36,214
Patch, chases and misc masonry	103,468	GSF	0.25	25,867

050001 MISCELLANEOUS & ORNAMENTAL IRON*

Angle brace frame - 4' 0C	500	EA	98.00	49,000
Loose lintels	240	LF	22.00	5,280

061000 ROUGH CARPENTRY

Misc. Rough Carpentry	103,468	GSF	0.50	51,734

071000 DAMPPROOF., WATERPROOF. & CAULKING*

Joint sealants	103,468	GSF	0.20	20,694

081113 HOLLOW METAL DOORS AND FRAMES

Misc. Interior Windows	500	SF	45.00	22,500

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
088000 GLAZING*				
Misc. Interior Windows	500	SF	14.00	7,000
092900 GYPSUM BOARD ASSEMBLIES				
Minor New Partitions	103,468	GSF	4.00	413,872
				890,830
C1020 INTERIOR DOORS				
081100 METAL DOORS AND FRAMES				
Interior door, frame and Hardware	103,468	GSF	3.00	310,404
083326 OVERHEAD COILING GRILLES				
Overhead fire grill	2	EA	8,000.00	16,000
Dish drop ctr grille	1	LS	3,000.00	3,000
084000 ENTRANCES, STOREFRONTS & CURTAIN WALLS				
Alum Vestibule Door - dbl	8	EA	6,850.00	54,800
Aluminum storefront sidelight and transom	500	SF	70.00	35,000
083100 ACCESS DOORS AND PANELS				
Access panels	1	LS	5,000.00	5,000
				424,204
C1030 FITTINGS				
050001 MISCELLANEOUS & ORNAMENTAL IRON*				
Renovation:				
Misc. metals	103,468	GSF	0.25	25,867
102113 TOILET COMPARTMENTS				
Solid Plastic Toilet Partitions:				
Std. partition	8	EA	1,200.00	9,600
HC partition	14	EA	1,350.00	18,900

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Urinal screen	18	EA	275.00	4,950
102813 TOILET ROOM ACCESSORIES				
Replace Toilet Accessories	1	LS	55,000.00	55,000
101100 VISUAL DISPLAY BOARDS				
Replace Marker and Tackboards:				
Marker board - 12'	4,200	SF	19.00	79,800
Tack Board - 4'	3,800	SF	14.00	53,200
Display cases	1	LS	20,000.00	20,000
Smart board - 6'		NIC		
104400 FIRE PROTECTION SPECIALTIES				
Science rm fire extinguisher & access	4	EA	450.00	1,800
Fire extinguisher and cabinet	8	EA	375.00	3,000
101400 SIGNAGE				
Int. ADA signage	103,468	GSF	0.08	8,277
109000 MISCELLANEOUS SPECIALTIES				
Health office cubicle w/track	2	EA	2,000.00	4,000
Misc. specialties	103,468	GSF	0.25	25,867
				310,261
TOTAL C10 - INTERIOR CONSTRUCTION				**1,625,296**
C20 - STAIRS				
C2010 STAIR CONSTRUCTION				
050001 MISCELLANEOUS & ORNAMENTAL IRON*				
AAB Stair Hall Modifications:				
Stair rail modification	8	EA	4,200.00	33,600
				33,600
C2020 STAIR FINISHES				
090006 RESILIENT FLOORING*				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Rubber tread and riser	8	FLT	1,250.00	10,000
				10,000
TOTAL C20 - STAIRS				**43,600**

C30 - INTERIOR FINISHES

C3010 WALL FINISHES

090003 TILE*

Ceramic Wall Tile:				
Shower rm 7'4"	2,500	SF	14.00	35,000
Locker rm	1,500	SF	14.00	21,000
New toilet rm wall 7'4"	7,000	SF	14.00	98,000
Corridors	12,000	SF	14.00	168,000

062000 FINISH CARPENTRY

Carpentry:				
Lobby paneling	2,000	SF	30.00	60,000
Media Center paneling	1,200	SF	30.00	36,000
Misc. wood trim work	103,468	GSF	0.25	25,867

098413 ACOUSTIC PANELS

Band classroom (1 EA)		Existing		
Choral classroom (1 EA)	400	SF	25.00	10,000
Music practice room (4 EA)	400	SF	25.00	10,000
Drama/TV studio (1 EA)	200	SF	25.00	5,000
Media center	500	SF	25.00	12,500
Cafeteria	400	SF	25.00	10,000

090009 PAINTING*

Renovation:				
Interior painting walls	103,468	GSF	1.70	175,896
				667,263

C3020 FLOOR FINISHES

090003 TILE*

Ceramic Floor Tile (Thin-set New Toilet Rm):				
Marble threshold	18	EA	48.00	864
Ceramic Floor Tile	2,510	SF	15.00	37,650
Ceramic base	920	LF	7.00	6,440
Waterproof membrane	2,100	SF	7.00	14,700

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Kitchen:				
Quarry tile	750	SF	15.50	11,625
Quarry tile base	125	LF	7.00	875
090006 RESILIENT FLOORING*				
Linoleum :				
Corridor/Classroom	75,098	SF	8.00	600,784
Café	6,182	SF	8.00	49,456
4" Vinyl wall base-allow	1	LS	32,000.00	32,000
Rubber flooring:				
Locker rm	2,280	SF	7.00	15,960
Stair Hall	2,111	SF	7.00	14,777
Floor Prep - allow	90,000	SF	1.35	121,500
096500 WOOD FLOORING				
Refinish Gym floor	7,839	SF	4.50	35,276
Refinish stage floor	805	SF	2.00	1,610
096813 CARPETING				
Carpet	2,805	SF	4.50	12,623
033000 CAST IN PLACE CONCRETE				
Mech/elec rm (seal conc.)	3,088	SF	1.00	3,088

				959,227
C3030 CEILING FINISHES				
092900 GYPSUM BOARD ASSEMBLIES				
Gyp Ceiling	7,500	SF	7.75	58,125
Misc. Gyp soffits	103,468	GSF	0.80	82,774
095100 ACOUSTICAL CEILINGS*				
Cafeteria ceiling system	6,100	SF	10.00	61,000
2x2 ACT typical	81,118	SF	4.75	385,311
2x2 MR ACT kitchen	750	SF	4.25	3,188
090009 PAINTING*				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Paint gyp ceiling	7,500	SF	1.00	7,500
Paint exposed structure mech/ elec	8,000	SF	1.30	10,400
				608,297
TOTAL C30 - INTERIOR FINISHES				**2,234,787**

D. SERVICES

D10 - CONVEYING

D1010 ELEVATORS & LIFTS

142424 HYDRAULIC ELEVATORS*

Wheelchair lift and patch	1	LS	25,000.00	25,000
				25,000

D1010 ESCALATORS & MOVING WALKS

D20 - PLUMBING

D2010 PLUMBING

220000 PLUMBING*

Plumbing rework	103,468	GSF	8.00	827,744
				827,744

*roof drainage system is existing to remain
* underslab drainage is existing to remain

TOTAL D20 - PLUMBING	**$8.00**	**/sf**		**827,744**

D30 - HVAC

D3010 HVAC

230000 HVAC*

HVAC - VAV System	103,468	GSF	28.00	2,897,104
				2,897,104

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
TOTAL D30 - HVAC	**$28.00**	**/SF**		**2,897,104**
D40 - FIRE PROTECTION				
D4010 FIRE PROTECTION				
210000 FIRE SUPPRESSION				
New wet system	103,468	GSF	5.00	517,340
Fire Pump	1	LS	75,000.00	75,000
				592,340
TOTAL D40 - FIRE PROTECTION	**$5.72**	**/SF**		**592,340**
D50 - ELECTRICAL				
D5010 ELECTRICAL				
260000 ELECTRICAL*				
Replace Electrical System	103,468	SF	25.00	2,586,700
				2,586,700
TOTAL D50 - ELECTRICAL	**$25.00**	**/SF**		**2,586,700**
E. EQUIPMENT & FURNISHINGS				
E10 - EQUIPMENT				
E1010 COMMERCIAL EQUIPMENT				
113100 APPLIANCES				
Gym laundry appliances	1	RM	2,500.00	2,500
Teacher work rm appliances	2	RM	2,500.00	5,000
Health office appliances	1	LS	2,500.00	2,500
Teachers dining appliances	1	LS	2,500.00	2,500
116623 GYMNASIUM EQUIPMENT				
Gymnasium equipment		EXISTING		
115213 PROJECTION SCREENS				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Projection screen - café	1	EA	10,000.00	10,000
114000 FOOD SERVICE EQUIPMENT				
Kitchen equipment & casework	1	LS	450,000.00	450,000
				472,500
TOTAL E10 - EQUIPMENT				**472,500**
E20 - FURNISHINGS				
123000 CASEWORK				
Replace all casework	103,468	GSF	6.00	620,808
122400 WINDOW SHADES				
Manual roller shades - typ.	9,000	SF	4.50	40,500
Vert. blinds @ int. offices	1	LS	5,000.00	5,000
124813 ENTRANCE FLOOR MATS & FRAMES				
Surface mat	4	EA	1,000.00	4,000
105113 METAL LOCKERS				
Corridor Locker:				
Student locker 15"x15"x72"	750	EA	255.00	191,250
Kitchen locker - allow	5	EA	200.00	1,000
PE Locker:				
Team locker 12"x15"x72"	100	EA	210.00	21,000
Coach locker 15"x15"x72"	10	EA	235.00	2,350
				885,908
E2020 MOVABLE FURNISHINGS		NIC		
				0
				0
TOTAL E20 - FURNISHINGS				**885,908**

F. SPECIAL CONSTRUCTION & DEMOLITION

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
F10 - SPECIAL CONSTRUCTION				
F1010 SPECIAL STRUCTURES		N/A		
				0
F1020 INTEGRATED CONSTRUCTION				
F20 - SELECTIVE BUILDING DEMOLITION				
F2010 BUILDING ELEMENTS DEMOLITION				
024116 STRUCTURE DEMOLITION				
Interior Demolition	103,468	GSF	6.00	620,808
				620,808
F2020 HAZARDOUS COMPONENTS ABATEMENT				
022820 ASBESTOS REMEDIATION				
Hazardous waste removal	see summary page			
				0
TOTAL F20 - SELECTIVE BUILDING DEMOLITION				**620,808**
G. BUILDING SITEWORK	SEE SITEWORK ESTIMATE			
G10 - SITE PREPARATION				

3.1.7 LOCAL ACTIONS AND APPROVALS

A. Narrative
B. Local Actions & Approvals Certification

3.1.7 LOCAL ACTIONS AND APPROVAL

A. Narrative

The Owner and OPM have taken a proactive approach to involve the local community in the Feasibility Study process. See attached Mountview Middle School Community Outreach Efforts. Key steps include the following:

- SBC Meetings: All SBC meetings have been conducted in accordance with the state's open meeting law and posted on the town website.
- Wachusett Regional School District updates on the status of the project at their televised meetings and covered by the media.
- Annual Town Meeting providing update on committee's efforts and televised on the Town's local cable channel.
- Building Committee is establishing a website dedicated to the project.
- Green Charrette Meeting was held and open to the public, published in local newspapers.
- Building Committee held public tour of Mountview School which was advertised in local newspaper, Town LED message board, and town and district websites.

The Local Actions and Certifications form, signed by the Town Manager, Superintendent of Schools, and School Committee Chairperson is included in this section.

B. Local Actions & Approvals Certification

Appendix 3D

August 15, 2012

Ms. Diane Sullivan
Senior Capital Program Manager
Massachusetts School Building Authority
40 Broad Street
Boston, MA 02109

Dear Ms. Sullivan:

The Town of Holden School Building Committee (SBC) has completed its review of the Feasibility Study Preliminary Design Program for the Mountview Middle School project (the Project), and on July 31, 2012, the SBC voted to approve and authorize the Owner's Project Manager to submit the Feasibility Study related materials to the MSBA for its consideration. A certified copy of the SBC meeting minutes, which includes the specific language of the vote and the number of votes in favor, opposed, and abstained, are attached.

Since the MSBA's Board of Directors approved the District to proceed with the Feasibility Study/Schematic Design on February 22, 2012, the SBC has held ten (10) meetings regarding the Project, in compliance with the State Open Meeting Law. All meetings are posted on the Town website, Town Clerk's office, and Police Station. These meetings include:

SBC Meeting February 28, 2012 – Held at the Holden Light Department – 6PM

The Committee reviewed the 10 schematic design bid proposals which were received by the Town on February 24, 2012. The bid proposals will be sent to the MSBA in mid-March in preparation for MSBA's Design Review Panel meeting on March 27, 2012.

SBC Meeting April 10, 2012 – Held at the Holden Light Department – 6PM

SBC Chairman Paul Challenger announced that the MSBA had ranked Lamoureux-Pagano as the top architectural firm for the Feasibility and Schematic Design phase of the project. Mr. Michael Pagano and Mr. Bill Senecal from LPA were introduced to members of the SBC. The Town is conducting contract negotiations with LPA. The group reviewed the Feasibility Study Draft Work Plan. The group reviewed and discussed the MSBA's proposed schedule of project completions dates, the ability to meet the dates, and when to schedule a Town Meeting. The Committee agreed that the F&SD phase is an important process and it is important to make educated and informed decisions for the proper school to be built. School Superintendent Pandiscio said that school staff/administration would be introduced to the design process in May or June 2012.

Mountview School Building Committee Meeting Summary August 15, 2012

SBC Meeting April 24, 2012 – Held at the Holden Light Department – 6PM

SBC Chairman Challenger noted that a Contract for Designer Services had been reached with Lamoureux-Pagano for $475,000. The Committee voted unanimously to approve the contract. OPM Gary Kaczmarek reported he met with the Director of Facilities for the School District to review the Mountview School's original building plans. The Committee discussed possible ways to conduct community outreach efforts in order to involve the public in the design process. A subcommittee consisting of Chairman Challenger and Committee members Mike Sherman and Chris Lucchesi will reach out to the Shrewsbury MA School Building Committee and the Ashburnham MA School Building Committees to research community outreach plans. Other methods of community outreach discussed were the involvement of the PTO/SIMCO groups, creation of a website and the new media.

SBC Meeting May 22, 2012 – Held at the Holden Light Department – 6PM

The Committee reviewed the Module 3 Feasibility Study Guideline Checklist. LPA and the OPM are currently working on completing the PDP which is due to the MSBA on July 12, 2012. The PSR is due to the MSBA on August, 9, 2012. Soil borings and geotechnical reports have been ordered for the current school site. The OPM is reviewing potential building sites in town to determine if there is enough land to select an alternative building site. Subcontractors will begin evaluating the school on May 24, 2012. The SBC Chairman spoke at the May 21, 2012 Annual Town Meeting about the efforts of the Committee. He will address the School Committee on May 23, 2012 and begin writing a monthly summary of committee efforts as a press release for Community Outreach purposes.

SBC Meeting June 5, 2012 – Held at the Holden Light Department – 6PM

LPA is working with the School District to conduct a room summary. Discussion was held about the maximum square footage allowed for an education plan for an approved enrollment of 800 students. Soil boring reports came back and a traffic study will be conducted on June 7, 2012. A hazardous materials survey of the school is ongoing. The SBC discussed alternative school building sites. Approximately 8 building sites have been identified that have enough land to support a school. LPA is currently evaluating all potential sites. SBC unanimously voted to have LPA pursue building on the current site, the Chapel/Bullard Street site, and the Zottoli site. LPA will set up a walk through of the Sherwood Middle School in Shrewsbury, MA for the Committee. The school is currently under construction. LPA will schedule a Green Engineer Charette for later in June. The public will be notified via the Town website and the press and are encouraged to attend. Members of the Community Outreach subcommittee met with members of the Shrewsbury, MA Middle School Public Outreach Committee. The Town and LPA conducted an educational input community outreach discussion on June 5, 2012.

Mountview School Building Committee Meeting Summary August 15, 2012

SBC Meeting June 12, 2012 – Held at the Holden Light Department – 6PM

The Green Charette will be held on June 21, 2012 and is open to school staff and the public. LPA will meet with the Superintendent on June 21, 2012 to complete the Room Summary. The Committee discussed when to present the PSR to the School Committee for submission to the MSBA by August 9, 2012. OPM Gary Kaczmarek will hold a meeting with members from Town Departments to review potential building sites and receive town input on June 13, 2012. LPA and the Committee participated in a site review of potential building sites. SBC unanimously voted to eliminate the Zottoli property from building consideration due to the high number of abutters and the high cost to acquire the land. The Committee unanimously voted to direct LPA to continue evaluation of the Malden Street land as a potential building site.

SBC Meeting June 26, 2012 – Held at the Holden Light Department – 6PM

LPA confirmed that hazardous materials had been found in the school and the hygienist has recommended a sizeable budget for remediation: $1M for new and $750K for renovation. PCB's were found in windows. The EPA has been notified. LPA and the District have completed the room summary. The District has asked for 30 rooms vs. 28 dictated by the MSBA, and the elimination of the media center. The District is in the process of writing a written defense of the request. An evaluation of the alternative building site has begun. The Green Charette was held on June 21, 2012. A "Stakeholder" meeting will be held on July 10, 2012 at 5PM at Mountview School. The public will be invited to attend a walk through to see its current conditions and attend the SBC meeting at 6PM. The Community Outreach subcommittee met with members of the Ashburnham School Building Committee. The SBC voted on options for LPA to include in the PDP due July 12, 2012. The SBC reviewed an updated Summary of Deliverables Schedule provided by LPA. After discussion of a tight meeting schedule, the SBC directed the OPM to discuss an extension of the reporting deadline with the MSBA and extend the filing into September 2012. The OPM informed the SBC that he was in the process of hiring an OPM consultant to help with the project on a short term basis. SBC unanimously voted to support hiring an OPM consultant as necessary. The SBC unanimously voted to support the following project options in the PDP: 1. no build; 2. renovation minimum, medium or heavy; 3. build new on existing site; 4. building new on alternate site; 6. consider other options consistent with MSBA guidelines and expectations. The SBC unanimously voted to include public comment as part of its regular meeting agenda.

SBC Meeting July 10, 2012 – Held at the Holden Light Department 6PM

LPA and the Committee prepared for the July 17, 2012 Community Outreach Tour of Mountview Middle School and the Joint Meeting with Town Officials and the Public immediately after the tour.

Mountview School Building Committee Meeting Summary August 15, 2012

SBC Public Meeting and Tour of Mountview Middle School July 17, 2012

The Committee provided tours to the public of the Mountview Middle School. After the tours, the public was invited to attend the Committee's weekly meeting at 6PM at the school. Members of the Board of Selectmen, Finance Committee, Town Committees, Department Heads, and the School Committee were in attendance. LPA provided a power point presentation on the history of the project, the progress to date, and MSBA objectives. A Q&A session with the public occurred. Questions from the public included what type of building to build, who makes the final building decision, costs, educational quality, condition of current school, and how to involve the public in the process. Over 50 people were in attendance at the meeting.

SBC Meeting July 31, 2012 – Held at the Holden Light Department 6PM

SBC and Lamoureux-Pagano discuss all of the building alternatives in order to narrow the building options down to three choices to submit for the PDP. SBC unanimously voted to remove the minimum renovation from consideration, unanimously voted to move the option of doing nothing from consideration and unanimously voted to remove a moderation renovation from consideration. The SBC unanimously voted to include an addition/renovation building option, constructing a new building on the existing site, and constructing a new building on an alternative site in the PDP. The SBC voted 7-0-1 with 1 abstention to endorse the PDP as written on July 24, 2012 and to allow for minor edits and corrections until submittal on August 15, 2012. The Committee agreed to hold a second SBC meeting and public tour of the school on August 28, 2012. Tom Curran, a member of the public spoke during the public comment portion of the meeting adding he hoped the public becomes more involved at the August 28th meeting.

In addition to the SBC meetings listed above, the OPM/School District held five (5) public meetings, which were posted in state Open Meeting Law, at which the Project was discussed. All meetings are posted on Town website, Town Clerk's office and Police Station. These meetings included:

OPM Meeting Minutes May 14, 2012 – Held at the Mountview Middle School– 10AM

Members of the SBC, LPA, School District, and Town Administration met with Mr. Chris Alles of the MSBA to kick-off the Feasibility and Schematic Design process. The first stage of the schematic design will be due mid-July or early August. The entire Feasibility and Schematic Design report will be due to the MSBA in January 2013. Mr. Alles said that changes to the reporting schedule were possible as it is important to get the right project to the street. Mr. Pagano discussed potential problems with the current school site. LPA suggests that the SBC look into an alternative building site. Changes to the MSBA 8 modules concept, and meeting dates were discussed.

OPM Meeting May 24, 2012 – Held at the Mountview Middle School– 2:30PM

OPM Gary Kaczmarek toured the Mountview Middle School with engineering subcontractors for HVAC, Fire Suppression, and Structural Engineering.

Mountview School Building Committee Meeting Summary **August 15, 2012**

OPM Meeting June 5, 2012 – Held at the Mountview Middle School – 3PM

OPM Gary Kaczmarek and LPA conducted an Educational Input Discussion that was open to the public and school department staff.

OPM Meeting June 13, 2012 – Town Hall, Holden, MA– 8:30AM

OPM Gary Kaczmarek and LPA met with Town officials to conduct a site assessment meeting.

OPM/Green Charette Meeting June 21, 2012 – Held at the School District Offices – 9AM

Engineering Staff from The Green Engineer, a green building and design consulting firm, conducted a Charette to members of LPA, SBC, town officials and the public. Green items discussed included building a safe, healthy, and productive school while being mindful of money and making considerations that are good for the planet. Both MA-CHPS and the LEEDS programs were discussed. LPA commented that evaluations of the current building have revealed that it is not environmentally, structurally, or educationally within code.

The presentation materials for each meeting, meeting minutes, and summary materials related to the Project are available locally for public review at the Town Clerk's Office, 1196 Main Street, Holden, MA 01520.

