FACILITY CONDITION ASSESSMENT

Prepared for

Ann Arbor Public Schools
2555 South State Street
Ann Arbor, Michigan 48104

FACILITY CONDITION ASSESSMENT

OF

SCARLETT MIDDLE SCHOOL
3300 LORRAINE STREET
ANN ARBOR, MICHIGAN 48108

PREPARED BY:
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DATE OF REPORT:
January 24, 2018

ONSITE DATE:
January 9-10, 2018

Immediate Repairs Report
Scarlett Middle School
1/24/2018

Location Name	EMG Renamed Item Number	ID	Cost Description	Quantity	Unit	Unit Cost	Subtotal	Deficiency Repair Estimate *
Scarlett Middle School	3.1	814404	ADA, Miscellaneous, Pool Lift Transfer Device, Replace	1	EA	$12,000.00	$12,000	**$12,000**
Scarlett Middle School	3.1	812004	Accessible Parking, Parking, Signage, Pole-Mounted,	2	EA	$500.00	$1,000	**$1,000**
Scarlett Middle School	3.1	812890	Accessible Restroom, Restroom, Lavatory Pipe Wraps,	2	EA	$80.00	$160	**$160**
Scarlett Middle School	6.4	814305	Exterior Wall, Concrete, 1-2 Stories, Repair	2400	SF	$26.01	$62,425	**$62,425**
Scarlett Middle School	6.6	812039	Overhead Door, 144 SF, Replace	2	EA	$2,634.03	$5,268	**$5,268**
Scarlett Middle School	7.1	812009	Condensing Unit/Heat Pump, Split System, 3.5 Ton, Replace	1	EA	$4,129.27	$4,129	**$4,129**
Scarlett Middle School	7.1	812013	Condensing Unit/Heat Pump, Split System, 3.5 Ton, Replace	1	EA	$4,129.27	$4,129	**$4,129**
Scarlett Middle School	7.1	812021	Ductless Split System, Single Zone, 2.5 Ton, Replace	1	EA	$6,577.13	$6,577	**$6,577**
Scarlett Middle School	7.1	813453	Air Handler, 8000, Replace	1	EA	$26,016.62	$26,017	**$26,017**
Scarlett Middle School	7.1	813365	Air Handler, 20001 - 25000, Replace	1	EA	$64,706.81	$64,707	**$64,707**
Scarlett Middle School	7.1	812898	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	812894	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	813415	Exhaust Fan, 501 - 800, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	812036	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	812914	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	813336	Exhaust Fan, 501 - 800, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	813327	Exhaust Fan, 501 - 800, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	812028	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	812903	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	812012	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	813335	Exhaust Fan, 501 - 800, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	813437	Exhaust Fan, 251 - 800, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	812007	Exhaust Fan, Roof Mounted, 801 to 1,000 CFM, Replace	1	EA	$1,769.49	$1,769	**$1,769**
Scarlett Middle School	7.1	812029	Exhaust Fan, Roof Mounted, 801 to 1,000 CFM, Replace	1	EA	$1,769.49	$1,769	**$1,769**
Scarlett Middle School	7.1	813402	Exhaust Fan, 251 - 800, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	812897	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	812913	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	812882	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	1	EA	$1,750.30	$1,750	**$1,750**

Immediate Repairs Report
Scarlett Middle School
1/24/2018

Location Name	EMG Renamed Item Number	ID	Cost Description	Quantity	Unit	Unit Cost	Subtotal	Deficiency Repair Estimate *
Scarlett Middle School	7.1	812010	Exhaust Fan, Roof Mounted, 801 to 1,000 CFM, Replace	1	EA	$1,769.49	$1,769	**$1,769**
Scarlett Middle School	7.1	813305	Exhaust Fan, 501 - 800, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	813444	Exhaust Fan, 501 - 800, Replace	1	EA	$1,750.30	$1,750	**$1,750**
Scarlett Middle School	7.1	813312	Heat Pump, 3.5 - 5, Replace	1	EA	$8,928.22	$8,928	**$8,928**
Scarlett Middle School	7.1	814683	Engineer, Mechanical/HVAC, General, Design	1	EA	$6,500.00	$6,500	**$6,500**
Scarlett Middle School	7.7	814415	Aquatics, Swimming Pool Mechanics, Replace	1	EA	$110,250.00	$110,250	**$110,250**
Scarlett Middle School	8.1	813448	Interior Stairs/Ramp, Interior Railing, Replace	12	LF	$50.00	$600	**$600**
Scarlett Middle School	8.2	812902	Freezer, Commercial, Walk-In, Replace	1	EA	$22,317.14	$22,317	**$22,317**
Scarlett Middle School	8.2	812893	Refrigerator	1	EA	$12,255.00	$12,255	**$12,255**
Immediate Repairs Total								**$384,077**

* Location Factor included in totals.

