



# **East Bridgewater School Committee:**

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## **Comprehensive School District Feasibility Study**

### **5 Cost Analysis & Phasing**

**Ai<sup>3</sup>**

Educational Planning  
ARCHITECTURE INVOLUTION LLC

**5/21/2007**  
Architecture

# Cost and Program Analysis

## **EAST BRIDGEWATER HIGH SCHOOL**

A program analysis of the existing East Bridgewater High School reveals that it is sufficiently sized to accommodate the projected High School enrollment. However, its poor organization and lack of appropriately sized/located specialized instructional and support spaces make it a very difficult building to convert into a modern High School educational environment.

Although the renovation of the existing building might not allow for an "ideal" educational environment, if the building was in good condition and could be converted to an "appropriate" educational facility at a reasonable cost, certainly some argument could be made for renovating the existing building in lieu of replacing it. For this reason, a cost analysis was completed to determine the cost of renovating the existing High School building versus the cost of constructing an "all new" facility.

The cost of renovating the existing High School facility is estimated herein at approximately \$46.6 million. This is a very expensive renovation, with the high cost mostly attributable to the age of the facility and the additional costs associated with a lengthy and labor-intensive renovation. The cost of an "all new" East Bridgewater High School is estimated herein at \$46.3 million. Although this is also a significant price tag, it represents a modern 21<sup>st</sup> Century high school with many advantages:

1. More energy efficiency
2. Better organization
3. Educational superiority
4. Less expensive to maintain
5. Could provide 50 years of future service

It is important to note that the replacement and/or renovation of the East Bridgewater High School has been identified as a high priority by the new Massachusetts School Building Authority. This could result in the MSBA providing approximately 60% in reimbursement funding, meaning that the Town of East Bridgewater would incur only \$18.4 million (40%) of the cost for a new High School.

## **CENTRAL ELEMENTARY SCHOOL**

The program analysis for the existing Central Elementary School reveals that the 1965 addition impedes a functional expansion. Additionally, the lower quality and worse condition of the 1965 addition would make it a poor candidate for renovation. However, a proposed project that eliminates the 1965 addition and expands the original 1949 building could provide a very functional and educationally advantageous

layout. The original construction of the 1949 building is of a very high quality, and a renovation and expansion of this building would result in a facility with all of the qualities of an "all new" building. Such a project could serve the Town for 50 years.

For purposes of comparison, a cost analysis was completed to determine the cost of an "all new" facility versus the cost of renovating and expanding the 1949 building. The analysis indicates that the renovation and expansion is approximately \$2.5 million less than an "all new" facility. Additionally, the renovation and expansion project is equal to the "all new" project in every aspect and also affords the Town the opportunity to maintain and restore the architecturally significant 1949 building, we believe that the renovation and expansion of the 1949 building is the appropriate solution. It offers the following advantages:

1. Maintains the architecturally significant 1949 building as a key piece of the Town Center.
2. Provides a building that is equal to an "all new" facility in every aspect.
3. Is less expensive than an "all new" facility.

