

FACILITY CONDITION ASSESSMENT

Prepared for

Town of Dedham Schools
100 Whiting Avenue
Dedham, Massachusetts 02026



FACILITY CONDITION ASSESSMENT
OF
DEDHAM-OAKDALE ELEMENTARY SCHOOL
147 CEDAR STREET
DEDHAM, MASSACHUSETTS 02026

PREPARED BY:

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EMG PROJECT #:

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DATE OF REPORT:

December 27, 2016

ONSITE DATE:

November 10, 2016



engineering | environmental | capital planning | project management



Immediate Repairs Report
Oakdale Elementary School
12/27/2016



Location Name	EMG Renamed Item Number	ID	Cost Description	Quantity	Unit	Unit Cost	Subtotal	Deficiency Repair Estimate *
Oakdale Elementary School	5.2	521750	G2012 Roadways, Asphalt Pavement, Cut & Patch	13000	SF	\$6.29	\$81,775	\$81,775
Oakdale Elementary School	5.2	521751	G2012 Roadways, Asphalt Pavement, Cut & Patch	12000	SF	\$6.29	\$75,485	\$75,485
Oakdale Elementary School	5.5	521906	P000X Engineer, Electrical, Design	1	EA	\$3,162.50	\$3,163	\$3,163
Oakdale Elementary School	6.6	522708	B2021 Window, Aluminum Double-Glazed 12 SF, 3+ Stories, Replace	50	EA	\$648.58	\$32,429	\$32,429
Oakdale Elementary School	6.6	522711	B2021 Window, Aluminum Double-Glazed 12 SF, 1-2 Stories, Replace	18	EA	\$584.21	\$10,516	\$10,516
Oakdale Elementary School	6.6	522712	B2021 Window, Aluminum Double-Glazed 24 SF, 1-2 Stories, Replace	142	EA	\$870.45	\$123,604	\$123,604
Oakdale Elementary School	6.6	522707	B2021 Window, Aluminum Double-Glazed 24 SF, 3+ Stories, Replace	97	EA	\$934.82	\$90,678	\$90,678
Oakdale Elementary School	6.6	523816	B2031 Exterior Door, Fully-Glazed Aluminum-Framed Swinging, Replace	4	EA	\$2,106.57	\$8,426	\$8,426
Oakdale Elementary School	7.1	523811	D3011 Fuel Oil Tank Monitoring System, Replace	1	EA	\$19,999.24	\$19,999	\$19,999
Oakdale Elementary School	7.1	523810	D3011 Fuel Oil Tank Monitoring System, Replace	1	EA	\$19,999.24	\$19,999	\$19,999
Oakdale Elementary School	7.1	524370	D3041 Motor, 3 HP, Open Drip Proof, Premium Efficiency, Replace	3	EA	\$1,397.25	\$4,192	\$4,192
Oakdale Elementary School	7.1	522930	D3042 Exhaust Fan, Propeller, 800 CFM, Replace	3	EA	\$1,383.64	\$4,151	\$4,151
Oakdale Elementary School	7.1	523815	D3051 Radiator, Cast Iron, Replace	4	EA	\$677.60	\$2,710	\$2,710
Oakdale Elementary School	7.1	522887	D3051 Unit Heater, Natural Gas, 76 to 125 MBH, Replace	1	EA	\$5,006.98	\$5,007	\$5,007
Oakdale Elementary School	7.1	522899	D3051 Unit Heater, Hydronic, 161 to 250 MBH, Replace	1	EA	\$4,239.16	\$4,239	\$4,239
Oakdale Elementary School	7.1	523880	X103X ECM, Building & Control Systems, Re-Commission, Modify	5000	SF	\$0.70	\$3,500	\$3,500
Oakdale Elementary School	7.2	523412	D2021 Backflow Preventer, 2", Replace	1	EA	\$2,603.17	\$2,603	\$2,603
Oakdale Elementary School	7.4	523468	D5012 Distribution Panel, 208 Y, 120 V, 200 Amp, Replace	1	EA	\$7,906.20	\$7,906	\$7,906
Oakdale Elementary School	7.4	523422	D5012 Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	1	EA	\$5,079.93	\$5,080	\$5,080
Oakdale Elementary School	7.4	523419	D5012 Distribution Panel, 208 Y, 120 V, 400 Amp, Replace	1	EA	\$9,487.85	\$9,488	\$9,488
Oakdale Elementary School	7.4	523415	D5012 Distribution Panel, 208 Y, 120 V, 400 Amp, Replace	1	EA	\$9,487.85	\$9,488	\$9,488
Oakdale Elementary School	7.4	523483	D5022 Fluorescent Lighting Fixture, T8, 32 W, Replace	32	EA	\$213.86	\$6,843	\$6,843
Oakdale Elementary School	7.6	523589	C1021 Interior Door, Fire 90-Minutes and Over, Replace	12	EA	\$1,649.06	\$19,789	\$19,789
Oakdale Elementary School	7.6	523587	D4019 Sprinkler System, Full Retrofit, School (per SF), Renovate	50000	SF	\$6.25	\$312,675	\$312,675
Oakdale Elementary School	7.6	523574	D5038 Camera Video Quad Processor, Headend, Closed Circuit, Replace	1	EA	\$3,366.59	\$3,367	\$3,367
Oakdale Elementary School	7.6	523580	D5038 Camera, Exterior, Closed Circuit, PTZ B/W, Replace	9	EA	\$3,371.90	\$30,347	\$30,347

Immediate Repairs Report
Oakdale Elementary School
12/27/2016



Location Name	EMG Renamed Item Number	ID	Cost Description	Quantity	Unit	Unit Cost	Subtotal	Deficiency Repair Estimate *
Oakdale Elementary School	8.1	523697	C3024 Interior Floor Finish, Vinyl Tile (VCT), Replace	20000	SF	\$4.80	\$96,012	\$96,012
Oakdale Elementary School	8.1	523843	C3031 Interior Ceiling Finish, Gypsum Board/Plaster, Prep & Paint	6000	SF	\$1.94	\$11,620	\$11,620
Oakdale Elementary School	8.1	523755	C3031 Interior Ceiling Finish, Vinyl, Replace	1400	SF	\$2.10	\$2,937	\$2,937
Immediate Repairs Total								\$1,008,027

* Location Factor included in totals.



12/27/2016

Location Name	EMG	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	Subtotal	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Deficiency Repair Estimate
	Renamed Item Number																														
Oakdale Elementary School	5.2	521750	Roadways, Asphalt Pavement, Cut & Patch	25	26	0	13000	SF	\$6.29	\$81,775	\$81,775																			\$81,775	
Oakdale Elementary School	5.2	521751	Roadways, Asphalt Pavement, Cut & Patch	25	26	0	12000	SF	\$6.29	\$75,485	\$75,485																			\$75,485	
Oakdale Elementary School	5.2	521767	Roadways, Concrete Pavement, Repair	0	15	* 0	400	SF	\$1.99	\$795				\$795																\$795	
Oakdale Elementary School	5.3	521800	Sump Pump, 3 HP, Replace	15	2016	* 0	1	EA	\$2,062.81	\$2,063		\$2,063														\$2,063				\$4,126	
Oakdale Elementary School	5.5	521956	Foundations, , Refinish	40	2016	* 0	200	SF	\$10.44	\$2,088		\$2,088																		\$2,088	
Oakdale Elementary School	5.5	521909	Flood Light, Exterior, 100 W, Replace	20	2016	* 0	7	EA	\$995.47	\$6,968		\$6,968																		\$6,968	
Oakdale Elementary School	5.5	521911	Flood Light, Exterior, 100 W, Replace	20	15	5	5	EA	\$995.47	\$4,977					\$4,977															\$4,977	
Oakdale Elementary School	5.5	521809	Fences & Gates, Chain Link, 4' High, Replace	30	24	6	1400	LF	\$30.51	\$42,717						\$42,717														\$42,717	
Oakdale Elementary School	5.5	521913	Fences & Gates, Chain Link, 6' High, Replace	30	24	6	40	LF	\$37.54	\$1,502						\$1,502														\$1,502	
Oakdale Elementary School	5.5	521914	Play Structure, Swing Set, 4 Seats, Replace	20	10	10	1	EA	\$2,210.00	\$2,210										\$2,210										\$2,210	
Oakdale Elementary School	5.5	521915	Play Structure, Medium, Replace	20	5	15	1	EA	\$40,005.63	\$40,006																\$40,006				\$40,006	
Oakdale Elementary School	5.5	521906	Engineer, Electrical, Design	0	2016	0	1	EA	\$3,162.50	\$3,163	\$3,163																			\$3,163	
Oakdale Elementary School	6.3	522186	Roof, Asphalt Shingle, Replace	20	12	8	4600	SF	\$3.42	\$15,734								\$15,734												\$15,734	
Oakdale Elementary School	6.3	522143	Roof, Single-Ply EPDM Membrane, Replace	20	7	13	12500	SF	\$10.52	\$131,500													\$131,500							\$131,500	
Oakdale Elementary School	6.3	522140	Roof, Single-Ply EPDM Membrane, Replace	20	1	19	6000	SF	\$10.52	\$63,120																		\$63,120		\$63,120	
Oakdale Elementary School	6.3	523891	Gutters & Downspouts, Aluminum w/ Fittings, Replace	10	9	1	420	LF	\$8.37	\$3,516		\$3,516									\$3,516									\$7,032	
Oakdale Elementary School	6.4	522191	Exterior Wall, Wood Clapboard, 3+ Stories, Replace	20	35	* 0	40	SF	\$28.04	\$1,121		\$1,121																		\$1,121	
Oakdale Elementary School	6.4	522198	Exterior Wall, Brick or Brick Veneer, 3+ Stories, Repoint	25	10	15	2000	SF	\$45.45	\$90,898																\$90,898				\$90,898	
Oakdale Elementary School	6.5	521769	Exterior Stairs, Concrete, Repair	0	20	* 0	200	SF	\$3.88	\$775		\$775																		\$775	
Oakdale Elementary School	6.5	521771	Exterior Stairs, Concrete, Repair	0	16	* 0	200	SF	\$3.88	\$775					\$775															\$775	
Oakdale Elementary School	6.5	523881	Exterior Wall, Painted Surface, 3+ Stories, Prep & Paint	10	5	5	4000	SF	\$3.83	\$15,300					\$15,300											\$15,300				\$30,601	
Oakdale Elementary School	6.6	522708	Window, Aluminum Double-Glazed 12 SF, 3+ Stories, Replace	30	114	0	50	EA	\$648.58	\$32,429	\$32,429																			\$32,429	
Oakdale Elementary School	6.6	522711	Window, Aluminum Double-Glazed 12 SF, 1-2 Stories, Replace	30	64	0	18	EA	\$584.21	\$10,516	\$10,516																			\$10,516	
Oakdale Elementary School	6.6	522712	Window, Aluminum Double-Glazed 24 SF, 1-2 Stories, Replace	30	64	0	142	EA	\$870.45	\$123,604	\$123,604																			\$123,604	
Oakdale Elementary School	6.6	522707	Window, Aluminum Double-Glazed 24 SF, 3+ Stories, Replace	30	114	0	97	EA	\$934.82	\$90,678	\$90,678																			\$90,678	
Oakdale Elementary School	6.6	523816	Exterior Door, Fully-Glazed Aluminum-Framed Swinging, Replace	30	64	0	4	EA	\$2,106.57	\$8,426	\$8,426																			\$8,426	
Oakdale Elementary School	6.6	522714	Exterior Door, Wood Solid-Core w/ Safety Glass, Replace	25	20	5	11	EA	\$1,928.03	\$21,208					\$21,208															\$21,208	
Oakdale Elementary School	7.1	523811	Fuel Oil Tank Monitoring System, Replace	20	40	0	1	EA	\$19,999.24	\$19,999	\$19,999																			\$19,999	
Oakdale Elementary School	7.1	523810	Fuel Oil Tank Monitoring System, Replace	20	35	0	1	EA	\$19,999.24	\$19,999	\$19,999																			\$19,999	
Oakdale Elementary School	7.1	523769	Fuel Storage Tank, 5,000 to 10,000 GAL, Replace	25	20	5	1	EA	\$28,486.61	\$28,487					\$28,487															\$28,487	
Oakdale Elementary School	7.1	523768	Fuel Storage Tank, 5,000 to 10,000 GAL, Replace	25	15	10	1	EA	\$28,486.61	\$28,487										\$28,487										\$28,487	
Oakdale Elementary School	7.1	522810	Boiler, Oil, 1,501 to 2,000 MBH, Replace	22	10	12	2	EA	\$52,840.11	\$105,680												\$105,680								\$105,680	
Oakdale Elementary School	7.1	523772	Expansion Tank, 61 to 100 GAL, Replace	25	20	5	1	EA	\$3,249.54	\$3,250					\$3,250															\$3,250	
Oakdale Elementary School	7.1	523900	Steam Trap, F&T, 2", Replace	20	10	10	1	EA	\$1,117.50	\$1,117										\$1,117										\$1,117	
Oakdale Elementary School	7.1	523771	Expansion Tank, 61 to 100 GAL, Replace	25	15	10	1	EA	\$3,249.54	\$3,250										\$3,250										\$3,250	
Oakdale Elementary School	7.1	523841	Pipe Insulation, Fiberglass, Heating Water/Steam, Replace	25	24	1	300	LF	\$8.18	\$2,455		\$2,455																		\$2,455	
Oakdale Elementary School	7.1	524370	Motor, 3 HP, Open Drip Proof, Premium Efficiency, Replace	18	64	0	3	EA	\$1,397.25	\$4,192	\$4,192																	\$4,192		\$8,384	
Oakdale Elementary School	7.1	522926	Motor, 3 HP, Open Drip Proof, Premium Efficiency, Replace	18	16	2	4	EA	\$1,397.25	\$5,589			\$5,589																	\$5,589	
Oakdale Elementary School	7.1	522925	Unit Ventilator, 751 to 1,250 CFM (approx. 3 Ton), Replace	15	12	3	4	EA	\$8,444.15	\$33,777				\$33,777														\$33,777		\$67,553	
Oakdale Elementary School	7.1	522914	Unit Ventilator, 751 to 1,250 CFM (approx. 3 Ton), Replace	15	11	4	5	EA	\$8,444.15	\$42,221					\$42,221														\$42,221	\$84,442	
Oakdale Elementary School	7.1	522901	Unit Ventilator, 751 to 1,250 CFM (approx. 3 Ton), Replace	15	10	5	15	EA	\$8,444.15	\$126,662					\$126,662															\$126,662	
Oakdale Elementary School	7.1	522927	Motor, 3 HP, Open Drip Proof, Premium Efficiency, Replace	18	9	9	2	EA	\$1,397.25	\$2,795										\$2,795										\$2,795	
Oakdale Elementary School	7.1	524373	Motor, 3 HP, Open Drip Proof, Premium Efficiency, Replace	18	9	9	2	EA	\$1,397.25	\$2,795										\$2,795										\$2,795	
Oakdale Elementary School	7.1	522930	Exhaust Fan, Propeller, 800 CFM, Replace	15	21	0	3	EA	\$1,383.64	\$4,151	\$4,151															\$4,151				\$8,302	