To the best of my knowledge and belief, each of the meetings listed above complied with the requirements of the Open Meeting Law, M.G.L. c. 30A, 18-25 and 940 CMR 29 *et seq.*

If you have any questions or require any additional information, please contact, Thomas Pandiscio, Superintendent of Schools, Wachusett Regional School District, 1750 Main Street, Holden, MA 01520 508-829-1670.

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.	By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.	By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.
By: Nancy Galkowski	**By: Thomas G. Pandiscio**	**By: Duncan Leith**
Title: Chief Executive Officer	**Title: Superintendent of Schools**	**Title: Chair of the School Committee**
Date: 7/10/2012	**Date: 6/27/2012**	**Date: 6/27/2012**

Mountview School Building Committee
Holden, MA
Community Outreach

The Mountview School Building Committee undertook the following Community Outreach efforts during the Preliminary Design Program of Massachusetts School Building Authority Module 3 – Feasibility Study.

September 2010. Committee is formed to conduct study of Mountview Middle School. Committee meets bi-weekly and all meetings are posted on town website and are open to the public.

February 2012. Committee is approved for Designer Selection Process by MSBA.

April 2012. Town hires Lamoureux-Pagano Architects to conduct Feasibility and Schematic Design Process. Principal Erik Githmark contacts PTO's and SIMCO representatives to communicate status of project.

May 2012. Building Committee Chairman Paul Challenger speaks at May 21, 2012 Annual Town Meeting to provide update on Committee's efforts. Meeting is broadcast on local cable channel.

May 2012. BC Chairman Paul Challenger updates School Committee at their May 23, 2012 meeting. Mr. Challenger also begins writing a monthly summary of committee progress which will be sent to Selectmen and Town Committees. A press release of committee activities will also be sent to local press. All committee meeting minutes are available on Town website

June 2012. LPA and OPM conduct Educational Input Meeting with Staff on June 5, 2012.

June 2012. LPA and OPM meet with Town Department Heads to discuss alternative site availability.

June 2012. Chairman Paul Challenger and members Mike Sherman and Chris Lucchesi meet with Community Outreach volunteers from Shrewsbury, MA to discuss Shrewsbury's successful efforts to build the Sherwood Middle School.

June 2012. Chairman Paul Challenger and members Mike Sherman and Chris Lucchesi begin working on a website dedicated to the project.

June 2012. Chairman Paul Challenger and Mike Sherman meet with members of the Ashburnham, MA School Building Committee to discuss their school building project.

Mountview Middle School Community Outreach Efforts

June 2012. Town posts notice of Green Charette Meeting being held on June 21, 2012 on Town's new LED message board, Town website and District website. Public is invited and encouraged to attend. Coverage of the event is published in The Landmark, Holden's weekly newspaper and The Holden Daily Voice, an online newspaper.

June 2012. Building Committee holds Green Charette on July 21, 2012 with members from Town Committees and Departments, School Officials and Staff, Engineering Subcontractors, members of the public and the press in attendance.

July 2012. Building Committee holds public tour of Mountview School. After tour, Public is invited to attend Building Committee meeting and LPA presents history of project to date, timelines, and activities of project. Town Selectmen, Finance Committee, Town Administration, and School Committee members are invited to attend. Meeting is advertised in The Landmark, The Holden Daily Voice, Town LED message board, Town website and District website. Over 50 people attend meeting.

July 31, 2012. Building Committee meets and endorses three options for PDP: 1. Add/Renovate; 2. Build new at existing site; 3. Build new at alternative site. Local press and public attend.

August 20, 2012. Building Committee Chairman Paul Challenger presents PDP to School Committee Representatives at their monthly meeting.

August 25, 2012. Building Committee has booth at local "Holden Days" where Committee members answer questions about the MSBA building process and provide updates on the activities of the Building Committee.

August 28, 2012. Building Committee plans a second public tour of Mountview School. After the tour, the public as well as all Town Committees and local State Senators and Representatives are invited to attend.

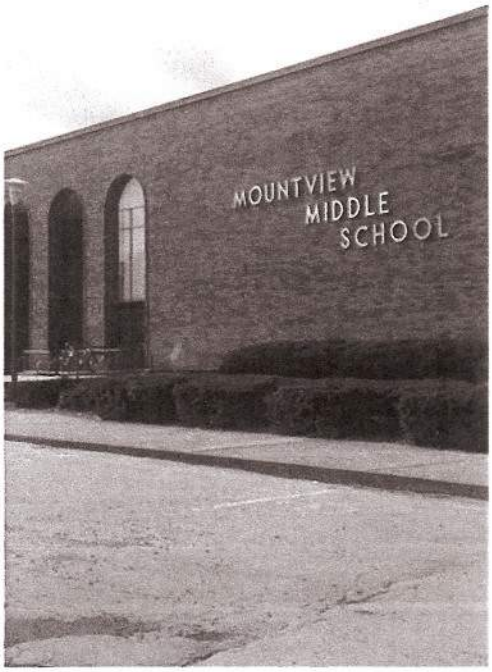
HOLDEN DAILY VOICE

News

06/14/12

Mountview Building Committee To Host Charrette

by Daniel Castro



HOLDEN, Mass. — As progress continues on the potential Mountview Middle School renovation/addition project, a charrette will be held on green technology to demonstrate how school construction can "go green."

The Mountview School Building Committee will be hosting a green building charrette "to lean more about how to build the most efficient project possible," according to chair Paul Challenger.

"We will have several experts in different fields make presentations on how to effectively design, construct and operate a modern school building in as environmentally efficient manner as possible," he added.

Currently in the feasibility phase, the project has continued to move forward, with the Mountview Building Committee estimating about a year before the need for voter approval for town funding.

In October 2010, Holden formed the school building committee to determine the best course of action for the 40 year old building, which was in significant need of work to keep it viable as a 21st century school.

The committee has been working with the Massachusetts School Building Authority to move forward and anticipate the MSBA to cover 53 percent of the cost of the project, which will be worth about $20 million.

As part of the strict guidelines by the MSBA, it is required that a green technology demonstration be held prior to any construction of a school. Challenger said the demonstration will provide information "about what our options are in many different ways, from efficient layouts and design, to building materials, infrastructure (lights, heating, windows, etc.), traffic flow, green spaces and many other opportunities to make this a healthy, efficient place."

The purpose of the event is to educate the Town on options to consider as the school is designed, and no decisions will be made.

The charrette is open to any interested member of the public. It will be held on Thursday, June 21 from 9 to 11:30 a.m. in the Superintendent's Lower Conference Room at the District Office at 1745 Main Street in Jefferson.

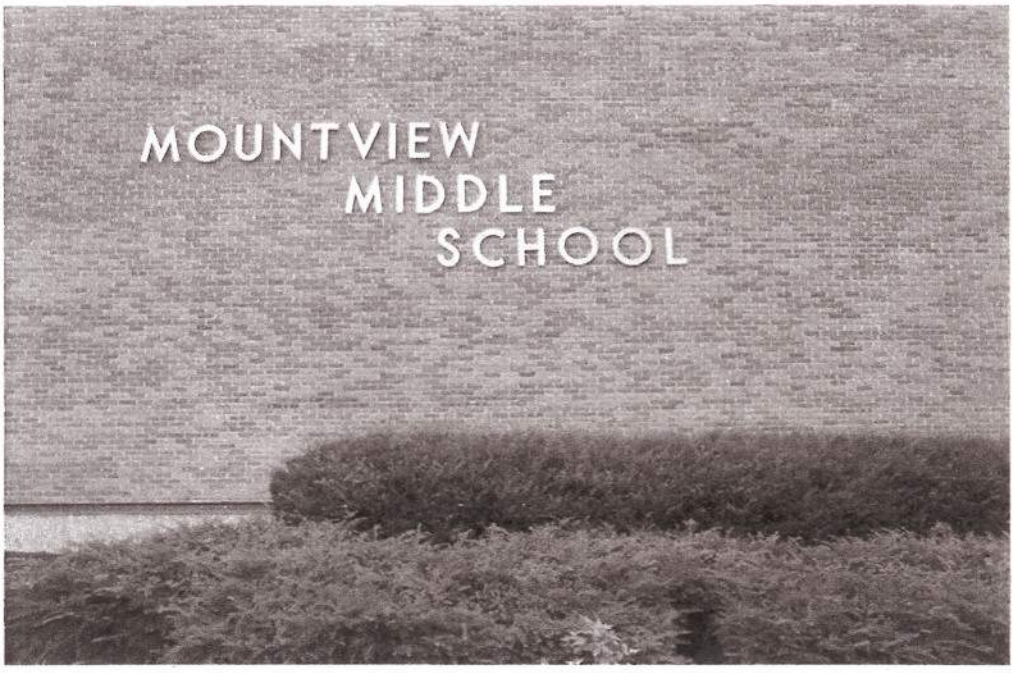
HOLDEN DAILY VOICE

News

06/22/12

Mountview Project Moves Forward As Green Project

by Daniel Castro



HOLDEN, Mass. — As the Mountview School Building Committee makes progress with the potential construction project, Thursday's charrette helped bring together ideas on how to proceed with a green foot forward and build the most efficient school for Holden.

Leading the discussion was Erik Ruoff and Carrie Havey, of The Green Engineer, LLP — a sustainable design consulting firm that specializes in solutions to design, build, and operate buildings with improved energy efficiency and reduced impact on the environment.

The consultants presented information about the possible options to take when pursuing a healthy, efficient school — from efficient layouts and design, to building materials, infrastructure (lights, heating, windows, etc.), traffic flow, and green spaces.

The charrette was the first of two that will take place before the committee's August 9 deadline from the MSBA, when they will have to come to a decision on whether the Mountview Middle School project will either not continue, move forward as a renovation with an addition or as an all-new building, and where a potential new school would be located.

Since Oct. 2010, the committee has been exploring the best course of action to take to address the longstanding issues with the 40 year old building.

Mountview Principal Erik Githmark said two of the most crucial problems are the inadequate classroom size and the air temperature and movement within the building.

Senecal said that a renovation would prove challenging structurally because about 80 percent of the building was built in 1964.

As an example, he said that adding equipment on the roof would be difficult as it is not designed to take on the new equipment.

"The other concern is that it's a very rigid school," he said, drawing attention to the brickwork of the old part of the school.

"Thankully it is a steel structure, so we're not relying on masonry walls to hold up the next floor," he said. "There's also limited headroom. It looks like a lot until we start putting sprinkler systems in that are not there, and we put ducts and electrical. We'll run out of room very quickly — so it's a challenge. Any renovation job is challenge, and this one is no different."

"It's also a funny school. There's really a lack of windows," Senecal said, with Githmark adding that one of the comments he hears most from teachers and visitors to the school is that it is a really dark building.

In fact, one of Senecal's goals for a new facility is to have sunshine in every classroom.

In line with this, Ruoff said that, for the amount of time students spend indoors, it was important that the space is going to promote learning and being healthy.

"There are a lot of studies out there that show that there are increased test scores associated with designing with more daylight, more access to views, and using materials that don't off-gas as much," he said. "There's a lot of, not only test score increases, but also reduced absenteeism. You can retain your staff for longer, which is less turnover."

At present, the scope of the project considers a maximum enrollment of 800 students, so while the existing building is 92,000 sq. ft, the committee is looking for a new building to potentially be 128,000 in order to meet their objective.

While one option is to build a new facility on the current site, the committee is also looking at town owned property on Bullard Street, near Mayo Elementary. Senecal said the two parcels are separated by a wetland which has never been developed.

"There's plenty of land there to develop some new fields," said Senecal. "It's quite a bit of site work, as there's some pretty steep terrain, but it looks very doable as all the utilities are there except for natural gas. Sewer, electricity and water are there.

This location would actually put the new middle school on the adjacent property line to Mayo.

"As far as traffic is concerned, it has the ability to enter from Malden Street, whereas Mayo School enters off of Bullard," he added.

While no decisions were made at the charrette, the committee is under tight deadlines from the MSBA to plan its course of action and present the findings of its study in July and August for review.

The Mountview Building Committee holds public meetings at 6 p.m. every second and fourth Tuesday of each month at the Holden Municipal Light Department.

HOLDEN DAILY VOICE

Schools

07/02/12

Holden To Host Forum On Mountview School Project

By Daniel Castro

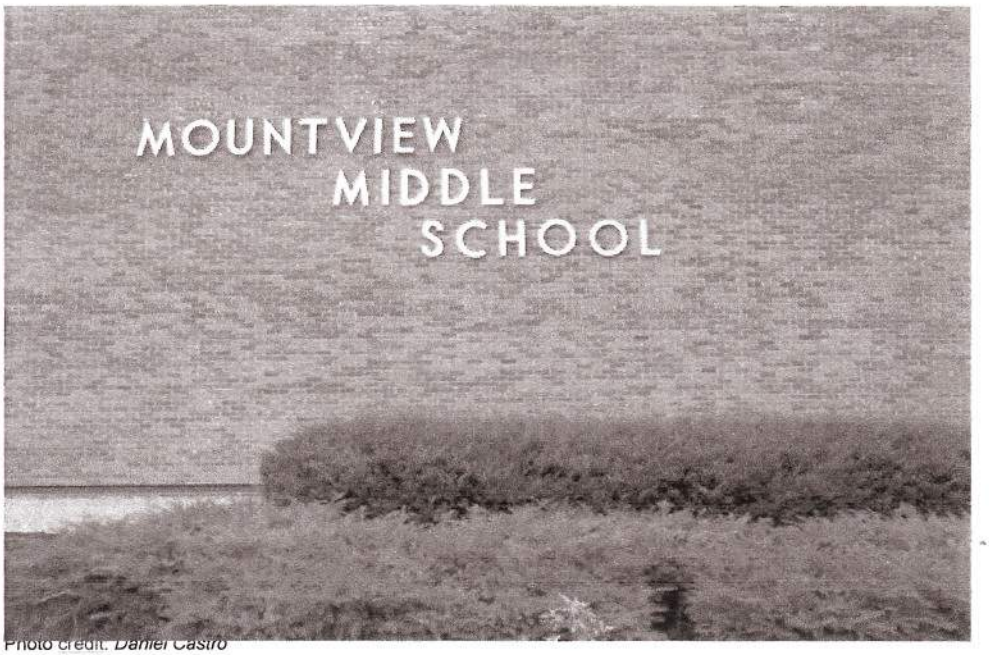


Photo credit: *Daniel Castro*

HOLDEN, Mass. — To provide information about a possible Mountview Middle School building project in Holden, the Mountview Building Committee will hold a question-and-answer session and building tour July 17 at the school.

Since October 2010, the committee has been exploring options to address longstanding problems with the 40-year-old building.

The building committee had planned to decide by August if it would recommend moving forward with design and construction, but, in order to allow for more public input, the committee petitioned the Massachusetts School Building Authority (MSBA) for an extension.

The MSBA granted the request, and now the committee needs to file its Preferred Schematic Report by Sept. 27 to recommend what project the town wants to pursue.

"This means we have to weigh and evaluate a wide range of options, including renovations/additions and new buildings, different sites, sizes and features before then, so there are many important decisions to be made in the next few weeks," said committee chair Paul Challenger.

This revision will not change the date of expected final MSBA approval in March 2013.
Challenger said the designer was asked to study and prepare cost estimates for six different scenarios:

1 - Do nothing. This is the base case required by the state for comparison purposes. It defines the

June 28, 2012

HOLDEN

Town mulls green building for middle school project

By Patricia Roy
proy@holdenlandmark.com

As the town takes preliminary steps toward replacing or renovating Mountview Middle School, a green wish list was put together by environmental consultants, local officials and engineers who are working on the middle school feasibility study.

The informational session, held last Thursday, is part of the state-required "green building" study being conducted to determine an environmentally sensitive approach to building or renovating a middle school.

Erik Ruoff and Carrie Havey of The Green Engineer LLP, a sustainable design consulting firm, outlined state guidelines for green building and said that adhering to the requirements means an increase in reimbursements from the Massachusetts School Building Authority.

Building green means constructing a school that's safe and healthy, uses resources efficiently, and is flexible and adaptable to possible future uses. The building should also be durable and easy to maintain, Ruoff said.

The benefits of green schools include a healthy, productive environment, improved teacher retention, savings in running the building and they can offer an interactive environment for students, where the building's mechanical systems could offer science lessons, Ruoff said.

In an informal poll, meeting attendees said they would like to see traffic issues addressed at the middle school, create a building with more daylight and have a water capture system that can be used for irrigating the grounds. The school should also be acceptable to faculty and meet curriculum needs, they said. Town Manager Nancy Galkowski said she would like to contain electrical costs.

Mountview School Principal Erik when considering the middle school project.

The town can renovate Mountview, build a new school on the same site or build a new school on a different site, he said.

A site off Bullard Street on two town-owned parcels has been identified as a potential location for a new school building. A benefit to the site is that the middle school would be able to share resources with the nearby Mayo Elementary School.

Traffic could enter for the new school from Malden Street, while Mayo School traffic enters from Bullard Street. A drawback to the site is that it is more than two miles from the nearest natural gas line, which is a favored fuel when considering new school building. The site is also very steep and would require considerable site work before building, but does have access to town water and sewer, Senecal said.

The town has identified a need for a school for 800 students. Mountview Middle School, at 92,000 square feet, is undersized according to state educational requirements. A new school would have to be 128,000 square feet, he said, although the state allows some leeway in a renovation project.

Senecal described several challenges to renovating Mountview School. Eighty percent of the school was built before 1964, and while it does have a steel frame, its masonry walls have a low insulation factor and its windows are single glazed. The roof is inadequate for supporting big equipment and the electrical system needs a new infrastructure.

Mountview also does not have a lot of headroom to handle ductwork and sprinkler systems, he said.

In its favor, Mountview is just one quarter mile from natural gas lines and

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Mountview School Principal Erik Githmark said his main concerns are classroom size and light, as well as air movement and temperature.

William Senecal of Lamoureaux Pagano Architects, the firm conducting the feasibility study, said there are several options available to the town building. A benefit to the site is that the middle school would be able to share resources with the nearby Mayo Elementary School.

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In its favor, Mountview is just one quarter mile from natural gas lines and has town water and sewerage.

Before the feasibility study is complete, Mountview School will be evaluated for a variety of systems – electrical, mechanical, plumbing and food service facilities. Traffic patterns and site studies will also be completed.

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Mountview School Building Committee
Meeting Minutes
June 26, 2012

6PM HMLD Building

Present: Chairman Paul Challenger, David White, Gary Kaczmarek, Margaret Watson, Erik Githmark, Chris Lucchesi, Mike Sherman, Jacquie Kelly, Peter Brennan

Absent: Nancy Galkowski, Tom Pandiscio

Others Present: Mike Pagano, LPA, Bill Senecal, LPA, Elizabeth Helder, Recording Secretary

1. OPM/Architect Update

LPA confirmed that the interior and exterior hazardous materials survey had been completed. Hazardous materials have been identified in the school. The hygienist has recommended a fairly sizable budget for removal whether remodeling or building new. The estimate is upwards of 1M if demolished and slightly less if renovated. PCB's were found in the window glazing/caulk. Mr. White said that usually, PCB remediation must be completed within a certain amount of time. Mr. Brennan said that he thought that the EPA would work with the project seeing that a renovation/rebuild is planned. Mr. Pagano said the Committee would receive a copy of the report. The hygienist is required by law to report the PCB levels to the EPA upon detection. PCB guidelines are still evolving and LPA as responsible designers will do their due diligence with the information and come up with a plan. Ms. Watson reported that PCB's found in another district school required that the students in the rooms be relocated to another school and the cafeteria could not serve hot food until the situation was remediated. Mr. Brennan commented that the District took those measures on their own, and were not required to do it. He said that once the District receives the report, they will contact the Town Manager about formulating a plan. Mr. White asked if the Committee could get an update from the hygienist regarding what the school should do. Hazardous materials removal has limitations to the amount of money the MSBA will reimburse for clean up. Some remediation they pay for, some they don't.

Mr. Senecal said the proposed room summary has been completed. He said that the District has asked for 30 rooms, 2 more than the MSBA has determined that a school of this size is allowed. Mr. Githmark is in the process of working on a description of variations to the MSBA room summary guidelines in support of these two additional classrooms. The square footage of the school has not changed; only the configuration of the classrooms. Mr. Githmark said he is considering some programming changes based on curriculum and staff changes over the next several years and this is why the extra classroom space is being requested. Dr. Pandiscio is proposing eliminating the media center (used to be called the Library). Mr. Pagano said this request might be precedent setting with the MSBA. This is going to test the limits of the MSBA and it will be interesting to see what the MSBA decides. The 4000 sq.ft. allotted for Library space has been reused into common area space for each grade to function as mini-media centers for the staff/kids. With a wireless school, the media will be in their hands. Mr. White inquired if the MSBA would allow the school to contain a Town funded auditorium on site. Mr. Pagano said that the MSBA would push back on that request. A school in Wellesley has to be the same as a school in Holyoke. Towns with more money should not be different from towns that don't; all schools are the same. Mr. White said he thought that the MSBA would like that the Town would get more use out of its school building. Mr. Pagano said the only way around that would be to finish building the school and then have the Town appropriate the money separately to build the auditorium.

Ms. Watson commented that she feels that losing the media center will be a tough sell to the public. She said the taxpayers will feel that it will cost them more in the end because of higher technology needs. It was agreed that the MSBC had voted to give the Superintendent the authority to determine the design of the educational program and it is his decision to defend these choices. Mr. Lucchesi said he understands where Ms. Watson is coming from and that she is sensitive to what people will say. The Committee should be able to have an answer to this decision; that they support the decision of the Superintendent and the Committee is building a school for the future.

Mr. Kaczmarek has finished and delivered The Request for Capital Budget Statement to LPA.

LPA has begun the work for the alternate site on Malden Street. Mr. Senecal is in the process of acquiring the site evaluation conducted for Holden Youth Sports Inc. Mr. Pagano said previous survey work and wetlands mapping would be helpful. Mr. White and Mr. Kaczmarek will help expedite the information from the site evaluation.

