

Capital Improvement Plan G

CAPITAL IMPROVEMENT PLAN

Summary

The Capital Improvement Plan (CIP) document is intended to be a continual “work in progress” to be used by the Town of Needham and the school district as a tool to assist them in planning for future improvements. This report reflects our assessment of the buildings and a recommended Capital Improvement Plan based on that assessment and includes collaborative meetings with Town and school officials. The cost estimates included herein are strictly placeholders; once a decision is made as to a specific scope and extent of the Work to be performed a more detailed review of the scope of work should be made to refine the estimates.

The CIP, included in the following pages, prioritizes the building needs into seven categories. These categories are used to place individual recommendations identified in the facilities assessment report. The definitions for each category is outlined below:

1) **Health, Safety, & Welfare:**

- Health: addresses health and environmental issues relating to the temperature, humidity, and quality of air, provisions for personal hygiene and non-toxic materials or finishes;
- Safety: relates to safety from accidental injury or death, (i.e. prevention or elimination of hazards in the event of fire or electrical malfunction)
- Welfare: relates to the emotional well-being for living, learning, and working in a space as well as the provisions of equal access, natural light and views to the outside.

2) **Code Compliance:** outlines items that do not meet the current code regulations and *should* be upgraded, but do not fall into the same level of priority as those identified in Health, Safety and Welfare. Items listed in this category do *not* include *all* non-compliant code items as many items are considered “grandfathered” and are assumed to have been compliant at the time of construction.

3) **Functional Use of the Building (aka Space Utilization):** this category notes items that influence the functional use of the building and the group that it serves. These items can include the size and proportion of a space in relation to its intended use. It can also include the location of the space in relation to other adjacent spaces and the ability to use that space to meet the educational needs of the users.

4) **Handicap Accessibility:** items that are not compliant with Americans with Disabilities Act (ADA) or Massachusetts Architectural Access Board (MAAB) requirements and are not included in previous categories are included here. Compliance for providing equivalent accommodations for the disabled are required by law, however providing compliance for the entire building or for

specific areas of the building may not be triggered until impacted by cost or scope of other work done in the building.

- 5) **Maintenance:** the ongoing maintenance of a structure is important to its ability to function and serve its patrons; items noted in this category aid in the continued functionality of the building structure and systems as well as preservation of building materials and finishes to maximize their life cycle.
- 6) **Energy Efficiency / Energy Saving:** is the design and the specification of materials and systems that minimize the consumption of energy. This category includes energy efficiency suggestions that can save operating costs over the life of the building and/or reduce the amount of energy consumed.
- 7) **Hazardous Material Abatement:** assumptions are made regarding the types of hazards that may exist in the materials found in the building based on the age of the materials and the extent of renovations and abatement that have been done in the past. Comprehensive testing must be done prior to the start of any construction. Materials that are in good condition and have not been disturbed do not present a health issue. The estimated dollar amount that is given in the C.I.P. is based on the expectation that once construction begins, testing and removal of suspect materials will need to take place. An allowance is included based on the assessment of which materials have already been tested, which ones are suspect and which may be impacted by the expected scope of work. A comprehensive NESHAP inspection should be performed, which would provide a more accurate hazardous materials abatement costs and scope.

