

**Acton-Boxborough Regional School District  
Capital Improvements Plan Cost Summary  
January 15, 2016**

	<b>CIP</b>	<b>Haz Mat</b>	<b>Total</b>
Acton Boxborough Regional HS	\$ 9,300,892	\$ 1,207,500	\$ 10,508,392
RJ Grey Jr HS	\$ 15,473,140	\$ 948,750	\$ 16,421,890
Parker Damon MS	\$ 8,388,101	\$ -	\$ 8,388,101
CT Douglas ES	\$ 16,715,808	\$ 1,345,500	\$ 18,061,308
Gates ES	\$ 13,091,789	\$ 1,638,750	\$ 14,730,539
Luther Conant ES	\$ 15,727,428	\$ 2,086,560	\$ 17,813,988
Blanchard ES	\$ 7,005,499	\$ 1,716,375	\$ 8,721,874
Aministration Bldg (Merriam)	\$ 12,889,445	\$ 1,319,625	\$ 14,209,070
Maintenance Building	\$ 2,064,300	\$ 33,638	\$ 2,097,938
<b>Subtotal</b>	\$ 100,656,402	\$ 10,296,698	
		<b>GRAND TOTAL</b>	\$ 110,953,099

Check		
\$	10,508,392	TRUE
\$	16,421,890	TRUE
\$	8,388,101	TRUE
\$	18,061,308	TRUE
\$	14,730,539	TRUE
\$	17,813,988	TRUE
\$	8,721,874	TRUE
\$	14,209,070	TRUE
\$	2,097,938	TRUE
\$	110,953,099	TRUE

District-Wide  
Capital Improvement Chart

Rank: 1 = Significant Renovations Needed 2 = Moderate Renovations Needed 3 = Ongoing Maintenance/Minor or Localized Renovations Needed											
Evaluation Criteria	ABRHS	Campus-Site and Leary Field	RJG-JHS	Parker Damon	Douglas	Gates	Conant	Blanchard	Admin	Maintenance Garage	TOTAL
Date of Construction and last renovations:	1964, 1971, 2004		1955, 1960, 2002	2001	1965	1967	1970	1949, 1959, 1967, 1970, 1995	1957	circa 1980's	
RANK	3		2	3	1	1	1	2,3	1	1	
<b>1. Health, Safety &amp; Welfare</b>	\$1,005,525		\$771,075	\$189,750	\$1,950,546	\$835,590	\$567,594	\$350,003	\$558,285	\$146,970	<b>\$6,375,338</b>
<b>1. Health, Safety &amp; Welfare</b>	\$3.08		\$5.32	\$1.36	\$40.64	\$15.47	\$10.32	\$4.93	\$15.51	\$56.53	
<b>2. Code Compliance</b>	\$117,128		\$140,588	\$132,825	\$868,125	\$975,840	\$741,510	\$743,696	\$1,106,526	\$232,875	<b>\$5,059,112</b>
<b>2. Code Compliance</b>	\$0.36		\$0.97	\$0.95	\$18.09	\$18.07	\$13.48	\$10.47	\$30.74	\$89.57	
<b>3. Functional Use</b>	\$2,921,850	\$4,391,250	\$2,265,160	\$1,172,224	\$4,594,020	\$1,777,564	\$1,572,758	\$1,581,282	\$2,207,663	\$1,223,370	<b>\$23,707,140</b>
<b>3. Functional Use</b>	\$8.94		\$15.62	\$8.37	\$95.71	\$32.92	\$28.60	\$22.27	\$61.32	\$470.53	
<b>4. Handicap Accessibility</b>	\$209,363		\$398,699	\$17,250	\$2,467,785	\$167,325	\$330,912	\$2,760	\$1,723,041	\$36,225	<b>\$5,353,360</b>
<b>4. Handicap Accessibility</b>	\$0.64		\$2.75	\$0.12	\$51.41	\$3.10	\$6.02	\$0.04	\$47.86	\$13.93	
<b>5. Maintenance- Extending the Life of the Building</b>	\$5,105,397		\$11,975,441	\$6,254,228	\$3,136,306	\$6,520,501	\$10,763,686	\$2,258,321	\$2,930,025	\$0	<b>\$48,943,905</b>
<b>5. Maintenance- Extending the Life of the Building</b>	\$15.61		\$62.59	\$44.67	\$65.34	\$120.75	\$195.70	\$31.81	\$81.39	\$0.00	
<b>6. Energy Efficiency- Energy Water Saving</b>	\$4,708,125		\$2,193,401	\$1,263,525	\$3,964,188	\$3,301,944	\$1,976,944	\$2,308,425	\$4,472,655	\$424,860	<b>\$24,614,067</b>
<b>6. Energy Efficiency- Energy Water Saving</b>	\$14.40		\$15.13	\$9.03	\$82.59	\$61.15	\$35.94	\$32.51	\$124.24	\$163.41	
<b>SUBTOTAL</b>	\$14,067,416	\$4,391,250	\$17,744,472	\$9,029,857	\$16,981,241	\$13,578,955	\$15,953,657	\$7,244,556	\$12,998,432	\$2,064,931	<b>\$114,052,922</b>
	\$43.02		\$122.38	\$64.50	\$353.78	\$251.46	\$290.07	\$102.04	\$361.07	\$794.20	
<b>7. Hazardous Materials Abatement - (As Needed)</b>	\$319,125		\$324,300	\$0	\$840,248	\$1,131,773	\$1,685,670	\$998,775	\$821,100	\$26,738	<b>\$6,147,728</b>
	\$0.98		\$2.24	\$0.00	\$17.51	\$20.96	\$30.65	\$14.07	\$22.81	\$10.28	
<b>TOTAL</b>	\$14,386,541	\$4,391,250	\$18,068,772	\$9,029,857	\$17,821,489	\$14,710,727	\$17,639,327	\$8,243,331	\$13,819,532	\$2,091,668	<b>\$120,200,650</b>
Overview Commentary:											
Cost/SF	\$43		\$122	\$64	\$354	\$251	\$290	\$102	\$361	\$794	

Merriam Administration Building (36,203 sf existing)		Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
<b>1 Health, Safety &amp; Welfare</b>										
1.01	Relocate front playground out of circle	1	Lump Sum	Landscape	1	\$172,500	\$25,875	\$17,250	\$43,125	\$258,750
1.02	Repave drives	12000	SF	Landscape	1	\$55,200	\$8,280	\$5,520	\$13,800	\$82,800
1.03	Reconstruct concrete walks & arrival plaza	4000	SF	Landscape	1	\$69,000	\$10,350	\$6,900	\$17,250	\$103,500
1.04	Install new wood fiber at rear playground	800	SF	Landscape	1	\$8,280	\$1,242	\$828	\$2,070	\$12,420
1.05	Replace wired glass with impact rated fire glass.			Architectural	3	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
1.06	Install guardrail below stairs to address low head height issue.			Architectural	1	\$3,450	\$518	\$345	\$863	\$5,175
1.07	All exit doors should be clearly identified with emergency exit lights and kept free from obstacles in the event of an emergency.			Architectural	1	\$5,060	\$759	\$506	\$1,265	\$7,590
1.08	Storage should be removed from electrical and mechanical rooms.			Architectural	1	\$2,300	\$345	\$230	\$575	\$3,450
1.09	Add rubberized or texturized tread and landing material to worn stair treads and landings.			Architectural	1	\$6,900	\$1,035	\$690	\$1,725	\$10,350
<b>2 Code Compliance (Items not noted above)</b>										
2.01	Provide fully sprinklered building.			FIRE PROTECTION	2	\$187,500	\$28,125	\$18,750	\$46,875	\$281,250
2.02	The combustion air damper sizes within the mechanical room should be verified to ensure that they are code compliant. We do not believe that they are therefore, new openings with dampers and actuators should be provided.	2	each	HVAC	1	\$4,600	\$690	\$460	\$1,150	\$6,900
2.03	Any and all sections of piping insulation that is missing should be replaced.		\$/LF	HVAC	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
2.04	Provide ventilation air to corridors in original classroom building with new dedicated fan coil units.	6	each	HVAC	1	\$51,750	\$7,763	\$5,175	\$12,938	\$77,625
2.05	Properly anchor/suspend lighting to structure to meet seismic code requirements.			Architectural	1	\$83,267	\$12,490	\$8,327	\$20,817	\$124,900
2.06	Replace doors and hardware throughout the building. Provide fire-rated doors and frames where required by code. Widen openings as needed to comply with accessibility requirements.			Architectural	1	\$231,167	\$34,675	\$23,117	\$57,792	\$346,751
2.07	Remove tack boards and displayed art materials to meet current codes (Image 35).			Architectural	1	\$2,300	\$345	\$230	\$575	\$3,450
2.08	Consider adding a 2 <sup>nd</sup> means of exit from the sunken air handler room.			Architectural	1	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
2.09	Add another exit from "Danny's Place" space.			Architectural	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
2.10	Fully enclose all stairs to meet fire-rating requirements. Replace handrails and guardrails at all stairs. Include additional allowance for modifications to adjacent spaces to address this.			Architectural	1	\$96,600	\$14,490	\$9,660	\$24,150	\$144,900
<b>3 Functional Use</b>										
3.01	Provide new domestic water distribution piping throughout.			PLUMBING	2	\$57,500	\$8,625	\$5,750	\$14,375	TBD
3.02	Video tape all buried drainage piping to determine pipe condition, pitch and to check for leaks and replace any failing piping. If pitch is determined to be shallow, we would not recommend low flow plumbing fixtures.			PLUMBING	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
3.03	Switchgear upgrade			Electrical	1	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
3.04	Replace the existing 3 ton Carrier air cooled condenser associated with the Administration area.	1	each	HVAC	1	\$12,000	\$1,800	\$1,200	\$3,000	\$18,000
3.05	Any and all faulty isolation valves and actuators should be replaced.	unknown	each	HVAC	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
3.06	Remove connecting drive to parking lot	2000	SF	Landscape	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
3.07	Replace sign	1	EA	Landscape	3	\$575	\$86	\$58	\$144	\$863
3.08	Fix paving/drain issue under building connector	400	SF	Landscape	3	\$6,900	\$1,035	\$690	\$1,725	\$10,350
3.09	Provide bicycle racks	6	EA	Landscape	3	\$6,210	\$932	\$621	\$1,553	\$9,315
3.10	Clean nature area, cut/prune vegetation	1	Lump Sum	Landscape	3	\$1,150	\$173	\$115	\$288	\$1,725
3.11	Pavement reconstruction, curb installation	1	LS	Civil	3	\$258,750	\$38,813	\$25,875	\$64,688	\$388,125
3.12	In the long-term, provide permanent space for the functions housed within modular classrooms and demolish the modular classroom and connecting corridor.	3300	SF	Architectural	3	\$990,000	\$148,500	\$99,000	\$247,500	\$1,485,000
3.13	Provide rubberized or cushioned resilient flooring in multi-purpose/gym space	2900	SF	Architectural	3	\$46,690	\$7,004	\$4,669	\$11,673	\$70,035
<b>4 Handicap Accessibility (Includes only items not noted above)</b>										
4.01	Create HC parking closer to building entrance	4	EA	Landscape	2	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
4.02	Create accessible path to building entry	600	SF	Landscape	2	\$6,900	\$1,035	\$690	\$1,725	\$10,350
4.03	Replace original built-in classroom cabinetry (95% of the building).			Architectural	2	\$237,311	\$35,597	\$23,731	\$59,328	\$355,966

	Merriam Administration Building (36,203 sf existing)	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
4.04	Perform comprehensive upgrades to the entire building to provide handicap accessibility. A detailed plan and scope of work is necessary to provide this. For conceptual estimating purposes, this work includes: a. Re-construction of two ramps b. A new elevator and related connecting corridor work c. Complete renovations to all toilet rooms (will likely require removal of other adjacent walls and reconfiguration of adjacent spaces) d. Demo and modifications at entries to each classroom for clearance adjacent to doors e. Hardware to be lever or push-pull type. f. Add high and low counters with knee space to be available for accessibility access. g. Provide braille signage at each room throughout the building.			Architectural	2	\$890,684	\$133,603	\$89,068	\$222,671	\$1,336,025
<b>5</b>	<b>Maintenance - Extending the Life of the Building</b> (includes only items not noted above)									
5.01	Insulate underside of all roof drain bodies.			PLUMBING	2	\$3,450	\$518	\$345	\$863	\$5,175
5.02	Fire alarm system upgrade			Electrical	1	\$82,800	\$12,420	\$8,280	\$20,700	\$124,200
5.03	Provide lightning protection system on the building			Electrical	2	\$20,700	\$3,105	\$2,070	\$5,175	\$31,050
5.04	Provide emergency generator to power life safety lighting and optional stand-by loads such as freeze protection and communications.			Electrical	2	\$143,750	\$21,563	\$14,375	\$35,998	\$215,625
5.05	Test the water quality and provide the necessary chemical treatment/maintenance.	1	each	HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
5.06	Underground ductwork should be cleaned.		\$/LF	HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
5.07	Provide routine maintenance on all exhaust fans such as replacing belts and lubricating their motors and shafts.	16	each	HVAC	1	\$18,400	\$2,760	\$1,840	\$4,600	\$27,600
5.08	Remove loose concrete on the foundation, provide rust-inhibitor to any exposed rebar, and apply a two-step approach to repairing and sealing foundation (estimate 5 locations at 10 lin ft each)	50	LF	Architectural	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
5.09	Replace access doors at crawl spaces (estimate 4 locations) and seal perimeter of opening.	4	total	Architectural	2	\$6,900	\$1,035	\$690	\$1,725	\$10,350
5.10	Cut back vegetation so that the greenery and roots are not in contact with the building. Re-grade soil adjacent to building to shed water away from the building.			Architectural	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
5.11	Provide retaining wall (estimate 5' high x 70' long) and significant soil re-grading and underdrain piping along with additional area drain, tied to stormwater collection system to drain water away from modular and temporary corridor.			Architectural	2	\$48,013	\$7,202	\$4,801	\$12,003	\$72,019
5.12	Re-point brick veneer (estimate 10% of brick surface)			Architectural	2	\$70,856	\$10,628	\$7,086	\$17,714	\$106,284
5.13	Identify cause of cracking in brick. Remove and replace damaged bricks as needed.			Architectural	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
5.14	Clean out weeps to allow water to drain out of brick cavity instead of being trapped inside walls.			Architectural	1	\$5,750	\$863	\$575	\$1,438	\$8,625
5.15	Re-finish T&G wood ceiling at exterior canopy.			Architectural	2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875

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5.16	Remove rust from exterior structural steel and apply Industrial-grade epoxy paint			Architectural	3	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
5.17	The modular classrooms are very inexpensively constructed without regard to longevity of exterior wall, roof and window systems as these are typically designed for temporary use. In the short-term, provide temporary patching and repair to maintain a water-tight envelope (relocate/replace gutters, improve roof flashing and caulking, and replace siding).	Replaced 3.12 above	SF	Architectural	1		\$0	\$0	\$0	\$0
5.18	Remove loose concrete on the horizontal precast concrete components at the building perimeter, provide rust-inhibitor to any exposed rebar, and apply a two-step approach to repairing and sealing concrete with precast-concrete patching and mineral coating system.	2952	SF	Architectural	1	\$169,740	\$25,461	\$16,974	\$42,435	\$254,610
5.19	Remove rust from metal siding and re-finish, or replace metal panels.			Architectural	1	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
5.20	Remove all existing caulking at metal wall panels, window and door openings and install new caulking.			Architectural	2	\$20,817	\$3,123	\$2,082	\$5,204	\$31,225
5.21	Provide flashing at angled soffits and replace plywood siding with pre-finished metal siding.			Architectural	1	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
5.22	Address cause of deterioration to hollow-metal door frames and doors and replace doors and frames (estimate 4 locations)	4	doors	Architectural	1	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
5.23	Replace wooden doors and frames with hollow metal or aluminum-framed entrance door systems (estimate 3 locations).	3	doors	Architectural	1	\$15,525	\$2,329	\$1,553	\$3,881	\$23,288
5.24	Replace the wood and metal louvers with storm-proof type (estimate 6).	6	total	Architectural	2	\$6,900	\$1,035	\$690	\$1,725	\$10,350
5.25	Remove all abandoned chimneys, mechanical equipment, roof curbs, down to the deck, frame and Infill roof deck with insulation and membrane to be flush with roof. (Do this work in conjunction with roof replacement if possible)			Architectural	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
5.26	Remove all roofing materials down to the deck, provide vapor retarder, R-40 rigid insulation (tapered to slope to drains at flat roof areas), and EPDM membrane with a 20-year warranty.			Architectural	1	\$862,500	\$129,375	\$86,250	\$215,625	\$1,293,750
5.27	Add roof drains to improve drainage (estimate 6).	6	total	Architectural	1	\$20,700	\$3,105	\$2,070	\$5,175	\$31,050
5.28	Replace older carpeting (estimate 10,000 sf)	10000	SF	Architectural	2	\$92,000	\$13,800	\$9,200	\$23,000	\$138,000
5.29	During any significant renovation, remove older VCT and VAT throughout. Perform moisture testing of slabs. Install new VCT.			Architectural	3	\$207,000	\$31,050	\$20,700	\$51,750	\$310,500
5.30										
<b>6 Energy Efficiency / Energy, Water Saving (includes only items not noted above)</b>										
6.01	Plumbing fixtures meet current code for water conservation. However, new high-efficiency low flow fixtures (faucets & flush valves) could be installed to reduce water consumption. It should be confirmed that the existing water closets & urinals are compatible with current low flow flush valves.			PLUMBING	3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
6.02	Provide new high efficiency gas fired water heater.			PLUMBING	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
6.03	Add occupancy sensors throughout the building for energy savings			Electrical	2	\$77,000	\$11,550	\$7,700	\$19,250	\$115,500
6.04	Install PV array between 50 to 150KW (price is based on 50KW)			Electrical	2	\$201,250	\$30,188	\$20,125	\$50,313	\$301,875
6.05	Remove air line window air conditioners and provide a central cooling plant or packaged rooftop units for cooling purposes	36203	SF	HVAC	3	\$624,502	\$93,675	\$62,450	\$156,125	\$936,753
6.06	Providing a building or town wide direct digital control system with web accessible software, graphical floor plans, and equipment indication, alarm notifications, trending and remote system	1	SF	HVAC	2	\$186,500	\$27,975	\$18,650	\$46,625	\$279,750
6.07	Replace the original Admin indoor air handling unit with a new unit that has variable air volume boxes an energy recovery wheel and premium efficiency motors with variable frequency drives. The unit is sized at approximately 15,000 CFM	1	each	HVAC	1	\$172,500	\$25,875	\$17,250	\$43,125	\$258,750
6.08	Replace the original Classroom indoor air handling units with new units that have variable air volume boxes, energy recovery wheels and premium efficiency motors with variable frequency drives. Each unit is sized at approximately 3,000 CFM	5	each	HVAC	1	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
6.09	Replace all windows with high performance, thermally isolated, low-e windows; For estimating purposes, use commercial aluminum curtain-wall system			Architectural	2	\$1,619,568	\$242,935	\$161,957	\$404,892	\$2,429,352
6.10	Replace aluminum entrance doors with thermally-broken, insulated, commercial heavy-duty aluminum doors (ideally done at the same time as window system replacement)	2	each	Architectural	2	\$20,700	\$3,105	\$2,070	\$5,175	\$31,050
6.11	Perform a structural analysis of the roof framing at roof to wall areas to confirm structure can support additional snow load (due to future additional insulation)			Architectural	1	\$5,000	\$750	\$500	\$1,250	\$7,500
<b>7 Hazardous Materials Abatement</b>										
7.01	Hard Joint Insulation	250	Total		3	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
7.02	9" x 9" Vinyl Floor Tiles and Mastic	20000	SF		3	\$115,000	\$17,250	\$11,500	\$28,750	\$172,500
7.03	Interior Windows	200	Total		3	\$46,000	\$6,900	\$4,600	\$11,500	\$69,000
7.04	Blackboards	65	Total		3	\$14,950	\$2,243	\$1,495	\$3,738	\$22,425
7.05	Ceramic Tile Grout and Adhesive				3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125