Mr. Senecal said another walk-through of the Sherwood School will be held in September/October 2012. The school will be closer to substantial completion at that point. Mountview staff will be invited to attend.

The Green Engineer Charette was held at 9AM on June 21st. Approximately 20 people participated. No decisions were made. The meeting was held to learn about sustainable building and its objectives.

LPA will hold a "Stakeholder Meeting" on July 10th at the Mountview School at 5PM. The public is invited to attend a walkthrough of the school to see the current conditions of the school. The Committee will then conduct a Committing Meeting at 6PM to discuss what is being submitted to the MSBA in the PDP. This is part of the Town's continued outreach efforts and will be advertised on the Town web site and on the LED message board on Main Street. Mr. Brennan said that the District has created a website for the building project; Mr. Sherman and Mr. Challenger need to determine a domain name to get it up and running. The Stakeholder Meeting event will be publicized on the Town's website. Mr. White said it will be important to point out all of the code violations in the school, and how the building will be difficult to renovate because of way the building is constructed. Mr. Sherman discussed how to structure and deliver that kind of information to the public. Mr. Githmark said that right now, all of the school classrooms are sitting in the hallways because staff if cleaning and conducting maintenance in the classrooms. It was agreed to hold a tour in a small portion of the school that is representative of the conditions in the entire building. Mr. Pagano said LPA will present the design plans to date at the meeting following the tour.

Ms. Watson said she felt there seems to be a consensus among the public that it is cheaper to renovate than to build new. She said it is important to stress during the tour that in its current condition, the school will be very expensive to renovate. Mr. Lucchesi said it important to reign in misinformation. Facts put together by the professionals will sell the project. Mr. White proposed seeking out graduates of the high school who lived through the high school renovation. These graduates could provide testimonials as to what it was like to have to achieve an education during the chaos of a renovation. Mr. Sherman said the public needs to know that it's not about building new or renovating; it's about getting something done at the school and the need to pass the funding for the project.

Mr. Challenger said he and Mr. Sherman met with members of the Ashburnham School Building Committee.

Mr. Senecal said that the Committee needs to vote on the options to study that will be included in the PDP: 1. No Build; 2. Renovation A. Minimum – Fix What is broken, B. Medium – No Reconfiguration, C. Heavy – Blow out walls/new addition; 3. Build new on existing site; 4. Build new on alternate site; 5. Other options consistent with MSBA guidelines and expectations.

Motion by Chris Lucchesi, seconded by Dave White, it was **UNANIMOUSLY VOTED TO SUPPORT THE FOLLOWING PROJECT OPTIONS IN THE PDP PRESENTED BY LPA TO INCLUDE 1. NO BUILD; 2. RENOVATION A. MINIMUM – FIX WHAT IS BROKEN, B. MEDIUM – NO RECONFIGURATION, C. HEAVY – BLOW OUT WALLS/NEW ADDITION; 3. BUILD NEW ON EXISTING SITE; 4. BUILD NEW ON ALTERNATE SITE; 5. OTHER OPTIONS CONSISTENT WITH MSBA GUIDELINES AND EXPECTATIONS.**

Mr. Lucchesi asked how the Committee could conduct a minimal renovation and meet MSBA guidelines. LPA concurred with Mr. Lucchesi's question. However, this is how the MSBA wants the information presented.

Mr. Senecal said that when the PSR is submitted to the MSBA on August 9th, LPA will have proven to the MSBA which solution is the best solution that meets the educational objectives of the community. Mr. White disagreed, saying he felt that it is the final decision of the MSBA which solution they will pay for.

Mr. Senecal provided an updated Summary of Deliverables that was emailed to the Committee on 6/12/12. The Committee reviewed each deliverable and the status of the item.

Mr. Pagano said that legal title was not necessary for the Malden Street property at this time.

Discussion was held regarding completion of Local Actions and Approvals – Summary of Deliverables 3.1.7.

The Committee discussed its tight meeting schedule after the PDP is submitted on July 12th. The Committee discussed holding a meeting to present the PDP to the public. The Committee discussed what is coming between the 4 weeks between the filing of the PDP and the filing of the PSR. It might be necessary to meet more than once a week between July 10th and August 9th in order to allow the committee to fully debate all of the building options. Mr. White said that he felt that the building decision would be abundantly clear based on all of the information gathered by the end of July as to which building choice is the best option for the Town. Mr. Senecal proposed presenting a different building option at each meeting starting at the July 17th meeting to keep the Committee updated and in the loop.

The Committee and LPA discussed taking an extra month for PSR submission and submit the PSR in September 2012 for review by the MSBA in November 2012. All involved agreed that it was important to take the time to complete this critical planning and design phase correctly. Mr. Kaczmarek will call the MSBA to determine if it is possible to change the PSR submission date.

Future meeting dates include: July 10th at 5PM at Mountview School Walk Through; July 17th at 6PM; July 23rd 7PM School Committee Meeting; July 31st at 6PM and August 7th at 6PM.

Mr. White said that Town officials should be invited to the Walk-Through Tour and Committee meeting on July 10th.

Mr. White said by racing through this heavy schedule will not allow the Finance Committee and the Selectmen their due diligence to weigh in on the direction the Building Committee intends to support. He suggested posting an informational joint meeting for July 24th between these groups to provide a history of the project to date and here is where we are now. Mr. Brennan said that the Committee has been charged by the Town to make the final building design decision. The Building Committee might not have all of the information to make a decision to recommend to these officials. He suggested meeting with the Fin Com and the Selectmen in September or October to inform them of the Building Committee's decision. Mr. White said it was important to allow these officials to participate in the project and take "a bite of the apple." It is important politically to include these officials in what is going on. We are not asking them to endorse the Committee's decision; just keep them informed of the progress of the project. Mr. Brennan suggested holding the meeting on July 17th. LPA said that site graphics should be available for both sites by July 17th. After a lengthy discussion, the Committee agreed to invite the Finance Committee and the Selectmen to a joint meeting at the July 10th Mountview Walk Through at 5PM at Mountview School. Mr. Challenger will send out a press release to the local meeting announcing the joint meeting.

Mr. Sherman left the meeting at 8:30PM.

Mr. Kaczmarek reported that he met with the Town Manager, Jacquie Kelly, and Mr. Challenger to discuss hiring an OPM consultant to help him with the preliminary OPM process on an as needed basis. During the early phases of this fast-paced project, it is important to make sure that all the paperwork is being processed properly. The budget contains money to support hiring an OPM consultant to provide services through the schematic design process. The position is under the bid threshold and will not require going out to bid. However, Mr. Kaczmarek reported that he solicited three quotes for OPM services to comply with purchasing laws. He added that the consultant he would like to hire also has experience working with the MSBA and filing for CM at RISK. He said he was looking for a vote of support from the Committee.

Motion by David White, seconded by Peter Brennan, it was **UNANIMOUSLY VOTED TO SUPPORT HIRING AN OPM CONSULTANT AS NECESSARY TO KEEP THE PROJECT SUCCESSFUL.**

Mr. Kaczmarek suggested that the Committee consider adding some type of Public Comment to the meeting Agenda. The group discussed a public comment policy.

Motion by David White, seconded by Peter Brennan, it was **UNANIMOUSLY VOTED TO ADD PUBLIC COMMENT TO THE MEETING AGENDA AT THE BEGINNING OF EACH MEETING TO ALLOW FOR COMMENT FROM THE PUBLIC. THE COMMITTEE WILL NOT ENGAGE IN DISCUSSION WITH THE PUBLIC DURING THIS AGENDA ITEM.**

2. Approval of Previous Minutes

Motion by Peter Brennan, seconded by Dave White, it was **VOTED 7-0-1 WITH 1 ABSTAINED TO APPROVE THE JUNE 12, 2012 MEETING MINUTES. (ABSTAINED: LUCCHESI.)**

3. Adjournment

Motion by Margaret Watson, seconded by Dave White, it was **UNANIMOUSLY VOTED TO ADJOURN THE JUNE 26, 2012 MEETING AT 9:20PM.**

PROGRESS ON MOUNTVIEW MIDDLE SCHOOL
June 26, 2012

The Mountview School Building Committee continues to make progress on studying the feasibility of various alternatives for updating the school building. This week's meeting included:

- Before September 27, 2012, the Committee needs to file a Preferred Schematic Report (PSR) with the Mass School Building Authority (MSBA) recommending what project the town wants to pursue. This means we have to weigh and evaluate a wide range of options, including renovations/additions and new buildings, different sites, sizes, and features before then, so there are many important decisions to be made in the next few weeks.

- Prior to today, the PSR filing date was August 12, which the committee felt was too aggressive and did not allow for adequate review and public input, so we petitioned the MSBA for a later filing date, which was granted. This revision will not change the date of expected final MSBA approval in March 2013.

- The Designer was asked to study and prepare cost estimates for 6 different scenarios.
    1 - Do nothing. This is the base case required by the State for comparison purposes. It defines the advantages and disadvantages of doing nothing to the building.
    2 - Minimum renovations - Do nothing except fix things that are broken or non-functional.
    3 - Medium renovations - Fix broken things and make some improvements to basic infrastructure (heating, roof, windows, etc) of the school.
    4- Heavy renovations and addition - Extensive renovation, moving walls, redesigning spaces and adding an addition. Also includes cost of relocating students during construction and impact on educational quality during project.
    5 - Build a new school on the existing Mountview site.
    6 - Build a new school on a parcel of town-owned land between Malden Street and Bullard Street, adjacent to the Mayo School property.

- Scheduled a joint meeting with the Finance Committee, Board of Selectmen and Holden School Committee representatives at Mountview School at 6PM on Tuesday, July 17. The Building Committee will provide tours of the building at 5PM to anyone interested, including the public. At the 6PM meeting the Committee will make a presentation on the process followed so far, the current status and what needs to be done before the filing date. Then there will be discussion among the 4 groups about the project so that the FinCom, BOS and School Committee can voice their opinions and get their questions answered. The meeting is open to the public and all interested citizens are encouraged to attend. Their will be a public comment period at the beginning of the meeting.

- The hazardous materials study has been completed on the existing building. The cost to remediate the identified hazmats will exceed $1,000,000 if the building is demolished, and will be somewhat less than that if the building is renovated. The extent to which the state will reimburse for these costs is being studied.

- The Wachusett School District and the Designer have studied the State guidelines and have decided on an initial space allocation that shows how many rooms of each type that the building should have to meet the educational standards of the District. The proposal envisions a pod design with classrooms located around a common space, similar to that used at the Mayo and Davis Hill Schools and which the staff of those schools finds very beneficial.

- Decided to meet weekly in July to hear updates as the Designer performs its reviews. The meeting schedule for July is
7/10 - Meet with OPM and Designer to discuss preliminary study results
7/17 - Joint meeting with BOS, FinCom and Holden School Com reps at Mountview
7/23 - Meet with the School Committee to present a status report on the project. This meeting is at the High School.
7/24 - Meet with OPM and Designer to discuss preliminary study results
7/31 - Meet with OPM and Designer to discuss preliminary study results

There may be additional meetings as needed. All meetings are held at 6PM at the Light Department (except as noted), are posted and are open to the public.

For additional information, contact Chairman Paul Challenger at (774) 364-2364 or Vice Chairman David White at (508) 450-3920.

Mountview School Building Committee
Meeting Minutes
July 10, 2012

6PM HMLD Building

Present: Vice-Chair David White, Gary Kaczmarek, Margaret Watson, Nancy Galkowski, Jacquie Kelly, Peter Brennan

Absent: Chairman Paul Challenger, Erik Githmark, Chris Lucchesi, Mike Sherman, Tom Pandiscio, Elizabeth Helder, Recording Secretary

Others Present: Bill Senecal, LPA

1. OPM/Architect Update

Bill Senecal with LPA explained to the Committee that the MSBA allowed the Committee to adjust the due dates for the PDP and the PSR. Mr. Senecal explained to the Committee and the press how these new dates will adjust the Summary of Deliverables. LPA will present a slide show at the public meeting scheduled on July 17th at Mountview School to explain MSBA Modules 1-8, and the project's timeline, milestones and work completed to date. Margaret Watson said that she felt that the presentation should also point out the flaws and problems with the current building.

Gary Kaczmarek explained the District's proposed use of the media center space. Ms. Watson added that the District's "rearrangement" of the square footage in media space stems from a movement across the District for educational programming purposes. Taking square footage from one giant library and using the space to create more library/media/pod space in classrooms supports the District's Literacy Program. This type of educational programming has generated higher MCAS scores.

David White suggested that LPA articulate during its presentation how the Committee was formed and why members were chosen to serve on the Committee. Additionally, it will be important to emphasize during the presentation how the current school is out of building code compliance in regards to stairways, corridors, classroom sizes, doorways, fire protection, and safety issues. Ms. Watson added that one of the largest issues with the high school renovation was how out of code the building was. It created many costly unforeseen situations during the renovation.

Dave White also asked LPA to explain that the MSBA will not fund a project unless the project meets MSBA guidelines. Additionally, the public must understand that the MSBA has been restructured, has different guidelines, and operates under a different process than when the high school was renovated.

Nancy Galkowski suggested that the Public Comment section for the July 17th meeting should come after the presentations and Q&A among the Selectmen and Finance Committee.

Gary Kaczmarek asked what the game plan was for touring the school. What areas were available and what points should be discussed. Dave White said that was a very good question and thought we would do groups of 20 people or so pending how many attended. Suggested that principal Eric Githmark, Head custodian Dennis Hyson, and OPM Gary Kaczmarek would lead groups if needed.

A motion for adjournment was not considered because the Committee did not have a quorum. The meeting concluded at 7:15PM.

Mountview School Building Committee
Community Outreach Meeting Minutes
July 17, 2012

6PM Mountview School

Present: Chairman Paul Challenger, David White, Gary Kaczmarek, Margaret Watson, Nancy Galkowski, Erik Githmark, Chris Lucchesi, Mike Sherman, Jacquie Kelly, Peter Brennan, Tom Pandiscio

Absent: Peter Brennan

Others Present: Mike Pagano, LPA, Bill Senecal, LPA, Elizabeth Helder, Recording Secretary, Dennis Lipka, Director, Growth Management and Town Building Commissoner.
Finance Committee:Alan Berg, Mariilyn Foley, Karl Makela, Jim Dunn, Chair.
Board of Selectman: Anthony Renzoni, Chair, Mark Ferguson, Vice Chair, Ken Lipka.
Wachusett Regional School Committee: Steve Hammond, Ken Mills, Stacey Jackson, Cynthia Bazinet, Duncan Leith.

Prior to the start of the meeting, members from the Building Committee and Lamoureux-Pagano conducted tours of the school for the public.

1. Project Update

Chairman Paul Challenger informed those present that the public meeting was being held to inform the public about how the school building committee had been formed, a history of the project to date, and where the project was going. He asked all in attendance to sign in on the sign-in sheet. He encouraged anyone interested in helping out with the project to indicate it on the sign-in sheet. Copies of the power point presentation were distributed to the audience.

Mr. Challenger said that the District had filed a statement of interest with the MSBA for a Mountview Middle School project in 2008. After reviewing the documentation and touring the building, the state placed the project high on the list of projects eligible for reimbursement. The Town of Holden formed a building committee in October 2010 and a November 2010 Town Meeting approved $625,000 to perform a Feasibility Study. In 2011, the Committee and the state agreed on a design enrollment of 800 students and the Committee hired Gary Kazmarek as the Owner's Project Manager. In 2012, a bid process was held for a Designer for the Feasibility Study. After meeting with the MSBA, it was determined that the Committee would hire Lamoureaux Pagano Associates, Architects (LPA) as its Designer.

Mike Pagano with LPA provided a summary of the Massachusetts School Building Authority (MSBA) and how the MSBA has changed since the Town built its elementary schools and renovated the high school. The MSBA has been revamped and is a highly organized and controlled building process. LPA has been hired to conduct a Feasibility Schematic Design Study of the project. The results of the study will be presented to the MSBA in March 2013. The project is in the first phase of the study: Preliminary Design Program (PDP). This portion of the study will analyze every available building option/alternative for the school.

Mr. Pagano broke the MSBA Building Process down step by step. Alternatives being evaluated include 1. No Build; 2. Tuition Agreements with other Districts; 3. Existing Building Acquisition; 4. Base Repair 5. Renovation (A. Minimum – Fix What is broken, B. Medium – No Reconfiguration, C. Heavy – Blow out walls/new addition); 6. Build new on existing site; 7. Build new on alternate site.

The conditions of the school are evaluated during the PDP process, including how the school supports state education programming requirements. Mr. Pagano stated that the school is poorly insulated, and is an energy hog; however, the brick façade of the school is relatively sound. However, much of the building is out of Massachusetts Building Code and ADA code. Science labs are limited in plumbing and significantly undersized. The general classrooms are all undersized. Hazardous Materials have been identified within the school. The current square footage of the school is 91,000. Total proposed square footage is 128,000, which is the MSBA square footage allotment for the enrollment of 800 students.

Alternative site selections were presented. There are only four alternative building sites in Town which contain the minimum 15-acres required to build a middle school. Three of the sites were excluded from consideration by the Building Committee due to cost, topography, abutters, lack of infrastructure, and wetlands. The only alternative site deemed appropriate by the committee is a site abutting the Mayo School on Malden Street. This is town owned land. Mr. Pagano stated that the Committee and MSBA are only studying options; no decisions have been made. LPA is looking at two different development options for the Malden Street site.

The Schematic Design will be submitted to the MSBA in January 2013. If the MSBA approves the entire Feasibility Study it will offer the Town a Funding Agreement in March 2013. The Town will then have 120-days to approve funding for the approved project, which will require a Town Meeting and a ballot vote. The Design Development phase will occur from July 2013 – March 2014. Construction is anticipated from September 2015 to August 2016.

Mr. Challenger said the Town will have one shot at achieving funding for the project. There are many schools on the State Reimbursement list waiting for money and the Town will not have two or three chances to achieve approval/funding. If the funding mechanism fails the first time, the Town will have lost the $625,000 used for the Feasibility Study phase.

Mr. White added that the final PDP report created by LPA and the Committee and submitted to the MSBA will be 800 to 1000 pages. It is a thorough, comprehensive, well-thought out design proposal. The project must be designed within MSBA guidelines in order to qualify for $20M of funding from the MSBA.

Mr. Challenger opened up discussion to the Committee's in attendance.

Ms. Bazinet said that she and most of the School Commmittee support the project and are anxious for it to begin. She inquired if there will be advocacy and support for the project at the ballot? Mr. Challenger said that the public needs to be involved in selling the project at the ballot. No Town money may be spent on selling the project; but the Building Committee will provide advice/ information to anyone interested in becoming involved in getting the project sold.

Mr. Berg asked how many of the students currently enrolled at Mountview are school choice students and how many are residents. Mr. Githmark said that there are 20 school choice children currently enrolled at the school and the total enrollment is currently 770 students. Enrollment projections are anticipated to increase to a peak of 850 students within the next several years.

Mr. Berg said the District says it has space and technology needs; what are the reasons for doing a renovation or building new. Mr. Challenger said that the all the buildings mechanical systems are failing and that building is riddled with hazardous materials and State and ADA code violations. If a certain amount of money is spent upgrading these some of the building deficiencies, it triggers a level of code requirements that must then be met, which will cost more money to be spent on the building to upgrade other systems (mandatory sprinkler installation, for example). It is a giant domino effect that keeps growing and money is spent on making renovations, which in the end could be more costly than building new, without the advantages of a new school. If the project does not address the space issues, the MSBA will not approve it for funding, and all work would be 100% on the Town.

Growth Management Director Dennis Lipka also responded by saying that code and safety requirement changes occur every year and the code requirements have even changed since the construction of the elementary schools and the high school. Mountview School is so out of code that even small upgrades/renovations will create a Code 3 requirement which is essentially a complete renovation of the school, which can be the same cost as a new building. There is no savings in doing a minimal repair to the school.

Mr. Challenger gave an example that sprinkler installation would be difficult in the current building because there is no space between floors to install the piping and ductwork required to meet compliance.

Mr. Hammond discussed the reduction of central media space for use in other smaller media centers in the building.

Mr. Challenger said that conceptually, 4 or 5 classrooms would be built around common space or pods used by the classrooms. He said that in meetings with staff, they have said this is their preferred method of teaching and interacting with students in preparation for future educational requirements.

Mr. Makela asked what the State's percentage of the total cost would be. Mr. Challenger explained that the State will reimbursement the project for approximately 53% of eligible construction. Building green gets more reimbursement. There are incentives with the MSBA that get more money for the project: the State reimburses different costs for different things. Land acquisition is 100% of the Town's cost. The project will be built to maximize the return for the Town while getting the school the Town needs.

Ms. Jackson asked if was possible that the MSBA will reject LPA's recommendation? If so, what happens next?

Mr. Challenger and Mr. Pagano said it is possible but very unlikely. Three options must be submitted to the MSBA for feedback purposes in August for the formal PSR proposal submission in September. There is a lot of give and take between the MSBA, the Committee and LPA during the review process to allow for feedback.

Mr. Berg asked if it was an appropriate time for the School Committee to reopen and revise the Regional Agreement to raise the maintenance threshold ($50,000) amount that the Town's are required to pay for maintenance to school buildings. He added that the Town's are dis-incentivized to do any maintenance based on the current Regional Agreement. He is concerned that with a 50-year design and no serious maintenance plan, now is the time to make changes to the agreement to what is fair and reasonable.

Mr. Lucchesi said maintenance comes at a cost: operating costs. Maintenance is sacrificed to pay for teaching. What is the point of opening up the Regional Agreement if there is no money to pay for maintenance in the first place. The operating budget would have to be increased by sacrificing education. Maintenance isn't even funded now. What's going to change?

