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Budget Report December 2005

North Newton High School City of Newton

Newton, Massachusetts

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Prepared for:

Gund Partnership

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This report provides an updated cost estimate for the construction of the new Newton North High School in the City of Newton. Taking into account the volatility of the contract market, at this stage in the project construction process this estimate presents a range that will be impacted by three main factors.

The first factor to consider is that the estimate is based on the most current educational program, and the Newton School Committee has yet to vote on the exact final program. Should there be a departure from the current program referenced in this report, a rise or decline in overall cost may result. Second, the recent global trend in the escalation of construction costs due to rising energy, steel, lumber, labor and other prices will also impact the projected cost. Escalation impact and projections are further detailed in Section 3 of this report. Third, as escalation rates will cause a significant cost increase each calendar year, the project schedule will affect the project cost.

The City of Newton and the Design Team are following the general public construction procedures as defined under Massachusetts General Law. Prior to the Construction Phase there are four phases of the Design Phase of the project. Presently the Consultants are completing the Program Phase, which will be closed out following the vote of the School Committee on the final educational program requirements. This phase is essentially a fact-gathering phase, culminating in a mutual understanding of the educational space needs and functional definitions for each element of the school, and a conceptual solution to meet those needs. The next phase is the Schematic Design Phase, which usually lasts six to nine months. The Schematic Design Phase culminates in an agreement on most of the major elements of the building, including siting and orientation, choice of materials, and a set of general outline drawings of the building showing layout, components, and major systems. The remaining two pre-construction phases are Detailed Design, during which every detail is decided—from electrical outlet placement to where the pipes will go—followed by Construction Documentation, when we finalize the necessary documents to begin actual construction.

Since the design team has been selected and is in place, it is standard procedure to reconcile the budget and program of the building. Eighteen months ago, the Turner Construction Company provided the City with a rough estimate of cost. Reconciling that budget of \$104.5 million with current market conditions, along with a more detailed understanding of the educational specifics, leads to the conclusion that the cost for this project has increased.

Our best estimate anticipates a rise in total construction costs of 37.4% over the original estimate. When evaluating the projected rise in costs of the Newton North High School project, it is appropriate to compare recent public school construction projects. In each case, the historical cost has been escalated forward to the end of 2005 at known rates. It should be noted that Newton North High School has a considerably larger percentage of site development works, with a high degree of complexity, when compared with most other projects, so that a comparison of the estimate without the specialist site works is closer to other schools. Other specialty features such as the indoor swimming pool complex are not found in other school projects.

Massachusetts High Schools	GFA	Construction or Estimate Date	Construction Cost	Equivalent to 2005 Cost	Original \$ rate/SF	End 2005 \$ rate/SF
Hopkinton HS	190,000	2001	\$34,700,000	\$42,909,000	\$182.63	\$225.84
Wayland HS	234,213	2004	\$51,434,000	\$55,034,000	\$219.60	\$234.97
Marblehead HS	215,000	2002	\$43,000,000	\$51,623,000	\$200.00	\$240.11
Hudson HS	200,000	2003	\$41,500,000	\$48,846,000	\$207.50	\$244.23
Lincoln Sudbury HS	347,000	2003	\$73,900,000	\$86,980,000	\$212.97	\$250.66
Newton North HS with Site Allowance	388,131	2005	\$100,347,000	\$100,347,000	\$258.54	\$258.54
Groton HS	164,750	2003	\$36,275,000	\$42,696,000	\$220.18	\$259.16

It is also worth noting the general impact of construction industry escalation in the Boston area and the cost increases experienced by other Massachusetts cities and towns. A typical sample is listed below:

Project	Original Cost Estimate	Revised Costs	% Increase
Foxboro combined fire, police station	\$8 million, 2005	\$13 million, 2005 lowest bid	62.5%
Mattapoisett library expansion	\$3.7 million, 2001	\$5.2 million, 2005 actual cost	40.5%
Milton Cunningham and Collicot Elementary Schools	\$24 million, 2004	\$27 million, 2005 actual cost	12.5%

Based on the current educational program, and given the time durations and schedule requirements of the Design and Construction Phases, the cost to build a 388,131 square foot Newton North High School will be between \$137,214,000 and \$160,486,000. The factors that will determine whether the project finally comes out on the high end or the low end will be the actual annual percentage rates of inflation during the Construction Phase of the project. There is approximately 18 months left in the Design Phase, so that we have costed out these percentages from December 2005 through the next 32 months, which marks the mid-point of the Construction Phase when inflation will cease to be a major concern (see graph in Appendix A).