Cost Analysis	900 Students	Renovate/Expand Central Elementary	
CENTRAL ELEMENTARY	Renovation sq.ft.: 58,869		
21-May-07	Addition sq.ft.: 78,793		
	Cost/SF	Cost	
		Comments	
Sitework	\$11.21	\$1,543,191.02	Earthwork, parking, paving, lawn, fields, planting
Phasing	\$6.75	\$929,218.50	Extended construction period for occupied building
General Conditions	\$10.20	\$1,404,152.40	Contractor's overhead, profit, and mobilization
Demolition	\$1.84	\$253,298.08	select demo. at exist. / interior demolition
Lead Removal	\$0.36	\$49,558.32	contained selective abatement at exterior windows
Concrete & Rebar	\$3.84	\$528,822.08	foundations, footings, slab for new addition
Masonry	\$14.34	\$1,974,073.08	masonry at new addition, repointing at existing
Structural Steel	\$9.57	\$1,317,425.34	Seismic mod. at existg. bldg./new steel @ addition
Exterior Metal Studs & Sheathing	\$6.11	\$841,114.82	Exterior cold formed metal framing @ new addition
Misc. Metals	\$4.10	\$564,414.20	lintels at existing/new buildings, roof edge angles at new and existing
Stair	\$0.00	\$0.00	Not applicable
Expansion Joints	\$0.15	\$20,704.36	Wall, Ceiling, Floor Interior and Exterior Retro fit existing building
Rough Carpentry	\$1.12	\$154,181.44	rough blocking, sills, lockers, casework, shelving, etc.
Millwork and Woodwork	\$6.37	\$876,906.84	Display cases, paneling, wainscoting, cafeteria, library, etc.
Glass Fiber Reinforced Plastic	\$0.81	\$111,506.22	Main Entry, Cafeterium, and Public Spaces
Roofing and Flashing	\$9.11	\$1,254,100.82	Membrane Roofing, partial asphalt shingles
Dampproofing and Caulking	\$1.24	\$170,508.15	dampproofing, vapor barrier, sealants @ new / sealants only @ existing
Building Insulation and Vapor Barrier	\$2.04	\$280,458.79	New exterior wall insulation at exterior walls only
Spray Fireproofing	\$0.45	\$62,140.63	Spray Fireproofing
Exterior Insulation Finish System	\$1.12	\$154,181.44	Exterior Insulation Finish System
Skylights	\$1.11	\$152,804.82	Cafeteria, Library Media Center
Firestopping	\$0.17	\$23,898.12	Wall Terminations, Pipe Penetrations, Conduits, etc
Steel Door Frames	\$0.63	\$86,052.52	Interior and Exterior Steel Door Frames to be painted
Steel Doors	\$0.26	\$35,792.12	Fire rated doors required / replace existing doors
Wood Doors	\$0.71	\$97,203.14	Interior Wood Doors
Hardware	\$1.34	\$184,487.08	Door hardware including latches, hinges, panic hardware, locksets, sweeps, etc
Access Doors	\$0.04	\$5,506.48	Access panels located in walls and ceilings for access to mechanical, plumbing
Overhead Coiling Doors	\$0.18	\$24,779.16	Roll up Doors for loading dock and interior coiling grilles for foodservice
Alum. Windows, Storefront, Curtainwall	\$6.91	\$951,244.42	replace exist'g windows / provide new at addition
Glass & Glazing	\$1.22	\$167,314.39	replace existing broken or non-compliant glass/add new
Interior Metal Framing	\$5.17	\$711,712.54	Interior walls and half height partitions
Gypsum Drywall / Veneer plaster	\$5.92	\$814,959.04	new drywall/veneer plaster and soffit board at exist / new addition
Ceramic, Quarry, and Porcelain Tile	\$1.52	\$208,750.66	replace all existing /new at addition
Acoustical Ceilings	\$1.72	\$237,439.42	Full Replacement of ceiling system and new @ addition
Wood Flooring- Gym and Stage	\$0.00	\$0.00	Not applicable
Resilient Flooring	\$2.31	\$317,898.22	renovation and addition areas
Carpet	\$0.72	\$99,116.64	renovation and addition areas
Acoustical Panels	\$0.51	\$70,207.62	Acoustical treatment at cafeterium, music room
Painting	\$1.63	\$224,691.92	Patch/paint at exist'g bldg. /paint @ new
Markerboards and Tackboards	\$0.58	\$79,678.77	Replace all Markerboards and tackboards
Toilet Partitions and Screens	\$0.24	\$33,451.87	Replace toilet partitions and urinal screens
Architectural Louvers	\$0.24	\$33,451.87	Replace all exterior louvers and screens
Signage and Graphics	\$0.02	\$3,122.17	Replace all exterior and interior building signage
Metal Lockers	\$0.89	\$122,519.18	Replace all metal lockers
Fire Extinguisher Cabinets	\$0.06	\$7,967.88	Replace all fire extinguisher cabinets
Toilet Accessories	\$0.16	\$22,301.24	Replace Paper towel, soap, toilet paper dispensers, mirrors, coat hooks, etc.
Stage Curtains and Rigging	\$0.00	\$0.00	Not applicable
Projection Screens	\$0.12	\$16,519.44	Replace all projection screens
Wastewater System Replacement	\$5.75	\$791,556.50	Reuse and Renovate septic system
Food Service Equip.	\$3.78	\$520,382.36	Replacement required
Appliances	\$0.00	\$0.00	Not applicable
Gym Backstop	\$0.38	\$52,311.56	Replace all backstops and provide motorized main court backstop
Cafeterium Divider Curtain	\$0.34	\$46,805.08	Replace existing with motorized dividing curtain with mesh top
Wall Pads	\$0.18	\$24,779.16	Replace existing wall pads at perimeter of gym
Misc. Cafeterium PE equipment	\$0.09	\$12,389.58	Install new single set of volleyball sleeves
Casework / Fixed	\$4.35	\$598,829.70	Replace existing / provide at new addition
Entrance Mats	\$0.14	\$19,272.68	Replace existing, add at new addition
Fixed Auditorium Seating	\$0.00	\$0.00	No auditorium
Telescoping Bleachers	\$0.00	\$0.00	Not applicable
Asbestos Removal	\$3.85	\$529,998.70	Remove existing asbestos containing materials
Fire Protection	\$3.78	\$520,382.36	retrofit into existing building / new at addition
Elevator	\$0.00	\$0.00	Not applicable
Plumbing	\$8.38	\$1,153,607.56	replace much of existing / provide @ new addition
HVAC	\$22.87	\$3,148,329.94	replace existing / provide @ new addition
Electrical & Telecom.	\$16.25	\$2,237,007.50	renovate existing / provide @ new addition
Modular Classrooms	\$2.18	\$300,000.00	Must purchase modular classrooms for swing space
Total Building cost	\$186.22	\$25,635,130.01	
Total Site cost	\$11.21	\$1,543,191.02	
Total Building & Site	\$197.43	\$27,178,321.03	
A/E Fees		\$2,448,048.89	
Topographical survey		\$30,000.00	
Geotech investigation		\$28,000.00	
Permitting		\$35,000.00	
On-site supervision by Owner		\$125,000.00	
Move Management		\$40,000.00	
Owner admin. Costs		\$10,000.00	
Printing / Advertising		\$75,000.00	
Construction testing		\$50,000.00	Includes additional abatement monitoring
Furniture & Equipment \$1,000 per student		\$900,000.00	purchase and install new furniture, fixtures, and equip.
Technology \$1000 per students		\$900,000.00	purchase and install new technology equipment as recommended
Project Contingency		\$2,717,832.10	project and construction contingency 10.0% of Construction
Project Management		\$543,566.42	
Total Project Cost	\$254.82	\$35,078,768.45	
SBAB Reimbursement	\$152.89	\$21,047,261.07	60%
Total Cost to East Bridgewater	\$101.93	\$14,031,507.38	40%