Mr. White said that Mr. Berg's question is fair. The issues with the building are not due to lack of maintenance or deferred maintenance. The building is simply old and outdated. The building has single paned windows, asbestos, and is 200 students over its capacity, has a lack of a sprinkler system, and endless State and ADA code violations. The building is old, tired, under sized, antiquated, and has out lived its useful life. He said that as a tax payer, the Town should not hold the students hostage until a political agreement is reached.

Is the Finance Committee not going to fund the school because it is unhappy with the Regional Agreement? Don't mix apples and oranges. While he agrees that changes needed to be made to the RA, now is not the time to do it.

Mr. Challenger said that the RA is not an issue for the Building Committee. That issues lies with the Finance Committee, Selectmen, Town, School Committee members and District. The MSBC has been charged to fix the problem at Mountview.

Mr. Challenger opened up the discussion to public comment. He reminded residents that the MSBC meets on the second and fourth Tuesdays at 6PM at the Light Department and encouraged the public to attend and contribute to the process.

Mr. Bill Turgeon, 177 Fox Hill Drive, inquired who makes the final decision regarding what is built? Mr. Pagano said that when the PSR is filed, THE SOLUTION will be filed and the decision will be made by the Town Manager, the District Superintendent, and the Building Committee. Mr. Turgeon asked if the Committee had considered joining together with the Town of Princeton which is facing declining middle school enrollment. Dr. Pandiscio said that the Town of Princeton rejected the Committee's request to combine the two middle schools.

Ms. Linda Ridlon, 152 Pilgrim Drive, asked if the building is renovated, would the school's ventilation system be brought up to ADA standards. Yes. Hazardous Materials remediation would also have to occur to achieve occupancy.

Mr. David Ridlon, 152 Pilgrim Drive, inquired what the quality of the building is on a scale of 1-10 (10 being the best). Mr. Challenger said the State determined that the building is desperate need of help by placing the Town near the top of the reimbursement list. Mr. Pagano said the brick exterior is a 9. Windows are a 2. Mechanical, Electrical and Plumbing have exceeded their useful life and are a 2. He added that he felt the building has been well maintained, given its age.

The problems can always be fixed but at what cost? Fundamentally it is a sound building; its just worn out.

Ms. Mary Jude Pigsley, Newell Road, asked how set is the schedule? Are the dates presented really a schedule to rely on? Mr. Challenger said that the MSBA can tell the MSBC to go back and make reconsiderations and that may cause the schedule to slip. However, the MSBA process is very planned and thorough and does not allow for much slippage.

Mr. Glenn Gaudette, Jennifer Drive, thanked the members of the Committee. He said that no one could hear during the meeting (due to poor acoustics) and that he couldn't read the power point presentation. What are the benefits of the new space. He said it was important for the MSBC to inform the Committee how the new space is going to move the educational process into the 21st century?

Mr. Ben Woodbury, Bancroft Road, asked if this was improving the Town? He asked the Committee to include the residents in the process in the next 9 weeks.

Committee member Dave White said that LPA and the Committee have spent 100's of hours on the process to date. He encouraged the public to come to the meetings and become involved. The Committee wants to build what the town wants.

Ms. Christina Smith, Sterling Road, wants a building that is accessible to taxpayers. Make features that the whole town can use.

Liz Helder, 33 Steppingstone Drive, encouraged residents to go online and read the previous minutes, become informed, attend meetings, tell friends, and get involved. In the two years she has been serving as the Secretary for the Committee, not one resident has attended the Building Committee's meetings. It's your money; use it.

Mr. Makela asked what's going to happen if a new school is built on a different site, what will happen to the old building. Mr. Challenger said that it has not been addressed. Hazardous materials remediation has been estimated at $1M. The State will pay for some of this remediation if the work is done during the lifespan of the project. If the building is saved, the State will not come back and pay for demolition/remediation 5 years down the road.

Mr. Mills asked if all options will be presented to the MSBA? The Committee will analyze all its options and their pros and cons, then present the best 3. Ultimately, the Committee will choose a single plan to submit for final approval.

Ms. Shira McWaters, Harris Street, made suggestions regarding heating and energy costs and what a new building would cost and compare the two. Will energy efficient options be considered? Mr. Challenger said that the Committee is considering green options. A Green Charette was held on June 21st to kick off green building considerations. The MSBA insists on making schools as energy efficient as possible.

The meeting concluded at 7:48PM.

The Green Engineer, LLP
Sustainable Design Consulting

From: **Carrie Havey, LEED AP**
To: **Bill Senecal**
Date: **July 6, 2012**
Re: **Charrette Notes**
Project: **Mountview Middle School**

On June 21, 2012 the Mountview Middle School conducted an integrated design team charrette. The charrette focused on identifying the project's high performance goals and discussing some of the MA-CHPS prerequisites and credits to determine the best approach for credit achievement. At the time of the charrette, the location of the project site was not yet determined. Below are the discussion points from the charrette.

Charrette Goals:
During the charrette an exercise was done to determine some of the sustainable goals for the project. Everyone was asked the following: "If the school renovation or construction was completed today, what would the local newspaper headline say?"

Building with strong aesthetic qualities
Sun in every window. Daylight harvesting
On time and on budget
One of top 10 energy-efficient schools in the country
Received 2% financing
Site that considers traffic and safety
Students give rave reviews
Renewables – wind
Reduction in water
Public/community use
Great design, meets curriculum needs
Green building design = quality design
Teaching space for staff
Net zero building
Indoor Environmental Quality improves teaching and test scores
Green building on budget
Fabulous design, showcase for community
Low water and energy
Greenhouse and botanical gardens
Improvement in test performance
Building that is, clean, energy efficient, appropriate to site
Site location in town
High bar for sustainable buildings in district
Ease of access – transportation
Renewable materials
Asset to school and community

General Information:

- Looking at several options right now: renovation, new school existing site, new school different site
- School was built in 1964
- Classrooms are not big enough
- 800 students, grades 6-8
- 50 faculty
- Existing school is 92,000 gross sf
- The renovated/new school will be approximately 128,000 sf (about 850 sf/classroom)

Integration and Innovation:

- MA-CHPS requires two integrated design team charrettes to meet II.p1 – Integrated Design. The charrette on June 21st was the first one.
- Innovation credits were not discussed, as it is too early into design.

Indoor Environmental Quality:

- Air temperature and movement an issue in the existing school.
- The cafeteria has poor ventilation.
- It is a dark school. There are not enough windows.
- Majority of existing classrooms have east/west exposure. Glare is an issue that will need to be addressed if renovations are done.
- Moisture in the building can be an issue.
- The new/renovated school should have operable windows that open out.
- There are hazardous materials in the existing school that will need to be removed.
- School must meet ASHRAE 55 - thermal comfort standards to comply with IEQ.p6
- School must meet ASHRAE Standard 62.1-2007, sections 4 through 7 of Ventilation for Acceptable Indoor Air Quality to comply with IEQ.p1.

Energy:

- Building has R5 single glazing
- Existing systems are loud
- Shell not efficient – poor insulation
- AHUs are old
- Roof can't handle adding units
- Existing building is an all masonry/steel structure
- There is limited headroom for ducts, etc.
- Electrical systems are old, out-of-date.
- Existing electrical system a safety issue for classrooms (science rooms)

If renovation of the existing site is chosen:

- Get rid of unit ventilators
- Dehumidifiers will be added
- Retrofit with heat recovery

- Some some cooling – for summer uses
- Monitor CO2
- Adjust system to meet loads
- Will add LED and fluorescent lighting. Daylight harvesting
- Lighting Power Density – 30% target
- Mitigate costs of electricity.
- A commissioning agent will be assigned after schematic design is complete.

Sustainable Sites:

- An alternate site is being considered (owned by the town). Site has steep slopes. Civil doesn't see this as an issue for siting the building and stormwater drainage.
- More opportunities to achieve site credits with the new site.
- Traffic and circulation are an issue on the existing site. Better parking and circulation are desired.
- Current site has issues with wetlands and prime agricultural land.

Water Efficiency:

- Capturing water on-site for irrigation a possibility. This could also be a demonstration area for educational purposes.
- School will have low flow toilets and urinals. No waterless urinals.
- Site will have sports fields. If fields are irrigated, they must have soil moisture meters, weather station, or evapotranspiration controllers to meet prerequisite WE.p1 – Irrigation System Performance on Recreational Fields.

Materials & Waste Management:

- Durable, long lasting materials should be considered in classrooms.
- A recycling area will need to be provided to meet credit MW.p1 – Storage & Collection of Recyclables.

MA-CHPS Criteria 2009 Edition
Project Checklist

Project Name: Mountview Middle School
Project Address: 270 Shrewsbury Street, Holden, MA
Date Updated: 21-Jun-12

MA-CHPS Project Numbers (Must be consistent throughout the application)

Bldg Area:	
Parking:	
Site Area:	
FTE:	
Students:	
Visitors:	

0	0	0	**TOTAL**

0	0	0	**Integration & Innovation**	Points	Abridged Requirements	Respons. Party	Comments
Y			II.p1	Integrated Design	Required	Conducat a min of 2 integrated design team workshops (1 in SD, 1 prior to CD) that identifiy the project's high performance goals		
Y			II.p2	Educational Display	Required	Provide a permanent display on the school site that describes the high performance features that are part of the school's design.		
			II.c1	Demonstration Areas	1	Create demonstration areas for 3 out of the 5 major MACHPS categories: Site, Water, Energy, Materials & IAQ		
			II.c2	Innovation	1-4	Points are awarded for highly innocative or creative actions or measure that are not already contained in MACHPS OR exceptional performance in an existing credit.		
			II.c3	Life Cycle Cost Analysis	3	As part of the design process, perform a life cycle cost analysis showing net present value over 30 yrs of the major building systems considered for the project that are anticipated to consume significant amount of energy, water or other natural resources.		
			II.c4	School Garden	1	1) Provide a site on campus for one or more school gardens with a min of 100sf four every 4 classrooms. 2)Provide signage to designate the areas as a school garden. 3) Develop a long-term maintenance plan. 4) For existing sites the soil must be tested to ensure there are no contaminants.		
			II.c5	School Master Plan	1	Develop a School Master Plan for the site and facilities of an individual school in collaboration with school board members and community stakeholds that: 1) Supports the continued compliance with high performance strategies. 2) Assess and plan for future transportation impacts. 3) Assess and plan for possible change in student enrollment. 4) Assess using the school for emergency preparedness. 5) Ass and plan for future high performance upgrades and renovations by documenting the life cycle of major materials and systems.		

0	0	0	**Indoor Environmental Quality**	**Points**	Abridged Requirements	Respons. Party	Comments
Y			EQ.p1	HVAC Design - ASHRAE 62.1	Required	**EQp1.1** Minimum OA Ventilation Requirement - Design all spaces to meet ASHRAE 62.1-2007Section 6.2 outdoor air requirements. In areas having significant pollutants shall be exhausted directly to the outside and not re-circulated. HVAC systems and equipment shall meet the requirements of ASHRAE 62.1 Section 5. **EQp1.2** To maintain clean ducts and avoid particulate accumulation and/or mold in the ductwork, duct liners must meet the ASTM standards C1071 or UL 181 for surface erosion resistance and ASTM standards C 1104 or C 209 for water vapor sorption.		
Y			EQ.p2	Construction IAQ Management	Required	**EQp2.1** During construction meet the recommended Design Approaches of the SMACNA IAQ Guidelines for Occupied Building Under Construction, 2007, Chapter 3. **EQp2.2** If installing a new duct sytem, follow SMACNA guidelines for "Duct Cleanliness for New Construction Guidelines" according to advanced levels of cleanliness. **EQp2.3** Building Flush Out - Develop a plan and include it in the specification to flush out the building with OA		
Y			EQ.p3	Pollutant & Chemical Source Control	Required	**EQp3.1** Off-Gassing - Where chemical use occurs use deck-to-deck partitions with dedicated outside exhaust at a rate of at least 0.50 cubic feet/min/sd. Doors to these areas must be secured with self-locking and closing mechanisms. **EQp3.2** Walk off Mats - Provide a 2 part walk-off mat system for all high volume entryways.**EQp3.3** Electric Ignitions for Gas-Fired Equipment - Specify electric ignitions for water heaters, boilers, AHUs and cooking stoves. **EQp3.4** Air intake locations shall follow ASHRAE 62.1-2007. All intakes must be 6 ft above landscaped grade. **EQp3.5** No Mobile Fossil-Fuel Power Equipment Indoors.		
Y			EQ.p4	Moisture Management	Required	**EQp4.1** Drainage - Design surface grades to slope away from the building. Evaporation drip pans are prohibited for HVAC systems. EQp4.2 Lawn irrigation shall be designed to prevent spray on building. **EQp4.3** Mold Prevention - Building materials shall be kept dry.		
Y			EQ.p5	Minimum Filtration	Required	Replace filtration media immediately prior to occupancy. Filtration media shall be MERV 10 or higher, excluding unit ventilators, which can have MERV 7.		
Y			EQ.p6	Thermal Comfort - ASHRAE 55	Required	Comply with the current ASHRAE 55 thermal comfort standards.		
Y			EQ.p7	View Windows, 70%	Required	Provide direct line of site to view glazing from 70% of the combined floor areas of classrooms, library and administration areas. View glazing area shall be =>7% of floor area.		
Y			EQ.p8	Eliminate Glare	Required	Design spaces to optimize daylight while preventing glare by controlling direct sunlight ingress.		
Y			EQ.p9	Minimum Acoustical Performance	Required	Unoccupied classrooms must meet: 1) Classroom and core learning spaces must reverberation time meets ANSI S12 60. 2) All walls, roof-ceiling and floor-ceiling assemblies must meet the STC ANSI S12.60-2002. 3) For enclosed core learning areas the exterior windows may comprise no more than 25% of the area of the partition. Floor-ceiling assemblies over classrooms must meet ICC of 50.		
Y			EQ.p10	Minimum Low Emitting Materials	Required	**EQp10.1** Paints & Coatings - All paints and architectural coatings totaling 90% or more of the total volume of such products applied shall meet SCAQMD Rule 1113 & comply with Safe Drinking Water & Toxic Enforcement Act of 1986. **EQp10.2** Composite Wood - At least 90% by area of the composite wood shall meet either or both CARB ATCM Sections 93120-93120.12 and shall have no added formaldehyde .		

			EQ.c1	View Windows, 80-90%	1-2	Provide direct line of site to view glazing for at least 80% of the combined floor area of the classrooms and admin areas.		
			EQ.c2	Daylighting in Classrooms	1-6	For all classroom spaces choose Multiple Point in Time Apprach average fc requirements OR Daylight Autonomy Approach (1-4points). For support spaces choose Multiple Point in Time Apprach average fc requirements OR Daylight Autonomy Approach (1-2points)		
			EQ.c3	Advanced Low-Emitting Materials	1-4	**EQc3.1** (1 point) All adhesives and sealants used in quantities of 2.5 gal or more and totaling 90% or more of the total shall meet SCAQMD Rule 1168 or CDPH Standard Practice. **EQc3.2** (1 point) Flooring Systems totaling 90% or more of the total floor area shall be tested following CDPH Standard Practice. **EQc3.3** (1 point) Ceiling and Wall Systems totaling 90% or more of the total area of such systems shall be tested following CDPH Standard Practice. **EQc3.4** Furniture and Furnishings totaling 90% or more of the total shall meet ASNI/BIFMA M7.1-2007		
			EQ.c4	Ducted Returns	1	Install ducted HVAC returns throughout the school in occupied spaces to avoid dut and microbial growth issues.		
			EQ.c5	Enhanced Filtration	1	Design HVAC system with particle arrestance filtration rate MERV 13.		
			EQ.c6	Post-Construction IAQ	1	EQc6.1 Vacuum carpeted and soft surfaces with a HEPA filter vacuum that meets CRI Seal of Approval/Green Label Vacuum. EQc6.2 Prior to flushout, filters must be replaced with MERV 10.		
			EQ.c7	Enhanced Acoustical Performance	1-4	**EQc7.1** (1 point) Classrooms and core learning spaces with volumes greater than 20,000 cubic feet must have a 1.5 second reverberation time max. **EQc7.2** (2 points) Unoccupied classrooms must have a max background noise level of no more than 35 dBA Leq. **EQc7.3** (1 point) Add to school commissioning requirements (in EEp2) that background HVAC noise is tested to reqs of EQ.p9 and EQc7.2.		
			EQ.c8	Controllability of Systems	1-2	**EQc8.1** (1 point) 90% of all classrooms shall have a minumum of one operable window that is accessible to occupants. **EQc8.2** (1 point) Provide separate temperature and ventilation controls for each classroom or provide each classroom with an independent temp sensor that automatically adjust to the conditions. And provide lighting controls for each classroom.		
			EQ.c9	Duct Access & Cleaning	1	Provide access doors for cleaning all supply and return ductwork and execute a plan for cleaning ductwork prior to occupancy.		
			EQ.c10	Electric Lighting	1	**EQc10.1** Provide multi-scene indirect/direct lighting systems for all classrooms. **EQc10.2** The lighting system shall operate in general illumination and A/V modes. **EQc10.3** In general illumination mode, achieve an avg illumination at desk level of 35 to 50 fc w/ min of 25fc at any point more than 3ft from any wall. **EQc10.4** In A/V mode achieve a avg illumination at desk level of between 10 and 20 fc. **EQc10.5** In indirect mode, controls shall provide at least two levels of uniform lighting both at night and when daylight is available.		

0	0	0	**Energy**		Points	Abridged Requirements	Respons. Party	Comments
Y			EE.p1	Minimum Energy Performance, 20%	Required	Follow the current MA Stretch Energy Code (780 CMR Appendix 120 AA, Chapter 5) to achieve energy savings either through the Performance based approach (20% better than the current ASHRAE 90.1 on an energy cost basis) OR the Prescriptive based approach as explained in the reference guide.		
Y			EE.p2	Commissioning	Required	Implement ALL of the fundamental best practice commissioning procedures, as described in the reference guide and contained in the Massachusetts School Building Authority's Standard Scope of Commissioning Services.		
Y			EE.p3	Facility Staff & Occupant Training	Required	EE.P3.1 Facility Staff Training: Facility staff must receive training and operation and maintenance documentation on all building systems included in the commissioning scope of work. EE.P3.2.Teacher/Administrative Staff Training: Teachers, administrators, and support staff must be offered training on operations of lighting, heating, and cooling systems in classrooms, offices, gyms, auditoriums etc. A User's Guide, explaining basic systems operations, should be developed and posted in each room of the school.		
			EE.c1(A)	Superior Energy Performance (Performance)	2-15	Performance approach: Utilize the Performance Approach from Energy Prerequisite EE.P1 for quantifying energy cost savings. Points are awarded according the percentage saved over a baseline building.		
			EE.c1(B)	Superior Energy Performance (Prescriptive)	2-4	Prescriptive approach: Meet the requirements of EQ.C2, Daylighting in Classrooms AND ensure that 40% of the installed electrical lighting wattage throughout the school is dimmed or turned off when sufficient natural light is present. (2 points) Install an energy recovery ventilation (ERV) system to recover waste heat into the incoming fresh air stream. (2 points)		
			EE.c2	Minimize Air Conditioning	1-3	1 Point: Design and install a dehumidification system, which tempers air but does not act as a full air conditioning system. Spaces such as computer classrooms and server rooms are exempt. 2 Points: Design 80% of permanent classrooms without air conditioning. 3 Points: Design 90% of permanent classrooms without air conditioning.		
			EE.c3	Renewable Energy	1-12	EE.C3.1: Use renewable energy sources for electricity production that are on-site or allocated to the school facility through net metering. EE.C3.2: Use on-site renewable energy sources for heating/cooling.		
			EE.c4	Plug Load Reduction & ENERGYSTAR Equipment	1	Pass a resolution to require ENERGY STAR equipment and appliances, where available, for all new purchases for the school and to prohibit the purchase of low efficiency products. Develop a plug load reduction plan that identifies all potential plug loads in the school. Plug loads identified should be incorporated into the energy model in EE.P1 Minimum Energy Performance, if the performance option is followed.		

