



**Feasibility Design  
Estimate**

**Sylvester Elementary School  
Design Priority Options**

Hanover, MA

**PM&C LLC**  
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Prepared for:

**CBI Consulting LLC**

November 1, 2019



**Sylvester Elementary School**  
Design Priority Options  
Hanover, MA

01-Nov-19

**Feasibility Design**

**MAIN CONSTRUCTION COST SUMMARY**

	<b>Construction Start</b>	<b>Gross Floor Area</b>	<b>\$/sf</b>	<b>Estimated Construction Cost</b>
<b>Sylvester ES Renovation</b>				
PRIORITY 1	May-22	35,960	\$72.05	\$2,591,021
Hazmat Allowance				NIC
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SUBTOTAL TRADE COSTS BUILDING		35,960	\$72.05	\$2,591,021
Design and Estimating Contingency	15.0%			\$388,653
Escalation Allowance	10.3%			\$266,875
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SUBTOTAL INCLUDING CONTINGENCIES				<b>\$3,246,549</b>
Subcontractor Bonds				In rates
General Conditions	10.00%			10.0%
Insurances - GLI/(Builders Risk not included)	3.00%			\$97,396
Bond	1.00%			\$32,465
OVERHEAD + PROFIT	8.0%			\$259,724
Building Permit				By Owner
CONSTRUCTION Contingency	10.0%			\$324,655
<b>TOTAL ESTIMATED CONSTRUCTION COST - PRIORITY 1</b>		<b>35,960</b>	<b>\$110</b>	<b>\$3,960,789</b>
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**Feasibility Design**

**MAIN CONSTRUCTION COST SUMMARY**

	<b>Construction Start</b>	<b>Gross Floor Area</b>	<b>\$/sf</b>	<b>Estimated Construction Cost</b>
<b>Sylvester ES Renovation</b>				
PRIORITY 2	May-22	35,960	\$77.78	\$2,796,985
Hazmat Allowance				NIC
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SUBTOTAL TRADE COSTS BUILDING		35,960	\$77.78	\$2,796,985
Design and Estimating Contingency	15.0%			\$419,548
Escalation Allowance	10.3%			\$288,089
SUBTOTAL INCLUDING CONTINGENCIES				<b>\$3,504,622</b>
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Subcontractor Bonds				In rates
General Conditions	10.00%			10.0%
Insurances - GLI/(Builders Risk not included)	3.00%			\$105,139
Bond	1.00%			\$35,046
OVERHEAD + PROFIT	8.0%			\$280,370
Building Permit				By Owner
CONSTRUCTION Contingency	10.0%			\$350,462
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<b>TOTAL ESTIMATED CONSTRUCTION COST - PRIORITY 2</b>		<b>35,960</b>	<b>\$119</b>	<b>\$4,275,639</b>
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### **Feasibility Design**

This Feasibility Design cost estimate was produced from drawings and specifications prepared by CBI Consulting LLC and their design team dated August 30, 2019. Design and engineering changes occurring subsequent to the issue of these documents have not been incorporated in this estimate.

This estimate includes all direct construction costs, General Contractor's overhead and profit and design contingency. Cost escalation assumes start dates indicated.

Bidding conditions are expected to be public bidding under Chapter 149 of the Massachusetts General Laws to pre-qualified general contractors, and pre-qualified sub-contractors, open specifications for materials and manufacturers.

The estimate is based on prevailing wage rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

### **ITEMS NOT CONSIDERED IN THIS ESTIMATE**

Items not included in this estimate are:

- All professional fees and insurance
- Land acquisition, feasibility, and financing costs
- All Furnishings, Fixtures and Equipment
- Items identified in the design as Not In Contract (NIC)
- Items identified in the design as by others
- Owner supplied and/or installed items (e.g. draperies, furniture and equipment)
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)
- Construction or occupancy phasing or off hours' work, (except as noted in this estimate)



Feasibility Design

GFA

35,960

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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Priority Option 1

**GROSS FLOOR AREA CALCULATION**

Basement; crawl spaces (not included in GSF)	2,362
Basement	10,870
Basement; new addition	450
1st Floor	13,300
1st floor; new addition	730
2nd Floor	10,100
2nd floor; new addition	510