\* Costs are derived from a database of Massachusetts Public School projects which were bid during year 2005. Two years of 4% inflation have been added to all costs to reflect current market conditions.  
\* Costs do not include interest and other borrowing costs  
\* SBAB reimbursement is an estimate. Exact reimbursement is determined after a full project submittal is made to the School Building Assistance Program

Cost Analysis	750 Students	Renovation	160,542	Renovation East Bridgewater High School
Renovation				
East Bridgewater HS		Renovation	160,542	
		Addition	0	
21-May-07	Cost/SF	Cost	Comments	
Sitework	\$17.76	\$2,851,225.92	Earthwork, parking, paving, lawn, fields, planting	
Wastewater Treatment Facility	\$18.10	\$2,905,810.20	Treatment facility serving all adjacent town buildings	
Phasing	\$11.83	\$1,867,103.46	Phased/occupied construction assumed - extend construction period	
General Conditions	\$13.21	\$2,120,759.82	Contractor's overhead, profit, and mobilization	
Demolition	\$4.81	\$772,207.02	Selective interior demolition - multiple phases	
Lead Removal	\$1.03	\$165,358.28	Lead abatement	
Concrete & Rebar	\$1.40	\$224,758.80	Saw-cut and replacement of existing where required	
Masonry	\$20.32	\$3,262,213.44	Repointing of exterior. Partial Replace int/ext. Restore finish, Replace lintels, etc	
Structural Steel	\$6.89	\$1,074,025.98	Seismic mod. at exstg. bldg.	
Exterior Metal Studs & Sheathing	\$3.86	\$619,692.12	Infill areas and replacement areas. Rear wall replacement. Soffits	
Misc. Metals	\$5.66	\$908,667.72	Stairs, railings, lintels, roof edge angles, and misc. ornamental	
Stair	\$0.00	\$0.00	Not applicable - included in misc. metals	
Expansion Joints	\$0.21	\$33,713.82	Wall, Ceiling, Floor Interior and Exterior Retro fit existing building	
Rough Carpentry	\$1.24	\$199,072.08	rough blocking, sills, lockers, casework, shelving, etc.	
Millwork and Woodwork	\$7.83	\$1,224,935.46	Display cases, paneling, wainscoting, cafeteria, library, etc.	
Glass Fiber Reinforced Plastic	\$0.90	\$144,487.80	Main Entry, Cafeterium, and Public Spaces	
Roofing and Flashing	\$7.25	\$1,163,929.50	Replacement incl. Insulation - Membrane Roofing, partial asphalt shingles	
Dampproofing and Caulking	\$1.28	\$205,493.76	dampproofing, vapor barrier, sealants	
Building Insulation and Vapor Barrier	\$4.04	\$648,569.68	Energy code modifications to exterior walls	
Spray Fireproofing	\$0.98	\$157,331.18	Spray Fireproofing - protection of existing structure	
Exterior Insulation Finish System	\$0.91	\$146,093.22	Exterior soffits and miscellaneous accent replacements	
Skylights	\$0.81	\$130,039.02	Misc. skylight additions	
Firestopping	\$0.19	\$30,502.98	Wall Terminations, Pipe Penetrations, Conduits, etc	
Steel Door Frames	\$0.70	\$112,379.40	Interior and Exterior Steel Door Frames to be painted	
Steel Doors	\$0.29	\$46,557.18	Fire rated doors	
Wood Doors	\$0.79	\$126,828.18	Interior Wood Doors	
Hardware	\$1.23	\$197,466.66	Door hardware including latches, hinges, panic hardware, locksets, sweeps, etc	
Access Doors	\$0.05	\$8,027.10	Access panels located in walls and ceilings for access to mechanical, plumbing	
Overhead Coiling Doors	\$0.20	\$32,108.40	Roll up Doors for loading dock and interior coiling grilles for foodservice	
Alum. Windows, Storefront, Curtainwall	\$8.89	\$1,106,134.38	New windows, storefront, curtainwall	
Glass & Glazing	\$0.49	\$76,665.58	Interior doors and windows, rated and non-rated glass	
Interior Metal Framing	\$4.73	\$759,363.66	Interior doors and half height partitions. Furring over existing walls.	
Gypsum Drywall / Veneer plaster	\$6.22	\$996,571.24	new drywall/veneer plaster and soffit board	
Ceramic, Quarry, and Porcelain Tile	\$1.89	\$271,315.98	Entry vestibules, main lobby, kitchen, high traffic areas	
