



Wellesley Elementary Schools  
Hardy, Hunnewell, Upham and North 40 Site  
Wellesley, MA

October 21, 2015

## Concept Design Options Estimate

**Design Architect:**

SMMA  
1000 Massachusetts Avenue  
Cambridge, MA 02138

**Estimator:**

Daedalus Projects Incorporated  
112 South Street  
Boston, MA 02111  
(617) 451 2717

## INTRODUCTION

### Project Description:

- Three (3) Existing Elementary School Sites, Hardy, Hunnewell & Upham Schools, and One (1) New Site Called "North 40"
- This project has various options

### Options:

- This Estimate analysis the following Options:
  - North 40 Site: New School for 660 Students
  - North 40 Site: New School for 536 Students
  - Hardy: Renovation (Historic Only)
  - Hardy: New School for 536 Students
  - Hardy: New School for 660 Students
  - Hardy: Historic Only & New for 660 Students
  - Hardy: Historic Only & Addition 308 Students
  - Hardy: "Repair Only" 308 Students
  - Hunnewell: Renovation & Addition 425 Students
  - Hunnewell: Renovation & Addition 536 Students
  - Hunnewell: New School for 536 Students
  - Hunnewell: Renovation & Addition 330 Students
  - Hunnewell: "Repair Only" 330 Students
  - Upham: New School for 536 Students
  - Upham: Renovation & Addition 536 Students
  - Upham: New School 264 Students
  - Upham: "Repair Only" 264 Students
- Public Roadway Extension at Hardy Elementary School: \$296,100

### Project Particulars:

- Drawings received June 2014 from SMMA
- Daedalus Projects, Inc. experience with similar projects of this nature
- Dollar rates are based on historical data and recent bid results on projects similar to these projects.
- See Daedalus estimate, dated June 17, 2015 for detail estimate of "Repair Only" options

## INTRODUCTION

### (Continued)

#### Project Assumptions:

- The project will be constructed by CM at Risk
- Unit rates are based on current dollars, using prevailing wages
- Project assumes a full gut renovation (except to the new construction projects and repair only projects) based on recent bid results of similar size and type
- Sitework based on on-site utilities and not on any off site utilities
- Escalation to start  
This project has
- Escalation during construction duration has been included in the unit rate details
- Subcontractor's markups have been included in each unit rate. Markups cover the cost of field overhead home office overhead home office overhead and subcontractor's profit
- Contractor's Construction Contingency markup is an allowance for unforeseen design issues, design detail development and specification clarifications
- General Conditions and Requirements value covers site management, scaffolding, staging and access, temporary protection, cleaning, SubContractor's General Conditions, site office overheads
- Insurance and Bonds markup is calculated on a percentage basis of direct construction costs. The value covers Contractor's Builder's Risk Insurance, General Liability, Sub-Contractor Bonds, and Performance Bond
- Fee markup is calculated on a percentage basis of direct construction costs

#### Project Exclusions:

- Work beyond the boundary of the site, such as any sitework improvements, traffic issues, etc.
- Owner's Project Administration
- Owner's Project Management (OPM) Fees
- Architectural/Engineering; Designer and other Professional fees, testing, printing, surveying
- Project costs; utility company back charges, construction of temporary facilities, relocation
- Testing
- Specialties, loose furnishings, fixtures and equipment beyond those noted
- Cost associated with demolition or "mothballing" of unused facilities

# Chart of Options

(including Wellesley College "North 40" Site)