Replacement Reserves Report

Scarlett Middle School

1/24/2018

Location Name	EMG Renamed Item Number	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	Subtotal	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	Deficiency Repair Estimate
Scarlett Middle School	3.1	814404	ADA, Miscellaneous, Pool Lift Transfer Device, Replace	0	0	0	1	EA	$12,000.00	$12,000	$12,000																				**$12,000**
Scarlett Middle School	3.1	812004	Accessible Parking, Parking, Signage, Pole-Mounted,	0	30	0	2	EA	$500.00	$1,000	$1,000																				**$1,000**
Scarlett Middle School	3.1	812890	Accessible Restroom, Restroom, Lavatory Pipe Wraps,	0	0	0	2	EA	$80.00	$160	$160																				**$160**
Scarlett Middle School	5.2	812027	Roadway, Concrete, 24" by 6" straight (per LF), Replace	25	15	10	1100	LF	$24.00	$26,400											$26,400										**$26,400**
Scarlett Middle School	5.2	813461	Parking Lot, Parking Lot, Repair	25	23	2	105000	SF	$3.28	$344,442			$344,442																		**$344,442**
Scarlett Middle School	5.2	813332	Pedestrian Pavement, , Replace	30	20	10	5000	SF	$9.00	$45,000											$45,000										**$45,000**
Scarlett Middle School	5.5	812030	Flood Light, Exterior, 100 W, Replace	20	10	10	8	EA	$995.47	$7,964											$7,964										**$7,964**
Scarlett Middle School	5.5	812043	Flood Light, Exterior, 100 W, Replace	20	10	10	4	EA	$995.47	$3,982											$3,982										**$3,982**
Scarlett Middle School	5.5	812032	Flood Light, Exterior, 100 W, Replace	20	5	15	9	EA	$995.47	$8,959																$8,959					**$8,959**
Scarlett Middle School	5.5	812008	Fences & Gates, Chain Link, 6' High, Replace	30	25	5	440	LF	$37.54	$16,517						$16,517															**$16,517**
Scarlett Middle School	5.5	814625	Signage, Property, Monument/Pylon, Replace	20	10	10	1	EA	$8,602.00	$8,602											$8,602										**$8,602**
Scarlett Middle School	5.5	813387	Bike Rack, , Replace	25	6	19	3	EA	$1,090.00	$3,270																				$3,270	**$3,270**
Scarlett Middle School	5.5	813370	Play Surface/Court, Asphalt,	5	3	2	26300	SF	$0.38	$10,007			$10,007					$10,007					$10,007					$10,007			**$40,029**
Scarlett Middle School	5.5	812033	Basketball Backboard, ,	10	5	5	4	EA	$9,435.64	$37,743						$37,743										$37,743					**$75,485**
Scarlett Middle School	5.5	812025	Walkway Bollard Light, 70 to 150 W HID, Replace	20	15	5	8	EA	$1,494.12	$11,953						$11,953															**$11,953**
Scarlett Middle School	5.5	812035	Pole Light, Exterior, 105 to 200 W LED (Fixture & Bracket Arm Only), Replace	20	3	17	27	EA	$3,303.00	$89,181																		$89,181			**$89,181**
Scarlett Middle School	6.3	813302	Roof, , Replace	20	12	8	109000	SF	$10.52	$1,146,680									$1,146,680												**$1,146,680**
Scarlett Middle School	6.3	812020	Roof Hatch, Metal, Replace	30	15	15	3	EA	$1,213.44	$3,640																$3,640					**$3,640**
Scarlett Middle School	6.4	814305	Exterior Wall, Concrete, 1-2 Stories, Repair	0	20	0	2400	SF	$26.01	$62,425	$62,425																				**$62,425**
Scarlett Middle School	6.4	812024	Exterior Wall Paint, 1-2 Stories, Repair	10	9	1	25120	SF	$2.87	$72,112		$72,112										$72,112									**$144,224**
Scarlett Middle School	6.4	812037	Brick Veneer Exterior Wall, Exterior, 1-2 Stories, Repair	25	16	9	2400	SF	$41.28	$99,078										$99,078											**$99,078**
Scarlett Middle School	6.6	812042	Window, Double Glazed, 1-2 Stories, 12 SF, Replace	30	18	12	370	EA	$584.21	$216,156													$216,156								**$216,156**
Scarlett Middle School	6.6	812015	Window, Double Glazed, 1-2 Stories, 24 SF, Replace	30	12	18	15	EA	$870.45	$13,057																			$13,057		**$13,057**
Scarlett Middle School	6.6	812044	Storefront	30	12	18	1800	SF	$48.00	$86,400																			$86,400		**$86,400**