Location Name	EMG	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	Subtotal	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Deficiency Repair Estimate			
	Renamed Item Number																																	
Oakdale Elementary School	7.1	523838	Humidifier, Steam, Duct w/ Controls, Replace	20	19	1	1	EA	\$5,801.04	\$5,801		\$5,801																			\$5,801			
Oakdale Elementary School	7.1	523815	Radiator, Cast Iron, Replace	50	64	0	4	EA	\$677.60	\$2,710	\$2,710																				\$2,710			
Oakdale Elementary School	7.1	522887	Unit Heater, Natural Gas, 76 to 125 MBH, Replace	20	46	0	1	EA	\$5,006.98	\$5,007	\$5,007																				\$5,007			
Oakdale Elementary School	7.1	522899	Unit Heater, Hydronic, 161 to 250 MBH, Replace	20	46	0	1	EA	\$4,239.16	\$4,239	\$4,239																				\$4,239			
Oakdale Elementary School	7.1	522900	Baseboard Heater, Electric, 6', 1500 Watts, Replace	25	20	5	2	EA	\$239.58	\$479						\$479															\$479			
Oakdale Elementary School	7.1	522948	Direct Digital Controls, System Points, Replace	10	8	2	50	EA	\$781.39	\$39,070			\$39,070										\$39,070								\$78,139			
Oakdale Elementary School	7.1	522928	Smoke/Carbon Monoxide Detector, , Replace	15	2016	* 0	12	EA	\$236.46	\$2,837		\$2,837															\$2,837				\$5,675			
Oakdale Elementary School	7.1	523880	ECM, Building & Control Systems, Re-Commission, Modify	0	9	0	5000	SF	\$0.70	\$3,500	\$3,500																				\$3,500			
Oakdale Elementary School	7.2	523395	Toilet, Flush Tank (Water Closet), Replace	20	5	15	27	EA	\$1,055.15	\$28,489																\$28,489					\$28,489			
Oakdale Elementary School	7.2	523396	Urinal, Vitreous China, Replace	20	5	15	9	EA	\$1,193.44	\$10,741																\$10,741					\$10,741			
Oakdale Elementary School	7.2	523397	Sink, Vitreous China, Replace	20	5	15	25	EA	\$861.51	\$21,538																\$21,538					\$21,538			
Oakdale Elementary School	7.2	523412	Backflow Preventer, 2", Replace	15	2016	0	1	EA	\$2,603.17	\$2,603	\$2,603															\$2,603					\$5,206			
Oakdale Elementary School	7.2	523411	Backflow Preventer, 2", Replace	15	2016	* 0	1	EA	\$2,603.17	\$2,603		\$2,603															\$2,603				\$5,206			
Oakdale Elementary School	7.2	523403	Pipe & Fittings, Copper, 1", Replace	30	27	3	800	LF	\$35.80	\$28,637				\$28,637																	\$28,637			
Oakdale Elementary School	7.2	522964	Water Heater, Electric, Residential, 16 to 29 GAL, Replace	15	11	4	1	EA	\$1,249.92	\$1,250					\$1,250															\$1,250	\$2,500			
Oakdale Elementary School	7.2	522966	Water Heater, Electric, Residential, 53 to 120 GAL, Replace	15	10	5	1	EA	\$2,937.40	\$2,937						\$2,937															\$2,937			
Oakdale Elementary School	7.4	523468	Distribution Panel, 208 Y, 120 V, 200 Amp, Replace	30	56	0	1	EA	\$7,906.20	\$7,906	\$7,906																				\$7,906			
Oakdale Elementary School	7.4	523422	Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	30	40	0	1	EA	\$5,079.93	\$5,080	\$5,080																				\$5,080			
Oakdale Elementary School	7.4	523419	Distribution Panel, 208 Y, 120 V, 400 Amp, Replace	30	40	0	1	EA	\$9,487.85	\$9,488	\$9,488																				\$9,488			
Oakdale Elementary School	7.4	523415	Distribution Panel, 208 Y, 120 V, 400 Amp, Replace	30	40	0	1	EA	\$9,487.85	\$9,488	\$9,488																				\$9,488			
Oakdale Elementary School	7.4	523425	Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	30	25	5	1	EA	\$5,079.93	\$5,080						\$5,080															\$5,080			
Oakdale Elementary School	7.4	523840	Receptacle, 120 V, 20 Amp, Replace	20	30	* 0	20	EA	\$126.32	\$2,526		\$2,526																			\$2,526			
Oakdale Elementary School	7.4	523483	Fluorescent Lighting Fixture, T8, 32 W, Replace	20	0	* 20	32	EA	\$213.86	\$6,843	\$6,843																				\$6,843			
Oakdale Elementary School	7.4	523464	Fluorescent Lighting Fixture, T8, 32 W, Replace	20	15	5	400	EA	\$213.86	\$85,543						\$85,543															\$85,543			
Oakdale Elementary School	7.5	523897	Cable, Coaxial, Underground, 18 Gauge, Replace	30	29	1	300	LF	\$19.20	\$5,759		\$5,759																			\$5,759			
Oakdale Elementary School	7.6	523589	Interior Door, Fire 90-Minutes and Over, Replace	20	2016	0	12	EA	\$1,649.06	\$19,789	\$19,789																				\$19,789			
Oakdale Elementary School	7.6	523587	Sprinkler System, Full Retrofit, School (per SF), Renovate	50	2016	0	50000	SF	\$6.25	\$312,675	\$312,675																				\$312,675			
Oakdale Elementary School	7.6	523514	Fire Extinguisher - Type ABC, Replace	15	10	5	10	EA	\$314.93	\$3,149						\$3,149															\$3,149			
Oakdale Elementary School	7.6	523497	Fire Alarm Control Panel, Multiplex, Replace	15	20	* 0	1	EA	\$4,284.35	\$4,284		\$4,284															\$4,284				\$8,569			
Oakdale Elementary School	7.6	523512	Heat Detector, Replace	15	12	3	8	EA	\$242.00	\$1,936				\$1,936															\$1,936		\$3,872			
Oakdale Elementary School	7.6	523509	Manual Pull Station, Replace	15	12	3	25	EA	\$186.08	\$4,652				\$4,652															\$4,652		\$9,304			
Oakdale Elementary School	7.6	523511	Smoke/Carbon Monoxide Detector, , Replace	15	10	5	55	EA	\$236.46	\$13,005						\$13,005															\$13,005			
Oakdale Elementary School	7.6	523508	Fire Alarm Horn & Strobe, Replace	20	12	8	54	EA	\$249.48	\$13,472								\$13,472													\$13,472			
Oakdale Elementary School	7.6	523574	Camera Video Quad Processor, Headend, Closed Circuit, Replace	5	10	0	1	EA	\$3,366.59	\$3,367	\$3,367					\$3,367					\$3,367					\$3,367					\$13,466			
Oakdale Elementary School	7.6	523580	Camera, Exterior, Closed Circuit, PTZ B/W, Replace	10	2016	0	9	EA	\$3,371.90	\$30,347	\$30,347										\$30,347										\$60,694			
Oakdale Elementary School	7.6	523576	Camera Fiber Optics Patch Panel, Headend, Closed Circuit, Replace	10	15	* 0	1	EA	\$982.20	\$982		\$982										\$982									\$1,964			
Oakdale Elementary School	7.6	523584	Camera, Badging, Replace	5	10	* 0	2	EA	\$977.63	\$1,955		\$1,955					\$1,955					\$1,955					\$1,955				\$7,821			
Oakdale Elementary School	7.6	523582	Camera, Interior, Closed Circuit, PTZ B/W, Replace	10	2016	* 0	1	EA	\$2,671.84	\$2,672		\$2,672										\$2,672									\$5,344			
Oakdale Elementary School	7.6	523577	Camera Fiber Optics Power Supply, Closed Circuit, Replace	10	15	* 0	1	EA	\$1,549.86	\$1,550		\$1,550										\$1,550									\$3,100			
Oakdale Elementary School	8.1	523697	Interior Floor Finish, Vinyl Tile (VCT), Replace	15	40	0	20000	SF	\$4.80	\$96,012	\$96,012															\$96,012					\$192,024			
Oakdale Elementary School	8.1	523702	Interior Floor Finish, Ceramic Tile, Replace	50	41	9	2000	SF	\$15.76	\$31,510									\$31,510												\$31,510			
Oakdale Elementary School	8.1	523843	Interior Ceiling Finish, Gypsum Board/Plaster, Prep & Paint	10	20	0	6000	SF	\$1.94	\$11,620	\$11,620										\$11,620										\$23,239			
Oakdale Elementary School	8.1	523755	Interior Ceiling Finish, Vinyl, Replace	20	64	0	1400	SF	\$2.10	\$2,937	\$2,937																				\$2,937			
Oakdale Elementary School	8.1	523748	Interior Ceiling Finish, Acoustical Tile (ACT), Replace	20	16	4	800	SF	\$3.11	\$2,489					\$2,489																\$2,489			
Oakdale Elementary School	8.2	523762	Commercial Kitchen, Convection Oven, Single, Replace	10	5	5	1	EA	\$5,077.62	\$5,078						\$5,078											\$5,078				\$10,155			
Oakdale Elementary School	8.2	523761	Commercial Kitchen, Refrigerator, 2-Door Reach-In, Replace	15	5	10	1	EA	\$4,256.00	\$4,256											\$4,256										\$4,256			
Oakdale Elementary School		521754	Roadways, Asphalt Pavement, Seal & Stripe	5	10	* 0	6000	SF	\$0.38	\$2,277		\$2,277					\$2,277					\$2,277					\$2,277				\$9,108			
Totals, Unescalated											\$1,008,027	\$52,234	\$44,659	\$69,797	\$46,735	\$318,523	\$48,450		\$0	\$29,206	\$37,099	\$84,653	\$12,952	\$144,750	\$131,500		\$0	\$318,182	\$16,020		\$0	\$44,556	\$106,591	\$2,513,934
Totals, Escalated (3.0% inflation, compounded annually)											\$1,008,027	\$53,801	\$47,378	\$76,269	\$52,600	\$369,255	\$57,852		\$0	\$36,997	\$48,406	\$113,766	\$17,929	\$206,379	\$193,112		\$0	\$495,717	\$25,708		\$0	\$75,854	\$186,907	\$3,065,960

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FACILITY CONDITION ASSESSMENT

DEDHAM-OAKDALE ELEMENTARY SCHOOL
147 CEDAR STREET
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-009.322

1. EXECUTIVE SUMMARY

1.1. PROPERTY INFORMATION AND GENERAL PHYSICAL CONDITION

The property information is summarized in the table below. More detailed descriptions may be found in the various sections of the report and in the Appendices.

PROPERTY INFORMATION	
Address:	147 Cedar Street, Dedham, Norfolk, Massachusetts 02026
Year Constructed/Renovated:	1902 Main multi-story building 1952 Southern wing including gymnasium 1960 Two end additions, two classrooms each (14, 15, 21, 22)
Current Occupants:	Approximately 275 students and 40 faculty
Percent Utilization:	95
Management Point of Contact:	Denise Moroney, 781-310-1141 phone
Property Type:	Classrooms, Offices
Site Area:	Approximately 7.00 acres
Building Area:	53,524 SF
Number of Buildings:	4
Number of Stories:	3
Parking Type and Number of Spaces:	47 spaces in open lots
Building Construction:	Conventional wood frame structure on concrete slab. Masonry bearing walls and wood-framed roofs. Steel frame with concrete-topped metal decks. Concrete tilt-up bearing walls and wood panel roof.
Roof Construction:	Gabled roofs with asphalt shingles. Flat roofs with built-up membrane.
Exterior Finishes:	Brick Veneer
Heating, Ventilation & Air Conditioning:	The original three-story 1902 building has a central steam boiler connected to a passive steam heating system and steam radiators. The building has steam heated Air Handler Units (AHUs) that appear to bring in fresh outdoor air to mix with internally heated air to classrooms. The 1952 wing has a central steam dual boiler system connected to unit ventilators and radiators. Supplemental units in the 1902 building include fan-driven exhaust ducts connected to the chimney to pull air up through the building and multiple unit heaters Supplemental units in the 1952 wing include vent fans and unit heaters Supplemental units in the 1960 end additions include electric baseboard and unit ventilators
Fire and Life/Safety:	Smoke detectors, heat detectors, alarms, strobes, extinguishers, manual pull stations, alarm panel, exit signs.
Dates of Visit:	November 10, 2016

FACILITY CONDITION ASSESSMENT

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147 CEDAR STREET
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-009.322

PROPERTY INFORMATION	
On-Site Point of Contact (POC):	Stone, Janitor
Assessment and Report Prepared by:	C. Martin Nowland, PE, CEM
Reviewed by:	Dan McCrary, Report Reviewer for: Bill Champion, Program Manager bchampion@emgcorp.com 800.733.0660 x6234

SYSTEMIC CONDITION SUMMARY			
Site	Good	HVAC	Fair
Structure	Good	Plumbing	Fair
Roof	Fair	Electrical	Fair
Vertical Envelope	Fair	Elevators	--
Interiors	Fair	Fire	Fair

The following bullet points highlight the most significant short term and modernization recommendations:

- Replace tile flooring in the original multi-story building
- Install backflow preventers on the two town water supply lines
- Install additional exterior lighting for safety and security
- Install a complete fire suppression system
- Replace unit ventilators in classrooms based on life cycle
- Replace all windows
- Replace boilers when they reach the end of their useful life
- Replace lighting fixtures based on life cycle
- Maintain courtyard pavement
- Cut and patch pavement on the west side
- Modernize obsolete electrical panels
- Replace failed fuel oil tank monitoring and alarm systems
- Install fire-rated interior doors
- Replace exterior doors as they pass the end of their useful life
- Install a video monitoring system
- Replace original iron water supply piping with copper
- Heat balancing and control system upgrade
- When at the end of their useful life, replace the underground No.2 fuel oil tanks
- Repair and paint plaster ceilings and walls in the original multi-story building
- The building and inhabitants are not protected by a fire suppression system. Due to its construction date, the facility is most likely "grandfathered" by code and the installation of fire sprinklers not required until major renovations are performed. Regardless of when or if installation of facility-wide fire suppression is required by the governing municipality, EMG recommends a retrofit be performed. A facility-wide fire suppression retrofit is recommended for additional safety and security and to reduce liability and the cost of insurance. A budgetary cost is included.

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- The windows are antiquated, energy-inefficient units with single-pane glazing. Storm windows are not present anywhere. Some of the windows are difficult to open and close. The windows are cannot be maintained. This is the most significant building envelope equipment that can improve comfort and provide significant savings on heating costs. Window replacement throughout the buildings is recommended.

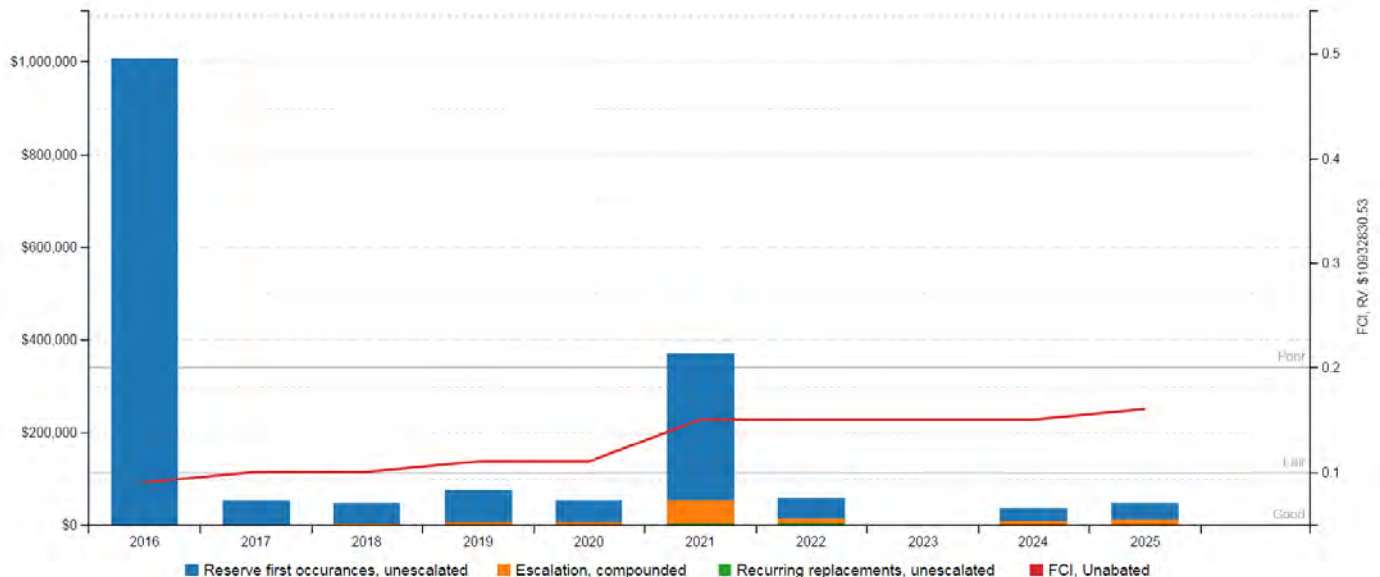
Generally, the property appears to have been constructed within industry standards in force at the time of construction. The property appears to have been well maintained since it was first occupied and is in fair overall condition.

According to property management personnel, the property has had a limited capital improvement expenditure program over the past three years, primarily consisting of street sidewalks and pavement. Supporting documentation was not provided in support of these claims but some of the work is evident.

1.2. FACILITY CONDITION INDEX (FCI)

FCI Analysis: Oakdale Elementary School

Replacement Value: \$ 10,932,831; Inflation rate: 3.0%



One of the major goals of the FCA is to calculate the FCI, which gives an indication of a building's overall condition. Two FCI ratios are calculated and presented, the Current Year and Ten-Year. The Current Year FCI is the ratio of Immediate Repair Costs to the building's Current Replacement Value. Similarly, the Ten-Year FCI is the ratio of anticipated Capital Reserve Needs over the next ten years to the Current Replacement Value.

FCI CONDITION RATING	DEFINITION	PERCENTAGE VALUE
Good	In new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies.	0% to 5%
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.	> than 5% to 10%
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	> than 10% to 60%
Very Poor	Has reached the end of its useful or serviceable life. Renewal is now necessary.	> than 60%

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The graphs above and tables below represent summary-level findings for the FCA. The deficiencies identified in this assessment can be combined with potential new construction requirements to develop an overall strategy that can serve as the basis for a portfolio-wide capital improvement funding strategy. Key findings from the assessment include:

KEY FINDING	METRIC	
Current Year Facility Condition Index (FCI) $FCI = (IR)/(CRV)$	0.10%	Poor
10-Year Facility Condition Index (FCI) $FCI = (RR)/(CRV)$	0.17%	Fair
Current Replacement Value (CRV)	53,524 SF * 204.26 / SF = \$10,932,831	
Year 0 (Current Year) - Immediate Repairs (IR)	\$1,062,857	
Years 1-10 – Replacement Reserves (RR)	\$1,864,353	
Total Capital Needs	\$2,927,210	

The major issues contributing to the Immediate Repair Costs and the Current Year FCI ratio are summarized below:

- Installation of a new sprinkler fire suppression system is the highest immediate repair cost. It is recommended by EMG, but may not be required by the authority having jurisdiction.
- Exterior windows are a high cost immediate repair. There is no question that the school has gotten its money's worth out of these windows. The windows are drafty because they do not seal well. The single pane glazing provides minimal insulation from the cold. Replacement windows will increase comfort and significantly reduce heating costs.
- The interior vinyl tile finishes in the 1902 original building are old, worn, and outdated. The tiles can no longer be re-coated and buffed for a sealed surface that shines. Recommend replacing floors that are worn out.
- The west side and the courtyard pavement needs attention and this is a high cost immediate repair. The pavement can be cut and patched or completely milled and overlaid.
- The goal is to control heat in each classroom or space by controlling the steam flow into radiators. A building automation system is already installed. The upgrade involves adding analog inputs for temperature monitoring and analog outputs to control new steam flow valves to better regulate heat to each space.

Further detail on the specific costs that make up the Immediate Repair Costs can be found in the cost tables in the appendices.

1.3. SPECIAL ISSUES AND FOLLOW-UP RECOMMENDATIONS

As part of the FCA, a limited assessment of accessible areas of the building(s) was performed to determine the presence of mold, conditions conducive to mold growth, and/or evidence of moisture. Property personnel were interviewed concerning any known or suspected mold, elevated relative humidity, water intrusion, or mildew-like odors. Sampling is not a part of this assessment.

Areas of suspect mold growth were observed along the masonry structure in the following areas:

- Outdoor alley between rooms 20 and 22, low on the walls and foundation
- Outdoor corner indent near the boiler room door where damaged gutter drains (north of classroom 14). Mold is low on the brick wall and concrete foundation.
- Outdoor wall near classrooms 21 and 22. Mold is on the brick wall and concrete foundation.

The mold appears to be the result of condensation from a stack of plywood in an area with limited ventilation. Exposure to mold or mold producing materials can be hazardous and should be avoided. The presence of mold does not necessarily constitute an exposure. This assessment does not constitute a comprehensive mold survey of the Project, and any conclusions are based solely on conditions readily observable in accessed areas.