Pollard Middle School		CIP 2011-2015	CIP 2011-2015	CIP 2011-2015	Long Term Improvements	Auditorium Reno
1	Health, Safety & Welfare	w/ Sci. Option 1	w/ Sci. Option 2	w/ Sci. Option 3	w/Auditorium Reno	
	Demolish the condemned bridge. Provide new concrete pad and stairs at two exit locations (one from corridor and one from boiler room). Provide new exterior door and hardware -two locations. Provide new fire rated door and hardware.	In Progress Summer 2011	In Progress Summer 2011	In Progress Summer 2011		
1.01	Add new exit signage					
*	1.02 Create egress paths at two longer (63' +/-) dead-end corridors located in the 1958 building : create egress path to exterior by extending corridors to the outside, reconfigure classrooms, with new corridor walls, ceilings, flooring, finishes, exterior and interior doors and hardware. This work is not required if the building is fully sprinklered. (*ADD \$130,000 if 2.03 is not completed in CIP 2011-2015)	alt to 2.03	alt to 2.03	alt to 2.03		
	1.03 Replace existing corridor and stairway doors with fire-rated doors and hardware. Doors to latch and magnetic hold opens to be connected to fire alarm system	\$104,000	\$104,000	\$104,000		
	1.04 Provide additional LED exit signs in several locations (estimate 5 new)	In Progress Summer 2011	In Progress Summer 2011	In Progress Summer 2011		
	1.05 Provide new fire extinguishers in corridors throughout school, properly mark locations and remove signs where extinguishers do not exist	In Progress Summer 2011	In Progress Summer 2011	In Progress Summer 2011		
	1.06 Investigate and address fungal growth on brick at exterior of Gym- Allowance. Source of fungal growth to be addressed during roofing project of 2011 -value shown is for brick cleaning only	In Progress Summer 2011	In Progress Summer 2011	In Progress Summer 2011		
	1.07 Address Rainleaders and clean/repair damaged brick at corners of building	In Progress Summer 2011	In Progress Summer 2011	In Progress Summer 2011		
	1.08 Investigate and address cracks noted on exterior and interior of Gyms- several locations- Allowance - may be address in summer 2011	\$26,000	\$26,000	\$26,000		
	1.09 After completion of re-roofing project, replace all damaged / stained ceiling tile	In Progress Summer 2011	In Progress Summer 2011	In Progress Summer 2011		
*A	1.10 Replace two existing stairs: from stage to seating and from auditorium to exterior. This work should be done in conjunction with the work noted in 3.08	\$23,000	\$23,000	\$23,000	\$23,000	\$23,000
	1.11 Remove thumb locks at group bathroom and locker room doors - provide key locks only	\$6,000	\$6,000	\$6,000		
	1.12 Provide lockable cabinets approved for use with Science chemicals	\$17,000	Incl. in 3.01.2 and 3.01.3 costs	Incl. in 3.01.2 and 3.01.3 costs		
	1.13 Remove items stored in room with electrical distribution panels and provide separate wall and door enclosure around electrical panels	\$9,000	\$9,000	\$9,000		
*	1.14 Install oil detection interlock to boiler room sump pumps with level alarm to contain fuel oil spill event - not required if school is converted to gas (*see 3.04)	\$21,000	\$21,000	\$21,000		
	1.15 Re-balance all mechanical ventilation systems to ensure all ventilation rates are per latest mechanical code.				\$117,000	
	1.16 Test all emergency light battery units for 90 minute capacity	\$4,000	\$4,000	\$4,000		
	1.17 Provide renovations to exit corridors near Band Room; widening corridor	\$120,000	\$120,000	\$120,000		

