

# FACILITY CONDITION ASSESSMENT

*Prepared for*

Town of Dedham Schools  
100 Whiting Avenue  
Dedham, Massachusetts 02026



FACILITY CONDITION ASSESSMENT  
OF  
DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

## PREPARED BY:

EMG

10461 Mill Run Circle, Suite 1100  
Owings Mills, Maryland 21117  
800.733.0660  
[www.EMGcorp.com](http://www.EMGcorp.com)

## EMG CONTACT:

Bill Champion  
Program Manager  
800.733.0660 x6234  
[bchampion@emgcorp.com](mailto:bchampion@emgcorp.com)

## EMG PROJECT #:

121711.16R000-002.322

## DATE OF REPORT:

November 17, 2016

## ONSITE DATES:

October 11, 2016, October 12, 2016  
and October 17, 2016



engineering | environmental | capital planning | project management



EMG Corporate Headquarters 10461 Mill Run Circle, Suite 1100, Owings Mills, MD 21117 [www.EMGcorp.com](http://www.EMGcorp.com) p 800.733.0660

# Immediate Repairs Report

11/17/2016



Location Name	Location Description	ID	Cost Description	Quantity	Unit	Unit Cost	Subtotal	Deficiency Repair Estimate *
Dedham High School / Cafeteria	Roof	498254	D3032 Condensing Unit/Heat Pump, Split System, 3 Ton, Replace	1	EA	\$3,578.67	\$3,579	\$3,579
Dedham High School	Foundation & Superstructure	499189	B1012 Structural Flooring/Decking, Concrete, Repair	1600	SF	\$28.85	\$46,158	\$46,158
Dedham High School	Northwest corner	509835	B1015 Exterior Stairs, Concrete, Repair	300	SF	\$3.88	\$1,163	\$1,163
Dedham High School	Loading dock (main)	506438	B1015 Exterior Stairs, Concrete, Replace	75	SF	\$48.94	\$3,671	\$3,671
Dedham High School	Roof	506425	B1029 Roof Access Ladder, Steel, Replace	10	LF	\$82.78	\$828	\$828
Dedham High School	Foundation Wall	498922	B2011 Exterior Wall, Concrete, 1-2 Stories, Repair	200	SF	\$26.01	\$5,202	\$5,202
Dedham High School	Exterior Walls	498917	B2011 Exterior Wall, Brick or Brick Veneer, 1-2 Stories, Repair	500	SF	\$48.56	\$24,278	\$24,278
Dedham High School	Exterior Walls	498919	B2011 Exterior Wall, Joint Caulking 0" to 1/2", 1-2 Stories, Remove & Replace	7500	LF	\$2.82	\$21,150	\$21,150
Dedham High School	Exterior Walls	509918	B2011 Exterior Wall, Brick or Brick Veneer, 1-2 Stories, Repoint	1000	SF	\$41.28	\$41,283	\$41,283
Dedham High School	Elevated Pedestrian Walkway	498935	B2016 Soffit, Gypsum Board, Replace	850	SF	\$9.91	\$8,423	\$8,423
Dedham High School	Exterior Walls	499461	B2021 Window, Steel Operable 12 SF, 1-2 Stories, Replace	24	EA	\$1,885.36	\$45,249	\$45,249
Dedham High School	Exterior Walls	499459	B2021 Window, Steel Operable 24 SF, 1-2 Stories, Replace	70	EA	\$3,472.74	\$243,092	\$243,092
Dedham High School	Building Exterior	498897	B2022 Curtain Wall, Aluminum-Framed System w/ Glazing, Replace	45870	SF	\$101.42	\$4,651,947	\$4,651,947
Dedham High School	Fitness Center Roof	498888	B3011 Roof, Single-Ply EPDM Membrane, Repair	75	SF	\$22.60	\$1,695	\$1,695
Dedham High School	Fitness Center Roof	502688	B3021 Roof Penetration, Skylight, Structurally Glazed, Replace	625	SF	\$119.38	\$74,613	\$74,613
Dedham High School	Building Interior	502360	C1021 Interior Door, Fire 90-Minutes and Over, Replace	20	EA	\$1,649.06	\$32,981	\$32,981
Dedham High School	Building Interior	502367	C3032 Interior Ceiling Finish, Acoustical Tile (ACT), Replace	75000	SF	\$3.11	\$233,325	\$233,325
Dedham High School	Building Interior	501858	D2021 Pipe & Fittings, Copper, 2", Replace	1800	LF	\$66.80	\$120,232	\$120,232
Dedham High School	Exterior Pad Mounted	498221	D3032 Ductless Split System, Single Zone, 0.75 to 1 Ton, Replace	1	EA	\$3,221.22	\$3,221	\$3,221
Dedham High School	Boiler Room	499511	D3044 Circulation Pump, Heating Water, 5 HP, Replace	1	EA	\$5,518.88	\$5,519	\$5,519
Dedham High School	Boiler Room	498083	D3044 Circulation Pump, Heating Water, 5 HP, Replace	1	EA	\$5,518.88	\$5,519	\$5,519
Dedham High School	Boiler Room	499512	D3044 Circulation Pump, Heating Water, 5 HP, Replace	1	EA	\$5,518.88	\$5,519	\$5,519
Dedham High School	Boiler Room	499510	D3044 Circulation Pump, Heating Water, 5 HP, Replace	1	EA	\$5,518.88	\$5,519	\$5,519
Dedham High School	Building Exterior	504130	G2016 Signage, Building Mounted, Individual Letters, Install/Replace	16	EA	\$150.00	\$2,400	\$2,400
Dedham High School	Site	499321	G2031 Pedestrian Pavement, Sidewalk, Concrete, Repair	250	SF	\$28.94	\$7,236	\$7,236
Dedham High School	Site	499410	G2031 Pedestrian Pavement, Sidewalk, Asphalt, Replace	750	SF	\$1.60	\$1,203	\$1,203

# Immediate Repairs Report

11/17/2016



Location Name	Location Description	ID	Cost Description	Quantity	Unit	Unit Cost	Subtotal	Deficiency Repair Estimate *
Dedham High School	Stairs at door 10	506414	G2035 Exterior Stairs & Ramps, Handrails, Metal, Replace/Install	20	LF	\$65.91	\$1,318	\$1,318
Dedham High School	Electrical room stairs	509781	G2035 Exterior Stairs & Ramps, Handrails, Metal, Replace/Install	30	LF	\$65.91	\$1,977	\$1,977
Dedham High School	Site	499199	G2052 Landscaping, Flat Areas, Re-slope, Regrade/Establish	1700	SF	\$3.24	\$5,501	\$5,501
Dedham High School	West Site Limits	499120	P000X Engineer, Structural, Retaining Wall, Evaluate/Report	1	EA	\$6,325.00	\$6,325	\$6,325
Dedham High School	Foundation & Superstructure	498921	P000X Engineer, Structural, Superstructure, Evaluate/Report	1	EA	\$10,120.00	\$10,120	\$10,120
Dedham High School	Building Interior	501860	P000X Engineer, Plumbing, Domestic Water Supply System, Evaluate/Report	1	EA	\$6,957.50	\$6,958	\$6,958
Dedham High School	Site	499193	P000X Engineer, Civil, Site Drainage, Evaluate/Report	1	EA	\$6,325.00	\$6,325	\$6,325
Dedham High School	Drinking Fountains	502544	Z105X ADA, Miscellaneous, Drinking Fountain, Cup Dispenser, Install	24	EA	\$88.55	\$2,125	\$2,125
Dedham High School	Parking lot	499326	Z106X ADA, Parking, Designated Stall with Pavement Markings & Signage, Install	3	EA	\$1,265.00	\$3,795	\$3,795
Dedham High School	Girl's Locker Room	503068	Z108X ADA, Restroom, Full Reconfiguration, Renovate	1	EA	\$15,180.00	\$15,180	\$15,180
Dedham High School	Restrooms	502536	Z108X ADA, Restroom, Lavatory Pipe Wraps, Install	10	EA	\$75.90	\$759	\$759
<b>Immediate Repairs Total</b>								<b>\$5,655,385</b>

\* Location Factor included in totals.

Location Name	Location Description	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
Dedham High School	Foundation & Superstructure	499189	Foundation, Concrete, Repair		0	57	0	1600	SF	\$28.85	\$46,158	\$46,158																			\$46,158
Dedham High School	Northwest corner	509835	Exterior Stairs, Concrete, Repair		0	57	0	300	SF	\$3.88	\$1,163	\$1,163																			\$1,163
Dedham High School	Loading dock (main)	506438	Exterior Stairs, Concrete, Replace		50	57	0	75	SF	\$48.94	\$3,671	\$3,671																			\$3,671
Dedham High School	Roof	506425	Roof Access Ladder, Steel, Replace		40	42	0	10	LF	\$82.78	\$828	\$828																			\$828
Dedham High School	Exterior Walls	498918	Exterior Wall, Brick or Brick Veneer, 1-2 Stories, Repoint		25	15	10	2000	SF	\$41.28	\$82,565									\$82,565											\$82,565
Dedham High School	Foundation Wall	498922	Exterior Foundation Wall and Columns, Concrete, 1-2 Stories, Repair		0	57	0	200	SF	\$26.01	\$5,202	\$5,202																			\$5,202
Dedham High School	Exterior Walls	498917	Exterior Wall, Brick or Brick Veneer, 1-2 Stories, Repair		0	58	0	500	SF	\$48.56	\$24,278	\$24,278																			\$24,278
Dedham High School	Exterior Walls	498919	Exterior Wall, Joint Caulking 0" to 1/2", 1-2 Stories, Replace		10	10	0	7500	LF	\$2.82	\$21,150	\$21,150								\$21,150											\$42,300
Dedham High School	Exterior Walls	509918	Exterior Wall, Brick or Brick Veneer, 1-2 Stories, Repoint		25	25	0	1000	SF	\$41.28	\$41,283	\$41,283																			\$41,283
Dedham High School	Exterior Walls	501307	Exterior Wall, Stainless Steel Siding, Replace		40	35	5	1200	SF	\$10.10	\$12,120					\$12,120															\$12,120
Dedham High School	Elevated Pedestrian Walkway	498935	Soffit, Wood Fiber, Replace		20	20	0	850	SF	\$9.91	\$8,423	\$8,423																			\$8,423
Dedham High School	Exterior Walls	499461	Window, Steel Operable 12 SF, 1-2 Stories, Replace		30	30	0	24	EA	\$1,885.36	\$45,249	\$45,249																			\$45,249
Dedham High School	Exterior Walls	499459	Window, Steel, Steel Operable 24 SF, 1-2 Stories, Replace		30	30	0	70	EA	\$3,472.74	\$243,092	\$243,092																			\$243,092
Dedham High School	Building Exterior	498897	Curtain Wall, Aluminum-Framed System w/ Glazing, Replace		30	30	0	45870	SF	\$101.42	\$4,651,947	\$4,651,947																			\$4,651,947
Dedham High School	Exterior	509786	Exterior Door, Steel Insulated, Replace		25	26	* 0	2	EA	\$1,577.53	\$3,155		\$3,155																		\$3,155
Dedham High School	Fitness Center Roof	498888	Roof, Single-Ply EPDM Membrane, Repair		0	9	0	75	SF	\$22.60	\$1,695	\$1,695																			\$1,695
Dedham High School	Roof	498883	Roof, Single-Ply EPDM Membrane, Replace		20	8	12	14500	SF	\$10.52	\$152,540											\$152,540									\$152,540
Dedham High School	Roof	498871	Roof, Built-Up, Replace		20	6	14	28060	SF	\$12.96	\$363,697														\$363,697						\$363,697
Dedham High School	Roof	498873	Roof, Built-Up, Replace		20	10	10	94000	SF	\$12.96	\$1,218,372									\$1,218,372											\$1,218,372
Dedham High School	Fitness Center Roof	502688	Roof Penetration, Skylight, Structurally Glazed, Replace		30	30	0	625	SF	\$119.38	\$74,613	\$74,613																			\$74,613
Dedham High School	Building Interior	502360	Interior Door, Fire 90-Minutes and Over, Replace		20	20	0	20	EA	\$1,649.06	\$32,981	\$32,981																			\$32,981
Dedham High School	Building Interior	502363	Interior Door, Wood Solid-Core, Replace		20	18	2	75	EA	\$1,423.11	\$106,734		\$106,734																		\$106,734
Dedham High School	Building Interior	502361	Interior Door Hardware, Classroom Security ANSI F39 Lockset, Replace		30	28	2	350	EA	\$573.00	\$200,550		\$200,550																		\$200,550
Dedham High School	Sports Field Restrooms	502700	Toilet Partitions, Metal Overhead-Braced, Replace		20	4	16	1	EA	\$850.00	\$850																\$850				\$850
Dedham High School	Sports Field Restrooms	502698	Toilet Partitions, Metal Overhead-Braced, Replace		20	4	16	1	EA	\$850.00	\$850																\$850				\$850
Dedham High School	Restrooms and Locker Rooms	502706	Toilet Partitions, Metal Overhead-Braced, Replace		20	10	10	36	EA	\$850.00	\$30,600									\$30,600											\$30,600
Dedham High School	Building Interior	502370	Hallway Lockers (older), Steel Baked Enamel 12" W x 15" D x 72" H, 1 to 5 Tiers, Replace		20	16	4	2400	LF	\$482.50	\$1,158,000				\$1,158,000																\$1,158,000
Dedham High School	Building Interior	502371	Locker Room Lockers (newer), Steel Baked Enamel 12" W x 15" D x 72" H, 1 to 5 Tiers, Replace		20	5	15	300	LF	\$482.50	\$144,750															\$144,750					\$144,750
Dedham High School	Interior Walls	502355	Interior Wall Finish, Concrete/Masonry/ Gypsum, Prep & Paint		8	4	* 4	276590	SF	\$1.45	\$401,332			\$401,332							\$401,332									\$401,332	\$1,203,996
Dedham High School	Interior Walls	502354	Interior Wall Finish, Concrete/Masonry/ Gypsum, Prep & Paint		8	0	8	276590	SF	\$1.45	\$401,332								\$401,332							\$401,332					\$802,664
Dedham High School	Kitchen	502325	Interior Floor Finish, Epoxy Coating, Prep & Paint		10	2	8	2500	SF	\$8.74	\$21,850								\$21,850									\$21,850			\$43,701
Dedham High School	Building Interior	502350	Interior Floor Finish, Terrazzo, Replace		50	38	12	120000	SF	\$12.06	\$1,446,684											\$1,446,684									\$1,446,684
Dedham High School	Building Interior	502329	Interior Floor Finish, Rubber Tile, Replace		15	8	7	7500	SF	\$8.43	\$63,262							\$63,262													\$63,262
Dedham High School	Building Interior	502346	Interior Floor Finish, Vinyl Tile (VCT), Replace		15	3	12	60000	SF	\$4.80	\$288,036											\$288,036									\$288,036
Dedham High School	Concession Stand and Sportsfield Restrooms	502496	Interior Floor Finish, Vinyl Sheeting, Replace		15	3	12	750	SF	\$7.01	\$5,257											\$5,257									\$5,257
Dedham High School	Gymnasiums	502327	Interior Floor Finish, Wood Strip, Refinish		10	2	8	16000	SF	\$3.68	\$58,842								\$58,842									\$58,842			\$117,683
Dedham High School	Men's Locker Rooms	502345	Interior Floor Finish, Ceramic Tile, Replace		50	43	7	1500	SF	\$15.76	\$23,633							\$23,633													\$23,633
Dedham High School	Building Interior	502347	Interior Floor Finish, Vinyl Tile (VCT) w/ Asbestos Abatement, Replace		15	10	5	55000	SF	\$8.19	\$450,615					\$450,615															\$450,615
Dedham High School	Administrative Office and Media Center	502337	Interior Floor Finish, Carpet Standard-Commercial Medium-Traffic, Replace		10	6	4	4000	SF	\$7.26	\$29,025				\$29,025										\$29,025						\$58,050
Dedham High School	Administrative Offices	502335	Interior Floor Finish, Carpet Tile Commercial-Grade, Replace		10	0	10	2500	SF	\$6.96	\$17,407									\$17,407											\$17,407
Dedham High School	Concession Building and Sports Field Restrooms	502695	Interior Ceiling Finish, Acoustical Tile (ACT), Replace		20	4	16	750	SF	\$3.11	\$2,333																\$2,333				\$2,333
Dedham High School	Building Interior	502366	Interior Ceiling Finish, Acoustical Tile (ACT), Replace		20	5	15	55000	SF	\$3.11	\$171,105															\$171,105					\$171,105
Dedham High School	Building Interior	502367	Interior Ceiling Finish, Acoustical Tile (ACT), Replace		20	20	0	75000	SF	\$3.11	\$233,325	\$233,325																			\$233,325
Dedham High School	Art Building	501721	Elevator, Hydraulic, 1400 LB, 2 Floors, Renovate		30	20	10	1	EA	\$108,794.40	\$108,794									\$108,794											\$108,794
Dedham High School	Auditorium	501716	Wheel Chair Lift, 350 LB Capacity, Replace		25	23	2	1	EA	\$16,652.79	\$16,653		\$16,653																		\$16,653
Dedham High School	Restrooms and Locker Rooms	502464	Toilet, Tankless (Water Closet), Replace		20	12	* 8	55	EA	\$842.97	\$46,363									\$46,363											\$46,363
Dedham High School	Restrooms and Locker Rooms	502465	Toilet, Tankless (Water Closet), Replace		20	4	* 16	20	EA	\$842.97	\$16,859									\$16,859											\$16,859
Dedham High School	Sports Field Restrooms	502500	Toilet, Tankless (Water Closet), Replace		20	4	16	12	EA	\$842.97	\$10,116																\$10,116				\$10,116
Dedham High School	Restrooms and Locker Rooms	502470	Urinal, Vitreous China, Replace		20	12	8	24	EA	\$1,193.44	\$28,643								\$28,643												\$28,643
Dedham High School	Restrooms and Locker Rooms	502471	Urinal, Vitreous China, Replace		20	4	* 16	10	EA	\$1,193.44	\$11,934								\$11,934												\$11,934
Dedham High School	Sports Field Restrooms	502508	Urinal, Vitreous China, Replace		20	4	16	3	EA	\$1,193.44	\$3,580																\$3,580				\$3,580
Dedham High School	Restrooms and Locker Rooms	502468	Sink, Vitreous China, Replace		20	12	8	45	EA	\$861.51	\$38,768								\$38,768												\$38,768
Dedham High School	Restrooms and Locker Rooms	502469	Sink, Vitreous China, Replace		20	4	* 16	20	EA	\$861.51	\$17,230								\$17,230												\$17,230
Dedham High School	Sports Field Restrooms	502506	Sink, Vitreous China, Replace		20	4	16	7	EA	\$861.51	\$6,031																\$6,031				\$6,031
Dedham High School	Building Interior	502481	Sink, Stainless Steel, Replace		20	8	12	60	EA	\$1,054.05	\$63,243											\$63,243									\$63,243
Dedham High School	Men's Locker Rooms and Coaches Rooms	502410	Shower, Ceramic Tile, Renovate		30	27	3	40	EA	\$1,983.78	\$79,351			\$79,351																	\$79,351
Dedham High School	Building Interior	501858	Galvanized Pipe & Fittings, Galvanized Iron, 2", Replace		30	30	0	1800	LF	\$66.80	\$120,232	\$120,232																			\$120,232
Dedham High School	Boiler Room	501337	Water Heater, Indirect, 120 GAL, Replace		15	7	8	1	EA	\$4,371.07	\$4,371								\$4,371												\$4,371
Dedham High School	Boiler Room	501336	Water Heater, Indirect, 120 GAL, Replace		15	7	8	1	EA	\$4,371.07	\$4,371								\$4,371												