Exterior mold occurs in the alley between rooms 20 and 22. Since mold is not evident in interior areas of the Project, there does not appear to be a significant health threat to the occupants of the Project. The affected exterior materials should be cleaned or removed as part of the property's routine maintenance program. The cost of this work is not included in the cost tables.

- Recommend having an electrical engineer study the electrical loads and determine if there really is the need for four electric services. Long-term savings could be significant.

1.4. OPINIONS OF PROBABLE COST

Cost estimates are attached at the front of this report (following the cover page).

These estimates are based on Invoice or Bid Document/s provided either by the Owner/facility and construction costs developed by construction resources such as *R.S. Means* and *Marshall & Swift*, EMG's experience with past costs for similar properties, city cost indexes, and assumptions regarding future economic conditions.

Opinions of probable costs should only be construed as preliminary, order of magnitude budgets. Actual costs most probably will vary from the consultant's opinions of probable costs depending on such matters as type and design of suggested remedy, quality of materials and installation, manufacturer and type of equipment or system selected, field conditions, whether a physical deficiency is repaired or replaced in whole, phasing of the work (if applicable), quality of contractor, quality of project management exercised, market conditions, and whether competitive pricing is solicited, etc. ASTM E2018-08 recognizes that certain opinions of probable costs cannot be developed within the scope of this guide without further study. Opinions of probable cost for further study should be included in the PCR.

1.4.1 METHODOLOGY

Based upon site observations, research, and judgment, along with referencing Expected Useful Life (EUL) tables from various industry sources, EMG opines as to when a system or component will most probably necessitate replacement. Accurate historical replacement records, if provided, are typically the best source of information. Exposure to the elements, initial quality and installation, extent of use, the quality and amount of preventive maintenance exercised, etc., are all factors that impact the effective age of a system or component. As a result, a system or component may have an effective age that is greater or less than its actual chronological age. The Remaining Useful Life (RUL) of a component or system equals the EUL less its effective age. Projections of Remaining Useful Life (RUL) are based on continued use of the Property similar to the reported past use. Significant changes in occupants and/or usage may affect the service life of some systems or components.

Where quantities could not be derived from an actual take-off, lump sum costs or allowances are used. Estimated costs are based on professional judgment and the probable or actual extent of the observed defect, inclusive of the cost to design, procure, construct and manage the corrections.

1.4.2 IMMEDIATE REPAIRS

Immediate repairs are opinions of probable costs that require immediate action as a result of: (1) material existing or potential unsafe conditions, (2) material building or fire code violations, or (3) conditions that, if not addressed, have the potential to result in, or contribute to, critical element or system failure within one year or will most probably result in a significant escalation of its remedial cost.

1.4.3 REPLACEMENT RESERVES

Replacement Reserves are for recurring probable expenditures, which are not classified as operation or maintenance expenses. The replacement reserves should be budgeted for in advance on an annual basis. Replacement Reserves are reasonably predictable both in terms of frequency and cost. However, Replacement Reserves may also include components or systems that have an indeterminable life but, nonetheless, have a potential for failure within an estimated time period.

Replacement Reserves exclude systems or components that are estimated to expire after the reserve term and are not considered material to the structural and mechanical integrity of the subject property. Furthermore, systems and components that are not deemed to have a material effect on the use of the Property are also excluded. Costs that are caused by acts of God, accidents, or other occurrences that are typically covered by insurance, rather than reserved for, are also excluded.

Replacement costs are solicited from ownership/property management, EMG's discussions with service companies, manufacturers' representatives, and previous experience in preparing such schedules for other similar facilities. Costs for work performed by the ownership's or property management's maintenance staff are also considered.

EMG's reserve methodology involves identification and quantification of those systems or components requiring capital reserve funds within the assessment period. The assessment period is defined as the effective age plus the reserve term. Additional information concerning system's or component's respective replacement costs (in today's dollars), typical expected useful lives, and remaining useful lives were estimated so that a funding schedule could be prepared. The Replacement Reserves Schedule presupposes that all required remedial work has been performed or that monies for remediation have been budgeted for items defined in the Immediate Repair Cost Estimate.

2. PURPOSE AND SCOPE

2.1. PURPOSE

EMG was retained by the client to render an opinion as to the Property's current general physical condition on the day of the site visit.

Based on the observations, interviews and document review outlined below, this report identifies significant deferred maintenance issues, existing deficiencies, and material code violations of record at municipal offices, which affect the Property's use. Opinions are rendered as to its structural integrity, building system condition and the Property's overall condition. The report also notes building systems or components that have realized or exceeded their typical expected useful lives.

CONDITIONS:

The physical condition of building systems and related components are typically defined as being in one of five conditions: Excellent, Good, Fair, Poor, Failed or a combination thereof. For the purposes of this report, the following definitions are used:

Excellent	=	New or very close to new; component or system typically has been installed within the past year, sound and performing its function. Eventual repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service.
Good	=	Satisfactory as-is. Component or system is sound and performing its function, typically within the first third of its lifecycle. However, it may show minor signs of normal wear and tear. Repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service.
Fair	=	Showing signs of wear and use but still satisfactory as-is, typically near the median of its estimated useful life. Component or system is performing adequately at this time but may exhibit some signs of wear, deferred maintenance, or evidence of previous repairs. Repair or replacement will be required due to the component or system's condition and/or its estimated remaining useful life.
Poor	=	Component or system is significantly aged, flawed, functioning intermittently or unreliably; displays obvious signs of deferred maintenance; shows evidence of previous repair or workmanship not in compliance with commonly accepted standards; has become obsolete; or exhibits an inherent deficiency. The present condition could contribute to or cause the deterioration of contiguous elements or systems. Either full component replacement is needed or repairs are required to restore to good condition, prevent premature failure, and/or prolong useful life.
Failed	=	Component or system has ceased functioning or performing as intended. Replacement, repair, or other significant corrective action is recommended or required.
Not Applicable	=	Assigning a condition does not apply or make logical sense, most commonly due to the item in question not being present.

FORMAT OF THE BODY OF THE REPORT:

Throughout sections 5 through 9 of this report, each report section will typically contain three subsections organized in the following sequence:

- A descriptive table (and/or narrative), which identifies the components assessed, their condition, and other key data points.
- A simple bulleted list of Anticipated Lifecycle Replacements, which lists components and assets typically in Excellent, Good, or Fair condition at the time of the assessment but that will require replacement or some other attention once aged past their estimated useful life. These listed components are typically included in the associated inventory database with costs identified and budgeted beyond the first several years.
- A bulleted cluster of Actions/Comments, which include more detailed narratives describing deficiencies, recommended repairs, and short term replacements. The assets and components associated with these bullets are/were typically problematic and in Poor or Failed condition at the time of the assessment, with corresponding costs included within the first few years.

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147 CEDAR STREET
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PLAN TYPES:

Each line item in the cost database is assigned a Plan Type, which is the primary reason or rationale for the recommended replacement, repair, or other corrective action. This is the “why” part of the equation. A cost or line item may commonly have more than one applicable Plan Type; however, only one Plan Type will be assigned based on the “best” fit, typically the one with the greatest significance. The following Plan Types are listed in general weighted order of importance:

Safety	=	An observed or reported unsafe condition that if left unaddressed could result in an injury; a system or component that presents a potential liability risk.
Performance/Integrity	=	Component or system has failed, is almost failing, performs unreliably, does not perform as intended, and/or poses a risk to overall system stability.
Accessibility	=	Does not meet ADA, UFAS, and/or other handicap accessibility requirements.
Environmental	=	Improvements to air or water quality, including removal of hazardous materials from the building or site.
Modernization/Adaptation	=	Conditions, systems, or spaces that need to be upgraded in appearance or function to meet current standards, facility usage, or client/occupant needs.
Lifecycle/Renewal	=	Any component or system in which future repair or replacement is anticipated beyond the next several years and/or is of minimal substantial early-term consequence.

2.2. SCOPE

The standard scope of the Facility Condition Assessment includes the following:

- Visit the Property to evaluate the general condition of the building and site improvements, review available construction documents in order to familiarize ourselves with, and be able to comment on, the in-place construction systems, life safety, mechanical, electrical, and plumbing systems, and the general built environment.
- Identify those components that are exhibiting deferred maintenance issues and provide cost estimates for Immediate Costs and Replacement Reserves based on observed conditions, maintenance history and industry standard useful life estimates. This will include the review of documented capital improvements completed within the last five-year period and work currently contracted for, if applicable.
- Provide a full description of the Property with descriptions of in-place systems and commentary on observed conditions.
- Provide a general statement of the subject Property's compliance to Title III of the Americans with Disabilities Act. This will not constitute a full ADA survey, but will help identify exposure to issues and the need for further review.
- Perform a limited assessment of accessible areas of the building(s) for the presence of mold, conditions conducive to mold growth, and/or evidence of moisture. EMG will also interview Project personnel regarding the presence of any known or suspected mold, elevated relative humidity, water intrusion, or mildew-like odors. Potentially affected areas will be photographed. Sampling will not be considered in routine assessments.
- List the current utility service providers.
- Review maintenance records and procedures with the in-place maintenance personnel.
- Observe a representative sample of the interior spaces/units, including vacant spaces/units, in order to gain a clear understanding of the property's overall condition. Other areas to be observed include the exterior of the property, the roofs, interior common areas, and the significant mechanical, electrical and elevator equipment rooms.
- Provide recommendations for additional studies, if required, with related budgetary information.
- Provide an Executive Summary at the beginning of this report.

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2.3. PERSONNEL INTERVIEWED

The management and maintenance staff were interviewed for specific information relating to the physical property, available maintenance procedures, historical performance of key building systems and components, available drawings and other documentation. The following personnel from the facility and government agencies were interviewed in the process of conducting the FCA:

NAME AND TITLE	ORGANIZATION	PHONE NUMBER
Stone, Janitor	Oakdale Elementary School	339.440.6666
John Brennan, Maintenance	Town of Dedham	781.234.5236

The FCA was performed with the assistance of Stone the Janitor and John Brennan, Town of Dedham Maintenance. The onsite Point of Contacts (POC), who were cooperative and provided information that appeared to be accurate based upon subsequent site observations. The onsite contacts were completely knowledgeable about the subject property and answered most questions posed during the interview process. The janitor POC's management involvement at the property has been for the past 15 years.

2.4. DOCUMENTATION REVIEWED

Prior to the FCA, relevant documentation was requested that could aid in the knowledge of the subject property's physical improvements, extent and type of use, and/or assist in identifying material discrepancies between reported information and observed conditions. The review of submitted documents does not include comment on the accuracy of such documents or their preparation, methodology, or protocol. The Documentation Request Form is provided in Appendix E.

2.5. PRE-SURVEY QUESTIONNAIRE

A Pre-Survey Questionnaire was reviewed with to the POC during the site visit. The questionnaire is included in Appendix E. Information obtained from the questionnaire has been used in preparation of this report.

2.6. WEATHER CONDITIONS

November 10, 2016: Clear, with temperatures in the 50's (°F) and light winds.

3. ACCESSIBILITY & PROPERTY RESEARCH

3.1. ADA ACCESSIBILITY

Generally, Title III of the Americans with Disabilities Act (ADA) prohibits discrimination by entities to access and use of “areas of public accommodations” and “commercial facilities” on the basis of disability. Regardless of its age, these areas and facilities must be maintained and operated to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Buildings completed and occupied after January 26, 1992 are required to comply fully with the ADAAG. Existing facilities constructed prior to this date are held to the lesser standard of compliance to the extent allowed by structural feasibility and the financial resources available. As an alternative, a reasonable accommodation pertaining to the deficiency must be made.

During the FCA, a limited visual observation for ADA accessibility compliance was conducted. The scope of the visual observation was limited to those areas set forth in *EMG's Abbreviated Accessibility Checklist* provided in Appendix D of this report. It is understood by the Client that the limited observations described herein does not comprise a full ADA Compliance Survey, and that such a survey is beyond the scope of EMG's undertaking. Only a representative sample of areas was observed and, other than as shown on the Abbreviated Accessibility Checklist, actual measurements were not taken to verify compliance.

At a school or office property, the areas considered as a public accommodation besides the site itself and parking, are the exterior accessible route, the interior accessible route up to the tenant lease lines and the interior common areas, including the common area restrooms.

The facility generally appears to be accessible as stated within the defined priorities of Title III of the Americans with Disabilities Act.

3.2. MUNICIPAL INFORMATION, FLOOD ZONE AND SEISMIC ZONE

Based on a review of the zoning classification information online, the property is located within a Residential zoning district and appears to be a conforming use.

4. EXISTING BUILDING ASSESSMENT

4.1. UNIT OR SPACE TYPES

All 53,524 square feet of the building is occupied by a single occupant, Town of Dedham Schools. The spaces are mostly a combination of offices, classrooms, hallways, gymnasium, utility rooms and supporting restrooms

4.2. INACCESSIBLE AREAS OR KEY SPACES NOT OBSERVED

A representative sample of the interior spaces were observed in order to gain a clear understanding of the property's overall condition. Other areas accessed included the site within the property boundaries, exterior of the property and the roof. All areas of the property were available for observation during the site visit.

A "down unit" or area is a term used to describe a unit or space that cannot be occupied due to poor conditions such as fire damage, water damage, missing equipment, damaged floor, wall or ceiling surfaces, or other significant deficiencies. There are no down units or areas.

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5. SITE IMPROVEMENTS

5.1. UTILITIES

The following table identifies the utility suppliers and the condition and adequacy of the services.

SITE UTILITIES		
UTILITY	SUPPLIER	CONDITION & ADEQUACY
Sanitary sewer	Dedham Department of Public Works	Fair
Storm sewer	Dedham Department of Public Works	Fair
Domestic water	Dedham-Westwood Water District	Good
Electric service	Eversource	Fair
Natural gas service	N/A	--

Actions/Comments:

- According to the POC, the utilities provided are adequate for the property. There are no unique, onsite utility systems such as emergency electrical generators, septic systems, water or waste water treatment plants, or propane gas tanks.

5.2. PARKING, PAVING, AND SIDEWALKS

ITEM	DESCRIPTION
Main Ingress and Egress	Cedar Street (East)
Access from	East and South
Additional Entrances	Madison Street (Southeast and Southwest) and Paved Areas (Northwest)
Additional Access from	South

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PAVING AND FLATWORK			
ITEM	MATERIAL	LAST WORK DONE	CONDITION
Entrance Driveway Apron	Asphalt	2013	Good
Parking Lot	Asphalt	2008	Fair
Drive Aisles	Asphalt	2008	Fair
Service Aisles	Asphalt	2004	Fair
Courtyard	Asphalt	1990	Poor
Toward ball fields	Asphalt	1990	Poor
Sidewalks	Concrete	2013	Good
Curbs	Concrete	1996	Fair
Site Stairs	Cast-in-place concrete	1990	Fair
Pedestrian Ramps	Cast-in-place concrete	2013	Good

PARKING COUNT				
OPEN LOT	CARPORT	PRIVATE GARAGE	SUBTERRANEAN GARAGE	FREESTANDING PARKING STRUCTURE
47	--	--	--	--
Total Number of ADA Compliant Spaces			2	
Number of ADA Compliant Spaces for Vans			2	
Total Parking Spaces			47	
Parking Ratio (Spaces/Apartments)			NA	
Method of Obtaining Parking Count			Physical count	

Anticipated Lifecycle Replacements:

- Asphalt cut and patch or possibly overlay
- Asphalt pavement seal and stripe
- Concrete pavement above fuel tanks
- Sidewalks
- Pedestrian ramps

Actions/Comments:

- On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.
- The two sets of concrete stairs near room 15 are in poor condition and need repairing.

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- The asphalt pavement exhibits significant areas of failure and deterioration, such as alligator cracking, transverse cracking, extensive raveling, and localized depressions. The courtyard and the west pavement toward the ball fields are in poor condition. The most severely damaged areas of paving must be cut and patched in order to maintain the integrity of the overall pavement system.

5.3. DRAINAGE SYSTEMS AND EROSION CONTROL

DRAINAGE SYSTEM AND EROSION CONTROL		
SYSTEM	EXISTS AT SITE	CONDITION
Surface Flow	<input checked="" type="checkbox"/>	Fair
Inlets	<input checked="" type="checkbox"/>	Fair
Swales	<input type="checkbox"/>	--
Detention pond	<input type="checkbox"/>	--
Lagoons	<input type="checkbox"/>	--
Ponds	<input type="checkbox"/>	--
Underground Piping	<input checked="" type="checkbox"/>	--
Pits	<input checked="" type="checkbox"/>	Fair
Municipal System	<input checked="" type="checkbox"/>	--
Dry Well	<input type="checkbox"/>	--

Anticipated Lifecycle Replacements:

- Sump pumps

Actions/Comments:

- There is no evidence of storm water runoff from adjacent properties. The storm water system appears to provide adequate runoff capacity. There is no evidence of major ponding or erosion.
- Provide and install a sump pump in the boiler room sump pit. Fabricate and install a metal grate over the sump pit for safety. There is no pit cover currently. This is especially important because the sump is directly in front of electrical panels, where easy, safe access is required. The lack of a grating is a code violation.

5.4. TOPOGRAPHY AND LANDSCAPING

ITEM	DESCRIPTION						
Site Topography	West of the building, the parking lots and ball fields slope slightly toward a drain at the corner of Madison Street and Circuit Road. To the east of the buildings, the land slopes down toward Cedar Street. North of the building, land slopes slightly to the north.						
Landscaping	Trees	Grass	Flower Beds	Planters	Drought Tolerant Plants	Decorative Stone	None
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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ITEM	DESCRIPTION			
Landscaping Condition	Good			
Irrigation	Automatic Underground	Drip	Hand Watering	None
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Irrigation Condition	--			

RETAINING WALLS		
TYPE	LOCATION	CONDITION
None	--	--

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The topography and adjacent uses do not appear to present conditions detrimental to the property. There are no significant areas of erosion.