Scarlett Middle School	6.6	812041	Exterior Door, Fully Glazed, Exterior Door, Replace	30	14	16	17	EA	$2,106.57	$35,812																	$35,812				**$35,812**
Scarlett Middle School	6.6	812017	Exterior Door, Exterior Door, Replace	25	11	14	26	EA	$950.12	$24,703														$24,703							**$24,703**
Scarlett Middle School	6.6	812039	Overhead Door, 144 SF, Replace	35	35	0	2	EA	$2,634.03	$5,268	$5,268																				**$5,268**
Scarlett Middle School	7.1	813388	Gas Distribution System, 5, Replace	20	13	7	1	EA	$9,652.21	$9,652								$9,652													**$9,652**
Scarlett Middle School	7.1	813376	Boiler, 3753, Replace	25	13	12	1	EA	$120,905.15	$120,905													$120,905								**$120,905**
Scarlett Middle School	7.1	813427	Boiler, 3753, Replace	25	13	12	1	EA	$120,905.15	$120,905													$120,905								**$120,905**
Scarlett Middle School	7.1	813420	Boiler, 3753, Replace	25	13	12	1	EA	$120,905.15	$120,905													$120,905								**$120,905**
Scarlett Middle School	7.1	813322	Boiler, 3753, Replace	25	13	12	1	EA	$120,905.15	$120,905													$120,905								**$120,905**
Scarlett Middle School	7.1	813372	Boiler Room Piping System, 101 - 175, Replace	25	19	6	1	EA	$3,998.56	$3,999							$3,999														**$3,999**
Scarlett Middle School	7.1	813357	Boiler Room Piping System, 176 - 250, Replace	25	8	17	1	EA	$4,696.79	$4,697																		$4,697			**$4,697**
Scarlett Middle School	7.1	813396	Heat Exchanger, 26 - 40, Replace	35	18	17	1	EA	$5,349.23	$5,349																		$5,349			**$5,349**
Scarlett Middle School	7.1	813355	Evaporative Cooler, 200, Replace	15	13	2	1	EA	$13,057.46	$13,057			$13,057															$13,057			**$26,115**
Scarlett Middle School	7.1	812009	Condensing Unit/Heat Pump, Split System, 3.5 Ton, Replace	15	16	0	1	EA	$4,129.27	$4,129	$4,129															$4,129					**$8,259**
Scarlett Middle School	7.1	812013	Condensing Unit/Heat Pump, Split System, 3.5 Ton, Replace	15	16	0	1	EA	$4,129.27	$4,129	$4,129															$4,129					**$8,259**
Scarlett Middle School	7.1	812021	Ductless Split System, Single Zone, 2.5 Ton, Replace	15	28	0	1	EA	$6,577.13	$6,577	$6,577															$6,577					**$13,154**
Scarlett Middle School	7.1	813451	Split System, 2.5, Replace	15	11	4	1	EA	$3,366.36	$3,366					$3,366															$3,366	**$6,733**
Scarlett Middle School	7.1	813363	Split System, 2.5, Replace	15	10	5	1	EA	$3,366.36	$3,366						$3,366															**$3,366**
Scarlett Middle School	7.1	813364	Split System, 2.5, Replace	15	10	5	1	EA	$3,366.36	$3,366						$3,366															**$3,366**
Scarlett Middle School	7.1	813303	Split System, 2.5, Replace	15	10	5	1	EA	$3,578.67	$3,579						$3,579															**$3,579**
Scarlett Middle School	7.1	812886	Split System, 1.5, Replace	15	5	10	1	EA	$4,473.11	$4,473											$4,473										**$4,473**
Scarlett Middle School	7.1	813453	Air Handler, 8000, Replace	30	50	0	1	EA	$26,016.62	$26,017	$26,017																				**$26,017**
Scarlett Middle School	7.1	813365	Air Handler, 20001 - 25000, Replace	30	50	0	1	EA	$64,706.81	$64,707	$64,707																				**$64,707**
Scarlett Middle School	7.1	813371	Air Handler, 10001 - 15000, Replace	30	26	4	1	EA	$41,979.17	$41,979					$41,979																**$41,979**
Scarlett Middle School	7.1	813379	Air Handler, 5201 - 6500, Replace	30	26	4	1	EA	$22,172.97	$22,173					$22,173																**$22,173**
Scarlett Middle School	7.1	813454	Fan, 15001 - 30000, Replace	20	15	5	1	EA	$24,686.81	$24,687						$24,687															**$24,687**
Scarlett Middle School	7.1	813423	Fan, 15001 - 30000, Replace	20	15	5	1	EA	$24,686.81	$24,687						$24,687															**$24,687**
Scarlett Middle School	7.1	813347	Air Handler, 5600, Replace	30	25	5	1	EA	$22,172.97	$22,173						$22,173															**$22,173**