Location Name		Location Description	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
Dedham High School	Boiler Room	506430	Circulator Pump, 0.5 HP, Replace	15	6	9	3	EA	\$3,414.40	\$10,243										\$10,243											\$10,243	
Dedham High School	Boiler Room	501334	Water Heater, Indirect, 120 GAL, Replace	15	7	8	1	EA	\$4,371.07	\$4,371										\$4,371											\$4,371	
Dedham High School	Boiler Room	501335	Water Heater, Indirect, 120 GAL, Replace	15	7	8	1	EA	\$4,371.07	\$4,371										\$4,371											\$4,371	
Dedham High School	Boiler Room	501926	Circulator Pump, Domestic Hot Water, 2 HP, Replace	15	5	10	1	EA	\$5,945.45	\$5,945											\$5,945										\$5,945	
Dedham High School	Boiler Room	501846	Sump Pump, 3/4 HP, Replace	15	10	5	1	EA	\$2,062.81	\$2,063							\$2,063														\$2,063	
Dedham High School	Boiler Room	501845	Sump Pump, 3/4 HP, Replace	15	10	5	1	EA	\$2,062.81	\$2,063							\$2,063														\$2,063	
Dedham High School	Boiler Room	501918	Air Compressor, 5 HP, Replace	20	5	15	1	EA	\$9,652.21	\$9,652																	\$9,652				\$9,652	
Dedham High School	Building Exterior & Roof	501711	Natural Gas Piping, Steel, Gas, 2", Replace	25	17	8	200	LF	\$36.96	\$7,391										\$7,391											\$7,391	
Dedham High School	Roof - Auditorium	501280	Solar Panel, 15 SF, Replace	15	8	7	260	EA	\$1,634.07	\$424,859									\$424,859												\$424,859	
Dedham High School	Roof - Gymnasium	501284	Solar Panel, 15 SF, Replace	15	8	7	143	EA	\$1,634.07	\$233,673									\$233,673												\$233,673	
Dedham High School	Roof - Art Building	501282	Solar Panel, 15 SF, Replace	15	8	7	143	EA	\$1,634.07	\$233,673									\$233,673												\$233,673	
Dedham High School	Exterior Pad Mounted	498165	Ductless Split System, Single Zone, 1.5 Ton, Replace	15	7	8	1	EA	\$4,473.11	\$4,473										\$4,473											\$4,473	
Dedham High School	Exterior Pad Mounted	498221	Ductless Split System, Single Zone, 1 Ton, Replace	15	2	* 13	1	EA	\$3,221.22	\$3,221	\$3,221																\$3,221				\$3,221	
Dedham High School	Exterior Pad Mounted	498047	Ductless Split System, Single Zone, 2 Ton, Replace	15	8	7	1	EA	\$4,473.11	\$4,473									\$4,473												\$4,473	
Dedham High School	Exterior Pad Mounted	498144	Ductless Split System, Single Zone, 1.5 Ton, Replace	15	8	7	1	EA	\$4,473.11	\$4,473									\$4,473												\$4,473	
Dedham High School	Roof - Auditorium	501342	Heat Pump, Split System, 2.5 Ton, Replace	15	0	15	1	EA	\$3,366.36	\$3,366																	\$3,366				\$3,366	
Dedham High School	Roof - Auto Building	500510	Condensing Unit, Split System, 3 Ton, Replace	15	11	4	1	EA	\$3,578.67	\$3,579						\$3,579														\$3,579	\$7,157	
Dedham High School	Exterior Pad Mounted	498148	Ductless Split System, Single Zone, 1 Ton, Replace	15	8	7	1	EA	\$3,221.22	\$3,221									\$3,221												\$3,221	
Dedham High School	Roof - Art Building	500392	Condensing Unit, Split System, 2 Ton, Replace	15	0	15	1	EA	\$3,122.18	\$3,122																	\$3,122				\$3,122	
Dedham High School	Exterior Pad Mounted	498100	Ductless Split System, Single Zone, 2 Ton, Replace	15	8	7	1	EA	\$4,473.11	\$4,473									\$4,473												\$4,473	
Dedham High School	Boys Gymnasium	501700	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Auditorium Mechanical Room (Right Side)	501652	Air Handler HV-17, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Auditorium Mechanical Room (Left Side)	502012	Air Handler HV-14, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	CAD Lab Mechanical Room	501212	Air Handler HV-10, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Building Interior (Above Ceiling)	501706	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Auditorium Mechanical Room (Right Side)	501650	Air Handler HV-16, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Building Interior (Above Ceiling)	501708	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Building Interior (Above Ceiling)	501705	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Boys Gymnasium	501699	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Boys Gymnasium	501701	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	CAD Lab Mechanical Room	501206	Air Handler HV-11, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Building Interior	499518	Unit Ventilator, 300 to 750 CFM (approx. 2 Ton), Replace	15	3	12	55	EA	\$6,749.60	\$371,228													\$371,228								\$371,228	
Dedham High School	Building Interior	499520	Fan Coil Unit, 2 to 2.5 Ton, Replace	15	7	8	45	EA	\$2,756.89	\$124,060										\$124,060											\$124,060	
Dedham High School	Girls Gymnasium	501697	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Gym Multipurpose Mechanical Room	501262	Air Handler HV-1, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Art Room 2	501246	Fan Coil Unit, 2 Ton, Replace	15	0	15	1	EA	\$2,756.89	\$2,757																	\$2,757				\$2,757	
Dedham High School	Gym Multipurpose Mechanical Room	501259	Air Handler HV-2, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Boys Gymnasium	501698	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	CAD Lab Mechanical Room	501202	Air Handler HV-7, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Fitness Center	501703	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Girls Gymnasium	501694	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	17	3	1	EA	\$9,413.96	\$9,414					\$9,414																\$9,414	
Dedham High School	Exterior Walls	500515	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	14	1	1	EA	\$2,021.87	\$2,022		\$2,022																\$2,022			\$2,022	
Dedham High School	Auditorium Mechanical Room (Left Side)	502011	Exhaust Fan, Centrifugal, 2,001 to 3,500 CFM, Replace	15	12	3	1	EA	\$3,072.78	\$3,073					\$3,073															\$3,073	\$6,146	
Dedham High School	Roof - Art Building	500385	Exhaust Fan EF-56, Roof Mounted, 501 to 800 CFM, Replace	15	5	10	1	EA	\$1,750.30	\$1,750											\$1,750										\$1,750	
Dedham High School	Roof - Gymnasium	500396	Exhaust Fan EF-59, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750																\$1,750			\$1,750	
Dedham High School	Roof - Auto Building	500374	Exhaust Fan EF-45, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750																\$1,750			\$1,750	
Dedham High School	Roof - Gymnasium	500401	Exhaust Fan EF-63, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750																\$1,750			\$1,750	
Dedham High School	Roof - Auto Building	500378	Exhaust Fan EF-47, Roof Mounted, 501 to 800 CFM, Replace	15	5	10	1	EA	\$1,750.30	\$1,750											\$1,750										\$1,750	
Dedham High School	Roof - Auto Building	500381	Exhaust Fan EF-50, Roof Mounted, 501 to 800 CFM, Replace	15	5	10	1	EA	\$1,750.30	\$1,750											\$1,750										\$1,750	
Dedham High School	CAD Lab Mechanical Room	501217	Exhaust Fan 6A, Centrifugal, 2,001 to 3,500 CFM, Replace	15	12	3	1	EA	\$3,072.78	\$3,073					\$3,073															\$3,073	\$6,146	
Dedham High School	Roof - Auto Building	500382	Exhaust Fan EF-51, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750																\$1,750			\$1,750	
Dedham High School	Roof - Gymnasium	500395	Exhaust Fan EF-58, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750																\$1,750			\$1,750	
Dedham High School	Roof - Auto Building	500371	Exhaust Fan EF-44, Roof Mounted, 501 to 800 CFM, Replace	15	3	12	1	EA	\$1,750.30	\$1,750												\$1,750									\$1,750	
Dedham High School	Roof - Art Building	500389	Exhaust Fan EF-53, Roof Mounted, 501 to 800 CFM, Replace	15	5	10	1	EA	\$1,750.30	\$1,750											\$1,750										\$1,750	
Dedham High School	Roof - Auto Building	500376	Exhaust Fan EF-46, Roof Mounted, 501 to 800 CFM, Replace	15	5	10	1	EA	\$1,750.30	\$1,750											\$1,750										\$1,750	
Dedham High School	Roof - Art Building	500384	Exhaust Fan EF-52, Roof Mounted, 501 to 800 CFM, Replace	15	5	10	1	EA	\$1,750.30	\$1,750											\$1,750										\$1,750	
Dedham High School	Art Studio Mechanical Room	501248	Exhaust Fan, Centrifugal, 3,501 to 5,000 CFM, Replace	15	12	3	1	EA	\$4,322.55	\$4,323					\$4,323														\$4,323		\$4,323	
Dedham High School	Roof - Art Building	500387	Exhaust Fan EF-Kiln Room, Centrifugal, 801 to 2,000 CFM, Replace	15	0	*																										

Location Name	Location Description	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		
Dedham High School	Exterior Walls	500514	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	14	1	1	EA	\$2,021.87	\$2,022		\$2,022															\$2,022				\$4,044		
Dedham High School	Art Studio Mechanical Room	501254	Supply Fan, Centrifugal, 3,501 to 5,000 CFM, Replace	15	12	3	1	EA	\$4,322.55	\$4,323				\$4,323															\$4,323			\$8,645	
Dedham High School	Roof - Auto Building	500379	Exhaust Fan EF-48, Roof Mounted, 501 to 800 CFM, Replace	15	5	10	1	EA	\$1,750.30	\$1,750											\$1,750											\$1,750	
Dedham High School	Roof - Art Building	500388	Exhaust Fan EF-54, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750															\$1,750					\$3,501	
Dedham High School	Roof - Gymnasium	500393	Exhaust Fan EF-57, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750															\$1,750					\$3,501	
Dedham High School	Auditorium Mechanical Room (Right Side)	501647	Exhaust Fan, Centrifugal, 2,001 to 3,500 CFM, Replace	15	12	3	1	EA	\$3,072.78	\$3,073				\$3,073																\$3,073			\$6,146
Dedham High School	Roof - Gymnasium	500399	Exhaust Fan EF-61, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750															\$1,750					\$3,501	
Dedham High School	Roof - Gymnasium	500400	Exhaust Fan EF-62, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750															\$1,750					\$3,501	
Dedham High School	D-Wing Roof	498089	Exhaust Fan EF-30, Roof Mounted, 501 to 800 CFM, Replace	15	10	5	1	EA	\$1,750.30	\$1,750						\$1,750																\$1,750	
Dedham High School	Roof - Auditorium	501341	Exhaust Fan EF-64, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750																\$1,750					\$3,501
Dedham High School	Roof - Art Building	500386	Exhaust Fan EF-55, Roof Mounted, 501 to 800 CFM, Replace	15	5	10	1	EA	\$1,750.30	\$1,750											\$1,750											\$1,750	
Dedham High School	Roof - Gymnasium	500397	Exhaust Fan EF-60, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750															\$1,750					\$3,501	
Dedham High School	Roof - Auto Building	500380	Exhaust Fan EF-49, Roof Mounted, 501 to 800 CFM, Replace	15	5	10	1	EA	\$1,750.30	\$1,750											\$1,750											\$1,750	
Dedham High School	Auditorium Mechanical Room (Left Side)	502010	Exhaust Fan, Centrifugal, 2,001 to 3,500 CFM, Replace	15	12	3	1	EA	\$3,072.78	\$3,073				\$3,073																\$3,073			\$6,146
Dedham High School	Boiler Room	499511	Circulation Pump P-2, Heating Water, 5 HP, Replace	20	5	* 15	1	EA	\$5,518.88	\$5,519	\$5,519																						\$5,519
Dedham High School	Boiler Room	498083	Circulation Pump P-3, Heating Water, 5 HP, Replace	20	5	* 15	1	EA	\$5,518.88	\$5,519	\$5,519																						\$5,519
Dedham High School	Boiler Room	499512	Circulation Pump P-4, Heating Water, 5 HP, Replace	20	5	* 15	1	EA	\$5,518.88	\$5,519	\$5,519																						\$5,519
Dedham High School	Boiler Room	499510	Circulation Pump P-1, Heating Water, 5 HP, Replace	20	5	* 15	1	EA	\$5,518.88	\$5,519	\$5,519																						\$5,519
Dedham High School	Roof - Auditorium	499524	Package Unit, 13 to 15 Ton, Replace	15	12	3	2	EA	\$26,845.87	\$53,692				\$53,692																\$53,692			\$107,383
Dedham High School	Throughout Building	501855	Building Automation System (HVAC Controls), Hybrid DDC and Pneumatic System, Upgrade	20	4	16	307323	SF	\$5.36	\$1,648,020																	\$1,648,020						\$1,648,020
Dedham High School	Throughout Building	502319	Sprinkler System, Full Retrofit, School (per SF), Install	50	48	2	307323	SF	\$6.25	\$1,921,844			\$1,921,844																				\$1,921,844
Dedham High School	Boiler Room	499516	Variable Frequency Drive (VFD) - Pumps, 5 HP Motor, Install	20	17	3	4	EA	\$4,748.96	\$18,996				\$18,996																			\$18,996
Dedham High School	Air Handler Locations	501639	Variable Frequency Drive (VFD) - Air Handlers, Up to 5 HP Motor, Install	20	17	3	18	EA	\$4,748.96	\$85,481				\$85,481																			\$85,481
Dedham High School	Throughout Interior	501906	Electrical System, School, Upgrade	40	33	7	60000	SF	\$49.78	\$2,986,500								\$2,986,500															\$2,986,500
Dedham High School	Exterior Soffits	498933	Recessed Soffit Lights, LED, Basic, 20 W, Replace	20	19	1	15	EA	\$180.19	\$2,703		\$2,703																					\$2,703
Dedham High School	Exterior Walls	498938	Building-Mounted Lighting Fixture, LED, Basic, 20 W, Replace	20	18	2	15	EA	\$180.19	\$2,703			\$2,703																				\$2,703
Dedham High School	Building Interior	501910	Lighting System, Interior, School, Upgrade	25	20	5	153661	SF	\$15.36	\$2,360,755						\$2,360,755																	\$2,360,755
Dedham High School	Throughout Building	502321	Fire Alarm System, School, Install	20	7	13	307323	SF	\$3.13	\$962,443														\$962,443									\$962,443
Dedham High School	Upgrade	503232	Security/Surveillance System, Cameras and CCTV, Install	10	2	8	307323	SF	\$4.35	\$1,335,995									\$1,335,995										\$1,335,995				\$2,671,989
Dedham High School	Laundry Room	501628	Commercial Washer, 60 LB, Replace	10	2	8	1	EA	\$8,800.00	\$8,800									\$8,800											\$8,800			\$17,600
Dedham High School	Concession Building	502490	Commercial Kitchen, Refrigerator, 1-Door Reach-In, Replace	15	12	3	1	EA	\$2,515.00	\$2,515				\$2,515																\$2,515			\$5,030
Dedham High School	Concession Building	502486	Commercial Kitchen, Freezer, Chest, Replace	15	4	11	1	EA	\$1,568.19	\$1,568												\$1,568											\$1,568
Dedham High School	Concession Building	502493	Commercial Kitchen, Freezer, Chest, Replace	15	10	* 5	1	EA	\$1,568.19	\$1,568											\$1,568												\$1,568
Dedham High School	Boys Gymnasium	502357	Bleacher, Telescoping Power Operated, to 15 Tier, Replace	20	5	15	300	EA	\$395.00	\$118,500																\$118,500							\$118,500
Dedham High School	Auditorium	502351	Auditorium Chair, Fixed, Replace	20	15	5	988	EA	\$400.00	\$395,200						\$395,200																	

