

Hingham Middle School Cost Estimate VE Exercise

VALUE ITEM	INITIAL ESTIMATE	POST-VE
Total Project Budget	64,042,549	61,749,189
Non-reimbursable items	(2,113,500)	(2,113,500)
MSBA Budget Total	61,929,049	59,653,689
Hingham Cost (56.13%)	34,760,775	33,473,512
Non-reimbursable items	2,113,500	2,113,500
Hingham Cost	36,874,275	35,587,012
Cost per Square Foot	\$301.92	\$290

Non-reimbursable Items:

- \$1,100,000 for ground improvement foundation
- \$500,000 for Septic upgrades (estimate)
- \$95,500 for Septic/WWTF investigation (projected from Designer contract budget)
- \$150,000 for field storage and toilet
- \$68,000 for hazardous VAT tile removal (asbestos)
- \$200,000 for other general soft costs (legal, permitting, etc.)

Total: \$2,113,500

Additional handouts:

- Estimated Costs used for April Town Meeting
- Budget submitted to the MSBA
- Cost Estimate Reconciliation Summary
- Value Engineering Worksheet
- Value Engineering Summary Memo

Hingham Middle School

Estimated Construction Project - Full Costs

Upper Range Calculation

	Cost Per Foot	Sq Feet	Extended Price
Construction Cost	\$275	164,000	\$45,100,000

Soft Costs

OPM
 Design Architect
 Legal
 Contingency
 FF&E (MSBA Allows 1200 per Student)
 Technology (Allowed 1200 Per Student)
 Other

Soft Cost Percent Range (MSBA Comps)	25-29%		26%
* Estimated Soft Costs			\$11,726,000

Upper Range Estimate	\$56,826,000
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Lower Range Calculation

	Cost Per Foot	Sq Feet	Extended Price
Construction Costs	\$235	164,000	\$38,540,000
*Estimated Soft Cost			\$11,726,000

Lower Range Estimate	\$50,266,000
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Summary	Upper Range	Lower Range
Estimated Project Costs	\$56,826,000	\$50,266,000
Less: Feasibility Study Amount	\$600,000	\$600,000
Range for second vote	\$56,226,000	\$49,666,000

* Lower construction costs will not necessarily result in lower soft cost.



TOTAL PROJECT BUDGET
Hingham Middle School

Date Issued: August 29, 2011

PROJECT BUDGET ITEMS:	Budgeted	Committed	Expended
BUILDING CONSTRUCTION & SITE COST	51,719,362.00	0.00	0.00
-Base Construction	51,069,362.00	0.00	0.00
-WWTP	500,000.00	0.00	0.00
-Toilet Facility	150,000.00	0.00	0.00
PROJECT CONTINGENCY	2,553,468.60	0.00	0.00
A & E BASE CONTRACT	2,658,692.00	340,608.00	196,326.45
Feasibility/Schematic Design	340,608.00	340,608.00	196,326.45
Design Development	768,235.00	0.00	0.00
Construction Documents	797,100.00	0.00	0.00
Bidding	99,019.00	0.00	0.00
Construction Administration	586,282.00	0.00	0.00
Closeout	47,948.00	0.00	0.00
Other Basic Services	19,500.00	0.00	0.00
PROJECT MANAGEMENT	1,385,000.00	93,500.00	41,965.00
Feasibility/Schematic Design	93,500.00	93,500.00	41,965.00
Design Development/CD/Bid	319,500.00	0.00	0.00
Construction Administration/Closeout	962,000.00	0.00	0.00
Reimbursables	10,000.00	0.00	0.00
EXTRA/OTHER SERVICE	359,167.00	83,667.00	33,609.36
Study enviro, geotech,	83,667.00	83,667.00	33,609.36
Geotech & Structural peer review	15,000.00	0.00	0.00
Structural Inspections, Building tests	35,000.00	0.00	0.00
Green, Renewable, Sustainability Components	90,900.00	0.00	0.00
Geotech Site, Well Investigation	92,500.00	0.00	0.00
Geohydro, Wetland reflag	32,100.00	0.00	0.00
Other Extra Services	10,000.00	0.00	0.00
MISC. COSTS	295,000.00	0.00	0.00
Bid Printing/Advertising	75,000.00	0.00	0.00
Construction Testing	50,000.00	0.00	0.00
Haz-Mat Monitoring	95,000.00	0.00	0.00
Utility Company Fees	75,000.00	0.00	0.00
OWNER ADMIN	330,500.00	500.00	380.96
Study Notices	500.00	500.00	380.96
Owner Contingency	100,000.00	0.00	0.00
Legal	50,000.00	0.00	0.00
Bonding	180,000.00	0.00	0.00
FF&E	1,224,000.00	0.00	0.00
TECHNOLOGY	1,224,000.00	0.00	0.00
Project Budget Totals	61,749,189.60	518,275.00	272,281.77

