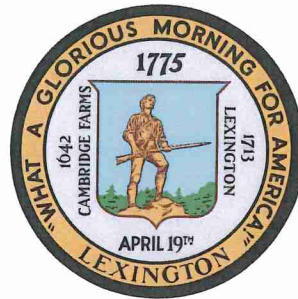


LEXINGTON PUBLIC SCHOOLS  
SCHOOL COMMITTEE MEETING



PRESENTATION  
ON THE  
PROPOSED RENOVATIONS  
TO THE

**BRIDGE AND BOWMAN  
ELEMENTARY SCHOOLS**

30 NOVEMBER 2010

## **Bridge and Bowman Renovation Project**

### **Sub-Committee for Bridge and Bowman and parent volunteer participants**

Carl Oldenburg, PBC Member Designee to Project

Jen Volgelzang, Liaison from School Department to PBC for Project

Brigitte Steines, Bridge Parent volunteer participant

Cindy Darcy, Bridge Parent volunteer participant

Kara Brandes Bowman Parent volunteer participant

Betsy Wilkenson Bowman Parent volunteer participant

Mary Anton, Principal Bowman School

Meg Colella, Principal Bridge School

The 2010 Annual Town Meeting approved funding in support of the recommendations for the Bridge & Bowman renovation project. A sub-committee was formed, as identified above, to work with the architects to incorporate these recommendations into design documents. The result of this process has culminated in an approximate \$325,000 savings of the current project costs versus the planned budget first estimated prior to spring 2010 town meeting.

While the master plan base scope or 0-10 yr. priority matrix addresses the deferred maintenance issues at both schools, the sub-committee identified additional recommendations to improve utilization of the building over the next 20 years.

- The addition of a fire suppression system must be added to the project to meet current codes.
- The outright removal of HVAC unit ventilators from classrooms and installation of a centralized ventilation system that will reduce classroom noise and improve air quality while still realizing energy goals and reducing operating expenses.
- The incorporation of tempering of ventilation air to provide "partial cooling" or humidity reduction is expected to provide more comfortable air temperatures of 78-80 degrees in classrooms and improve occupant comfort without the costs of full air-conditioning which stops at 74 degree cooling.
- The addition of two new classrooms (per school) by moving the boiler room function supports a rising enrollment at these schools which is contrary to the master plans predicated enrollment decline.
- The addition of two more classrooms (per school) by modifying spaces allocated to administration also supports the enrollment increases, and also enhances building entry security.
- New lighting systems and controls contribute to the energy efficiencies of the building and improve overall lighting quality.
- Installation of network wiring and power distribution for planned technology improvements, facilitates implementation of the technology plan for the schools.

These recommendations should be considered to realize the Bridge and Bowman project as a 20 year building solution.

## **BASE SCOPE**

### **GENERAL CONSTRUCTION**

- 1.0 Accessible entrance
- 2.0 Ramp at Gym up to the stage
- 3.0 Redesign all toilet rooms for accessibility
- 4.0 Provide rated doors with smoke stopping
- 5.0 Provide panic hardware and repaint exterior doors
- 6.0 Provide HC compliant interior doors, frames and hardware
- 7.0 Replace exterior windows and damaged louvers
- 8.0 Provide window screens at all operable windows
- 9.0 Replace window treatments
- 10.0 Replace all ceilings
- 11.0 Repaint interior surfaces, except corridors
- 12.0 Relocate selected lockers to provide HC accessible door clearance as required
- 13.0 Replace all non-accessible sinks and casework with new accessible sinks and casework
- 14.0 Replace non-accessible circulation desk at library with new accessible circulation desk
- 15.0 Replace existing guardrails and handrails
- 16.0 Repair CMU and Brick as required
- 17.0 Replace existing expansion joint sealant with rubber compression seals
- 18.0 Provide smoke stopping at top of all interior walls

### **PLUMBING**

- 19.0 New building gas service
- 20.0 New gas fired boiler and water heaters
- 21.0 Replace all plumbing fixtures with water conserving fixtures

### **HVAC**

- 22.0 Replace all Unit Ventilators and air handling units to provide code required ventilation
- 23.0 Clean fan wheels, coils, dampers and outside air louvers
- 24.0 Replace all exhaust fans and clean exhaust ductwork
- 25.0 CO2 demand ventilator controls on new unit ventilators
- 26.0 Commissioning