<b>TOTAL GROSS FLOOR AREA (GFA)</b>	<b>35,960</b>	<b>sf</b>
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<b>NEW SIX STOP ELEVATOR</b>	<b>1,690</b>	<b>gsf</b>		-
Demolish existing paving	700	sf	2.00	1,400
Patch existing paving	1	ls	1,000.00	1,000
Excavate for new elevator; remove off site	389	cy	60.00	23,340
Excavate at existing crawl space; remove off site	167	cy	100.00	16,700
Concrete elevator pit; complete	1	ls	30,000.00	30,000
Concrete elevator sump pit; complete including pump and oil/water separator	1	ls	15,000.00	15,000
Demo exterior foundation wall	132	sf	20.00	2,640
Demo crawl space	1	ls	1,000.00	1,000
New foundation wall for elevator addition	444	sf	70.00	31,080
Reconfigure stair to basement	1	ls	15,000.00	15,000
SOG	730	sf	15.00	10,950
Structural steel and deck	13	tns	5,000.00	65,000
Exterior wall; assumed masonry to match existing	1,860	sf	88.50	164,610
Roofing	730	sf	25.00	18,250
Railing	25	lf	300.00	7,500
Vestibule doors	1	pr	8,500.00	8,500
Stair doors	1	pr	4,000.00	4,000
Shaftwall	720	sf	25.00	18,000
New staircase	1	flt	40,000.00	40,000
Demo bathrooms	550	sf	9.00	4,950
Finishes	1,690	gsf	17.00	28,730
Elevator; six stop; front and back openings	1	ls	360,000.00	360,000
HVAC	1,690	gsf	35.00	59,150
Electrical	1,690	gsf	20.00	33,800
F2010 SUBTOTAL				\$ 960,600

<b>NEW 3-phase electrical service</b>				
Electrical service upgrades	35,960	sf	3.00	107,880
Allowance for U/G service	1	ls	30,000.00	30,000
Transformer				By Utility Co.
F2010 SUBTOTAL				\$ 137,880

<b>NEW Multi-Use Men's Bathrooms (two rooms)</b>				
Demolish existing bathrooms	600	sf	15.00	9,000
Allowance for finishes	1	ls	48,200.00	48,200
Partitions	792	sf	20.00	15,840
Doors	2	ea	2,000.00	4,000
Accessories	2	rms	1,500.00	3,000
Plumbing fixtures and piping	18	fxt	6,000.00	108,000
HVAC	600	sf	25.00	15,000
Electrical	600	sf	10.00	6,000
F2010 SUBTOTAL				\$ 209,040

<b>NEW Unisex Bathrooms (three rooms)</b>	<b>318</b>	<b>sf</b>		-
Allowance for finishes	1	ls	28,330.00	28,330
Partitions	528	sf	20.00	10,560
Doors	3	ea	2,000.00	6,000
Accessories	3	rms	600.00	1,800
Plumbing fixtures and piping	6	fxt	6,000.00	36,000
HVAC	318	sf	25.00	7,950
Electrical	318	sf	10.00	3,180
F2010 SUBTOTAL				\$ 93,820



Feasibility Design

GFA

35,960

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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**Priority Option 1**

	<b>NEW Janitors Closets (two rooms)</b>	<b>246</b>	sf		-		
	Allowance for finishes	<b>1</b>	ls	1,968.00	1,968		
	Partitions	<b>576</b>	sf	20.00	11,520		
	Doors	<b>2</b>	ea	2,000.00	4,000		
	Accessories	<b>2</b>	rms	200.00	400		
	Plumbing fixtures and piping	<b>2</b>	fxt	6,000.00	12,000		
	HVAC	<b>246</b>	sf	15.00	3,690		
	Electrical	<b>246</b>	sf	10.00	2,460		
F2010	SUBTOTAL					\$	36,038
	<b>Renovate existing bathrooms</b>						
	Allowance for gut renovation	<b>744</b>	sf	315.00	234,360		
F2010	SUBTOTAL					\$	234,360
	<b>Code Red Recommendations</b>						
	Add new one hour door at stage stairs	<b>1</b>	loc	3,000.00	3,000		
	Add new one hour door at all openings into stairways	<b>9</b>	loc	3,000.00	27,000		
	Clear exit areas	<b>1</b>	ls	500.00	500		
	Add fire extinguisher cabinets	<b>12</b>	loc	400.00	4,800		
	Upgrade hardware at fire rated doors into stairwells	<b>10</b>	lvs	1,800.00	18,000		
	Remove storage boxes				By owner		
	Modify stage stairs	<b>1</b>	ls	5,000.00	5,000		
F2010	SUBTOTAL					\$	58,300
	<b>Automatic Door Openers</b>						
	Add automatic door openers at all corridor doors	<b>36</b>	loc	2,500.00	90,000		
F2010	SUBTOTAL					\$	90,000
	<b>Ceiling Replacement</b>						
	Remove and reinstall ceilings; 2 x 4 ACT	<b>27,058</b>	sf	6.50	175,877		
F2010	SUBTOTAL					\$	175,877
	<b>Lighting Replacement</b>						
	Remove and replace existing lighting with new 2 x 2 LED	<b>34,270</b>	gsf	5.00	171,350		
F2010	SUBTOTAL					\$	171,350
	<b>Egress Lighting</b>						
	ADD exterior emergency lighting	<b>6</b>	loc	900.00	5,400		
F2010	SUBTOTAL					\$	5,400
	<b>New Sprinkler system</b>						
	Install new fire protection throughout	<b>35,960</b>	sf	6.50	233,740		
	New dry system in crawl spaces	<b>2,362</b>	sf	4.00	9,448		
	New water service for fire protection	<b>1</b>	ls	50,000.00	50,000		
F2010	SUBTOTAL					\$	293,188
	<b>Subdivide 4 classrooms into 12 offices</b>						
	New partitions	<b>2,976</b>	sf	18.00	53,568		
	New doors	<b>12</b>	ea	2,000.00	24,000		
	New flooring; assumed carpet	<b>3,400</b>	sf	6.00	20,400		
	Electrical work; fire alarm and power/telecom upgrades (lighting included above)	<b>3,400</b>	sf	8.00	27,200		
	Ceilings included above				-		
F2010	SUBTOTAL					\$	125,168