OWNER'S PROJECT

MANAGER

MEMORANDUM

3

Schematic Design Estimate Reconciliation

Project Number

PROJECT: Model Middle School
Hingham, MA

Date: 8/26/11

Attachments: A. M. Fogarty and Associates SD Estimate (for the designer)
Carmone Estimating Group, LLC SD Estimate (for the OPM)

To: Ray Estes – Chair of the Hingham School Building Committee, John Ferris, Director of Business and Support Services, Hingham Public Schools

CC: Dorothy H. Galo, Ph. D., Hingham Public Schools, James Jordan, Ai3, Mary Mahoney, KBA, Kristy Lyons, KBA

From: Dan Bradford, KBA

Ray,

Ai3's estimator (AM Fogarty) and KBA's estimator (Carmone Estimating Group) conferenced yesterday to review the Schematic Design estimates that are based on the schematic design documents generated by Ai3. Initial estimates from each firm were reviewed simultaneously. Both estimators provided their take off information for every item in the estimate to determine what quantities for product and what unit prices were carried by each estimator to ensure that both estimates were based on similar scope of work. Also, background knowledge about the level of finish work was discussed in order to provide accurate pricing level for some items where the detail information has not yet been provided in the documents. The current documents are at a schematic design level so the level of detail is not final and it was important for each estimator and the design team to discuss any areas where the assumptions need to be made about the intent of the design in order to price the project appropriately.

The attached estimates are the result of this conference held yesterday. Each estimator has incorporated the comments made in the conference into their initial estimates and modified their estimates accordingly. The reconciled estimates are attached and the revised amounts are:

PLANNING

DESIGN

EXTERIOR ENVELOPE CONSULTANTS

PROJECT MANAGERS



KEVIN J. BUCKLEY, AIA
DANIEL P. BRADFORD, AIA

AM Fogarty -	\$53,253,514 (\$301.92/sf) Alt #1, Field Storage/Toilet Bldg. - \$150,000 Alt #2, WWTP renovation - \$500,000
Carmone Estimating Group -	\$52,816,316 (\$299.44/sf) Alt. #1, Field Storage/Toilet Bldg. - \$251,000 Alt. #2, WWTP renovation - \$500,000

These values reflect less than a 1% delta between each other which is well within the tolerance for a reconciled Schematic Design estimate to be presented to MSBA.

If you should have any questions, please contact me at your earliest convenience.

PLANNING

DESIGN

EXTERIOR ENVELOPE CONSULTANTS

PROJECT MANAGERS

6 THIRTEENTH STREET
CHARLESTOWN NAVY YARD
CHARLESTOWN, MASSACHUSETTS 02129
TEL 617-241-2807 FAX 617-241-2857

Schematic
Hingham Middle School
Hingham, MA

26-Aug-11

GRAND SUMMARY

Building Cost				\$39,242,081
Site work				\$4,205,434
Remove Building	122,600	GSF	\$3.90	\$478,140
Hazardous Waste Removal				\$650,000