Location Name	Location Description	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
Dedham High School	Site	499193	Engineer, Civil, Site Drainage, Evaluate/Report	0	4	0	1	EA	\$6,325.00	\$6,325	\$6,325																				\$6,325
Dedham High School	Drinking Fountains	502544	ADA, Miscellaneous, Drinking Fountain, Cup Dispenser, Install	0	0	0	24	EA	\$88.55	\$2,125	\$2,125																				\$2,125
Dedham High School	Parking lot	499326	ADA, Parking, Designated Stall with Pavement Markings & Signage, Install	0	0	0	3	EA	\$1,265.00	\$3,795	\$3,795																				\$3,795
Dedham High School	Girl's Locker Room	503068	ADA, Locker Room, Reconfiguration, Renovate	0	0	0	1	EA	\$15,180.00	\$15,180	\$15,180																				\$15,180
Dedham High School	Restrooms	502536	ADA, Restroom, Lavatory Pipe Wraps, Install	0	0	0	10	EA	\$75.90	\$759	\$759																				\$759
Dedham High School / Cafeteria	Kitchen Mechanical Room	501331	Water Heater, Indirect,120 GAL., Replace	15	7	8	1	EA	\$4,371.07	\$4,371									\$4,371												\$4,371
Dedham High School / Cafeteria	Kitchen Mechanical Room	501332	Water Heater, Indirect,120 GAL., Replace	15	7	8	1	EA	\$4,371.07	\$4,371									\$4,371												\$4,371
Dedham High School / Cafeteria	Kitchen Mechanical Room	501333	Water Heater, Gas, 55 GAL., Replace	10	4	6	1	EA	\$3,528.93	\$3,529							\$3,529										\$3,529				\$7,058
Dedham High School / Cafeteria	Kitchen	501380	Grease Trap/Interceptor, Undercounter, Replace	10	7	3	1	EA	\$1,650.00	\$1,650				\$1,650										\$1,650							\$3,300
Dedham High School / Cafeteria	Kitchen Mechancial Room	501320	Boiler, Domestic Hot Water, Gas, 500 MBH, Replace	25	7	18	1	EA	\$23,840.87	\$23,841																			\$23,841		\$23,841
Dedham High School / Cafeteria	Roof	498060	Condensing Unit, Split System, 3 Ton, Replace	15	13	2	1	EA	\$3,578.67	\$3,579			\$3,579															\$3,579			\$7,157
Dedham High School / Cafeteria	Roof	498254	Condensing Unit, Split System, 3 Ton, Replace	15	18	0	1	EA	\$3,578.67	\$3,579	\$3,579															\$3,579					\$7,157
Dedham High School / Cafeteria	Lower Level Kitchen Storage	501583	Condensing Unit 1, Split System, 2.5 Ton, Replace	15	12	3	1	EA	\$3,366.36	\$3,366				\$3,366															\$3,366		\$6,733
Dedham High School / Cafeteria	Lower Level Kitchen Storage	501584	Condensing Unit 3, Split System, 2.5 Ton, Replace	15	12	3	1	EA	\$3,366.36	\$3,366				\$3,366															\$3,366		\$6,733
Dedham High School / Cafeteria	Roof	501338	Condensing Unit, Split System, 5 Ton, Replace	15	7	8	1	EA	\$6,439.81	\$6,440									\$6,440												\$6,440
Dedham High School / Cafeteria	Roof	498113	Condensing Unit, Split System, 3 Ton, Replace	15	13	2	1	EA	\$3,578.67	\$3,579			\$3,579														\$3,579				\$7,157
Dedham High School / Cafeteria	Roof	498131	Condensing Unit, Split System, 3 Ton, Replace	15	13	2	1	EA	\$3,578.67	\$3,579			\$3,579														\$3,579				\$7,157
Dedham High School / Cafeteria	Lower Level Kitchen Storage	501580	Condensing Unit 2, Split System, 4 Ton, Replace	15	12	3	1	EA	\$4,619.82	\$4,620				\$4,620																\$4,620	\$9,240
Dedham High School / Cafeteria	Roof	498266	Condensing Unit, Split System, 3 Ton, Replace	15	13	2	1	EA	\$3,578.67	\$3,579			\$3,579														\$3,579				\$7,157
Dedham High School / Cafeteria	Roof	501340	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	1	14	1	EA	\$2,021.87	\$2,022															\$2,022						\$2,022
Dedham High School / Cafeteria	Roof	498094	Exhaust Fan EF-30, Roof Mounted, 401 to 500 CFM, Replace	15	10	5	1	EA	\$1,557.32	\$1,557						\$1,557															\$1,557
Dedham High School / Cafeteria	Roof	500302	Exhaust Fan EF-28, Roof Mounted, 501 to 800 CFM, Replace	15	10	5	1	EA	\$1,750.30	\$1,750						\$1,750															\$1,750
Dedham High School / Cafeteria	Roof	501339	Exhaust Fan, Centrifugal, 3,501 to 5,000 CFM, Replace	15	1	14	1	EA	\$4,322.55	\$4,323															\$4,323						\$4,323
Dedham High School / Cafeteria	Roof	500436	Exhaust Fan EF-27, Roof Mounted, 401 to 500 CFM, Replace	15	14	1	1	EA	\$1,557.32	\$1,557		\$1,557															\$1,557				\$3,115
Dedham High School / Cafeteria	Roof	500303	Exhaust Fan EF-33, Roof Mounted, 501 to 800 CFM, Replace	15	10	5	1	EA	\$1,750.30	\$1,750						\$1,750															\$1,750
Dedham High School / Cafeteria	Roof	500304	Exhaust Fan EF-32, Roof Mounted, 501 to 800 CFM, Replace	15	10	5	1	EA	\$1,750.30	\$1,750						\$1,750															\$1,750
Dedham High School / Cafeteria	Roof	500476	Exhaust Fan EF-34, Roof Mounted, 401 to 500 CFM, Replace	15	14	1	1	EA	\$1,557.32	\$1,557		\$1,557															\$1,557				\$3,115
Dedham High School / Cafeteria	Roof	499849	Exhaust Fan EF-29, Roof Mounted, 501 to 800 CFM, Replace	15	10	5	1	EA	\$1,750.30	\$1,750						\$1,750															\$1,750
Dedham High School / Cafeteria	Roof	499566	RTU-7, Roof-Mounted Furnace, Gas, 501 to 900 MBH, Replace	20	17	3	1	EA	\$46,206.73	\$46,207				\$46,207																	\$46,207
Dedham High School / Cafeteria	Roof	499559	RTU-3, Variable Volume, 41 Ton, Replace	15	12	3	1	EA	\$94,686.43	\$94,686				\$94,686															\$94,686		\$189,373
Dedham High School / Cafeteria	Roof	499560	RTU-6, Variable Volume, 45 Ton, Replace	15	12	3	1	EA	\$94,686.43	\$94,686				\$94,686															\$94,686		\$189,373
Dedham High School / Cafeteria	Roof	498181	RTU-4, Variable Volume, 41 to 60 Ton, Replace	15	12	3	1	EA	\$94,686.43	\$94,686				\$94,686															\$94,686		\$189,373
Dedham High School / Cafeteria	Roof	499542	RTU-5, Variable Volume, 31 to 40 Ton, Replace	15	12	3	1	EA	\$66,150.28	\$66,150				\$66,150															\$66,150		\$132,301
Dedham High School / Cafeteria	Roof	499544	RTU-2, Variable Volume, 47 Ton, Replace	15	12	3	1	EA	\$94,686.43	\$94,686				\$94,686															\$94,686		\$189,373
Dedham High School / Cafeteria	Roof	498159	RTU-1, Variable Volume, 31 to 40 Ton, Replace	15	12	3	1	EA	\$66,150.28	\$66,150				\$66,150															\$66,150		\$132,301
Dedham High School / Cafeteria	Kitchen	501408	Fire Suppression System, Wet Chemical, Replace	15	7	8	1	EA	\$3,488.87	\$3,489									\$3,489												\$3,489
Dedham High School / Cafeteria	Auxiliary/Prep Kitchen	501354	Fire Suppression System, Dry Chemical, Replace	15	5	10	1	EA	\$3,488.87	\$3,489											\$3,489										\$3,489
Dedham High School / Cafeteria	Cafeteria	501632	Refrigerator, Milk Cooler, Replace	15	7	8	1	EA	\$2,515.00	\$2,515									\$2,515												\$2,515
Dedham High School / Cafeteria	Kitchen	501372	Commercial Kitchen, Dishwasher, Replace	10	6	4	1	EA	\$19,661.82	\$19,662					\$19,662										\$19,662						\$39,324
Dedham High School / Cafeteria	Lower Level Kitchen Storage	501577	Walk-In Freezer #4, Walk-In Freezer, Replace	20	5	15	1	EA	\$22,317.14	\$22,317																\$22,317					\$22,317
Dedham High School / Cafeteria	Cafeteria	501607	Refrigerator, Vertical Open Air, Commercial, Replace	15	5	10	1	EA	\$4,256.00	\$4,256											\$4,256										\$4,256
Dedham High School / Cafeteria	Kitchen	501382	Tilting Skillet, Tilting Skillet, Replace	20	2	18	1	EA	\$22,440.00	\$22,440																			\$22,440		\$22,440
Dedham High School / Cafeteria	Kitchen	501434	Food Mixer, Mixer, Freestanding, Replace	25	21	4	1	EA	\$12,890.60	\$12,891					\$12,891																\$12,891
Dedham High School / Cafeteria	Kitchen	501369	Walk-In Cooler #1, Walk-In Refrigerator, Replace	20	5	15	1	EA	\$12,255.00	\$12,255															\$12,255						\$12,255
Dedham High School / Cafeteria	Kitchen	501432	Refrigerator, Commercial, Refrigerator, 2-Door Reach-In, Replace	15	8	7	1	EA	\$4,256.00	\$4,256								\$4,256													\$4,256
Dedham High School / Cafeteria	Kitchen	501431	Commercial Kitchen, Garbage Disposal, 1 to 3 HP, Replace	15	7	8	1	EA	\$3,434.22	\$3,434									\$3,434												\$3,434
Dedham High School / Cafeteria	Cafeteria	501621	Steam Table, Sealed Well, 5-well, Replace	15	8	* 7	1	EA	\$4,191.00	\$4,191			\$4,191														\$4,191				\$8,382
Dedham High School / Cafeteria	Cafeteria	501436	Refrigerator, Commercial, Refrigerator, 1-Door Reach-In, Replace	15	5	10	1	EA	\$2,515.00	\$2,515											\$2,515										\$2,515
Dedham High School / Cafeteria	Cafeteria	501617	Steam Table, Sealed Well, 5-well, Replace	15	13	2	1	EA	\$4,191.00	\$4,191			\$4,191															\$4,191			\$8,382
Dedham High School / Cafeteria	Lower Level Kitchen Storage	501575	Walk-In Cooler #5, Walk-In Refrigerator, Replace	20	5	15	1	EA	\$12,255.00	\$12,255																\$12,255					\$12,255
Dedham High School / Cafeteria	Cafeteria	501873	Commercial Kitchen, Refrigerated Buffet, Replace	15	1	14	1	EA	\$3,699.70	\$3,700																\$3,700					\$3,700
Dedham High School / Cafeteria	Kitchen	501395	Commercial Kitchen, Food Warmer, Replace	15	12	3	1	EA	\$1,551.91	\$1,552				\$1,552															\$1,552		\$3,104
Dedham High School / Cafeteria	Cafeteria	501871	Commercial Kitchen, Refrigerated Buffet, Replace	15	1	14	1	EA	\$3,699.70	\$3,700																\$3,700					\$3,700
Dedham High School / Cafeteria	Cafeteria	501610	Refrigerator, Commercial, Refrigerator, 1-Door Reach-In, Replace	15	5	10	1	EA	\$2,515.00	\$2,515											\$2,515										\$2,515
Dedham High School / Cafeteria	Cafeteria	501566	Refrigerator, Milk Cooler, Replace	15	7	8	1	EA	\$2,515.00	\$2,515									\$2,515												\$2,515
Dedham High School / Cafeteria	Kitchen	501383	Kitchen Exhaust Hood, Exhaust Hood, Replace	15	5	10	1	EA	\$7,571.72	\$7,572											\$7,572										\$7,572
Dedham High School / Cafeteria	Auxiliary/Prep Kitchen Area	501349	Convection Oven, EL, Oven 1 & 2, Convection Oven, Double, Replace	10	5	5	1	EA	\$8,643.00	\$8,643							\$8,643									\$8,643					\$17,286
Dedham High School / Cafeteria	Kitchen	501386	Steamer, Commercial, Steamer, Tabletop, Replace	10	0	10	1	EA	\$6,344.00	\$6,344											\$6,344										\$6,344
Dedham High School / Cafeteria	Kitchen	501394	Refrigerator, Commercial, Refrigerator, 2-Door Reach-In, Replace	1																											

Location Name	Location Description	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
Dedham High School / Cafeteria	Auxiliary/Prep Kitchen Area	501390	Convection Oven, EL. Oven 3 & 4, Convection Oven, Double, Replace	10	5	5	1	EA	\$8,643.00	\$8,643						\$8,643										\$8,643					\$17,286
Dedham High School / Cafeteria	Cafeteria	501563	Food Warmer, Electric, Replace	15	7	8	1	EA	\$1,551.91	\$1,552									\$1,552												\$1,552
Dedham High School / Cafeteria	Kitchen	501385	Steamer, Commercial, Steamer, Tabletop, Replace	10	0	10	1	EA	\$6,344.00	\$6,344											\$6,344										\$6,344
Dedham High School / Cafeteria	Kitchen	501397	Convection Oven, HS Ovens 5 & 6, Convection Oven, Double, Electric, Replace	10	7	3	1	EA	\$8,643.00	\$8,643				\$8,643										\$8,643							\$17,286
Dedham High School / Cafeteria	Auxiliary/Prep Kitchen Area	501351	Commercial Kitchen, Exhaust Hood, Replace	15	6	9	1	EA	\$7,571.72	\$7,572										\$7,572											\$7,572
Dedham High School / Cafeteria	Kitchen	501406	Range & Oven, Range/Oven, 4-Burner, Replace	15	5	10	1	EA	\$4,128.00	\$4,128											\$4,128										\$4,128
Dedham High School / Cafeteria	Cafeteria	501609	Food Warmer, 2000 Watt, Replace	15	5	10	1	EA	\$1,551.91	\$1,552											\$1,552										\$1,552
Dedham High School / Cafeteria	Kitchen	501381	Tilting Skillet, Tilting Skillet, Replace	20	2	18	1	EA	\$22,440.00	\$22,440																			\$22,440		\$22,440
Dedham High School / Cafeteria	Kitchen	501389	Convection Oven, HS Ovens 3 & 4, Convection Oven, Double, Replace	10	7	3	1	EA	\$8,643.00	\$8,643				\$8,643										\$8,643							\$17,286
Dedham High School / Cafeteria	Auxiliary/Prep Kitchen Area	501350	Convection Oven EL. Oven 3 & 4, Convection Oven, Double, Replace	10	5	5	1	EA	\$8,643.00	\$8,643						\$8,643										\$8,643					\$17,286
Dedham High School / Cafeteria	Cafeteria	501618	Steam Table, Sealed Well, 5-well, Replace	15	13	2	1	EA	\$4,191.00	\$4,191			\$4,191															\$4,191			\$8,382
Dedham High School / Cafeteria	Cafeteria	501437	Refrigerator, Milk Cooler, Replace	15	7	8	1	EA	\$2,515.00	\$2,515										\$2,515											\$2,515
Dedham High School / Cafeteria	Cafeteria	501438	Food Warmer, Commercial, 500 Watt, Replace	15	8	7	1	EA	\$1,551.91	\$1,552								\$1,552													\$1,552
Dedham High School / Cafeteria	Kitchen	501360	Food Waste Disposer, Garbage Disposal, 2 HP, Replace	15	8	7	1	EA	\$3,434.22	\$3,434								\$3,434													\$3,434
Dedham High School / Cafeteria	Kitchen	501392	Convection Oven, HS Ovens 1 & 2, Convection Oven, Double, Replace	10	7	3	1	EA	\$8,643.00	\$8,643				\$8,643										\$8,643							\$17,286
Dedham High School / Cafeteria	Cafeteria	501597	Refrigerator, Commercial, Refrigerator, 1-Door Reach-In, Replace	15	5	10	1	EA	\$2,515.00	\$2,515											\$2,515										\$2,515
Dedham High School / Cafeteria	Kitchen	501423	Commercial Kitchen, Mixer, Tabletop, Replace	20	8	12	1	EA	\$3,050.00	\$3,050													\$3,050								\$3,050
Dedham High School / Cafeteria	Cafeteria	501564	Food Warmer, Electric, Replace	15	12	3	1	EA	\$1,551.91	\$1,552				\$1,552															\$1,552		\$3,104
Dedham High School / Cafeteria	Cafeteria	501590	Salad Table, Refrigerated, Replace	15	5	10	1	EA	\$4,301.96	\$4,302											\$4,302										\$4,302
Dedham High School / Cafeteria	Cafeteria	501565	Food Warmer, Electric, Replace	15	8	* 7	1	EA	\$1,551.91	\$1,552				\$1,552															\$1,552		\$3,104
Dedham High School / Cafeteria	Cafeteria	501589	Refrigerator, Milk Cooler, Replace	15	7	8	1	EA	\$2,515.00	\$2,515									\$2,515												\$2,515
Dedham High School / Cafeteria	Kitchen	501396	Refrigerator, Commercial, Refrigerator, 2-Door Reach-In, Replace	15	13	2	1	EA	\$4,256.00	\$4,256			\$4,256															\$4,256			\$8,512
Dedham High School / Cafeteria	Cafeteria	501596	Refrigerator, Commercial, 2-Door Reach-In, Replace	15	0	15	1	EA	\$4,256.00	\$4,256																\$4,256					\$4,256
Dedham High School / Cafeteria	Cafeteria	501593	Salad Table, Refrigerated, Replace	15	5	10	1	EA	\$4,301.96	\$4,302											\$4,302										\$4,302
Dedham High School / Cafeteria	Kitchen	501356	Refrigerator, Commercial, Refrigerator, 2-Door Reach-In, Replace	15	9	6	1	EA	\$4,256.00	\$4,256							\$4,256														\$4,256
Dedham High School / Cafeteria	Cafeteria	501435	Refrigerator, Commercial, Refrigerator, 1-Door Reach-In, Replace	15	5	10	1	EA	\$2,515.00	\$2,515											\$2,515										\$2,515
Dedham High School / Wing- A	Crawl Space (Main Water Line)	501929	Backflow Preventer, 4", Install	15	14	1	1	EA	\$6,001.42	\$6,001		\$6,001															\$6,001				\$12,003
Dedham High School / Wing- A	Crawl Space	502005	Water Heater, Electric, Commercial, 75 GAL, Replace	15	0	15	1	EA	\$6,963.24	\$6,963																\$6,963					\$6,963
Dedham High School / Wing- A	Crawl Space	501567	Condensing Unit CU-13, Split System, 4 Ton, Replace	15	12	3	1	EA	\$4,619.82	\$4,620				\$4,620															\$4,620		\$9,240
Dedham High School / Wing- A	Main Office	501988	Fan Coil Unit, 4 Tons, Replace	15	12	3	1	EA	\$4,099.53	\$4,100				\$4,100															\$4,100		\$8,199
Dedham High School / Wing- A	Psychologists Office	501983	Fan Coil Unit, 4 Tons, Replace	15	12	3	1	EA	\$4,099.53	\$4,100				\$4,100															\$4,100		\$8,199
Dedham High School / Wing- A	Roof	500427	Exhaust Fan EF-13, Centrifugal, 251 to 800 CFM, Replace	15	3	12	1	EA	\$2,021.87	\$2,022													\$2,022								\$2,022
Dedham High School / Wing- A	Roof	500429	Exhaust Fan EF-15, Centrifugal, 251 to 800 CFM, Replace	15	3	12	1	EA	\$2,021.87	\$2,022													\$2,022								\$2,022
Dedham High School / Wing- A	Roof	500432	Exhaust Fan EF-18, Centrifugal, 251 to 800 CFM, Replace	15	3	12	1	EA	\$2,021.87	\$2,022													\$2,022								\$2,022
Dedham High School / Wing- A	Roof	500431	Exhaust Fan EF-17, Centrifugal, 251 to 800 CFM, Replace	15	3	12	1	EA	\$2,021.87	\$2,022													\$2,022								\$2,022
Dedham High School / Wing- A	Roof	500426	Exhaust Fan EF-12, Centrifugal, 251 to 800 CFM, Replace	15	3	12	1	EA	\$2,021.87	\$2,022													\$2,022								\$2,022
Dedham High School / Wing- A	Roof	500430	Exhaust Fan EF-16, Centrifugal, 251 to 800 CFM, Replace	15	3	12	1	EA																							