Study	North 40 Site	Hardy Elementary	Hunnewell Elementary	Upham Elementary	Population	Cost Total	Cost/Student
1.	New School 660-Students 95,700 GSF New  \$35,620,734	Close School Renovation (Historic Only) 15,116 GSF Renovation  \$6,768,117 **	Renovation & Addition 425-Students 47,613 GSF Addition 22,687 GSF Renovation \$32,704,077	Close	1,085	<b>166,000 GSF</b>  <b>\$68,324,811</b>	\$62,972
2.	New School 536-Students 81,722 GSF \$31,820,807	Close	Close	New School 536-Students 81,722 GSF New \$35,204,701	1,072	<b>163,444 GSF</b>  <b>\$67,025,508</b>	\$62,524
3.	N/A	New School 536-Students 81,722 GSF New \$31,993,171 Renovation (Historic Only) 15,116 GSF Renovation \$6,768,117 **	Renovation & Addition 425-Students 47,613 GSF Addition 22,687 GSF Renovation \$27,012,360	Close	961	<b>152,022 GSF</b>  <b>\$59,005,531</b>	\$61,400
4.	N/A	New School 660-Students 95,700 GSF New \$35,900,517	Close	New School 536-Students 81,722 GSF New \$35,204,701	1,196	<b>177,422 GSF</b>  <b>\$71,105,218</b>	\$59,453
5.	N/A	Close	Renovation & Addition 425-Students 47,613 GSF Addition 22,687 GSF Renovation \$27,012,360	New School 536-Students 81,722 GSF New \$35,204,701	961	<b>152,022 GSF</b>  <b>\$62,217,061</b>	\$64,742
6.	N/A	New School 660-Students 95,700 GSF Renovation (Historic Only) 15,116 GSF Renovation \$41,386,163	New School 536-Students 81,722 GSF New \$36,636,300	Renovation & Addition 536-Students 57,241 GSF Addition 24,481 GSF Renovation \$35,022,733	1,732	<b>274,260 GSF</b>  <b>\$113,045,196</b>	\$65,269
7.	Two Phases Summer Construction N/A	Renovation & Modular 308-Students 45,909 GSF \$15,331,791	Renovation & Modular 330-Students 36,441 GSF \$11,736,510	Renovation & Modular 264-Students 36,481 GSF \$11,200,481	902	<b>118,831 GSF</b>  <b>\$38,268,782</b>	\$42,427
7a.	Single Phase Summer Construction N/A	Renovation & Modular 308-Students 45,909 GSF \$13,937,992 30 Modulares \$4,717,137 ***	Renovation & Modular 330-Students 36,441 GSF \$10,669,554 30 Modulares \$4,717,137 ***	Renovation & Modular 264-Students 36,481 GSF \$10,182,256 30 Modulares \$4,717,137 ***	902	<b>118,831 GSF</b>  <b>*** \$48,941,213</b>	\$54,259
8.	N/A	Renovation & Addition 308-Students 40,037 GSF New Renovation (Historic Only) 15,116 GSF Renovation \$21,682,330 1.5Yr Leased Modular (1) Classrm \$521,084	Renovation & Addition 330-Students 35,558 GSF New 22,687 GSF Renovation  \$24,109,260	New School 264-Students 47,523 GSF New  \$25,292,293 3Yr Leased Modular (3) Classrms \$1,627,211	902	<b>160,921 GSF</b>  <b>\$73,232,178</b>	\$81,189

\*\* Renovation Cost For Historic Hardy School For Reference Only - Not Carried In Final Cost

\*\*\* Modular Cost Will Be Reduced By Redundant Install and Removal Cost Based On Final Master Plan Sequence