		EE.c5	Energy Management System & Sub metering	1-3	EE.C5.1: Install an energy management system (EMS) to monitor and trend the energy consumed by the following systems throughout the school: Lighting (interior and exterior), HVAC, and Domestic hot water systems. Meter all energy sources provided by utility sources and trend the data against outside air temperature. Provide a plan addressing trendlogging, operator training, and data analysis. EE.C5.2: During design, circuit the electric loads to designated lighting and general power panels so that a true energy measurement of these systems can be achieved. Take either approach for two points: Submeter Major Electrical Equipment Loads OR Boiler System.		
		EE.c6	Flex Energy	1-2	Design the school so that the following technologies can be easily incorporated: 1) Photovoltaic electricity systems, 2) Solar thermal systems, 3) Electric vehicles. 1 Point: Identify the locations where one or more of these technologies can be incorporated and what steps must be taken to make them possible. 2 Points: Identify the locations that will be constructed to be ready for one or more of these technologies.		
0	0	0	**Water**	Points	Abridged Requirements	Respons. Party	Comments
Y		WE.p1	Irrigation System Performance on Recreational Fields	Required	Any in-ground irrigation systems used for recreational fields must have soil moisture meters, weather station, or ET controllers.		
Y		WE.p2	Indoor Water Use Reduction, 20%	Required	Employ strategies that, in aggregate, reduce potable water use by 20% beyond the baseline calculated for the building after meeting EPA 1992 fixture requirements.		
		WE.c1	Indoor Water Use Reduction, 30-50%	1-3	Exceed the potable water use reduction beyond the calculated baseline determined in WE.p2		
		WE.c2	Reduce Potable Water Use for Sewage Conveyance	4	Reduce the use of potable water for building sewage conveyance by a minimum of 50% through the utilization of water-efficient fixtures, use of rainwater catchement systems, or both.		
		WE.c3	No Potable Water Use for Non-Recreational Landscaping Areas	3	Do not install permanent irrigation systems for watering non-playing field landscaped areas AND specify drought tolerant plants or grasses in these areas.		
		WE.c4	Reduce Potable Water Use for Recreational Landscaping Areas	2	Reduce the irrigation needs of athletic fields by specifying appropriate soils and drought tolerant grasses for all sports fields. Specify soils and seed mixes that meet requirements.		
		WE.c5	Irrigation System Commissioning	1	Create an irrigation commissioning plan and complete installation review during construction, performance testing after installation, and documentation for ongoing operations and maintenance.		
		WE.c6	Water Management System	1-3	WEc6 (1 point) Install a Water Management System to monitor water for any equipment or system that exceeds 20% of the total amount of water used. At a minimum submeter domestic water and exterior irrigation. WEc6.2 (3 points) Install a Water Management System to monitor water use of all indoor and outdoor water uses. Water meters should have a pulsed output for AMR. Submeter: all indoor water usage except gyms with showers, gyms with showers, landscaping irrigation, recreation irrigation, swimming pool, cooling tower.		
0	0	0	**Site**	Points	Abridged Requirements	Respons. Party	Comments
Y		SS.p1	Joint Use of Facilities & Parks	Required	Design, with community involvment onr ore more spaces (2,500sf min) for use by community or other appropriate organziaton. Share park or recreation space with the community.		
		SS.c1	Sustainable Site Selection	1-5	**SSc1.1** (1 point) So not modify land with prior to project was public parkland, conservation land, or land aquired for water supply protection. **SSc1.2** (1 point) Do not develop on land lower than 5' above the 100 yr flood elevation. **SSc1.3** (1 point) Do not develop school site that are within wetland resource areas. **SSc1.4** (1 piont) Do not develop on greenfields.		
		SS.c2	Central Location/Smart Growth	1	Site the school with 1/2 mile of at least 8 basic services OR verify that municipality has a current Commonwealth Capital score		
		SS.c3	Reduced Building Footprint	1	Increase the FAR of the school to be at least 1.4.		
		SS.c4	Building Layout & Microclimates	1	Implement four of the following: 1)Orient the building to maximize daylighting 2) Consider prevailing winds. 3) Take advantage of existing formations to provide shelter from extreme weather. 4) Plant appropriate trees in appropriate areas. 5) Minimize importation of non-native soils. 6) Create physical connections to bike paths, natural features or adjacent buildings. 7) Site building to maximize opportunties for renewable technology.		
		SS.c5	Public Transportation	1	Locate building within 1/2 mile of a commuter rail, light rail or subway OR within 1/4 mile of one or more bus lines.		
		SS.c6	Pedestrian/Bike/Human Powered Transportation	2	SSc6.1 (1 point) Provide sidewalks and bike lanes that extend at least to the school entrance AND provide lanes that connect to residential areas at least 1/4 mile from the school entrance AND provide suitable means to secure bicycles for 5% or more of the building occupants. SSc6.2 (1 point) Provide bike lanes that extend at least 2 miles		
		SS.c7	Parking Minimization	1	New Construction: Size parking capacity 1) To meet, but not exceed, local zoning OR 2) not to exceed a) HS - 2.25 spaces per classroom plus parking for 20% of students b) Elementary & Middle - 3 spaces per classroom. Major Renovations: Add no new parking AND provide preferred parking spaces for 5Z% of total parking for carpools and LEFE vehicles.		
		SS.c8	Post-Construction Stormwater Management	1	Exceed the MA Stormwater Standards by implementing a stormwater management plan that results in a 25% decrease in stormwater runoff volumen for existing conditions.		
		SS.c9	Reduce Heat Islands - Landscaping	1	Provide shade (within 5 yrs) on at least 20% of non-roof, impervious surfaces on site OR use light colored (SRI 29) materials for 20% of the impervious area. OR use a combination.		
		SS.c10	Reduce Heat Islands - Cool Roofs	1	Use roofing materials that have a SRI of 78 low-sloped roof, 29 steep-sloped roof for a minimun of 75% of roof area.		
		SS.c11	Light Pollution Reduction	1	Mee the Uplight, light tresspass and glare requirements as described in sections SSc11.2-11.3		

0	0	0	Materials & Waste Management		Points	Abridged Requirements	Respons. Party	Comments
Y			MW.p1	Storage & Collection of Recyclables	Required	Meet local ordinances for recycling space, and provide both an easily accessible areas dedicated to the separation collection and storage of recyclables. Provide a plan for the removal of these recyclables.		
Y			MW.p2	Minimum Construction Site Waste Management, 75%	Required	Recycle, reuse, and/or salvage at least 75% (by weight) of non-hazardous construction and demolition waste, not including land clearing and associated debris.		
			MW.c1	Minimum Construction Site Waste Management, 90%	1	Recycle, reuse, and/or salvage an additional 15% for a total of 90% (by weight) of non-hazardous construction and demolition waste, not including land clearing and associated debris.		
			MW.c2	Single Attribute - Recycled Content Materials	1-2	Prescriptive: Specify and install at least four major materials from Table 15-Minimum Recycled Content Levels for 1 point, or eight majore materials for 2 points. Performance: The weighted average recycled-content value is at least 10% (post-consumer + 1/2 secondary), or at least 20% for 2 points.		
			MW.c3	Single Attribute - Rapidly Renewable Materials	1	Use rapidly renewable materials, excluding wood fiber, for 2.5% of the total value of all products used in the project. OR Specify rapidly renewable materials for 50Z% of the major interior finishes or structural material listed in criteria.		
			MW.c4	Single Attribute - Certified Wood	1	Specify that a minimum of 50% of the wood-based materials are FSC Certified.		
			MW.c5	Single Attribute - Regional Materials	1-2	Specify that a minimum of 10% of building materials (based on cost) that are extracted, and manufactured regionally for 1 point. 2 points for 20%.		
			MW.c6	Materials Reuse	1	Peformance: Specify re-used, salvaged or refurbished materaials obtained off-site for 5% of building materials. Prescriptive: Specify re-used, salvaged or refurbished materials for 25% of one of the following major finish materials: Flooring, casework, acoustical ceiling tiles, wall finishes, tile, roofing materials.		
			MW.c7	Durable & Low Maintenance Flooring	1	Chose flooring products for 50% of the interior surface that are: Impermeable to moisture and air, 15 year non-prorated life time warranty, Provide documentation showing life cycle (15 year) initial costs and maintenance needs of all flooring in the project have been assessed.		
			MW.c8	Building Reuse - Exterior	1-4	Reuse large portions of existing structure during renovatoin or redevelopment projects. 50% - 1 point. 65% - 2 points, 80% - 3 points, 95% - 4 points.		
			MW.c9	Building Reuse - Interior	1	Maintain 50% non-structural elements (walls, floor coverings and ceiling systems).		

0	0	0	Operations & Maintenance		Points	Abridged Requirements	Respons. Party	Comments
Y			OM.p1	Maintenance Plan	Required	The district must create a school maintenance plan that includes an inventory of all equipment (electrical, mechanical, plumbing and envelope) in the school and its preventative and routine maintenance needs.		
Y			OM.p2	Anti-Idling Measures	Required	Adopt a no idling policy that applies to all school buses operating in the school district and all vehicles operting in the school zone.		
Y			OM.p3	Green Cleaning	Required	The school committee must pass a resolution adopting a comprehensice green cleaning policy that ensures only environmentally preferable cleaning products and practices are used.		
			OM.c1	Work Order & Maintenance Management System	1	The school district shall ddevelop or purchase a work order and maintenance management system (MMS)		
			OM.c2	Indoor Environmental Management Plan	1-3	**Option 1** (3 points) Implement EPA's Tools for Schools Program or equivalent. **Option 2** (2 points) Custodial/Facility Staff Training using MA Facility Admin. Ass. Modeules on IAQ, IPM, radon, drinking water and "Cleaning for Health". **Option 3** (1 point) Arrange a presentation on Tools for Schools or MA Healthy Schools Checklist to the school committee.		
			OM.c3	Green Power	1	Commit to purchasing RECs or a power through a PPA equivalent to 15% of the projected annual electricity needs.		
			OM.c4	Climate Change Action: Diesel Bus Retrofit	1	Retrofit buses by participating in the DEP MassCleanDiesel Initiative.		
			OM.c5	Carbon Footprint Reporting	1	Join the Climate Action Registry to commit to calculate, report and verify annual GHG emmisions using The Climate Action Registry online tool.		
			OM.c6	Energy Benchmarking	3	OMc6.1 (2 points) The school must adopt a policy of benchmarking its energy use over time to track building performance. OMc6.2 (1 point) Commit to conduct a post-occupancy analysis of the building's performance after 1-2 yrs or recommissioning after 2-5 yrs.		

0	0	0	TOTAL	125

Eligibility Levels

New Construction MA-CHPS Verified - 40 points

New Construction MA-CHPS Verified Leader - 50 points

Mountview School Building Committee
Meeting Minutes
July 31, 2012

6PM HMLD Building

Present: Chairman Paul Challenger, David White, Gary Kaczmarek, Margaret Watson, Nancy Galkowski, Erik Githmark, Chris Lucchesi, Mike Sherman, Jacquie Kelly, Tom Pandiscio, Joel Wolk

Others Present: Mike Pagano, LPA, Bill Senecal, LPA

1. Architect/OPM/Project Update

OPM Gary Kaczmarek introduced Mr. Joel Wolk to the Committee. Mr. Wolk has been hired as part of Mr. Kaczmarek's OPM assistance team.

Mr. Pagano informed the Committee that the PDP was due on August 15, 2012. He reported that Fogerty, the architect's cost estimator, had completed the cost estimating on the PDP. Mr. Senecal updated the Summary of Deliverable's timeline. Mr. Pagano said the Committee must determine and vote on the three options that are the best for the project. He reviewed the three criteria to help the Committee make the best informed building decision for the project. The three criteria are 1. must meet MSBA guidelines; 2. must meet school department guidelines; and 3. must be a 50-year building.

Chris Lucchesi said it was important to review all the materials before removing options from consideration. He asked if there were any narrative variances with the PDP that might cause a problem with the MSBA. Mr. Pagano said that the Superintendent's decision to create a smaller media center and divert the square footage into other areas of the educational design is a new concept for the MSBA to consider. The MSBA might send back review notes on the PDP and request additional information on a reduced media center. However, these comments will not back it back to the Committee until the end of September. This gamble might cause the project to lose design time if the MSBA rejects the alternative use of the media center. Mr. Kaczmarek said he had spoken with Chris Alles with the MSBA concerning some of the variances in the PDP. If an add/renovation option is the final choice, it will cause the building to be larger than the MSBA's allotted 128,000 sf. This is because the building is currently so educationally inefficient and the building is so deficient in sf. The add/renovation option will also include a reduced sf. Media Center and space allocated to pods.

Mike Sherman suggested having the media center concept reviewed by the WRSD School Committee's Education Subcommittee. Margaret Watson said that the Education Subcommittee only meets twice a year and would not have the opportunity to review it prior the PDP submission. Dr. Pandiscio said that he had looked for similar projects and could not find a comparable one. However, there is a lot of discussion among the educational community about decentralizing media centers. Dave White suggested that there was an appropriation of $625,000 for the Feasibility Study and some money could be spent on conducting additional design fees.

Mr. Senecal commented that another narrative variance issue might involve the proposed size of the gym/stage in the gym instead of the cafeteria.

Mr. Sherman inquired how LPA determines that their work is correct and complete. Mr. Pagano said that he and his staff have extensive experience in school construction. His reports and designs have been recognized by the MSBA as high quality. Mr. White commented that he felt impressed with the quality of work done to date.

The Committee discussed the 30% rule and code compliance. The building does not comply with any current building codes. There will be additional costs for an add/renovation while the building is occupied.

The Committee discussed all six building options for the project. Mr. Lucchesi said that he did not think that a minimum renovation was viable.

Motion by Chris Lucchesi, seconded by David White, it was **UNANIMOUSLY VOTED TO REMOVE A MINIMUM RENOVATION OF THE MOUNTVIEW MIDDLE SCHOOL FROM THE PROJECT CONSIDERATION.**

Motion by Chris Lucchesi, seconded by David White, it was **UNANIMOUSLY VOTED TO REMOVE DOING NOTHING TO THE MOUNTVIEW MIDDLE SCHOOL FROM THE PROJECT CONSIDERATION.**

Motion by Chris Lucchesi, seconded by David White, it was **UNANIMOUSLY VOTED TO REMOVE A MODERATE RENOVATION OF THE MOUNTVIEW MIDDLE SCHOOL FROM THE PROJECT CONSIDERATION.**

Motion by Chris Lucchesi, seconded by David White, it was **UNANIMOUSLY VOTED TO CONSIDER THE THREE REMAINING PROJECT OPTIONS FOR THE MOUNTVIEW MIDDLE SCHOOL: 1. ADD/RENOVATE; 2. BUILD A NEW SCHOOL ON EXISTING SITE; AND 3. BUILD A NEW SCHOOL ON A NEW SITE.**

Margaret Watson said she intended to abstain from the vote to endorse the PDP because she had not had an opportunity to review the document.

Motion by Chris Lucchesi, seconded by David White, it was **VOTED 7-0-1 WITH 1 ABSTAINED TO ENDORSE THE PDP DATED 7/24/12 AS WRITTEN AND ALLOW FOR MINOR EDITS AND CORRECTIONS AS NECESSARYREMOVE A MINIMUM RENOVATION OF THE MOUNTVIEW MIDDLE SCHOOL FROM THE PROJECT CONSIDERATION. (ABSTAINED: WATSON.)**

The Committee agreed to meet on August 14, 2012.

LPA left the meeting at 8:22PM.

2. Community Outreach

Chairman Challenger said he would present the PDP to the School Committee at their August 20th meeting.

The Committee agreed to conduct another public tour of the middle school and hold a Committee meeting on August 28, 2012. All Town Committees and State Legislators will be invited to attend.

3. Approval of Previous Minutes

Motion by David White, seconded by Chris Lucchesi, it was **UNANIMOUSLY VOTED TO APPROVE THE MEETING MINUTES OF JUNE 26, 2012 AS PRESENTED.**

Motion by David White, seconded by Chris Lucchesi, it was **UNANIMOUSLY VOTED TO APPROVE THE MEETING MINUTES OF JULY 17, 2012 AS PRESENTED.**

4. Adjournment

Motion by Margaret Watson, seconded by Dave White, it was **UNANIMOUSLY VOTED TO ADJOURN THE JULY 31, 2012 MEETING AT 9:04PM.**

APPROVED:

PDP APPENDICES

A. Current Statement of Interest (SOI)
B. MSBA Board Action Letter
C. Executed Design Enrollment Certification

PDP APPENDICES

A. Current Statement of Interest (SOI)

Massachusetts School Building Authority

School District Wachusett

District Contact Thomas G Pandiscio TEL: (508) 829-1670

Name of School Mountview Middle

Submission Date 11/13/2008

Note

The following Priorities have been included in the Statement of Interest:

1. ☑ Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.
2. ☐ Elimination of existing severe overcrowding.
3. ☐ Prevention of the loss of accreditation.
4. ☐ Prevention of severe overcrowding expected to result from increased enrollments.
5. ☑ Replacement, renovation or modernization of the heating system in a schoolhouse to increase energy conservation and decrease energy related costs in the schoolhouse.
6. ☐ Short term enrollment growth.
7. ☐ Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.
8. ☐ Transition from court-ordered and approved racial balance school districts to walk-to, so-called, or other school districts.

Potential Project Scope: Major Project

Is this SOI the District Priority SOI? YES

The MSBA ID for the District Priority SOI: 2009 Mountview Middle

District Goal for School: Please explain the educational goals of any potential project at this school

Mountview Middle School has the largest middle school enrollment in the regional school district. In FY2007 the regional school district undertook a Literacy Initiative for elementary grades. A renovated Mountview Middle School will better enable the Literacy Initiative to be launched in middle grades.

Is this part of a larger facilities plan? NO

If "YES", please provide the following:

Facilities Plan Date:

Planning Firm:

Please provide an overview of the plan including as much detail as necessary to describe the plan, its goals and how the school facility that is the subject of this SOI fits into that plan:

Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 21 students per teacher.

Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 20

students per teacher.

Is there overcrowding at the school facility? YES

If "YES", please describe in detail, including specific examples of the overcrowding.

At the time of certification by the Town in August 2007 it was recorded that the school had a capacity of 600. As of October 1, 2008 the enrollment is 761.

General Description

SITE DESCRIPTION: Please provide a detailed description of the current site and any known existing conditions that would impact a potential project at the site (maximum of 5000 characters).:

The Mountview Middle School was constructed in 1967. An addition was constructed in 1989. The facility contains 122,750 square feet of floor space. The original underground storage tank was removed in 1996 and replaced with a double lined tank. The site is 12.9 acres.
Grades served are 6, 7, 8.

BUILDING ENCLOSURE: Please provide a detailed description of the building enclosure, types of construction materials used, and any known problems or existing conditions (maximum of 5000 characters).:

The building is steel framed with concrete slab and steel beam floors with metal deck. Roof construction is steel beam. Exterior walls are brick.
Exterior walls: There are some stress cracks in outside walls. Many exterior doors and casings- particularly doors to the cafeteria, gymnasium and front entrance - are rusty and rotting.
Roof: The main roof is 40 years old. The addition is nearly 20 years old. In July 2008 WP Hickman Systems, Inc. conducted a visual inspection and a comprehensive infrared roof moisture survey and found that the overall condition of the roof system was only fair. The firm recommended replacement within the next 3-5 years.
Windows: HMFH Architects, Inc., reported in a May 1996 Feasibility Study that the original steel windows (single pane) were rusting. As of 2008 the windows remain thick and single pane, not energy efficient. The caulking is old and cracking and rubber gaskets have begun to fall out. THere are no screens on the upper section of classroom windows allowing insects in during the fall and spring sessions.

Age of EXTERIOR WALLS (In Years): 41
Year of Last Repair or Replacement: 1989
Description of Last Repair or Replacement:
Year addition built.

Age of ROOF(In Years): 41
Year of Last Repair or Replacement: 2008
Description of Last Repair or Replacement:
Performed roof leak and roof drain repairs.

Age of WINDOWS(In Years): 41
Year of Last Repair or Replacement: 1989
Description of Last Repair or Replacement:
Year addition built.

MECHANICAL and ELECTRICAL SYSTEMS: Please provide a detailed description of the current mechanical and electrical systems, and any known problems or existing conditions (maximum of 5000 characters).:

Boilers: The 1996 HMFH Feasibility Study found that the domestic water heater was in poor condition. PLumbing shut off valaves are unreliable for shut-off. The showers are in a state of disrepair. The plumbing fixtures do not meet water conservation requirements of the plumbing code. Science rooms do not have neutralizing tanks. As of 2008 the two boilers are original equipment and in poor condition. The boilers are not energy efficient and are costly to repair. Currently there is one boiler leaking and it is estimated $15,400 to repair.
HVAC System: The 1996 HMFH Feasibility Study reported that the ventilation system in the 1967 original building was showing signs of deterioration. Motor driven equipment and valves in the 1967 building were reaching life expectancy and should be replaced. The central core offices and Nurse's area on the 2nd floor has supply air only, with no apparent return/exhaust air from the space. The space is not air conditioned and there have been numerous complaints of overheating and lack of ventilation for these areas. The compressors for the Kitchen coolers/freezers are remotely located in the receiving

area. No ventilation is provided and problems with overheating have been encountered. As of 2008 the motor control center needs to be replaced. There is no emergency generator.
Electrical Services and Distribution Syetem: The 1996 HMFH Feasibility Study reported that the lighting in the original 1967 building was not energy efficient. There was no security system. As of 2008, there is no monitored security system to protect the building and its contents in off hours. The intercom/PA system, classroom telephone network and many clocks within the school need replacing.The system was originally installed in 1967. Because of the system's age, unreliability and unavailability of repair parts it has been recommended that the system be replaced at a cost of $48,000.

Age of BOILERS(In Years): 41
Year of Last Repair or Replacement: 2008
Description of Last Repair or Replacement:
Defective 5 hp heating circulator pump as well as electrical service to it replaced.

Age of HVAC SYSTEM (In Years): 41
Year of Last Repair or Replacement: 2008
Description of Last Repair or Replacement:
Replaced air compressor and controller for the air handling unit; time clocks replaced; and comprehensively cleaned unit vent coils.

Age of ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM(In Years): 41
Year of Last Repair or Replacement: 2006
Description of Last Repair or Replacement:
Emergency lighting replaced.

BUILDING INTERIOR: Please provide a detailed description of the current building interior including a description of the flooring systems, finishes, ceilings, lighting, etc. (maximum of 5000 characters).:

Flooring: The gymnasium floor and the cafeteria stage floor are in need of replacement. The wooden gym floor has been patched and is warping. The library carpet needs to be replaced. Asbestos floor tiles were removed in FY2003.
Fire suppression system: There is no sprinkler system in the original 1967 building. The jockey pump for the sprinkler system in the 1989 addition was replaced in FY2003; a diesel pump in the sprinkler pipe system was reapied in FY2007 and a fire pump test header was replaced in 2008.
Finishes: Student lockers are antiquated, too small, and have no locks for security. There are not enough for the student population. All classroom door locks are not able to be repaired as the originals are "one-of-a-kind" and are no longer manufactured. Parts can not be obtained.
ADA compliance: The facility is not totally ADA compliant.

PROGRAMS and OPERATIONS: Please provide a detailed description of the current programs offered and indicate whether there are program components that cannot be offered due to facility constraints, operational constraints, etc.:

With three grades there needs to be six science labs. THere are currently only four such labs. Two remaining labs are very small.

CORE EDUCATIONAL SPACES: Please provide a detailed description of the Core Educational Spaces within the facility, a description the number and sizes (in square feet) of classrooms, a description of science rooms/labs including ages and most recent updates, and a description of the media center/library (maximum of 5000 characters).:

The educational spaces are substandard given current standards. They have been designed and constructed for late 20th century educational pursuits.
More to be described pending feasibility study.