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7.06	Hidden ACM				3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.07	Miscellaneous Hazardous Materials				3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.08	Transite Panels	1200	SF		3	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
7.09	Window Wall System	280	Total		3	\$64,400	\$9,660	\$6,440	\$16,100	\$96,600
7.10	Transite Sewer Pipes				3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.11	Roofing Materials	35000	SF		3	\$80,500	\$12,075	\$8,050	\$20,125	\$120,750
7.12	Damproofing on Exterior/Foundation Walls				3	\$201,250	\$30,188	\$20,125	\$50,313	\$301,875
7.13	PCB's Remediation				3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.14	Estimated costs for ACM Inspection and Testing Services				3	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
7.15	Estimated costs for PCB's Testing and Abatement Plans Services				3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.16	Estimated costs for Design, Construction Monitoring and Air Sampling Services				3	\$90,850	\$13,628	\$9,085	\$22,713	\$136,275
	<b>TOTALS</b>					<b>\$9,530,214</b>	<b>\$1,429,532</b>	<b>\$953,021</b>	<b>\$2,382,553</b>	<b>\$14,209,070</b>

Blanchard Memorial School (71,395 sf existing)		Quantity	Unit (% SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
<b>Health, Safety &amp; Welfare</b>										
1.01	Provide/conduct water analysis report to determine the best method to treat the well water to become safe for consumption.			PLUMBING	1	\$5,750	\$863	\$575	\$1,438	\$8,625
1.02	Repair damaged post at main entrance railing. Sandblast rusted areas and apply zinc-rich paint. (1 damaged post and a few rusted spots)			Architectural	1	\$575	\$86	\$58	\$144	\$863
1.03	Provide crash pads along perimeter of gymnasium.			Architectural	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
1.04	Replace concrete walks	9850	SF	Landscape	1	\$135,930	\$20,390	\$13,593	\$33,983	\$203,895
1.05	Install new wood fiber at playground	4800	SF	Landscape	1	\$49,680	\$7,452	\$4,968	\$12,420	\$74,520
1.06	Replace signage at route 111 (20 mph signs) - assume 2				1	\$1,150	\$173	\$115	\$288	\$1,725
<b>Code Compliance (Items not noted above)</b>										
2.01	Provide reduced pressure backflow preventers at Janitor's closet soap dispenser.	2		PLUMBING	1	\$2,300	\$345	\$230	\$575	\$3,450
2.02	LED egress lighting should be installed outside of egress doors			ELECTRICAL	1	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
2.03	Provide outlet at ceilings for projectors. (Confirm with Electrical)		EA	ELECTRICAL	1	\$920				
2.04	Install a guardrail at half wall (retaining wall) near 1965 entry.	16	LF	Architectural	1	\$2,760	\$414	\$276	\$690	\$4,140
2.05	Replace railing at receiving area stairs	17	LF	Architectural	1	\$4,888	\$733	\$489	\$1,222	\$7,331
2.06	Gut Reno of toilet rooms (prior to 1995) as part of reconfiguration to comply with MAAB	1436		Architectural	1	\$412,850	\$61,928	\$41,285	\$103,213	\$619,275
2.07	Relocate fire pump pit to above ground. (confirm scope FP)			Fire Protection	1	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
<b>Functional Use</b>										
3.01	Video tape all buried drainage piping to determine pipe condition, pitch and to check for leaks and replace any failing piping. If pitch is determined to be shallow, we would not recommend low flow plumbing fixtures.			PLUMBING	2	\$28,750	\$4,313	\$2,875	\$7,188	TBD
3.02	We recommend video inspection of existing drains to confirm integrity and correct pipe invert.			PLUMBING	2	\$5,750	\$863	\$575	\$1,438	\$8,625
3.03	Remove all existing shut-off valves below sinks and replace with new.			PLUMBING	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.04	Replace and expand casework in 1967 wing classrooms	120	LF	Architectural	2	\$82,800	\$12,420	\$8,280	\$20,700	\$124,200
3.05	Construct a metal stud and drywall partition wall to separate the gym storage/office and the Custodial space	19	LF	Architectural	1	\$5,244	\$787	\$524	\$1,311	\$7,866
3.06	Replace conc. curbs with granite	1130	LF	Landscape	2	\$51,980	\$7,797	\$5,198	\$12,995	\$77,970
3.07	Repave drives and parking	69350	SF	Landscape	2	\$319,010	\$47,852	\$31,901	\$79,753	\$478,515
3.08	Restripe parking lines	87	EA	Landscape	2	\$3,002	\$450	\$300	\$750	\$4,502
3.09	Repaint HC spaces	4	EA	Landscape	2	\$690	\$104	\$69	\$173	\$1,035
3.10	Repair wood boardwalk	1	Lump Sum	Landscape	3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.11	Plant more trees at drives/parking	20	EA	Landscape	3	\$27,600	\$4,140	\$2,760	\$6,900	\$41,400
3.12	Reseed athletic field	5600	SF	Landscape	3	\$6,440	\$966	\$644	\$1,610	\$9,660
3.13	Upgrade play equipment	1	Lump Sum	Landscape	3	\$115,000	\$17,250	\$11,500	\$28,750	\$172,500
3.14	Create landscape beds at entry	250	SF	Landscape	3	\$1,438	\$216	\$144	\$359	\$2,156
3.15	Separate delivery area from play area (Provide screen/fence)	60	LF	Landscape	3	\$6,210	\$932	\$621	\$1,553	\$9,315
3.16	New prep counter			Foodservice	2	\$3,500	\$525	\$350	\$875	\$5,250
3.17	Repair Hobart mixer			Foodservice	2	\$350	\$53	\$35	\$88	\$525
3.18	New range			Foodservice	2	\$4,200	\$630	\$420	\$1,050	\$6,300
3.19	Work table			Foodservice	2	\$1,400	\$210	\$140	\$350	\$2,100
3.20	Pavement repair, drainage improvements, catch basin replacement	1	LS	Civil	2	\$350,000	\$52,500	\$35,000	\$87,500	\$525,000
<b>Handicap Accessibility (includes only items not noted above)</b>										
4.01	Paint accessible travel path/crosswalk at HC spaces	200	SF	Landscape	1	\$1,840	\$276	\$184	\$460	\$2,760
4.02	Provide compliant protective wrap at exposed plumbing beneath sinks in toilet rooms (part of 2.06)				1					
4.03										

Blanchard Memorial School (71,395 sf existing)		Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
<b>Maintenance - Extending the Life of the Building</b> (includes only items not noted above)										
5.01	Replace Cafeteria/Kitchen Make-up Air Unit			HVAC	3	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
5.02	Add Ventilation to Corridors with Ceiling Fancoils	10	each	HVAC	2	\$86,250	\$12,938	\$8,625	\$21,563	\$129,375
5.03	Replace Boiler and Pumps	71395	SF	HVAC	3	\$126,500	\$18,975	\$12,650	\$31,625	\$189,750
5.04	Replace Unit Ventilators	71395	SF	HVAC	3	\$410,500	\$61,575	\$41,050	\$102,625	\$615,750
5.05	Replace Exhaust Fans	12	ea	HVAC	3	\$48,300	\$7,245	\$4,830	\$12,075	\$72,450
5.06	Test Hot Water Quality and Apply Treatment			HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
5.07	Replace Faulty Isolation Valves	71395	SF	HVAC	1	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
5.08	Replace Ductless Cooling Units	4	each	HVAC	3	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
5.09	Install Drain Pan Under IT Room Through the Wall Air Conditioner			HVAC	1	\$500	\$75	\$50	\$125	\$750
5.10	Have Carrier Technician Troubleshoot and Adjust VVT System in Admin Area			HVAC	1	\$1,250	\$188	\$125	\$313	\$1,875
5.11	Install Wall Transfer Grilles Between Cafeteria and Kitchen			HVAC	1	\$1,000	\$150	\$100	\$250	\$1,500
5.12	Install Electric Snowmelt Cable Under Low Unit Vent Louver in 4th Grade CR			HVAC	1	\$1,500	\$225	\$150	\$375	\$2,250
5.13	Install Ductless Cooling Unit in IT Room			HVAC	1	\$6,000	\$900	\$600	\$1,500	\$9,000
5.14	Waterproof Interior of Fire Pump Vault			HVAC	1	\$1,750	\$263	\$175	\$438	\$2,625
5.15	Fire Pump pit experiences significant condensation. Confirm that the existing dehumidification system in pit is working properly.			FIRE PROTECTION	1		\$0	\$0	\$0	\$0
5.16	System in building is in good working order. Owner to continue to inspect/maintain system per NFPA 25 requirements.			FIRE PROTECTION	3		\$0	\$0	\$0	\$0
5.17	Fire alarm system upgrade - include panel and devices			Electrical	1	\$166,750	\$25,013	\$16,675	\$41,688	\$250,125
5.18	Sandblast rusted post areas at 1965 southeast entry and apply zinc-rich paint.			Architectural	1	\$1,150				



Blanchard Memorial School (71,395 sf existing)		Quantity	Unit (% SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
5.19	Resurface cracked/spalling concrete.	25	SF	Architectural	2	\$4,313	\$647	\$431	\$1,078	\$6,469
5.20	Clean rust off concrete with appropriate rust remover/cleaner or lightly sandblast	25	SF	Architectural	1	\$288	\$43	\$29	\$72	\$431
5.21	Repair parking at foundation by resurfacing minor cracks. At areas with severe breaks or chunks missing, remove damaged areas before repaving.	25	SF	Architectural	1	\$2,875	\$431	\$288	\$719	\$4,313
5.22	Clean efflorescence at brick and apply a clear masonry product to brick that would allow the block to breathe, while preventing moisture from getting into the block to prevent efflorescence.	50	SF	Architectural	2	\$863	\$129	\$86	\$216	\$1,294
5.23	Repaint any mortar deterioration to prevent further damage at isolated areas around the building	50	SF	Architectural	1	\$2,588	\$388	\$259	\$647	\$3,881
5.24	Confirm appropriate exterior paint was used on window frames. Repaint frames. Clean paint off brick with appropriate cleaner and wire brush if needed.	TBD		Architectural	2		\$0	\$0	\$0	\$0
5.25	Periodically use water with a pressure nozzle to remove moss. To clear moss, soak brick/block with water and spray a bleach/water mixture and let it sit. After a week, soak the brick/block again and remove moss with a scrub brush. This will have to be done periodically.			Architectural	2	\$5,750	\$863	\$575	\$1,438	\$8,625
5.26	Clean out caulk from weep holes at Courtyard.			Architectural	1	\$2,300	\$345	\$230	\$575	\$3,450
5.27	Replace damaged FRP (panel approx 36" x 36")	2	panels	Architectural	1	\$1,656	\$248	\$166	\$414	\$2,484
5.28	Replace missing grid component at exterior gym soffit to protect the opening. (1- 24" grid component)			Architectural	1	\$575	\$86	\$58	\$144	\$863
5.29	Repair lightning protection cover (1 location noted)			Architectural	1	\$575	\$86	\$58	\$144	\$863
5.30	Repair vent opening and install a bug screen cover			Architectural	1	\$288	\$43	\$29	\$72	\$431
5.31	Misc Roof Repairs: Repair damaged patches • Repair damaged boot at exhaust pipe • Trim back any trees growing over the roof • To address standing water at cafeteria roof, extend the downspout towards the roof drain			Architectural	1	\$164,174	\$24,626	\$16,417	\$41,044	\$246,261
5.32	Install expansion joint covers at building control joints to allow for building movement without damaging finishes.			Architectural	2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
5.33	Replace flooring throughout the building including Kitchen	17395	SF	Architectural	3	\$160,034	\$24,005	\$16,003	\$40,009	\$240,051
5.34	Provide corner guards at GWB walls in high traffic areas.	12	locations	Architectural	1	\$2,484	\$373	\$248	\$621	\$3,726
5.35	Repair/replace kiln exhaust hood.			Architectural	1	\$4,600	\$690	\$460	\$1,150	\$6,900
5.36	Minor cracking of the exterior site slabs, walls, stairs and loading docks - All cracks should be injected with a crack repair epoxy	30	LF	Structural	3	\$4,140	\$621	\$414	\$1,035	\$6,210
5.37	The concrete beam supporting the canopy was cracked - The concrete should be chipped away as required to expose the reinforcing the concrete should be recast.	1	Location	Structural	1	\$1,725	\$259	\$173	\$431	\$2,588
5.38	Replace windows at 1949 building that were not replaced in 1995	1078	SF	Architectural	2	\$117,772	\$17,666	\$11,777	\$29,443	\$176,657
5.39	Add an irrigation system for fields; scope to be defined. Placeholder...				2	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
										\$0
<b>Energy Efficiency / Energy, Water Saving (includes only items not noted above)</b>										
										\$555,000
6.01	Add Building Wide DDC Controls	71395	SF	HVAC	1	\$370,000	\$55,500	\$37,000	\$92,500	
6.02	Install VFD's on Heating Pumps			HVAC	1	\$16,500	\$2,475	\$1,650	\$4,125	\$24,750
6.03	Reinsulate Damaged Breeching Insulation			HVAC	2	\$2,000	\$300	\$200	\$500	\$3,000
6.04	Reinsulate Missing Hot Water Piping Insulation, especially in Crawlspace			HVAC	1	\$1,500	\$225	\$150	\$375	\$2,250
6.05	Insulate Larger Valves			HVAC	2	\$3,500	\$525	\$350	\$875	\$5,250
6.06	Install CO2 Demand Control Ventilation in Gym, Cafeteria and Library			HVAC	1	\$27,600	\$4,140	\$2,760	\$6,900	\$41,400
6.07	Install Demand Control Ventilation at Kitchen Hood & Add VFDs			HVAC	2	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
6.08	Reinsulate Refrigerant Piping at Condensing Units			HVAC	1	\$500	\$75	\$50	\$125	\$750
6.09	Search for and Repair Control Air Leaks			HVAC	1	\$5,000	\$750	\$500	\$1,250	\$7,500
6.10	Plumbing fixtures meet current code for water conservation. However, new high-efficiency low flow fixtures (faucets & flush valves) could be installed to reduce water consumption. It should be confirmed that the existing water closets & urinal are compatible with current low flow flush valves.			PLUMBING	3	\$56,000	\$8,400	\$5,600	\$14,000	\$84,000
6.11	Provide new high-efficiency gas-fired domestic water heater once the existing water heater has expired.			PLUMBING	2	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125

Blanchard Memorial School (71,395 sf existing)		Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
6.12	Add occupancy sensors throughout the building for energy savings			Electrical	2	\$230,000	\$34,500	\$23,000	\$57,500	\$345,000
6.13	Upgrade exterior lighting to LED at building and parking lot			Electrical	2	\$69,000	\$10,350	\$6,900	\$17,250	\$103,500
6.14	Install PV array between 50 to 150KW			Electrical	2	\$603,750	\$90,563	\$60,375	\$150,938	\$905,625
6.15	Replace garage door, man door and frame at location #6.			Architectural	2	\$6,900	\$1,035	\$690	\$1,725	\$10,350
6.16	Caulking and weather stripping should be checked and replaced at each exterior door.			Architectural	1	\$9,200	\$1,380	\$920	\$2,300	\$13,800
<b>Hazardous Materials Abatement</b>										
7.01	Interior Windows	102	windows		3	\$43,700	\$6,555	\$4,370	\$10,925	\$65,550
7.02	Interior Caulking (allowance)				3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
7.03	Blackboards	65	blackboards		3	\$14,950	\$2,243	\$1,495	\$3,738	\$22,425
7.04	Vinyl Floor Tiles and Mastic	45000	SF		3	\$258,750	\$38,813	\$25,875	\$64,688	\$388,125
7.05	Hidden ACM (Allowance)				3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.06	Misc Hazardous Materials (Allowance)				3	\$40,250	\$6,038	\$4,025	\$10,063	\$60,375
7.07	Gym Rubber Flooring	5500	SF		3	\$126,500	\$18,975	\$12,650	\$31,625	\$189,750
7.08	Exterior Windows	265	windows		3	\$60,950	\$9,143	\$6,095	\$15,238	\$91,425
7.09	Transite Sewer Pipes (Allowance)				3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.10	Damproofing on Exterior /Foundation Walls				3	\$345,000	\$51,750	\$34,500	\$86,250	\$517,500
7.11	PCB's Remediation				3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
7.12	Estimated costs for ACM Inspection and Testing Services				3	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
7.13	Estimated costs for PCB's Testing and Abatement Plans Services				3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.14	Estimated costs for Design, Construction Monitoring and Air Sampling Services				3	\$93,150	\$13,973	\$9,315	\$23,288	\$139,725
<b>TOTALS</b>						<b>\$5,845,403</b>	<b>\$876,500</b>	<b>\$584,333</b>	<b>\$1,460,833</b>	<b>\$8,721,874</b>