Location Name	Location Description	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	
Dedham High School / WING- C	Science Classroom	502386	Emergency Eye Wash & Shower Station, Combination, Replace	15	1	14	1	EA	\$2,114.70	\$2,115															\$2,115						\$2,115	
Dedham High School / WING- C	Science Classroom	502382	Emergency Eye Wash & Shower Station, Combination, Replace	15	1	14	1	EA	\$2,114.70	\$2,115															\$2,115						\$2,115	
Dedham High School / WING- C	Science Classroom	502385	Emergency Eye Wash & Shower Station, Combination, Replace	15	1	14	1	EA	\$2,114.70	\$2,115															\$2,115						\$2,115	
Dedham High School / WING- C	Roof	500512	Condensing Unit, Split System, 3.5 Ton, Replace	15	1	14	1	EA	\$4,129.27	\$4,129															\$4,129						\$4,129	
Dedham High School / WING- C	Roof	500511	Condensing Unit, Split System, 3 Ton, Replace	15	12	3	1	EA	\$3,578.67	\$3,579				\$3,579															\$3,579		\$7,157	
Dedham High School / WING- C	Roof	500456	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500434	Exhaust Fan EF-21, Centrifugal, 801 to 2,000 CFM, Replace	15	3	12	1	EA	\$2,664.18	\$2,664													\$2,664								\$2,664	
Dedham High School / WING- C	Roof	498241	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	12	3	1	EA	\$2,021.87	\$2,022				\$2,022															\$2,022		\$4,044	
Dedham High School / WING- C	Roof	500457	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500438	Exhaust Fan EF-23, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500464	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500469	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500460	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500458	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500462	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500437	Exhaust Fan EF-22, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500459	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500466	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500452	Exhaust Fan EF-26, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500441	Exhaust Fan EF-25, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500439	Exhaust Fan EF-24, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Roof	500467	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / WING- C	Science Classroom	502373	Laboratory Exhaust Hood, 4 LF, Replace	15	1	14	1	EA	\$2,633.87	\$2,634															\$2,634						\$2,634	
Dedham High School / WING- C	Science Classroom	502377	Laboratory Exhaust Hood, 4 LF, Replace	15	1	14	1	EA	\$2,633.87	\$2,634															\$2,634						\$2,634	
Dedham High School / WING- C	Science Classroom	502372	Laboratory Exhaust Hood, 4 LF, Replace	15	1	14	1	EA	\$2,633.87	\$2,634															\$2,634						\$2,634	
Dedham High School / WING- C	Science Classroom	502379	Laboratory Exhaust Hood, 4 LF, Replace	15	1	14	1	EA	\$2,633.87	\$2,634															\$2,634						\$2,634	
Dedham High School / WING- C	Science Classroom	502376	Laboratory Exhaust Hood, 4 LF, Replace	15	1	14	1	EA	\$2,633.87	\$2,634															\$2,634						\$2,634	
Dedham High School / WING- C	Science Classroom	502374	Laboratory Exhaust Hood, 4 LF, Replace	15	1	14	1	EA	\$2,633.87	\$2,634															\$2,634						\$2,634	
Dedham High School / WING- C	Science Classroom	502378	Laboratory Exhaust Hood, 4 LF, Replace	15	1	14	1	EA	\$2,633.87	\$2,634															\$2,634						\$2,634	
Dedham High School / WING- C	Science Classroom	502375	Laboratory Exhaust Hood, 4 LF, Replace	15	1	14	1	EA	\$2,633.87	\$2,634															\$2,634						\$2,634	
Dedham High School / Wing E	Crawl Space	501572	Heat Pump, VRF Split System, 3 Ton, Replace	15	0	15	1	EA	\$3,578.67	\$3,579																\$3,579					\$3,579	
Dedham High School / Wing E	Roof	500484	Exhaust Fan EF-36, Centrifugal, 251 to 800 CFM, Replace	15	3	12	1	EA	\$2,021.87	\$2,022													\$2,022								\$2,022	
Dedham High School / Wing E	Roof	500491	Exhaust Fan EF-35, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750															\$1,750				\$3,501	
Dedham High School / Wing E	Roof	500485	Exhaust Fan EF-40, Centrifugal, 251 to 800 CFM, Replace	15	10	5	1	EA	\$2,021.87	\$2,022						\$2,022															\$2,022	
Dedham High School / Wing E	Roof	500493	Exhaust Fan EF-42, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750															\$1,750				\$3,501	
Dedham High School / Wing E	Roof	500479	Exhaust Fan EF-39, Centrifugal, 251 to 800 CFM, Replace	15	3	12	1	EA	\$2,021.87	\$2,022												\$2,022									\$2,022	
Dedham High School / Wing E	Roof	500480	Exhaust Fan EF-41, Centrifugal, 251 to 800 CFM, Replace	15	3	12	1	EA	\$2,021.87	\$2,022												\$2,022									\$2,022	
Dedham High School / Wing E	Roof	500495	Exhaust Fan EF-37, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750															\$1,750				\$3,501	
Dedham High School / Wing E	Roof	500478	Exhaust Fan EF-43, Centrifugal, 251 to 800 CFM, Replace	15	3	12	1	EA	\$2,021.87	\$2,022												\$2,022									\$2,022	
Dedham High School / Wing E	Roof	500497	Exhaust Fan EF-38, Roof Mounted, 501 to 800 CFM, Replace	15	14	1	1	EA	\$1,750.30	\$1,750		\$1,750															\$1,750				\$3,501	
Dedham High School / Wing E	Crawl Space	501774	Switchboard MD2, 1,600 Amp, Replace	30	26	4	1	EA	\$29,404.36	\$29,404					\$29,404																	\$29,404
Totals, Unescalated											\$5,655,385	\$86,462	\$2,292,024	\$1,485,624	\$1,258,003	\$3,291,404	\$7,785	\$3,991,481	\$2,924,754	\$17,815	\$1,618,822	\$404,468	\$2,373,026	\$1,021,559	\$468,246	\$571,698	\$4,843,310	\$35,400	\$2,641,193	\$404,911	\$35,393,369	
Totals, Escalated (3.0% inflation, compounded annually)											\$5,655,385	\$89,056	\$2,431,609	\$1,623,381	\$1,415,893	\$3,815,639	\$9,296	\$4,909,018	\$3,704,990	\$23,244	\$2,175,561	\$559,879	\$3,383,368	\$1,500,194	\$708,263	\$890,687	\$7,772,091	\$58,510	\$4,496,454	\$710,013	\$45,932,532	

## TABLE OF CONTENTS

<b>1</b>	<b>Executive Summary .....</b>	<b>1</b>
1.1	Property Information and General Physical Condition .....	1
1.2	Facility Condition Index (FCI) .....	3
1.3	Special Issues and Follow-Up Recommendations .....	4
1.4	Opinions of Probable Cost .....	5
1.4.1	Methodology .....	5
1.4.2	Immediate Repairs .....	6
1.4.3	Replacement Reserves .....	6
<b>2</b>	<b>Purpose and Scope .....</b>	<b>7</b>
2.1	Purpose .....	7
2.2	Scope .....	8
2.3	Personnel Interviewed .....	9
2.4	Documentation Reviewed .....	9
2.5	Pre-Survey Questionnaire .....	9
2.6	Weather Conditions .....	9
<b>3</b>	<b>Accessibility &amp; Property Research .....</b>	<b>10</b>
3.1	ADA Accessibility .....	10
<b>4</b>	<b>Existing Building Assessment .....</b>	<b>11</b>
4.1	Unit or Space Types .....	11
4.2	Inaccessible Areas or Key Spaces Not Observed .....	11
<b>5</b>	<b>Site Improvements .....</b>	<b>12</b>
5.1	Utilities .....	12
5.2	Parking, Paving, and Sidewalks .....	12
5.3	Drainage Systems and Erosion Control .....	13
5.4	Topography and Landscaping .....	14
5.5	General Site Improvements .....	15
<b>6</b>	<b>Building Architectural and Structural Systems .....</b>	<b>17</b>
6.1	Foundations .....	17
6.2	Superstructure .....	17
6.3	Roofing .....	18
6.4	Exterior Walls .....	19
6.5	Exterior and Interior Stairs .....	20
6.6	Exterior Windows and Doors .....	21
6.7	Patio, Terrace, and Balcony .....	21
<b>7</b>	<b>Building Mechanical and Plumbing Systems .....</b>	<b>22</b>
7.1	Building Heating, Ventilating, and Air Conditioning (HVAC) .....	22
7.2	Building Gas Distribution .....	25
7.3	Building Plumbing and Domestic Hot Water .....	25
7.4	Building Electrical .....	27
7.5	Building Elevators and Conveying Systems .....	28
7.6	Fire Protection and Security Systems .....	29
<b>8</b>	<b>Interior Spaces .....</b>	<b>31</b>
8.1	Interior Finishes .....	31
8.2	Commercial Kitchen & Laundry Equipment .....	33
<b>9</b>	<b>Other Structures .....</b>	<b>35</b>
<b>10</b>	<b>Certification .....</b>	<b>36</b>
<b>11</b>	<b>Appendices .....</b>	<b>37</b>

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

# 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:	140 Whiting Avenue, Dedham, Norfolk County, Massachusetts 02026
Year Constructed/Renovated:	1959 Additions: 1967 and 1975 Renovations: 2002, 2011
Current Occupants:	Dedham High School
Percent Utilization:	100%
Management Point of Contact:	Town of Dedham-Dedham Public Schools, Denise Moroney, Director of Facilities & Maintenance 781.752.7812 phone <a href="mailto:Dmoroney@dedham.k12.ma.us">Dmoroney@dedham.k12.ma.us</a> email
Property Type:	High School
Site Area:	11.9 acres (estimated acreage of school and sport field from 29.5 acre total as indicated on site plan in appendices)
Building Area:	307,323 SF
Number of Buildings:	One
Number of Stories:	Two (plus basement level)
Parking Type and Number of Spaces:	205 spaces in open lots
Building Construction:	Steel frame with concrete-topped metal decks.
Roof Construction:	Flat roofs with built-up membrane and EPDM membrane
Exterior Finishes:	Brick Veneer and Curtain Wall
Heating, Ventilation and Air Conditioning:	Central system with boilers and air handlers, feeding unit ventilators, fan coil units, hydronic baseboard radiators and cabinets. Individual package units. Supplemental components: ductless split-systems
Fire and Life/Safety:	Smoke detectors, alarms, strobes, extinguishers, pull stations, alarm panel, exit signs, and hydrants.
Dates of Visit:	October 11, October 12 and October 17, 2016
On-Site Point of Contact (POC):	Denise Moroney
Assessment and Report Prepared by:	Josh Hogan
Reviewed by:	Scott Williford Technical Report Reviewer for Bill Champion Program Manager <a href="mailto:bchampion@emgcorp.com">bchampion@emgcorp.com</a> 800.733.0660 x6234

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Systemic Condition Summary			
Site	Fair	HVAC	Fair
Structure	Fair	Plumbing	Fair
Roof	Fair	Electrical	Fair
Vertical Envelope	Poor	Elevators	Fair
Interiors	Fair	Fire	Fair

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

- Replacement of the interior door hardware
- Installation of a complete fire suppression system
- Replacement of rooftop packaged units
- Replacement of interior air handling units
- Replacement of ductless split system
- Replacement of condensers
- Replacement of areas of 9x9 vinyl tile flooring
- Install a backflow prevention device for the domestic water service
- Replacement of the existing fluorescent lighting with LED lighting
- Replacement of the auditorium wheelchair lift
- Seal and stripe asphalt paved parking lots and walkways
- Replacement of the interior doors (partial)
- Renovate the showers within the men's locker room and varsity men's locker room
- Replacement of roof-mounted exhaust fans
- Circulation pump replacement
- Installation of cooling equipment within the auditorium space
- Installation of dumpster enclosure
- Various kitchen equipment replacement
- Interior painting

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 an active capital improvement expenditure program over the past three years, primarily consisting of interior renovations to the CAD lab, engineering lab, nurse suite and guidance offices, re-wiring and upgrade to the public address system, partial upgrade of the interior lighting within the D-Wing, transformer/switchgear improvements, and replacement of the exterior doors. Supporting documentation was not provided in support of these claims but some of the work is evident.

## FACILITY CONDITION ASSESSMENT

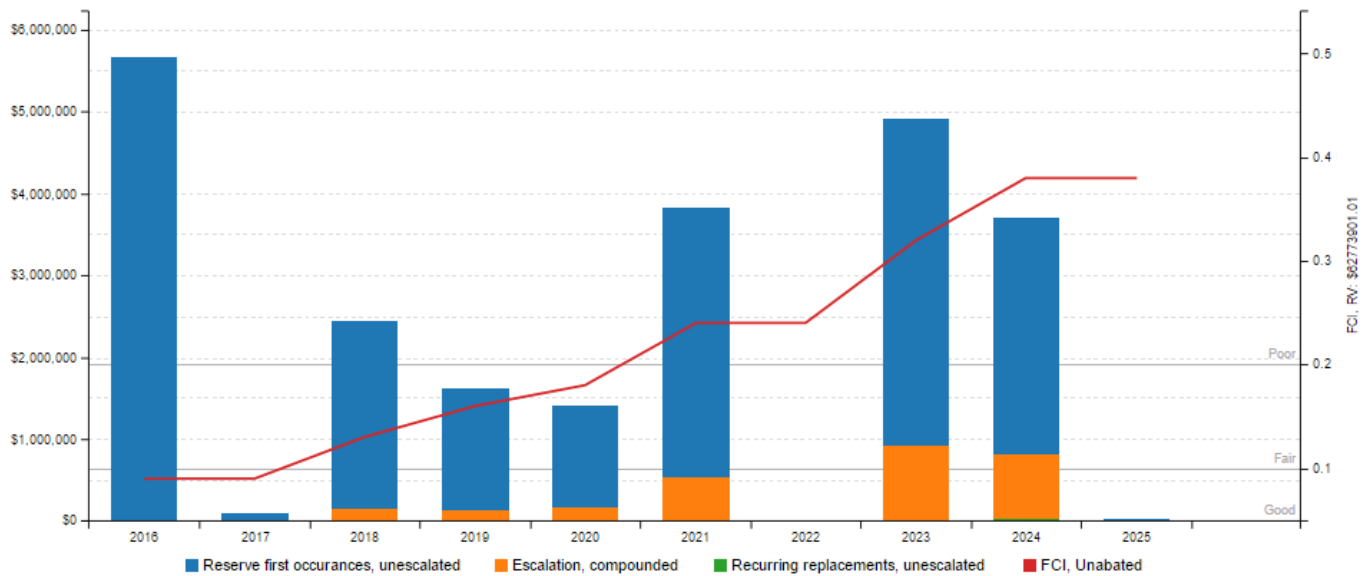
DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

### 1.2 FACILITY CONDITION INDEX (FCI)

#### FCI Analysis: Dedham High School

Replacement Value: \$ 62,773,901; 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%

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) $FCI = (IR)/(CRV)$	9.0%	Fair
10-Year Facility Condition Index (FCI) $FCI = (RR)/(CRV)$	37.7%	Poor
Current Replacement Value (CRV)	307,323 SF * 204.26 / SF = \$62,773,795.95	



## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Key Finding	Metric
Year 0 (Current Year) - Immediate Repairs (IR)	\$5,655,385
Years 1-10 – Replacement Reserves (RR)	\$23,677,512
<b>Total Capital Needs</b>	<b>\$29,332,897</b>

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

- Engineering study and associated repairs related to the cracking observed at the foundation, exterior walls and interior finishes
- Engineering study and associated repairs related to the area of inadequate site drainage between the sports field and high school building
- Engineering study and associated repairs related to the stone masonry retaining walls at the west property limits
- Engineering study and associated replacements related to the original galvanized piping
- Replacement of the original curtain wall system
- Replacement of the original windows
- Repointing of the exterior brick masonry (partial)
- Addition of railings to the stairs and raised landing at door 10
- Repair areas of damaged concrete sidewalk, including trip hazards at the sidewalk adjacent to the main building entrance
- Replacement and repair of areas of damaged asphalt paved sidewalk
- Repairs to areas of deteriorated roofing
- Installation of additional building signage
- Replacement of the damaged railing adjacent to the electrical room exterior stairwell and addition of railing at the stairs
- Replacement of inadequate fire doors (reported to not meet current fire/life safety code)
- Replacement of damaged soffit and inadequate soffit-mounted lighting
- Repair to damaged concrete loading dock and adjacent stairs
- Repair to damaged concrete columns at the north elevation adjacent to the vehicular underpass
- Repair of retaining walls
- Resecure the loose roof access ladder located between the Building A roof and auditorium roof
- Significant ADA accessibility upgrades
- Building sealant replacement
- Replacement of the skylight at the fitness center
- Replacement of the ceiling tile grid system where antiquated and damaged

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.

There are no visual indications of the presence of mold growth, conditions conducive to mold growth, or evidence of moisture in representative readily accessible areas of the property.

#### CODE VIOLATIONS

The client reported an unresolved Fire Code violation. See Section 3.1 for descriptions and comments.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

The following additional studies are recommended:

- Ponding occurs on site at a low-point between the sports field and high school building. There is currently no underdrain at this location, resulting in standing water during precipitation and snow melt. A Professional Engineer must be retained to observe the existing drainage conditions, make recommendations, and, if required, determine estimated costs to resolve the observed problems. Drainage repairs should be performed to improve drainage at this location and a cost allowance for such repairs is included in the cost tables in Section 5.3.
- The stone masonry retaining wall at the west property limits has evidence of stress cracks throughout the length of the wall. Portions of the retaining wall are out of plumb and appear to be unstable as a result of movement. The damaged portions of the retaining walls must be repaired. A Professional Engineer must be retained to observe the conditions, make recommendations, and, if required, determine estimated costs to resolve the observed problems. A cost allowance for repairs is included in the tables in Section 5.4.
- The foundations and footings could be partially observed within the crawl spaces beneath the building. There are significant areas of cracking and displacement at exterior walls and interior wall finishes throughout the building. This condition typically indicates excessive settlement or other potential problems with the foundation system. A Professional Engineer with specific expertise in structural design and construction in this geographical area must be retained to evaluate the structure and to provide remedial recommendations consistent with local regulatory and code requirements. Although the estimated cost of repair cannot be accurately determined without the recommended study, a budgetary cost allowance to repair the affected elements is also included in Section 6.1.
- A significant percentage of the domestic water lines are galvanized iron original to the 1959 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. EMG recommends an Engineer be retained to evaluate some easily accessible pipe sections, evaluate, and determine the interior pipe wall conditions after nearly 60 years of use. Pending these results, consideration should be given to replacing all the plumbing supply lines with copper. A budgetary cost for piping replacement is included in Section 7.3.

## 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 FCA.

### 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.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

---

### 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.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

### 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.

The expanded scope of this assessment includes the following:

- Verify equipment and building components related to the property manager's preventative maintenance database.



## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

### 2.3 PERSONNEL INTERVIEWED

The management and maintenance staff, building engineers, and some key contractors 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
Denise Moroney Director of Facilities and Maintenance	Town of Dedham-Dedham Public Schools	781.752.7812

The FCA was performed with the assistance of Denise Moroney, Director of Facilities & Maintenance, Town of Dedham, the onsite Point of Contact (POC), who was cooperative and provided information that appeared to be accurate based upon subsequent site observations. The onsite contact is completely knowledgeable about the subject property and answered most questions posed during the interview process. The POC's management involvement at the property has been for the past two 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.

Although Appendix E provides a summary of the documents requested or obtained, the following list provides more specific details about some of the documents that were reviewed or obtained during the site visit.

- Summary of recent capital improvements by the school district.
- 2016 School Survey Questionnaire and Information Request
- Floor plans
- Elevator certificates

### 2.5 PRE-SURVEY QUESTIONNAIRE

A Pre-Survey Questionnaire was sent to the POC prior to 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

October 11, 2016: Clear, with temperatures in the 70s (°F) and light winds.

October 12, 2016: Clear, with temperatures in the 60s (°F) and light winds.

October 17, 2016: Clear, with temperatures in the 70s (°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.