<b>TOTAL - PRIORITY 1 WORK</b>	<b>\$2,591,021</b>
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Feasibility Design

GFA

35,960

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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Priority Option 2

**GROSS FLOOR AREA CALCULATION**

Basement; crawl spaces (not included in GSF)	2,362
Basement	10,870
Basement; new addition	450
1st Floor	13,300
1st floor; new addition	730
2nd Floor	10,100
2nd floor; new addition	510

<b>TOTAL GROSS FLOOR AREA (GFA)</b>	<b>35,960</b>	<b>sf</b>
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	<b>REPLACE ROOF</b>	<b>13,300</b>	<b>gsf</b>		-		
	Remove existing roofing	13,300	sf	2.00	26,600		
	New EPDM roofing	13,300	sf	18.00	239,400		
	Allowance for roofing at backside of parapet and new coping	570	lf	60.00	34,200		
	Move and reinstall roof top equipment	1	ls	50,000.00	50,000		
F2010	SUBTOTAL					\$	350,200

	<b>REPLACE ROOF DRAINS</b>						
	Remove and replace roof drains and piping	8	loc	3,000.00	24,000		
F2010	SUBTOTAL					\$	24,000

	<b>AUDITORIUM FLOORING</b>						
	Refinish existing hardwood flooring at auditorium	3,000	sf	6.00	18,000		
	Replace 15% of flooring	450	sf	20.00	9,000		
F2010	SUBTOTAL					\$	27,000

	<b>CLASSROOM FLOORING</b>						
	Refinish existing hardwood flooring at classrooms (3) + Offices (2)	4,000	sf	6.00	24,000		
F2010	SUBTOTAL					\$	24,000

	<b>INTERIOR PAINTING</b>						
	Allowance to repaint all existing walls, ceilings doors etc.	35,960	sf	3.00	107,880		
F2010	SUBTOTAL					\$	107,880

	<b>HVAC BLW Recommendations</b>						
	Replace existing system with new VRF system; includes new high efficiency boilers, all piping and ductwork; new DDC controls	34,270	sf	45.00	1,542,150		
	Demolition	34,270	sf	2.00	68,540		
	Asbestos removal	1	ls	10,000.00	10,000		
F2010	SUBTOTAL					\$	1,620,690

	<b>FIRE ALARM RECOMMENDATIONS</b>						
	Replace existing FA system	34,270	sf	4.00	137,080		
F2010	SUBTOTAL					\$	137,080

	<b>PA + INTERCOM</b>						
	Replace intercom	1	ls	3,000.00	3,000		
	PA system	34,270	sf	1.50	51,405		
F2010	SUBTOTAL					\$	54,405

	<b>Lighting Replacement</b>						
	Remove and replace existing lighting with new 2 x 2 LED	22,660	gsf	5.00	113,300		
F2010	SUBTOTAL					\$	113,300

	<b>PLUMBING per BLW Report</b>						
	Replace water heater	1	ls	30,000.00	30,000		
	Replace all existing plumbing piping; water, waste and vent	34,270	sf	7.00	239,890		
	Replace all existing plumbing fixture not replaced in other work items	34,270	sf	2.00	68,540		
F2010	SUBTOTAL					\$	338,430

<b>TOTAL - PRIORITY 2 WORK</b>	<b>\$2,796,985</b>
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