Luther Conant Elementary School (55,017 sf existing)		Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, Haz Mat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC 'Markups'	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
<b>1 Health, Safety &amp; Welfare</b>										
1.01	Repave walks	7000	SF	Landscape	1	\$48,300	\$7,245	\$4,830	\$12,075	\$72,450
1.02	Repave drives	55560	SF	Landscape	2	\$255,576	\$38,336	\$25,558	\$63,894	\$383,364
1.03	Install new wood fiber at existing playground areas	3200	SF	Landscape	1	\$33,120	\$4,968	\$3,312	\$8,280	\$49,680
\$0										
<b>2 Code Compliance (Items not noted above)</b>										
2.01	Install expansion tank at Kitchen water heater.	1	each	PLUMBING	1	\$2,300	\$345	\$230	\$575	\$3,450
2.02	Install plaster traps on the Art Room sinks.	5	each	PLUMBING	1	\$5,750	\$863	\$575	\$1,438	\$8,625
2.03	Install grease Interceptor for pot washing sink and all Kitchen drainage shall be directed to an exterior grease trap.	1		PLUMBING	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
2.04	Fully sprinklered building.	55017	SF	FIRE PROTECTION	2	\$320,000	\$48,000	\$32,000	\$80,000	\$480,000
2.05	Any and all sections of piping insulation that is missing should be replaced.	unknown	LF	HVAC	2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
2.06	Provide ventilation air to Corridors with new dedicated fan coil units.	10	each	HVAC	2	\$86,250	\$12,938	\$8,625	\$21,563	\$129,375
2.07	Provide and install door closers at openings located in smoke/rated partitions			Architectural	1	\$3,220	\$483	\$322	\$805	\$4,830
2.08	Demolish inner walls of entry vestibule and construct larger vestibule meeting current requirements.			Architectural	2	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
2.09	Provide compliant signage at all permanent rooms	Incl in 1.07		Architectural	2	\$0	\$0	\$0	\$0	\$0
2.10	Remove and replace existing roof ladders to meet OSHA requirements			Architectural	1	\$6,900	\$1,035	\$690	\$1,725	\$10,350
2.11	Provide outlet at ceiling (instead of above ceiling) for ceiling mounted projectors		each	Electrical	2	\$920	\$138	\$92	\$230	\$1,380
\$0										
<b>3 Functional Use</b>										
3.01	Install mixing valves in lavatory supplies.	55017	SF	PLUMBING	2	\$23,000	\$3,450	\$2,300	\$5,750	TBD
3.02	Switchgear upgrade			Electrical	1	\$150,000	\$22,500	\$15,000	\$37,500	\$225,000
3.03	Any and all faulty isolation valves and actuators should be replaced.	unknown	each	HVAC	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.04	New kitchen hood and fire suppression system			Food Service	1	\$21,275	\$3,191	\$2,128	\$5,319	\$31,913
3.05	New range			Food Service	2	\$4,830	\$725	\$483	\$1,208	\$7,245
3.06	New stainless steel table			Food Service	2	\$1,610	\$242	\$161	\$403	\$2,415
3.07	New serving counters / sneeze guards			Food Service	1	\$48,300	\$7,245	\$4,830	\$12,075	\$72,450
3.08	Replace asphalt curbs with granite	1360	LF	Landscape	2	\$62,560	\$9,384	\$6,256	\$15,640	\$93,840
3.09	Expand parking at west side	12600	SF	Landscape	2	\$101,430	\$15,215	\$10,143	\$25,358	\$152,145
3.10	Plant shade trees along entry drive	10	EA	Landscape	3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.11	Enhance plantings at entry	1	Lump Sum	Landscape	3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.12	Screen service area (vegetation)	8	EA	Landscape	3	\$2,760	\$414	\$276	\$690	\$4,140
3.13	Convert stone wall area for playground	6300	SF	Landscape	3	\$186,875	\$28,031	\$18,688	\$46,719	\$280,313
3.14	Create planted gathering areas throughout rear play area	800	SF	Landscape	3	\$9,200	\$1,380	\$920	\$2,300	\$13,800
3.15	Full Depth Pavement reconstruction, catch basin install, curb repair	1	LS	Civil	3	\$325,000	\$48,750	\$32,500	\$81,250	\$487,500
3.16	Provide Fire/Smoke rated doors where required.				1	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
3.17	Restripe parking lines	70	EA	Landscape	2	\$2,415	\$362	\$242	\$604	\$3,623
\$0										
<b>4 Handicap Accessibility (includes only items not noted above)</b>										
4.01	Drinking fountains should be replaced with Accessible units.	3	each	PLUMBING	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
4.02	Paint accessible travel path/crosswalk at HC spaces	250	SF	Landscape	1	\$2,300	\$345	\$230	\$575	\$3,450
4.03	Create accessible path to new playground	1600	SF	Landscape	1	\$18,400	\$2,760	\$1,840	\$4,600	\$27,600
4.04	Replace non-compliant hardware with ADA/MAAB compliant (lever type) locksets			Architectural	2	\$63,270	\$9,490	\$6,327	\$15,817	\$94,904
4.05	Install ADA/MAAB compliant, thermally broken thresholds at exterior doors			Architectural	1	\$4,554	\$683	\$455	\$1,139	\$6,831
4.06	Replace doors and associated hardware. Widen openings not meeting current accessibility requirements			Architectural	2	\$92,000	\$13,800	\$9,200	\$23,000	\$138,000
4.07	Provide compliant signage at all permanent rooms			Architectural	2	\$22,144	\$3,322	\$2,214	\$5,536	\$33,217
4.08	Repaint HC spaces	4	EA	Landscape	2	\$690	\$104	\$69	\$173	\$1,035
<b>5 Maintenance - Extending the Life of the Building (Includes only</b>										
5.01	Replace Kitchen Hood Fan	1		HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
5.02	Add Hot Water Duct Coil to Admin Area RTU	1		HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625

				Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, Haz Mat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
	<b>Luther Conant Elementary School (55,017 sf existing)</b>	Quantity	Unit (%, SF, LF, etc.)							
5.03	Replace Cafeteria/Kitchen Indoor Air Handler	2		HVAC	1	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
5.04	Replace Portable Classroom with Permanent Building Addition	Incl In 5.18 below		HVAC	3		\$0	\$0	\$0	\$0
	Provide routine maintenance on all unit ventilators, exhaust fans and unit heaters such as replacing belts and lubricating their motors and shafts.	55017	SF	HVAC	1	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
5.06	Test the water quality and provide the necessary chemical treatment/maintenance.	1		HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
5.07	Install new domestic water distribution piping throughout, including insulation.			PLUMBING	2	\$126,500	\$18,975	\$12,650	\$31,625	\$189,750
5.08	Install new heat distribution piping throughout, including insulation.			PLUMBING	2	\$225,000	\$33,750	\$22,500	\$56,250	\$337,500
5.08	For a Roof replacement project, roof drains should be replaced and horizontal rain leaders shall be insulated.			PLUMBING	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
5.09	Video tape all buried drainage piping to determine pipe condition, pitch and to check for leaks and replace any failing piping. If pitch is determined to be shallow, we would not recommend low flow plumbing fixtures.			PLUMBING	3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
5.10	Fire alarm system upgrade			Electrical	1	\$126,500	\$18,975	\$12,650	\$31,625	\$189,750
5.11	Provide lightning protection system on the building			Electrical	2	\$32,200	\$4,830	\$3,220	\$8,050	\$48,300
5.12	Minor cracking at the top of the foundation walls - Cracks should be sealed with a cementitious repair mortar.	30	LF	Structural	3	\$5,175	\$776	\$518	\$1,294	\$7,763

	Luther Conant Elementary School (55,017 sf existing)	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, Haz Mat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
5.13	Cracking in the exterior brick walls and the egress slab at one classroom pod - This scope of work for the most severe location is identified in a separate cost estimate, totalling approximately \$75k in construction costs (exclusive of Soft Costs).	1	Locations	Structural	1	\$59,536	\$8,930	\$5,954	\$14,884	\$89,303
5.14	Cracking in the exterior brick walls and the egress slabs at the three other classroom pods- Similar condition to above but not as severe - The concrete and brick should be removed as required. The foundation wall should be provided as required to prevent further frost heaving. Once this has been done the brick and egress slabs can be reinstalled. This line item is to address all three remaining locations	3	Locations	Structural	2	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
5.15	Determine cause of cracking and address. Re-point cracked mortar joints and replace cracked / broken brick.			Architectural	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
5.16	Replace cap flashing at top of brick masonry walls (Allowance)			Architectural	2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
5.17	Re-point deteriorating mortar joints on an as needed basis (Allowance)			Architectural	2	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
5.18	Clean out weeps to ensure proper water drainage from cavity wall			Architectural	1	\$5,750	\$863	\$575	\$1,438	\$8,625
5.19	Provide permanent space for the classrooms and offices housed within the modular and demolish modular classrooms and connecting corridor. (Long Term)	7500	SF	Architectural	2	\$2,250,000	\$337,500	\$225,000	\$562,500	\$3,375,000
5.20	For Modulares in the short-term, provide temporary patching and repair to maintain a water and weather-tight envelope (replace siding, improve flashing and caulking, re-install/replace gutters). Also remove existing decks and reconstruct with proper flashing and spacers to allow surface water to drain.			Architectural	1	\$207,270	\$31,091	\$20,727	\$51,818	\$310,905
5.21	Replace deteriorated hollow metal frames with thermally-broken aluminum curtainwall entries and insulated glazing			Architectural	2	\$51,750	\$7,763	\$5,175	\$12,938	\$77,625
5.22	Replace non-thermally broken aluminum window systems with thermally-broken systems and insulated glazing			Architectural	2	\$949,043	\$142,356	\$94,904	\$237,261	\$1,423,565
5.23	Replace hollow metal doors and frames with insulated doors and thermally broken frames.			Architectural	2	\$66,700	\$10,005	\$6,670	\$16,675	\$100,050
5.24	Replace Louvers and vent grilles			Architectural	3	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
5.25	Perform structural analysis of roofing system to confirm roof can withstand additional snow load with added insulation, particularly at low-roof to wall locations. Obtain test cuts to confirm extent of existing roofing materials, test for hazardous materials. Remove ballast, remove and replace roof membrane with added insulation to meet current energy code requirements, sloping to roof drains.			Structural/Architectural	1	\$1,391,930	\$208,790	\$139,193	\$347,983	\$2,087,895
5.26	Remove exterior metal wall panels. Provide rigid and spray-foam insulation at top of concrete wall to roof transition at entire perimeter of building, sealed from the interior with a vapor retarder and exterior sheathing. Provide new exterior wall panel. Perform this work at the time of the roofing replacement.			Architectural	1	\$447,948	\$67,192	\$44,795	\$111,987	\$671,922
5.27	Replace roof drain piping and covers.			Architectural	1	\$27,600	\$4,140	\$2,760	\$6,900	\$41,400
5.28	Replace VCT in lobby, vestibules, corridors, Cafeterium, and service areas. As no vapor barrier was included beneath the slab in the original construction a topical application of a vapor barrier is recommended, as well as levelling compounds in some locations prior to tile installation. Install linoleum sheet goods or linoleum tile in lieu of VCT			Architectural	2	\$460,000	\$69,000	\$46,000	\$115,000	\$690,000
5.29	Service area floors currently incorporating a mixture of VCT and sealed concrete; remove VCT, refinish (via light sandblasting) and re-seal with a concrete sealer			Architectural	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
5.30	Replace individual CMU blocks that are severely damaged. Repair cracked mortar joints via raking of the joint and repointing			Architectural	1	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
5.31	Repair of surface damage to gypsum/plaster walls and repaint			Architectural	2	\$158,174	\$23,726	\$15,817	\$39,543	\$237,261
5.32	Locate and repair any leaks above ceiling and replace damaged ceiling materials			Architectural	1	\$50,616	\$7,592	\$5,062	\$12,654	\$75,923
5.33	Clean tectum panels via industrial vacuum followed by spray-application of white, or light colored paint so as not to darken the space			Architectural	2	\$9,200	\$1,380	\$920	\$2,300	\$13,800
5.34	Replacement or reconditioning of casework and countertops including replacement of sink base cabinets in original classrooms and some additional spaces			Architectural	2	\$126,539	\$18,981	\$12,654	\$31,635	\$189,809
5.35	Replace pneumatic controls (that weren't already replaced) with DDC.			Architectural	1					
5.36	Install privacy screens at urinals in gang toilet rooms			Architectural	2	\$1,610	\$242	\$161	\$403	\$2,415
<b>6 Energy Efficiency / Energy, Water Saving (Includes only items not noted above)</b>										

	Luther Conant Elementary School (55,017 sf existing)	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, Haz Mat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
6.01	Install VFD's on Heating Pumps. Estimate replacement of (2) pumps	2		HVAC	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
6.02	Replace/Repair Exhaust Fan Central Time Clock	1		HVAC	2	\$2,875	\$431	\$288	\$719	\$4,313
6.03	Providing a building or town wide direct digital control system with web accessible software, graphical floor plans, and equipment indication, alarm notifications, trending and remote system modification.	55017	SF	HVAC	2	\$284,625	\$42,694	\$28,463	\$71,156	\$426,938
6.04	Install CO2 Demand Control Ventilation in Gym, Cafeteria, Kitchen and Library			HVAC	2	\$27,600	\$4,140	\$2,760	\$6,900	\$41,400
6.05	Replace the Administration roof top unit with a new roof top unit that has energy recovery wheels, premium efficiency motors, and variable frequency drives, as this is now required by code for energy saving purposes and would provide a more energy efficient system.	1		HVAC	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
6.06	Plumbing fixtures meet current code for water conservation. However, new high-efficiency low flow fixtures (faucets & flush valves) could be installed to reduce water consumption. It should be confirmed that the existing water closets & urinals are compatible with current low flow flush valves.	55017	SF	PLUMBING	3	\$43,125	\$6,469	\$4,313	\$10,781	\$64,688
6.07	Once existing Building water heater has expired, replace with high efficiency unit with master mixing valve.	1	each	PLUMBING	2	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
6.08	Add occupancy sensors throughout the building for energy savings			Electrical	2	\$172,500	\$25,875	\$17,250	\$43,125	\$258,750
6.09	Upgrade exterior lighting to LED			Electrical	2	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
6.10	Install PV array between 50 to 150KW			Electrical	2	\$603,750	\$90,563	\$60,375	\$150,938	\$905,625
6.11	Seal between window and brick masonry with new high-performance sealants			Architectural	1	\$15,817	\$2,373	\$1,582	\$3,954	\$23,726
6.12	Install new weatherstripping at doors			Architectural	1	\$5,520	\$828	\$552	\$1,380	\$8,280
6.13	Incorporate Insulating glass at all glazed door and sidelight openings.			Architectural	2	\$29,900	\$4,485	\$2,990	\$7,475	\$44,850
<b>7 Hazardous Materials Abatement</b>										
7.01	Brown 12" x 12" Vinyl Floor Tiles and Mastic	45000	SF	HazMat	3	\$258,750	\$38,813	\$25,875	\$64,688	\$388,125
7.02	Hard Joint Insulation	40	Total	HazMat	3	\$2,875	\$431	\$288	\$719	\$4,313
7.03	2' x 4' Suspended Acoustical Ceiling Tiles	45000	SF	HazMat	3	\$218,500	\$32,775	\$21,850	\$54,625	\$327,750
7.04	Interior Windows	70	Total	HazMat	3	\$16,100	\$2,415	\$1,610	\$4,025	\$24,150
7.05	Sinks	21	Total	HazMat	3	\$2,415	\$362	\$242	\$604	\$3,623
7.06	Blackboards	40	Total	HazMat	3	\$9,200	\$1,380	\$920	\$2,300	\$13,800
7.07	Ceramic Tile Grout and Adhesive			HazMat	3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.08	Hidden ACM			HazMat	3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.09	Miscellaneous Hazardous Materials			HazMat	3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.10	Exhaust Insulation - Generator Room	12	LF	HazMat	3	\$575	\$86	\$58	\$144	\$863
7.11	Flexible Connector - Generator Room	1	Total	HazMat	3	\$115	\$17	\$12	\$29	\$173
7.12	Transite Sewer Pipes			HazMat	3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.13	Roofing Materials	50000	SF	HazMat	3	\$115,000	\$17,250	\$11,500	\$28,750	\$172,500
7.14	Damproofing on Exterior/Foundation Walls			HazMat	3	\$201,250	\$30,188	\$20,125	\$50,313	\$301,875
7.15	PCB's Remediation			HazMat	3	\$149,500	\$22,425	\$14,950	\$37,375	\$224,250
7.16	Estimated costs for ACM Inspection and Testing Services			HazMat	3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.17	Estimated costs for PCB's Testing and Abatement Plans Services			HazMat	3	\$8,510	\$1,277	\$851	\$2,128	\$12,765
7.18	Estimated costs for Design, Construction Monitoring and Air Sampling Services			HazMat	3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.19	Zonolite Insulation in exterior wall cavity (ACM)			HazMat	3	\$149,500	\$22,425	\$14,950	\$37,375	\$224,250
<b>TOTALS</b>						<b>\$11,898,992</b>	<b>\$1,784,849</b>	<b>\$1,189,899</b>	<b>\$2,974,748</b>	<b>\$17,813,988</b>