### **ELECTRICAL**

- 27.0 Provide occupancy sensors
- 28.0 Test existing emergency lighting by simulating power failure. Add additional emergency lighting as required
- 29.0 Improve existing fire alarm system, add horn/strobes in required areas
- 30.0 Add receptacles and GFI as required

**SCHEMATIC DESIGN ESTIMATE OF MASTER PLAN BASE SCOPE**

	Building Area--GSF: [1]	125,178	0	125,178
	Proposed Enrollment--pupils: 1050	RENOV	NEW	TOTAL
	\$/sf	D.C. = 10%		
A.	<b>BUILDING TRADE COST[2]</b>			
	General Construction	\$39.79	\$4,980,637	\$4,980,637
	Fire Protection[3]	\$0.00	\$500	\$500
	Plumbing	\$1.36	\$170,507	\$170,507
	HVAC	\$20.96	\$2,623,205	\$2,623,205
	Electrical	\$3.03	\$379,222	\$379,222
	<b>SUBTOTAL</b>	\$65.14	\$8,154,071	\$8,154,071
B.	<b>SITWORK TRADE COST</b>			
	Hazardous Materials Abatement			\$266,000
	Earthwork/Site Improvements			\$0
	Utilities -- Civil, Electrical			\$78,279
C.	<b>TOTAL TRADE COST</b>			<b>\$8,498,350</b>
	General Conditions	7.5%		\$637,376
	Overhead & Profit	2.5%		\$228,393
D.	<b>SUBTOTAL CONTRACTOR'S COST</b>			<b>\$9,364,119</b>
	Escalation to July 2011 @ 2.5% /yr	2.5%		\$234,103
E.	<b>TOTAL CONTRACTOR'S COST</b>			<b>\$9,598,222</b>
	Bidding Contingency	3.0%		\$287,947
F.	<b>TOTAL ESTIMATED BID</b>			<b>\$9,886,169</b>
	Construction Contingency	10.0%		\$988,617
G.	<b>TOTAL ESTIMATED CONSTRUCTION COST</b>			<b>\$10,874,786</b>
	FURNITURE, EQUIPMENT & APPLIANCES			\$0
	EDUCATIONAL TECHNOLOGY			\$0
	INDIRECT EXPENSES[4]			\$1,881,000
H.	<b>TOTAL ESTIMATED PROJECT COST</b>			<b>\$12,755,786</b>

[4] Project Budget \$13,078,941  
 Over/(Under) (\$323,155)

[1] Bridge = 61,400 SF; Bowman = 63,778 SF

[2] Based on current competitive market conditions for general construction work.  
 Includes 15% design contingency (D.C.)

[3] New building-wide sprinkler system required by Code is not included here, as it was not part of the original Master Plan.

[4] Includes A/E fees already appropriated, as well as Commissioning.

# Lexington Public Schools

Bridge and Bowman Schools

11/18/10

Schematic Design Estimate

Scope Additions

## SCOPE ADDITIONS ESSENTIAL TO 20+ YEAR BUILDINGS

	COST FOR BRIDGE	COST FOR BOWMAN	ESTIMATED PROJECT COST TOTAL (Rounded)	
<b>REQUIRED</b>				
1.0	New Automaitc Sprinkler System at each School	\$704,500	\$704,500	\$1,409,000
<b>PROGRAM</b>				
2.0	New Boiler Room and (2) New Classrooms at the old Boiler Room at each School	\$389,000	\$389,000	\$778,000
3.0	Re-Arrange Administration for Entry Control and (2) New Classrooms at each School	\$523,000	\$523,000	\$1,046,000
<b>BUILDING SYSTEMS</b>				
4.0	New Central Rooftop H&V Systems	\$598,500	\$598,500	\$1,197,000
5.0	Add Partial Cooling/Tempering Throughout to 4.0 ( <i>Target Temperature in Classrooms: 78-80F</i> )	\$147,000	\$147,000	\$294,000
6.0	Add Air Conditioning Throughout to 4.0 & 5.0 ( <i>Target Temperature in All Spaces: 74F</i> )	\$657,500	\$657,500	\$1,315,000
7.0	New electrical service ( <i>Required for 3.0</i> )	\$124,000	\$124,000	\$248,000
8.0	New lighting & controls.	\$271,000	\$271,000	\$542,000
9.0	New Fire Alarm System	\$180,500	\$180,500	\$361,000
10.0	IT Infrastructure			
	a. Upgrade Power Distribution for IT	\$75,000	\$75,000	\$150,000
	b. Replace Network Wiring.	\$37,500	\$37,500	\$75,000
11.0	New telephone system.	\$37,500	\$37,500	\$75,000
12.0	New master clock & PA system.	\$120,000	\$120,000	\$240,000
13.0	New emergency generator <b>at Bridge School only.</b>	\$140,000	--	\$140,000
14.0	New outside lighting.	\$30,000	\$30,000	\$60,000
<b>Total Cost for Two Schools</b>		\$4,035,000	\$3,895,000	\$7,930,000
<b>Reduced Base Scope Costs</b>		\$5,599,743	\$7,156,043	\$12,755,786
<b>Total Costs 20+ Year Building w/ Air Tempering Option 5</b>		<b>\$8,977,243</b>	<b>\$10,393,543</b>	<b>\$19,370,786</b>
<b>Total Costs 20+ Year Building w/ AC Option 6</b>		\$9,634,743	\$11,051,043	\$20,685,786