**DIRECT TRADE COST SUMMARY**

TRADE DESCRIPTION	North 40 Sitemap	Hardy Sitemap for New	Hunnewell Sitemap for New	Hunnewell Sitemap for Renovation & New	Upham Sitemap	New School for 660 Students		New School for 536 Students		Hardy: 15,116 GSF		Hunnewell Renovation 22,687 GSF		Hunnewell Addition 47,613 GSF		Hunnewell Renovation 18,917 GSF		Hunnewell Addition 62,805 GSF		Upham Renovation 24,481 GSF		Upham Addition 57,241 GSF		New School for 308 Students 55,153 GSF		New School for 330 Students 58,245 GSF		New School for 264 Students 47,523 GSF					
						Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF	Total	Cost/GSF
A10 FOUNDATIONS						\$1,802,810	\$18.84	\$1,515,685	\$18.55	\$0	\$0.00	\$0	\$0.00	\$846,384	\$17.78	\$0	\$0.00	\$1,098,828	\$17.50	\$0	\$0.00	\$846,384	\$14.79	\$0	\$0.00	\$908,832	\$16.48	\$955,831	\$16.41	\$808,204	\$17.01		
A20 BASEMENT						\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00		
B10 STRUCTURE						\$2,955,765	\$30.89	\$2,534,044	\$31.01	\$0	\$0.00	\$0	\$0.00	\$1,527,310	\$32.08	\$0	\$0.00	\$1,973,749	\$31.43	\$0	\$0.00	\$1,890,286	\$33.02	\$1,752,977	\$31.78	\$1,850,019	\$31.78	\$1,513,509	\$31.85				
B20 EXTERIOR CLOSURE						\$4,425,673	\$46.25	\$3,717,137	\$45.49	\$1,197,500	\$79.22	\$1,539,875	\$67.87	\$2,351,616	\$49.39	\$1,499,000	\$79.24	\$2,725,816	\$43.40	\$1,907,750	\$77.93	\$2,351,616	\$41.08	\$2,268,528	\$41.13	\$2,367,581	\$40.65	\$2,103,440	\$44.28				
B30 ROOFING						\$1,163,250	\$12.16	\$997,750	\$12.21	\$279,646	\$18.50	\$419,710	\$18.50	\$550,900	\$11.57	\$349,965	\$18.50	\$749,500	\$11.93	\$452,899	\$18.50	\$550,900	\$9.62	\$635,169	\$11.52	\$665,873	\$11.43	\$559,403	\$11.77				
C10 INTERIOR CONSTRUCTION						\$2,715,152	\$28.37	\$2,405,558	\$29.62	\$532,234	\$35.21	\$716,441	\$31.58	\$1,785,184	\$37.49	\$633,123	\$33.47	\$2,052,429	\$32.68	\$749,450	\$30.61	\$1,959,344	\$34.23	\$1,908,149	\$34.60	\$1,965,650	\$33.75	\$1,769,086	\$37.23				
C20 STAIRCASES						\$122,000	\$1.27	\$122,000	\$1.49	\$10,000	\$0.66	\$10,000	\$0.44	\$71,000	\$1.49	\$10,000	\$0.53	\$71,000	\$1.13	\$10,000	\$0.41	\$71,000	\$1.24	\$122,000	\$2.21	\$122,000	\$2.09	\$122,000	\$2.57				
C30 INTERIOR FINISHES						\$1,994,845	\$20.84	\$1,834,319	\$22.45	\$483,080	\$31.96	\$725,035	\$31.96	\$1,179,069	\$24.76	\$604,553	\$31.96	\$1,393,416	\$22.19	\$782,368	\$31.96	\$1,314,903	\$22.97	\$1,226,147	\$22.23	\$1,270,282	\$21.81	\$1,117,195	\$23.51				
D10 CONVEYING SYSTEMS						\$102,200	\$1.07	\$102,200	\$1.25	\$0	\$0.00	\$0	\$0.00	\$102,200	\$2.15	\$0	\$0.00	\$102,200	\$1.63	\$0	\$0.00	\$102,200	\$1.79	\$102,200	\$1.85	\$102,200	\$1.75	\$102,200	\$2.15				
D20 PLUMBING						\$594,200	\$6.10	\$500,332	\$6.12	\$75,580	\$5.00	\$113,435	\$5.00	\$295,678	\$6.21	\$94,585	\$5.00	\$398,830	\$6.16	\$122,405	\$5.00	\$353,446	\$6.17	\$451,224	\$8.18	\$475,960	\$8.17	\$390,184	\$8.21				