CAPACITY and UTILIZATION: Please provide a detailed description of the current capacity and utilization of the school facility. If the school is overcrowded, please describe steps taken by the administration to address capacity

issues. Please also describe in detail any spaces that have been converted from their intended use to be used as classroom space (maximum of 5000 characters).:

As noted, the Town certified a capacity of the facility at 600 people in 2007. The 1996 HMFH study reported at capacity of 675. The student enrollment was 761 as of October 2008.

MAINTENANCE and CAPITAL REPAIR: Please provide a detailed description of the district's current maintenance practices, its capital repair program, and the maintenance program in place at the facility that is the subject of this SOI. Please include specific examples of capital repair projects undertaken in the past, including if any override or debt exclusion votes were necessary (maximum of 5000 characters).:

The District annually repairs and maintains Mountview Middle School on a needs based basis and reacting to issues that may present themselves in the normal operation of the facility. However the age of the building and its systems required complete replacement/renovation as a long term and cost effective solution.
In FY2007 the District launched a comprehensive energy conservation program. More than $1 million in energy costs have been avoided through this program since that time. The focus of the program was and is human behavorial modifications to conserve energy, such as turning off lights, computers, printers, setting thermostats low, closing classroom doors so as not to heat corridor space unnecessarily, using time clocks to automatically control temperatures. In conjunction with this "human" effort the regional school district also inivested in capital improvements and deferred maitenance items. However the regional school district does not have the budgetary capability to finance major capital improvements such as window replacements, heating plant replacements and HVAC system upgrades.
The regional school district recognizes that even more significant energy savings would be realized with the installation of double pane windows and computerized boiler and HVAC control systems. Energy costs avoidance at Mountview have totaled about $100,000 over two years. Energy use has decreased by about 25%. In comparison, Mountview lags behind the savings and the usage decreases in the regional school district's other school facilities where reductions are about 33%.

Priority 1

Please provide a detailed description of the perceived health and safety problems below. Attach copies of orders or citations from state and/or local building and/or health officials.

There are two safety issues. One is the lack of a sprinkler system in the original 1967 building. The second is the age and condition of the roof which has been rated as only fair.

Priority 1

Please describe the measures the School District has taken to mitigate the problem(s) described above.

The regional school district commissioned a private contractor to perform an assessment of the roof system in the summer of 2008. Roof leaks and drains are repaired as needed and budget permits.

Priority 1

Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

Without replacement of the roof eventually the roof will fall further into disrepair. Instructional budget funds may need to be diverted to undertake more extensive repairs as the roof ages and increases in poor condition.

Please also provide the following:

Name of Firm that performed the Study/Report:
W P Hickman Systems

Date of Study/Report: 7/17/2008

Synopsis of Study/Report:
The overall condition of the roof is fair. Repairs will provide for additional 3-5 years of effective service life.

Is the perceived Health and Safety problem related to asbestos?: NO

If "YES", please describe the location in the facility, if it is currently friable, and the mitigation efforts that the district has undertaken to date.:

Is the perceived Health and Safety problem related to an electrical condition?: NO

If "YES", please describe the electrical condition, any imminent threat, and the mitigation efforts that the district has undertaken to date.:

Is the perceived Health and Safety problem related to a structural condition?: NO

If "YES", please describe the structural condition, any imminent threat, and the mitigation efforts that the district has undertaken to date.:

Is the perceived Health and Safety problem related to the building envelope?: YES

If "YES", please describe the building envelope condition, any imminent threat, and the mitigation efforts that the district has undertaken to date.:
Lack of sprinkler system in original building.

Is the perceived Health and Safety problem related to the roof?: YES

If "YES", please describe the roof condition, any imminent threat, and the mitigation efforts that the district has undertaken to date.:
See above. No imminent threat but roof is approaching estimated useful life within 3-5 years.

Is the perceived Health and Safety problem related to accessibility?: NO

If "YES", please describe the areas that lack accessibility and the mitigation efforts that the district has undertaken to date. In addition, please submit to the MSBA copies of any federally-required ADA Self-Evaluation Plan and Transition Plan.:

Priority 5

Please provide a detailed description of the energy conservation measures that are needed and include an estimation of resultant energy savings as compared to the historic consumption.

Districtwide in FY2007 the District launched a comprehensive energy conservation program. More than $1 million in energy costs have been avoided through this program. The focus of the program was and is human behavioral modifications to conserve energy, such as turning off lights, computers, printers, setting thermostats low, closing classroom doors so as not to heat corridor space, using time clocks to automatically lower and increase heat and cooling.

In conjunction with this "human" effort the District also invested in minor capital improvements and deferred maintenance items. However the District does not have the budgetary capability to finance window replacement and HVAC system replacement or major upgrades.

The District recognizes that even more significant energy savings would be realized with the installation of double pane windows in place of single pane (such as at Mountview) and with computerized boiler and HVAC systems in place of boilers that were installed in the late 1960's (such as at Mountview). Energy costs avoidance at Mountview has totaled about $100,000 over two years. Energy use has decreased by about 25%. In comparison, Mountview lags behind the savings and the usage decrease in the District's other school facilities where reductions are about 33%. Our ability to save even more significant energy costs is encumbered by these outdated furnishings and equipment.

Priority 5

Please describe the measures the School District has already taken to reduce energy consumption.

See above.

Name of School	Mountview Middle

Priority 5

Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

The District launched an Energy Conservation Program with the intent of saving energy budget dollars to be able to prevent and then provide budget dollars for Instructional Expenditures. Because of the success of the program the regional school district was able to level fund its energy costs in FY2009 at FY2008 levels even the cost of oil and electricity have increased. The assumption is that energy use will decrease.
Mountview Middle School is one of the oldest facilities in the regional school district. By upgrading and/or replacing boilers and HVAC systems the energy efficiency will increase and energy costs will decrease.

Please also provide the following:

Age of Roof (Years): 41
Were any major repairs or renovations of the roof undertaken in the past?: NO
If "YES", please provide the year of the last major repair/renovation of the roof:
Age of Windows (Years): 41
Were any major repairs or renovations of the windows undertaken in the past?: NO
If "YES", please provide the year of the last major repair/renovation of the windows:
Age of Doors (Years): 41
Were any major repairs or renovations of the doors undertaken in the past?: NO
If "YES", please provide the year of the last major repair/renovation of the doors:
Age of HVAC (Years): 41
Were any major repairs or renovations of the HVAC undertaken in the past?: NO
If "YES", please provide the year of the last major repair/renovation of the HVAC:
Age of Boilers (Years): 41
Were any major repairs or renovations of the boilers undertaken in the past?: NO
If "YES", please provide the year of the last major repair/renovation of the boilers:
Age of Electrical System (Years): 41
Were any major repairs or renovations the electrical system undertaken in the past?: NO
If "YES", please provide the year of the last major repair/renovation of the electrical system:
Age of Lighting System (Years): 41
Were any major repairs or renovations of the lighting system undertaken in the past?: NO
If "YES", please provide the year of the last major repair/renovation of the lighting system:
Have the systems identified above been examined by an engineer or other trained building professionals?: YES
If "YES", please provide the name of the individual and his/her professional affiliation:
WP Hickman Systems
Please also provide the date of the inspection:: 7/17/2008
Please describe how addressing the system will extend the useful life of the facility that is the subject of this SOI (maximum of 5000 characters).:
By replacing windows, the roof, doors, and the boilers, and upgrading electrical, sprinkler and HVAC systems is it believed that the facility's life expectancy can be extended another 20-25 years.

Vote

Vote of Municipal Governing Body YES: NO: Date:

Vote of School Committee YES: NO: Date:

Vote of Regional School Committee YES: 17 NO: 0 Date: 11/10/2008

Form of Vote

The following form of vote should be used by both the City Council/Board of Aldermen, Board of Selectmen/equivalent governing body AND the School Committee in voting to approve this Statement of Interest.

If a regional school district, the regional school district should use the following form of vote.

Resolved: Having convened in an open meeting on _____, the _____ *[City Council/Board of Aldermen, Board of Selectmen/Equivalent Governing Body, School Committee]* of _____ *[City/Town/School District]*, in accordance with its charter, by-laws, and ordinances, has voted to authorize the Superintendent to submit to the Massachusetts School Building Authority the Statement of Interest dated _____ for the _____ *[Name of School]* located at _____ *[Address]* which describes and explains the following deficiencies and the priority category(s) for which _____ *[Name of City/Town/District]* may be invited to apply to the Massachusetts School Building Authority in the future

_____

_____

_____

_____

_____

_____ *[Insert a description of the priority(s) checked off on the Statement of Interest and a brief description of the deficiency described therein for each priority]*; and hereby further specifically acknowledges that by submitting this Statement of Interest, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority, or commits the _____ *[Name of City/Town/District]* to filing an application for funding with the Massachusetts School Building Authority.

B. Recommendations Requiring Action by the School Committee

Motion: Having convened in an open meeting on November 10, 2008, the Wachusett Regional District School Committee in accordance with its charter, by-laws, and ordinances, vote to authorize the Superintendent to submit to the Massachusetts School Building Authority the Statement of Interest dated November 14, 2008 for the Mountview Middle School located at 270 Shrewsbury Street, Holden, Massachusetts which describes and explains the following deficiencies and the priority categories for which Wachusett Regional School District may be invited to apply to the Massachusetts School Building Authority in the future

- Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.
- Elimination of existing severe overcrowding.
- Replacement, renovation or modernization of the heating system in a schoolhouse to increase energy conservation and decrease energy related costs in the schoolhouse.

and hereby further specifically acknowledges that by submitting this Statement of Interest, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority, or commits the Wachusett Regional School District to filing an application for funding with the Massachusetts School Building Authority.

(M. Sherman)
(R. Imber)

Roll call vote:
In favor:
Margaret Watson
John Nunnari
Cynthia Bazinet
Robert Carter
Shirley Conrad
Melinda Coyle
Steven Hammond
Robert Imber
Stacey Jackson
Mark James
Duncan Leith
Michael Pantos
Robert Pelczarski
Norman Plourde
Michael Sherman
Joseph Sova
Marcie Zaharee

Opposed:
None

(Motion passed unanimously)

Name of School	Wachusetts Regional School District

CERTIFICATIONS

The undersigned hereby certifies that, to the best of his/her knowledge, information and belief, the statements and information contained in this statement of Interest and attached hereto are true and accurate and that this Statement of Interest has been prepared under the direction of the district school committee and the undersigned is duly authorized to submit this Statement of Interest to the Massachusetts School Building Authority. The undersigned also hereby acknowledges and agrees to provide the Massachusetts School Building Authority, upon request by the Authority, any additional information relating to this Statement of Interest that may be required by the Authority.

LOCAL CHIEF EXECUTIVE OFFICER/DISTRICT SUPERINTENDENT/SCHOOL COMMITTEE CHAIR
(E.g., Mayor, Town Manager, Board of Selectmen)

Chief Executive Officer	**School Committee Chair**	**Superintendent of Schools**
Brian J. Bullock	Margaret Watson	Thomas G. Pandiscio
(print name)	(print name)	(print name)
(signature)	(signature)	(signature)
Date 11/12/08	Date 11/12/08	Date 11/12/08

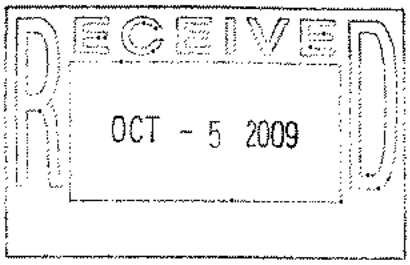
B. MSBA Board Action Letter

10/5/09
-7 FB

Massachusetts School Building Authority

Timothy P. Cahill
Chairman, State Treasurer

Katherine P. Craven
Executive Director



September 30, 2009

Margaret Watson, Chair
Wachusett Regional School Committee
1745 Main Street
Jefferson, MA 01522

RE: Wachusett Regional School District, Mountview Middle School

Dear Ms. Watson:

I am pleased to report that the Board of the Massachusetts School Building Authority ("MSBA") voted to invite the Wachusett Regional School District to collaborate with the MSBA in conducting a Feasibility Study on the Mountview Middle School.

During the Feasibility Study phase, the school district and the MSBA will collaborate to find the most fiscally responsible and educationally appropriate solution to the facility's problems. The Feasibility Study, which will be conducted pursuant to the MSBA's regulations, will involve the MSBA collaborating with the District to begin to explore potential solutions to the problems identified in the Statement of Interest.

I do want to emphasize that this invitation to collaborate on a Feasibility Study is ***not*** approval of a project, but is strictly an invitation to your school district to work with the MSBA to explore potential solutions to the problems that have been identified. Moving forward in the MSBA's process requires collaboration with the MSBA, and communities that "get ahead" of the MSBA without MSBA approval will not be eligible for grant funding. To qualify for any funding from the MSBA, local communities must follow the MSBA's statute and regulations, which require MSBA collaboration and approval at each step of the process.

Before the Feasibility Study can begin, there are a number of things that must happen, including:

- the District must provide a preliminary overview of available or projected local funding for any proposed project;
- the District must submit to the MSBA a current routine and capital maintenance plan for its school facilities; and

- the District must execute an Initial Compliance Certificate, to ensure that the District understands and will comply with the MSBA's requirements and regulations.

Once these initial steps are completed, the MSBA and the District will then work on procuring the project management and design professionals which will help bring the District's feasibility study to fruition.

We will be contacting you soon to discuss these and other next steps that the district must complete as it moves forward in the MSBA's capital pipeline. In the meantime, however, I wanted to share with you the Board's decision and provide a brief overview of what this means for your District.

I look forward to continuing to work with you as the MSBA's new grant program progresses. As always, feel free to contact me or my staff at (617) 720-4466 should you have any questions.

Sincerely,

Katherine Craven

Katherine Craven
Executive Director

Cc. Senator Harriette L. Chandler
Representative Lewis G. Evangelidis
David J. White Sr., Chair, Holden Board of Selectmen
Michael Quinlivan, Chair, Paxton Board of Selectmen
Allan Sentkowski, Chair, Princeton Board of Selectmen
Leroy Clark, Chair, Rutland Board of Selectmen
Paul M. Sushchyk, Chair, Sterling Board of Selectmen
Thomas Pandiscio, Superintendent, Wachusett School District
File *10.2 Letters*

MSBA Project No. 200907750305
District: Wachusett

MASSACHUSETTS SCHOOL BUILDING AUTHORITY
FEASIBILITY STUDY AGREEMENT

This Feasibility Study Agreement, dated the 22nd day of February, 2012 (the "Agreement") is between the Massachusetts School Building Authority (the "Authority"), a public instrumentality of the Commonwealth of Massachusetts established by Chapter 70B of the Massachusetts General Laws and Chapters 208 & 210 of the Acts of 2004 of the Commonwealth, in each case as amended from time to time, and the Wachusett Regional School District (the "District").

WHEREAS, the District submitted a Statement of Interest to the Authority for the Mountview Middle School ("School"), and the District prioritized this Statement of Interest as its priority to receive any potential funding from the Authority;

WHEREAS, the School facility is owned by the Town but occupied and controlled by the District pursuant to a Lease;

WHEREAS, the Board of Directors of the Authority has voted to authorize the Parties to enter into this Agreement upon the terms and conditions stated herein;

WHEREAS, the Feasibility Study is one step in the multi-step process of the Authority's grant program for school building construction and renovation projects, and the invitation to collaborate on conducting and/or reviewing a Feasibility Study is not approval of a project or any funding by the Authority, except as expressly provided in this Agreement;

WHEREAS, the Authority's grant program for school building renovation and construction projects is a non-entitlement, discretionary program based on need, as determined by the Authority;

WHEREAS, the District has submitted a signed Initial Compliance Certification, as described in 963 CMR 2.02, 2.03 & 2.10(2), in the form prescribed by the Authority, and it has been accepted by the Authority;

WHEREAS, the District has formed a School Building Committee to monitor the Feasibility Study and advise the District during the study;

WHEREAS, the Authority may reimburse the District for a portion of eligible, approved costs incurred in connection with the Feasibility Study undertaken by the District for the School under certain terms and conditions, hereinafter provided, and subject to the provisions of M.G.L. c. 70B, 963 CMR 2.00 *et seq*. and all applicable policies and guidelines of the Authority;

NOW THEREFORE, in consideration of the promises and the agreements, provisions and covenants contained in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Authority and the District (together, the "Parties") agree as follows:

SECTION 1
DEFINITIONS

1.1 Capitalized terms not specifically defined in this Definitions section shall have the meanings ascribed to them in either M.G.L. c. 70B or 963 CMR 2.00 *et seq.*.

"Budget" shall mean a complete and full enumeration of all costs, including both hard costs and soft costs, so-called, that the District reasonably estimates, to the best of its knowledge and belief, will be incurred in connection with the planning, development, and the completion of the Feasibility Study, which Budget shall be approved by the Authority and attached hereto as **Exhibit A**, as it may be updated from time to time.

"Design Contract" shall mean the standard design contract developed and prescribed by the Authority, as it may be amended by the Authority from time to time, that shall be executed by the District or the Town, as provided herein, and the Designer for design services related to the Proposed Project.

"Designer" shall mean the individual, corporation, partnership, sole proprietorship, joint stock company, joint venture, or other entity engaged in the practice of architecture, landscape architecture, or engineering that meets the requirements of M.G.L. c. 7, § 38A 1/2 (b) and has been procured and contracted by the District or the Town, as provided herein, to conduct a Feasibility Study, in accordance with the provisions of Sections 2.1(a)(i) and 2.1(a)(ii) of this Agreement.

"District" shall mean the Wachusett Regional School District and shall also include the Town to the extent that it is owner of the School facility that is leased to the District and as it may have the legal authority to appropriate and borrow funds for the Proposed Project and/or to procure, and enter into contracts for, OPM, Designer, and other consultant services related to the Proposed Project, all in accordance with the provisions of this Agreement, the policies, regulations, Guidelines and Standards of the Authority, and all applicable law.

"Excusable Delay" shall mean a delay of the Feasibility Study that either (a) is solely because of a natural event, such as flood, storms, or lightning, that is not preventable by any human agency, or (b) is reasonably determined by the Authority to be excusable.

"Feasibility Study" shall mean a study as described in 963 CMR 2.10(8) and in any applicable policies and guidelines of the Authority and, in relation to a Major Reconstruction Project or Repair Project, as described in M.G.L. c. 70B, 963 CMR 2.00 *et seq.* and any applicable policies and guidelines of the Authority, shall also include an engineering study, in a format prescribed by or otherwise acceptable to the Authority, to investigate potential options and solutions, including cost

estimates, for the deficiencies and issues identified in the Statement of Interest or as otherwise determined by the Authority.

"Lease" A written lease agreement made pursuant to the provisions of G.L. c. 71, s. 14C or any other applicable provision of law under which the Town leases the School facility to the District.

"Owner's Project Manager" shall mean the individual corporation, partnership, sole proprietorship, joint stock company, joint venture, or other entity under contract with, designated, or assigned by the District or the Town, as provided herein, and approved by the Authority, to fully and completely manage and coordinate administration of the Project to completion. The Owner's Project Manager must meet the qualifications set forth in M.G.L. c. 149, § 44A ½, 963 CMR 2.00 *et seq.*, and all applicable policies and guidelines of the Authority.

"Regional School District Agreement" shall mean the agreement made and adopted pursuant to the provisions of M.G.L. c. 71, ss. 14B & 15 or any other applicable provision of law that establishes the District as a regional school district.

"Scope" shall mean the scope of the Feasibility Study as described in 963 CMR 2.10(8) and any applicable policies and guidelines of the Authority or as otherwise determined in writing by the Authority and as more fully described in **Exhibit B** attached hereto, as it may be updated from time to time as mutually agreed upon by the District and the Authority.

"Schedule" shall mean the schedule for the Feasibility Study, which schedule shall be updated from time to time and approved by the Authority, and is attached hereto as **Exhibit C**.

"School" shall mean the Mountview Middle School, located at 270 Shrewsbury Street,that is owned by the Town and occupied and controlled by the District pursuant to a Lease.

"Statement of Interest" shall mean the Statement of Interest, as defined in 963 CMR 2.09 and all applicable policies and guidelines of the Authority, submitted to the Authority by the District for the School.

"Town" shall mean the Town of **Holden**, Massachusetts, as it is owner of the School facility that occupied and controlled by the District pursuant to a Lease and as it may have the legal authority to appropriate and borrow funds for the Proposed Project and/or procure, and enter into contracts for, OPM, Designer, and other consultant services related to the Proposed Project, all in accordance with the provisions of this Agreement and the statutes, regulations, policies, Guidelines and Standards of the Authority, and all applicable law.

SECTION 2
FEASIBILITY STUDY

Subject to the terms and conditions of this Agreement, and in reliance on the representations, warranties and covenants contained herein, the Parties hereby agree as follows:

2.1 Feasibility Study.

(a.) The Parties hereby agree that the District shall undertake a Feasibility Study to investigate potential options and solutions, including cost estimates, to the School's deficiencies and issues as identified in the Statement of Interest or as otherwise determined by the Authority and in accordance with the Scope, Budget, and Schedule approved by the Authority. The adequacy, sufficiency and/or acceptability of a Feasibility Study or a Prior Study, as defined in Section 2.1(c) of this Agreement, for the purposes of the Authority's grant program shall be determined by the Authority within its sole discretion. Any determination by the Authority that a Feasibility Study or Prior Study is adequate, sufficient or acceptable for the Authority's purposes shall not be construed as a certification or approval by the Authority of the studies, plans, drawings, designs, cost estimates, specifications or any other information or materials contained therein. The District, its officials, employees and agents are and shall remain responsible for the Feasibility Study and/or Prior Study and the building designs, site plans, drawings, cost estimates, specifications and other materials and information relative thereto that the District submits to the Authority. The Authority's review of the Feasibility Study and/or Prior Study and any studies, plans, drawings, designs, cost estimates, specifications or any other information or materials contained therein or related thereto is solely for the purpose of determining whether they meet the provisions of this Agreement and the Authority's regulations, standards, policies, guidelines and other requirements and whether the District will be eligible for potential funding from the Authority for the Proposed Project. Approval of a Proposed Project shall only be determined by a vote of the Authority's Board in accordance with 963 CMR 2.00 *et seq.* and the applicable policies and guidelines of the Authority.