The facility does not appear to be accessible with Title III of the Americans with Disabilities Act. Elements as defined by the ADAAG that are not accessible as stated within the priorities of Title III, are as follows:

##### ***Parking***

- Adequate number of designated parking stalls and signage for cars are not provided. Two additional parking stalls and one redone parking stall are required. The stall adjacent to the Gym will need to be redone as it has no signage or pavement markings. Costs are included for the addition of three stalls.

##### ***Paths of Travel***

- Install cup dispenser at an existing non-conforming water fountain.

##### ***Restrooms***

- Renovate a portion of the existing women's locker room to create an accessible/gender neutral restroom and locker room.
- Wrap drain pipes below lavatory with insulation; protect against contact with hot, sharp, or abrasive surfaces.

A full ADA Compliance Survey may reveal additional aspects of the property that are not in compliance.

Corrections of these conditions should be addressed from a liability standpoint, but are not necessarily code violations. The Americans with Disabilities Act Accessibility Guidelines concern civil rights issues as they pertain to the disabled and are not a construction code, although many local jurisdictions have adopted the Guidelines as such. The cost to address the achievable items noted above is included in the cost tables.

## 4 EXISTING BUILDING ASSESSMENT

---

### 4.1 UNIT OR SPACE TYPES

All 307,323 square feet of the building are occupied by Dedham Public Schools. The spaces are a combination of classrooms, administrative offices, gymnasiums and other athletic spaces, an auditorium, cafeteria and supporting restrooms, commercial kitchen, mechanical and other utility spaces.

### 4.2 INACCESSIBLE AREAS OR KEY SPACES NOT OBSERVED

Most of the interior spaces were observed in order to gain a clear understanding of the property's overall condition. A representative sample of classrooms was observed, as some of the classrooms were occupied at the time of the assessment. Other areas accessed included the site within the property boundaries, exterior of the property and the roof.

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.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

## 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 and Adequacy
Sanitary sewer	Town of Dedham Department of Public Works	Good
Storm sewer	Town of Dedham Department of Public Works	Good
Domestic water	Dedham-Westwood Water District	Good
Electric service	Eversource Energy	Good
Natural gas service	Eversource Energy	Good

#### 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	Mt. Vernon Street
Access from	West
Additional Entrances	Whiting Avenue
Additional Access from	South

Paving and Flatwork			
Item	Material	Last Work Done	Condition
Entrance Driveway Apron	Asphalt	2012	Good
Parking Lot	Asphalt	2012	Fair
Drive Aisles	Asphalt	2012	Fair
Service Aisles	Asphalt	2012	Fair
Sidewalks	Concrete and Asphalt	2012	Fair
Curbs	Concrete	15-20 Years	Fair
Site Stairs	Cast-in-place concrete	15-20 Years	Fair
Pedestrian Ramps	Cast-in-place concrete	15-20 Years	Fair

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Parking Count				
Open Lot	Carport	Private Garage	Subterranean Garage	Freestanding Parking Structure
205	0	0	0	0
Total Number of ADA Compliant Spaces			5	
Number of ADA Compliant Spaces for Vans			2	
Total Parking Spaces			205	
Parking Ratio (Spaces/1,000 Square Feet)			0.66	
Method of Obtaining Parking Count			Physical count	

Exterior Stairs			
Location	Material	Handrails	Condition
Northwest Building Corner	Concrete stairs	Metal	Fair

### Anticipated Lifecycle Replacements:

- Asphalt seal coating
- Asphalt pavement (mill and overlay)
- Concrete Sidewalks
- Asphalt Sidewalks

### Actions/Comments:

- The site has limited parking for visitors, staff, and students.
- The asphalt paved sidewalks exhibit areas of failure and deterioration, such as alligator cracking, transverse cracking and localized depressions at the sidewalks at the building perimeter and between the school building and adjacent sports field. The depressed area of asphalt pavement located between the school building and sports field must be cut and patched. Replacement of the sidewalk adjacent to the west building elevation is recommended. These areas must be replaced immediately.
- The concrete sidewalks, curbs, and gutters have isolated areas of settlement, cracking, spalling, and heavy surface wear. These areas occur at the sidewalk adjacent to the main building entrance, and other isolated locations. Some areas of damage pose a trip hazard to pedestrians. The damaged areas of concrete sidewalks require immediate repair.
- The asphalt paved parking lots currently show no significant signs of cracking or surface deterioration. In order to maximize the pavement life, pothole patching, crack sealing, seal coating, and re-striping of the asphalt paving will be required.
- The concrete stairs at the northwest building limits have isolated areas of cracked and spalled concrete surfaces which present trip hazards. The damaged portions of the stairs must be repaired.

## 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"/>	Good



## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Drainage System and Erosion Control		
System	Exists at Site	Condition
Swales	<input type="checkbox"/>	--
Detention pond	<input type="checkbox"/>	--
Lagoons	<input type="checkbox"/>	--
Ponds	<input type="checkbox"/>	--
Underground Piping	<input checked="" type="checkbox"/>	Good
Pits	<input type="checkbox"/>	--
Municipal System	<input checked="" type="checkbox"/>	Good
Dry Well	<input type="checkbox"/>	--

### Anticipated Lifecycle Replacements:

- Sump pumps

### Actions/Comments:

- Ponding occurs on site at a low-point between the sports field and high school building. There is currently no underdrain at this location, resulting in standing water during precipitation and snow melt. A Professional Engineer must be retained to observe the existing drainage conditions, make recommendations, and, if required, determine estimated costs to resolve the observed problems as discussed in Section 1.3. A cost allowance for drainage repairs to improve drainage at this location has been included in the cost tables.

## 5.4 TOPOGRAPHY AND LANDSCAPING

Item	Description						
Site Topography	Slopes gently down from the south side of the property to the north property line.						
Landscaping	Trees	Grass	Flower Beds	Planters	Drought Tolerant Plants	Decorative Stone	None
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	N/A						

Retaining Walls		
Type	Location	Condition
Stone masonry	West Property Limits	Poor
Stone masonry	Main Driveway	Fair
Concrete	South Property Limits	Fair
Stone masonry	West Courtyard	Fair



## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Retaining Walls		
Type	Location	Condition
Concrete	Gymnasium Parking Lot	Fair
Concrete	Maintenance Shop Driveway	Fair
Stone masonry	East Building Elevation	Fair
Keystone	Sports Field and Track	Good

### Anticipated Lifecycle Replacements:

- No components of significance

### Actions/Comments:

- The stone masonry retaining wall at the west property limits has evidence of stress cracks throughout the length of the wall. Portions of the retaining wall are out of plumb and appear to be unstable as a result of movement. The damaged portions of the retaining walls must be repaired. A Professional Engineer must be retained to observe the conditions, make recommendations, and, if required, determine estimated costs to resolve the observed problems as discussed in Section 1.3. A cost allowance for wall repairs is included in the cost tables.
- Isolated sections of the stone masonry retain wall at the west courtyard are cracked. Damaged portions of the retaining wall must be repaired.
- Sections of the concrete retaining walls located throughout the site are cracked. Damaged portions of the concrete retaining walls must be repaired.

## 5.5 GENERAL SITE IMPROVEMENTS

Property Signage	
Property Signage	Building mounted
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"/>
	Poor				
Building Lighting	None		Wall Mounted		Recessed Soffit
	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	Poor				

Site Fencing		
Type	Location	Condition
Chain link with metal posts	West Site Perimeter	Good



## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Site Fencing		
Type	Location	Condition
Chain link with metal posts	Sports Field and Track	Good
Chain link with metal posts	East Property Limits	Fair

Refuse Disposal				
Refuse Disposal	Common area dumpsters			
Dumpster Locations	Mounting	Enclosure	Contracted?	Condition
Staff Parking Lot	Asphalt paving	None	Yes	Fair

Other Site Amenities			
	Description	Location	Condition
Playground Equipment	None	--	--
Tennis Courts	None	--	--
Basketball Court	None	--	--
Swimming Pool	None	--	--
Sports Field & Track	Yes	West of the High School building	Good

### Anticipated Lifecycle Replacements:

- Exterior building-mounted lighting
- Pole-mounted site lighting
- Site fencing (east property limits)
- Artificial sports field
- Rubber track
- Sports field lighting
- Scoreboard

### Actions/Comments:

- The current building-mounted signage does not display the property address. The lack of adequate signage may impede the timely arrival of emergency services personnel and equipment. Additional identification signage must be installed which displays the property address.
- The building is bordered by residential homes, limiting the amount of exterior lighting. The POC reported that the current quantity of exterior lighting is adequate for the site.
- The building-mounted high-intensity discharge lighting appears to be antiquated and inefficient. Replacement of the exterior building-mounted lighting with energy efficient fixtures and lamps is recommended.
- Exterior soffit light fixtures located at the underside of the elevated pedestrian walkway are damaged and reported to not function properly, or are missing altogether. The light fixtures require replacement to provide necessary levels of night lighting for safety and security.
- There are currently no enclosures at the dumpster location. It is strongly recommended that a dumpster enclosure be installed to help contain refuse within the dumpster location, increase security related to dumpster use, and improve the aesthetics of the site.



## 6 BUILDING ARCHITECTURAL AND STRUCTURAL SYSTEMS

### 6.1 FOUNDATIONS

Building Foundation		
Item	Description	Condition
Foundation	Piles (concrete)	Fair
Basement and Crawl Space	Concrete slab and concrete walls	Fair

**Anticipated Lifecycle Replacements:**

- No components of significance

**Actions/Comments:**

- The foundations and footings could be partially observed within the crawl spaces beneath the building. There are significant areas of cracking and displacement at exterior walls and interior wall finishes throughout the building. This condition typically indicates excessive settlement or other potential problems with the foundation system. A Professional Engineer with specific expertise in structural design and construction in this geographical area must be retained to evaluate the structure and to provide remedial recommendations consistent with local regulatory and code requirements. Although the estimated cost of repair cannot be accurately determined without the recommended study, a budgetary cost allowance to repair the affected elements is also included.
- Isolated sections of the exterior concrete foundation walls and exterior concrete columns are cracked and spalled, with exposed steel reinforcing in some locations. Damaged exterior foundation walls must be repaired.

### 6.2 SUPERSTRUCTURE

Building Superstructure		
Item	Description	Condition
Framing / Load-Bearing Walls	Cast-in-place concrete, steel columns and beams	Fair
Ground Floor	Concrete slab	Fair
Upper Floor Framing	Cast-in-place concrete, steel columns and beams	Fair
Upper Floor Decking	Concrete, precast planks and metal decking	Fair
Roof Framing	Cast-in-place concrete, steel beams and girders, and open web steel joists	Fair
Roof Decking	Metal decking, wood fiber panel decking, precast concrete planks	Fair

**Anticipated Lifecycle Replacements:**

- No components of significance

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

### Actions/Comments:

- The superstructure is exposed in some locations, which allows for limited observation. Building construction varies between the original building and later additions.
- There is evidence of building movement in locations of cracked, displaced and damaged exterior and interior walls, as described in Section 6.1 – Foundations. Based on limited observation of the building structure, it is unclear whether these observed defects are a result of deficiencies related to the foundation or building structure. Review of the superstructure should be performed as part of the Professional Engineering study described in the previous section 6.1.

## 6.3 ROOFING

Primary Roof			
Type / Geometry	Low-Sloped (Flat)	Finish	Built-up membrane
Maintenance	Outside Contractor	Roof Age	2002
Flashing	Built-up base and Edge flashing	Warranties	Materials – Roofing Manufacturer
Parapet Copings	None	Roof Drains	Internal drains
Fascia	None	Insulation	Rigid Board
Soffits	Concealed Soffits	Skylights	Yes
Attics	None	Ponding	Yes
Ventilation Source-1	Soffit Vents	Leaks Observed	No
Ventilation Source-2	Soffit Vents	Roof Condition	Fair

The primary roof is located at the A, B, C, D (cafeteria) and E Wings, Auditorium, Art Wing, Auto Building and Gymnasium.

Secondary Roof			
Type / Geometry	Low Sloped (Flat) and Hip Roof	Finish	Single-Ply EPDM Membrane (Stone Ballast over Fitness Center)
Maintenance	Outside Contractor	Roof Age	2002
Flashing	Membrane	Warranties	Unknown
Parapet Copings	None	Roof Drains	Gutters and Downspouts and Internal Drains
Fascia	None	Insulation	Rigid Board
Soffits	None	Skylights	Yes
Attics	None	Ponding	No
Ventilation Source-1	None	Leaks Observed	No
Ventilation Source-2	None	Roof Condition	Fair

The secondary roof is located at D Wing and Fitness Center.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

### **Anticipated Lifecycle Replacements:**

- Built-up roofing
- Single-ply EPDM roof membrane
- Roof flashings (included as part of overall membrane replacement)
- Dome skylights (included as part of overall roof system replacement)
- Pyramid skylight (above fitness center)

### **Actions/Comments:**

- The roof finishes were reportedly installed between 2002 and 2007. Information regarding roof warranties or bonds was not available. The roofs are reported to be covered by a roof system manufacturer's warranty. A copy of the warranty was requested but 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
- The single-ply EPDM roof located at the fitness center is covered with gravel ballast. Additionally, the gravel surfacing (up to 1 inch in diameter) located at the built-up roof areas is loose and may be easily displaced. During severe wind storms, roofing aggregate (ballast) and gravel surfacing 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.
- An area of roof edge flashing at the fitness center roof is damaged, exposing the underlying roof substrates, roof decking, and building interior. In addition, there is a minor area of ponding water at the lower roof located between the gymnasium and fitness center. Access to this roof area was limited, however the area of ponding appeared to be the result of inadequate slope-to-drain. The area of inadequate drainage should be repaired and the damaged flashing elements must be repaired.
- The overall 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.
- The translucent panel skylight located above the fitness center is reported to be original. The translucent panels are deteriorated and exhibiting fiber bloom. Sealant at the skylight framing is failed and missing. The skylight has exceeded its expected life and requires replacement.
- The exterior drain leaders connecting the gutters and downspouts to the storm water drain leaders at the gymnasium and fitness center are cracked and damaged. The cost to replace the existing cast iron drain leaders with PVC replacement leaders is relatively insignificant and the work should be performed as part of the property management's operations program.
- A roof ladder providing access between the A-Building roof and adjacent auditorium has detached mounting brackets. The roof ladder should be repaired immediately.

## 6.4 EXTERIOR WALLS

Building Exterior Walls		
Type	Location	Condition
Primary Finish	Curtain wall	Poor
Secondary Finish	Metal siding	Fair
Accented with	Brick veneer	Fair
Soffits	Concealed	Poor

Building sealants (caulking) are located between dissimilar materials, at joints, and around window and door openings.

### **Anticipated Lifecycle Replacements:**

- Brick masonry re-pointing



## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

- Building sealants (caulking)
- Metal siding (north library elevation)
- Curtain wall

### **Actions/Comments:**

- The metal-framed, single-pane curtain wall system is original to the building construction. The curtain wall has significant areas of deteriorated glazing putty, paint failure, and failed perimeter sealant. The hopper-style windows within the curtain wall glazing sections are difficult to operate. The cement-board panels located between glazing panes have areas of damage and paint failure. Additionally, the client reported that these panels may have asbestos containing materials. The energy-inefficient curtain wall system is antiquated and requires replacement.
- Isolated portions of the brick masonry mortar joints are cracked and deteriorated. The deteriorated mortar joints must be cleaned and re-pointed. Additionally, it is highly recommended that a cost allowance for periodic cleaning and repointing of the brick masonry veneer is anticipated as part of the property management's routine maintenance program. A cost for this work has been included in the replacement reserve tables.
- Areas of the brick masonry veneer have significant areas of step cracking, spalls, and displaced brick, which appears to be the result of building movement. The most severe areas of damaged brick masonry occur at the east building elevation at the exterior auditorium wall. The damaged brick masonry must be repaired.
- The metal siding located at the north library rising wall (roof-level) is original to building construction. The siding has isolated areas of corrosion and other minor damage. Lifecycle replacement of the metal siding is anticipated.
- Building sealants are brittle, deteriorated, and missing at the exterior masonry control joints, window and door frame perimeters, and other building finish transitions. Deteriorated sealant must be replaced.
- Sections of the exterior wood fiber soffit located beneath the elevated pedestrian walkway are heavily damaged, and are potentially infested with bird and rodents in some locations. The soffit should be replaced. This work should be performed in conjunction with replacement of the soffit light fixtures.

## 6.5 EXTERIOR AND INTERIOR STAIRS

Building Exterior and Interior Stairs					
Type	Description	Riser	Handrail	Balusters	Condition
Building Exterior Stairs	Concrete stairs	Closed	Metal	Metal	Fair
Building Interior Stairs	Steel framed with pan-filled concrete	Closed	Metal	Metal	Fair

### **Anticipated Lifecycle Replacements:**

- Exterior stairs
- Exterior entrance ramps

### **Actions/Comments:**

- The interior stairs have isolated areas of cracked stair treads. This condition shows no indication of differential settlement presenting trip hazards. Repair to the areas of cracked stair treads is required. The cost to address the areas of damaged stair treads is relatively insignificant and the work should be performed as part of the property management's operations program.
- The concrete stairs located at the loading dock are in poor condition. There is evidence of stair movement away from the adjacent wall and isolated areas of damaged and missing concrete treads which present a trip hazard. These stairs will require replacement immediately.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

- The concrete loading dock has areas of cracked, spalled, and damaged concrete surfaces. The damaged portions of the loading dock must be repaired
- The handrail located at the electrical room stairwell is damaged and loose, and poses a safety hazard. The handrail requires immediate replacement.

### 6.6 EXTERIOR WINDOWS AND DOORS

Building Windows				
Window Framing	Glazing	Location	Window Screen	Condition
Steel framed, fixed and operable	Single glaze	Main Building Exterior	<input type="checkbox"/>	Poor
Aluminum framed, translucent panel, operable	Double glaze	Gymnasium, South Elevation	<input type="checkbox"/>	Good

Building Doors		
Main Entrance Doors	Door Type	Condition
	Metal, insulated	Good
Secondary Entrance Doors	Metal, insulated	Good
Service Doors	Metal, insulated	Good
Overhead Doors	Aluminium	Fair

#### **Anticipated Lifecycle Replacements:**

- Overhead door
- Aluminum windows (Gym)

#### **Actions/Comments:**

- The original exterior steel windows are antiquated, energy-inefficient units with single-pane glazing. Some of the windows are difficult to open and close. Areas of broken glazing were observed. Window frames have isolated areas of damage, and paint failure throughout. Glazing putty is deteriorated and missing throughout, and the window perimeter sealants have failed.
- The exterior entrance and service doors were replaced within the last 3 years, with exception to two service doors located at the north building elevation. The owner reported that replacement of these two service doors is schedule to occur within the next year. Costs for replacement have been included.