Acoustical Ceilings	\$2.26	\$362,824.92	New lay-in ceiling system	
Wood Flooring- Gym and Stage	\$1.79	\$287,370.18	Gymnasium and auditorium stage	
Resilient Flooring	\$2.34	\$375,668.28	Vinyl composition tile and sheet vinyl	
Carpet	\$0.42	\$67,427.64	Library media and administrative areas	
Acoustical Panels	\$0.43	\$69,033.06	Acoustical treatment at cafeteria, music room	
Painting	\$1.81	\$290,581.02	Paint at interior and exterior	
Markerboards and Tackboards	\$0.64	\$102,746.88	Install Markerboards and tackboards	
Toilet Partitions and Screens	\$0.23	\$36,924.66	Install toilet partitions and urinal screens	
Architectural Louvers	\$0.27	\$43,346.34	Install exterior mechanical and ventilation louvers and screens	
Signage and Graphics	\$0.23	\$36,924.66	Install exterior and interior building signage	
Metal Lockers	\$0.90	\$144,487.80	Install new metal lockers	
Fire Extinguisher Cabinets	\$0.07	\$11,237.94	Install new fire extinguisher cabinets	
Toilet Accessories	\$0.18	\$28,897.58	Install Paper towel, soap, toilet paper dispensers, mirrors, coat hooks, etc.	
Stage Curtains and Rigging	\$0.74	\$118,801.08	Install stage curtain and rigging at auditorium	
Fixed Auditorium Seating	\$0.51	\$81,876.42	Replacement of auditorium seating	
Projection Screens	\$0.13	\$20,870.48	Install new projection screens @ all classrooms	
Food Service Equip.	\$2.35	\$377,273.70	New equipment for full service kitchen	
Appliances	\$0.30	\$48,162.60	Misc. appliances	
Gym Backstop	\$0.36	\$57,795.12	Install backstops and provide motorized main court backstop	
Gym Divider Curtain	\$0.32	\$51,373.44	Install motorized dividing curtain with mesh top	
Wall Pads	\$0.20	\$32,108.40	Install wall pads at perimeter of gym	
Misc. Gymnasium Equipment	\$0.10	\$16,054.20	Install floor sleeves and misc. PE equipment	
Casework / Fixed	\$5.38	\$863,715.96	Provide new casework @ classrooms, media center, administration, etc.	
Entrance Mats	\$0.16	\$25,686.72	Provide at all main vestibules	
Telescoping Bleachers	\$0.60	\$96,325.20	Electrically operated bleachers at Gymnasium	
Asbestos Removal	\$7.12	\$1,143,059.04	Phased abatement of existing building	
Fire Protection	\$2.99	\$480,020.58	Fully sprinklered building	
Elevator	\$0.97	\$155,725.74	Two multi-stop hioeless hydraulic elevator	
Plumbing	\$9.03	\$1,449,694.26	Install new plumbing systems throughout	
HVAC	\$26.23	\$4,211,016.66	Install new HVAC systems throughout	
Electrical & Telecom.	\$18.82	\$2,989,292.04	Install new electrical systems throughout	
Modular Classrooms	\$3.88	\$622,902.96	Modular classrooms required for occupied renovation	
<b>Total Building cost</b>	<b>\$208.89</b>	<b>\$33,535,618.36</b>		
<b>Total Site cost</b>	<b>\$35.86</b>	<b>\$2,851,225.92</b>		
<b>Total Building &amp; Site</b>	<b>\$244.75</b>	<b>\$36,386,844.30</b>		
A/E Fees		\$3,082,881.77		
Topographical survey		\$32,000.00		
Geotech investigation		\$18,000.00		
Permitting		\$40,000.00		
On-site supervision by Owner		\$275,000.00		
Move Management		\$150,000.00		
Owner admin. Costs		\$30,000.00		
Printing / Advertising		\$75,000.00		
Construction testing		\$30,000.00		
Haz Mat removal monitoring		\$125,000.00		
Furniture & Equipment \$1,250 per student		\$937,500.00	purchase and install new furniture, fixtures, and equip.	
Technology \$1250 per students		\$937,500.00	purchase and install new technology equipment as recommended	
FF&E and Technology Consultants		\$131,250.00		
Project Contingency		\$3,638,684.43	project and construction contingency 10% of Construction	
Project Management		\$727,736.89		
<b>Total Project Cost</b>	<b>\$290.44</b>	<b>\$46,627,397.38</b>		
SBAB Reimbursement	\$174.26	\$27,976,438.43	60%	
<b>Total Cost to E. Bridgewater</b>	<b>\$116.17</b>	<b>\$18,650,958.95</b>	<b>40%</b>	