2 Code Compliance (items not noted above)						
	2.01	Remove and Replace stair guardrails and handrails at each stairway				\$45,000
	2.02	Remove borrowed lites (interior clear story windows) at corridor/classroom walls in 1958 building and build new abuse resistant sheetrock walls with tack boards				\$43,000
*	2.03	Provide sprinkler coverage at remaining areas of building- estimated at 70% of building (* see note in 1.02)	\$1,480,000	\$1,480,000	\$1,480,000	
3 Functional Use of Building (Impact on Learning - below MSBA standards)						
	3.01.1	Renovate existing science rooms with upgraded floor, ceiling, lighting/electrical, HVAC, plumbing, and built in casework. (No expansion of classrooms are included) - total of 9,700 sf Option 1 - (Does not meet MSBA space standards nor does it address educational program function requirements)	\$2,800,000			
	3.01.2	Expand existing science classrooms with in the footprint of the existing building, complete renovation of each space (total of 18,500 sf). Option 2 - (Cost does not include renovation of modulars as required to maintain current number of classrooms)		\$5,020,000		
	3.01.3	Add New additions; science 14,500 sf, renovate existing spaces for science 3,000 sf, provide light renovations to existing science classrooms (9,700 sf) to become standard classrooms. Demo enclosed glass connection bridge / corridor, provide new corridor connection to classrooms, provide egress modifications related to courtyard - estimate is based on design sketch Option 3			\$6,160,000	
*	3.02	Relocate existing administrative areas to classrooms near entry courtyard and convert existing admin into classrooms-(+/-4,600 sq.ft.) heavy renovation (*consider phasing this work after science room addition to provide flexible space for classroom relocation)				\$1,300,000
*A	3.03	Provide new multi-stall toilet rooms and single toilet rooms near Auditorium - construct new addition for this- consider combining this work with other renovation/expansion work, sprinkler system work, and plumbing work see 5.15 and 6.01)				\$870,000
	3.04	Work with Utility Co. to provide new gas main on Harris Ave to accommodate consistent and reliable gas boiler service - pending review with utility company (*coordinate with 1.14, and 5.23 for gas conversion)				\$9,000

	3.05	Provide minor adjustment and reconfiguration of site circulation and parking to accommodate 7-8 grade structure (after Newman project is completed). Allowance	\$35,000	\$35,000	\$35,000		
	3.06	Provide visitor spaces and additional parking and drainage after the Newman at Pollard project is completed. Includes lighting, stormwater, landscaping, sidewalk (allowance)				\$120,000	
	3.07	Replace existing telephone, PA, bell and clock system	\$230,000	\$230,000	\$230,000		
*A	3.08	Renovate auditorium including hvac system, electrical upgrade for lighting and power, audio and visual equipment, new flooring, new seating, HC accessibility - includes demo and re-build of slab to modify slope/flat areas for HC access (This estimate expects that the building, including this space, is already fully sprinklered)				\$2,185,000	\$2,185,000
	4 Handicap Accessibility (includes only items not noted above)						
	* 4.01	Accessible route to/from building Provide new paved path from parking area to main entrance. Provide accessible route from parking to the northeast side of the building (consider timing work to coincide with 3.05 or 4.02 or other site work)	\$26,000	\$26,000	\$26,000		
	4.02	Provide accessible route from the building to the playing fields	Summer 2011	Summer 2011	Summer 2011		
	4.03	Provide renovations to 5 Toilet rooms throughout school (i.e. door entry reconstruction/new toilet partitions/grab bars/replace lavatories, water closets, urinals and finishes)		\$157,000	\$157,000	include cost if not done with sci. renovations	
*A	4.04	There are a number of items to address auditorium accessibility that would normally be included here; cost is included in 3.08 above					
	4.05	Relocate existing signage at 25% of existing rooms to be compliant - provide 20 new ADA compliant room signs	\$4,000	\$4,000	\$4,000		
	4.06	Replace existing water fountains with compliant high-low type- patch to match finishes		\$28,000	\$28,000	include cost if not done with sci. renovations	
	4.07	Upgrade elevator controls to be compliant with current guidelines		\$40,000	\$40,000	include cost if not done with sci. renovations	
	4.08	Provide accessibility improvements to Choral Room and Lecture Hall- Allowance	\$18,000	\$18,000	\$18,000		