### 6.7 PATIO, TERRACE, AND BALCONY

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

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

## 7 BUILDING MECHANICAL AND PLUMBING SYSTEMS

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

Building Central Heating System	
Primary Heating System Type	Steam and Hot Water Boilers
Quantity and Capacity of Major Components	Three steam boilers at 4185 MBH each Two hot water boilers at 2500 MBH each
Total Heating Capacity	17,555 MBH
Heating Fuel	Natural gas
Location of Major Equipment	Boiler Room
Space Served by System	Entire Building
Age Ranges	All units dated 2011
Boiler Condition	Good
Heat Exchanger Condition	None

Building Central Cooling System	
Primary Cooling System Type	None
Quantity and Capacity of Major Components	N/A
Total Cooling Capacity	N/A
Refrigerant	None
Cooling Towers	None
Location of Major Equipment	N/A
Space Served by System	N/A
Age Ranges	N/A
Chiller Condition	N/A
Cooling Tower Condition	N/A

Distribution System	
HVAC Water Distribution System	Two-pipe
Heating Water Circulation Pump Size and Quantity	Four pumps at 5 HP each
Chilled Water Circulation Pump Size and Quantity	NA

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Distribution System	
Condenser Water Circulation Pump Size and Quantity	Three pumps at 1/3 HP each
Pump Condition	Fair
Air Distribution System	Constant and Variable volume
Quantity and Capacity of Air Handlers	18 air handlers (reported), ranging from 1500 to 4500 CFM each (16 air handlers were accessible/observed)
Location of Air Handlers	Mechanical rooms, suspended from ceiling
Large Spaces the Larger Dedicated AHU's Serve	Gymnasium, Auditorium , Locker Rooms, Fitness Center
Age of Air Handlers	All units are original
Air Handler Condition	Poor
Terminal Units	Unit ventilators, fan coil units, radiator and radiator cabinets
Quantity and Capacity of Terminal Units	Approximately 45 fan coil units and 55 unit ventilators ranging from 250 to 1250 CFM Quantity and capacity of hydronic radiators and radiator cabinets was difficult to determine without construction drawings
Location of Terminal Units	Within interior spaces
Spaces Served by Terminal Units	Throughout facility
Terminal Unit Condition	Fair

Supplemental Components	
Supplemental Component No. 1	Package units
Location / Space Served by Package Unit	D-Wing/Cafeteria/Media Center
Package Unit Condition	Poor
Supplemental Component No. 2	Split-system condensing units with individual fan coil/air handling units (optional electric heat)
Location / Space Served by Split System Condensing Units and Individual Fan Coil/Air Handling Units	School Psychologist's Office, Main Office, Art Studios
Split System Condensing Units and Individual Fan Coil/Air Handling Unit Condition	Fair
Supplemental Component No. 3	Ductless Split Systems
Location / Space Served by Ductless Split Systems	Administration Offices, Guidance Offices, Nurses Suite, Miscellaneous Offices, and Individual Spaces
Ductless Split System Condition	Fair

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Controls and Ventilation	
HVAC Control System	BAS, hybrid pneumatic/electronic system
HVAC Control System Condition	Good
Building Ventilation	Central AHU with fresh air intake, rooftop exhaust fans
Ventilation System Condition	Fair

### ***Anticipated Lifecycle Replacements:***

- Air handling units
- Circulation pumps and motors
- Fan coil units and unit ventilators
- Rooftop package units and furnace
- Split condensing units and fan coils
- Ductless split-systems
- Wall-mounted exhaust fans
- Rooftop exhaust fans
- Variable frequency drives
- Direct digital HVAC control system

### ***Actions/Comments:***

- The HVAC systems are maintained by the in-house maintenance staff. Partial records of the installation, maintenance, upgrades, and replacement of the HVAC equipment at the property have been maintained since the property was first occupied.
- The HVAC equipment varies in age. HVAC equipment is replaced on an "as needed" basis. A major HVAC renovation was performed in 2011, which included replacement of the steam and hot water boilers, replacement of the unit ventilators and portion of the fan coil units, upgrade of the HVAC controls, and other miscellaneous improvements to the heating system.
- The air handlers are original to the building construction and are reported to be functioning adequately. Many of the air handling unit components, such as fan motors, heating coils, and other components, are also original. It is recommended that the air handling units are replaced to improve efficiency and performance. Installation of high-efficiency motors is recommended at the time of replacement. Please note that a portion of the air handling units are located within the ceilings and were not accessible at the time of the assessment. Eleven air handling units were visually observed. The property manager reported that there is an estimated total of 18 air handling units which serve the building.
- The circulation pump motors lack variable frequency drives (VFD's). As the motors are fairly substantial in size, the overall system would benefit from the utilization of VFD's to reduce full-speed usage and improve efficiency. Installation of VFD's is highly recommended.
- Some of the ductwork, housing and other air handler components are corroded and damaged. Repair or replacement of these components should be performed as part of the property manager's routine maintenance plan.
- The air handler fan motors lack variable frequency drives (VFD's). As the motors are fairly substantial in size, the overall system would benefit from the utilization of VFD's to reduce full-speed usage and improve efficiency. Installation of VFD's is highly recommended in tandem with high-efficiency motor replacements. This work should be performed in conjunction with the air handler replacement.
- The heating water circulation pump motors lack variable frequency drives (VFD's). As the motors are fairly substantial in size, the overall system would benefit from the utilization of VFD's to reduce full-speed usage and improve efficiency. Installation of VFD's is highly recommended in tandem with high-efficiency motor replacements.
- The rooftop packaged units and furnace serving the D-Wing spaces were installed in 1998. The equipment is reported to be problematic and requires frequent maintenance. The units have some exterior surface corrosion, indicative of their age. The owner reported that the units are anticipated for replacement within the next 2-4 years.
- A portion of the roof-mounted and wall-mounted exhaust fans are original to construction. Some of the exhaust fans do not appear to be functioning properly, and have damaged to the hoods and other components. Replacement of the antiquated exhaust fans is recommended to provide adequate ventilation.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

- The owner reported that the auditorium does not have cooling, making it difficult to maintain a comfortable climate within space when occupied. Installation of cooling for the auditorium space is anticipated for the next 2-4 years. A budgetary cost has been included to perform this work in the form of package unit addition.

## 7.2 BUILDING GAS DISTRIBUTION

Gas service is supplied from the gas main on the adjacent public street. The gas meters and regulators are located along the north building elevation, behind a wooden enclosure. The gas distribution piping within the building is malleable steel (black iron).

### **Anticipated Lifecycle Replacements:**

- Natural gas piping

### **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.
- Significant portions of the gas piping are corroded and need to be scraped and painted to prevent degradation of the piping system. The cost to address the gas piping is relatively insignificant and the work should be performed as part of the property management's operations program. Lifecycle replacement of the natural gas piping is anticipated.
- The exterior area surrounding the gas meter and regulators is overgrown with shrubs and other vegetation. The overgrowth should be cut back and cleared. The cost to perform this work relatively insignificant and the work should be performed as part of the property management's operations program.

## 7.3 BUILDING PLUMBING AND DOMESTIC HOT WATER

Building Plumbing System		
Type	Description	Condition
Water Supply Piping	Galvanized Iron and CPVC	Fair
Waste/Sewer Piping	Cast iron	Fair
Vent Piping	Cast iron	Fair
Water Meter Location	Within crawl space where the domestic water line enters the building	

Domestic Water Heaters or Boilers	
Components	Main - Two hot water heating boilers serve four indirect-fired water heaters/storage tanks Science labs - One electric water heater Kitchen - One natural gas water boiler with two storage tanks; One natural gas water heater
Fuel	Natural gas (main and kitchen) Electric (science labs)
Quantity and Input Capacity	Main - Two units at 2500 MBH/each Science labs - One unit at 4500 Watts Kitchen - One unit at 500 MBH; 199 MBH
Storage Capacity	NA
Boiler or Water Heater Condition	Good

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Domestic Water Heaters or Boilers	
Supplementary Storage Tanks?	Yes
Storage Tank Quantity and Volume	Main - Four indirect fired water heaters (tanks) at 120 gallons/each Kitchen – Two storage tanks at 120 gallons/each
Quantity of Storage Tanks	Six
Storage Tank Condition	Good
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	2.2 GPM
Condition	Good

### ***Anticipated Lifecycle Replacements:***

- Indirect-fired water heaters
- Water boiler (kitchen mechanical room)
- Water heater (crawl space)
- Circulation pumps
- Grease trap
- Backflow preventer
- Acid neutralization system
- Toilets
- Urinals
- Sinks
- Showers
- Emergency eyewash/shower stations
- Galvanized pipe

### ***Actions/Comments:***

- There is a plumbing leak within a second floor A-Wing girl's restroom, which has caused the restroom to be out of order for an extended period of time. The maintenance staff reported that the plumbing leak is located somewhere deep within the wall and is difficult to locate. Repair of this leak has been ongoing and is anticipated to be completed as part of the school's routine maintenance plan. No costs have been included for ongoing repair.
- A significant percentage of the domestic water lines are galvanized iron original to the 1959 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. EMG recommends an Engineer be retained to evaluate some easily accessible pipe sections, evaluate, and determine the interior pipe wall conditions after nearly 60 years of use. Pending these results, consideration should be given to replacing all the plumbing supply lines with copper. A budgetary cost for pipe replacement is included.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

- Maintenance of the grease traps is the responsibility of the building owner. A licensed plumber must inspect the grease traps and sewer lines on a regular basis to ensure that they are properly maintained. This work can be performed as part of the property management's operations program.
- There is an abandoned delusion tank located within the kitchen mechanical room space that is damaged and no longer in use. The tank is cracked and leaking into the surrounding containment area, causing accelerated corrosion. Additionally, the broken tank was releasing a strong odor, which was noticeable in the adjacent staff parking lot. The cost to remove the abandoned tank is relatively insignificant and the work should be performed as part of the property management's routine maintenance program.
- A backflow preventer was not observed on the domestic main water line. Installation of a backflow preventer is recommended to reduce the risk of contaminating the municipal water supply.
- The showers within the men's locker room and men's varsity locker room are reported to be original. Modernization of the showers is anticipated due to age and wear.

### 7.4 BUILDING ELECTRICAL

Building Electrical Systems			
Electrical Lines	Underground	Transformer	Pad-mounted
Main Service Size	1,600 Amps	Volts	277/480 Volt, three-phase
Meter and Panel Location	Main Electrical Room	Branch Wiring	Copper
Conduit	Metallic	Step-Down Transformers?	Yes
Security / Surveillance System?	Yes	Building Intercom System?	Yes
Lighting Fixtures	T-8 and LED		
Main Distribution Condition	Good		
Secondary Panel and Transformer Condition	Fair		
Lighting Condition	Good		

Building Emergency System			
Size	85 kW – Indoor Generator 200 kW – Outdoor Generator	Fuel	Natural gas – Indoor Generator Diesel – Outdoor Generator
Generator / UPS Serves	Emergency lights, elevators, etc.	Tank Location	Integral tank (part of generator)
Testing Frequency	Weekly	Tank Type	Integral ("belly") tank
Generator / UPS Condition	Good		

#### ***Anticipated Lifecycle Replacements:***

- Distribution panels
- Circuit Breaker Panels
- Switchboards
- Step-down transformers
- Automatic transfer switches
- Interior lighting



## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

- Solar panels
- Video surveillance and security system

### Actions/Comments:

- The onsite electrical systems up to the meters are owned and maintained by the respective utility company.
- The electrical service and capacity appear to be adequate for the property's demands.
- The owner reported that the main electrical switchboard is scheduled for replacement in December 2016, which is part of an effort to upgrade the original main electrical service equipment. A new exterior pad-mounted transformer was installed during the summer of 2016 to replace the antiquated transformer that was located within the electrical room vault beneath the school.
- The owner reported that a portion of the linear fluorescent ceiling mounted lighting was replaced with LED fixtures and lamps in 2016. The owner additionally reported that phased upgrade of the interior lighting to LED is anticipated to occur within the next 10 to 15 years. A cost allowance has been included within the reserve tables to account for upgrade of the interior lighting throughout the building.
- The electrical panels, switchboards and step-down transformers are mostly original 1959 components. The electrical service is reportedly adequate for the facility's needs. However, due to the age of the equipment, and increasing difficulty of obtaining replacement parts over time, lifecycle replacements are recommended per above. A budgetary cost to upgrade the original electrical components has been included.
- The school owns and maintains the roof-mounted solar panels and associated equipment. The owner reported that electricity from the solar panels is sold back to the electrical company for an energy credit. Lifecycle replacement of the solar panels and associated components is anticipated.

## 7.5 BUILDING ELEVATORS AND CONVEYING SYSTEMS

	Elevator-1	Elevator-2
Building Name	D-Wing/ Cafeteria	Art Building
Elevator Category	Passenger	Passenger
Elevator Type	Hydraulic	Hydraulic
Elevator Capacity	2500	1400
Elevator Manufacturer	City	Concord
Equipment Location	Ground floor or basement adjacent to shaft	Ground floor or basement adjacent to shaft
Elevator Safety Stop	Electronic	Electronic
Elevator Emergency Communication	Yes	Yes
Elevator Cab Floor	Vinyl-tile	Vinyl-tile
Elevator Cab Wall	Plastic-laminated wood	Fiberglass plastic
Elevator Cabin Lighting	T-8 Fluorescent	T-8 Fluorescent
Machinery Condition	Fair	Fair
Controls Condition	Fair	Fair
Cab Finish Condition	Poor	Fair

Other Conveyance	Escalators	Dumbwaiters	Wheelchair Lifts
------------------	------------	-------------	------------------



## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Condition	NA	NA	Poor
-----------	----	----	------

### Anticipated Lifecycle Replacements:

- Elevator machinery
- Elevator controls
- Elevator cab finishes
- Wheelchair lift

### Actions/Comments:

- The elevators appear to provide adequate service. The elevators are serviced by Atlantic Elevator on a routine basis. The elevator machinery and controls appear to be more than 20 years old. The elevators will require continued periodic maintenance. Renovation of the elevator machinery and controls is anticipated during the reserve term.
- The elevators are inspected on an annual basis by the municipality, and a certificate of inspection is displayed in each elevator cab.
- The emergency communication equipment in the elevator cabs appears to be functional. Equipment testing is not within the scope of the work.
- The finishes within the D-Wing elevator cab will require replacement. The cost to replace the finishes is relatively insignificant and the work can be performed as part of the property management's operations program.

## 7.6 FIRE PROTECTION AND SECURITY SYSTEMS

Item	Description					
Sprinkler System Type	None					
Fire Alarm System	Central Alarm Panel	<input checked="" type="checkbox"/>	Battery-Operated Smoke Detectors	<input type="checkbox"/>	Alarm Horns	<input checked="" type="checkbox"/>
	Annunciator Panels	<input 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	Good					
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	None					
Central Alarm Panel System	Location of Alarm Panel			Installation Date of Alarm Panel		
	Main Office			2009±		
Fire Extinguishers	Last Service Date			Servicing Current?		
	October, 2016			Yes		
Hydrant Location	Whiting Avenue					
Siamese Location	None					

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Item	Description			
Sprinkler System Type	None			
Special Systems	Kitchen Suppression System	<input checked="" type="checkbox"/>	Computer Room Suppression System	<input type="checkbox"/>

### ***Anticipated Lifecycle Replacements:***

- Central alarm panel
- Alarm devices and system
- Kitchen fire suppression systems

### ***Actions/Comments:***

- The building is not protected by fire suppression. 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.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

## 8 INTERIOR SPACES

### 8.1 INTERIOR FINISHES

The most significant interior spaces include classrooms, offices, gymnasiums, an auditorium, cafeteria and media center. Supporting areas include hallways, stairs, building entrances, locker rooms, restrooms, staff break rooms, mechanical rooms, and utility closets.

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
Terrazzo	Lobby and restrooms	Fair
Vinyl tile	Classrooms	Fair
Carpet	Offices and auditorium	Fair
Ceramic tile	Restrooms and shower rooms	Fair
Epoxy flooring	Kitchen	Good
Hardwood	Gymnasiums	Fair
Concrete (finished & unfinished)	Wood shop, maintenance areas, mechanical rooms and auditorium	Fair
Rubber flooring	Locker rooms and fitness center	Fair
Typical Wall Finishes		
Wall Finish	Locations	General Condition
CMU block (painted & glazed finishes)	Lobby, offices restrooms, gymnasiums, fitness center, wood shop, hallways, mechanical rooms and kitchen	Fair
Painted drywall	Offices and miscellaneous spaces	Fair
Decorative wood	Auditorium	Fair
Exposed CMU/masonry	Cafeteria, auditorium stairwells and entrances	Fair
Typical Ceiling Finishes		
Ceiling Finish	Locations	General Condition
Suspended T-bar (Acoustic)	Throughout building	Fair
Painted drywall	Auditorium	Good
Exposed structure	Gymnasium, fitness center, mechanical rooms	Good

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

Interior Doors		
Item	Type	Condition
Interior Doors	Solid core wood	Fair
Door Framing	Metal	Fair
Fire Doors	Yes	Fair

### **Anticipated Lifecycle Replacements:**

- Carpet
- Carpet tile
- Vinyl tile
- Ceramic tile
- Epoxy flooring
- Hardwood (refinish)
- Rubber flooring
- Terrazzo flooring
- Interior paint
- Suspended acoustic ceiling tile
- Auditorium seating
- Gymnasium Bleachers
- Interior doors
- Toilet partitions
- Lockers

### **Actions/Comments:**

- The owner reported that a portion of the interior fire doors do not meet current fire and life safety code requirements. Documentation of the violations related to the fire doors was requested. No documentation relating to this issue was provided by the owner as part of this assessment. Replacement of the inadequate fire doors in violation of the life safety code is required. A budgetary cost allowance has been included to perform this work.
- The interior door hardware does not function well and is antiquated. Many of the locks are difficult to operate. The owner reported that phased upgrade of the interior door hardware is anticipated to occur over the next three years. This upgrade will phase out the old hardware while improving security throughout the school.
- Many of the interior doors have cosmetic damage due to age. It is recommended that antiquated and damaged interior doors are replaced in conjunction with the door hardware upgrade.
- The terrazzo flooring is reported to be original to the building. Damaged areas of terrazzo flooring have been repaired where required. Lifecycle replacement of the terrazzo flooring is anticipated.
- A portion of the interior areas were last renovated in 2016. It appears that many of the interior finishes are original.
- A portion of the interior flooring consists of original 9 inch (9x9) vinyl tiles, which has been known to contain asbestos materials. Overall, the 9x9 vinyl tile flooring does not appear to have any significant areas of damage or deterioration. The owner has replaced sections of the flooring on an as-needed basis. Lifecycle replacement of the original 9x9 vinyl tile flooring is anticipated.
- The suspended ceiling tile system has significant areas of damaged and missing ceiling tiles throughout the building. The suspended ceiling tile system is antiquated, and appears to be original in some locations. Replacement of the antiquated ceiling tile system is required.
- Sections of the ceiling tile system have been replaced during interior renovation work performed within the last 10 to 12 years. Lifecycle replacement of the ceiling tile system in these areas is anticipated.
- A portion of the lockers within the men's and women's locker rooms have been replaced within the past 5-7 years. The majority of the lockers throughout the school are 20+ years in age, with areas of paint failure and damage. Lifecycle replacement of the older school lockers is anticipated.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

- There are isolated areas of cracked and damaged wall finishes throughout the building, which appear to be related to structural movement. These areas of interior wall damage should be reviewed as part of the structural building study previously described in Section 6.1. The cost to replace the damaged finishes is relatively insignificant and the work should be performed as part of the property management's routine maintenance program.