\* Costs are derived from a database of Massachusetts Public School projects which were bid during year 2006/2007. Two years of 5% inflation have been added to all costs to reflect a construction start in the spring of 2009.

\* Costs do not include interest and other borrowing costs

\* SBAB reimbursement is an estimate. Exact reimbursement is determined after a full project submittal is made to the

Cost Analysis		900 Students	New Central Elementary School
New Central Elementary		New Construction: 128,700	
21-May-07			
	Cost/SF	Cost	Comments
Sitework	\$14.11	\$1,815,957.00	Earthwork, parking, paving, lawn, fields, planting
Wastewater Treatment Facility	\$0.00	\$0.00	Not applicable - assume tie into new HS system
Phasing	\$0.00	\$0.00	Not applicable
General Conditions	\$12.38	\$1,593,308.00	Contractor's overhead, profit, and mobilization
Demolition	\$6.28	\$808,236.00	Demolition and removal of existing building
Lead Removal	\$0.00	\$0.00	Not applicable - included in demolition
Concrete & Rebar	\$8.21	\$1,056,627.00	foundations, footings, slab
Masonry	\$33.88	\$4,357,782.00	Exterior and interior masonry and pre-cast concrete
Structural Steel	\$18.23	\$2,346,201.00	New structural steel
Exterior Metal Studs & Sheathing	\$8.89	\$1,144,143.00	Exterior cold formed metal framing
Misc. Metals	\$5.41	\$696,267.00	Stairs, railings, lintels, roof edge angles, and misc. ornamental
Stair	\$0.00	\$0.00	Not applicable - included in misc. metals
Expansion Joints	\$0.24	\$30,888.00	Wall, Ceiling, Floor Interior and Exterior
Rough Carpentry	\$1.78	\$229,088.00	rough blocking, sills, lockers, casework, shelving, etc.
Millwork and Woodwork	\$7.92	\$1,019,304.00	Display cases, paneling, wainscoting, cafeteria, library, etc.
Glass Fiber Reinforced Plastic	\$1.43	\$184,041.00	Main Entry, Cafeteria, and Public Spaces
Roofing and Flashing	\$8.38	\$1,075,932.00	Membrane Roofing, partial asphalt shingles
Dampproofing and Caulking	\$1.79	\$230,373.00	dampproofing, vapor barrier, sealants
Building Insulation and Vapor Barrier	\$2.91	\$374,517.00	New exterior wall insulation / under slab insul. @ barrier
Spray Fireproofing	\$0.34	\$43,758.00	Spray Fireproofing
Exterior Insulation Finish System	\$1.98	\$252,252.00	Exterior Insulation Finish System
Skylights	\$1.28	\$164,738.00	Cafeteria, Library Media Center
Firestopping	\$0.28	\$33,482.00	Wall Terminations, Pipe Penetrations, Conduits, etc
Steel Door Frames	\$0.84	\$108,108.00	Interior and Exterior Steel Door Frames to be painted
Steel Doors	\$0.29	\$37,323.00	Fire rated doors
Wood Doors	\$0.79	\$101,873.00	Interior Wood Doors
Hardware	\$1.41	\$181,467.00	Door hardware including latches, hinges, panic hardware, locksets, sweeps, etc
Access Doors	\$0.05	\$6,435.00	Access panels located in walls and ceilings for access to mechanical, plumbing
Overhead Coiling Doors	\$0.20	\$25,740.00	Roll up Doors for loading dock and interior coiling grilles for foodservice
Alum. Windows, Storefront, Curtainwall	\$7.31	\$940,797.00	New windows, storefront, curtainwall
Glass & Glazing	\$1.47	\$189,189.00	Interior doors and windows, rated and non-rated glass
Interior Metal Framing	\$6.13	\$788,931.00	Interior walls and half height partitions
Gypsum Drywall / Veneer plaster	\$6.43	\$827,541.00	New drywall/veneer plaster and soffit board
Ceramic, Quarry, and Porcelain Tile	\$1.67	\$214,929.00	Entry vestibules, main lobby, kitchen, high traffic areas
Acoustical Ceilings	\$2.28	\$293,436.00	New lay-in ceiling system