D30 HVAC						\$2,891,000	\$30.21	\$2,471,660	\$30.24	\$453,480	\$30.00	\$680,610	\$30.00	\$1,448,390	\$30.42	\$567,510	\$30.00	\$1,904,150	\$30.32	\$734,430	\$30.00	\$1,737,230	\$30.35	\$1,674,590	\$30.36	\$1,767,350	\$30.34	\$1,445,690	\$30.42				
D40 FIRE PROTECTION						\$349,520	\$3.65	\$299,199	\$3.66	\$68,022	\$4.50	\$102,092	\$4.50	\$176,407	\$3.71	\$85,127	\$4.50	\$231,098	\$3.68	\$110,165	\$4.50	\$211,068	\$3.69	\$203,551	\$3.69	\$214,682	\$3.69	\$176,083	\$3.71				
D50 ELECTRICAL						\$2,881,000	\$30.10	\$2,461,660	\$30.12	\$423,248	\$28.00	\$635,236	\$28.00	\$1,438,390	\$30.21	\$529,676	\$28.00	\$1,894,150	\$30.16	\$685,468	\$28.00	\$1,727,230	\$30.17	\$1,664,590	\$30.18	\$1,757,350	\$30.17	\$1,435,690	\$30.21				
E10 EQUIPMENT						\$880,938	\$9.00	\$880,938	\$10.53	\$75,580	\$5.00	\$113,435	\$5.00	\$493,000	\$10.35	\$94,585	\$5.00	\$493,000	\$7.85	\$122,405	\$5.00	\$493,000	\$8.61	\$724,518	\$13.14	\$729,029	\$12.53	\$711,165	\$14.96				
E20 FURNISHINGS						\$622,696	\$6.51	\$590,213	\$7.22	\$151,160	\$10.00	\$226,870	\$10.00	\$527,611	\$11.08	\$189,170	\$10.00	\$544,766	\$8.67	\$244,810	\$10.00	\$527,611	\$9.22	\$478,627	\$8.68	\$504,812	\$8.67	\$417,649	\$8.79				
F10 SPECIAL CONSTRUCTION						\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00	\$0	\$0.00		
F20 SELECTIVE DEMOLITION						\$0	\$0.00	\$0	\$0.00	\$259,917	\$17.19	\$147,466	\$6.50	\$0	\$0.00	\$122,961	\$6.50	\$0	\$0.00	\$159,127	\$6.50	\$0	\$0.00	\$41,365	\$0.75	\$43,684	\$0.75	\$0	\$0.00	\$35,642	\$0.75		
G10 SITE PREPARATION	\$1,093,573	\$835,192	\$626,394	\$615,850	\$1,336,082	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
G20 SITE IMPROVEMENTS	\$1,777,859	\$1,178,847	\$884,135	\$762,806	\$1,178,847	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
G30 SITE CIVIL/MECHANICAL UTILITIES	\$1,686,000	\$1,086,000	\$814,500	\$394,000	\$1,086,000	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
G40 SITE ELECTRICAL UTILITIES	\$500,000	\$400,000	\$300,000	\$120,000	\$400,000	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
<b>Direct Trade Cost SubTotal</b>	<b>\$5,957,432</b>	<b>\$3,500,038</b>	<b>\$2,625,029</b>	<b>\$1,892,656</b>	<b>\$4,000,928</b>	<b>\$23,471,048</b>	<b>\$245.26</b>	<b>\$20,427,694</b>	<b>\$249.97</b>	<b>\$4,009,447</b>	<b>\$265.25</b>	<b>\$5,430,203</b>	<b>\$239.35</b>	<b>\$12,793,136</b>	<b>\$268.69</b>	<b>\$4,780,253</b>	<b>\$252.70</b>	<b>\$15,620,931</b>	<b>\$248.72</b>	<b>\$6,081,276</b>	<b>\$248.41</b>	<b>\$14,126,217</b>	<b>\$246.96</b>	<b>\$14,162,467</b>	<b>\$258.79</b>	<b>\$14,793,203</b>	<b>\$263.98</b>	<b>\$12,707,141</b>	<b>\$267.39</b>				
Construction Contingency	3.00%	\$151,723																															
Construction Contingency Renovation	5.00%	\$175,002	\$131,251	\$94,633	\$200,046	\$704,131	\$7.36	\$612,831	\$7.50	\$200,473	\$13.26	\$271,511	\$11.97	\$383,795	\$8.06	\$239,013	\$12.63	\$468,628	\$7.46	\$304,064	\$12.42	\$424,087	\$7.41	\$424,875	\$7.70	\$443,797	\$7.62	\$381,215	\$8.02				