### 8.2 COMMERCIAL KITCHEN & LAUNDRY EQUIPMENT

The cafeteria kitchen has a variety of commercial kitchen appliances, fixtures, and equipment. The equipment is owned and maintained in-house.

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

Commercial Kitchen		
Appliance	Comment	Condition
Refrigerators	Walk-in, up-right and chest	Fair
Freezers	Walk-in, up-right and chest	Fair
Ranges	Gas	Fair
Ovens	Gas and electric	Good
Griddles / Grills	Gas	Fair
Fryers	N/A	--
Hood	Exhaust ducted to exterior	Good
Dishwasher	Owned	Fair
Microwave	<input checked="" type="checkbox"/>	Good
Ice Machines	<input checked="" type="checkbox"/>	Good
Steam Tables	<input checked="" type="checkbox"/>	Fair
Work Tables	<input checked="" type="checkbox"/>	Good
Shelving	<input checked="" type="checkbox"/>	Good

Commercial Laundry		
Equipment	Comment	Condition
Commercial Washing Machines	One machine rated at 60 LB.	Good
Commercial Dryers	None	--
Residential Washers	<input type="checkbox"/>	--
Residential Dryers	<input checked="" type="checkbox"/>	Fair

#### Anticipated Lifecycle Replacements:

- Commercial kitchen equipment



## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

- Commercial washing machine
- Laboratory fume exhaust hoods

### ***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 storage building is located adjacent to the sports field and track. The maintenance building is a wood-framed structure set on cast-in-place concrete forms.

A concession building is located adjacent to the sports field and track. The concession building is a wood-framed structure set on cast-in-place concrete forms. The concession building is heated with a small, wall-mounted electric heater. The concession building contains residential and light-commercial kitchen equipment.

A restroom structure is located adjacent to the sports field and track. The building contains both a men's and women's restrooms which are heated by wall-mounted electric heaters.

### ***Anticipated Lifecycle Replacements:***

- Restroom fixtures
- Toilet partitions
- Vinyl sheet flooring
- Acoustic ceiling tiles

### ***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.

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

## 10 CERTIFICATION

The Town of Dedham Schools retained EMG to perform this Facility Condition Assessment in connection with its continued operation of Dedham High School, 140 Whiting Avenue, Dedham, Massachusetts, the "Property". It is our understanding that the primary interest of The Town of Dedham Schools 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:** Joshua Hogan, PE  
Project Manager

**Reviewed by:**



---

Scott Williford  
Technical Report Reviewer for  
Bill Champion  
Program Manager  
[bchampion@emgcorp.com](mailto:bchampion@emgcorp.com)  
800.733.0660 x6234

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

## 11 APPENDICES

---

- APPENDIX A: PHOTOGRAPHIC RECORD
- APPENDIX B: SITE AND FLOOR PLANS
- APPENDIX C: SUPPORTING DOCUMENTATION
- APPENDIX D: EMG ACCESSIBILITY CHECKLIST
- APPENDIX E: PRE-SURVEY QUESTIONNAIRE

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

---

---

# APPENDIX A: PHOTOGRAPHIC RECORD

---



PHOTO #1: *SITE AND LANDSCAPING*



PHOTO #2: *MAIN ENTRANCE*



PHOTO #3: *SOUTH ELEVATION*



PHOTO #4: *EAST ELEVATION*



PHOTO #5: *WEST ELEVATION*



PHOTO #6: *NORTH ELEVATION*



PHOTO #7: ELEVATED WALKWAY



PHOTO #8: ASPHALT PAVED STAFF PARKING LOT



PHOTO #9: ACCESSIBLE PARKING



PHOTO #10: CRACKING ACROSS A SECTION OF ASPHALT PAVED SIDEWALK



PHOTO #11: CONCRETE SIDEWALK AND ENTRANCE



PHOTO #12: DAMAGED CONCRETE AND A POTENTIAL TRIP HAZARD AT A SECTION OF SIDEWALK ADJACENT TO MAIN ENTRANCE



PHOTO #13: CHAIN-LINK FENCING AND STONE RETAINING WALL AT THE SITE PERIMETER



PHOTO #14: A SECTION OF DAMAGED RETAINING WALL AND DISPLACED CONCRETE CURB AT THE SITE PERIMETER



PHOTO #15: A VERTICAL CRACK AT THE RETAINING WALL ADJACENT TO THE GYMNASIUM



PHOTO #16: DAMAGED CONCRETE STAIRS AT THE LOADING DOCK



PHOTO #17: CONCRETE FOOTINGS WITHIN THE CRAWL SPACE



PHOTO #18: DETERIORATED CONCRETE AND EXPOSED STEEL REINFORCING AT THE EXTERIOR FACE OF THE FOUNDATION WALL



PHOTO #19: *CRACKED CONCRETE FOUNDATION AT A BUILDING CORNER*



PHOTO #20: *STRUCTURAL STEEL FRAMING*



PHOTO #21: *LOW-SLOPED GRAVEL SURFACED BUILT-UP ROOFING*



PHOTO #22: *STEEP-SLOPED EPDM ROOFING*



PHOTO #23: *ROOF-MOUNTED SOLAR PANELS*



PHOTO #24: *LOOSE GRAVEL SURFACING*



PHOTO #25: AREA OF DAMAGED ROOF FLASHING AT THE FITNESS CENTER ROOF

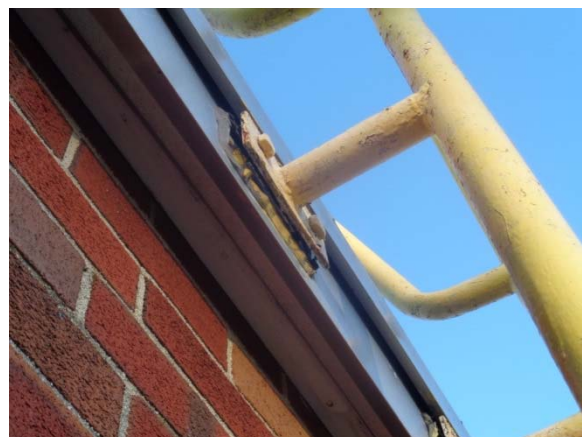


PHOTO #26: DETACHED ROOF LADDER



PHOTO #27: DETERIORATED MORTAR JOINTS



PHOTO #28: CRACKED BRICK MASONRY EXTERIOR WALL



PHOTO #29: METAL PANEL EXTERIOR WALL



PHOTO #30: CORRODED EXTERIOR METAL WALL



PHOTO #31: EXTERIOR CURTAIN WALL GLAZING



PHOTO #32: DAMAGED CURTAIN WALL WINDOW FRAME



PHOTO #33: DETERIORATED CURTAIN WALL GLAZING PUTTY AND FAILED PAINT



PHOTO #34: UPPER LEVEL SINGLE-PANE WINDOWS



PHOTO #35: TRANSLUCENT PANEL REPLACEMENT WINDOWS AT THE GYM



PHOTO #36: INSULATED METAL EXTERIOR DOORS



PHOTO #37: DAMAGED WOOD FIBER SOFFIT AT THE UNDERSIDE OF THE ELEVATED WALKWAY



PHOTO #38: STEAM AND HYDRONIC HEATING BOILERS



PHOTO #39: HEATING HOT WATER CIRCULATION PUMPS



PHOTO #40: INTERIOR AIR HANDLING UNIT



PHOTO #41: ROOFTOP PACKAGED UNIT



PHOTO #42: PNEUMATIC AND DIRECT DIGITAL HVAC CONTROLS



PHOTO #43: *INDIRECT WATER HEATERS*



PHOTO #44: *MAIN ELECTRICAL SWITCHGEAR*



PHOTO #45: *INDOOR EMERGENCY GENERATOR*

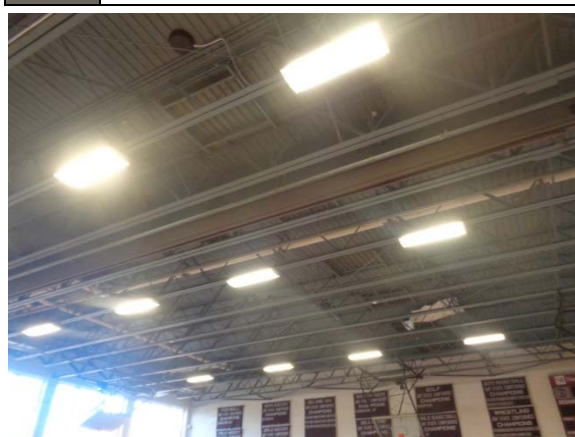


PHOTO #46: *INTERIOR LIGHTING*



PHOTO #47: *HYDRAULIC PASSENGER ELEVATOR  
MACHINERY AND CONTROLS*



PHOTO #48: *ELEVATOR CAB FINISHES*



PHOTO #49: FIRE AND LIFE SAFETY DEVICES



PHOTO #50: COMMERCIAL KITCHEN EQUIPMENT



PHOTO #51: CLASSROOM



PHOTO #52: MEDIA CENTER



PHOTO #53: AUDITORIUM

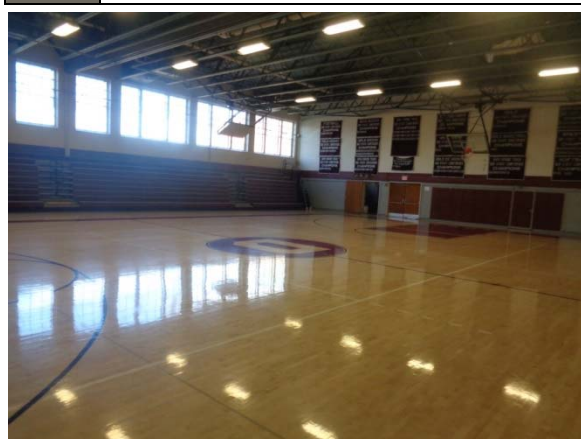


PHOTO #54: GYMNASIUM

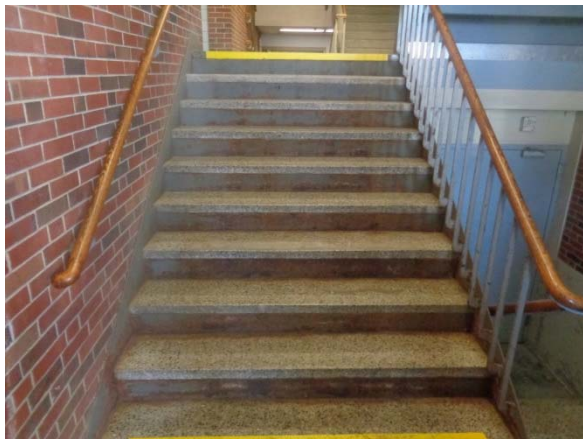


PHOTO #55: INTERIOR STAIRS



PHOTO #56: 9X9 VINYL TILE FLOORING



PHOTO #57: AREA OF POORLY-FITTING CEILING TILES



PHOTO #58: INTERIOR SOLID-WOOD DOORS



PHOTO #59: CONCESSION BUILDING, RESTROOMS AND STORAGE SHED



PHOTO #60: ARTIFICIAL TURF FIELD AND TRACK

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

---

---

## APPENDIX B: SITE AND FLOOR PLANS

---

## Site Plan



**Project Name:**

Dedham – Dedham High School

**Project Number:**

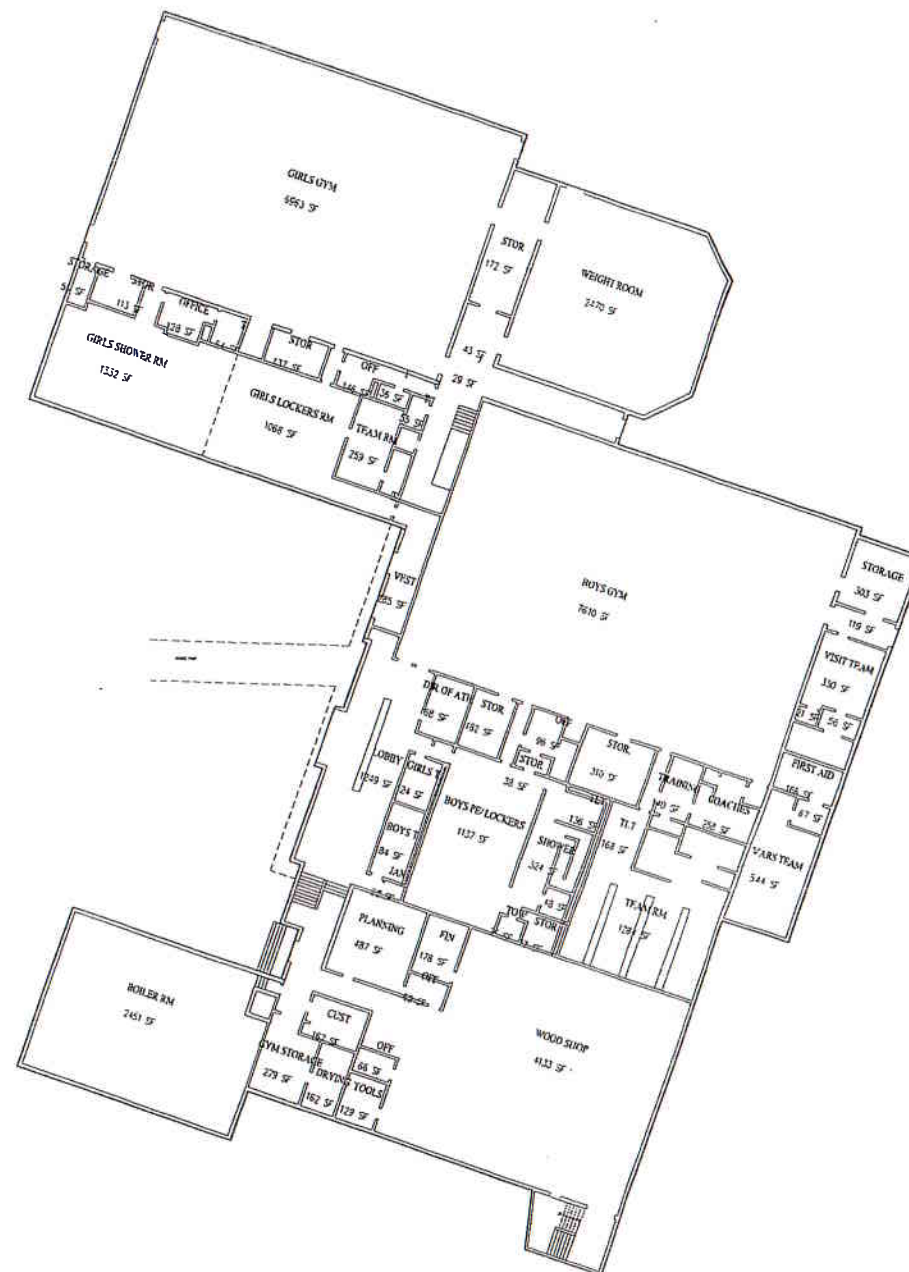
121711.16R000-002.322

**Source:**

Google Earth

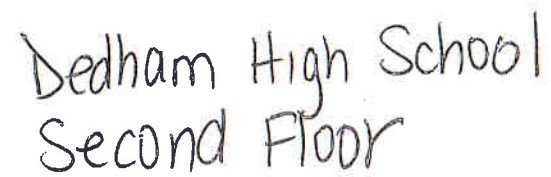
**On-Site Date:**

October 11, 12 and 17, 2016



Dedham High School  
Basement





## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

---

---

## APPENDIX C: SUPPORTING DOCUMENTATION

---

# Summer 2016: 10 DHS Projects



1. Telecor PA System
2. Power Transformer/Switchgear
3. CAD Lab/Engineering Lab & Art Studio#3
4. Kiln Relocation
5. Lower Gym Entrance - ADA Accessible
6. Whiteboard Installation
7. Room Darkening Shades
8. Ceilings in 1<sup>st</sup> Floor A wing & B wing
9. Nurse Suite Kitchenette
10. Youth Commission Offices



# The Commonwealth of Massachusetts

## Department of Public Safety

1 Ashburton Place, Boston, MA 02108-1618

### Certificate For Use of Elevator

Chapter 143 General Laws, as amended

Location: 140 WHITING AVENUE,  
DEDHAM, 02026

Issued On: June 28, 2016

Expires: May 31, 2017

Chapter 143 of the General Law, Section 65 states the  
(elevator inspection) certificate shall be posted in a  
conspicuous place in or near the cab or car of such elevator.

Capacity (lbs): 2500

Speed (fpm): 100

State ID#: 73-P-79

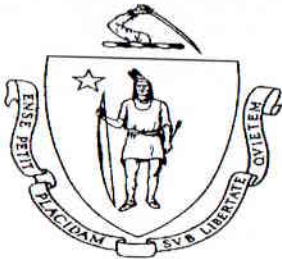
Inspection #: INS-068205

A handwritten signature in black ink, appearing to read "Matt Carlin".

---

Matt Carlin  
Commissioner

IN CASE OF ACCIDENT NOTIFY (508) 820-1444 AT ONCE.  
REPORT UNSAFE CONDITIONS TO BUILDING MANAGER / OWNER



# The Commonwealth of Massachusetts

## Department of Public Safety

1 Ashburton Place, Boston, MA 02108-1618

### Certificate For Use of Elevator

Chapter 143 General Laws, as amended

Location: 140 WHITING AVENUE,  
DEDHAM, 02026

Issued On: June 28, 2016

Expires: May 31, 2017

Chapter 143 of the General Law, Section 65 states the  
(elevator inspection) certificate shall be posted in a  
conspicuous place in or near the cab or car of such elevator.

Capacity (lbs): 1400

Speed (fpm): 30

State ID#: 73-L-107

Inspection #: INS-052722

A handwritten signature in black ink, appearing to read "Matt Carlin".