5.5. GENERAL SITE IMPROVEMENTS

PROPERTY SIGNAGE	
Property Signage	Monument
Street Address Displayed?	No

SITE AND BUILDING LIGHTING					
Site Lighting	None	Pole Mounted	Bollard Lights	Ground Mounted	Parking Lot Pole Type
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Fair				
Building Lighting	None		Wall Mounted		Recessed Soffit
	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>
	Poor				

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SITE FENCING		
TYPE	LOCATION	CONDITION
Chain link with metal posts	South, west, and north perimeter	Fair
Chain link with metal posts	North side of courtyard	Fair

REFUSE DISPOSAL				
Refuse Disposal	Common area dumpsters			
Dumpster Locations	Mounting	Enclosure	Contracted?	Condition
North side of courtyard	Asphalt paving	Chain link fence	Yes	Fair
North side of courtyard	Asphalt paving	None	Yes	Missing

OTHER SITE AMENITIES			
	DESCRIPTION	LOCATION	CONDITION
Playground Equipment	Plastic and metal	North and west of building	Fair
Tennis Courts	None	--	--
Basketball Court	Asphalt	West of building	Fair
Swimming Pool	None	--	--

The basketball courts and playground are illuminated by high-intensity light fixtures mounted on wood poles. The baseball fields are not lighted. The grounds on the Cedar Street side of the building are not illuminated.

Anticipated Lifecycle Replacements:

- Exterior lighting
- Site fencing
- Playground equipment

Actions/Comments:

- On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.
- The property currently lacks adequate identification signage with the street number displayed. The lack of adequate signage may impede the timely arrival of emergency services personnel and equipment. New identification signage is needed.
- It appears that there is not adequate lighting on the Cedar Street and Madison Street sides of the building. The only lighting in these areas are street lights and external door lights. Recommend a lighting study to determine if necessary, and if yes, where and what type of lighting is needed. Additional estimated lighting installation is included in the database.
- One dumpster has a six foot chain-link fence with slats enclosure. An enclosure door is missing. The second dumpster has no fencing or door. Install door for one dumpster and an enclosure with a door for the second dumpster.
- The dumpsters sit on asphalt, which wears quickly when heavy metal dumpsters are handled regularly. A cost for concrete pads for the dumpsters is included.
- There are two baseball backstops on the ball fields. One backstop is galvanized and in fair condition. The second backstop farther from the school, is rusting and needs paint. This work is considered routine maintenance.

6. BUILDING ARCHITECTURAL AND STRUCTURAL SYSTEMS

6.1. FOUNDATIONS

BUILDING FOUNDATION		
ITEM	DESCRIPTION	CONDITION
Foundation in 1902 building	Stone	Fair
Foundation in 1952/1960s additions	Concrete slab and concrete walls	Fair

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- Isolated areas of the foundation systems are exposed, which allows for limited observation. There is no evidence of movement or water infiltration.

6.2. SUPERSTRUCTURE

BUILDING SUPERSTRUCTURE		
ITEM	DESCRIPTION	CONDITION
Framing / Load-Bearing Walls	Masonry walls	Fair
Ground Floor	Concrete slab	Fair
Upper Floor Framing	Wood joists	Fair
Upper Floor Decking	Wood	Fair
Roof Framing	Wood joists, purlins, rafters	Fair
Roof Decking	Wood	Fair

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The superstructure is concealed. Walls and floors appear to be plumb, level, and stable. There are no significant signs of deflection or movement.

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6.3. ROOFING

PRIMARY ROOF			
Type / Geometry	Hip Roof	Finish	Asphalt shingles
Maintenance	Outside Contractor	Roof Age	5 Years
Flashing	Sheet metal	Warranties	Unknown
Parapet Copings	None	Roof Drains	Gutters and downspouts
Fascia	None	Insulation	Fiberglass batts
Soffits	None	Skylights	No
Attics	Wood joists with wood boards	Ponding	No
Ventilation Source-1	Power Vents	Leaks Observed	No
Ventilation Source-2	--	Roof Condition	Fair

The primary roof is located at on the original 1902 three-story building.

SECONDARY ROOF			
Type / Geometry	Flat	Finish	Rubber membrane with stone ballast
Maintenance	Outside Contractor	Roof Age	7 Years
Flashing	Sheet metal	Warranties	Unknown
Parapet Copings	None	Roof Drains	Internal drains
Fascia	None	Insulation	Rigid Board
Soffits	None	Skylights	No
Attics	Steel beams	Ponding	No
Ventilation Source-1	Power Vents	Leaks Observed	No
Ventilation Source-2	Turtle Vents	Roof Condition	Fair

The secondary roof is located over the 1952 wing addition, and does not include the gymnasium or 1960 end additions.

SECONDARY ROOF			
Type / Geometry	Flat	Finish	Single-ply membrane
Maintenance	Outside Contractor	Roof Age	1 Year
Flashing	Sheet metal	Warranties	Unknown

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SECONDARY ROOF			
Parapet Copings	None	Roof Drains	Edge drainage to ground
Fascia	None	Insulation	Fiberglass batts
Soffits	Exposed Soffits	Skylights	No
Attics	Wood joists with plywood sheathing	Ponding	No
Ventilation Source-1	--	Leaks Observed	No
Ventilation Source-2	--	Roof Condition	Good

The secondary roof is located over the gymnasium.

SECONDARY ROOF			
Type / Geometry	Flat	Finish	Asphalt shingles
Maintenance	Outside Contractor	Roof Age	12 Years
Flashing	Sheet metal	Warranties	Unknown
Parapet Copings	None	Roof Drains	Edge drainage to ground
Fascia	None	Insulation	Rigid Board
Soffits	None	Skylights	No
Attics	Steel beams	Ponding	No
Ventilation Source-1	Gable end vents	Leaks Observed	No
Ventilation Source-2	--	Roof Condition	Fair

The secondary roof is located over the two 1960 classroom additions, which included rooms 14, 15, 21, and 22.

Anticipated Lifecycle Replacements:

- Asphalt shingles
- Roof membranes

Actions/Comments:

- The roof finishes vary in age as shown in the above tables. Information regarding roof warranties or bonds was not available. The roofs are maintained by an outside contractor.
- According to the POC, there are no active roof leaks. There is no evidence of active roof leaks.
- There is no evidence of roof deck or insulation deterioration. The roof substrate and insulation should be inspected during any future roof repair or replacement work.
- Roof drainage appears to be adequate. Clearing and minor repair of drain system components should be performed regularly as part of the property management's routine maintenance and operations program.

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- There is no evidence of moisture, water intrusion, or excessive daylight in the multi-story building attic. The insulation in the attic appears to be adequate.
- During severe wind storms, roofing aggregate (ballast) may become wind-borne and may harm nearby persons or may damage surrounding properties or building or site elements of the subject property. National, regional, and local building codes vary widely in the treatment of this issue and should be consulted during any future roofing repairs or replacements.
- The field of the roofs have shingles of different ages. A preventive maintenance program to address deteriorated or damaged roof finishes is recommended. A cost allowance for this work is included.
- There are a couple of metal gutter downspouts that are bent and need to be repaired to allow water to flow freely. One is near doors 9 and 13. This work is considered routine maintenance.
- The site POC indicated that the 1902 building metal gutters and downspouts are not working properly, and water spills over the gutter instead of flowing down the spouts. Recommend hiring a roofing contractor to check that the downspouts are clear and the gutters are sloped properly.

6.4. EXTERIOR WALLS

BUILDING EXTERIOR WALLS		
TYPE	LOCATION	CONDITION
Primary Finish	Brick veneer	Fair
Secondary Finish	Painted wood	Fair
Accented with	--	--
Soffits	Concealed	--

Building sealants (caulking) are located between dissimilar materials, at joints, and around window and door openings. Building sealants and a small amount of wood trim are standard on-going maintenance tasks.

Anticipated Lifecycle Replacements:

- Brick veneer
- Masonry re-pointing

Actions/Comments:

- On-going periodic maintenance, including patching repairs, graffiti removal, and re-caulking, is highly recommended. Future lifecycle replacements of the components listed above will be required.
- The small area of wood siding near the top of the south fire escape is peeling paint, cracked, and broken and must be replaced. This is about 50 feet in the air with little to hold on to, so body harnesses and drop nets will be needed.
- On the west side, a classroom has a cooling system hot exhaust duct that is vented outside at about four feet above grade. The pipe needs a small screen installed to keep mice and insects out. This work is considered routine maintenance.

6.5. EXTERIOR AND INTERIOR STAIRS

BUILDING EXTERIOR AND INTERIOR STAIRS					
TYPE	DESCRIPTION	RISER	HANDRAIL	BALUSTERS	CONDITION
Exterior Southwest near room 15	Concrete stairs	Closed	Metal	Metal	Poor

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BUILDING EXTERIOR AND INTERIOR STAIRS					
TYPE	DESCRIPTION	RISER	HANDRAIL	BALUSTERS	CONDITION
Exterior Northeast near rooms 21 & 22	Concrete stairs	Closed	Metal	Metal	Fair
Exterior Main building north fire escape	Steel-framed with textured metal treads	Open	Metal	Metal	Fair
Exterior West side near room 7	Concrete stairs	Closed	Metal	Metal	Good
Exterior West side near room 8	Concrete stairs	Closed	Metal	Metal	Good
Exterior Main building south fire escape	Steel-framed with textured metal treads	Open	Metal	Metal	Fair
Exterior East door room 14	Concrete stairs	Closed	Metal	Metal	Fair
Interior Main Building	Wood-framed with Vinyl treads	Closed	Wood	Wood	Good

Anticipated Lifecycle Replacements:

- Paint quantity 2 three-story metal fire escapes

Actions/Comments:

- On-going periodic maintenance is highly recommended.
- The concrete stairs near classroom 15 are in poor condition with spalling and crumbling and need repairs. The rail is loose and needs to be replaced.

6.6. EXTERIOR WINDOWS AND DOORS

BUILDING WINDOWS				
WINDOW FRAMING	GLAZING	LOCATION	WINDOW SCREEN	CONDITION
Aluminum framed, fixed	Single glaze	Throughout 1952 wing	<input type="checkbox"/>	Poor
Aluminum framed, operable	Single glaze	Throughout 1952 wing	<input type="checkbox"/>	Poor
Wood framed, fixed	Single glaze	Building bridge	<input type="checkbox"/>	Fair
Steel framed, fixed	Single glaze	1952 wing east side	<input type="checkbox"/>	Poor
Vinyl framed, operable	Double glaze	Main bldg. 1902 basement	<input type="checkbox"/>	Fair
Aluminum framed, operable	Single glaze	Main 1902 building	<input type="checkbox"/>	Fair
Wood framed, fixed	Single glaze	1952 wing west side	<input type="checkbox"/>	Poor

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BUILDING DOORS		
Main Entrance Doors	Door Type	Condition
	Solid core wood	Good
Secondary Entrance Doors	Solid core wood	Fair
Service Doors	Metal, hollow	Fair
Overhead Doors	None	--

Anticipated Lifecycle Replacements:

- Windows
- Exterior wood doors

Actions/Comments:

- On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.
- The windows are antiquated, energy-inefficient units with single-pane glazing. Storm windows are not present anywhere. Some of the windows are difficult to open and close. Window replacement throughout the buildings is recommended.
- The windows display significant evidence of rusted, deteriorated, and in some cases inoperable window frames especially those installed in the 1952 wing. The damaged window frames must be replaced.
- The 1952 wing lobby doors towards Cedar Street all have significant gaps around them, and they are wide enough to let mice waltz into the building. Doors need to be replaced.
- There are some missing or damaged sections of sealant and weather-stripping. Minor sealant and weather-stripping replacement or repair is considered routine maintenance.
- Approximately 20 square foot window panes are broken on the gymnasium exterior wall. These must be replaced and are considered routine maintenance tasks.
- Doors 8 and 10 have loose hinges, need weather-stripping and paint as part of normal maintenance.

6.7. PATIO, TERRACE, AND BALCONY

Not applicable. There are no patios, terraces, or balconies.

7. BUILDING MECHANICAL AND PLUMBING SYSTEMS

7.1. BUILDING HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

BUILDING CENTRAL HEATING SYSTEM	
Primary Heating System Type	Steam boilers
Quantity and Capacity of Major Components	One boiler at 3,709 MBH
Total Heating Capacity	3,709 MBH
Heating Fuel	Dual fuel, natural gas & fuel oil
Location of Major Equipment	Mechanical rooms
Space Served by System	Entire 1902 building
Age Ranges	2008
Boiler Condition	Fair
Heat Exchanger Condition	--

The above heating system is installed in the 1902 main building. The heating system for the 1902 building is completely isolated from the rest of the facility.

BUILDING CENTRAL HEATING SYSTEM	
Primary Heating System Type	Steam boilers
Quantity and Capacity of Major Components	Two boilers at 1,689 MBH each
Total Heating Capacity	3,378 MBH
Heating Fuel	Fuel oil
Location of Major Equipment	Mechanical rooms
Space Served by System	1952 wing
Age Ranges	2006
Boiler Condition	Fair
Heat Exchanger Condition	--

The above heating system is installed in the 1952 wing addition. This system heats the entire 1952 wing, however, heating for the two 1960s end additions and the 1902 main building is done separately.

DISTRIBUTION SYSTEM	
Heating Distribution System	Two-pipe

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DISTRIBUTION SYSTEM	
Heating Water Circulation Pump Size & Quantity	NA
Chilled Water Circulation Pump Size & Quantity	NA
Condenser Water Circulation Pump Size & Quantity	Two units at 1/3HP each
Pump Condition	Fair
Terminal Units	Unit ventilators
Quantity and Capacity of Terminal Units	1902 building: approximately three custom intakes for fresh air to feed originally passive steam piping/ducting. See description below. 1952 wing: approximately fifteen unit ventilators ranging from 750 to 1250 CFM 1960s end additions: approximately four sized 750-1250CFM unit ventilators with electric heating
Location of Terminal Units	Adjacent to windows
Spaces Served by Terminal Units	Classrooms
Terminal Unit Condition	Fair

SUPPLEMENTAL COMPONENTS	
Supplemental Component #1	Electric baseboards
Location / Space Served by electric baseboards	1960s end unit additions, classrooms 14, 15, 21, 22
Electric baseboard Condition	Fair
Supplemental Component #2	Suspended unit heaters
Location / Space Served by suspended unit heater	1902 building basement, boy's restroom
Suspended unit heater Condition	Fair
Supplemental Component #3	Suspended unit heaters
Location / Space Served by suspended unit heater	1902 building basement, girl's restroom
Suspended unit heater Condition	Fair
Supplemental Component #4	Two approximately 5 tons Air Handler Units (AHU)
Location / Space Served by AHUs	Gymnasium
AHUs Condition	North is not functioning, South unit-fan circulates air only
Supplemental Component #5	Three unknown size AHUs
Location / Space Served by AHUs	1902 building heat and ventilation
AHUs Condition	Fair

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SUPPLEMENTAL COMPONENTS	
Supplemental Component #6	Suspended unit heater
Location / Space Served by suspended unit heater	1952 wing east entrance hallway
Suspended unit heater condition	Fair
Supplemental Component #7	De-humidifier
Location / Space Served by de-humidifier	1902 building basement boy's restroom
De-humidifier condition	Fair

CONTROLS & VENTILATION	
HVAC Control System	BAS, pneumatic controls
HVAC Control System Condition	Fair
Building Ventilation	See description below
Ventilation System Condition	Fair

The original 1902 building heating system was originally boilers and steam radiators plus a system that uses steam to heat air and passively heat and provide air circulation. The radiators are throughout the building for specific room heating. The passive air ventilation system, which has vents in most room, has been modified.

In the basement, there are three sets of louvers and each is matched up with a passive steam-to-air radiator air handler unit. The AHUs were part of the original building design, and have air ducts to various rooms. Each of the louvers, and temperature switches to control the louvers, is near a passive steam-to-air handler. The louvers allow fresh outside air to flow into the basement at each steam-to-air AHU. The three sets of louvers are controlled using a temperature switch to open when the steam piping gets hot via a temperature sensor on the steam piping. The steam piping gets hot when there is a demand for more heat in rooms, so fresh air is brought in when the heat is needed.

Fans have been installed under the steam radiator piping to force air upward. The fans are inexpensive, retail fans temporarily mounted. The fans are not rated for this heavy use and should be replaced with commercial grade, reliable and long-lasting fans.

Additional fans have been installed in the attic in unused spaces next to the library. The fans pull air upward and blow air into the large chimney to exhaust building air outside. All these measures essentially increase fresh air flow through the building.

As the outside temperature drops, more heat is needed in the building. The steam demand increases to meet classroom thermostat set points. The steam heat comes on, steam piping gets hot, the louvers open allowing fresh air to mix with building internal air, basement fans force updraft air flow to classrooms, and attic fans pull exhaust air and send it into the chimneys.

According to the janitor and teachers interviewed, the heating and ventilation in the classrooms works fine.

Some commissioning may have been done to balance how much steam goes to room radiators and how much goes to the air handlers to ensure there is sufficient fresh air at all times. However, this would be a challenging, unscientific task because it depends on how the building absorbs and distributes the heat. The goal of this system is to provide enough heat and fresh air at all times where groups of people occupy the spaces. See recommendations below.

The boilers do have backflow preventers, which are periodically tested, on all the boilers.