(i.) The District shall procure a Designer to conduct the Feasibility Study pursuant to the provisions of M.G.L. c. 7, § 38A ½ through 38 O, 963 CMR 2.10(8), 963 CMR 2.12, and any other applicable laws and regulations; provided, however, that if the

estimated construction cost of the Proposed Project is determined to be equal to or greater than five million dollars ($5,000,000), then the District shall select the Feasibility Study Designer using the Authority's Designer Selection Panel in accordance with 963 CMR 2.00 *et seq.* and all applicable policies and guidelines of the Authority. The District shall not use a Designer who was procured by the District prior to July 1, 2007, to conduct the Feasibility Study, unless the Designer is acceptable to the Authority. It is further provided that, if said Designer who was procured by the District prior to July 1, 2007, is unacceptable to the Authority, the District shall conduct a new procurement for a Feasibility Study Designer pursuant to the applicable provisions of M.G.L. c. 7, § 38A ½ through 38 O, 963 CMR 2.10(8), 963 CMR 2.12, and any rules, regulations, policies and guidelines of the Authority.

(ii.) The District shall use the Authority's Design Contract to contract with the Designer for the Feasibility Study. The District shall monitor the performance of the Designer and shall require the Designer to fully comply with all provisions of the Design Contract, including, but not limited to, all provisions affecting the interests of the Authority.

(iii.) If, at any time, the construction cost of the Proposed Project is estimated by the Authority to be more than one million five hundred thousand dollars ($1,500,000), or if the construction cost of the Proposed Project is estimated to be equal to or less than one million five hundred thousand dollars ($1,500,000) and the Authority so requires, at any time, as a condition to qualify for funding by the Authority, the District shall procure and maintain under contract, or otherwise assign, an Owner's Project Manager, pursuant to M.G.L. c. 149, § 44A ½ , 963 CMR 2.00, *et seq.* and any applicable policies and guidelines of the Authority. The selection of an Owner's Project Manager shall be subject to the review and approval of the Authority as required by M.G.L. 70B, 963 CMR 2.00, *et seq.*, and any applicable policies and guidelines of the Authority. Any costs associated with an Owner's

Project Manager who is not approved by the Authority shall not be eligible for reimbursement.

(iv.) Where applicable, the District shall use the Authority's model request for services and standard contract to procure and contract with any Owner's Project Manager for the Proposed Project, including the Feasibility Study stage of the Proposed Project. The District shall monitor the performance of the Owner's Project Manager and shall require the Owner's Project Manager to fully comply with all provisions of the contract between the District and the Owner's Project Manager including, but not limited to, all provisions affecting the interests of the Authority.

(v.) In the event that the District grants legal authority to the Town or otherwise delegates authority to the Town to procure and/or contract with a Designer, Owner's Project Manager or other consultants for the Proposed Project, the District shall not be relieved of any of the duties and obligations imposed upon it by this Agreement. The District shall remain obligated to the Authority under this Agreement and shall do all acts and things necessary, including entering into appropriate agreements with the Town, exercising supervision, direction, and, control over the Town, and enforcing its contractual rights, to ensure that the Town, when acting on the District's behalf, performs all obligations that would otherwise be imposed upon the District by this Agreement and by the statutes, regulations, policies, Guidelines and Standards of the Authority. The District shall do all acts and things necessary, including entering into appropriate agreements with the Town, exercising supervision, direction, and control over the Town, and enforcing its contractual rights to ensure that the Town, when acting on the District's behalf, complies with and enforces all of the provisions of any contracts that the Town may enter into with a Designer, Owner's Project Manager, or other consultants for the Proposed Project.

(b.) Subject to the satisfaction of or compliance with, as reasonably determined by the Authority, all of the terms and conditions of this

Agreement, the applicable provisions of M.G.L. c. 70B, Chapters 208 and 210 of the Acts of 2004, and 963 CMR 2.00 *et seq.* and any other rule, regulation, policy or guideline of the Authority, and further subject to the Authority's approval of the Scope, Budget and Schedule and the District obtaining all necessary approvals, authorizations and appropriations for the Feasibility Study using forms prescribed by or otherwise acceptable to the Authority, the Authority hereby agrees to pay to the District an amount that shall under no circumstances exceed **the lesser of (i) Fifty-Two and Eighty-Nine hundredths per cent (52.89%) of the eligible, approved costs of the Feasibility Study, as determined by the Authority, or (ii) Three Hundred Thirty Thousand, Five Hundred Sixty-Three dollars ($330,563.00).** The Parties hereby acknowledge and agree that $330,563.00 is the maximum amount of funding that the District may receive from the Authority for the Feasibility Study, and that the final amount of eligible Feasibility Study costs approved by the Authority may equal an amount less than $330,563.00, as determined by an audit or audits conducted by the Authority. Any costs and expenditures that are determined by the Authority to be either in excess of the $330,563.00 or ineligible for payment by the Authority shall be the sole responsibility of the District.

In the event that the Authority reasonably determines that the Feasibility Study is not in accordance or compliance with the Scope, Schedule, Budget, all of the terms and conditions of this Agreement, the provisions of M.G.L. c. 70B, Chapters 208 and 210 of the Acts of 2004, 963 CMR 2.00 *et seq.* and any other rule, regulation, policy or guideline of the Authority, or is delayed (other than an Excusable Delay) or is not duly authorized, approved and funded by either the District or the Town in accordance with applicable law and as required by the Authority, then the Authority may temporarily and/or permanently withhold payments to the District for any eligible, approved costs of the Feasibility Study, provided that the Authority shall not unreasonably withhold any such payments and further provided that the Authority shall give written notice to the District of any such withholding. Notwithstanding the foregoing, failure by the Authority to provide such written notice timely shall not create or result in any entitlement to payment for the District. In the event that the Authority either temporarily or permanently withholds payment for the Feasibility Study, the District hereby agrees and acknowledges that the Authority shall have no liability for any such withholding of payment or any loss that may occur as a result of any such withholding of payment. The District agrees that it shall not transfer or otherwise assign to any other person or entity, including the Town, any interest in this Agreement, including, but not limited to, the right or standing to claim or receive payment directly from the Authority, except as authorized in writing by the Authority, and further agrees that it shall indemnify, defend and hold harmless the Authority against any such claims, including any that may be

brought against the Authority by the Town or any Designer, Owner's Project Manager or other consultant in relation to the Proposed Project.

The District shall not be eligible to receive any funding for the Authority's share of the eligible, approved Feasibility Study costs, or any portion thereof, unless and until the Authority has approved the Scope, Budget, and Schedule. The Authority shall reimburse the District only for costs incurred by the District in connection with the Feasibility Study that are timely submitted to the Authority, eligible for reimbursement pursuant to Authority policies, procedures, and guidelines, and audited and approved by the Authority.

(c) Notwithstanding the provisions of Section 2.1(a) above, in the event that the District commenced a feasibility study unilaterally or without the prior written acknowledgement and concurrence of the Authority in connection with the deficiencies and issues identified in the Statement of Interest or as otherwise determined by the Authority (hereinafter "Prior Study"), and, after review, the Authority has determined in writing that the Prior Study is adequate and meets the needs of the Authority, in whole or in part, the District may submit to the Authority requests for reimbursement of costs related to the Prior Study subject to the provisions of Section 2.1 (b), Section 4 and any other applicable provisions of this Agreement. The District acknowledges and agrees that any costs incurred by the District in relation to the Prior Study may not be eligible for reimbursement. In the event that any such costs are determined to be eligible, approved costs by the Authority, they shall be subject to the provisional reimbursement rate set forth in Section 2.1(b) of this Agreement and shall be subject to audit by the Authority. The District further acknowledges and agrees that, notwithstanding a determination by the Authority that the Prior Study is adequate and meets the Authority's needs, in whole or in part, the Authority may require the District to conduct a new or supplemental Feasibility Study, in accordance with, and as described in, the Budget, Scope and Schedule. The District further acknowledges and agrees that costs incurred in connection with a Prior Study that (i) does not meet the needs of the Authority, in whole or in part, as determined by the Authority, or (ii) was conducted after September 22, 2006, shall not be eligible for reimbursement.

2.2 Term of Agreement.

This Agreement shall terminate upon (1) approval of a Project Scope and Budget Agreement for the Proposed Project by the Authority's Board and (2) execution of said Project Scope and Budget Agreement by the Authority and the District or it shall terminate at a time specified in the Schedule, whichever occurs sooner.

SECTION 3

COVENANTS

The District covenants and agrees that as long as this Agreement is in effect, the District shall and shall take whatever action is necessary to cause its employees, officers, representatives and agents, including the Town, to perform and comply with all covenants of this Agreement.

3.1 The District hereby agrees that it shall make available for inspection by, and submit to, the Authority any and all information and documentation related to the Feasibility Study, including, but not limited to budget information, progress reports, and draft copies that may be requested by the Authority, promptly and in no event later than the deadline stated in any such request.

3.2 The District hereby agrees that it shall work with the Authority in developing the Scope, Budget and Schedule for the Feasibility Study and it acknowledges and agrees that the Authority's funding for the Feasibility Study is subject to the Authority's approval of the Scope, Budget and Schedule.

3.3 The District hereby acknowledges and agrees that the Authority shall not provide any amounts in excess of the amount determined under Section 2.1(b) of this Agreement.

3.4 The District hereby acknowledges and agrees that the Authority may, in its sole discretion, determine that certain costs incurred by the District in connection with the Feasibility Study are not eligible for reimbursement by the Authority, pursuant to any applicable provisions of M.G.L. c. 70B, 963 CMR 2.00 *et seq.*, including, but not limited to, sections 2.10 & 2.16(5), and any other policies and guidelines of the Authority.

3.5 The District shall comply with all provisions of this Agreement; the provisions of all other agreements between the Authority and the District that relate to the Feasibility Study; the provisions of M.G.L. c. 70B, 963 CMR 2.00 *et seq.*; all policies and guidelines of the Authority; and all provisions of law applicable to the Feasibility Study, this Agreement, and any other agreements and documents related to the Feasibility Study, and shall take all action necessary to fulfill its obligations under this Agreement.

3.6 The District hereby acknowledges and agrees that the Authority shall not be required or obligated to make any payment for any eligible Feasibility Study costs while an Event of Default, as defined in section 8 of this Agreement, shall have occurred.

3.7 The District shall, and shall cause any Owner's Project Manager and Designer and their employees, subconsultants and agents to, keep adequate records of the Feasibility Study and make all Feasibility Study records and the Feasibility Study site(s) available to the Authority or representatives of the Authority for review during the course of the Feasibility Study.

3.8 The District hereby acknowledges and agrees that the duties of any Owner's Project Manager hired by and/or assigned to the Proposed Project by the District shall

include, but not be limited to, fully and completely managing and coordinating on behalf of the District the administration of the Feasibility Study to completion. Any Owner's Project Manager hired by and/or assigned to the Proposed Project by the District shall be responsible for overseeing, tracking, and managing the Budget and Schedule. In the event that an Owner's Project Manager is not required for the Proposed Project, the District shall have the aforesaid duties and responsibilities in addition to any others imposed by M.G.L. c. 70B, 963 CMR, et seq., the policies and guidelines of the Authority, and any other applicable provisions of law.

3.9 The District hereby agrees that the Authority shall have free access to, and open communication with, any Owner's Project Manager hired by and/or assigned to the Proposed Project by the District and that the Authority shall have full and complete access to all information and documentation relating to the Proposed Project to the same extent that the District has such access. The District agrees that it shall require any such Owner's Project Manager to fully cooperate with the Authority in all matters related to the Proposed Project; to promptly communicate, transmit, and/or make available for inspection and copying any and all information and documentation requested by the Authority; to fully, accurately and promptly complete all forms and writings requested by the Authority; and to give complete, accurate, and prompt responses to any and all questions, inquiries and requests for information posed by the Authority. The District agrees that it shall not in any way, directly or indirectly, limit, obstruct, censor, hinder or otherwise interfere with the free flow of communication and information between the Owner's Project Manager and the Authority in all matters related to the Proposed Project and as provided herein; that it shall not suffer the same to occur by the act or omission of any other person or entity; and that it shall not retaliate against the Owner's Project Manager for communicating information to the Authority as provided herein. The District agrees to execute, deliver and/or communicate to the Owner's Project Manager any and all authorizations, approvals, waivers, agreements, directives, and actions that are necessary to fulfill its obligations under this paragraph. The District further agrees that the Authority shall bear no liability whatsoever arising out of the Authority's knowledge or receipt of information communicated to the Authority by the Owner's Project Manager and that the District shall remain responsible for the management and completion of the Proposed Project.

3.10 The District hereby acknowledges and agrees that the duties of the Designer shall include, but not be limited to, those described in this Agreement, including, but not limited to, the Scope attached hereto as Exhibit B; 963 CMR 2.10(8); any applicable rules, regulations, policies and guidelines of the Authority; and any standard scope of services and the Design Contract prescribed by the Authority.

3.11 The District hereby acknowledges and agrees that neither the District nor any of its employees, officials, consultants, contractors, or agents, including the Town, shall submit any false or intentionally misleading information or documentation to the Authority in connection with this Feasibility Study Agreement or the Feasibility Study, and further acknowledges and agrees that the submission of any such information or documentation may cause the Authority to suspend, revoke or terminate any and all

payments otherwise due to the District and/or recover any previous payments made to the District, and the District may be ineligible for any funding from the Authority. The District hereby further agrees that it shall have a continuing obligation to update and notify the Authority in writing when it knows or has any reason to know that any information or documentation submitted to the Authority contains false, misleading or incorrect information.

3.12 The District hereby acknowledges and agrees that the Authority shall bear no responsibility or liability of any sort for the results of any Feasibility Study, environmental assessment, geotechnical site testing, any necessary site remediation, clean-up, or other site remediation services.

3.13 The District hereby acknowledges and agrees that it shall provide a final Feasibility Study report to the Authority, which shall be in a format that is prescribed by or otherwise acceptable to the Authority.

3.14 The District hereby acknowledges and agrees that the Authority's grant program is a non-entitlement, discretionary program based on need, and the Feasibility Study may not result in a school construction, renovation or repair project that is eligible for funding by the Authority.

3.15 The District shall not combine, consolidate, or conjoin in any way the procurement, pre-qualification or selection of an Owner's Project Manager or Designer for the Proposed Project with the procurement, pre-qualification or selection of an Owner's Project Manage or Designer for any other construction, repair or renovation project without the express prior written approval of a duly authorized representative of the Authority. Any costs incurred by the District that relate to, or arise out of, the use of a combined, consolidated or conjoined procurement, pre-qualification or selection process as proscribed above, including, but not limited to, the preparation of bid documents, requests for services, and requests for qualifications, without the express prior written approval of a duly authorized representative of the Authority shall not be eligible for reimbursement.

3.16 The District shall do all acts and things necessary to exercise such supervision, direction and control over the Town as is necessary to ensure compliance with the provisions of this Agreement, the provisions of any contracts with an Owner's Project Manager, Designer or other consultant for the Proposed Project and the provisions of the statutes, regulation, policies, procedures and directives of the Authority.

3.17 The District shall forthwith present a copy of this Agreement to the Town and shall provide the Town with whatever information is necessary to ensure compliance with the provisions of this Agreement.

SECTION 4
PAYMENTS AND AUDIT

4.1 Subject to the terms and conditions of the Agreement, the Authority shall reimburse the District for eligible, approved costs incurred in connection with the Feasibility Study in accordance with the following:

(a) Using the Authority's Pro-Pay system, the District shall submit requests for reimbursement on a monthly basis to the Authority in a format prescribed by the Authority. Each monthly request for reimbursement shall be approved locally by a duly authorized representative of the District, shall be in a form acceptable to the Authority, shall include reasonable detail, including, but not limited to (1) the amount of funding requested, (2) the nature of the materials or property or services received, (3) the total value of the work performed and materials furnished by the Owner's Project Manager, if any, the Designer, and each consultant, subconsultant or vendor to date, and (4) the value of the work completed during the Feasibility Study. The District agrees that each request for reimbursement shall be accompanied by the invoices for each of the amounts requisitioned and any other supporting documentation and information substantiating the District's request for reimbursement, as the Authority may request, in a form satisfactory to the Authority.

(b) Each request for reimbursement shall include a written certification signed by a duly authorized representative of the District stating that: (1) such request for reimbursement is solely for Feasibility Study costs, (2) the obligations itemized in the request for reimbursement have not been the basis for a prior request for reimbursement submitted by the District that has been paid or rejected by the Authority, (3) the reimbursement requested is due for work actually and properly performed or materials or property actually supplied prior to the date of the requisition, (4) the reimbursement requested is for costs that already have been duly paid by the District, and (5) such reimbursement requested is within the Budget approved by the Authority.

(c) The Authority shall review all requests for reimbursement properly submitted pursuant to this Agreement as soon as reasonably possible. The Authority shall not consider requests for reimbursement that are not, as reasonably determined by the Authority, (1) timely and properly submitted, (2) in accordance with the most recent Budget approved by the Authority, and (3) for eligible Feasibility Study costs incurred by the District. The District understands and agrees that no reimbursement shall be made by the Authority unless the District has complied with all of the terms and conditions of this Agreement, the applicable provisions of M.G.L. c. 70B, chapters 208 and 210 of the Acts of 2004, 963 CMR 2.00 *et seq*., and all policies and guidelines of the Authority.

(d) After receipt from the District of a timely and properly submitted request for reimbursement pursuant to this Agreement, the Authority shall

make payment to the District of the Authority's share of approved, eligible Feasibility Study costs, subject to the terms and conditions of this Agreement. The District hereby agrees and acknowledges that the amount of approved, eligible Feasibility Study costs reimbursed by the Authority may be subject to change, pending audit, including but not limited to an audit pursuant to Section 4.2 of this Agreement and the final close-out audit pursuant to Section 4.3 of this Agreement.

4.2 The Authority may review and perform a preliminary audit on each request for reimbursement submitted pursuant to this Agreement to ensure that only eligible costs of the Feasibility Study are approved and paid by the Authority. Any such preliminary audits shall be conducted in accordance with 963 CMR 2.16 and other policies and guidelines of the Authority. In the event that the Authority determines that an item contained in a request for reimbursement submitted by the District pursuant to this Agreement is not eligible for reimbursement by the Authority, the Authority shall adjust a subsequent reimbursement to the District to account for the ineligible costs. The District hereby acknowledges and agrees that each audit conducted pursuant to this Section 4.2 is preliminary, and the Authority may further adjust and alter the results of a preliminary audit after it conducts subsequent audits or a final close-out audit of the Feasibility Study.

4.3 The District hereby acknowledges and agrees that a final, close-out audit of the Feasibility Study by the Authority shall include an audit of all requests for reimbursement submitted and all reimbursements made by the Authority. The final, close-out audit shall be conducted in accordance with 963 CMR 2.16 and any other applicable regulations, policies and guidelines of the Authority. The District shall make all documents and materials requested by the Authority or its representatives available in a timely manner. The District further acknowledges and agrees that the final, close-out audit of the Feasibility Study may not occur until such time as the Authority conducts its final, close-out audit of the project that may result from the Feasibility Study, should the District be approved for any such project. Any adjustments applicable as a result of the final, close-out audit may be made in the final amount of the Total Facilities Grant, as determined by the Authority.

SECTION 5
REPRESENTATIONS AND WARRANTIES

The District hereby warrants and represents that each of the following statements is true, correct and complete:

5.1 The District is validly organized and existing under and by virtue of the laws of the Commonwealth, has full power and authority to own its properties and/or to control its properties under lease agreements and carry on its business as now conducted, and has full power and authority to execute, deliver and perform its obligations under this Agreement and all other documents related to the Feasibility Study.

5.2 The District is duly authorized to execute and deliver this Agreement and has taken all necessary steps to authorize the execution and delivery of this Agreement, to

undertake the Feasibility Study and to perform and consummate all transactions contemplated by this Agreement.

5.3 The undersigned has the full legal authority to execute this Agreement on behalf of the District and to bind the District to its provisions.

5.4 This Agreement does not and will not, to any material extent, conflict with, or result in violation of any applicable provisions of law, including, but not limited to, any statute, charter, by-law, ordinance, rule or regulation, or any judgment, order, rule or regulation of any court or other agency of government.

5.5 The District has all requisite legal power and authority to control and operate the School that is the subject of the Feasibility Study and to undertake and oversee the Feasibility Study pursuant to a lease which assures that the District has exclusive jurisdiction and control of the School and the land upon which it is situated for the anticipated useful life of the Proposed Project.

5.6 No information furnished by or on behalf of the District to the Authority in this Agreement, the Budget, the Initial Compliance Certification, or any other document, certificate or written statement furnished to the Authority in connection with the Feasibility Study contains any untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements contained in this Agreement or therein not misleading in light of the circumstances in which the same were made.

5.7 The District has duly obtained all necessary votes, resolutions, authorizations, appropriations and local approvals, in accordance with formats prescribed by or otherwise acceptable to the Authority, and has taken all actions necessary or required by law to enable it to enter into this Agreement and to fund and perform its obligations hereunder, in accordance with the Authority's guidelines, regulations, policies and standards. This Agreement constitutes a valid and binding obligation of the District, enforceable in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, moratorium, reorganization or other laws heretofore or hereafter enacted and general equity principles.

5.8 No litigation before or by any court, public board or body is pending or threatened against the District, the Town or the Authority seeking to restrain or enjoin the execution and delivery of this Agreement or the Feasibility Study, or contesting or affecting the validity of this Agreement or the power of the District to pay its share of the Feasibility Study.