	TOTAL DIRECT COST			44,575,655
GENERAL CONDITIONS FEE	24	MOS	\$65,000	\$1,560,000
INSURANCE		3.0%		\$1,384,070
P&P BOND (all trades)		0.65%		\$308,878
DESIGN CONTINGENCY		1.0%		\$478,286
ESCALATION (June 2012)		6%		\$2,898,413
		4%		\$2,048,212

	TOTAL CONSTRUCTION COST			\$53,253,514
	COST PER SF			\$301.92
ALTERNATE #1 ADD CONCESSION BUILDING				\$150,000
ALTERNATE # 2 ADD UPGRADE EXISTING SEWAGE SYSTEM EQUIPMENT				\$500,000
	CONSTRUCTION COST INCLUDING ALTERN			\$53,903,514

PROJECT: Hingham Middle School
 LOCATION: Hingham, MA
 CLIENT: Ai3 Architects
 DATE: 26-Aug-11

NO. OF SQ. FT.: 176,385
 COST PER SQ. FT.: \$246.32

No.: 11094

SUMMARY

	<u>TOTAL</u>	<u>PERCENT OF PROJECT</u>	<u>COST PER SF</u>
A. SUBSTRUCTURE			
A10 - FOUNDATIONS			
A1010 STANDARD FOUNDATIONS	976,941	2%	5.54
A1020 SPECIAL FOUNDATIONS	1,100,000	3%	6.24
A1030 SLAB ON GRADE	876,908	2%	4.97
A20 - BASEMENT CONSTRUCTION			
A2010 BASEMENT EXCAVATION	0	0%	0.00
A2020 BASEMENT WALLS	0	0%	0.00
B. SHELL			
B10 - SUPERSTRUCTURE			
B1010 FLOOR CONSTRUCTION	2,135,368	5%	12.11
B1020 ROOF CONSTRUCTION	2,334,702	5%	13.24
B20 - EXTERIOR ENCLOSURE			
B2010 EXTERIOR WALLS	4,362,983	10%	24.74
B2020 EXTERIOR WINDOWS	1,862,192	4%	10.56
B2030 EXTERIOR DOORS	104,650	0%	0.59
B30 - ROOFING			
B3010 ROOF COVERINGS	1,623,595	4%	9.20
B3020 ROOF OPENINGS	92,200	0%	0.52
C. INTERIORS			
C10 - INTERIOR CONSTRUCTION			
C1010 PARTITIONS	4,644,088	11%	26.33
C1020 INTERIOR DOORS	582,918	1%	3.30
C1030 FITTINGS	1,782,476	4%	10.11
C20 - STAIRS			
C2010 STAIR CONSTRUCTION	187,310	0%	1.06
C2020 STAIR FINISHES	32,544	0%	0.18
C30 - INTERIOR FINISHES			
C3010 WALL FINISHES	359,495	1%	2.04
C3020 FLOOR FINISHES	1,022,204	2%	5.80
C3030 CEILING FINISHES	1,078,247	2%	6.11
D. SERVICES			
D10 - CONVEYING			
D1010 ELEVATORS & LIFTS	106,460	0%	0.60
D1010 ESCALATORS & MOVING WALKS	0	0%	0.00
D1090 OTHER CONVEYING SYSTEMS	0	0%	0.00
D20 - PLUMBING			
D2010 PLUMBING	1,778,343	4%	10.08