Wood Flooring- Gym and Stage	\$1.23	\$158,301.00	Gymnasium and auditorium stage
Resilient Flooring	\$2.13	\$274,131.00	Vinyl composition tile and sheet vinyl
Carpet	\$0.42	\$54,054.00	Library media and administrative areas
Acoustical Panels	\$0.43	\$55,341.00	Acoustical treatment at cafeteria, music room
Painting	\$1.89	\$243,243.00	Paint at interior and exterior
Markerboards and Tackboards	\$0.64	\$82,388.00	Install Markerboards and tackboards
Toilet Partitions and Screens	\$0.23	\$29,801.00	Install toilet partitions and urinal screens
Architectural Louvers	\$0.26	\$33,482.00	Install exterior mechanical and ventilation louvers and screens
Signage and Graphics	\$0.23	\$29,801.00	Install exterior and interior building signage
Metal Lockers	\$0.89	\$114,543.00	Install new metal lockers
Fire Extinguisher Cabinets	\$0.07	\$9,009.00	Install new fire extinguisher cabinets
Toilet Accessories	\$0.18	\$23,186.00	Install Paper towel, soap, toilet paper dispensers, mirrors, coat hooks, etc.
Stage Curtains and Rigging	\$0.29	\$37,323.00	Install stage curtain at cafeteria stage
Fixed Auditorium Seating	\$0.00	\$0.00	Not applicable
Projection Screens	\$0.13	\$16,731.00	Install new projection screens @ all classrooms
Food Service Equip.	\$1.93	\$248,391.00	New equipment for full service kitchen
Appliances	\$0.11	\$14,157.00	Misc. appliances
Gym Backstop	\$0.38	\$46,332.00	Install backstops and provide motorized main court backstop
Gym Divider Curtain	\$0.32	\$41,184.00	Install motorized dividing curtain with mesh top
Wall Pads	\$0.19	\$24,453.00	Install wall pads at perimeter of gym
Misc. Gymnasium Equipment	\$0.11	\$14,157.00	Install floor sleeves and misc. PE equipment
Casework / Fixed	\$6.09	\$783,783.00	Provide new casework @ classrooms, media center, administration, etc.
Entrance Mats	\$0.16	\$20,592.00	Provide at all main vestibules
Telescoping Bleachers	\$0.34	\$43,758.00	3 rows bleachers @ gym
Asbestos Removal	\$1.87	\$214,929.00	Required abatement prior to demolition
Fire Protection	\$2.93	\$377,091.00	Fully sprinklered building
Elevator	\$0.71	\$91,377.00	One multi-stop holess hydraulic elevator
Plumbing	\$6.39	\$1,079,793.00	Install new plumbing systems throughout
HVAC	\$25.63	\$3,298,581.00	Install new HVAC systems throughout
Electrical & Telecom.	\$17.31	\$2,227,797.00	Install new electrical systems throughout
Modular Classrooms	\$0.00	\$0.00	Not applicable
Total Building cost	\$225.67	\$29,043,729.00	
Total Site cost	\$14.11	\$1,815,957.00	
Total Building & Site	\$239.78	\$30,859,686.00	
A/E Fees		\$2,237,327.24	
Topographical survey		\$32,000.00	
Geotech investigation		\$28,000.00	
Permitting		\$30,000.00	
On-site supervision by Owner		\$175,000.00	
Move Management		\$40,000.00	
Owner admin. Costs		\$10,000.00	
Printing / Advertising		\$75,000.00	
Construction testing		\$40,000.00	
Haz Mat removal monitoring		\$30,000.00	
Furniture & Equipment \$1,000 per student		\$900,000.00	purchase and install new furniture, fixtures, and equip.
Technology \$1000 per students		\$900,000.00	purchase and install new technology equipment as recommended
FF&E and Technology Consultants		\$128,000.00	
Project Contingency		\$1,542,984.30	project and construction contingency 5.0% of Construction
Project Management		\$540,044.51	
Total Project Cost	\$291.89	\$37,566,042.04	
SBAB Reimbursement	\$175.13	\$22,539,825.22	80%
Total Cost to E. Bridgewater	\$116.76	\$15,026,416.82	40%