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Project Program and Scope of Work

The overall concept model from the Gund Partnership, used during the Designer Selection process, considered every element of the site for optimum efficiency so that more specific lump sum estimates can be listed for each major functional component. Additional consideration was given to hazardous material removal, services, and other specific cost items not previously addressed in detail. The overall site configuration has been costed to completely re-use and relocate major elements. This includes allowing the building to be centrally located on site, taking advantage of the natural slope on the south side, and re-orienting the football field for optimum playing conditions.

Naturally, the final decisions on siting the building and on the orientation of the football field have yet to be made. However, for the purposes of this report we have used the current program as it will be submitted to the Newton School Committee. The current program has been developed to 275,270 SF with a gross area of 388,131 SF to be used by 1,850 students. Each category of functional area within the school has been identified and can be individually tracked and priced within the whole building envelope at the completion of the Schematic Design Phase. The program reflects all changes made since the Study Phase and the adjustments to suit requirements from the current school, taking into account feedback from faculty and staff, as well as the general public. The current program also accommodates special facilities and features necessary and appropriate to achieve the optimal building in a contemporary school environment.

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Budget Development and Monitoring

In order to move forward on Cost Analysis and establishing budget controls and monitoring, it is essential that the final program be defined and submitted to the designers. The estimate to date is prepared from the best current information available, which will be presented to the Newton School Committee on January 9, 2006.

Decisions still to be made may affect the overall size of the building and development of the site. Thus, further design evaluations made during the Schematic Design Phase may impact the overall cost. The stakeholders must resolve these issues during the Schematic Design Phase.

At the same time, more detailed examination of specific site related costs—such as demolition and HAZMAT remediation, and service utility provision—will enable the total project cost to be estimated with a greater degree of accuracy than is possible at this concept stage. By the completion of Schematic Design, it is expected that the budget for the entire project can be detailed within close confidence limits, and the necessary balance be achieved between program, site requirements, and financial responsibility.

As part of the design process, we recommend the following:

- Examining major system lifecycle, operational and maintenance costs to achieve the best balance between capital investment and long-term operating costs.
- Value enhancement of design and material options throughout the project, including pre-buying materials and monitoring particular trade or design alternatives for cost effectiveness in the current marketplace.
- That the detailed studies and estimates be developed for necessary budget items during the Schematic Design Phase, in order to provide the best possible risk envelope for the overall budget on completion of Schematic Design.
- Constantly monitoring the balance of program, quality of specification, and optional features during the project's entire design and bidding cycle.
- That while progressing through the Schematic and Design Development phases over the next six months, the budget and market pricing of similar construction around the Boston area be constantly monitored.
- Taking into account that market prices are expected to stabilize as the industry adjusts to steel, concrete and other material levels.
- That risk mitigation be practiced at all phases to ensure a fixed budget commitment is not exceeded during current market volatility.

4

Escalation of Project Costs

This section covers the escalation of project costs since the original Concept Estimate made in 2003.

4.1 General Notes on Construction Industry Escalation

The construction industry in the US has experienced historical price increases and volatility since late 2003. Initially, the major catalyst was steel price rises due to market demand from China. However, other materials were also affected by regional shortages. More recently, oil price rises in 2005 have not only led to substantial increases in transportation costs, they have affected materials such as PVC, roofing, insulation and other petroleum based products.

Recent hurricanes have caused shortages and price peaks for lumber, gypsum board, roofing and concrete. Their impact has been greatest on the residential market, where most of the rebuilding effort is required. The number of contractors and skilled labor available outside the disaster areas has also been reduced. Panic buying, significant reduction of lumber supply from the southeast, shipping costs and energy costs have all served to maintain a high level of uncertainty (risk) in the market. In the medium term for commercial building, it is still uncertain if the pressures caused by the housing market will continue to affect supply prices throughout the northeast.