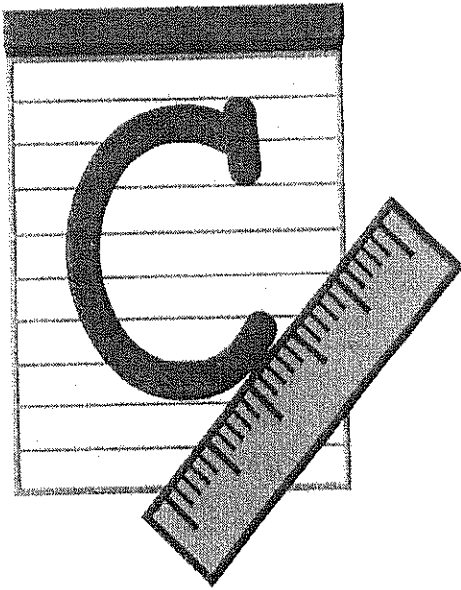
Hingham Middle School - Schematic

	<u>TOTAL</u>	<u>PERCENT OF PROJECT</u>	<u>COST PER SF</u>
D30 - HVAC			
D3010 HVAC	4,586,010	11%	26.00
D40 - FIRE PROTECTION			
D4010 FIRE PROTECTION	752,902	2%	4.27
D50 - ELECTRICAL			
D5010 ELECTRICAL	4,674,203	11%	26.50
E. EQUIPMENT & FURNISHINGS			
E10 - EQUIPMENT			
E1010 COMMERCIAL EQUIPMENT	1,098,499	3%	6.23
E1020 INSTITUTIONAL EQUIPMENT	0	0%	0.00
E1030 VEHICULAR EQUIPMENT	0	0%	0.00
E1090 OTHER EQUIPMENT	0	0%	0.00
E20 - FURNISHINGS			
E 2010 FIXED FURNISHINGS	1,086,846	3%	6.16
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	177,309	0%	1.01
G1020 SITE DEMOLITION & RELOCATIONS	160,506	0%	0.91
G1030 SITE EARTHWORK	756,748	2%	4.29
G1040 HAZARDOUS WASTE REMEDIATION	0	0%	0.00
G20 - SITE IMPROVEMENTS			
G2010 ROADWAYS	655,272	2%	3.72
G2020 PARKING LOTS	0	0%	0.00
G2030 PEDESTRIAN PAVING	240,886	1%	1.37
G2040 SITE DEVELOPMENT	664,544	2%	3.77
G2050 LANDSCAPING	331,509	1%	1.88
G30 - SITE MECHANICAL UTILITIES			
G3010 WATER SUPPLY	307,038	1%	1.74
G3020 SANITARY SEWER	126,254	0%	0.72
G3030 STORM SEWER	485,819	1%	2.75
G3040 HEATING DISTRIBUTION	0	0%	0.00
G3050 COOLING DISTRIBUTION	0	0%	0.00
G3060 FUEL DISTRIBUTION	18,450	0%	0.10
G3090 OTHER SITE MECHANICAL UTILITIES	0	0%	0.00
G40 - SITE ELECTRICAL UTILITIES			
G4010 ELECTRICAL DISTRIBUTION	133,600	0%	0.76
G4020 SITE LIGHTING	147,500	0%	0.84

Hingham Middle School - Schematic

	<u>TOTAL</u>	<u>PERCENT OF PROJECT</u>	<u>COST PER SF</u>
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	43,447,515	100%	246.32



CARMONE ESTIMATING GROUP, LLC

Budget Estimate

Plans dated: 8/01/2011

HINGHAM MIDDLE SCHOOL

Owner: Town of Hingham, MA

Architect: Ai3 Architects

631 East Street . C201 . Mansfield, MA . 617.777.6319 . tacarmone@comcast.net

UNIFORMAT II LEVEL 3 SCHEMATIC BUDGET ESTIMATE

CLIENT: KBA
PROJECT: Hingham Middle School
SIZE (gsf): 176,385
LOCATION: Hingham ,Massachusetts
ESTIMATOR: TAC
PLAN DATE: August 1,2011
TODAY'S DATE: 08/26/11