---

Matt Carlin  
Commissioner

IN CASE OF ACCIDENT NOTIFY (508) 820-1444 AT ONCE.  
REPORT UNSAFE CONDITIONS TO BUILDING MANAGER / OWNER

**2016 School Survey Questionnaire and Information Request  
Dedham High School - Dedham Public Schools - September 2016**

**District Questions**

- A. In order to expedite the survey process and gather accurate and complete information for each District, the Superintendent or designee should be prepared to answer these questions when Assessors arrive in the District for site visits:
1. Does the District have a Master Plan? If Yes, please provide the following information:
    - Year Completed - **2013**
    - Name of Firm that prepared the Master Plan - **Dore & Whittier**
  2. Has the District performed renovations/construction independent of MSBA? If so please describe: **YES - Please see document "Dedham Public Schools Capital Improvement Projects 1961-2003."**
  3. District Technology Plan:
    - a. What is the District ES Student to device ration standard? 1 device per **2** students.
    - b. What is the District MS student to device ratio standard? 1 device per **1** student.
    - c. What is the District HS student to device ratio standard? 1 device per **1** student.
  4. Are there any District-controlled buildings that were previously used as Educational space? If yes, please provide the following information for each building that is no longer used as educational space:
    - Building Name and address - **Dexter School - 1100 High Street**
    - Year Opened - **1962**
    - Last year used as a school - **1976**
    - Current use - **Vacant - to be demolished - November 2016**
    - Reason the building ceased to be used as educational space -
      - Operating costs -
      - **Lack of Enrollment - redistricting**
      - Building Condition and/or
      - Other? If other, please provide brief description

5. Does the District have any shared campuses? **NO** If yes, please answer the following

questions:

- a. Are there multiple school buildings on one campus? **NO**
- b. Are there multiple school buildings within one building? **NO**
- c. Please provide the names of all schools which share a campus. **N/A**

### **School Questions**

- A. In order to expedite the survey process and gather accurate and complete information for each school, the School Principal, Facilities Director, and/or designee with knowledge of the history and use of the school should be prepared to provide the following information during the on-site assessment:
- School Area in Gross Square Feet - **307,323 GSF**
    - If the school is composed of multiple buildings, please also provide the combined Gross Square Footage.
  - Year Opened - **1959**
  - How many CR lack natural daylighting (windows, solar tubes) - **20**
  - Are there student restrooms on each floor or wing: **YES**
  - Technology
    - What is the approximate device to student ratio; 1 device per   **1**   student.
      - **The high school is in its sixth year of a one to one program.**
    - What is the internet download speed to campus?
      - **District based Internet; four lines can be used; 500 Mbps down for two and 150 Mbps down for two; residential type connections**
    - What is the internet upload speed to campus?
      - **District based Internet; four lines can be used; 500 Mbps up for two and 20 Mbps up for two; residential type connections**
    - How many classrooms have wired internet coverage;
      - **All of them.**
    - How many classrooms have wireless internet coverage;
      - **All of them**
    - Does Library have wireless internet coverage;
      - **Yes**

- Does Cafeteria have wireless internet coverage;
  - **Yes**
- Does the Gymnasium have wireless internet coverage;
  - **Yes**
- Does Auditorium have wireless internet coverage;
  - **Yes**
- How many classrooms have dedicated computer-accessible display technology;
  - **All of them.**
- How many classrooms have installed sound amplification;
  - **None currently; added as needed.**
- How many portable sound amplification systems do you have;
  - **None**
- Do 75% or more of the classrooms have sufficient power outlets to support technology without extension cords;
  - **Yes**
- Does the technology infrastructure impact ability to conduct assessment testing?
  - **Yes, positively.**

- **Security**

- Is there surveillance camera coverage - exterior - **YES** - full, **partial**, none
  - Is there surveillance camera coverage at the entrance - **YES** - full, **partial**, none
  - Is there surveillance camera coverage - interior - **YES** - full, **partial**, none
  - Presence of Intrusion Alarms - **YES** - **full**, partial, none
  - Presence and extent of Metal Detector Coverage - **NO** - full, partial, **none**
  - Is there a Secure Entry - **YES**
  - Security Staff, if any - **NO** - full, partial, **none**
  - Is the site approach visible from Administration Suite - **YES** - **Partially**
  - Is there a Credentials/ID system for facility/staff/visitors in place - **YES**
  - How many classrooms have two-way communication with office/security?  
**ALL (67)**
- Whether there is an imminent danger of structural failure that could cause significant harm to building or occupants? **NO IMMINENT DANGER** If an imminent danger of structural failure exists, please answer the following questions:

- For what grade level the building was originally built: **9-12**
- Number of Floors: **3**
- Whether the building is partially or fully occupied or vacant: **Fully Occupied**
- Be prepared to provide a history of all Additions, Renovations and installation of Modular Classrooms at each school building, including:
  - Year of Addition, Renovation or Modularity:
  - If Modularity was installed, please provide the Number of Modularity, Age of Modularity, and number of Modular Classrooms:
  - Brief description of addition/renovations, (e.g. Addition of 10 classrooms in 1998 or all single-paned windows replaced in 2000).
  - **1967 - 24 classrooms; 1 gym; 1 locker room; a multi-purpose fitness room added (B wing, top of E wing, girls gym)**
  - **1975 - 17 classrooms; 1 library; 1 cafeteria; 1 kitchen added (D Wing)**
- **Building Systems:**
  - **Roof**
    - Total Square Footage of all roof sections (per building) - **136,143 sq ft**
    - Oldest roof section - year - **2002**
    - Square footage of oldest roof section - **28504 sq ft**
    - Oldest roof section, type: built-up, single ply, etc. - **Built up**
    - Second oldest roof section - year - **2003**
    - Square footage of second oldest roof section - **65078 sq ft**
    - Second oldest roof section type: built-up, single ply, etc. - **Built up**
    - Third oldest roof section - year - **2007**
    - Square footage of third oldest roof section - **42561 sq ft**
    - Third oldest roof section type: built-up, single ply, etc - **Built up**
  - **Exterior Windows**
    - Oldest windows - year - **1959**
    - Percent of total windows - **60%**
    - Oldest Windows type - single pane wood, insulated wood, single pane steel, etc. - **Single pane steel**
    - Second oldest windows - year - **1967**
    - Percent of total windows - **40%**

- Second oldest windows type, single pane wood, insulated wood, single pane steel, etc.? **Single pane steel**
- **Boilers**
  - Oldest boiler - year - **2010**
  - Oldest boiler fuel type: oil, gas, dual, electric, propane, other - **Gas**
  - Second oldest boiler - year - **N/A**
  - Second oldest boiler fuel type: oil, gas, dual, electric, propane, other - **N/A**
- **HVAC**
  - Age of oldest - year - **1999**
  - HVAC heating type: hot water, steam, **forced air**, heat pump, other
  - HVAC Ventilation/AC type: chiller, **DX/Split, DX/Package**, displacement ventilation, window units, other, none
  - HVAC Ventilation/AC Coverage: full, **partial**, none
- **Electrical**
  - Amperage of the main breaker A - **1000 amp**
  - Voltage of the main breaker A: 120/208 single phase, 120/208 three-phase, 480/277 three phase or other; **277/480 -three phase**
  - Amperage of the main breaker B - **N/A**
  - Voltage of the main breaker B: 120/208 single phase, 120/208 three-phase, 480/277 three phase or other - **N/A**
  - Amperage of the main breaker C - **N/A**
  - Voltage of the main breaker C: 120/208 single phase, 120/208 three-phase, 480/277 three phase or other - **N/A**
- **Elevators**
  - How many elevators in this building - **2**
  - How many chair lifts in this building - **1**

B. In addition to collecting the information above, the Assessors will record room usage in the school during their site visit. To facilitate this, please have a floor plan of the building that clearly shows each room in the school. A fire egress plan works well for this purpose. Using the floor plan School Personnel shall designate what each room is used for. We understand and appreciate the value of the School personnel's time, so we ask this floor plan be filled out prior to the site visit. The Assessor will then review it with the School representative at the time of the assessment and collect a copy of the

- The number used as Other: **0**

#### 5. Library/Media Center

- Does the school have a Library/Media Center: **YES**
- Is the Library/Media Center on site or off site: **YES**
- Library/Media Center Square Footage: **8658 SF**
- Is the Library/Media Center shared with another school? **NO**

#### 6. Cafeteria

- Does the school have a Cafeteria: **YES**
- What is the Square Footage of the Cafeteria dining area: **9718 SF**
- How many lunch seatings or periods: **THREE**
- Does the Cafeteria have a stage: **NO**
- If the school does not have a cafeteria, does it share one with another school?: **NO**

#### 7. Gymnasium

- Does the school have a gym: **YES**
- Number of gyms: **2**
- Square Footage of gym: **BOYS GYM - 7610 SF; GIRLS GYM - 6963 SF**
- Does the gym have a stage: **NO**
- If the school does not have a gymnasium, does it share one with another school: **N/A**
- Does the school have a Multipurpose Room that is used as a gymnasium: **NO**

#### 8. Auditorium

- Does the school have an Auditorium: **YES**
- Square Footage of the Auditorium: **6800 SF**
- Number of seats in the Auditorium: **982**

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

---

---

## APPENDIX D: EMG ACCESSIBILITY CHECKLIST

---

**Date Completed: October 17, 2016**

**Property Name: Dedham - Dedham High School**

**EMG Project Number: 121711.16R000-002.322**

	<b>Building History</b>	<b>Yes</b>	<b>No</b>	<b>Unk</b>	<b>Comments</b>
1	Has an ADA survey previously been completed for this property?	√			
2	Have any ADA improvements been made to the property?	√			
3	Does a Transition Plan / Barrier Removal Plan exist for the property?			√	Owner reported that it is unknown if a barrier removal plan is in place for the property. It is believed that there is no barrier removal plan at the current time.
4	Has building ownership or management received any ADA related complaints that have not been resolved?		√		
5	Is any litigation pending related to ADA issues?		√		
	<b>Parking</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
1	Are there sufficient accessible parking spaces with respect to the total number of reported spaces?		√		There are 205 total parking spaces that serve the high school, five of which are ADA accessible including two van stalls. Seven total accessible stalls are required. The addition of 3 is required as one of the existing stalls is non-compliant due to missing signage and pavement markings.
2	Are there sufficient van-accessible parking spaces available?	√			Two of the stalls are van-accessible parking spaces (sports field)
3	Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading "Van Accessible" at van spaces?		√		The ADA accessible parking at the single high school parking stall is non-compliant as discussed above
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?	√			
5	Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs?	√			
6	If required does signage exist directing you to accessible parking and an accessible building entrance?	√			
	<b>Ramps</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
1*	Do all ramps along accessible path of travel appear to meet slope requirements? ( 1:12 or less)	√			
2*	Are ramps that appear longer than 6 ft complete with railings on both sides?	√			

	<b>Ramps</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
3*	Does the width between railings appear at least 36 inches?	√			
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?	√			
	<b>Entrances/Exits</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
1*	Do all required accessible entrance doorways appear at least 32 inches wide and not a revolving door?	√			
2	If the main entrance is inaccessible, are there alternate accessible entrances?	√			Gymnasium/Art Building entrance
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)?	√			
	<b>Paths of Travel</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
1*	Are all paths of travel free of obstruction and wide enough for a wheelchair (appear at least 36 inches wide)?	√			
2	Are wheelchair-accessible facilities (toilet rooms, exits, etc.) identified with signage?	√			
3	Is there a path of travel that does not require the use of stairs?	√			
	<b>Elevators</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
1	Do the call buttons have visual and audible signals to indicate when a call is registered and answered when car arrives?	√			
2	Are there visual and audible signals inside cars indicating floor change?	√			
3	Are there standard raised and Braille marking on both jambs of each hoist way entrance as well as all cab/call buttons?	√			
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?	√			
5*	Are elevator controls low enough to be reached from a wheelchair (appears to be between 15 and 48 inches)?	√			
6	If a two-way emergency communication system is provided within the elevator cab, is it usable without voice communication?	√			

	Toilet Rooms	Yes	No	NA	Comments
1	Are common area public restrooms located on an accessible route?	√			
2	Are pull handles push/pull or lever type?	√			
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)?	√			
5*	Are public restrooms large enough to accommodate a wheelchair turnaround (appear to have 60" turning diameter)?	√			
6	In unisex toilet rooms, are there safety alarms with pull cords?			√	
7*	Are toilet stall doors wheelchair accessible (appear to be at least 32" wide)?	√			
8	Are grab bars provided in toilet stalls?	√			
9*	Are sinks provided with clearance for a wheelchair to roll under (appear to have 29" clearance)?	√			
10	Are sink handles operable with one hand without grasping, pinching or twisting?	√			
11	Are exposed pipes under sink sufficiently insulated against contact?		√		Some restrooms are missing sink trap protection
	Guest Rooms	Yes	No	NA	Comments
1	How many total accessible sleeping rooms does the property management report to have? <b>Provide specific number in comment field.</b> Are there sufficient reported accessible sleeping rooms with respect to the total number of reported guestrooms? See attached hot sheet.			√	
2	How many of the accessible sleeping rooms per property management have roll-in showers? <b>Provide specific number in comment field.</b> Are there sufficient reported accessible rooms with roll-in showers with respect to the total number of reported accessible guestrooms? See attached hot sheet.			√	

	<b>Guest Rooms</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
3	How many assistive listening kits and/or rooms with communication features are available per property management? <b>Provide specific number in comment field.</b> Are there sufficient reported assistive listening devices with respect to the total number of rooms? See attached hot sheet.			√	
	<b>Pools</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
1	Are public access pools provided? If the answer is no, please disregard this section.			√	
2	How many accessible access points are provided to each pool/spa? <b>Provide number in comment field.</b> Is at least one fixed lift or sloped entry to the pool provided?			√	
	<b>Play Area</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
1	Has the play area been reviewed for accessibility? All public playgrounds are subject to ADAAG standards.			√	
	<b>Exercise Equipment</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>	<b>Comments</b>
1*	Does there appear to be adequate clear floor space around the machines/equipment (30" by 48" minimum)?	√			Exercise equipment is mobile and can be moved around to accommodate accessibility as required

*\*Based on visual observation only. The dimensions were not confirmed through measurements.*

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

---

# APPENDIX E:

## 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		
Name of Building:	DEDHAM HIGH SCHOOL	Building #:	
Name of person completing questionnaire:	DENISE MORONEY		
Length of Association With the Property:	2 YEARS	Phone Number:	781-752-7812

Site Information	
Year of Construction?	1959 Add #1 - 1967 Add #2 - 1975
No. of Stories?	2 Floors. + Basement
Total Site Area?	29.5 Acres (HS, Acrey + Sports Field)
Total Building Area?	307,323 Sqft

Inspections	Date of Last Inspection	List of Any Outstanding Repairs Required
1. Elevators	2 + Audikam Lift	June 2016
2. HVAC Mechanical, Electric, Plumbing?	Fall 2016	No
3. Life-Safety/Fire?	October 2016	- No ; Twice a year Spring/Fall
4. Roofs?	Fall 2016	- NO

Key Questions	Response
Major Capital Improvements in Last 3 yrs.	See printouts
Planned Capital Expenditure For Next Year?	New suite (2015); Guidance Suite (2015) - Ceiling + LED light
Age of the Roof?	5 year plan - See attached - Door Hardware
What bldg. Systems Are Responsibilities of Tenants? (HVAC/Roof/Interior/Exterior/Paving)	2002 is the oldest
	N/A

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?	✓				• Some fire doors are not up to code - Need automatic closers/magnetic
2 Is there any pending litigation concerning the property?		✓			
3 Are there any other significant issues/hazards with the property?		✓			
4 Are there any unresolved construction defects at the property?		✓			



# FCA (Town of Dedham Schools) Pre-Survey Questionnaire

5	Has any part of the property ever contained visible suspect mold growth?		✓			
---	--	--	---	--	--	--

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?		✓			
7 Are there any recalled fire sprinkler heads (Star, GEM, Central, and Omega)?				✓	
8 Have there been indoor air quality or mold related complaints from tenants?	✓				<p>Emv.</p> <p>• Some - However, testing has been performed and there is no mold at this time.</p>

## GENERAL SITE

9	Are there any problems with erosion, storm water drainage or areas of paving that do not drain?	✓				<p>• lower gym</p> <p>• Walkway btwn the H.S. Field and Gym entrances</p>
10	Are there any problems with the landscape irrigation systems?		✓			<p>• No irrigation sys</p>

## BUILDING STRUCTURE

11	Are there any problems with foundations or structures?		✓			
12	Is there any water infiltration in basements or crawl spaces?		✓			
13	Has a termite/wood boring insect inspection been performed within the last year?		✓			

## BUILDING ENVELOPE

14	Are there any wall, or window leaks?	✓				B201/202 - Leak @ window
15	Are there any roof leaks?		✓			
16	Is the roofing covered by a warranty or bond?	✓				Covered by warranty - Tremco
17	Are there any poorly insulated areas?	✓				Windows



# FCA (Town of Dedham Schools) Pre-Survey Questionnaire

18	Is Fire Retardant Treated (FRT) plywood used?			✓		
19	Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used?				✓	

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?		✓			
21	Does any part of the electrical system use aluminum wiring?			✓		• Ask Electrician
22	Do Residential units have a less than 60-Amp service?				✓	
23	Do Commercial units have less than 200-Amp service?				✓	
24	Are there any problems with the utilities, such as inadequate capacities?	NA	✓			• However - The transformer (Nster) in transformer vault is going to be removed.

## ADA

25	Has the management previously completed an ADA review?	✓	NA			• Building Commesional has reviewed.
26	Have any ADA improvements been made to the property?	✓				
27	Does a Barrier Removal Plan exist for the property?		✓			
28	Has the Barrier Removal Plan been approved by an arms-length third party?				✓	
29	Has building ownership or management received any ADA related complaints?		✓			
30	Does elevator equipment require upgrades to meet ADA standards?		✓			

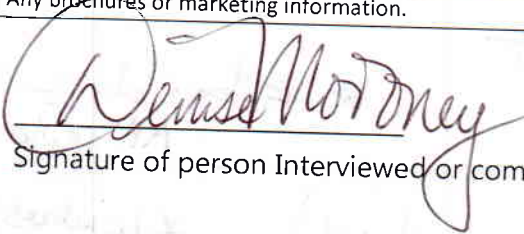


# FCA (Town of Dedham Schools) Pre-Survey Questionnaire

PLUMBING					
31	Is the property served by private water well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
32	Is the property served by a private septic system or other waste treatment systems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
33	Is polybutylene piping used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ask plumber (Also ask about galvanized pipe)
34	Are there any plumbing leaks or water pressure problems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Restroom on 2nd Flar has had leaks - Needs to be renovated.

Additional Issues or Concerns That EMG Should Know About?	
1.	The building has some galvanized pipe (domestic water)
2.	
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"/>	Some AHU's not accessible
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 checked="" type="checkbox"/>	<input type="checkbox"/>	
Site plan with bldg., roads, parking and other features	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Contact Details for Mech, Elevator, Roof, Fire Contractors:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	
Any brochures or marketing information.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

  
Signature of person interviewed or completing form

10/11/16  
Date

## FACILITY CONDITION ASSESSMENT

DEDHAM - DEDHAM HIGH SCHOOL  
140 WHITING AVENUE  
DEDHAM, MASSACHUSETTS 02026

EMG PROJECT NO: 121711.16R000-002.322

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"><li>1. All available construction documents (blueprints) for the original construction of the building or for any tenant improvement work or other recent construction work.</li><li>2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features.</li><li>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).</li><li>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.</li><li>5. For hotel or nursing home properties, provide a summary of the room types and room type quantities.</li><li>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.</li><li>7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies.</li></ol> | <ol style="list-style-type: none"><li>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.</li><li>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.</li><li>10. Records of system &amp; material ages (roof, MEP, paving, finishes, furnishings).</li><li>11. Any brochures or marketing information.</li><li>12. Appraisal, either current or previously prepared.</li><li>13. Current occupancy percentage and typical turnover rate records (for commercial and apartment properties).</li><li>14. Previous reports pertaining to the physical condition of property.</li><li>15. ADA survey and status of improvements implemented.</li><li>16. Current / pending litigation related to property condition.</li></ol> |
|---|---|

Your timely compliance with this request is greatly appreciated.