The construction industry had been in an oversupply state after the recession of 2000 and, subsequently, the 9/11 attack. Accordingly, pricing was held almost flat with quite small escalation allowances and contractors were willing to absorb the escalation risk in bidding for jobs. More recently, however, many contractors and steel subcontractors in particular experienced price pressure difficulties and are no longer able to provide bids without a risk factor for escalation.

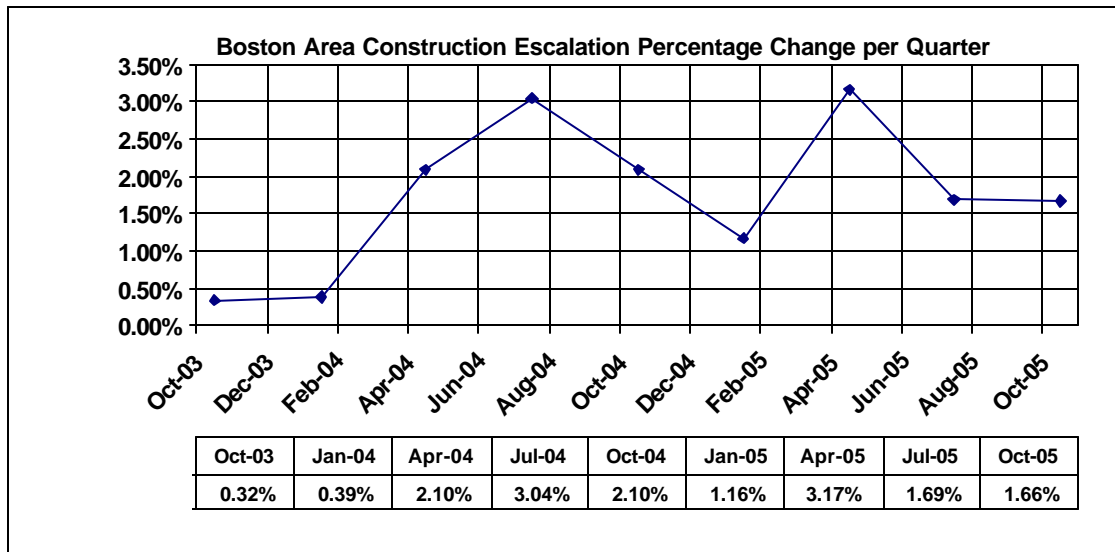
As the current construction market has become characterized by uncertainty, contractors are reflecting the risk factor in their bids. Steel prices rose, reached a plateau, and rose slightly again. There is uncertainty as to the pricing strategies of large steel suppliers, as the demand from China has stabilized and scrap is again available from various sources. Other base materials are also still fluctuating. **In the most recent three months, rises of 15% - 20% have been experienced in bidding prices over the expected levels for public construction projects.**

The escalation indicators for the construction industry are considerably above the general rate. However, while this has been taken into consideration, it is anticipated that a downturn in demand, lessening of oil prices, and a decline in construction after the initial response to the 2005 hurricanes, will bring this escalation closer to the general inflation rate of the whole economy.

4.2 Reconciliation of Escalation from the Provisional Estimate of August 2003

Rider Hunt Levett & Bailey publish a quarterly cost index of construction industry costs for major cities in the US. Other recognized industry indexes can be compared, with similar trends over the period 2000 – 2005 (below).

The Boston sub-index from the RHL&B index has been used below to analyze cost changes for the North Newton High School project since the original estimate was done. The trend line for Boston is shown below. Note that the quarterly index for December (not yet published) indicates a further rise of approximately 2.2%.



While costs rose sharply in the 2004 time frame, many industry observers and estimating consultants were cautious about predicting a continuously high rate of escalation for an extended period of time. This applied particularly to projects not due to bid in the immediate short term, as market corrections could bring pricing back to levels more consistent with the economy as a whole. It can be seen from the above that while cost increases did level off towards the end of 2004, that more recent events in 2005 have kept the incremental rate fluctuating more than was hoped for. The last period of 12 to 18 months has seen sufficient volatility to cause contractors to start adding escalation risk contingency to their bids, generally not done previously. At this time, therefore, it is deemed prudent to re-examine the concept level design and program requirements for Newton North High School against overall budget requirements and possible escalation scenarios.