Gates Elementary School (53,933 sf existing)		Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups 1	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
<b>1 Health, Safety &amp; Welfare</b>										
1.01	Repave walks	16400	SF	Landscape	1	\$113,160	\$16,974	\$11,316	\$28,290	\$169,740
1.02	Repave drives	59000	SF	Landscape	2	\$271,400	\$40,710	\$27,140	\$67,850	\$407,100
1.03	Repair playground edging/walls	50	LF	Landscape	1	\$6,900	\$1,035	\$690	\$1,725	\$10,350
1.04	Install new wood fiber at playground	12000	SF	Landscape	1	\$124,200	\$18,630	\$12,420	\$31,050	\$186,300
<b>2 Code Compliance (items not noted above)</b>										
2.01	Insulate underside of all roof drain bodies and replace and insulate all horizontal rain leader piping			PLUMBING	1	\$14,375	\$2,156	\$1,438	\$3,594	\$21,563
2.02	The Kitchen drainage piping shall be directed to an exterior grease trap.	1		PLUMBING	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
2.03	Fully sprinklered building.	53933	SF	FIRE PROTECTION	2	\$315,000	\$47,250	\$31,500	\$78,750	\$472,500
2.04	Any and all sections of piping insulation that is missing should be replaced.		S/LF	HVAC	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
2.05	Provide ventilation air to Corridors with new dedicated fan coil units.	10	each	HVAC	1	\$86,250	\$12,938	\$8,625	\$21,563	\$129,375
2.06	The combustion air damper sizes within the mechanical room should be verified to ensure that they are code compliant. We do not believe that they are therefore, new openings with dampers and actuators should be provided.	2	each	HVAC	1	\$4,600	\$690	\$460	\$1,150	\$6,900
2.07	Remove and replace existing roof ladders to meet OSHA requirements	2	each	Architectural	1	\$4,600	\$690	\$460	\$1,150	\$6,900
2.08	Provide compliant signage at all permanent rooms	82	each	Architectural	1	\$14,145	\$2,122	\$1,415	\$3,536	\$21,218
2.09	Provide and install door closers at openings located in smoke/rated partitions			Architectural	1	\$3,220	\$483	\$322	\$805	\$4,830
2.10	Demolish inner walls of entry vestibule and construct larger vestibule meeting current requirements.			Architectural	1	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
2.11	Provide outlet at ceiling (instead of above ceiling) for ceiling mounted projectors	20	locations	Electrical	1	\$920	\$138	\$92	\$230	\$1,380
2.12	Fire alarm system upgrade			Electrical	1	\$124,200	\$18,630	\$12,420	\$31,050	\$186,300
<b>3 Functional Use</b>										
3.01	Switchgear upgrade			Electrical	1	\$150,000	\$22,500	\$15,000	\$37,500	TBD
3.02	Any and all faulty isolation valves and actuators should be replaced.	unknown	each	HVAC	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.03	Service the existing Honeywell Control system associated with the RTU for the Administration area	1	each	HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
3.04	Serving counter and sneeze guard			Food Service	1	\$36,800	\$5,520	\$3,680	\$9,200	\$55,200
3.05	Wood table replacement			Food Service	1	\$1,610	\$242	\$161	\$403	\$2,415
3.06	Range			Food Service	1	\$5,520	\$828	\$552	\$1,380	\$8,280
3.07	New hood & fire system (not including mechanical system)			Food Service	1	\$18,500	\$2,775	\$1,850	\$4,625	\$27,750
3.08	Replace broken concrete curbs with granite	200	LF	Landscape	2	\$10,350	\$1,553	\$1,035	\$2,588	\$15,525
3.09	Reset slope granite curb	50	LF	Landscape	3	\$863	\$129	\$86	\$216	\$1,294
3.10	Remove green concrete walls at entry	40	LF	Landscape	3	\$6,900	\$1,035	\$690	\$1,725	\$10,350
3.11	Add plantings to enhance entry	1	Lump Sum	Landscape	3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.12	Screen service area (vegetation)	12	EA	Landscape	3	\$4,140	\$621	\$414	\$1,035	\$6,210
3.13	Replace I-beam posts with wood guardrail	600	LF	Landscape	3	\$41,400	\$6,210	\$4,140	\$10,350	\$62,100
3.14	Repave paved court at rear	8000	SF	Landscape	3	\$73,600	\$11,040	\$7,360	\$18,400	\$110,400
3.15	Plant ornamental trees at front of building	16	EA	Landscape	3	\$46,000	\$6,900	\$4,600	\$11,500	\$69,000
3.16	Full Depth Pavement, curbing, drainage improvement	1	LS	Civil	2	\$517,500	\$77,625	\$51,750	\$129,375	\$776,250
3.17	Widen loading area driveway for truck access. (scope to be determined - allowance towards design/construction)			Landscape/Civil	2	\$115,000	\$17,250	\$11,500	\$28,750	\$172,500
3.18	Increase Parking on site. (scope to be determined - allowance towards design/construction)			Landscape/Civil	2	\$115,000	\$17,250	\$11,500	\$28,750	\$172,500
3.19	Install privacy screens at urinals in gang toilet rooms			Architectural	2	\$1,610	\$242	\$161	\$403	\$2,415
<b>4 Handicap Accessibility (includes only items not noted above)</b>										
4.01	Drinking fountains should be replaced with Accessible units.	3	each	PLUMBING	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
4.02	Paint accessible travel path/crosswalk at HC spaces	200	SF	Landscape	1	\$1,840	\$276	\$184	\$460	\$2,760
4.03	Replace non-compliant hardware with ADA/MAAB compliant (lever type) locksets			Architectural	2	\$62,100	\$9,315	\$6,210	\$15,525	\$93,150

				Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
	<b>Gates Elementary School (53,933 sf existing)</b>	Quantity	Unit (%, SF, LF, etc.)							
4.04	Provide ADA/MAAB compliant, thermally broken thresholds at exterior doors			Architectural	1	\$3,588	\$538	\$359	\$897	\$5,382
4.05	Demolish inner walls of entry vestibule and construct larger vestibule meeting current requirements	Incl 2.11 above		Architectural	2		\$0	\$0	\$0	\$0
4.06	Replace faucets in all Toilet rooms with controls that meet accessibility requirements. Install piping covers over supplies and drains below sinks. Install grab bars at designated HC toilets. Provide toilet paper dispenser in location meeting reach requirements. Reconfigure toilet partitions so as to meet current requirements. In accessible single-user toilet rooms some wall demolition and reconstruction will be required to attain space required for approaches to fixtures and exit door			Architectural	2	\$25,185	\$3,778	\$2,519	\$6,296	\$37,778
4.07	Restripe parking lines	36	EA	Landscape	2	\$1,242	\$186	\$124	\$311	\$1,863
4.08	Repaint HC spaces	2	EA	Landscape	2	\$345	\$52	\$35	\$86	\$518
										\$0
<b>5</b>	<b>Maintenance - Extending the Life of the Building (Includes only</b>									
5.01	Provide new domestic water distribution piping throughout, including insulation. Integrity of kitchen drain pipe and piping under slab to be replaced.			PLUMBING	3	\$126,500	\$18,975	\$12,650	\$31,625	\$189,750
5.02	Video tape all buried drainage piping to determine pipe condition, pitch and to check for leaks and replace any failing piping. If pitch is determined to be shallow, we would not recommend low flow plumbing fixtures			PLUMBING	3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
2.13	Provide lightning protection system on the building			Electrical	2	\$31,050	\$4,658	\$3,105	\$7,763	\$46,575
2.14	Provide routine maintenance on all unit ventilators, exhaust fans and unit heaters such as replacing belts and lubricating their motors and shafts.			HVAC	1	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
2.15	Test the water quality and provide the necessary chemical treatment/maintenance.			HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
2.16	Minor cracking and exposed reinforcing on the exterior foundation walls - An epoxy product should be used to cover and seal the exposed reinforcing or any cracks	30	LF	Structural	3	\$5,175	\$776	\$518	\$1,294	\$7,763
2.17	Determine cause of cracking and address. Replace cap flashing, re-point cracked mortar joints and replace cracked / broken brick. (Allowance)			Architectural	1	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125



Gates Elementary School (53,933 sf existing)		Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups 1	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
2.18	Re-point deteriorating mortar joints on an as needed basis. (Allowance)			Architectural	2	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
2.19	Rake out joint at exposed truss type reinforcing, bend reinforcing inward, and re-point joint (Allowance)			Architectural	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
2.20	Replace deteriorated hollow metal frames with thermally-broken aluminum curtainwall entry systems and insulated glazing			Architectural	2	\$51,750	\$7,763	\$5,175	\$12,938	\$77,625
2.21	Replace non-thermally broken aluminum window systems with thermally-broken systems and insulated glazing			Architectural	2	\$930,344	\$139,552	\$93,034	\$232,586	\$1,395,516
2.22	Seal between window and brick masonry with new high-performance sealants			Architectural	2	\$15,506	\$2,326	\$1,551	\$3,876	\$23,259
2.23	Replace hollow metal doors and frames with insulated doors and thermally broken frames			Architectural	2	\$52,900	\$7,935	\$5,290	\$13,225	\$79,350
2.24	Replace Louvers and vent grilles			Architectural	3	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
2.25	Perform structural analysis of roof structure to confirm roof can withstand additional snow load with added insulation, particularly at low-roof to wall locations. Obtain test cuts to confirm extent of existing roofing materials, test for hazardous materials. Remove ballast, remove and replace roof membrane with added insulation to meet current energy code requirements, sloping to the roof drains.			Struct/Arch	1	\$1,364,505	\$204,676	\$136,450	\$341,126	\$2,046,757
2.26	Remove exterior metal fascia panels. Provide rigid and spray-foam insulation from top of concrete wall to roof transition at entire perimeter of building, sealed from the interior with a vapor retarder and exterior sheathing. Provide new exterior wall panel. Perform this work at the time of the roofing replacement.			Architectural	2	\$331,200	\$49,680	\$33,120	\$82,800	\$496,800
2.27	Replace roof drain piping and covers.	53933	SF	Plumbing	1	\$31,000	\$4,650	\$3,100	\$7,750	\$46,500
2.28	Replace all VCT in lobby, vestibules, corridors, Cafeterium, and service areas. As no vapor barrier was included beneath the slab in the original construction a topical application of a vapor barrier is recommended, as well as levelling compounds in some locations prior to tile installation. Install linoleum sheet goods or linoleum tile in lieu of VCT			Architectural	2	\$345,000	\$51,750	\$34,500	\$86,250	\$517,500
2.29	Replace wood sports floor in gymnasium			Architectural	1	\$170,200	\$25,530	\$17,020	\$42,550	\$255,300
2.30	Replace wood floor at stage			Architectural	2	\$37,375	\$5,606	\$3,738	\$9,344	\$56,063
2.31	Service area floors currently incorporating a mixture of VCT and sealed concrete; remove VCT, refinish (via light sandblasting) and re-seal with a concrete sealer			Architectural	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
2.32	Determine cause of cracking in CMU walls and address. Replace individual CMU blocks that are severely damaged and repaint. Repair cracked mortar joints via raking of the joint and repointing			Struct/Arch	1	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
2.33	Replacement of ACP and grids with new.			Architectural	3	\$296,700	\$44,505	\$29,670	\$74,175	\$445,050
2.34	Replacement or reconditioning of casework and countertops including replacement of sinks and sink base cabinets to meet accessibility requirements.			Architectural	2	\$124,046	\$18,607	\$12,405	\$31,011	\$186,069
2.35	Replace pneumatic controls (that weren't already replaced) with DDC.	53933	SF		1	\$125,000	\$18,750	\$12,500	\$31,250	\$187,500
<b>6 Energy Efficiency / Energy, Water Saving (includes only items not noted above)</b>										
6.01	Plumbing fixtures met code for water conservation at time of installation. However, new higher-efficiency low flow fixtures (faucets & flush valves) could be installed to reduce water consumption. It should be confirmed that the existing water closets & urinals are compatible with current low flow flush valves.			PLUMBING	3	\$43,125	\$6,469	\$4,313	\$10,781	\$64,688
6.02	Add occupancy sensors throughout the building for energy savings			Electrical	2	\$172,500	\$25,875	\$17,250	\$43,125	\$258,750
6.03	Upgrade exterior lighting to LED			Electrical	2	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
6.04	Install PV array between 50 to 150KW			Electrical	2	\$603,750	\$90,563	\$60,375	\$150,938	\$905,625
6.05	Install VFD's on Heating Pumps. Estimate replacement of (3) pumps	3		HVAC	2	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
6.06	Providing a building or town wide direct digital control system with web accessible software, graphical floor plans, and equipment indication, alarm notifications, trending and remote system modification.	1	SF	HVAC	2	\$279,000	\$41,850	\$27,900	\$69,750	\$418,500
6.07	Install CO2 Demand Control Ventilation in Gym, Cafeteria, Room 2A and Kitchen			HVAC	2	\$27,600	\$4,140	\$2,760	\$6,900	\$41,400
6.08	Remove all the window air conditioners and provide a central cooling plant or packaged rooftop units for cooling purposes.	1	SF	HVAC	3	\$868,321	\$130,248	\$86,832	\$217,080	\$1,302,482
6.09	Replace all the indoor air handling units with new units that have energy recovery wheels, premium efficiency motors, and variable frequency drives, as this is now required by code for energy saving purposes and would provide a more energy efficient system. (especially in Cafe, Kitchen, Room 2A, library)	3	each	HVAC	1	\$86,250	\$12,938	\$8,625	\$21,563	\$129,375
6.10	Incorporate insulating (safety) glass at all glazed door and sidelight openings				2	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
<b>7 Hazardous Materials Abatement</b>										
7.01	Brown 12" x 12" Vinyl Floor Tiles and Mastic	17000	SF	HazMat	3	\$97,750	\$14,663	\$9,775	\$24,438	\$146,625

	<b>Gates Elementary School (53,933 sf existing)</b>	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
7.02	Hard Joint Insulation	40	Total	HazMat	3	\$2,875	\$431	\$288	\$719	\$4,313
7.03	2' x 4' Suspended Acoustical Ceiling Tiles	22000	SF	HazMat	3	\$151,800	\$22,770	\$15,180	\$37,950	\$227,700
7.04	Sinks	21	Total	HazMat	3	\$2,415	\$362	\$242	\$604	\$3,623
7.05	Blackboards	40	Total	HazMat	3	\$9,200	\$1,380	\$920	\$2,300	\$13,800
7.06	Ceramic Tile Grout and Adhesive			HazMat	3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.07	Hidden ACM			HazMat	3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.08	Miscellaneous Hazardous Materials			HazMat	3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.09	Exhaust Insulation - Generator Room	12	LF	HazMat	3	\$575	\$86	\$58	\$144	\$863
7.10	Flexible Connector - Mechanical Room	5	Total	HazMat	3	\$1,150	\$173	\$115	\$288	\$1,725
7.11	Transite Sewer Pipes			HazMat	3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.12	Roofing Materials	35000	SF	HazMat	3	\$80,500	\$12,075	\$8,050	\$20,125	\$120,750
7.13	Damproofing on Exterior/Foundation Walls			HazMat	3	\$201,250	\$30,188	\$20,125	\$50,313	\$301,875
7.14	Zonolite Insulation on Exterior Walls			HazMat	3	\$149,500	\$22,425	\$14,950	\$37,375	\$224,250
7.15	PCB's Remediation			HazMat	3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.16	Estimated costs for ACM Inspection and Testing Services			HazMat	3	\$8,510	\$1,277	\$851	\$2,128	\$12,765
7.17	Estimated costs for PCB's Testing and Abatement Plans Services			HazMat	3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.18	Estimated costs for Design, Construction Monitoring and Air Sampling Services			HazMat	3	\$99,475	\$14,921	\$9,948	\$24,869	\$149,213
	<b>TOTALS</b>					<b>\$9,970,360</b>	<b>\$1,495,554</b>	<b>\$997,036</b>	<b>\$2,492,590</b>	<b>\$14,730,539</b>