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Cost Analysis New East Bridgewater HS		750 Students	New East Bridgewater High School
21-May-07		New Construction: 154,288	
	Cost/SF	Cost	Comments
Sitework	\$23.17	\$3,574,852.96	Earthwork, parking, paving, lawn, fields, planting
Wastewater Treatment Facility	\$19.38	\$2,990,101.44	Treatment facility serving all adjacent town buildings
Phasing	\$0.00	\$0.00	Not applicable
General Conditions	\$13.78	\$2,126,088.64	Contractor's overhead, profit, and mobilization
Demolition	\$4.47	\$689,687.36	Demolition and removal of existing building
Lead Removal	\$0.00	\$0.00	Not applicable - included in demolition
Concrete & Rebar	\$8.02	\$1,237,389.76	foundations, footings, slab
Masonry	\$32.32	\$4,986,588.16	Exterior and interior masonry and pre-cast concrete
Structural Steel	\$16.88	\$2,604,381.44	New structural steel
Exterior Metal Studs & Sheathing	\$8.61	\$1,328,419.68	Exterior cold formed metal framing
Misc. Metals	\$5.44	\$839,326.72	Stairs, railings, lintels, roof edge angles, and misc. ornamental
Stair	\$0.00	\$0.00	Not applicable - included in misc. metals
Expansion Joints	\$0.17	\$26,228.96	Wall, Ceiling, Floor Interior and Exterior
Rough Carpentry	\$1.64	\$253,032.32	rough blocking, sills, lockers, casework, shelving, etc.
Millwork and Woodwork	\$8.25	\$1,272,876.00	Display cases, paneling, wainscoting, cafeteria, library, etc.
Glass Fiber Reinforced Plastic	\$1.58	\$243,775.04	Main Entry, Cafetorium, and Public Spaces
Roofing and Flashing	\$7.91	\$1,220,418.08	Membrane Roofing, partial asphalt shingles
Dampproofing and Caulking	\$1.69	\$260,746.72	dampproofing, vapor barrier, sealants
Building Insulation and Vapor Barrier	\$2.79	\$430,463.52	New exterior wall insulation
Spray Fireproofing	\$0.49	\$75,601.12	Spray Fireproofing
Exterior Insulation Finish System	\$2.25	\$347,148.00	Exterior Insulation Finish System
Skylights	\$1.23	\$189,774.24	Cafeteria, Library Media Center
Firestopping	\$0.23	\$35,486.24	Wall Terminations, Pipe Penetrations, Conduits, etc
Steel Door Frames	\$0.80	\$123,430.40	Interior and Exterior Steel Door Frames to be painted
Steel Doors	\$0.29	\$44,743.52	Fire rated doors
Wood Doors	\$0.79	\$121,887.52	Interior Wood Doors
Hardware	\$1.58	\$243,775.04	Door hardware including latches, hinges, panic hardware, locksets, sweeps, etc
Access Doors	\$0.05	\$7,714.40	Access panels located in walls and ceilings for access to mechanical, plumbing
Overhead Coiling Doors	\$0.20	\$30,857.60	Roll up Doors for loading dock and interior coiling grilles for foodservice
Alum. Windows, Storefront, Curtainwall	\$7.41	\$1,143,274.08	New windows, storefront, curtainwall
Glass & Glazing	\$1.59	\$245,317.92	Interior doors and windows, rated and non-rated glass
Interior Metal Framing	\$5.86	\$904,127.68	Interior walls and half height partitions
Gypsum Drywall / Veneer plaster	\$6.22	\$959,871.36	New drywall/veneer plaster and soffit board
Ceramic, Quarry, and Porcelain Tile	\$1.69	\$260,746.72	Entry vestibules, main lobby, kitchen, high traffic areas
Acoustical Ceilings	\$2.28	\$348,690.88	New lay-in ceiling system
Wood Flooring- Gym and Stage	\$1.79	\$276,175.52	Gymnasium and auditorium stage
Resilient Flooring	\$2.34	\$361,033.92	Vinyl composition tile and sheet vinyl
Carpet	\$0.42	\$64,800.96	Library media and administrative areas