Anticipated Lifecycle Replacements:

- Boilers
- Air handler fan motors
- Ventilation fan motors

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- Distribution pumps and motors
- Suspended gas and electric unit heaters
- Baseboard heaters
- Unit ventilators
- Rooftop or attic exhaust fan motors
- De-humidifier
- Steam traps

Actions/Comments:

- The HVAC systems are maintained by an outside contractor.
- Approximately 20 percent of the HVAC equipment is original. The HVAC equipment varies in age. HVAC equipment is replaced on an "as needed" basis.
- In the original 1902 building, recommend installing carbon monoxide detectors and alarms in the classrooms to ensure there is always adequate fresh air. See discussion above for additional details.
- In the original 1902 building, recommend installing commercial grade to replace residential grade fans under the three steam-to-air AHUs. Commercial grade fans will last longer, are more reliable, and should be purchased with Energy Star rating to ensure they are efficient.
- The HVAC equipment appears to be functioning adequately overall in most areas. Maintenance staff and teachers were interviewed about the historical and recent performance of the equipment and systems. No chronic problems were reported and an overall sense of satisfaction with the systems was conveyed. However, due to the inevitable failure of parts and components over time, some of the equipment will require replacement.
- In the original 1902 building, the heating side of the system appears to lack system redundancy. If the single boiler fails the main building would be without central heat. When the boiler is replaced, consideration should be given to providing two units that provide an equivalent or higher amount of capacity as the unit currently in place. The boiler is not due for replacement until 2038.
- The boiler steam piping is not all insulated. Reasons to insulate include (1) the heat goes where you want it delivered and (2) insulation avoids any hot touch or burn hazard, which is generally accepted as 140 degrees Fahrenheit. Walk down steam piping and insulate where exposed to increase efficiency and reduce liability.
- Over time steam traps wear out and need to be serviced or replaced. The number of steam traps was not counted, however, a cost allowance for two is included as a placeholder for lifecycle replacement.
- The facility HVAC (with the exception of the 1960s classrooms addition) is controlled using a pneumatic system supplied by a 1951 air compressor (with a recently updated motor). For modernization, reliability, and increased control, full conversion to a web-based direct digital control (DDC) platform is highly recommended. Add analog inputs for temperature monitoring, analog outputs for steam control valve controls, and provide/install steam control valves to regulate steam, and therefore heat, in each space. A cost estimate for this upgrade is provided.
- The age of the two underground fuel tanks and two boiler condensate receiver tanks is unknown and estimated. All will need be replaced based on their actual life cycle. Cost allowances have been provided.
- The two underground fuel tanks for No.2 fuel oil have failed monitoring systems. Both need to be replaced immediately.
- The steam radiators in the 1952 wing lobby toward Cedar Street leak and are shut off. An overhead heating unit was installed to make up for the loss of heat. Recommend replacing the steam radiators and shut off the overhead heating unit.
- There is an industrial de-humidifier in the 1902 building basement boy's restroom. Recommend installation of a permanent de-humidifier as part of the ventilation system. A cost allowance is provided.
- The library is always cold in winter, which may contribute to its lack of use. Roof and wall insulation looks very good. Recommend hiring a contractor to re-commission the heating system.

7.2. BUILDING PLUMBING AND DOMESTIC HOT WATER

BUILDING PLUMBING SYSTEM		
TYPE	DESCRIPTION	CONDITION
Water Supply Piping	Galvanized iron	Fair

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BUILDING PLUMBING SYSTEM		
TYPE	DESCRIPTION	CONDITION
Waste/Sewer Piping	Cast iron	Fair
Vent Piping	Cast iron	Fair
Water Meter Location	One in the 1902 building crossover and second in 1952 wing boiler room	

DOMESTIC WATER HEATERS OR BOILERS	
Components	Water Heaters
Fuel	Electric
Quantity and Input Capacity (1952 wing boiler room)	One 4,500 Watts
Storage Capacity	80 gallons
Boiler or Water Heater Condition	Fair
Quantity and Input Capacity (1902 second floor restroom)	One 1,500 Watts
Storage Capacity	19 gallons
Boiler or Water Heater Condition	Fair
Supplementary Storage Tanks?	No
Storage Tank Quantity & Volume	NA
Quantity of Storage Tanks	--
Storage Tank Condition	--
Domestic Hot Water Circulation Pumps (3 HP and over)	No
Adequacy of Hot Water	Adequate
Adequacy of Water Pressure	Adequate

PLUMBING FIXTURES	
Water Closets	Commercial
Toilet (Water Closet) Flush Rating	1.6 GPF
Common Area Faucet Nominal Flow Rate	0.5 GPM
Condition	Fair

Anticipated Lifecycle Replacements:

- Water heaters
- Toilets
- Urinals
- Sinks

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Actions/Comments:

- The plumbing systems appear to be well maintained and functioning adequately. The water pressure appears to be sufficient. No significant repair actions or short term replacement costs are required. Routine and periodic maintenance is recommended. Future lifecycle replacements of the components or systems listed above will be required.
- Although it appears most of the piping within the main utility rooms has been replaced with copper, it is probable that the concealed, hard-to-access domestic water lines are galvanized iron original to the 1902 construction. To date there has been no history of chronic leaks or water pressure problems. However, it is quite common for galvanized iron piping to develop problems due to long-term corrosion with thinning walls and/or interior mineral deposit accumulation, especially once it has aged 40 or 50 years. As such, EMG recommends replacing all the plumbing supply lines with copper. A budgetary cost allowance is included.
- A backflow preventer is needed on the water supply lines to the school to keep water in school piping from getting into the town water system. There are two water flow meters supplying the facility. A 1960 s backflow preventer is necessary on each supply.

7.3. BUILDING GAS DISTRIBUTION

Gas service is supplied from the gas main on the adjacent public street. The gas distribution piping within the building is malleable steel (black iron).

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The pressure and quantity of gas appear to be adequate.
- The gas meters and regulators appear to be functioning adequately and will require routine maintenance.
- Only limited observation of the gas distribution piping can be made due to hidden conditions.

7.4. BUILDING ELECTRICAL

BUILDING ELECTRICAL SYSTEMS			
Electrical Lines	Overhead	Transformer	Pole-mounted
First Service Size	400 Amps	Volts	120/240 Volt, single-phase
Second Service Size	400 Amps	Volts	120/240 Volt, single-phase
Third Service Size	200 Amps	Volts	120/240 Volt, single-phase
Fourth Service Size	200 Amps	Volts	120/240 Volt, single-phase
Meter & Panel Location	1st-1952 boiler room 2nd-1960 SW room 14 3rd-1902 East basement 4th-1960 NW room 22	Branch Wiring	Copper
Conduit	Metallic	Step-Down Transformers?	No
Security / Surveillance System?	Yes	Building Intercom System?	Yes
Lighting Fixtures	T-8 fluorescent		

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BUILDING ELECTRICAL SYSTEMS	
1st Service Panel Age/Condition	Poor
2nd Service Panel Age/Condition	Poor
3 rd Service Panel Age/Condition	Good
4 th Service Panel Age/Condition	Fair
Lighting Condition	Fair

Anticipated Lifecycle Replacements:

- Circuit breaker panels
- Interior light fixtures

Actions/Comments:

- The onsite electrical systems are maintained by the Eversource utility company.
- The first electric service is located in the 1952 wing boiler room. The panel is approximately 1960 vintage, is obsolete, and needs to be replaced.
- The second electric service is in the 1960 southwest addition in classroom 14 in a closet. The distribution panel is from around 1960, is obsolete, and replacement is in order.
- The third electric service is in the 1902 main building basement. This electric service was installed in 2005 and is in fine shape.
- The fourth electric service is in the 1960 northwest addition in classroom 22 in a closet. The distribution panel is from around 1960, is obsolete, and replacement is in order.
- Occupancy sensors and fluorescent lighting are utilized throughout the building to ensure lighting is on only when necessary.
- Recommend having an electrical engineer study the electrical loads and determine if there really is the need for four electric services. Prior to upgrading any electric service distribution panels, suggest engaging an electrical engineer to do a load study. It appears that one or two electric services might be eliminated if not necessary. Part of the change would involve one distribution panel feeding another. Savings would be realized on panel hardware, installation cost, and electric service ongoing costs, while installation of additional feeder(s) wiring would offset some of these costs in the short term. Long-term savings could be significant.
- Lighting in the gymnasium is using fluorescent T12 fixtures and bulbs. Recommend replacement with T8 fixtures and bulbs to replace obsolete equipment and to save on energy bills. A cost allowance has been provided for this upgrade.
- There are receptacles in the offices that are ganged with multiple extension cords to have more places to plug in electrical devices. There are not receptacles every 6 feet or less as required by code. Install additional receptacles for a safer and more convenient electrical installation.
- Electrical wiring runs from the 1902 original building, across the rubber and pea stone room, into a modified window between rooms 13 and 14. It is illegal and terrible workmanship to install wiring out in the open, especially when the wiring is not rated for direct ultraviolet exposure. The insulation on much of the wiring is falling off. The wiring appears to be for networking or communications. The wiring needs to be installed properly in conduit, direct burial cable, or other means allowed by the National Electric Code. A cost for this work is provided.
- Lock all electrical panels that are in public areas to prevent inadvertent or mischievous power loss.
- Electrical panels throughout the facility have equipment, furniture, and other items stored in front of these panels. It is a hazard to store any equipment in front of any electrical panel to slow or prevent access to the panel. It is illegal to leave objects in front of these panels. A fire or building inspector will typically demand all items are permanently removed, safety inspections can fail, and/or fines can be assessed. Electrical rooms or closets are not storage areas.

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7.5. BUILDING ELEVATORS AND CONVEYING SYSTEMS

There are no elevators or conveying systems. There is a handicapped lift to lift wheelchairs from the gymnasium floor level up to access the stage and the rear west wing.

Anticipated Lifecycle Replacements:

- Wheelchair lift

Actions/Comments:

- There is no ADA handicapped access to the basement. Since there is no reason access would be needed, an elevator installation is not warranted and an elevator is not required. All other classroom and common areas are accessible, and access to the rear wing is via the existing lift.
- Perform periodic operation, test, and recertification of the lift assembly.

7.6. FIRE PROTECTION AND SECURITY SYSTEMS

ITEM	DESCRIPTION					
Type	None					
Fire Alarm System	Central Alarm Panel	<input checked="" type="checkbox"/>	Battery-Operated Smoke Detectors	<input checked="" type="checkbox"/>	Alarm Horns	<input checked="" type="checkbox"/>
	Annunciator Panels	<input checked="" type="checkbox"/>	Hard-Wired Smoke Detectors	<input checked="" type="checkbox"/>	Strobe Light Alarms	<input checked="" type="checkbox"/>
	Pull Stations	<input checked="" type="checkbox"/>	Emergency Battery-Pack Lighting	<input type="checkbox"/>	Illuminated EXIT Signs	<input checked="" type="checkbox"/>
Alarm System Condition	Fair					
Sprinkler System	None	<input checked="" type="checkbox"/>	Standpipes	<input type="checkbox"/>	Backflow Preventer	<input type="checkbox"/>
	Hose Cabinets	<input type="checkbox"/>	Fire Pumps	<input type="checkbox"/>	Siamese Connections	<input type="checkbox"/>
Suppression Condition	--					
Central Alarm Panel System	Location of Alarm Panel			Installation Date of Alarm Panel		
	Principal's office			~2000		
Fire Extinguishers	Last Service Date			Servicing Current?		
	August 2015					
Hydrant Location	Two on Cedar Street and Two on Madison Street					
Siamese Location	None					
Special Systems	Kitchen Suppression System		<input type="checkbox"/>	Computer Room Suppression System		<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- Central monitoring and alarm panel, including batteries

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- Alarm horns, strobes, manual pull stations, smoke detectors, heat detectors
- Security camera system and keyless access
- Fire extinguishers

Actions/Comments:

- On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.
- Facility fire extinguishers were inspected in August 2015 based on inspection tags on each unit. These should be inspected annually.
- Fire monitoring and alarm system alarm notification horns and strobes were updated approximately 15 years ago. The fire protection system appears in serviceable condition and is tested at least annually by the Dedham Fire Department.
- The building is not protected by a fire suppression system. Due to its construction date, the facility is most likely "grandfathered" by code and the installation of fire sprinklers not required until major renovations are performed. Regardless of when or if installation of facility-wide fire suppression is required by the governing municipality, EMG recommends a retrofit be performed. A facility-wide fire suppression retrofit is recommended. A budgetary cost is included.
- The stairwell doors and door hardware are not fire-rated. Certification labels are not displayed on the fire-rated components. New doors and door hardware must be installed at all required locations. A budgetary cost is included.
- The fire monitoring and alarm system has a heat detector immediately above each boiler in the boiler room. It appears that fire detection devices are missing on the boiler ceiling. This is a standard maintenance item.
- The camera monitoring system has limited function and is obsolete. Replace with a new system.
- There is at least one Exit sign missing in the hallway in front of classroom 11. Recommend checking that all Exit signage is installed properly in required locations. This would be a standard maintenance budget item.
- The fire extinguishers have not been inspected within the last year. A qualified fire equipment contractor must inspect and service the fire extinguishers as part of standard maintenance.
- Fire extinguishers appear to be missing at some locations. New fire extinguishers must be installed at all required locations immediately.
- The original building stairwell doors and door hardware are not fire-rated. Certification labels are not displayed on the fire-rated components. New doors and door hardware must be installed at all required locations.

8. INTERIOR SPACES

8.1. INTERIOR FINISHES

The facility is used as an elementary school for the Town of Dedham. The main first floor level of the school includes classrooms, offices, auditorium with a full-court gymnasium and raised stage at one end, media center, storage, and rest rooms. The original boiler room in the 1902 multi-story building is downstairs in a small basement. The boiler room for the 1952 wing is also downstairs located just to the west of the gym. The auditorium stage is raised a few steps above the ground floor. The original 1902 multi-story building has classrooms, teacher's room, restrooms, and offices on the second floor. The third floor is home to the library.

The original building is standard red brick exterior with wood wainscoting, floors, and trim with plaster upper walls and ceilings. The newer 1952 wing has beige exterior and interior brick, hung ceilings or plaster, and tile on concrete floors. The two 1960 end additions have more beige exterior brick, concrete block interior walls, and tile on concrete floors.

The most significant interior spaces include classrooms and a gymnasium.

The following table generally describes the locations and typical conditions of the interior finishes within the facility:

TYPICAL FLOOR FINISHES		
FLOOR FINISH	LOCATIONS	GENERAL CONDITION
Vinyl tile	Offices, classrooms, hallways, some restrooms	Fair
Hardwood	Gymnasium, kitchen prep area, library	Fair
Ceramic tile	Restrooms	Fair
Terrazzo	1902 building restrooms	Fair
Unfinished	Boiler rooms	Fair
TYPICAL WALL FINISHES		
WALL FINISH	LOCATIONS	GENERAL CONDITION
Exposed CMU/masonry	1952 wing offices, classrooms, gym, hallways	Fair
Ceramic tile	Restrooms	Fair
Plaster	1902 building upper	Fair
Wood	First & second floors 1902 building	Fair
TYPICAL CEILING FINISHES		
CEILING FINISH	LOCATIONS	GENERAL CONDITION
Suspended T-bar (Acoustic)	Hallways, some classrooms	Fair
Plaster	Classrooms, offices, hallways, restrooms	Fair
Hard glued tiles	Gymnasium	Fair

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INTERIOR DOORS		
ITEM	TYPE	CONDITION
Interior Doors	Solid core wood	Fair
Door Framing	Metal	Fair
Fire Doors	No	--

Anticipated Lifecycle Replacements:

- Vinyl tile
- Ceramic tile
- Suspended acoustic ceiling tile
- Hard tile ceilings
- Interior doors

Actions/Comments:

- It appears that the interior finishes are original.
- On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.
- There are damaged ceiling tiles in the front hall of the 1952 wing. Almost the entire Cedar Street facing hall ceiling needs replacement.
- Some repair work has been done in the 1902 building basement rest rooms and a few plywood patches are covering work temporarily. The work needs to be finished and the ceilings and walls refinished. These are small projects that are standard maintenance tasks.
The interior vinyl tile floor finishes in the 1902 original building are old, worn, and outdated. The tiles can no longer be re-coated and buffed for a sealed surface that shines. Recommend replacing floors that are worn out.
- Interior doors, other than those in stairways, are not fire-rated. Certification labels are not displayed on components. New doors and door hardware should be installed at all required locations. A budgetary cost is included.
- There is a mouse problem in the 1902 building. Recommend that the school hires a contractor or ask the janitor to go around the entire school and seal up any holes or places where rodents can enter from out in the cold. This is a standard maintenance task.
- Ceilings in the original building are cracking, peeling, and the plaster/paint is showing deterioration. Recommend repairing the plaster and painting.

8.2. COMMERCIAL KITCHEN & LAUNDRY EQUIPMENT

The school has a variety of commercial kitchen appliances, fixtures, and equipment to chill and warm food. The equipment is owned and maintained by the school.

The kitchen includes the following major appliances, fixtures, and equipment:

COMMERCIAL KITCHEN		
APPLIANCE	COMMENT	CONDITION
Refrigerators	Up-right	Fair
Freezers	NA	--
Ranges	NA	--
Ovens	Electric	Fair

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COMMERCIAL KITCHEN		
APPLIANCE	COMMENT	CONDITION
Griddles / Grills	NA	--
Fryers	NA	--
Hood	NA	--
Dishwasher	NA	--
Microwave	<input type="checkbox"/>	--
Ice Machines	<input type="checkbox"/>	--
Steam Tables	<input type="checkbox"/>	--
Work Tables	<input checked="" type="checkbox"/>	Fair
Shelving	<input checked="" type="checkbox"/>	Fair

COMMERCIAL LAUNDRY		
EQUIPMENT	COMMENT	CONDITION
Commercial Washing Machines	NA	--
Commercial Dryers	NA	--
Residential Washers	<input type="checkbox"/>	--
Residential Dryers	<input type="checkbox"/>	--

Anticipated Lifecycle Replacements:

- Refrigerator
- Convection oven

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.

9. OTHER STRUCTURES

A maintenance/storage shed is located north of the courtyard. The maintenance building is a 16' x 12' footprint wood structure with a gable roof set on a concrete slab. The shed is in fair condition.

Anticipated Lifecycle Replacements:

- Storage shed

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended.

10. CERTIFICATION

The Town of Dedham Schools retained EMG to perform this Facility Condition Assessment in connection with its continued operation of Oakdale Elementary School, 147 Cedar Street, Dedham, Massachusetts, the "Property". It is our understanding that the primary interest of Dedham-Oakdale Elementary School is to locate and evaluate materials and building system defects that might significantly affect the value of the property and to determine if the present Property has conditions that will have a significant impact on its continued operations.

The conclusions and recommendations presented in this report are based on the brief review of the plans and records made available to our Project Manager during the site visit, interviews of available property management personnel and maintenance contractors familiar with the Property, appropriate inquiry of municipal authorities, our Project Manager's walk-through observations during the site visit, and our experience with similar properties.

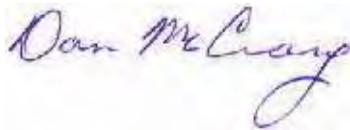
No testing, exploratory probing, dismantling or operating of equipment or in depth studies were performed unless specifically required under Section 2 of this report. This assessment did not include engineering calculations to determine the adequacy of the Property's original design or existing systems. Although walk-through observations were performed, not all areas were observed (See Section 4.2 for areas observed). There may be defects in the Property, which were in areas not observed or readily accessible, may not have been visible, or were not disclosed by management personnel when questioned. The report describes property conditions at the time that the observations and research were conducted.