CT Douglas Elementary School (48,324 sf existing)		Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
<b>1 Health, Safety &amp; Welfare</b>										
1.01	Provide an independent air testing company to investigate the odor within the Modular classrooms.	2	each	HVAC	1	\$4,025	\$604	\$403	\$1,006	\$6,038
1.02	Replace asphalt walks with concrete sidewalks and granite curbs	4000	SF	Landscape	1	\$69,000	\$10,350	\$6,900	\$17,250	\$103,500
1.03	Repave drives	26000	SF	Landscape	2	\$119,600	\$17,940	\$11,960	\$29,900	\$179,400
1.04	Remove sand/Install new wood fiber at rear playground	3000	SF	Landscape	1	\$31,050	\$4,658	\$3,105	\$7,763	\$46,575
1.05	Provide a 1-hr rated GWB/stud partition to divide the classroom in half where the waste-line enters the space.	25	LF	Architectural	1	\$6,325	\$949	\$633	\$1,581	\$9,488
1.06	Renovate crawl space to provide vapor barrier, concrete slab, mechanical ventilation and heat, electricity and lighting systems to make spaces functional and eliminate IAQ concerns.	48324	SF	Architectural	1	\$944,734	\$141,710	\$94,473	\$236,184	\$1,417,101
1.07	Upgrade/replace approximately 6 exit signs throughout the building.	6	locations	Architectural	1	\$3,450	\$518	\$345	\$863	\$5,175
1.08	Connect corridor doors and assembly spaces to fire alarm system with magnetic hold-opens. (approx. 3 doors locations and gym at 2200 SF and Cafeterium at 3000 SF)			Architectural	1	\$37,720	\$5,658	\$3,772	\$9,430	\$56,580
1.09	Demo existing platform and build new that is less than 30" high, including new stairs and handrails.			Architectural	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
1.10	Provide fire-rated enclosure for photovoltaic transfer switch and electrical panels.	570	SF	Architectural	1	\$13,110	\$1,967	\$1,311	\$3,278	\$19,665
1.11	Remove art sink and counter in corridor leading to modular classrooms and install elsewhere in building.			Architectural	1	\$9,200	\$1,380	\$920	\$2,300	\$13,800
1.12	Repair and upgrade exterior pressure treated ramps and stairs to provide new handrails, non-slip surface, new treads and boards along ramp.			Architectural	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
<b>2 Code Compliance (Items not noted above)</b>										
2.01	Install plaster traps at the Art Room sinks.	5	each	Plumbing	1	\$5,750	\$863	\$575	\$1,438	\$8,625
2.02	Install grease Interceptor for pot washing sink and all Kitchen drainage shall be directed to an exterior grease trap.	1		Plumbing	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
2.03	Insulate underside of all roof drain bodies and all horizontal ram leader piping.			Plumbing	1	\$14,375	\$2,156	\$1,438	\$3,594	\$21,563
2.04	Fully sprinkler building	48324		Fire Protection	2	\$320,000	\$48,000	\$32,000	\$80,000	\$480,000
2.05	Finish electrical room partitions and relocate so they are not in the NEC required clear space.			Architectural	1	\$5,750	\$863	\$575	\$1,438	\$8,625
2.06	Any and all sections of piping insulation that is missing should be replaced. (Include allowance)	unknown	\$/LF	HVAC	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
2.07	Provide ventilation air to Corridors with new dedicated fan coil units.	5	each	HVAC	1	\$43,125	\$6,469	\$4,313	\$10,781	\$64,688
2.08	The combustion air damper sizes within the mechanical room should be verified to ensure that they are code compliant. We do not believe that they are therefore, new openings with dampers and actuators should be provided.	2	each	HVAC	1	\$4,600	\$690	\$460	\$1,150	\$6,900
2.09	Demo all corridor doors and frames and replace with new fire-rated doors, frames and hardware, tied to fire alarm system (approx. 2 locations)	2	locations	Architectural	1	\$18,400	\$2,760	\$1,840	\$4,600	\$27,600
2.10	Perform renovations to corridor walls to provide fire-rated separation from corridor or provide sprinkler system throughout. Estimate sprinkler system (recommendation placeholder only - refer to Fire Protection item above)	48324	SF	Architectural	1	Incl Above				\$0
2.11	Replace guardrails and handrails at stairway and ramp to meet current code			Architectural	2	\$5,750	\$863	\$575	\$1,438	\$8,625
2.12	Fire alarm system upgrade			Electrical	1	\$126,500	\$18,975	\$12,650	\$31,625	\$189,750
<b>3 Functional Use</b>										
3.01	Install mixing valves in lavatory supplies.	48324	SF	Plumbing	1	\$23,000	\$3,450	\$2,300	\$5,750	TBD
3.02	Upgrade vintage branch circuit panelboards and add computer and mechanical panelboards to serve new loads.			Electrical	1	\$253,000	\$37,950	\$25,300	\$63,250	\$379,500
3.03	Increase light level in gymnasium			Electrical	1	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
3.04	Any and all faulty isolation valves and actuators should be replaced.	unknown	each	HVAC	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.05	New walk-in cooler/freezer			Food Service	1	\$21,275	\$3,191	\$2,128	\$5,319	\$31,913
3.06	New stainless table			Food Service	1	\$1,610	\$242	\$161	\$403	\$2,415
3.07	Serving counter and sneeze guard			Food Service	1	\$48,300	\$7,245	\$4,830	\$12,075	\$72,450
3.08	New hood & fire system (not including mechanical system)			Food Service	1	\$21,275	\$3,191	\$2,128	\$5,319	\$31,913
3.09	Suggested new kitchen estimate (NOTE THIS REPLACES OTHER STAND ALONE UPGRADES)			Food Service	2	\$373,750	\$56,063	\$37,375	\$93,438	\$560,625
3.10	Replace asphalt curbs with granite	760	LF	Landscape	2	\$34,960	\$5,244	\$3,496	\$8,740	\$52,440
3.11	Replace plantings at entry	1	Lump Sum	Landscape	2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.12	Plant shade trees around play areas	16	EA	Landscape	3	\$16,560	\$2,484	\$1,656	\$4,140	\$24,840

CT Douglas Elementary School (48,324 sf existing)		Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
3.13	Repair paved rear walk, fix erosion	1	Lump Sum	Landscape	3	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
3.14	Screen service area (vegetation)	12	EA	Landscape	3	\$3,450	\$518	\$345	\$863	\$5,175
3.15	Pavement reconstruction, curb repair, drainage Improvements	1	LS	Civil	2	\$325,000	\$48,750	\$32,500	\$81,250	\$487,500
3.16	Find alternative permanent space for functions that use the modular classrooms and remove modular classrooms (Area includes all modulars; estimate new construction- addition to existing bldg)	6200	SF	Architectural	2	\$1,860,000	\$279,000	\$186,000	\$465,000	\$2,790,000
<b>4 Handicap Accessibility (includes only items not noted above)</b>										
4.01	Drinking fountains should be replaced with accessible units.	3	each	Plumbing	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
4.02	Paint accessible travel path/crosswalk at HC spaces	250	SF	Landscape	1	\$2,300	\$345	\$230	\$575	\$3,450
4.03	Create accessible path to rear playground	1200	SF	Landscape	1	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
4.04	Construct new 3-stop elevator between entry lobby and 2-story classroom wing, with connecting corridor. Assume reconfiguration (demo and build new within existing footprint) of resource room, stair, ramp and connecting corridor) NOTE: THIS REPLACES LINE ITEM IN CODE COMPLIANCE SECTION REGARDING STAIR AND RAMP HANDRAILS)	1880	SF	Architectural	1	\$719,900	\$107,985	\$71,990	\$179,975	\$1,079,850
4.05	Provide handicap lift at platform	1	total	Architectural	1	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
4.06	Modify/demo all classroom entries and any other room that lacks clear space adjacent to door to allow for clear space. Provide new door, frame and hardware and reconfigure cubby area to be handicap accessible	28	door locations	Architectural	2	\$161,000	\$24,150	\$16,100	\$40,250	\$241,500
4.07	Gut renovate each toilet room to create handicap accessible gang boys and girls toilet rooms and two handicap accessible single user toilet rooms	10	locations	Architectural	2	\$483,000	\$72,450	\$48,300	\$120,750	\$724,500
4.08	Demo classroom counter and sink and replace with accessible counter sink and cabinet (6' long).	22	classrooms	Architectural	2	\$202,400	\$30,360	\$20,240	\$50,600	\$303,600
4.09	Provide room signage at each room compliant with accessibility code	50	locations	Architectural	2	\$8,625	\$1,294	\$863	\$2,156	\$12,938
4.10	Restripe parking lines	55	EA	Landscape	2	\$1,898	\$285	\$190	\$474	\$2,846
4.11	Repaint HC spaces	3	EA	Landscape	2	\$518	\$78	\$52	\$129	\$776
<b>5 Maintenance - Extending the Life of the Building (includes only items not noted above)</b>										
5.01	Provide new domestic water distribution piping throughout, including insulation. Add hot water recirculation with pump at water heater.			Plumbing	3	\$126,500	\$18,975	\$12,650	\$31,625	\$189,750
5.02	For a Roof replacement project, roof drains should be replaced and horizontal rain leaders shall be insulated.			Plumbing	3	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
5.03	Video tape all buried drainage piping to determine pipe condition and check for leaks and replace any failing piping.			Plumbing	3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125

	CT Douglas Elementary School (48,324 sf existing)	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
5.04	Video tape all buried drainage piping to determine pipe condition, pitch and to check for leaks and replace any failing piping. If pitch is determined to be shallow, we would not recommend low flow plumbing fixtures.		duplicate?	Plumbing	3		\$0	\$0	\$0	\$0
5.05	Replace drain piping in kitchen (sawcut slab, remove existing, install new, insulation, vapor barrier and dowel slab into existing)			Owner	2	\$23,863	\$3,579	\$2,386	\$5,966	\$35,794
5.06	Provide lightning protection system on the building			Electrical	2	\$32,200	\$4,830	\$3,220	\$8,050	\$48,300
5.07	Provide emergency generator to power life safety lighting and optional stand-by loads such as freeze protection and communications.			Electrical	2	\$230,000	\$34,500	\$23,000	\$57,500	\$345,000
5.08	Provide routine maintenance on all unit ventilators, exhaust fans and unit heaters such as replacing belts and lubricating their motors and shafts.			HVAC	1	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
5.09	Test the hydronic water quality and provide the necessary chemical treatment/maintenance.			HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
5.10	Minor cracking was observed in the perimeter concrete at the ground level of the west wing - The concrete should be chipped away as required to expose the reinforcing the concrete should be recast.	60	LF	Structural	2	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
5.11	Repair/replace cracked brick (500 sf) and install control joints at corners (200 LF).	500	SF	Architectural	2	\$63,250	\$9,488	\$6,325	\$15,813	\$94,875
5.12	At exposed concrete cornice/fascia and stoops at recessed windows along entire building perimeter: - Remove any loose concrete around re-bar, remove rust and apply epoxy coating to re-bar. Inject epoxy into cracks. Patch concrete at exposed reinforcing and apply mineral coating over entire concrete surface.			Architectural	2	\$109,020	\$16,353	\$10,902	\$27,255	\$163,530
5.13	Replace exterior wood doors and frame within exg brick masonry opening with insulated, hollow-metal door and frame	2	location	Architectural	2	\$6,900	\$1,035	\$690	\$1,725	\$10,350
5.14	Re-insulate condensate piping at condensing units on roof			Architectural	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
5.15	We recommend that a structural roof analysis be done to determine the snow load capacity of the roof in order to potentially minimize the amount of snow removal that is performed. Extreme caution must be taken when removing snow from roofs in order not to damage the membrane roof			Architectural	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
5.16	Replace VCT, VAT tile, carpet and wall base throughout with VCT - Include color accents and pattern.	48324	SF	Architectural	3	\$444,581	\$66,687	\$44,458	\$111,145	\$666,871
5.17	Remove wood flooring in gym/multipurpose space and replace with athletic cushioned rubberized flooring system (8mm)	2200	SF	Architectural	2	\$40,480	\$6,072	\$4,048	\$10,120	\$60,720
5.18	Address roof leaks. Replace all acoustical suspended tile with humidity-resistant ceiling tile. Replace stained acoustical ceiling tiles	48324	SF	Architectural	1	\$333,436	\$50,015	\$33,344	\$83,359	\$500,159
5.19	Remove all glue-on acoustic panels throughout building. In multi-purpose room spaces provide tectum abuse and impact resistant acoustical panels, mounted to the walls (25% coverage of wall surface) and mechanically anchored to the roof structure (50% coverage at underside of deck). In other spaces where height allows, provide suspended acoustical panel system. This work should be combined with lighting replacement and/or hvac system upgrades			Architectural	2	\$119,264	\$17,890	\$11,926	\$29,816	\$178,895
5.20	Original and replacement cabinetry should be replaced with new during any significant renovation project.			Architectural	3	\$253,078	\$37,962	\$25,308	\$63,270	\$379,617
5.21	Replace all remaining doors and hardware with new. Provide fire rated doors where required by code			Architectural	2	\$92,000	\$13,800	\$9,200	\$23,000	\$138,000
5.22	Replace sewer and stormwater lines in crawl space			Owner		\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
<b>6 Energy Efficiency / Energy, Water Saving (includes only items not noted above)</b>										
6.01	Plumbing fixtures meet current code for water conservation. However, new high-efficiency low flow fixtures (faucets & flush valves) could be installed to reduce water consumption. It should be confirmed that the existing water closets & urinals are compatible with current low flow flush valves.			Plumbing	3	\$43,125	\$6,469	\$4,313	\$10,781	\$64,688
6.02	condensing domestic water heater with master mixing valve.			Plumbing	2	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
6.03	Add occupancy sensors throughout the building for energy savings			Electrical	2	\$172,500	\$25,875	\$17,250	\$43,125	\$258,750
6.04	Upgrade exterior lighting to LED			Electrical	2	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
6.05	Providing a building or town wide direct digital control system with web accessible software, graphical floor plans, and equipment indication, alarm notifications, trending and remote system modification.	48324	SF	HVAC	2	\$284,625	\$42,694	\$28,463	\$71,156	\$426,938
6.06	Install CO2 Demand Control Ventilation in Gym and Cafeteria			HVAC	2	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
6.07	Remove all the window air conditioners and provide a central cooling plant or packaged rooftop units for cooling purposes.	55017	SF	HVAC	3	\$885,774	\$132,866	\$88,577	\$221,443	\$1,328,661

	CT Douglas Elementary School (48,324 sf existing)	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
6.08	Replace all the indoor air handling units with new units that have energy recovery wheels, premium efficiency motors, and variable frequency drives, as this is now required by code for energy saving purposes and would provide a more energy efficient system.	2	each	HVAC	2	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
6.09	Replace the window units with high-performance insulated, double-paned units to improve efficiency of temperature control.			Architectural	2	\$949,043	\$142,356	\$94,904	\$237,261	\$1,423,565
6.10	During window replacement, replace doors and frames with thermal, commercial heavy-duty aluminum doors and frames.			Architectural	2	\$59,800	\$8,970	\$5,980	\$14,950	\$89,700
<b>7 Hazardous Materials Abatement</b>										
7.01	Hard Joint Insulation	4	Total		3	\$575	\$86	\$58	\$144	\$863
7.02	Brown 12" x 12" Vinyl Floor Tiles and Mastic	7000	SF		3	\$40,250	\$6,038	\$4,025	\$10,063	\$60,375
7.03	Beige 12" x 12" Vinyl Floor Tiles and Mastic	20000	SF		3	\$115,000	\$17,250	\$11,500	\$28,750	\$172,500
7.04	Interior Windows	95	Total		3	\$21,850	\$3,278	\$2,185	\$5,463	\$32,775
7.05	Sinks	26	Total		3	\$2,990	\$449	\$299	\$748	\$4,485
7.06	Blackboards	50	Total		3	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
7.07	Ceramic Tile Grout and Adhesive				3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.08	Hidden ACM				3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.09	Miscellaneous Hazardous Materials				3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.10	Flexible Connector - Mechanical Room	5	Total		3	\$1,150	\$173	\$115	\$288	\$1,725
7.11	Window Wall System	120	Total		3	\$27,600	\$4,140	\$2,760	\$6,900	\$41,400
7.12	Transite Sewer Pipes				3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.13	Roofing Materials	35000	SF		3	\$80,500	\$12,075	\$8,050	\$20,125	\$120,750
7.14	Damproofing on Exterior/Foundation Walls				3	\$201,250	\$30,188	\$20,125	\$50,313	\$301,875
7.15	PCB's Remediation				3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.16	Estimated costs for ACM Inspection and Testing Services				3	\$8,510	\$1,277	\$851	\$2,128	\$12,765
7.17	Estimated costs for PCB's Testing and Abatement Plans Services				3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
7.18	Estimated costs for Design, Construction Monitoring and Air Sampling Services				3	\$98,325	\$14,749	\$9,833	\$24,581	\$147,488
<b>TOTALS</b>						<b>\$12,063,872</b>	<b>\$1,809,581</b>	<b>\$1,206,387</b>	<b>\$3,015,968</b>	<b>\$18,061,308</b>

Capital Improvement Plan  
 Insert name  
 Acton-Boxborough Regional School District  
 Acton, Massachusetts  
 31 August 2015

DRAFT

Parker Damon Building (139,963 sf existing)	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups 1	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
									\$155,250
Install new wood fiber at existing playground areas	10000	SF	Landscape	1	\$103,500	\$15,525	\$10,350	\$25,875	
Provide reduced pressure backflow preventers at Janitor's closet soap dispenser.			PLUMBING	1	\$2,300	\$345	\$230	\$575	\$3,450
Video tape all buried drainage piping to determine pipe condition, pitch and to check for leaks and replace any failing piping. If pitch is determined to be shallow, we would not recommend low flow plumbing fixtures.			PLUMBING	2	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
Remove all PVC waste piping and replace with copper piping.			PLUMBING	1	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
Vision Panel replacment			Food Service	1	\$518	\$78	\$52	\$129	\$776
Hood trim			Food Service	1	\$1,380	\$207	\$138	\$345	\$2,070
Replace sign	1	EA	Landscape	3	\$575	\$86	\$58	\$144	\$863
Establish directional sign system	20	EA	Landscape	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
Eliminate asphalt walk paving at front arrival	3000	SF	Landscape	3	\$6,900	\$1,035	\$690	\$1,725	\$10,350
									\$20,700
Convert eliminated asphalt areas to landscape beds	3000	SF	Landscape	3	\$13,800	\$2,070	\$1,380	\$3,450	
Enlarge center turnaround traffic circle	2500	SF	Landscape	2	\$71,875	\$10,781	\$7,188	\$17,969	\$107,813
									\$21,563
Convert center circle to landscaped island	2500	SF	Landscape	2	\$14,375	\$2,156	\$1,438	\$3,594	
Add ornamental plantings to enhance front of building	8	EA	Landscape	3	\$5,520	\$828	\$552	\$1,380	\$8,280
Increase vegetative screening at delivery & generator areas	12	EA	Landscape	3	\$4,140	\$621	\$414	\$1,035	\$6,210

<b>Parker Damon Building (139,963 sf existing)</b>	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups 1	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
Increase vegetative buffer to south side abutters	20	EA	Landscape	3	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
Plant more shade trees throughout parking lot	36	EA	Landscape	3	\$62,100	\$9,315	\$6,210	\$15,525	\$93,150
Mill and Overlay Pavement, repair curb	1	LS	Civil	3	\$172,500	\$25,875	\$17,250	\$43,125	\$258,750
Redesign front circle/entrance (scope to be determined - allowance towards design/construction)	TBD			3	\$0	\$0	\$0	\$0	\$0
Add walkways through parking lot (scope to be determined - allowance towards design/construction)	TBD			3	\$0	\$0	\$0	\$0	\$0
Replace twist type faucets with accessible type at some of the toilet rooms. (Estimate 25% of toilet rooms)	12	each	Plumbing	2	\$6,900	\$1,035	\$680	\$1,725	\$10,350
Install/adjust protective coverings over exposed pipes beneath sinks. (Estimate 20% of sinks)	10	each	Plumbing	2	\$3,450	\$518	\$345	\$863	\$5,175
Provide/adjust signage (allowance)			Architectural	2	\$1,150	\$173	\$115	\$288	\$1,725
Install Discharge Elbow on Kitchen Hood Fan			HVAC	1	\$1,500	\$225	\$150	\$375	\$2,250
Test Chilled Water and Hot Water Quality and Apply Treatment			HVAC	1	\$3,000	\$450	\$300	\$750	\$4,500
Install Electric Snowmelt Cable Under Low Unit Vent Louvers			HVAC	1	\$2,500	\$375	\$250	\$625	\$3,750
Resupport 2 Condensing Units on Roof			HVAC	1	\$500	\$75	\$50	\$125	\$750
Add a 225 ton Turbocor Air Cooled Back-up Chiller ; rebuild chiller			HVAC	2	\$285,000	\$42,750	\$28,500	\$71,250	\$427,500
Replace Split Systems with R-410A Systems	10	each	HVAC	3	\$86,250	\$12,938	\$8,625	\$21,563	\$129,375
Replace Rooftop Units with Units with Energy Recovery	8	each	HVAC	3	\$138,000	\$20,700	\$13,800	\$34,500	\$207,000
Replace Boilers and existing heat pumps. Repair leaks at circulator pump seals	139963	each	HVAC	3	\$189,750	\$28,463	\$18,975	\$47,438	\$284,625
Replace Unit Ventilators and provide controls	139963	each	HVAC	3	\$805,000	\$120,750	\$80,500	\$201,250	\$1,207,500
Replace Exhaust Fans	15	each	HVAC	3	\$60,400	\$9,060	\$6,040	\$15,100	\$90,600
Replace Kitchen Make-up Air Unit	1	each	HVAC	3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
Replace Faulty Isolation Valves. Provide Allowance to add valves to chilled water piping main and hot water main.			HVAC	2	\$2,000	\$300	\$200	\$500	\$3,000
Fire protections System is in good working order. Owner to continue to inspect/maintain system per NFPA 25 requirements.			FIRE PROTECTION	3		\$0	\$0	\$0	\$0
Remove existing thermostatic mixing valves and replace with new.			PLUMBING	1	\$8,500	\$1,275	\$850	\$2,125	\$12,750
TVSS should be added at Main service			Electrical	1	\$2,300	\$345	\$230	\$575	\$3,450
Fire Alarm system upgrade, include panel (Edwards Est2)			Electrical	3	\$322,000	\$48,300	\$32,200	\$80,500	\$483,000
Provide lightning protection system on the building			Electrical	3	\$80,500	\$12,075	\$8,050	\$20,125	\$120,750