5	Maintenance - Extending the Life of the Building (includes only items not noted above)					
*A	5.01 Replace Auditorium seating (combine this work with handicap accessible improvements) - cost is included in item 3.08 above					
	5.02 Replace Lecture Hall seating (combine this work with hc improvements)				\$27,000	
	5.03 Replace carpeting in classrooms if 1969 wing- estimate 10 classrooms	In Progress Summer 2011	In Progress Summer 2011	In Progress Summer 2011		
	5.04 Remove gym folding partition- Install fold down type curtain instead- both gyms				\$98,000	
	5.05 Provide light reno improvements to locker rooms- (address moisture in slab issues replace flooring)				\$117,000	
*	5.06 Remove existing rubber flooring in both gyms, provide moisture-resistant primer and provide new cushioned rubber sports flooring-vinyl coating-welded seams. (Work should be coordinated to follow work in item 5.28)				\$325,000	
	5.07 Replace door hardware at gym doors				\$14,000	
	5.08 Infill missing interior brick at corner of gym at roof drain	In Progress Summer 2011	In Progress Summer 2011	In Progress Summer 2011		
	5.09 Address slab cracking at exterior of band room- Patch and repair concrete and provide stainless steel cap (estimate 16" wide by 75' long by 16" high)				\$35,000	
	5.10 Sell or Demolish Modular Classrooms- re-grade area for additional grass play space				\$9,000	
	5.11 Remove VCT and VAT flooring in 1958 wing. Prepare slab and install new VCT and vinyl base	In Progress Summer 2011	In Progress Summer 2011	In Progress Summer 2011		
	5.12 Remove VAT in lower level. Address moisture issues in slab with application of primer- provide new VCT and vinyl base	In Progress Summer 2011	In Progress Summer 2011	In Progress Summer 2011		
	5.13 Provide central Htg/Ventilation system for computer room (where make-shift box is on top of unit ventilator)				\$18,000	
	5.14 Correct cause of excessive flow noise through gas-service meter				\$1,000	
	5.15 Replace water distribution piping (including piping to all drinking fountains) during significant renovation project (the scope is divided between CIP-Science and Long Term Reno)		\$200,000	\$200,000	\$380,000	
	5.16 Re-pipe kitchen waste system and provide new grease interceptor				\$18,000	
	5.17 Replace all classroom sinks with new fixtures- provide handicap accessibility improvements to counters at this time as well. Provide atmospheric vacuum breakers on all faucets		\$70,000	\$70,000	include cost if not done with sci. renovations	
	5.18 Replace domestic water heater				\$44,000	
	5.19 Remove existing pneumatic control system and existing ddc system. Replace pneumatic actuators with electronic. Provide new DDC front-end to replace the existing system. (This is proportioned to address only Science related scope in one column and remaining changes in Long-Term Imp)			\$300,000	\$637,000	

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		Re-pipe hydronic heat piping configuration to allow for simultaneous operation of both boiler rooms and sequencing of boilers. Convert piping to a heat/cool system with seasonal changeover. Normally this item would be in Long-Term Improvements but is recommended to be done with Science Renovations		\$703,000	\$703,000	include cost if not done with sci. renovations	
5.20							
		At classrooms, replace unit ventilators with new heat/cool fan-coil units and energy recovery ventilators with CO2 sensor based occupancy sensors- demo thru-window A/C units and roof-top exhaust fans. Install new insulated glass unit where AC unit was removed. Include patch to match flooring and wall areas where units are removed. Infill roof openings and patch roof. Include all related demo and replacement of finishes required to complete the work. Include structural reinforcing for any new RTU's (See Footnote #5)				\$603,000	
5.21							
		At core or assembly areas, replace with VAV packaged heat/cool RTU's and terminal units. Provide structural reinforcing for each new unit- include all related demo and new finishes associated with this work.				\$930,000	\$100,000
5.22							
		Remove and abate fuel-oil UST-infill with clean fill and finish with similar materials				\$96,000	
5.23							
		Any expansion of electrical needs or addition to the building will require service upgrade as follows: Upgrade exg 2000 Amp service to 3000 Amp, 208Y/120 Volt, 3-phase, 4-wire (includes new switchboard, utility company pad mount transformer, and 2000 Amp back-feed to exg switchboard. Add four electric panels per floor fed from new distribution panels. New distrib. panels should be 400 Amp, 208Y/120 Volt, 3-phase, 4-wire panels fed from the new switchboard.		\$910,000	\$910,000	include cost if not done with sci. renovations	include cost if not done with other renovations
* 5.24							
		Any expansion of zones or system, will require replacement of fire alarm control panel and three (3) remote panels. Existing devices do not require replacement		\$44,000	\$44,000	include cost if not done with sci. renovations	
* 5.25							
		Any expansion or major reconfig of school will require a replacement of PA system head end and some re-zoning of the system		\$52,000	\$52,000	include cost if not done with sci. renovations	
* 5.26							
*A 5.27		Replace auditorium sound and lighting systems(include in 3.08 above)					
		Provide new site drainage structures and pipe including water quality structures- replace 50+ yr old drainage pipe				\$166,000	
5.28							
		Provide new sewer and water line connections (more than 50 yrs old)				\$140,000	
5.29							