This report has been prepared on behalf of and exclusively for the use of the Town of Dedham Schools for the purpose stated within Section 2 of this report. The report, or any excerpt thereof, shall not be used by any party other than the Town of Dedham Schools or for any other purpose than that specifically stated in our agreement or within Section 2 of this report without the express written consent of EMG.

Any reuse or distribution of this report without such consent shall be at the Town of Dedham Schools and the recipient's sole risk, without liability to EMG.

Prepared by: C. Martin Nowland, PE, CEM,
Project Manager

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11. APPENDICES

APPENDIX A: PHOTOGRAPHIC RECORD

APPENDIX B: SITE AND FLOOR PLANS

APPENDIX C: EMG ACCESSIBILITY CHECKLIST

APPENDIX D: PRE-SURVEY QUESTIONNAIRE

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APPENDIX A: PHOTOGRAPHIC RECORD





PHOTO #1: FRONT ENTRANCE ON CEDAR STREET



PHOTO #2: 1902 MAIN BUILDING TOWARDS THE COURTYARD



PHOTO #3: GYMNASIUM SIDE FACING THE COURTYARD



PHOTO #4: PLAYGROUND



PHOTO #5: CLASSROOMS 14 AND 15, RUBBER ROOF WITH PEA STONE



PHOTO #6: WEST SIDE BASKETBALL COURTS AND BALL FIELD



PHOTO #7: 1960 ADDITION CLASSROOMS 21 AND 22



PHOTO #8: 1960 ADDITION, ROOM 21 LOOKING NORTHEAST



PHOTO #9: WEST PARKING LOT ASPHALT DETERIORATION



PHOTO #10: 1902 MAIN BUILDING



PHOTO #11: ROOF OF 1960 ADDITION ROOM 22, POLE LIGHT AND ELECTRIC SERVICE



PHOTO #12: COURTYARD NO.2 FUEL OIL TANK COVER



PHOTO #13: 1902 MAIN BUILDING SOUTH FIRE ESCAPE



PHOTO #14: SOUTH SIDE OF MAIN BUILDING AND FIRE ESCAPE



PHOTO #15: 1952 WING RUBBER ROOF AND PEA STONE LOOKING EAST AT GYM



PHOTO #16: WIRING DROPPED ON ROOF AND INSULATION DISINTEGRATING

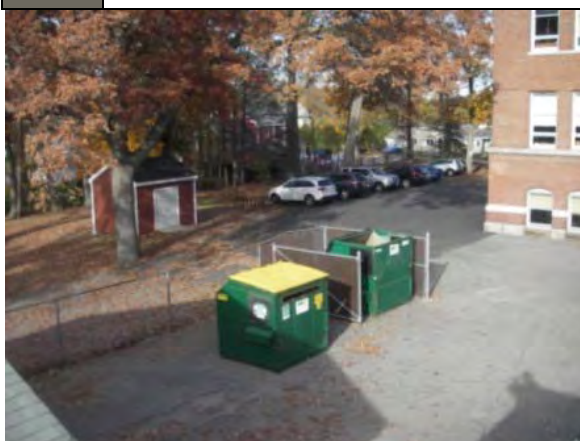


PHOTO #17: SHED AND DUMPSTERS AT NORTH END OF COURTYARD



PHOTO #18: RUBBER AND PEA STONE ROOF ON THE 1952 WING LOOKING SOUTH



PHOTO #19: TYPICAL CORRIDOR



PHOTO #20: GUEST UNIT



PHOTO #21: ATTIC - ROOF TRUSS FRAMING



PHOTO #22: ATTIC - ROOF TRUSS FRAMING



PHOTO #23: 1902 BUILDING ASPHALT SHINGLES AND COPPER GUTTER



PHOTO #24: 1902 BUILDING CHIMNEY AND FIRE ESCAPE WALKOUT

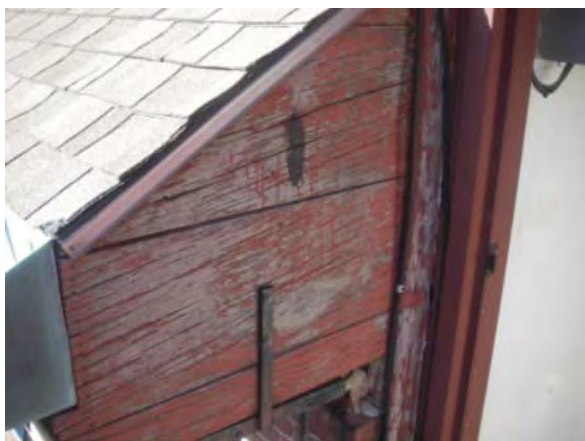


PHOTO #25: 1902 BUILDING FIRE ESCAPE WALKOUT NEEDS WORK

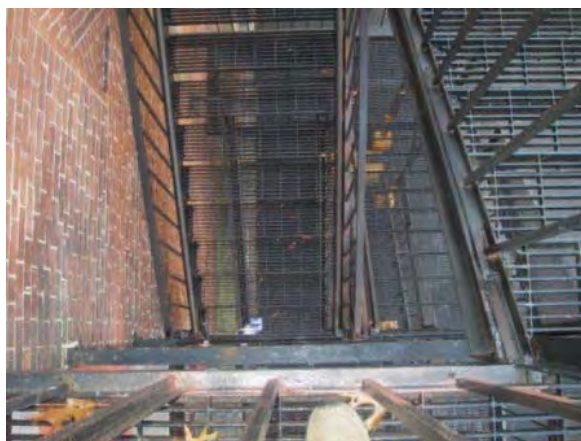


PHOTO #26: 1902 BUILDING NORTH FIRE ESCAPE

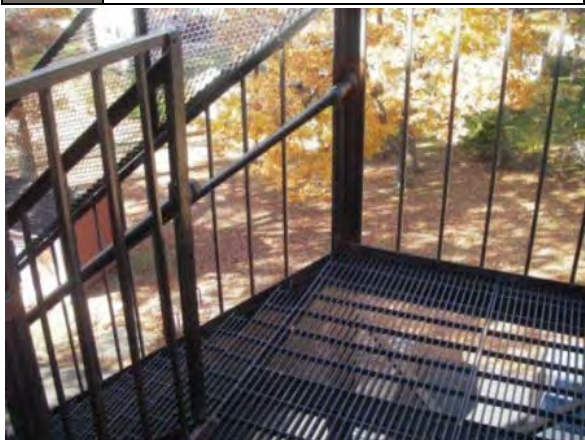


PHOTO #27: 1902 BUILDING NORTH FIRE ESCAPE



PHOTO #28: 1902 ATTIC EXHAUST VENT CONNECTED TO CHIMNEY



PHOTO #29: 1902 ATTIC ADDITIONAL EXHAUST VENTS TO CHIMNEY



PHOTO #30: 1902 ATTIC EXHAUST FAN AND VENT DUCT



PHOTO #31: 1902 ATTIC INSULATION



PHOTO #32: 1902 ATTIC INSULATION AND OUTER RAFTERS



PHOTO #33: 1952 WING BOILER ROOM



PHOTO #34: BOILER FRONT



PHOTO #35: SECOND BOILER FRONT



PHOTO #36: BOILER NAMEPLATE



PHOTO #37: BURNER NAMEPLATE



PHOTO #38: 1952 WING BOILER FEED PUMPS



PHOTO #39: 1952 WING BOILER WATER TREATMENT SYSTEM



PHOTO #40: 1952 WING CONDENSATE AIR COMPRESSOR



PHOTO #41: 1952 WING BOILERS PNEUMATIC CONTROLS



PHOTO #42: AIR COMPRESSOR NAMEPLATE



PHOTO #43: 1952 WING DOMESTIC WATER HEATER



PHOTO #44: 1952 WING DOMESTIC WATER HEATER NAMEPLATE



PHOTO #45: 1952 WING BOILER ROOM CARBON MONOXIDE DETECTOR



PHOTO #46: 1952 WING BOILER FUEL OIL PUMPS



PHOTO #47: 1952 WING BOILER ROOM UNDER-GROUND FUEL TANK MONITOR



PHOTO #48: 1952 WING BOILER ROOM UPDATED ELECTRIC DISTRIBUTION PANEL



PHOTO #49: 1952 WING BOILER ROOM FIRE EXTINGUISHER NAMEPLATE



PHOTO #50: 1952 WING BOILER ROOM FIRE EXTINGUISHER INSPECTION TAG



PHOTO #51: 1952 WING BOILER ROOM ELECTRIC SERVICE AND METER



PHOTO #52: 1952 WING BOILER ROOM ELECTRIC PANELS AND OPEN PIT HAZARD



PHOTO #53: 1952 WING SUMP PIT IN FRONT OF ELECTRICAL PANELS

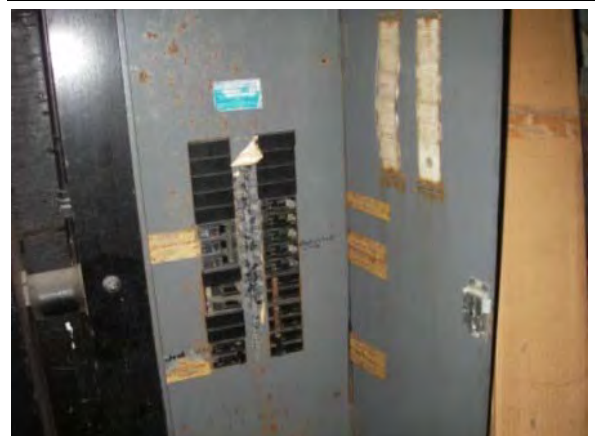


PHOTO #54: 1952 WING BOILER ROOM OLDER ELECTRICAL PANEL



PHOTO #55: 1952 WING HALLWAY



PHOTO #56: 1952 WING BOILER ROOM ELECTRICAL PANEL NAMEPLATE



PHOTO #57: 1960 WING CLASSROOM UNIT VENTILATOR



PHOTO #58: 1960 WING CLASSROOM



PHOTO #59: 1952 WING CLASSROOM



PHOTO #60: 1952 WING CLASSROOM



PHOTO #61: 1952 WING CLASSROOM SINK



PHOTO #62: 1952 WING CLASSROOM SINK PIPING

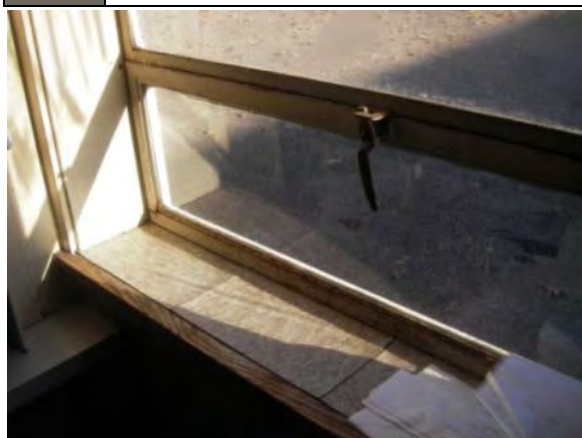


PHOTO #63: 1952 WING ALUMINUM WINDOW FRAMES AND SINGLE-PANE GLASS



PHOTO #64: 1960 ADDITION ELECTRIC SERVICE METER

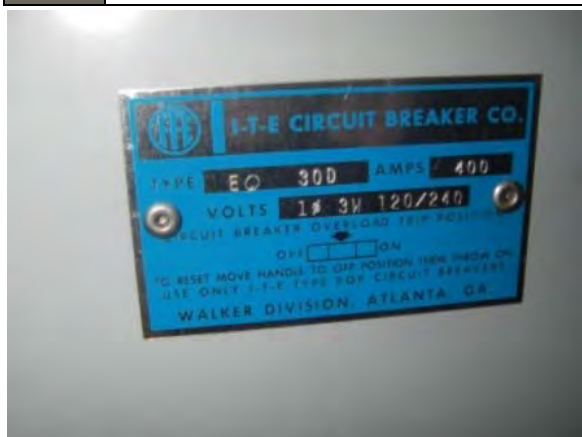


PHOTO #65: 1950 ADDITION ELECTRIC SERVICE PANEL NAMEPLATE



PHOTO #66: 1960 ADDITION ELECTRIC SERVICE DISTRIBUTION PANEL

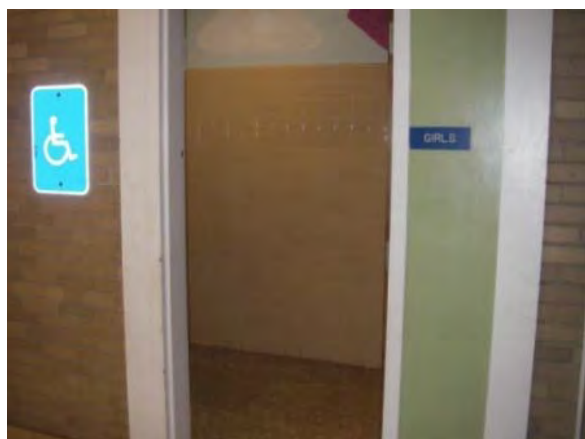


PHOTO #67: 1952 WING RESTROOM ENTRANCE



PHOTO #68: 1952 WING GIRL'S RESTROOM



PHOTO #69: 1952 WING GIRL'S RESTROOM FIRE ANNUNCIATOR AND THERMOSTAT