Parker Damon Building (139,963 sf existing)	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups 1	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
Remove loose parging from foundation wall and apply a new parge coat using an epoxy based formulation.			Architectural	2	\$26,517	\$3,978	\$2,652	\$6,629	\$39,775
Remove loose concrete from around exposed reinforcing steel, apply rust inhibitor to steel, and apply a two-step to repairing and sealing foundation.			Architectural	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
Rake out caulk joints between metal panels and re-install using backer rod (if needed) and a highly flexible polyurethane based exterior sealant with strong adhesion, flexibility, and anti-mold growth properties.			Architectural	2	\$80,479	\$12,072	\$8,048	\$20,120	\$120,718
Clean metal panel system thoroughly.			Architectural	2	\$119,957	\$17,993	\$11,996	\$29,989	\$179,935
Brick sills at all locations should be removed, along with all affected brick courses below them. Condition of damp-proofing should be determined and replaced if needed. Through wall flashing systems should also be reviewed and replaced. Install new brick up to underside of through wall flashing (bottom of brick sill location). Recommend installation of pre-cast concrete sills to replace previous brick sills (top two courses of brick make up the brick sill), then cap with an extruded aluminum sill to prevent absorption of moisture and a repeat of this problem (Note that if extruded aluminum sill is incorporated into repair, new brick sills could be installed in lieu of pre-cast concrete sills).			Architectural	1	\$363,458	\$54,519	\$36,346	\$90,864	\$545,186
Clean existing discolored brick via masonry wash down, or light sandblasting to regain original color as closely as possible (Note that stain removal may not be 100% effective as depth of discoloration may be excessive).			Architectural	2	\$205,563	\$30,834	\$20,556	\$51,391	\$308,344
Prune trees adjacent to building so as to leave a clear space between branches and surface of wall. Tree limb movement during windy conditions should be taken into account when determining degree of trimming			Architectural	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
Remove existing sealants (and backer rods if necessary) and replace with a highly flexible polyurethane based exterior sealant with strong adhesion, flexibility, and anti-mold growth properties.			Architectural	2	\$40,239	\$6,036	\$4,024	\$10,060	\$60,359
Replace damaged aluminum storefront framing members.			Architectural	2	\$32,775	\$4,916	\$3,278	\$8,194	\$49,163
Install new weather seals where missing at doors. Replace damaged or worn weather seals on an as needed basis.			Architectural	1	\$2,990	\$449	\$299	\$748	\$4,485
Replace failed thresholds. This appears to occur primarily at the receiving loading dock area, and at Kindergarten classroom doors at the lower floor level of the building.			Architectural	1	\$1,840	\$276	\$184	\$460	\$2,760
At hollow metal doors, remove surface rust via sanding or sandblast. Prime with a zinc rich primer, and repaint with several coats of a rust inhibitive coating			Architectural	1	\$8,970	\$1,346	\$897	\$2,243	\$13,455
Re-application, or replacement of associated sealants at louvers on an as needed basis.			Architectural	2	\$5,750	\$863	\$575	\$1,438	\$8,625
Re-adhere EPDM walkway pads as necessary.			Architectural	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
Re-seal seams in EPDM roof where delamination is occurring at both the ballasted and un-ballasted roofs, inclusive of counterflashing at ballasted roofs.			Architectural	1	\$274,395	\$41,159	\$27,439	\$68,599	\$411,592
Remove debris from roof drain locations, as well as debris collections occurring along the parapets.			Architectural	1	\$5,750	\$863	\$575	\$1,438	\$8,625
Prune trees adjacent to building to avoid contact with roof membrane (as well as metal panel wall system).	Included in 5.24		Architectural	1		\$0	\$0	\$0	\$0
Remove existing sealants from parapet cap flashing and re-seal with an appropriate sealant.			Architectural	1	\$13,258	\$1,989	\$1,326	\$3,315	\$19,888
Remove and replace asphalt shingle roof at linear skylights (possibly with another material; metal, membrane, etc.).			Architectural	2	\$259,808	\$38,971	\$25,981	\$64,952	\$389,712
Recommend replacement of all VCT in lobby, vestibules, corridors, cafeterium, and service areas. If no vapor barrier was included beneath the slab in the original construction a topical application of a vapor barrier is recommended, as well as levelling compounds in some locations prior to tile installation. Install linoleum tile in lieu of VCT			Architectural	1	\$336,375	\$50,456	\$33,638	\$84,094	\$504,563
Replace soiled, frayed carpet in Kindergarten classrooms and damaged areas in offices and media center with new. Replace transition strips between carpet and VCT.			Architectural	2	\$94,185	\$14,128	\$9,419	\$23,546	\$141,278
Replace vinyl base (isolated, damaged areas) - estimate 10%			Architectural	2	\$8,048	\$1,207	\$805	\$2,012	\$12,072

Parker Damon Building (139,963 sf existing)	Quantity	Unit (% SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups 1	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
Refinish wood sports floor in gymnasium.			Architectural	2	\$37,375	\$5,606	\$3,738	\$9,344	\$56,063
Address areas of damaged CMT in toilet rooms and re-grout locations where needed. - Allowance			Architectural	2	\$5,000	\$750	\$500	\$1,250	\$7,500
Repair areas of damaged epoxy flooring in kitchen area as well as integral base. Second option would be to remove in its entirety and replace as one monolithic floor surface.	1300		Architectural	2	\$20,930	\$3,140	\$2,093	\$5,233	\$31,395
Replace heavily worn rubber stair treads as needed.			Architectural	2	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
Repair physically damaged areas of GWB on an as needed basis and repaint. Replace GWB showing signs of moisture damage adjacent to window openings or water source, re-finish, and repaint. - Allowance			Architectural	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
Re-adhere, re-grout ceramic wall tile in toilet rooms on an as needed basis (isolated areas). - Allowance			Architectural	2	\$5,750	\$863	\$575	\$1,438	\$8,625
Replace any damaged ceiling tiles. - Allowance			Architectural	2	\$3,450	\$518	\$345	\$863	\$5,175
Interior Doors (Allowance) <ul style="list-style-type: none"> <li>Repair or replace damaged doors.</li> <li>Reinstall hardware that has fallen off due to anchorage at damaged door locations.</li> <li>Replace wire glass with impact resistant, and fire rated glazing (where required).</li> <li>Repaint door frames.</li> </ul>			Architectural	2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
Repair or replace damaged areas of plastic laminate at cabinets (including adjustment, or replacement of hardware), countertops, and cubbies. - Allowance			Architectural	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
Replace ceramic tile backsplash with plastic laminate			Architectural	2	\$4,025	\$604	\$403	\$1,006	\$6,038
Repair or replace damaged pencil proof grilles in countertops.			Architectural	2	\$1,150	\$173	\$115	\$288	\$1,725
Replace wood window sills with solid surface material.			Architectural	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
Upgrade water heaters and associated piping.				2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
Replace traps at classroom sinks, allowance for 20 locations				1	\$5,750	\$863	\$575	\$1,438	\$8,625
Repair hot water recirculating lines				1	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
Change Chilled Water System to Variable Primary System			HVAC	2	\$40,250	\$6,038	\$4,025	\$10,063	\$60,375
Reinsulate Refrigerant Piping at Condensing Units			HVAC	1	\$2,000	\$300	\$200	\$500	\$3,000
Reinsulate Missing Hot Water Piping & Duct Insulation			HVAC	1	\$3,000	\$450	\$300	\$750	\$4,500
Replace Actuator on Boiler B-1A			HVAC	1	\$1,500	\$225	\$150	\$375	\$2,250
Add Isolation Dampers to Combustion Air Openings			HVAC	1	\$5,000	\$750	\$500	\$1,250	\$7,500
Insulate Larger Valves			HVAC	2	\$6,500	\$975	\$650	\$1,625	\$9,750
Install CO2 Demand Control Ventilation in Gym, Cafeteria and Library			HVAC	1	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
Install Demand Control Ventilation at Kitchen Hood & Add VFDs			HVAC	1	\$27,600	\$4,140	\$2,760	\$6,900	\$41,400
Retrocommission Controls - Replace Faulty Controls and Adjust Programming			HVAC	1	\$15,000	\$2,250	\$1,500	\$3,750	\$22,500
Plumbing fixtures meet current code for water conservation. However, new high-efficiency low flow fixtures (faucets & flush valves) could be installed to reduce water consumption. It should be confirmed that the existing water closets & urinals are compatible with current low flow flush valves.			PLUMBING	3	\$109,000	\$16,350	\$10,900	\$27,250	\$163,500
Install PV array between 50 to 150KW			Electrical	2	\$603,750	\$90,563	\$60,375	\$150,938	\$905,625

<b>Parker Damon Building (139,963 sf existing)</b>	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
									\$0
<b>TOTALS</b>					\$5,592,068	\$838,810	\$559,207	\$1,398,017	\$8,388,101

Capital Improvement Plan  
 Insert name  
 Acton-Boxborough Regional School District  
 Acton, Massachusetts  
 31 August 2015

**DRAFT**

		RJ Grey Jr High School (145,280 sf existing)	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
<b>1</b>	<b>Health, Safety &amp; Welfare</b>										
		1.01 Repave asphalt walks	5600	SF	Landscape	1	\$38,640	\$5,796	\$3,864	\$9,660	\$57,960
		1.02 Repave drives	92000	SF	Landscape	1	\$423,200	\$63,480	\$42,320	\$105,800	\$634,800
		1.06 Provide harness at rock wall.	1	EA	Architectural	1	\$1,150	\$173	\$115	\$288	\$1,725
		1.07 Widen concrete walkways along charter road. - allowance - base on 8 feet wide	2000	LF		1	\$312,800	\$46,920	\$31,280	\$78,200	\$469,200
		1.08 Add restrooms to concession stand - prefab metal building with Approx 1500 SF, 14 toilets, 2 urinals, 10 WC	1600	SF		2	\$400,000	\$60,000	\$40,000	\$100,000	\$600,000
<b>2</b>	<b>Code Compliance (items not noted above)</b>										
		2.01 Provide gas valve on kitchen cooking equipment interlocked with CO detectors located adjacent to hood.	1		PLUMBING	1	\$4,025	\$604	\$403	\$1,006	\$6,038
		2.02 Provide concrete landing pad at B-wing (west elevation) - 1 location			Architectural	1	\$9,200	\$1,380	\$920	\$2,300	\$13,800
		2.03 Provide lightning protection system	145280	SF	Electrical	1	\$80,500	\$12,075	\$8,050	\$20,125	\$120,750
<b>3</b>	<b>Functional Use</b>										
		3.01 Upgrade Gymnasium lighting with LED high bay fixtures			ELECTRICAL	2	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
		3.02 Provide emergency generator to power life safety lighting and optional stand-by loads such as freeze protection and communications			ELECTRICAL	2	\$575,000	\$86,250	\$57,500	\$143,750	\$862,500
		3.03 Vision Panel replacment			Food Service	1	\$450	\$68	\$45	\$113	\$675
		3.04 Milk coolers			Food Service	1	\$6,900	\$1,035	\$690	\$1,725	\$10,350

				Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost	
		<b>RJ Grey Jr High School (145,280 sf existing)</b>	Quantity	Unit (%, SF, LF, etc.)							
	3.05	Sneeze guards			Food Service	1	\$18,400	\$2,760	\$1,840	\$4,600	\$27,600
	3.06	Replace concrete curb with granite	430	LF	Landscape	2	\$19,780	\$2,967	\$1,978	\$4,945	\$29,670
	3.07	Repave lower parking lot	35000	SF	Landscape	2	\$161,000	\$24,150	\$16,100	\$40,250	\$241,500
	3.08	Restripe parking lines	104	EA	Landscape	2	\$3,588	\$538	\$359	\$897	\$5,382
	3.09	Add planting median island at lower parking lot	2000	SF	Landscape	3	\$69,000	\$10,350	\$6,900	\$17,250	\$103,500
	3.10	Shade trees for lower parking median island	8	EA	Landscape	3	\$11,040	\$1,656	\$1,104	\$2,760	\$16,560
	3.11	Additional shade trees for lower parking lot	8	EA	Landscape	3	\$11,040	\$1,656	\$1,104	\$2,760	\$16,560
	3.12	New school sign	1	EA	Landscape	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
	3.13	Screen service area (vegetation)	20	EA	Landscape	3	\$6,900	\$1,035	\$690	\$1,725	\$10,350
	3.13	Allowance for acoustical treatment in gym and library			Architectural	2	\$74,779	\$11,217	\$7,478	\$18,695	\$112,168
	3.14	Provide heavy guage metal lockers in Locker rooms			Architectural	2	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
	3.15	Replace auditorium seating (Assumes 534 seats)			Architectural	2	\$184,230	\$27,635	\$18,423	\$46,058	\$276,345
	3.16	Mill and Overlay, curb repair	1	LS	Civil	2	\$287,500	\$43,125	\$28,750	\$71,875	\$431,250
<b>4</b>	<b>Handicap Accessibility (Includes only items not noted)</b>										
	4.01	Paint accessible travel path/crosswalk at HC spaces	500	SF	Landscape	1	\$4,600	\$690	\$460	\$1,150	\$6,900
	4.02	Reduce slope at auditorium floor to meet ADA requirements (do in conjunction with 3.15)			Architectural	2	\$100,625	\$15,094	\$10,063	\$25,156	\$150,938
	4.03	Modify door openings and adjacent walls to provide accessible clearance at push/pull sides of doors.			Architectural	2	\$115,000	\$17,250	\$11,500	\$28,750	\$172,500
	4.04	Add walkway at tennis courts to front entrance	300	LF	Architectural	2	\$41,400	\$6,210	\$4,140	\$10,350	\$62,100
	4.05	Restripe parking lines	81	EA	Landscape	2	\$2,795	\$419	\$279	\$699	\$4,192
	4.06	Repaint HC spaces	8	EA	Landscape	2	\$1,380	\$207	\$138	\$345	\$2,070

					Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech, HazMat)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
		<b>RJ Grey Jr High School (145,280 sf existing)</b>	Quantity	Unit (%, SF, LF, etc.)							
<b>5</b>	<b>Maintenance - Extending the Life of the Building (Includes only items not noted above)</b>										
	5.01	Replace Roof Fan that was Damaged by Sliding Snow			HVAC	1	\$4,025	\$604	\$403	\$1,006	\$6,038
	5.02	Replace Half of the Roof Fans that are Inoperative	10	each	HVAC	1	\$40,250	\$6,038	\$4,025	\$10,063	\$60,375
	5.03	Relocate the Fancoil in the Kitchen	1	ea	HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
	5.04	Install Snowguards on Gym Roof in Select Places to Protect Fans			HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
	5.05	Replace Finance Area RTU with Unit with Energy Recovery			HVAC	2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
	5.06	Improve Ventilation to Basement Electric Room			HVAC	2	\$5,750	\$863	\$575	\$1,438	\$8,625
	5.07	Replace Split Systems with R-410A Systems	10	each	HVAC	3	\$86,250	\$12,938	\$8,625	\$21,563	\$129,375
	5.08	Replace Rooftop Units & Air Handlers with Units with Energy Recovery	8	each	HVAC	3	\$138,000	\$20,700	\$13,800	\$34,500	\$207,000
	5.09	Replace Unit Ventilators	145280	SF	HVAC	3	\$830,000	\$124,500	\$83,000	\$207,500	\$1,245,000
	5.10	Replace Make-up Air Units	2	each	HVAC	3	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
	5.11	Replace Faulty Isolation Valves	145280	SF	HVAC	2	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
	5.12	Test Hot Water Quality and Apply Treatment			HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
	5.13	Replace Facilities Portable Building with Permanent Building			HVAC	2		\$0	\$0	\$0	\$0
	5.14	Retrocommission Controls - Replace Faulty Controls and Adjust Programming			HVAC	1	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
	5.15	Paint roof gas piping.		100 LF	PLUMBING	2	\$5,750	\$863	\$575	\$1,438	\$8,625
	5.16	System is in good working order. Owner to continue to inspect/maintain system per NFPA 25 requirements.			FIRE PROTECTION	3	\$0	\$0	\$0	\$0	\$0
	5.17	with LED sources			ELECTRICAL	1	\$115,000	\$17,250	\$11,500	\$28,750	\$172,500