5.9 The District and, if acting on the District's behalf for purposes of the Proposed Project, the Town, has implemented policies and procedures to prevent and eliminate fraud, waste and abuse of public funds in connection with the Feasibility Study and any future construction or renovation projects that may be forthcoming as a result of the Feasibility Study.

5.10 The District has submitted all audit materials requested by the Authority in connection with any project for which the District has received or anticipates receiving funding from the Authority.

5.11 In the event that the Town procures and enters into contracts with the Owner's Project Manager, Designer and other consultants for the Proposed Project at the School, the Town has full legal authority, and has been duly aouthorized by the District to procure, enter into, administer, and enforce contracts with the Owner's Project Manager, Designer and other consultants for the Proposed Project at the School.

5.11 Pursuant to the Regional School District Agreement, the Town is a member town of the District.

5.12 The Town owns the land, together with the buildings, structures, and all other improvements erected or to be erected thereon, together with any improvements or additions which may from time to time be made to those buildings, structures, or improvements, presently known and identified as the School.

5.13 The School is under the control of the District pursuant to a Lease with the Town which assures that the District has exclusive jurisdiction and control of the School for the anticipated useful life of any Approved Project that may be constructed thereon.

5.14 The District has the authority to construct, reconstruct, add to, remodel, make extraordinary repairs to, equip, organize and operate the School

5.15 The Town is responsible for the payment of capital costs required to construct, reconstruct, add to, remodel, make extraordinary repairs to, equip, organize and operate the School.

5.16 All meetings of all public bodies in the District that relate in any way to the Proposed Project, including, but not limited to, the meetings of the District's school building committee, have been conducted, and shall be conducted, in compliance with the provisions of G.L. c. 30A, §§ 18 – 25, 940 CMR 29.00 *et seq.*, the so-called Open Meeting Law, and all other applicable law.

SECTION 6
INSURANCE

6.1 The District shall obtain and maintain all insurance required by law and insurance of such types and limits and upon such terms and conditions as may be required by, or as may be acceptable to, the Authority.

6.2 The District shall require by contractual obligation, and shall also ensure by the exercise of due diligence, that any Designer hired in connection with the Feasibility Study obtain and maintain, at a minimum, insurance of such types and limits and upon such terms and conditions as may be required by law and as may be prescribed

by the Authority in the Design Contract between the Designer and the District or the Town.

6.3 Except where the Owner's Project Manager is an existing employee of the District or the Town, the District shall require by contractual obligation, and shall also ensure by the exercise of due diligence, that any Owner's Project Manager hired for the Proposed Project obtain and maintain, at a minimum, insurance of such types and limits and upon such terms and conditions as may be required by law and as may be prescribed by the Authority in its standard contract for Owner's Project Manager services which is incorporated by reference herein.

SECTION 7
COMPLIANCE WITH CONTRACT DOCUMENTS, PROJECT PERMITS AND OTHER APPLICABLE LAW

7.1 The District shall take all reasonable actions designed to ensure that the Feasibility Study complies with all applicable contract documents, building codes, laws, rules and regulations and to ensure that all necessary project permits have been obtained. Notwithstanding any right of approval or review held or exercised by the Authority in connection with this Agreement or the Feasibility Study, the District shall be responsible for the successful performance and completion of the Feasibility Study in accordance with this Agreement, the Design Contract, design documents and project permits, if any, and for the economical and efficient operation and administration of the Feasibility Study.

SECTION 8
DEFAULTS AND REMEDIES

8.1 The occurrence of any of the following events shall constitute, and is herein defined to be, an Event of Default under this Agreement:

(a) If the District shall fail to perform and observe any covenant, agreement or condition on its part provided in this Agreement and such failure shall continue for a period of thirty (30) days after written notice thereof shall be given to the District by the Authority; provided if such failure cannot be remedied within such thirty (30) day period, it shall not constitute an Event of Default hereunder if corrective action satisfactory to the Authority, as determined by the Authority in writing, is instituted by the District within such period and diligently pursued until the failure is remedied. Any forbearance or failure of the Authority in giving such written notice shall not amount to any waiver of the Authority's rights under this Agreement as to the same or subsequent breaches and shall not preclude the Authority from pursuing any of its rights or remedies provided under this Agreement or as otherwise provided by law.

(b) If any representation or warranty made by the District in this Agreement or in any other agreement entered into by the District with the Authority shall prove to have been incorrect or to be misleading in any material respect.

8.2 If any Event of Default hereunder shall occur and be continuing, the Authority may proceed to protect its rights under this Agreement, and may: (a) terminate this Agreement, (b) permanently withhold or temporarily suspend payment of any eligible, approved costs to the District, (c) recover any payments of eligible, approved costs previously made to the District, and/or (d) exercise any other right or remedy upon such default as may be granted to the Authority under this Agreement or under any other applicable provision of law.

8.3 No remedy conferred upon or reserved to the Authority is intended to be exclusive and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Agreement or now or hereafter existing at law or in equity. No delay or omission to exercise any right, remedy or power accruing upon any Event of Default shall impair any such right, remedy or power or shall be construed to be a waiver thereof, but any such right, remedy or power may be exercised from time to time and as often as the Authority may deem expedient.

SECTION 9
OTHER TERMS

9.1 Governing Law. This Agreement shall be governed by, construed, and enforced in accordance with, the laws of the Commonwealth of Massachusetts.

9.2 Venue. Any civil action brought against the Authority by the District, or any person or entity claiming by, through or under it, that arises out of the provisions of this Agreement, shall only be brought in the Superior Court for Suffolk County, Massachusetts. The District, for itself and for any person or entity claiming by, through or under it, hereby waives any defenses that it may have as to the venue to which it has agreed herein, including, but not limited to, any claim

that this venue is improper or that the forum is inconvenient. The District for itself and for any person or entity claiming by, through or under it, hereby waives all rights, if any, to a jury trial in any such civil action that may arise out of the provisions of this Agreement.

9.3 Indemnification of the Authority by the District. To the fullest extent permitted by law, the District shall indemnify and hold harmless the Authority and its officers, agents and employees from and against any and all claims, actions, damages, liabilities, injuries, costs, fees, expenses, or losses, including, without limitation, reasonable attorney's fees and costs of investigation and litigation, whatsoever which may be incurred by, or for which liability may be asserted against, the Authority or any of its officers, agents or employees arising out of any activities undertaken by, for, or on behalf of the District in the execution or implementation of this Agreement or with respect to the Feasibility Study, including, but not limited to, the performance of any contract or obligation directly or indirectly related to the Feasibility Study. Such obligation shall not be construed to negate or abridge any other obligation of indemnification running to the Authority which would otherwise exist.

9.4 Members, Employees Not Liable. No member or employee of the Authority shall be charged or held personally or contractually liable by or to the District under any term or provision of this Agreement or because of any breach thereof or because of its execution or attempted execution.

9.5 Assignability. The District shall not assign any interest, in whole or in part, in this Agreement and shall not transfer any interest in the same, whether by assignment or novation, without the prior written approval of the Authority.

9.6 Payment Not A Waiver.

The Authority's payment(s) to the District under this Agreement or its review, approval or acceptance of any actions by the District under this Agreement shall not operate as a waiver of any rights under this Agreement and the District shall remain liable to the Authority for all damages incurred by the Authority as a result of the District's failure to perform in accordance with the terms and conditions of this Agreement.

The rights and remedies of the Authority provided for under this Agreement are in addition to any other rights or remedies provided by law. The Authority may assert a right to recover damages by any appropriate means, including, but not limited to, set-off, suit, withholding, recoupment, or counterclaim either during or after performance of this Agreement.

9.7 Notices. Any notices required or permitted to be given by either of the Parties hereunder shall be given in writing and shall be delivered to the addressee (a) in-hand (b) by certified mail, postage prepaid, return receipt requested, (c) by

facsimile; or (d) by a commercial overnight courier that guarantees next day delivery and provides a receipt, and such notices shall be addressed as follows:

If to the Authority:

Massachusetts School Building Authority
40 Broad Street, Suite 500
Boston, MA 02109
Attention: Director of Capital Planning
Facsimile: (617) 720-5260

If to the District:

Wachusett Regional School District
1745 Main Street
Jerfferson, MA 01522
Attention: Superintendent of Schools
Facsimile: (508) 829-1680
Email: Tom_Pandiscio@wrsd.net

or to such other address or addressee as the District and the Authority may from time to time specify in writing. Any notice shall be effective only upon receipt, which for any notice given by facsimile shall mean notice that has been received by the party to whom it is sent as evidenced by a confirmation slip that bears the time and date of receipt.

9.7 Severability. If any provisions of this Agreement shall for any reason be held to be invalid or unenforceable, the invalidity or unenforceability of such provision shall not affect any of the remaining provisions of this Agreement, and this Agreement shall be construed and enforced as if such invalid or unenforceable provision had not been contained herein.

9.8 Counterparts. This Agreement may be executed in one or more counterparts, any of which shall be regarded for all purposes as an original and all of which constitute but one and the same instrument. Each party agrees that it will execute any and all documents or other instruments, and take such other actions as may be necessary to give effect to the terms of this Agreement.

9.9 No Waiver. No waiver by either party of any term or conditions of this Agreement shall be deemed or construed as a waiver of any other terms or conditions, nor shall a waiver of any breach be deemed to constitute a waiver of any subsequent breach, whether of the same or of a different section, subsection, paragraph, clause, phrase, or other provision of this Agreement.

9.10 Integration. This Agreement merges and supersedes all prior negotiations, representations, and agreements between the Parties hereto relating to the Feasibility Study and constitutes the entire agreement between the Parties hereto with respect to the

Feasibility Study and the Authority's funding of a portion of the eligible, approved costs of the Feasibility Study.

IN WITNESS WHEREOF, the Parties have executed this Agreement on this 22nd day of February, 2012.

MASSACHUSETTS SCHOOL BUILDING AUTHORITY
By,

John K. McCarthy
~~Interim~~ Executive Director

WACHUSETT REGIONAL SCHOOL DISTRICT
By,

Thomas G. Pandiscio, Ed.D.
Name (type or print)

Superintendent of Schools
Title/Office (type or print)

EXHIBIT A

FEASIBILITY STUDY BUDGET
Wachusett Regional School District
Mountview Middle School

The total Budget for the Feasibility Study conducted pursuant to this Agreement, which is attached hereto and incorporated by reference herein, shall be no more than $625,000 based upon the following estimates:

Owner's Project Manager:	$ 90,000.00
Designer:	$ 450,000.00
Environmental and Site Testing:	$ 55,000.00
Other	$ 30,000.00

EXHIBIT B

SCOPE OF THE FEASIBILITY STUDY
Wachusett Regional School District
Mountview Middle School

The Scope of the Feasibility Study conducted under this Agreement, which is attached hereto and incorporated by reference herein, shall consist of the development of a study/schematic design for evaluation of a renovation of the existing school, a renovation of and addition to the existing school and/or new construction. Pursuant to the Massachusetts School Building Authority's regulations, 963 CMR 2.06, the space allowance for the potential project shall meet all applicable MSBA regulations and guidelines.

The Feasibility Study shall contain all information required by 963 CMR 2.10(8) and any other applicable rules, regulations, policies, guidelines and directives of the MSBA including, but not limited to, a final design program, space summary, budget statement for educational objectives, and a proposed total project budget. The District shall submit to the MSBA the educational space template, based on the agreed upon enrollment of 800 students, for review and acceptance. Upon acceptance of the educational space summary, the District will commence with the evaluation of alternatives. The Schematic Designs that are developed pursuant to this Agreement shall be based upon the final design program which shall be subject to the written approval of the MSBA. The Schematic Design shall include, but not be limited to, the information required by the MSBA's Feasibility Study Guidelines, including, but not limited to, a site development plan, environmental assessment, geotechnical assessment, geotechnical analysis, code analysis, utility analysis, schematic building floor plans, schematic exterior building elevations, narrative building systems descriptions, MA-CHPS scorecard or LEED for Schools checklist, outline specifications, cost estimates, project schedule and proposed total project budget.

In conducting the Feasibility Study and developing the Schematic Design, the District shall, in a sufficient and timely manner as determined by the MSBA, initiate such notification procedures, undertake such review processes, and obtain such determinations and approvals as may be required by 963 CMR 2.03(2)(h) & (i), including, but not limited to, such procedures, reviews, determinations, and approvals as may be required by the Massachusetts Historical Commission ("MHC") and/or the Massachusetts Environmental Policy Act ("MEPA"). At its earliest opportunity, the District shall seek a written determination from MHC as to whether MHC intends to undertake a review of the Proposed Project.

The District shall be responsible for conducting such geotechnical evaluations, site investigations, soils explorations and environmental assessments as are reasonable and necessary to determine whether any significant environmental, geotechnical or other physical conditions exist that may have an impact upon eventual construction on the proposed site. The MSBA may require the District to fully fund certain environmental or geotechnical site testing beyond initial investigatory costs. The MSBA shall bear no responsibility or liability of any sort for the results of any geotechnical evaluations or site testing, soils explorations, environmental assessments, nor for any site remediation, clean-up, or other site remediation services.

The development of the Schematic Design shall be subject to continuing review by the MSBA in accordance with the provisions of this Agreement, the Schedule of Deliverables contained herein,

the MSBA's Feasibility Study guidelines and any other applicable rule, regulation, policy, guideline or directive of the MSBA. The District shall be responsible for submitting to the MSBA all documentation that is required to complete the Feasibility Study and Schematic Design and to support the preparation of a Project Scope and Budget Agreement.

Exhibit B Schedule of Deliverables

Wachusett Regional School District
Mountview Middle School

Deliverable	Status/ Received
Initial Compliance Certification	Complete
School Building Committee	Complete
Local Vote Authorization	Complete
Mass. Historical Commission Approval	Complete
Enrollment Questionnaire	Complete
Agreed Upon Enrollment Projection	Complete
OPM Selection	Complete
Executed MSBA Standard OPM Contract	Complete
Designer Selection	Still Required
Executed MSBA Standard Contract for Designer Services	Still Required
MSBA Educational Space Template	Still Required
Preliminary Evaluation of Alternatives	Still Required
Budget Statement for Preferred Schematic Design	Still Required
Recommendation of Preferred Schematic Design	Still Required
Final Design Program for Preferred Schematic Design	Still Required
Schematic Building Floor Plans	Still Required
A letter from the Superintendent demonstrating SPED compliance with Chapters 70 and 71B	Still Required
Mass. DESE Special Education Space Approval Letter	Still Required
Room Data Sheets	Still Required
Schematic Exterior Building Elevations	Still Required
Narrative Building Systems Descriptions	Still Required
Preliminary Summary of Ineligible Spaces	Still Required
Construction Systems: Outline of Specifications	Still Required
MA-CHPS Scorecard or LEED for Schools Checklist	Still Required
F.F. & E. Specification and Estimate	Still Required
Value Engineering Plan for Detailed Design	Still Required
Total Project Budget/MSBA Form 3011	Still Required
Construction Estimate UniFormat II, Level 3	Still Required
Preliminary Summary of Ineligible Costs	Still Required
Project Cash Flow	Still Required
Project Schedule	Still Required

EXHIBIT C

FEASIBILITY STUDY SCHEDULE
Wachusett Regional School District
Mountview Middle School

The Feasibility Study Agreement, which is attached hereto and incorporated by reference herein, shall terminate 440 days after the date of its execution by the Parties and/or upon MSBA Board approval of a Project Scope and Budget Agreement and execution thereof by the Parties, whichever is sooner.

The estimated dates of completion for certain tasks related to the Scope of this Agreement are set forth below. These projected dates are estimates only and are subject to change with the approval of the Authority. Any changes to the completion dates of individual tasks does not necessarily impact the overall term of the agreement as defined above and in Section 2.2 of the Feasibility Study Agreement.

Projected MSBA Board Approval to Move to Schematic Design:
October 2012

Completion of Feasibility Study including Schematic Design/Final Program:
February 2013

Project Scope and Budget Conference/Execution of Project Scope and Budget Agreement:
March 2013

Projected MSBA Board Approval:
March 2013

Projected Town Vote for Project Scope and Budget Agreement:
May 2013

Exhibit D

MSBA Preliminary Reimbursement Rate

Wachusett

MSBA Reimbursement Rate Calculation	
Base Points	31.00
Income Factor	5.68
Property Wealth Factor	16.21
Poverty Factor	-
Racial Desegregation Plan Approved prior to 6/30/2000	-
Subtotal: Reimbursement Rate Before Incentives	52.89
Incentive Points	
Maintenance (0-2)	-
CM @ Risk (0-1)	-
Newly Formed Regional District (0-6)	-
Major Reconstruction or Reno/Reuse (0-5)	-
Overlay Zoning 40R & 40S (0-1)	-
Overlay Zoning 100 units or 50% of units for 1, 2 or 3 family structures (0-0.5)	-
Energy Efficiency - "Green Schools" (0-2)	-
Model Schools (5)	-
Total Incentive Points	-
MSBA Reimbursement Rate	**52.89**

Per M.G.L. c. 70B §10, the reimbursement rate shall not be greater than 80%.

Feasibility Study Agreement Exhibit E

rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing bona fide fringe benefits to laborers and mechanics pursuant to an enforceable commitment to carry out a financially responsible plan of program, which was communicated in writing to the laborers and mechanics affected. The fringe benefits enumerated in the Davis-Bacon Act include medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing; unemployment benefits; life insurance, disability insurance, sickness insurance, or accident insurance; vacation or holiday pay; defraying costs of apprenticeship or other similar programs; or other bona fide fringe benefits. Fringe benefits do not include benefits required by other Federal, State, or local law.

(q) The term *wage determination* includes the original decision and any subsequent decisions modifying, superseding, correcting, or otherwise changing the provisions of the original decision. The application of the wage determination shall be in accordance with the provisions of §1.6 of this title.

[48 FR 19541, Apr. 29, 1983, as amended at 48 FR 50313, Nov. 1, 1983; 55 FR 50149, Dec. 4, 1990; 57 FR 19206, May 4, 1992; 65 FR 69693, Nov. 20, 2000; 65 FR 80279, Dec. 20, 2000]

§§5.3—5.4 [Reserved]

§5.5 Contract provisions and related matters.

(a) The Agency head shall cause or require the contracting officer to insert in full in any contract in excess of $2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in §5.1, the following clauses (or any modifications thereof to meet the particular needs of the agency, *Provided*, That such modifications are first approved by the Department of Labor):

(1) *Minimum wages.* (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in §5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional

classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(*1*) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(*2*) The classification is utilized in the area by the construction industry; and

(*3*) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) *Withholding.* The (write in name of Federal Agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be

considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) *Payrolls and basic records.* (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate Federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under §5.5(a)(3)(i) of Regulations, 29 CFR part 5. This information may be submitted in any form desired. Optional Form WH–347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029–005–00014–1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(*1*) That the payroll for the payroll period contains the information required to be maintained under §5.5(a)(3)(i) of Regulations, 29 CFR part 5 and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) *Apprentices and trainees*—(i) *Apprentices.* Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate

for the work performed until an acceptable program is approved.

(ii) *Trainees.* Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) *Equal employment opportunity.* The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) *Compliance with Copeland Act requirements.* The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) *Contract termination: debarment.* A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) *Compliance with Davis-Bacon and Related Act requirements.* All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) *Disputes concerning labor standards.* Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) *Certification of eligibility.* (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded

Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) *Contract Work Hours and Safety Standards Act.* The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by §5.5(a) or 4.6 of part 4 of this title. As used in this paragraph, the terms *laborers* and *mechanics* include watchmen and guards.

(1) *Overtime requirements.* No contractor or subcontractor contracting for any part of the conract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) *Withholding for unpaid wages and liquidated damages.* The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in §5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of

C. Executed Design Enrollment Certification

MASSACHUSETTS SCHOOL BUILDING AUTHORITY
WACHUSETT REGIONAL SCHOOL DISTRICT
MOUNTVIEW MIDDLE SCHOOL

DESIGN ENROLLMENT CERTIFICATION

As a result of a collaborative analysis with the Massachusetts School Building Authority ("MSBA") of enrollment projections and space capacity needs for the Proposed Project at the Mountview Middle School, the Wachusett Regional School District hereby acknowledges and agrees that the design of the Proposed Project at the Mountview Middle School shall be based on an enrollment of no more than 800 students. The Wachusett Regional School District further acknowledges and agrees that, pursuant to 963 CMR 2.00 *et seq.*, the MSBA shall determine the square feet per student space allowance and total square footage for a middle school serving 800 students. The Wachusett Regional School District acknowledges and agrees that it has no right or entitlement to any particular design enrollment, square feet per student space allowance, or total square footage and that it has no right or entitlement to a design enrollment any greater than 800 students for the Mountview Middle School, and further acknowledges and agrees that it shall not bring any claim or action, legal or equitable, against the MSBA, or any of its officers or employees, for the purpose of obtaining an increase in the design enrollment of the Mountview Middle School that it has acknowledged and agreed to herein. The Wachusett Regional School District further acknowledges and agrees that, among other things, the design enrollment, square feet per student space allowance, and total square footage of the Mountview Middle School shall be subject to the approval of the MSBA's Board and that the final approval of a Proposed Project at the Mountview Middle School shall be within the sole discretion of the MSBA's Board.

The undersigned, for themselves and the Wachusett Regional School District, hereby certify that that they have read and understand the contents of this Design Enrollment Certification and that each of the above statements is true, complete and accurate. The undersigned also hereby certify that they have been duly authorized by the appropriate governmental body to execute this Certification on behalf of the Wachusett Regional School District and to bind the Wachusett Regional School District to its terms.

Chairman of the Board of Selectmen

11/2/2011
Date

Duly Authorized Representative of
School Committee Duncan G. Leith

10-25-11
Date

Superintendent of Schools
Thomas G. Pandiscio, Ed.D.
10/25/2011
Date