We recommend anticipating a total of 32 months to allow for an extended period in bringing the project to bid. This time includes the projected escalation to the mid-point of construction, thus providing for the risk factor that contractors are currently including in bids. A probable rate would be (mid range) 5% per annum, making a total rise of approximately 37.4% in construction costs since the original project estimate.

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Summary

Recent upward trends in construction are being felt around the globe. The objective of this report is to provide an accurate expectation of final costs for a new Newton North High School. Estimates and recommendations are based on current industry study and a fundamental understanding of these trends, as well as the information gathered from your community as to specific site and educational requirements.

We believe this report will help the City of Newton to re-establish the baseline for costs and project definition, continuing with your project through each stage until completion. Rider Hunt & Bailey can be called upon throughout the project to offer our analysis and advice as necessary on what is sure to be an outstanding facility for your community.

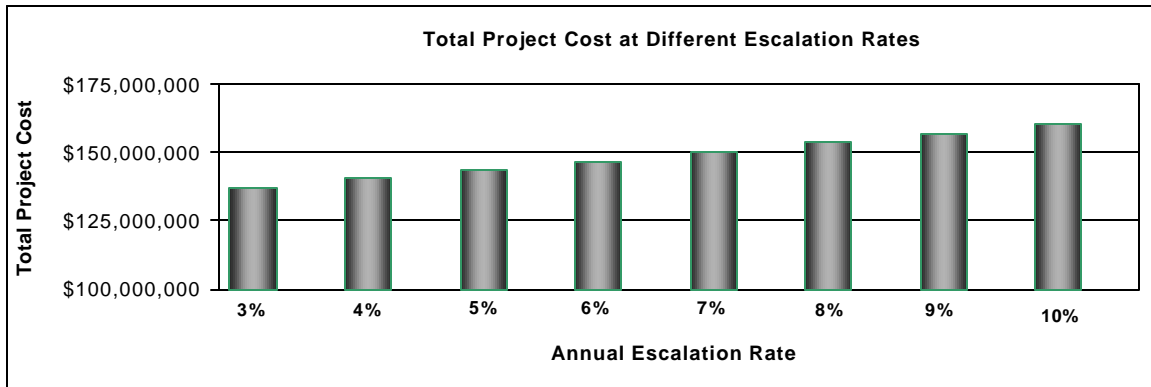
Appendix A – Program and Provisional Budget Estimate

NORTH NEWTON HIGH SCHOOL PROGRAM AND PROVISIONAL BUDGET ESTIMATE

Student and Enrollment Parameters				
Enrollment	1850		Building	
Gross Floor Area	388,131		\$240/sq.ft	\$93,123,000
Area per Student	210		Site	\$12,101,000
Subtotal of net Program Space:				
Non-program space	1.410	112,861		
TOTAL GSF (gross square feet):			388,131	

Net total ECC in December 2005 dollars			\$105,224,000
Add Sustainable Design allowance	1%	\$1,052,000	\$106,276,000
Add Construction Contingency	5%	\$5,314,000	\$111,590,000
Add Soft Costs (esclation included)	15%	\$15,676,000	\$128,050,000

Escalated Cost :	Annual Percent	Cost/Month	Total Cost
(allowing 32 months escalation during design and through mid point of construction)	3%	\$286,000	\$137,214,000
	4%	\$385,000	\$140,374,000
	5%	\$486,000	\$143,589,000
	6%	\$588,000	\$146,858,000
	7%	\$692,000	\$150,182,000
	8%	\$797,000	\$153,560,000
	9%	\$905,000	\$156,995,000
	10%	\$1,014,000	\$160,486,000



Soft Cost Summary	
Design fees	\$7,000,000
Project Management fees	\$2,500,000
Consultant fees/testing/moving	\$750,000
Furniture, Fittings & Equipment	\$1,387,500
Technology	\$1,850,000
Comissioning	\$350,000
Soft cost contingency	\$337,188
Athletic transportation costs	\$350,000
Subtotal	\$14,524,688
Soft Cost Escalation	\$1,151,312
Total	\$15,676,000