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											\$120,750
	5.18	Provide lightning protection system on the building			ELECTRICAL	3	\$80,500	\$12,075	\$8,050	\$20,125	
	5.19	Minor cracking at the top of the foundation walls - Cracks should be sealed with a cementitious repair mortar.	30	LF	Structural	3	\$5,175	\$776	\$518	\$1,294	\$7,763
	5.20	Cracking in the gym CMU walls at the bearing locations - Testing should be performed to determine whether or not the CMU is solidly grouted. If it isn't then grout should be pumped into the cells below the bearing locations	6	Locations	Structural	1	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
	5.21	Repair mortar joint at stone wall near Gym stair			Architectural	1	\$5,750	\$863	\$575	\$1,438	\$8,625
	5.22	Repoint/repair 10% of brick wall at A-wing and clean efflorescence from brick. Remove a section of brick along the lower portion of the wall and install through wall flashing and weep holes to allow water to escape from wall cavity and prevent future damage. Repeat this around the building where the same condition exists (10% of brick walls)			Architectural	2	\$110,214	\$16,532	\$11,021	\$27,554	\$165,321
	5.23	Replace 5% of brick where damaged around the building			Architectural	3	\$232,844	\$34,927	\$23,284	\$58,211	\$349,266
	5.24	Replace damaged aluminum panels and rotting wood at B-wing, adding flashing to protect the repaired assembly. Provide concrete bumpers at this parking area to limit proximity to building			Architectural	2	\$46,000	\$6,900	\$4,600	\$11,500	\$69,000
	5.25	Rake out caulk joints between metal panels (north and west sides of B-C-D-E wings) and reinstall using backer rod (if needed) and a highly flexible urethane base exterior sealant with strong adhesion, flexibility, and anti-mold growth properties			Architectural	2	\$38,905	\$5,836	\$3,890	\$9,726	\$58,357
	5.26	Repalce caulking at all windows			Architectural	2	\$41,768	\$6,265	\$4,177	\$10,442	\$62,652
	5.27	Repoint mortar at precast sills (10% of locations)			Architectural	2	\$7,183	\$1,077	\$718	\$1,796	\$10,774
	5.28	Replace wood windows and aluminum window systems installed prior to 2002			Architectural	2	\$2,132,905	\$319,936	\$213,291	\$533,226	\$3,199,358

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	5.29	Reset anchors at thresholds for multiple doors around the building. (10 locations)	10	Locations	Architectural	2	\$1,150	\$173	\$115	\$288	\$1,725
	5.30	Replace door and frame and canopy at Fitness room exit.			Architectural	2	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
	5.31	Parge cracks at underside of canopy at main entrance			Architectural	2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
	5.32	Rake out caulk joints at metal louvered panels and reinstall using backer rod (if needed) and a highly flexible polyurethane base exterior sealant with strong adhesion, flexibility, and anti-mold growth properties.			Architectural	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
	5.33	At locations where SSMR dumps onto EPDM flat roof - Replace wood fascia with metal, provide snow guards at SSMR, provide gutters (commercial grade - heavy duty) with drain pipe that extends to a roof drain.	354	LF	Architectural	1	\$40,710	\$6,107	\$4,071	\$10,178	\$61,065
	5.34	Repair broken skylights (estimate 10 skylights); repair damaged weather seals (all)			Architectural	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
	5.35	Replace all roof drain covers			Architectural	2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
	5.36	Misc Roof Repairs <ul style="list-style-type: none"> <li>• Replace boots seals where damaged.</li> <li>• Properly anchor all roof equipment.</li> <li>• Replace caulking at various locations and clean up mastic from roof edge.</li> <li>• Install large scale gutter system along gymnasium roof connected to a roof drain leader to prevent large amounts of water from gym roof landing on adjacent flat roof surfaces.</li> </ul>			Architectural	1	\$334,144	\$50,122	\$33,414	\$83,536	\$501,216
	5.37	Replace wood floor at gymnasium			Architectural	2	\$290,168	\$43,525	\$29,017	\$72,542	\$435,252
	5.38	Replace stage flooring			Architectural	2	\$37,375	\$5,606	\$3,738	\$9,344	\$56,063
	5.39	Allowance to replace all flooring			Architectural	3	\$612,021	\$91,803	\$61,202	\$153,005	\$918,031
	5.40	Replace tectum ceiling at gym			Architectural	3	\$261,151	\$39,173	\$26,115	\$65,288	\$391,727
	5.41	Update circulator pumps for heating system			Mechanical	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875



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	5.42	Replace 1 backflow preventor at water main			Plumbing	1	\$5,750	\$863	\$575	\$1,438	\$8,625
	5.43	Replace mixing station for eye wash stations			Plumbing	1	\$4,025	\$604	\$403	\$1,006	\$6,038
					Plumbing	1					\$17,250
	5.44	Replace 2 water heater tanks					\$11,500	\$1,725	\$1,150	\$2,875	
	5.45	Replace mixing station for hot water			Plumbing	1	\$5,175	\$776	\$518	\$1,294	\$7,763
<b>6</b>		<b>Energy Efficiency / Energy, Water Saving</b> (includes only items not noted above)									
	6.01	Replace Exterior Ductwork that has Holes or is Deteriorated			HVAC	1	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
	6.02	Replace Exterior Ductwork Insulation that has Deteriorated			HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
	6.03	Reinsulate Refrigerant Piping at Condensing Units			HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
	6.04	Insulate Piping & Air Separator in Boiler Room			HVAC	1	\$4,600	\$690	\$460	\$1,150	\$6,900
	6.05	Add CO2 Demand Control Ventilation to Gym Units			HVAC	1	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
	6.06	Add Zone Dampers to Library/Superintendent's Office Unit			HVAC	1	\$8,625	\$1,294	\$863	\$2,156	\$12,938
	6.07	Install Demand Control Ventilation at Kitchen Hood & Add VFDs			HVAC	1	\$27,600	\$4,140	\$2,760	\$6,900	\$41,400
	6.08	Insulate Larger Valves			HVAC	2	\$8,625	\$1,294	\$863	\$2,156	\$12,938
	6.09	Reinsulate Missing Hot Water Piping & Duct Insulation			HVAC	1	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
	6.10	Provide new high efficiency low flow plumbing fixtures throughout.			Plumbing	3	\$125,000	\$18,750	\$12,500	\$31,250	\$187,500
	6.11	Add occupancy sensors throughout the building for energy savings			ELECTRICAL	2	\$460,000	\$69,000	\$46,000	\$115,000	\$690,000
	6.12	Replace weather stripping at all doors			Plumbing	3	\$3,968	\$595	\$397	\$992	\$5,951
	6.13	Upgrade energy management control system			Plumbing	3	\$752,550	\$112,883	\$75,255	\$188,138	\$1,128,825

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<b>7</b>	<b>Hazardous Materials</b>										
	7.01	Old Interior Windows	190	each		3	\$43,700	\$6,555	\$4,370	\$10,925	\$65,550
	7.02	Ceramic Tile Adhesive and Grout				3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
	7.03	Hidden ACM				3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
	7.04	Miscellaneous Hazardous Materials				3	\$40,250	\$6,038	\$4,025	\$10,063	\$60,375
	7.05	Transite Sewer Pipes				3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
	7.06	Damproofing on Exterior/Foundation Walls				3	\$345,000	\$51,750	\$34,500	\$86,250	\$517,500
	7.07	PCB's Remediation				3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
	7.08	Estimated costs for ACM Inspection and Testing Services				3	\$5,750	\$863	\$575	\$1,438	\$8,625
	7.09	Estimated costs for PCB's Testing and Abatement Plans Services				3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
	7.10	Estimated costs for Design, Construction Monitoring and Air Sampling Services				3	\$48,300	\$7,245	\$4,830	\$12,075	\$72,450
		<b>TOTALS</b>					<b>\$10,947,926</b>	<b>\$1,642,189</b>	<b>\$1,094,793</b>	<b>\$2,736,982</b>	<b>\$16,421,890</b>

Acton Boxborough Regional High School (327,237 sf existing)		Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
<b>1 Health, Safety &amp; Welfare</b>										
1.01	Recessed poke thru outlets in most cases are damaged. Replace.	10	each	Electrical	1	\$5,750	\$863	\$575	\$1,438	\$8,625
	We recommend consulting with Delta Controls to determine the current control issue and resolve it as soon as possible. This could be affecting how units operate which in turn could affect the ventilation needs of the building. Provide allowance (\$10k)	1		HVAC	1	\$10,000	\$1,500	\$1,000	\$2,500	\$15,000
1.02	Replace damaged concrete sidewalks/plazas	5600	SF	Landscape	1	\$96,600	\$14,490	\$9,660	\$24,150	\$144,900
1.03	Reset and replace granite curb where necessary	250	LF	Landscape	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
1.04	Create pedestrian concrete sidewalks for west parking lots	4500	SF	Landscape	1	\$62,100	\$9,315	\$6,210	\$15,525	\$93,150
1.05	Replace concrete steps at pool bleacher area to be compliant with riser/tread dim's and provide durable slip-resistant surface			Architectural	1	\$75,000	\$11,250	\$7,500	\$18,750	\$112,500
1.06	Clean ducts/change filters at return air diffusers.			Architectural	1	\$188,161	\$28,224	\$18,816	\$47,040	\$282,242
1.07	Allowance to investigate indoor air quality concerns and address. This may be related to failed exhaust fans noted on the roof.			Architectural	1	\$20,000	\$3,000	\$2,000	\$5,000	\$30,000
1.08										
<b>2 Code Compliance (items not noted above)</b>										
2.01	Paint all elevated gas piping yellow and label as required by current plumbing code.		75 LF	Plumbing	1	\$1,150	\$173	\$115	\$288	\$1,725
2.02	Provide gas valve on kitchen cooking equipment interlocked with CO detectors located adjacent to hood.	1		Plumbing	1	\$4,025	\$604	\$403	\$1,006	\$6,038
2.03	Add signage at each main disconnect per NEC 230.2 (E)	2	each	Electrical	1	\$460	\$69	\$46	\$115	\$690
2.04	The combustion air damper sizes within the mechanical room should be verified to ensure that they are code compliant. We do not believe that they are therefore, new openings with dampers and actuators should be provided.	2	each	HVAC	1	\$4,600	\$690	\$460	\$1,150	\$6,900
2.05	Provide rated closers /appropriate hardware at fire rated doors.			Architectural	1	\$51,750	\$7,763	\$5,175	\$12,938	\$77,625
2.06	Provide compliant guardrails at pool bleacher area			Architectural	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
<b>3 Functional Use</b>										
3.01	Electrical Room E143N where the PV inverter is located is extremely hot and should be provided with local cooling unit	1	each	Electrical/HVAC	1	\$8,625	\$1,294	\$863	\$2,156	TBD
3.02	There were no exterior outlets around the building convenience receptacles should be added.	N/A		Electrical	3	\$8,050	\$1,208	\$805	\$2,013	\$12,075
3.03	Lighting in pool should be upgraded to LED with increased lumen output. Current light levels are inadequate	N/A		Electrical	1	\$2,300	\$345	\$230	\$575	\$3,450
3.04	Repair lighting control system	N/A		Electrical	1	\$368,000	\$55,200	\$36,800	\$92,000	\$552,000
3.05	Update Auditorium house lighting to LED with dim to black	N/A		Electrical	1	\$86,250	\$12,938	\$8,625	\$21,563	\$129,375
3.06	Remove the existing chilled water pump located above the first floor classroom and replace it as well as relocate it to the second floor corridor just below where the chilled water piping exits the chiller. This will provide a more serviceable location and eliminate the current noise and service issue at its current location. The pump has a capacity of 110 GPM with a 5 HP motor.	1	each	HVAC	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
3.07	Any and all facility isolation valves and actuators should be replaced.	unknown	each	HVAC	1	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
3.08	Replace the Pool unit with 100% outside air unit with an all-aluminum interior casing, aluminum coils, and an aluminum plate and frame heat exchanger and DX cooling. Mostly all of the components associated with this existing unit have failed or are in the process of failing. The existing unit capacity is 11,500 CFM.	1	each	HVAC	1	\$220,000	\$33,000	\$22,000	\$55,000	\$330,000
3.09	RTU-8 second stage of cooling has failed and needs to be serviced	1	each	HVAC	1	\$8,625	\$1,294	\$863	\$2,156	\$12,938
3.10	Compressor failures on the Venmar RTU's should be replaced/repared.	2	each	HVAC	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.11	Repave areas of drive and parking	8000	SF	Landscape	2	\$36,800	\$5,520	\$3,680	\$9,200	\$55,200
3.12	Add vegetative screening at delivery area	24	EA	Landscape	2	\$8,280	\$1,242	\$828	\$2,070	\$12,420
3.13	Consider new sign in uniform style	1	EA	Landscape	3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.14	Possible irrigation repairs	1	Lump Sum	Landscape	3	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
3.15	Section of West Parking Lot	1	LS	Civil	3	\$75,000	\$11,250	\$7,500	\$18,750	\$112,500
3.16	Replace curbing	1	LS	Civil	3	\$15,000	\$2,250	\$1,500	\$3,750	\$22,500
3.17	South Parking Lot Mill and Overlay	1	LS	Civil	3	\$35,000	\$5,250	\$3,500	\$8,750	\$52,500
3.18	Investigate louver issues at two locations (18"x18" each +/-), at basement level of B-area, determine if functioning properly, develop solution and address.	2	locations	Architectural	1	\$2,070	\$311	\$207	\$518	\$3,105
<b>4 Handicap Accessibility (includes only items not noted above)</b>										
4.01	Relocate doors at corridor where ramp is too close to the doors.			Architectural	2	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
4.02	Repair or replace transitions that don't meet current code. (Allowance)			Architectural	2	\$1,000	\$150	\$100	\$250	\$1,500

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4.03	Repair flooring at ramps where the raised rubber tile has lifted or is missing.			Architectural	2	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
4.04	Extend handrails at ends of ramps to comply with current code			Architectural	2	\$2,300	\$345	\$230	\$575	\$3,450
4.05	Insulate piping below any accessible sinks			Architectural	2	\$5,750	\$863	\$575	\$1,438	\$8,625
4.06	Re-construct bleachers at pool area and provide accessible seating area with nearby access to elevator	Incl 1.06 above		Architectural	1		\$0	\$0	\$0	\$0
4.07	Construct renovations to the auditorium to allow for handicap accessibility without a lift			Architectural	2	\$34,500	\$5,175	\$3,450	\$8,625	\$51,750
4.08	Relocate room signage as needed to comply			Architectural	2	\$1,725	\$259	\$173	\$431	\$2,588
4.09	Provide paved walkway to tennis courts and playfields			Owner	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
<b>5</b>	<b>Maintenance - Extending the Life of the Building (includes only items not noted above)</b>									
5.01	System is in good working order. Owner to continue to inspect/maintain system per NFPA 25 requirements.			FIRE PROTECTION	3		\$0	\$0	\$0	\$0
5.02	Test the water quality and provide the necessary chemical treatment/maintenance.	1	each	HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
5.03	Consider entering a service contract with a qualified service technician company so that all roof top units can be serviced and maintained on a regular basis.	1	each	HVAC	1		\$0	\$0	\$0	\$0
5.04	Provide routine maintenance on all unit ventilators, exhaust fans and unit heaters such as replacing belts and lubricating their motors and shafts.	40	each	HVAC	1	\$46,000	\$6,900	\$4,600	\$11,500	\$69,000
5.05	Exposed steel is not corroded in existing pool house but non structural elements show extreme corrosion. - All elements showing signs of corrosion should be replaced with corrosion resistant elements. All steel framing members showing signs of corrosion shall be wire brushed and painted with rust inhibiting paint. (Allowance for general repair and refinishing of surfaces/finishing)	100	%	Structural	1	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
5.06	Spalling of slabs and stairs at loading dock - Loading dock concrete should be chipped as required to expose reinforcing and recast	30	LF	Structural	2	\$8,625	\$1,294	\$863	\$2,156	\$12,938
5.07	Minor cracking on the underside of the concrete tee's at the back of the gym - Epoxy should be injected into cracks and then sealed with paint or an epoxy	20	LF	Structural	2	\$8,050	\$1,208	\$805	\$2,013	\$12,075
5.08	Exposed steel is not corroded in existing mechanical room but non structural elements show extreme corrosion. - All elements showing signs of corrosion should be replaced with corrosion resistant elements. All steel framing members showing signs of corrosion shall be wire brushed and painted with rust inhibiting paint.	100	%	Structural	1	\$37,950	\$5,693	\$3,795	\$9,488	\$56,925
5.09	Remove parging on concrete block foundation and at sills to windows that sit on the top of these walls. Provide new concrete product, mechanically anchored into block and apply mineral coating			Architectural	2	\$62,100	\$9,315	\$6,210	\$15,525	\$93,150
5.10	Remove plywood infill at exterior stair and replace with cast-in-place concrete.	65	CF	Architectural	1	\$11,213	\$1,682	\$1,121	\$2,803	\$16,819