	DIVISION SUMMARY	COST PER SF
DIVISION		
A. SUBSTRUCTURE	3,087,935	17.51
B. SHELL	11,863,808	67.26
C. INTERIORS	9,223,291	52.29
D. SERVICES	11,892,481	67.42
E. EQUIPMENT & FURNISHINGS	2,174,582	12.33
F. SPECIAL CONSTRUCTION & DEMOLITION	1,066,120	6.04
G. BUILDING SITEWORK	4,765,170	27.02
	\$44,073,388	
GENERAL CONTRACTORS/SUB BOND COST	881,468	5.00
GENERAL CONDITIONS	1,560,000	8.84
BUILDING PERMIT	BY OWNER	
FEE	3% 1,395,446	7.91
DESIGN CONTINGENCY	6 % 2,874,618	16.30
ESCALATION	4 % 2,031,397	11.52
	SUB-TOTAL: \$52,816,316	
	TOTAL PROJECT COST \$52,816,316	
	COST PER GSF \$298.44	
ADD Sewage System Upgrade	\$ 500,000	
ADD CONCESSION BUILDING	\$ 251,450	

UNIFORMAT II LEVEL 3 SCHEMATIC BUDGET ESTIMATE

CLIENT: KBA
PROJECT: Hingham Middle School
SIZE (gsf): 176,385
LOCATION: Hingham ,Massachusetts
ESTIMATOR: TAC
PLAN DATE: August 1,2011
DDAY'S DATE: 08/26/11

	DIVISION SUMMARY	COST PER SF
DIVISION		
FOUNDATIONS	3,087,935	17.51
BASEMENT CONSTRUCTION	0	0.00
SUPER STRUCTURE	4,482,282	25.41
EXTERIOR ENCLOSURE	5,660,970	32.09
ROOFING	1,720,555	9.75
INTERIOR CONSTRUCTION	6,109,267	34.64
STAIRS	210,796	1.20
INTERIOR FINISHES	2,903,229	16.46
CONVEYING	106,495	0.60
PLUMBING	1,816,057	10.30
HVAC	4,586,536	26.00
FIRE PROTECTION	756,071	4.29
ELECTRICAL	4,627,322	26.23
EQUIPMENT	751,074	4.26
FURNISHINGS	1,423,508	8.07
SPECIAL CONSTRUCTION	0	0.00
BUILDING DEMOLITION AND HAZARDOUS ABATEMEN	1,066,120	6.04
SITE PREPARATION	1,496,096	8.48
SITE IMPROVEMENTS	1,846,483	10.47
SITE MECHANICAL UTILITIES	1,396,342	7.92
SITE ELECTRICAL UTILITIES	26,250	0.15
OTHER SITE CONSTRUCTION	0	0.00
	\$44,073,368	
GENERAL CONTRACTORS/SUB BOND COST	881,468	5.00
GENERAL CONDITIONS	1,560,000	8.84
BUILDING PERMIT	BY OWNER	
FEE	3% 1,395,446	7.91
DESIGN CONTINGENCY	6 % 2,874,618	16.30
ESCALATION	4% 2,031,397	11.52
	SUB-TOTAL: \$52,816,316	
	TOTAL PROJECT COST \$52,816,316	
	COST PER GSF \$299.44	
ADD UPGRADE SEWAGE SYSTEM	\$ 500,000	
ADD CONCESSION BUILDING	\$ 251,450	

NEW HINGHAM MIDDLE SCHOOL

Ai3 Project #1101.00
August 29, 2011

AM Fogarty Estimate 8/26/2011

Building Cost	\$39,242,081
Site Work	\$4,205,434
Remove Building	\$478,140
HAZ MAT Removal	\$650,000
TOTAL DIRECT COST	\$44,575,655

***This estimate is a determination of fair market value of the construction of this project.
It is not a prediction of low bid.**

Proposed VE Cost Reduction Items:

Site:	
Reduce disposal of surplus fill(raise Building 1' and raise fields 2' 15,900 x \$9.0CY)	(\$143,100)
Reduce Planting allowance by 25K	(\$25,000)
Eliminate Traffic Signage- (Included in exterior signage architectural)	(\$5,000)
Eliminate Basketball courts, fencing and gravel base (replace with loam and seed)	(\$116,374)
Eliminate Wood School Sign	(\$4,000)
Exterior	
Reduce Signage- exterior by 10K	(\$10,000)
Reduce Gym Signage by 8K	(\$8,000)
Provide 1 exterior lawn sign	(\$20,000)
Finishes:	
Reduce finish carpentry by 15% (450,000)	(\$67,500)
Remove decorative logo from Lobby floor	(\$5,000)
Plumbing	
Reduce plumbing to \$9.35/sf	(\$129,143)
HVAC:	
Reduce HVAC system to \$25.00/SF	(\$176,385)
Fire Protection	
Reduce Fire Protection System to \$4.05/SF	(\$38,542)
Electrical	
Eliminate pedestrian lighting from 20 to 10 fixtures	(\$22,000)
Equipment	
Reduce seats from 700 to 680 in auditorium (estimate carried 700)	(\$14,000)
*Eliminate dishwashing component from Kitchen Equipment allowance	(\$35,000)
Eliminate kiln and provide in FFE	(\$3,800)
Eliminate Bleacher Paint and Graphics	(\$5,000)
Reduce Wood Shop and Tech Design Lab Equipment by \$16,000	(\$16,000)
Eliminate electrical mat hoist-wrestling - from gym equipment	(\$7,500)
Provide 3 fume hoods for science- reduce from 9 to 3	(\$46,500)
Eliminate Water Distillers	(\$10,800)
Eliminate Autoclave sterilizers	(\$40,500)
Eliminate Steam Tables	(\$13,500)
Reduce theater equipment	(\$50,000)
Total VE Savings:	-\$1,012,644

ESTIMATE ADJUSTMENTS

Building & Site Cost	\$42,434,871
Remove Building	\$478,140
HAZ MAT Removal	\$650,000
TOTAL DIRECT COST	\$43,563,011
General Conditions (24 Months @ 65K)	\$1,560,000
FEE (3%)	\$1,306,890
Insurance (0.65%)	\$283,160
P&P Bond (1.0%)	\$435,630
Design Contingency (Reduce to 5% in Lieu of 6%)	\$2,178,150.55
Escalation (4%)	\$1,742,520
TOTAL Construction Cost	\$51,069,362
COST PER SF	\$290

OWNER'S PROJECT

MANAGER

MEMORANDUM

4

Project Scope & Budget -Schematic Estimate Value
Engineering Considerations

Project Number

PROJECT: Model Middle School
Hingham, MA

Date: 8/26/11

Attachments: Ai3 Proposed VE Cost Reduction Items

To: Carolyn Walsh, Project Coordinator, MSBA
CC: Raymond Estes, Hingham Building Committee, Dorothy H. Galo. Ph. D., Hingham Public Schools, John Ferris, Hingham Public Schools, James Jordan, Ai3, Dan Bradford, KBA, Kristy Lyons, KBA
From: Mary Mahoney, KBA

Ms. Walsh,

Following Project Scope and Budget cost estimate reconciliation, Ai3 and KBA conducted a value engineering exercise for the project to review the cost and functional value of various design components, features and systems. Based on the exercise, the attached list of scope reductions and adjustments were offered to Hingham's Building Committee to maximize cost efficiency for the project without impact to the overall scope, function and performance of the proposed building and site improvements.

As indicated in the attached document the proposed total scope reduction includes twenty five (25) items with a value of \$1,012,644 which will result in an amended construction cost total of \$51,069,362.

The attached value engineering list was reviewed with the Hingham Building Committee during their August 29, 2011 meeting and following extensive consideration and discussion the list of value engineering items was accepted without exception.

The total project budget report and MSBA Form 3011 Total Project Budget Template – PS&B have been drafted to include the revised total construction costs of \$51,069,362 for the base project. Construction cost estimates for Alternate Nos. 1 and 2, Field Storage/Toilet Bldg and Wastewater Treatment System Upgrades, shall remain at the value reported in the original cost estimate document.

If you should have any questions, please contact me at your earliest convenience. Regards.

PLANNING

DESIGN

EXTERIOR ENVELOPE CONSULTANTS

PROJECT MANAGERS