Acoustical Panels	\$0.64	\$98,744.32	Acoustical treatment at cafetorium, music room
Painting	\$1.81	\$279,261.28	Paint at interior and exterior
Markerboards and Tackboards	\$0.84	\$98,744.32	Install Markerboards and tackboards
Toilet Partitions and Screens	\$0.23	\$35,486.24	Install toilet partitions and urinal screens
Architectural Louvers	\$0.27	\$41,657.76	Install exterior mechanical and ventilation louvers and screens
Signage and Graphics	\$0.23	\$35,486.24	Install exterior and interior building signage
Metal Lockers	\$0.90	\$138,859.20	Install new metal lockers
Fire Extinguisher Cabinets	\$0.07	\$10,800.16	Install new fire extinguisher cabinets
Toilet Accessories	\$0.18	\$27,771.84	Install Paper towel, soap, toilet paper dispensers, mirrors, coat hooks, etc.
Stage Curtains and Rigging	\$0.99	\$152,745.12	Install stage curtain and rigging at auditorium stage
Fixed Auditorium Seating	\$0.87	\$134,230.56	750 seat auditorium
Projection Screens	\$0.13	\$20,057.44	Install new projection screens @ all classrooms
Food Service Equip.	\$2.64	\$407,320.32	New equipment for full service kitchen
Appliances	\$0.30	\$46,288.40	Misc. appliances
Gym Backstop	\$0.38	\$55,543.68	Install backstops and provide motorized main court backstop
Gym Divider Curtain	\$0.32	\$49,372.16	Install motorized dividing curtain with mesh top
Wall Pads	\$0.20	\$30,857.60	Install wall pads at perimeter of gym
Misc. Gymnasium Equipment	\$0.28	\$40,114.88	Install floor sleeves and misc. PE equipment
Casework / Fixed	\$6.49	\$1,001,329.12	Provide new casework @ classrooms, media center, administration, etc.
Entrance Mats	\$0.30	\$46,288.40	Provide at all main vestibules
Telescoping Bleachers	\$0.60	\$92,572.80	Electrically operated bleachers at Gymnasium
Asbestos Removal	\$1.69	\$260,746.72	Required abatement prior to demolition
Fire Protection	\$2.98	\$459,778.24	Fully sprinklered building
Elevator	\$0.70	\$108,001.60	One multi-stop hoiless hydraulic elevator
Plumbing	\$8.55	\$1,319,162.40	Install new plumbing systems throughout
HVAC	\$25.14	\$3,878,800.32	Install new HVAC systems throughout
Electrical & Telecom.	\$17.59	\$2,713,925.92	Install new electrical systems throughout
Modular Classrooms	\$0.00	\$0.00	Not applicable
Total Building cost	\$226.12	\$34,887,802.56	
Total Site cost	\$23.17	\$3,574,852.96	
Total Building & Site	\$249.29	\$38,462,655.52	
A/E Fees		\$2,692,371.89	
Topographical survey		\$32,000.00	
Geotech investigation		\$38,000.00	
Permitting		\$40,000.00	
On-site supervision by Owner		\$175,000.00	
Move Management		\$40,000.00	
Owner admin. Costs		\$10,000.00	
Printing / Advertising		\$75,000.00	
Construction testing		\$50,000.00	
Haz Mat removal monitoring		\$85,000.00	
Furniture & Equipment \$1,250 per student		\$937,500.00	purchase and install new furniture, fixtures, and equip.
Technology \$1250 per students		\$937,500.00	purchase and install new technology equipment as recommended
FF&E and Technology Consultants		\$131,250.00	
Project Contingency		\$1,923,122.78	project and construction contingency 5% of Construction
Project Management		\$673,092.97	
Total Project Cost	\$300.10	\$46,302,293.15	
SBAB Reimbursement	\$180.06	\$27,781,375.89	60%
Total Cost to E. Bridgewater	\$120.04	\$18,520,917.26	40%

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