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5.11	Scrape off loose paint and concrete at original building fascia. Apply concrete patching compound and apply mineral coating			Architectural	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
5.12	Replace caulking at control joints.			Architectural	2	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
5.13	Replace caulking at perimeter of all windows.			Architectural	2	\$94,081	\$14,112	\$9,408	\$23,520	\$141,121
5.14	Confirm number of leaking windows (possibly 6). Investigate and address cause of the leaks; this may involve removal of a window, as well as a number of brick above and to the side of a window. Re-finish wood stools, patch and re-paint concrete block	6	locations	Architectural	1	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
5.15	Replace clerestory windows at cafeteria with high-performance insulated, aluminum window system, specified for southern exposure			Architectural	2	\$198,260	\$29,739	\$19,826	\$49,565	\$297,390
5.16	Replace all hollow metal doors and frames (older sections of building prior to 2002). Replace thresholds and adjacent flooring as well.			Architectural	3	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
5.17	During a future renovation project, consider replacement of aluminum framing system and doors at primary entrances.			Architectural	3	\$80,500	\$12,075	\$8,050	\$20,125	\$120,750
5.18	Investigate alternatives to relocate exterior ductwork inside. In the meantime, for the purpose of this CIP, refer to HVAC item on this topic. Allowance for study only			Architectural	2	\$10,000	\$1,500	\$1,000	\$2,500	\$15,000
5.19	Remove deteriorated concrete splashblocks and replace with rubber membrane matt to protect membrane roof.			Architectural	1	\$7,475	\$1,121	\$748	\$1,869	\$11,213
5.20	Install roof drain at large ponding area west of auditorium and provide tapered insulation and new membrane in this area.	10,000	sf	Architectural	1	\$287,500	\$43,125	\$28,750	\$71,875	\$431,250
5.21	Add roof walk pads at top and bottom of all ladders, and circulation path to each roof top unit.	200	lf	Architectural	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
5.22	Precast concrete fascia/cornice was observed to have rebar protruding, which caused cracking of the concrete. Remove exposed rebar at concrete and patch cut-out. Remove all paint from fascia and apply mineral coating.			Architectural	2	\$115,000	\$17,250	\$11,500	\$28,750	\$172,500
5.23	Remove pvc elbow at plumbing vent and find alternative solution to address issue with cast iron instead of pvc.			Architectural	2	\$5,750	\$863	\$575	\$1,438	\$8,625
5.24	Add a 3' high ladder at raised roof area where scupper is used as stepping area.			Architectural	1	\$1,610	\$242	\$161	\$403	\$2,415
5.25	Verify warranty duration on translucent (Kalwal) skylight panels and replace all southern exposure panels. Carry allowance assuming warranty does not cover replacement cost.			Architectural	1	\$46,000	\$6,900	\$4,600	\$11,500	\$69,000
5.26	Relocate coax cable to run inside the building; cap and seal tight all openings in roof.			Architectural	1	\$5,750	\$863	\$575	\$1,438	\$8,625
5.27	Replace deteriorated and leaking exhaust fans (estimate 7); use different model that does not allow water or snow in.	7	locations	Architectural	1	\$16,100	\$2,415	\$1,610	\$4,025	\$24,150
5.28	Provide prefabricated, engineered stand-alone platform to support condensing units; anchor units to platform.	4	ea	HVAC	2	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
5.29	Remove 60' long by 2' high section of brick at gym; remove failed thru-wall flashing, and provide retro-fit thru-wall flashing and insulation, and provide new brick.	120	sf	Architectural	1	\$20,700	\$3,105	\$2,070	\$5,175	\$31,050
5.30	Investigate cause of concrete slab issues and address; provide flash patching as needed, replace VCT in numerous classrooms and corridors throughout the building (estimate 25,000 sf)	25000	SF	Architectural	3	\$258,750	\$38,813	\$25,875	\$64,688	\$388,125
5.31	Replace wrinkled and worn carpeting (estimate 4,000 sf)	4000	SF	Architectural	3	\$36,800	\$5,520	\$3,680	\$9,200	\$55,200
5.32	Relocate locker rooms as part of a larger renovation project.			Architectural	3	\$862,500	\$129,375	\$86,250	\$215,625	\$1,293,750
5.33	Cap all abandoned or cut piping above ceiling to be water-tight			Architectural	3	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
5.34	When house lights are replaced, replace the plaster ceiling in the auditorium			Architectural	1	\$279,450	\$41,918	\$27,945	\$69,863	\$419,175
5.35	Replace numerous doors and hardware throughout the building (estimate 25% of all doors)			Architectural	1	\$376,323	\$56,448	\$37,632	\$94,081	\$564,484
5.36	Re-finish cabinetry and built-in woodwork (Allowance)			Architectural	3	\$30,000	\$4,500	\$3,000	\$7,500	\$45,000
5.37	Replace all theatrical curtains at stage			Architectural	1	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
5.38	Replace limited number of seats in auditorium (estimate 5)	5	seats	Architectural	1	\$2,013	\$302	\$201	\$503	\$3,019
5.39	Any and all sections of piping insulation (all types of piping, including refrigerant piping) that is missing should be replaced with durable weatherproof rigid insulated covering (this applies primarily to exterior piping on roof but may also apply to localized areas within the school where subjected to damage).	250	\$/LF	HVAC	1	\$4,350	\$653	\$435	\$1,088	\$6,525
5.40	Replace all outdoor ductwork insulation and insulate any existing exterior ductwork that does not have any insulation with durable, weatherproof, rigid insulation covering (similar to Flexclad type product) with the highest R-value possible.	1000	SF	HVAC	1	\$6,900	\$1,035	\$690	\$1,725	\$10,350
<b>6 Energy Efficiency / Energy, Water Saving (Includes only items not noted above)</b>										
6.01	Provide new high efficiency low flow flush valves at water closets and urinals.			Plumbing	3	\$250,000	\$37,500	\$25,000	\$62,500	\$375,000
6.02	Replace the existing chiller with a high efficiency turbo core compressor style chiller.	1	each	HVAC	2	\$285,000	\$42,750	\$28,500	\$71,250	\$427,500
6.03	Replace the existing boiler plant with high efficiency condensing style boilers.	2	each	HVAC	2	\$172,500	\$25,875	\$17,250	\$43,125	\$258,750
6.04	Replace all the roof top units with new roof top units with energy recovery wheels, premium efficiency motors, and variable frequency drives, as this is now required by code for energy saving purposes and would provide a more energy efficient system.	25	each	HVAC	2/3	\$431,250	\$64,688	\$43,125	\$107,813	\$646,875

Acton Boxborough Regional High School (327,237 sf existing)		Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
6.05	Replace the Pool unit with 100% outside air unit with an all-aluminum Interior casing, aluminum coils, and an aluminum plate and frame heat exchanger and DX cooling. The existing unit capacity is 11,500 CFM.	1	each	HVAC	1	\$207,000	\$31,050	\$20,700	\$51,750	\$310,500
<b>7 Hazardous Materials Abatement</b>										
7.01	Ceramic Tile Adhesive and Grout			HazMat	3	\$40,250	\$6,038	\$4,025	\$10,063	\$60,375
7.02	Hidden ACM			HazMat	3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.03	Miscellaneous Hazardous Materials			HazMat	3	\$40,250	\$6,038	\$4,025	\$10,063	\$60,375
7.04	Transite Sewer Pipes			HazMat	3	\$57,500	\$8,625	\$5,750	\$14,375	\$86,250
7.05	Damproofing on Exterior/Foundation Walls			HazMat	3	\$488,750	\$73,313	\$48,875	\$122,188	\$733,125
7.06	PCB's Remediation			HazMat	3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
7.07	Estimated costs for ACM Inspection and Testing Services			HazMat	3	\$5,750	\$863	\$575	\$1,438	\$8,625
7.08	Estimated costs for PCB's Testing and Abatement Plans Services			HazMat	3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
7.09	Estimated costs for Design, Construction Monitoring and Air Sampling Services			HazMat	3	\$80,500	\$12,075	\$8,050	\$20,125	\$120,750
<b>TOTALS</b>						<b>\$7,014,219</b>	<b>\$1,052,133</b>	<b>\$701,422</b>	<b>\$1,753,555</b>	<b>\$10,508,392</b>
<b>GENERAL NOTES</b>										
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 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. Some items should be completed in combination with other items. Some of these suggestions may be noted above. We recommend that once a scope of work is desired to be pursued, a mini-study should be done to confirm which work should be done together. See the next general note below for additional information.										
6. 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. Part or all of this work may trigger other renovation requirements related to code, seismic, sprinklers or handicap accessibility. 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.										

District-Wide  
Capital Improvement Chart

Rank: 1 = Significant Renovations Needed    2 = Moderate Renovations Needed    3 = Ongoing Maintenance/Minor or Localized Renovations Needed											
Evaluation Criteria	ABRHS	Campus-Site and Leary Field	RJG-JHS	Parker Damon	Douglas	Gates	Conant	Blanchard	Admin	Maintenance Garage	TOTAL
Date of Construction and last renovations:	1964, 1971, 2004		1955, 1960, 2002	2001	1965	1967	1970	1949, 1959, 1967, 1970, 1995	1957	circa 1980's	
	327,000		145,000	140,000	48,000	54,000	55,000	71,000	36,000	2,600	
RANK	3		2	3	1	1	1	2,3	1	1	
<b>1. Health, Safety &amp; Welfare</b>	\$1,005,525		\$771,075	\$189,750	\$1,950,546	\$835,590	\$567,594	\$350,003	\$558,285	\$146,970	<b>\$8,375,338</b>
1. Health, Safety & Welfare	\$3.08		\$5.32	\$1.36	\$40.64	\$15.47	\$10.32	\$4.93	\$15.51	\$56.53	
<b>2. Code Compliance</b>	\$117,128		\$140,588	\$132,825	\$868,125	\$975,840	\$741,510	\$743,696	\$1,106,526	\$232,875	<b>\$5,059,112</b>
2. Code Compliance	\$0.36		\$0.97	\$0.95	\$18.09	\$18.07	\$13.48	\$10.47	\$30.74	\$89.57	
<b>3. Functional Use</b>	\$2,921,850	\$4,391,250	\$2,265,160	\$1,172,224	\$4,594,020	\$1,777,564	\$1,572,758	\$1,581,282	\$2,207,663	\$1,223,370	<b>\$23,707,140</b>
3. Functional Use	\$8.94		\$15.62	\$8.37	\$95.71	\$32.92	\$28.60	\$22.27	\$61.32	\$470.53	
<b>4. Handicap Accessibility</b>	\$209,363		\$398,699	\$17,250	\$2,467,785	\$167,325	\$330,912	\$2,760	\$1,723,041	\$36,225	<b>\$5,353,360</b>
4. Handicap Accessibility	\$0.64		\$2.75	\$0.12	\$51.41	\$3.10	\$6.02	\$0.04	\$47.86	\$13.93	
<b>5. Maintenance- Extending the Life of the Building</b>	\$5,105,397		\$11,975,441	\$6,254,228	\$3,136,306	\$6,520,501	\$10,763,686	\$2,258,321	\$2,930,025	\$0	<b>\$48,943,805</b>
5. Maintenance- Extending the Life of the Building	\$15.61		\$82.59	\$44.67	\$65.34	\$120.75	\$195.70	\$31.81	\$81.39	\$0.00	
<b>6. Energy Efficiency- Energy Water Saving</b>	\$4,708,125		\$2,193,401	\$1,263,525	\$3,964,188	\$3,301,944	\$1,976,944	\$2,308,425	\$4,472,655	\$424,860	<b>\$24,814,067</b>
6. Energy Efficiency- Energy Water Saving	\$14.40		\$15.13	\$9.03	\$82.59	\$61.15	\$35.94	\$32.51	\$124.24	\$163.41	
<b>SUBTOTAL</b>	\$14,067,416	\$4,391,250	\$17,744,472	\$9,029,857	\$16,981,241	\$13,578,955	\$15,953,657	\$7,244,556	\$12,998,432	\$2,064,931	<b>\$114,052,922</b>
	\$43.02		\$122.38	\$64.50	\$353.78	\$251.46	\$290.07	\$102.04	\$361.07	\$794.20	
<b>7. Hazardous Materials Abatement - (As Needed)</b>	\$319,125		\$324,300	\$0	\$840,248	\$1,131,773	\$1,685,670	\$998,775	\$821,100	\$26,738	<b>\$6,147,728</b>
	\$0.98		\$2.24	\$0.00	\$17.51	\$20.96	\$30.65	\$14.07	\$22.81	\$10.28	
<b>TOTAL</b>	\$14,386,541	\$4,391,250	\$18,068,772	\$9,029,857	\$17,821,489	\$14,710,727	\$17,639,327	\$8,243,331	\$13,819,532	\$2,091,668	<b>\$120,200,650</b>
Overview Commentary:											
Cost/SF	\$43		\$122	\$64	\$354	\$251	\$290	\$102	\$361	\$794	

	Maintenance Building (2,560 sf existing)	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs incl GC Markups <sup>1</sup>	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
<b>1</b>	<b>Health, Safety &amp; Welfare</b>									
1.01	Install fire alarm system.			Electrical	1	\$8,050	\$1,208	\$805	\$2,013	\$12,075
1.02	Provide a fire-rated wall and door separation between vehicle bay and employee eating and office areas. Provide plated metal panels at first 4' on wall of vehicle side.			Architectural	1	\$11,730	\$1,760	\$1,173	\$2,933	\$17,595
1.03	Construct a separate welding booth space, in a fire-rated space, and stand-alone exhaust/ventilation			Architectural	1	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
1.04	Construct a separate, ventilated, fire-rated space for oil tank and flammable liquids.			Architectural	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
1.05	Construct a separate fire-rated space for furnace, along with a fire-rated shaft for flue.			Architectural	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
1.06	Construct a new waste-line from Charter Road to the building and connect to sink in staff room and future toilet room.			Architectural	1	\$20,700	\$3,105	\$2,070	\$5,175	\$31,050
<b>2</b>	<b>Code Compliance (items not noted above)</b>									
2.01	Provide accessible toilet rooms for staff.	2		PLUMBING	1	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
2.02	Provide sanitary service from road into building for toilet rooms.			PLUMBING	1	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
2.03	Provide water heater for fixtures. (sink and future toilet room)	1		PLUMBING	1	\$4,025	\$604	\$403	\$1,006	\$6,038
2.04	Provide floor drains in garage area per code. Garage drainage is required to be directed to an oil separator.	6		PLUMBING	1	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
2.05	Fully sprinklered building.			FIRE PROTECTION	2	\$23,000	\$3,450	\$2,300	\$5,750	\$34,500
2.06	Install life safety lighting emergency battery units	10		Electrical	1	\$5,175	\$776	\$518	\$1,294	\$7,763
2.07	Provide CO/NO2 monitoring system and exhaust system	1	each	HVAC	1	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
2.08	Provide ventilation air to the office area, provide a packaged fuel oil fired indoor air handling unit at 3000 CFM for heating and ventilation of the garage and office area.	1	each	HVAC	1	\$28,750	\$4,313	\$2,875	\$7,188	\$43,125
2.09	Fuel oil storage tank vents should be relocated to the outdoors	1	LF	HVAC	1	\$5,750	\$863	\$575	\$1,438	\$8,625
2.10	Provide code-required ventilation to staff break and office spaces, separated from vehicle spaces.			Architectural	1	\$13,800	\$2,070	\$1,380	\$3,330	\$20,700
<b>3</b>	<b>Functional Use</b>									
3.01	Switchgear upgrade and added receptacles			Electrical	1	\$8,625	\$1,294	\$863	\$2,156	\$12,938
3.02	New paved parking area	7200	SF	Landscape	2	\$33,120	\$4,968	\$3,312	\$8,280	\$49,680
3.03	New paved vehicle storage area	9000	SF	Landscape	2	\$62,100	\$9,315	\$6,210	\$15,525	\$93,150
3.04	Add curbing on Charter Road for drainage	120	LF	Landscape	2	\$5,520	\$828	\$552	\$1,380	\$8,280
3.05	Install vegetative screening	40	EA	Landscape	3	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
3.06	Install new sign	1	EA	Landscape	3	\$575	\$86	\$58	\$144	\$863
3.07	Pavement reconstruction, drainage improvements	1	LS	Civil	3	\$143,750	\$21,563	\$14,375	\$35,938	\$215,625
3.08	Install bollards or curbing at the perimeter of building where vehicles frequent			Architectural	2	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
3.09	Add windows above eye-level to allow day-light into the spaces.	40	SF	Architectural	3	\$6,440	\$966	\$644	\$1,610	\$9,660
3.10	Construct an addition so that the full bus can fit inside the building.	1500	SF	Architectural	2	\$345,000	\$51,750	\$34,500	\$86,250	\$517,500
3.11	Build an addition to the building for more secure storage for equipment and parts, better organization, improved efficiency, and increase longevity of assets.	600	SF	Architectural	2	\$165,600	\$24,840	\$16,560	\$41,400	\$248,400
3.12	Replace cabinets and counters		LF	Architectural	3	\$17,250	\$2,588	\$1,725	\$4,313	\$25,875
3.13										
<b>4</b>	<b>Handicap Accessibility (includes only items not noted above)</b>									
4.01	Replace door knobs with levers.			Architectural	2	\$13,800	\$2,070	\$1,380	\$3,450	\$20,700
4.02	Provide concrete or asphalt outside exterior door to provide sloped transition into entry door to address 2" lip.			Architectural	2	\$10,350	\$1,553	\$1,035	\$2,588	\$13,925
4.03										
<b>6</b>	<b>Energy Efficiency / Energy, Water Saving (includes only items not noted above)</b>									
6.01	Providing a building or town wide direct digital control system with web accessible software, graphical floor plans, and equipment indication, alarm notifications, trending and remote system modification.	1	SF	HVAC	3	\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
6.02	Remove the window air conditioner and provide cooling to the indoor air handling unit indicated above.	1	CFM	HVAC	2	\$21,500	\$3,225	\$2,150	\$5,375	\$32,250



	Maintenance Building (2,560 sf existing)	Quantity	Unit (%, SF, LF, etc.)	Discipline (Architectural, Civil, Landscape, Structural, HVAC, Electrical, Plumbing, Fire Protection, Tech)	Priority 1 = (0-2 yrs) 2 = (3-6 yrs) 3 = (7+ yrs)	Costs Inc: GC Markups: 1	Design and Estimating Contingency 15%	Owners Contingency 10%	Soft Cost Allowance 20%	Estimated Cost
6.03	Remove fiberglass batt insulation blankets and install structural insulation panels (SIP), with rain screen and flashed at base to the exterior. Remove and re-install exterior metal siding as needed. This work should be done in conjunction with roofing insulation replacement.			Architectural	2	\$132,480	\$19,872	\$13,248	\$33,120	\$198,720
6.04	Provide vented insulation composite roof panels on top of existing metal roof and install new standing seam metal roof designed for low-slope roofs. Include allowance for structural reinforcing between purlins. Structural engineer to analyze roof structure load capacity prior to beginning work to determine if additional reinforcing is necessary and to what extent. This work should be done at the same time as improvements to exterior wall. Roof and wall systems shall be connected to provide continuous vapor and insulation between wall and roof.			Architectural	2	\$117,760	\$17,664	\$11,776	\$29,440	\$176,640
<b>7 Hazardous Materials Abatement</b>										
7.01	Sinks	1	Total			\$575	\$85	\$58	\$144	\$863
7.02	Miscellaneous Hazardous Materials					\$5,750	\$863	\$575	\$1,436	\$8,625
7.03	Transite Sewer Pipes					\$11,500	\$1,725	\$1,150	\$2,875	\$17,250
7.04	Estimated costs for ACM Inspection and Testing Services					\$1,150	\$173	\$115	\$288	\$1,725
7.05	Estimated costs for Design, Construction Monitoring and Air Sampling Services					\$3,450	\$518	\$345	\$863	\$5,175
<b>TOTALS</b>						<b>\$1,398,625</b>	<b>\$209,794</b>	<b>\$139,863</b>	<b>\$349,656</b>	<b>\$2,097,938</b>