PHOTO #70: 1952 WING GIRL'S RESTROOM HANDICAP ACCESS TOILET

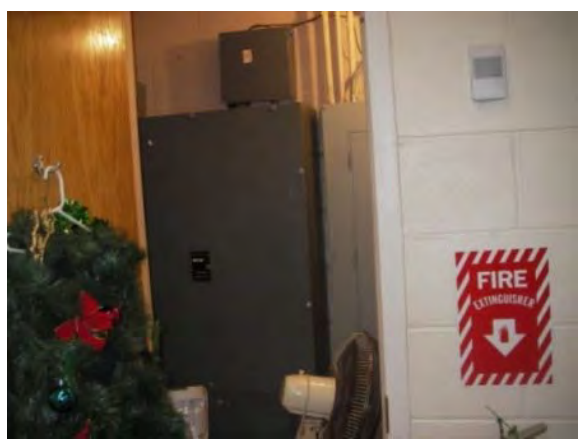


PHOTO #71: 1960 ADDITION ELECTRICAL CLOSET WITH FANS BLOCKING ACCESS



PHOTO #72: 1952 WING GIRL'S RESTROOM HANDICAP ACCESS SINK



PHOTO #73: GYMNASIUM

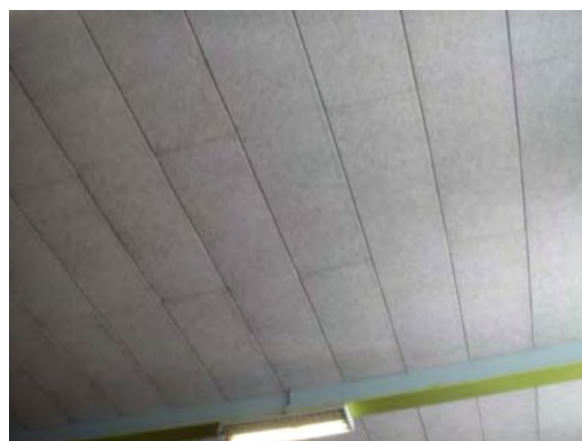


PHOTO #74: GYM CEILING PANELS AND STEEL SUPPORT



PHOTO #75: GYM AND STAGE



PHOTO #76: GYM AND HEAT RADIATORS



PHOTO #77: HANDICAP WHEELCHAIR LIFT UP TO THE STAGE



PHOTO #78: 1952 WING LOBBY ON CEDAR STREET



PHOTO #79: 1952 WING LOBBY LEAKING AND UNUSED STEAM RADIATORS



PHOTO #80: 1952 WING LOBBY UNIT HEATER OFFSETS FAILED RADIATORS



PHOTO #81: 1952 WING LOBBY CEILING TILES IN POOR CONDITION



PHOTO #82: ORIGINAL BUILDING BASEMENT KITCHEN PREP AREA



PHOTO #83: KITCHEN OVEN

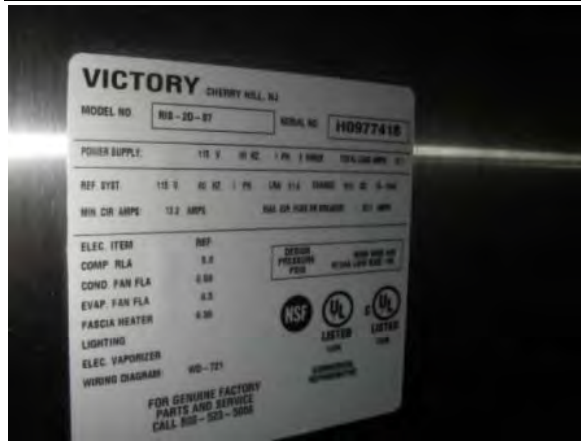


PHOTO #84: KITCHEN UPRIGHT REFRIGERATOR NAMEPLATE



PHOTO #85: 1902 BUILDING BASEMENT STEAM PIPING FOR PASSIVE AIR HEATING

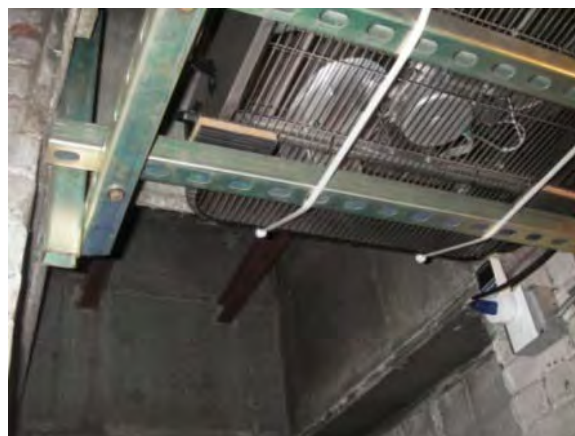


PHOTO #86: 1902 BUILDING RETAIL FAN ADDED UNDER PASSIVE STEAM PIPING

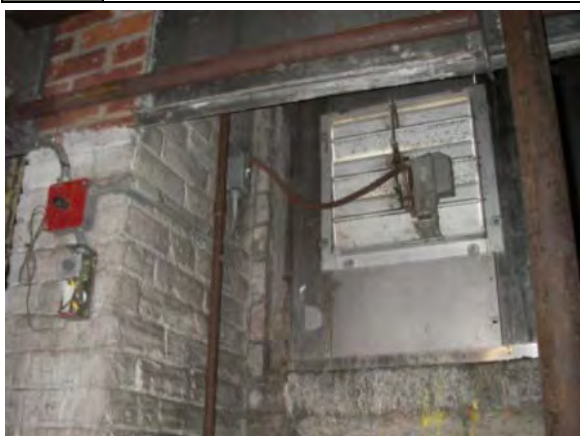


PHOTO #87: 1902 BUILDING TEMPERATURE CONTROLLED LOUVER-FRESH AIR

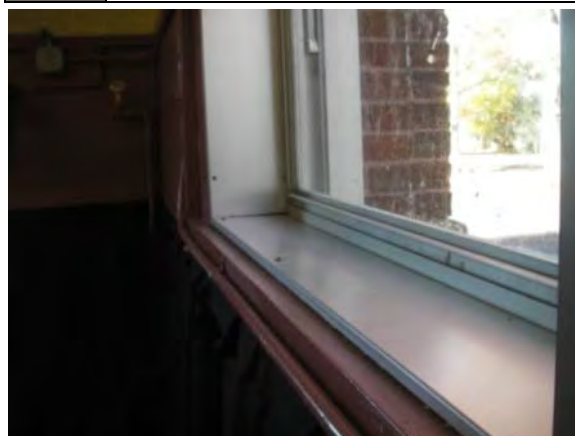


PHOTO #88: 1902 BUILDING ALUMINUM SINGLE-PANE WINDOW AND FRAME



PHOTO #89: 1902 BUILDING BASEMENT MUSIC ROOM

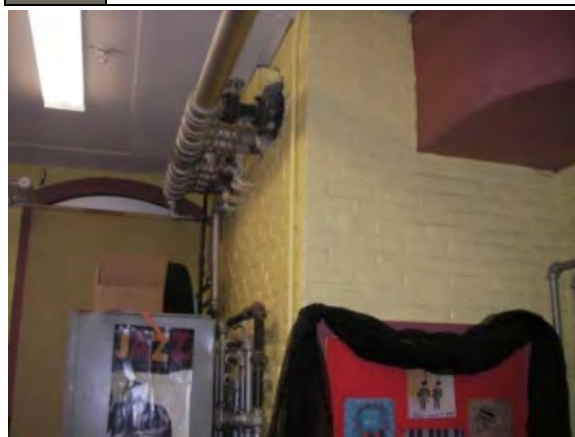


PHOTO #90: 1902 BUILDING BASEMENT MUSIC ROOM STEAM PIPING



PHOTO #91: 1902 BUILDING BASEMENT BOY'S RESTROOM



PHOTO #92: 1902 BUILDING BASEMENT BOY'S RESTROOM



PHOTO #93: 1902 BUILDING BASEMENT BOY'S RESTROOM UNIT HEATER

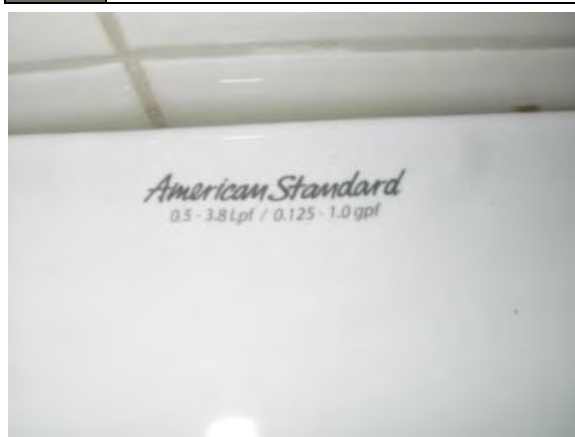


PHOTO #94: 1902 BUILDING BASEMENT BOY'S RESTROOM STANDARD TOILET



PHOTO #95: 1902 BUILDING BASEMENT STONE FOUNDATION



PHOTO #96: 1902 BUILDING BASEMENT ELECTRIC SERVICE



PHOTO #97: 1902 BUILDING BASEMENT AIR HANDLER FRESH AIR INTAKE



PHOTO #98: 1902 BUILDING BASEMENT ELECTRIC SERVICE PANEL



PHOTO #99: 1902 BUILDING BASEMENT AIR HANDLER UNIT (AHU)



PHOTO #100: 1902 BUILDING BASEMENT AHU PASSIVE STEAM HEAT PIPING



PHOTO #101: 1902 BUILDING BOILER FRONT



PHOTO #102: 1902 BUILDING BOILER



PHOTO #103: 1902 BUILDING BOILER ROOM CONDENSATE TANK



PHOTO #104: 1902 BUILDING BOILER NAMEPLATE



PHOTO #105: 1902 BUILDING BASEMENT GIRL'S RESTROOM SINKS



PHOTO #106: 1902 BUILDING BASEMENT GIRL'S RESTROOM TOILET STALLS



PHOTO #107: 1902 BUILDING BASEMENT GIRL'S RESTROOM UNIT HEATER



PHOTO #108: 1902 BUILDING BASEMENT GIRL'S RESTROOM UNFINISHED REPAIRS

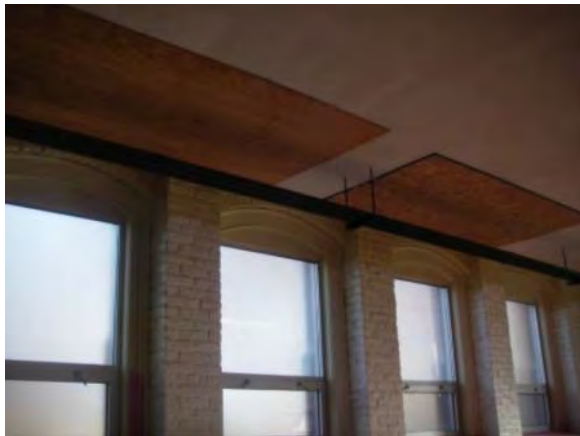


PHOTO #109: 1902 BUILDING BASEMENT GIRL'S RESTROOM REPAIRS



PHOTO #110: 1902 BUILDING STANDARD STEAM RADIATOR



PHOTO #111: 1902 BUILDING FLOOR AIR VENTS AND OLDER FLOOR TILE



PHOTO #112: 1902 BUILDING PRINCIPAL'S OFFICE FIRE ALARM PANEL



PHOTO #113: 1902 BUILDING OBSOLETE ELECTRICAL PANEL



PHOTO #114: 1902 BUILDING ELECTRICAL PANEL



PHOTO #115: 1902 BUILDING PRINCIPAL'S OFFICE



PHOTO #116: 1902 BUILDING MAIN ENTRANCE DOORS FROM THE INSIDE



PHOTO #117: 1902 BUILDING WOODEN STAIRS



PHOTO #118: 1902 BUILDING ORIGINAL ALUMINUM WINDOW FRAME & SINGLE GLAZE



PHOTO #119: 1902 BUILDING COMPUTER ROOM

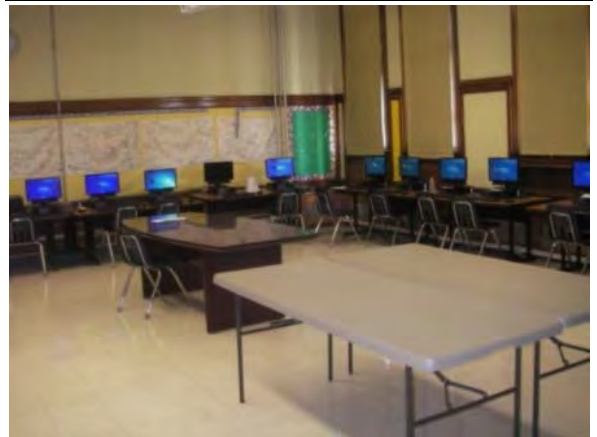


PHOTO #120: 1902 BUILDING COMPUTER ROOM



PHOTO #121: 1902 BUILDING HALLWAY SINK- MULTIPLE CLASSROOMS SHARE



PHOTO #122: 1902 BUILDING CLASSROOM CRACKED AND STAINED CEILING



PHOTO #123: 1902 BUILDING SECOND FLOOR RESTROOM



PHOTO #124: 1902 BUILDING WORN VINYL FLOOR TILE

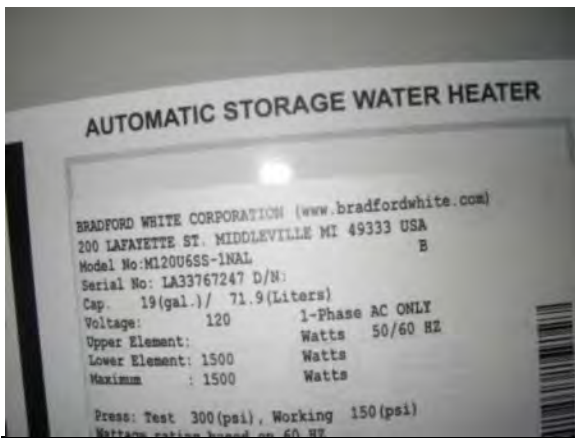


PHOTO #125: 1902 BUILDING 2ND FLOOR RESTROOM WATER HEATER INFO



PHOTO #126: 1902 BUILDING CLASSROOM



PHOTO #127: 1902 BUILDING ORIGINAL ALUMINUM WINDOW FRAME AND GLASS



PHOTO #128: 1902 BUILDING 3RD FLOOR HALL REPAIR NEEDED



PHOTO #129: 1902 BUILDING LIBRARY RENOVATED IN 2007



PHOTO #130: 1902 BUILDING LIBRARY

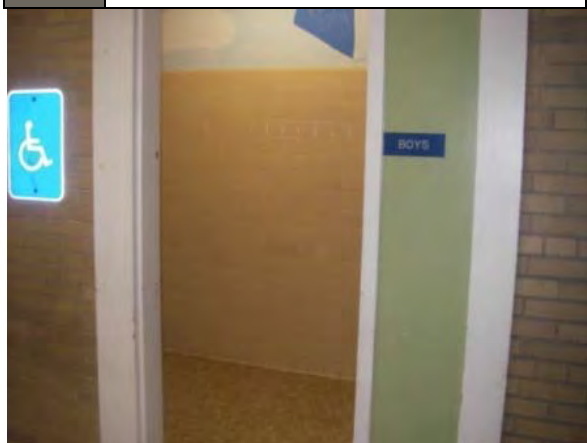


PHOTO #131: 1902 BUILDING BOY'S RESTROOM

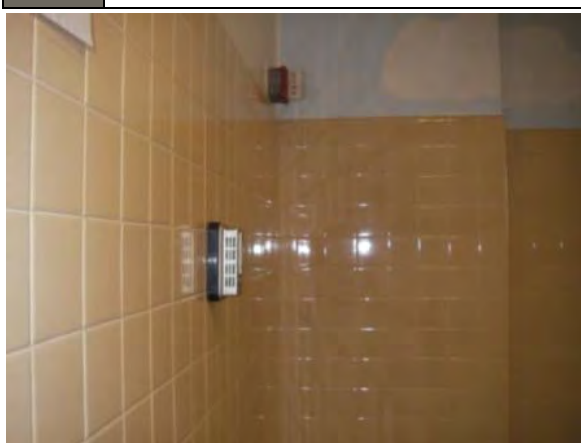


PHOTO #132: 1902 BUILDING BOY'S RESTROOM WITH FIRE ALARM AND THERMOSTAT



PHOTO #133: 1902 BUILDING BOY'S RESTROOM SINKS

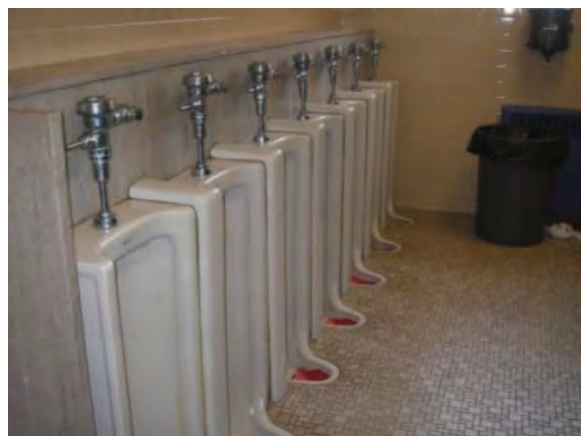


PHOTO #134: 1902 BUILDING BOY'S RESTROOM URINALS



PHOTO #135: GYM BROKEN WINDOWS

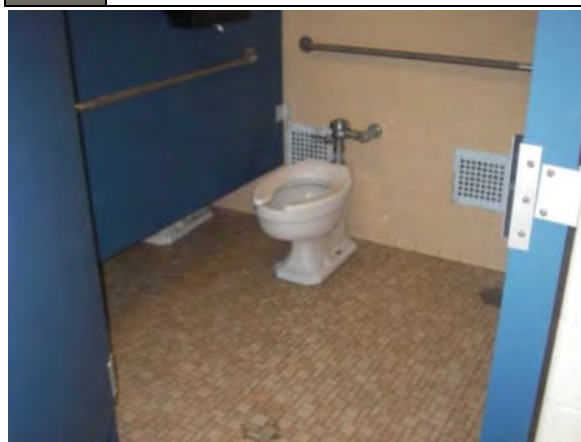


PHOTO #136: 1902 BUILDING BOY'S RESTROOM HANDICAP TOILET



PHOTO #137: 1952 WING WEST SIDE DOORS TO THE BOILER ROOM



PHOTO #138: 1952 WING CLASSROOM HVAC VENT NEEDS A MOUSE/INSECT SCREEN

FACILITY CONDITION ASSESSMENT

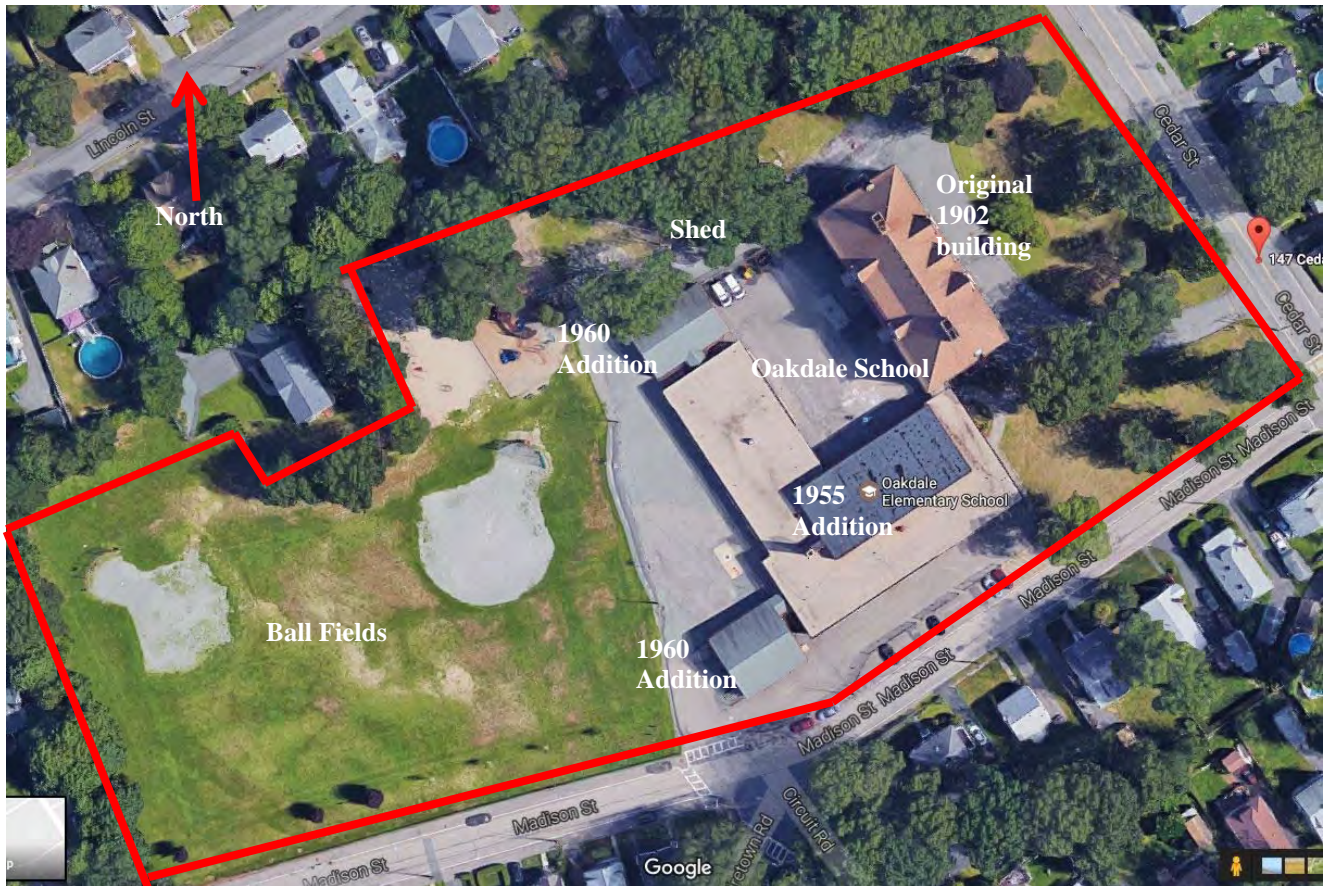
DEDHAM-OAKDALE ELEMENTARY SCHOOL
147 CEDAR STREET
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-009.322

APPENDIX B: SITE AND FLOOR PLANS



Site Plan

**Project Name:**

Dedham–Oakdale Elementary School

Project Number:

121711.16R000-009.322

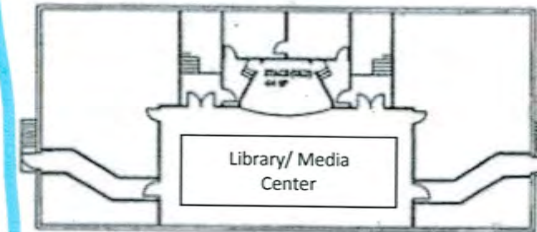
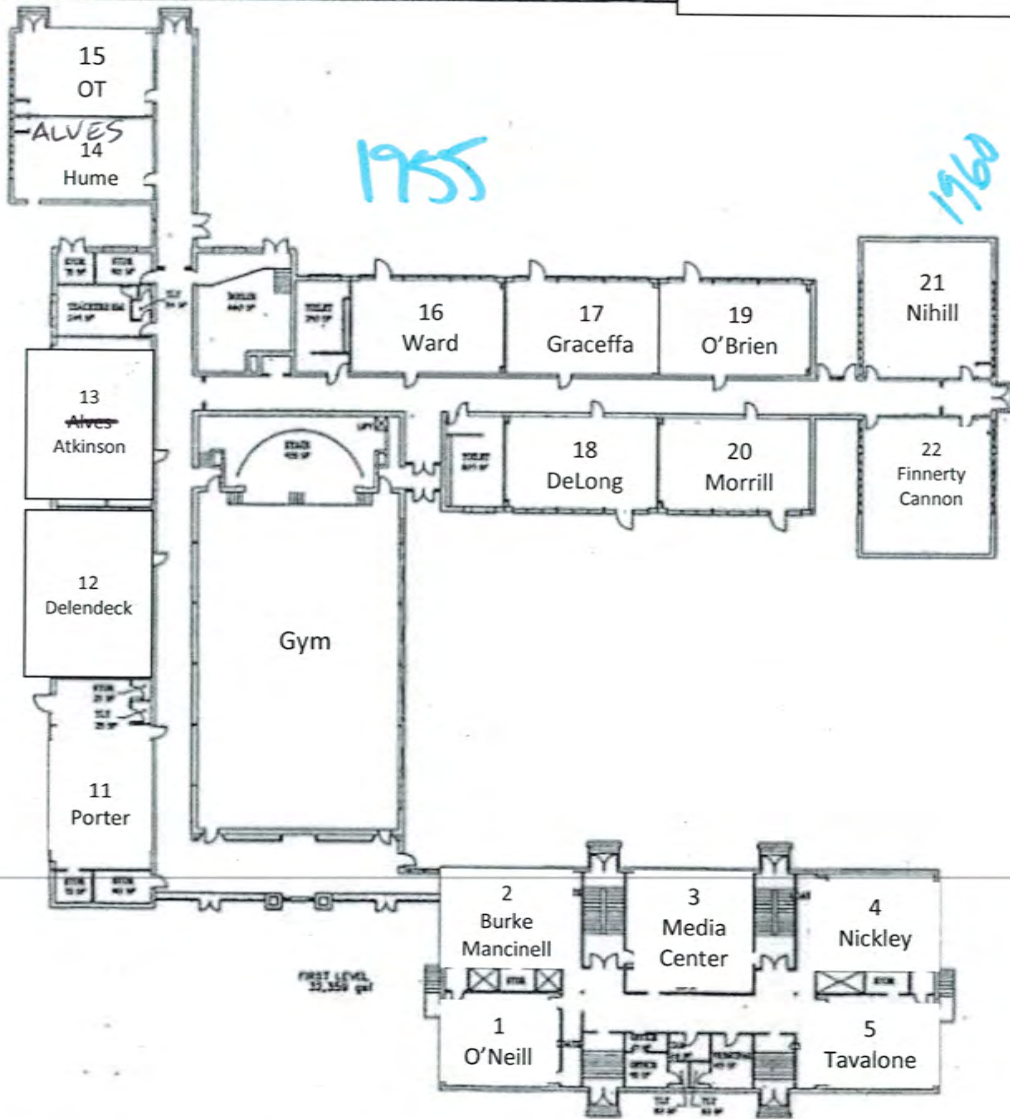
Source:

Google Earth

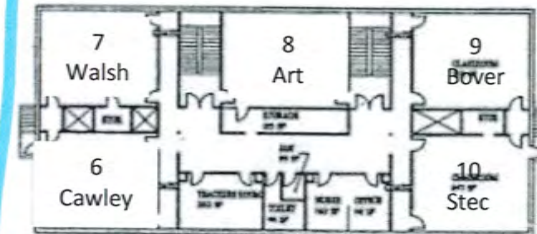
On-Site Date:

October 10, 2016

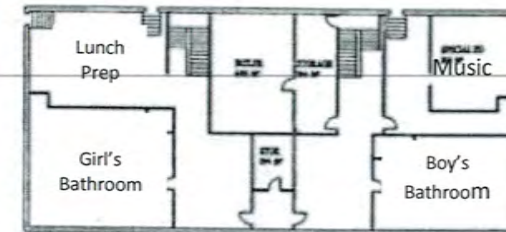
Oakdale School



3rd Floor



2nd Floor



Basement



FACILITY CONDITION ASSESSMENT

DEDHAM-OAKDALE ELEMENTARY SCHOOL
147 CEDAR STREET
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-009.322

APPENDIX C:

EMG ACCESSIBILITY CHECKLIST



Date Completed: 11-10-2016

Property Name: OAKDALE ELEMENTARY

EMG Project Number: 121711.16 R000 - 009.322

Building History		Yes	No	Unk	Comments
1	Has an ADA survey previously been completed for this property?			X	
2	Have any ADA improvements been made to the property?	X			
3	Does a Transition Plan / Barrier Removal Plan exist for the property?			X	
4	Has building ownership or management received any ADA related complaints that have not been resolved?		X		
5	Is any litigation pending related to ADA issues?		X		
Parking		Yes	No	NA	Comments
1	Are there sufficient accessible parking spaces with respect to the total number of reported spaces?	X			45 SPACES 2 HANDICAPPED SPACES
Parking (cont.)		Yes	No	NA	Comments
2	Are there sufficient van-accessible parking spaces available?	X			2 (BOTH)
3	Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading "Van Accessible" at van spaces?		X		1-YES 1-NO
4	Is there at least one accessible route provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones, if provided, and public streets and sidewalks?	X			
5	Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs?	X			
6	If required does signage exist directing you to accessible parking and an accessible building entrance?		X		NEED PAVEMENT PAINTED LINES
Ramps		Yes	No	NA	Comments
1*	Do all ramps along accessible path of travel appear to meet slope requirements? (1:12 or less)	X			
2	Are ramps that appear longer than 6 ft complete with railings on both sides?			X	

VAN YES

	Ramps (cont.)	Yes	No	NA	Comments
3	Does the width between railings appear at least 36 inches?			X	
4	Is there a level landing for approximately every 30 ft horizontal length of ramp, at the top and at the bottom of ramps and switchbacks?			X	
	Entrances/Exits	Yes	No	NA	Comments
1	Do all required accessible entrance doorways appear at least 32 inches wide and not a revolving door?	X			
2	If the main entrance is inaccessible, are there alternate accessible entrances?			X	
3	Is the door hardware easy to operate (lever/push type hardware, no twisting required and not higher than approximately 48 inches above the floor)?	X			
	Paths of Travel	Yes	No	NA	Comments
1	Are all paths of travel free of obstruction and wide enough for a wheelchair (appear at least 36 inches wide)?	X			
2	Are wheelchair-accessible facilities (toilet rooms, exits, etc.) identified with signage?	X			
3	Is there a path of travel that does not require the use of stairs?	X			EXCEPT STAGE IN GYM - WHEELCHAIR LIFT
	Elevators	Yes	No	NA	Comments
1	Do the call buttons have visual and audible signals to indicate when a call is registered and answered when car arrives?			X	
2	Are there visual and audible signals inside cars indicating floor change?			X	
3	Are there standard raised and Braille marking on both jambs of each hoist way entrance as well as all cab/call buttons?			X	

	Elevators (cont.)	Yes	No	NA	Comments
4	Do elevator doors have a reopening device that will stop and reopen a car door if an object or a person obstructs the door?			X	
5	Are elevator controls low enough to be reached from a wheelchair (appears to be between 15 and 48 inches)?			X	
6	If a two-way emergency communication system is provided within the elevator cab, is it usable without voice communication?			X	
	Toilet Rooms	Yes	No	NA	Comments
1	Are common area public restrooms located on an accessible route?	X			
2	Are pull handles push/pull or lever type?	X			
3	Are there audible and visual fire alarm devices in the toilet rooms?				
4	Are toilet room access doors wheelchair-accessible (appear to be at least 32 inches wide)?	X			
	Toilet Rooms (cont.)	Yes	No	NA	Comments
5	Are public restrooms large enough to accommodate a wheelchair turnaround (appear to have 60" turning diameter)?	X			
6	In unisex toilet rooms, are there safety alarms with pull cords?		X		
7	Are toilet stall doors wheelchair accessible (appear to be at least 32" wide)?	X			
8	Are grab bars provided in toilet stalls?	X			
9	Are sinks provided with clearance for a wheelchair to roll under (appear to have 29" clearance)?	X			
10	Are sink handles operable with one hand without grasping, pinching or twisting?	X			

11	Are exposed pipes under sink sufficiently insulated against contact?	X			
	Guest Rooms	Yes	No	NA	Comments
1	How many total accessible sleeping rooms does the property management report to have? Provide specific number in comment field. Are there sufficient reported accessible sleeping rooms with respect to the total number of reported guestrooms? See attached hot sheet.			X	
2	How many of the accessible sleeping rooms per property management have roll-in showers? Provide specific number in comment field. Are there sufficient reported accessible rooms with roll-in showers with respect to the total number of reported accessible guestrooms? See attached hot sheet.			X	
3	How many assistive listening kits and/or rooms with communication features are available per property management? Provide specific number in comment field. Are there sufficient reported assistive listening devices with respect to the total number of rooms? See attached hot sheet.			X	
	Pools	Yes	No	NA	Comments
1	Are public access pools provided? If the answer is no, please disregard this section.			X	
	Pools (cont.)	Yes	No	NA	Comments
2	How many accessible access points are provided to each pool/spa? Provide number in comment field. Is at least one fixed lift or sloped entry to the pool provided?			X	
	Play Area	Yes	No	NA	Comments
1	Has the play area been reviewed for accessibility? All public playgrounds are subject to ADAAG standards.		X		UNKNOWN
	Exercise Equipment	Yes	No	NA	Comments
1	Does there appear to be adequate clear floor space around the machines/equipment (30" by 48" minimum)?			X	

*Based on visual observation only. The slope was not confirmed through measurements.

FACILITY CONDITION ASSESSMENT

DEDHAM-OAKDALE ELEMENTARY SCHOOL
147 CEDAR STREET
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-009.322

APPENDIX D: PRE-SURVEY QUESTIONNAIRE





FCA (Town of Dedham Schools) Pre-Survey Questionnaire

This questionnaire must be completed by the property owner, the owner's designated representative, or someone knowledgeable about the subject property. If the form is not completed, EMG's Project Manager will require **additional time** during the on-site visit with such a knowledgeable person in order to complete the questionnaire. During the site visit, EMG's Field Observer may ask for details associated with selected questions. This questionnaire will be utilized as an exhibit in EMG's final report.

Name of Institution:	TOWN OF DEDHAM SCHOOLS		
Name of Building:	OAKDALE ELEMENTARY	Building #:	147 CEDAR STREET
Name of person completing questionnaire:	STONE		
Length of Association With the Property:	15 YEARS	Phone Number:	339-440-6666

Site Information	
Year of Construction?	1902-3 STORIES, 1952-NEW WING, 1960-2ND ADDITION
No. of Stories?	3 Floors. 1
Total Site Area?	~7 Acres
Total Building Area?	55524 Sqft

Inspections	Date of Last Inspection	List of Any Outstanding Repairs Required
1. Elevators	NO 2016	WHEELCHAIR LIFT AT STAGE
2. HVAC Mechanical, Electric, Plumbing?	UNKNOWN	
3. Life-Safety/Fire?	2016	
4. Roofs?	2016	

Key Questions	Response
Major Capital Improvements in Last 3 yrs.	OAKDALE STREET SIDEWALKS & PAVEMENT
Planned Capital Expenditure For Next Year?	NO
Age of the Roof?	7 YEARS
What bldg. Systems Are Responsibilities of Tenants? (HVAC/Roof/Interior/Exterior/Paving)	NA

Mark the column corresponding to the appropriate response. Please provide additional details in the Comments column, or backup documentation for any Yes responses. (NA indicates "Not Applicable", Unk indicates "Unknown")

QUESTION	Y	N	Unk	NA	COMMENTS
ZONING, BUILDING DESIGN & LIFE SAFETY ISSUES					
1 Are there any unresolved building, fire, or zoning code issues?		X			
2 Is there any pending litigation concerning the property?		X			
3 Are there any other significant issues/hazards with the property?		X			
4 Are there any unresolved construction defects at the property?		X			



FCA (Town of Dedham Schools) Pre-Survey Questionnaire

5	Has any part of the property ever contained visible suspect mold growth?	X				BASEMENT-DEHUMIDIFIERS PRESENT IN BATHROOMS.
Mark the column corresponding to the appropriate response. Please provide additional details in the Comments column, or backup documentation for any Yes responses. (NA indicates "Not Applicable", Unk indicates "Unknown")						
	QUESTION	Y	N	Unk	NA	COMMENTS
6	Is there a mold Operations and Maintenance Plan?		X			
7	Are there any recalled fire sprinkler heads (Star, GEM, Central, and Omega)?		X			
8	Have there been indoor air quality or mold related complaints from tenants?		X			
GENERAL SITE						
9	Are there any problems with erosion, storm water drainage or areas of paving that do not drain?		X			
10	Are there any problems with the landscape irrigation systems?				X	
BUILDING STRUCTURE						
11	Are there any problems with foundations or structures?	X				FEW PLACES
12	Is there any water infiltration in basements or crawl spaces?	X				BASEMENT RESTROOMS - FROM DOWN SPOUTS, FLOWS IN FROM GRADE
13	Has a termite/wood boring insect inspection been performed within the last year?		X			~ 4 YEARS AGO
BUILDING ENVELOPE						
14	Are there any wall, or window leaks?		X			
15	Are there any roof leaks?		X			
16	Is the roofing covered by a warranty or bond?	X				
17	Are there any poorly insulated areas?	X				SINGLE PANE WINDOWS
18	Is Fire Retardant Treated (FRT) plywood used?		X			



FCA (Town of Dedham Schools) Pre-Survey Questionnaire

19	Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used?		X			
Mark the column corresponding to the appropriate response. Please provide additional details in the Comments column, or backup documentation for any Yes responses. (NA indicates "Not Applicable", Unk indicates "Unknown")						
QUESTION		Y	N	Unk	NA	COMMENTS
BUILDING HVAC AND ELECTRICAL						
20	Are there any leaks or pressure problems with natural gas service?		X			
21	Does any part of the electrical system use aluminum wiring?			X		
22	Do Residential units have a less than 60-Amp service?				X	
23	Do Commercial units have less than 200-Amp service?		X			QTY 3
24	Are there any problems with the utilities, such as inadequate capacities?		X			
ADA						
25	Has the management previously completed an ADA review?		X			
26	Have any ADA improvements been made to the property?	X				
27	Does a Barrier Removal Plan exist for the property?		X			
28	Has the Barrier Removal Plan been approved by an arms-length third party?				X	
29	Has building ownership or management received any ADA related complaints?			X		
30	Does elevator equipment require upgrades to meet ADA standards?				X	
PLUMBING						
31	Is the property served by private water well?		X			
32	Is the property served by a private septic system or other waste treatment systems?		X			



FCA (Town of Dedham Schools) Pre-Survey Questionnaire

33	Is polybutylene piping used?			X		
34	Are there any plumbing leaks or water pressure problems?		X			

Additional Issues or Concerns That EMG Should Know About?	
1.	LIGHTING IN HALLWAYS & LOBBIES
2.	EXTERIOR DOORS
3.	

Items Provided to EMG Auditors				
	Yes	No	N/A	Additional Comments?
Access to All Mechanical Spaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Access to Roof/Attic Space	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Access to Building As-Built Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Site plan with bldg., roads, parking and other features	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DID RECIEVE FLOOR PLAN
Contact Details for Mech, Elevator, Roof, Fire Contractors:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EXCEPT ROOF
List of Commercial Tenants in the property	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Previous reports pertaining to the physical condition of property.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
ADA survey and status of improvements implemented.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Current / pending litigation related to property condition.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Any brochures or marketing information.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Stout

Signature of person Interviewed or completing form

11-10-16

Date

FACILITY CONDITION ASSESSMENT

DEDHAM-OAKDALE ELEMENTARY SCHOOL
147 CEDAR STREET
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-009.322

On the day of the site visit, provide EMG's Field Observer access to all of the available documents listed below. Provide copies if possible.

INFORMATION REQUIRED

- | | |
|---|---|
| <ol style="list-style-type: none">1. All available construction documents (blueprints) for the original construction of the building or for any tenant improvement work or other recent construction work.2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features.3. For commercial properties, provide a tenant list which identifies the names of each tenant, vacant tenant units, the floor area of each tenant space, and the gross and net leasable area of the building(s).4. For apartment properties, provide a summary of the apartment unit types and apartment unit type quantities, including the floor area of each apartment unit as measured in square feet.5. For hotel or nursing home properties, provide a summary of the room types and room type quantities.6. Copies of Certificates of Occupancy, building permits, fire or health department inspection reports, elevator inspection certificates, roof or HVAC warranties, or any other similar, relevant documents.7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies. | <ol style="list-style-type: none">8. The company name, phone number, and contact person of all outside vendors who serve the property, such as mechanical contractors, roof contractors, fire sprinkler or fire extinguisher testing contractors, and elevator contractors.9. A summary of recent (over the last 5 years) capital improvement work which describes the scope of the work and the estimated cost of the improvements. Executed contracts or proposals for improvements. Historical costs for repairs, improvements, and replacements.10. Records of system & material ages (roof, MEP, paving, finishes, furnishings).11. Any brochures or marketing information.12. Appraisal, either current or previously prepared.13. Current occupancy percentage and typical turnover rate records (for commercial and apartment properties).14. Previous reports pertaining to the physical condition of property.15. ADA survey and status of improvements implemented.16. Current / pending litigation related to property condition. |
|---|---|

Your timely compliance with this request is greatly appreciated.