<b>Trade Cost SubTotal</b>	<b>\$5,209,155</b>	<b>\$3,675,040</b>	<b>\$2,756,280</b>	<b>\$1,987,289</b>	<b>\$4,200,974</b>	<b>\$24,175,179</b>	<b>\$252.61</b>	<b>\$21,040,525</b>	<b>\$257.46</b>	<b>\$4,209,920</b>	<b>\$278.51</b>	<b>\$5,701,714</b>	<b>\$251.32</b>	<b>\$13,176,934</b>	<b>\$276.75</b>	<b>\$5,019,266</b>	<b>\$265.33</b>	<b>\$16,089,559</b>	<b>\$256.18</b>	<b>\$6,385,340</b>	<b>\$260.83</b>	<b>\$14,560,304</b>	<b>\$254.37</b>	<b>\$14,587,342</b>	<b>\$264.49</b>	<b>\$15,237,000</b>	<b>\$261.60</b>	<b>\$13,088,356</b>	<b>\$275.41</b>				
General Conditions and Requirements	8.50%	\$442,780	\$312,380	\$234,290	\$168,920	\$357,090	\$21.47	\$1,788,450	\$21.88	\$357,850	\$23.67	\$484,646	\$21.36	\$1,120,040	\$23.52	\$426,638	\$22.55	\$1,367,613	\$21.78	\$542,759	\$22.17	\$1,237,626	\$21.62	\$1,239,930	\$22.48	\$1,295,150	\$22.24	\$1,112,520	\$23.41				
Insurance	1.10%	\$62,171	\$43,862	\$32,896	\$23,718	\$50,139	\$288.531	\$3.01	\$251,119	\$3.07	\$50,245	\$3.32	\$66,050	\$3.00	\$157,267	\$3.30	\$59,905	\$3.17	\$192,029	\$3.06	\$76,209	\$3.11	\$173,777	\$3.04	\$174,100	\$3.16	\$181,854	\$3.12	\$156,210	\$3.29			
GC Bonds	1.10%	\$62,855	\$44,344	\$33,258	\$23,979	\$50,690	\$291.705	\$3.05	\$253,881	\$3.11	\$50,798	\$3.36	\$68,799	\$3.03	\$158,997	\$3.34	\$60,564	\$3.20	\$194,141	\$3.09	\$77,047	\$3.15	\$175,689	\$3.07	\$176,015	\$3.19	\$183,854	\$3.16	\$157,928	\$3.32			
Fee	3.00%	\$173,309	\$122,269	\$91,702	\$66,117	\$159,767	\$804.309	\$8.40	\$700,019	\$8.67	\$140,064	\$9.27	\$189,696	\$8.36	\$438,397	\$9.21	\$166,991	\$8.83	\$535,300	\$8.62	\$212,441	\$8.68	\$484,422	\$8.46	\$485,322	\$8.80	\$508,936	\$8.70	\$435,450	\$9.16			
<b>Estimated Construction Cost Total</b>	<b>\$5,950,270</b>	<b>\$4,197,895</b>	<b>\$3,148,426</b>	<b>\$2,270,023</b>	<b>\$4,798,660</b>	<b>\$27,614,624</b>	<b>\$288.55</b>	<b>\$24,033,994</b>	<b>\$294.09</b>	<b>\$4,808,877</b>	<b>\$318.13</b>	<b>\$6,512,905</b>	<b>\$287.08</b>	<b>\$15,051,635</b>	<b>\$316.12</b>	<b>\$5,733,364</b>	<b>\$303.08</b>	<b>\$16,378,642</b>	<b>\$292.63</b>	<b>\$7,293,791</b>	<b>\$297.94</b>	<b>\$16,631,818</b>	<b>\$290.56</b>	<b>\$16,662,709</b>	<b>\$302.12</b>	<b>\$17,404,794</b>	<b>\$298.82</b>	<b>\$14,950,464</b>	<b>\$314.59</b>				
Escalation	6.13%	\$364,460	\$257,130	\$192,850	\$139,040	\$293,920	\$1,691,400	\$17.67	\$1,472,090	\$18.01	\$294,550	\$19.49	\$398,916	\$17.58	\$921,913	\$19.36	\$351,169	\$18.56	\$1,125,692	\$17.92	\$446,745	\$18.25	\$1,018,699	\$17.80	\$1,020,600	\$18.50	\$1,066,050	\$18.30	\$915,720	\$19.27			
<b>ECC including Escalation Total</b>	<b>\$6,314,730</b>	<b>\$4,455,025</b>	<b>\$3,341,276</b>	<b>\$2,409,063</b>	<b>\$5,092,580</b>	<b>\$29,306,024</b>	<b>\$306.23</b>	<b>\$25,506,084</b>	<b>\$312.11</b>	<b>\$5,103,427</b>	<b>\$337.62</b>	<b>\$6,911,821</b>	<b>\$304.66</b>	<b>\$15,973,548</b>	<b>\$335.49</b>	<b>\$6,084,533</b>	<b>\$321.64</b>	<b>\$19,504,334</b>	<b>\$310.55</b>	<b>\$7,740,536</b>	<b>\$316.19</b>	<b>\$17,650,517</b>	<b>\$308.35</b>	<b>\$17,683,309</b>	<b>\$320.62</b>	<b>\$18,470,844</b>	<b>\$317.12</b>	<b>\$15,866,184</b>	<b>\$333.86</b>				