**MAIN LEVEL FLOOR PLAN**

REPRESENTATION IS OF BRIDGE SCHOOL

**LEGEND:**

- BASE SCOPE
- BASE SCOPE REDESIGN
- ADMINISTRATION/NURSE/OFFICE
- GENERAL CLASSROOMS
- STORAGE/TOILETS/MECHANICAL
- KILN ROOM

# Scope Additions + Base Scope

## Bridge and Bowman Elementary Schools

Lexington, MA  
17.11.2010

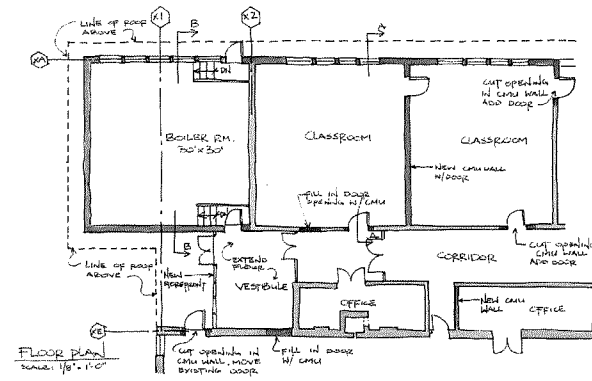


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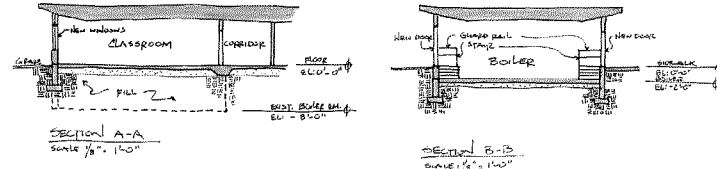
LEGEND:  
 PROPOSED CHANGES

1 OPTION 2e FLOOR PLAN  
 1/8" = 1'-0"

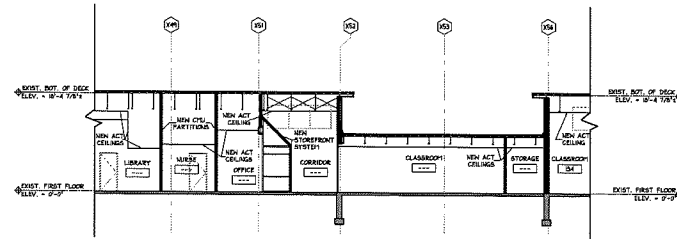


LEGEND:  
 EXISTING WALLS  
 PROPOSED WALLS

1 OPTION 1b FLOOR PLAN (REVISED)  
 1/8" = 1'-0"



2 OPTION 1b SECTION (REVISED)  
 1/8" = 1'-0"



1 OPTION 2e SECTION  
 1/8" = 1'-0"

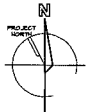
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 OF CAMBRIDGE INC

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**BRIDGE  
 ELEMENTARY  
 SCHOOL**

LEXINGTON, MA

100% SCHEMATIC DESIGN  
 10/29/2010



Drawn By: SZ  
 Checked By: MC  
 Scale: AS NOTED  
 Date: 10/29/2010  
 Professional Seal

SCOPE OPTIONS  
 1b AND 2e

**A1.4**