6	Energy Efficiency / Energy Saving (includes only items not noted above)					
*	6.01 Replace water closets, urinals, janitor sinks with newer more water efficient models (to be done during toilet renovation upgrades coordinate with 5.15)		\$380,000	\$380,000	include cost if not done with sci. renovations	include cost if not done with other. renovations
*	6.02 If replacing hot water boilers, replace with high efficiency natural gas fired condensing type boilers of similar output heating capacity (coordinate with 3.04)				\$287,000	
	6.03 Reprogram DDC System to reduce interior space temp's during school vacation and off hrs				\$9,000	
	6.04 Replace classroom lighting with direct-indirect pendant mounted fixtures with two rows of two lamp fixtures (included with Science Renovations because ceilings are removed due to Sprinkler System installation)			\$440,000		
	6.05 Replace existing HID (metal halide) gym lights with high efficiency pendant mounted T5 fluorescent fixtures, with multiple switching				\$73,000	
	6.06 Provide new lighting controls and occupancy sensors for all "support" spaces				\$84,000	
7	Hazardous Materials Abatement					
	7.01 For any renovation project, include an allowance to address abatement of asbestos containing materials and pcb's, lead containing paint renovation requirements	\$30,000	\$150,000	\$150,000	\$130,000	
						*Auditorium Work
	TOTALS	\$4,953,000	\$9,860,000	\$11,740,000	\$8,953,000	\$3,178,000
						* does not include items expected to be done with science renovations.
FOOTNOTES						
*	Indicates that item is related to or must be done in combination with other items listed					
*A. Notes work in the auditorium, this work should be scheduled to coincide with other *A work						
1. Cost Estimates have been prepared by PM&C. Costs are conceptual in nature, are for comparison purposes only and are not intended for use in construction. They are based on current market conditions in June 2011 and must be adjusted for inflation and construction market conditions for each year beyond this date. No cost for phasing or portable classrooms has been included.						
2. An Allowance has been provided for Hazardous Materials abatement (asbestos, lead, pcb). The actual cost depends on the scope and extent of the work performed as well as any additional testing that may be necessary as part of the scope of the work.						
3. GC Overhead & Profit and estimated Soft Costs and Owner's Contingency have been included in these figures.						
4. Refer to each section of the Report for more detailed information. Before moving forward with a specific project, a detailed review of the scope of work and a re-assessment of the cost estimate for that scope should be performed.						
5. Due to the conceptual nature of these recommendations and estimates and the complexity of existing conditions, several solutions may be provided to achieve the end result. Existing conditions in some areas may limit the ability to fully implement the proposed scope of work. Once a determination is made to move forward with a specific improvement line item, a mini study specific to the scope of work should be done to confirm the scope of work, prepare sketches as necessary and prepare a refined cost estimate.						
6. A number of items are listed in CIP 2011-2015 columns that might normally be included in the Long-Term Improvements column but have been triggered to be completed in the CIP column due to the renovation of the Science Classrooms. It is emphasized that these costs are conceptual and that a detailed estimate be prepared based on more detailed plans and scope of work prior to developing a final project cost budget estimate.						