Location Name	EMG Renamed Item Number	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	Subtotal	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	Deficiency Repair Estimate
Scarlett Middle School	7.1	813341	Fan, 15001 - 30000, Replace	20	15	5	1	EA	$24,686.81	$24,687						$24,687															**$24,687**
Scarlett Middle School	7.1	813360	Air Handler, 5201 - 6500, Replace	30	25	5	1	EA	$22,172.97	$22,173						$22,173															**$22,173**
Scarlett Middle School	7.1	813413	Air Handler, 10001 - 15000, Replace	30	25	5	1	EA	$41,979.17	$41,979						$41,979															**$41,979**
Scarlett Middle School	7.1	813441	Fan, 15001 - 30000, Replace	20	15	5	1	EA	$24,686.81	$24,687						$24,687															**$24,687**
Scarlett Middle School	7.1	813320	Air Handler, 6501 - 8000, Replace	30	24	6	1	EA	$26,016.62	$26,017							$26,017														**$26,017**
Scarlett Middle School	7.1	813333	VAV Unit, 401 - 800, Replace	15	6	9	38	EA	$4,983.58	$189,376										$189,376											**$189,376**
Scarlett Middle School	7.1	813330	Air Handler, 9000, Replace	30	17	13	1	EA	$31,181.53	$31,182														$31,182							**$31,182**
Scarlett Middle School	7.1	813417	Air Handler, 6500, Replace	30	17	13	1	EA	$22,172.97	$22,173														$22,173							**$22,173**
Scarlett Middle School	7.1	813459	Air Handler, 5201 - 6500, Replace	30	17	13	1	EA	$22,172.97	$22,173														$22,173							**$22,173**
Scarlett Middle School	7.1	812898	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812894	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	813415	Exhaust Fan, 501 - 800, Replace	15	36	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812036	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812914	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	813336	Exhaust Fan, 501 - 800, Replace	15	36	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	813327	Exhaust Fan, 501 - 800, Replace	15	36	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812028	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812903	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812012	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	813335	Exhaust Fan, 501 - 800, Replace	15	36	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	813437	Exhaust Fan, 251 - 800, Replace	15	36	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812007	Exhaust Fan, Roof Mounted, 801 to 1,000 CFM, Replace	15	15	0	1	EA	$1,769.49	$1,769	$1,769															$1,769					**$3,539**
Scarlett Middle School	7.1	812029	Exhaust Fan, Roof Mounted, 801 to 1,000 CFM, Replace	15	15	0	1	EA	$1,769.49	$1,769	$1,769															$1,769					**$3,539**
Scarlett Middle School	7.1	813402	Exhaust Fan, 251 - 800, Replace	15	36	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812897	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812913	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812882	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812010	Exhaust Fan, Roof Mounted, 801 to 1,000 CFM, Replace	15	15	0	1	EA	$1,769.49	$1,769	$1,769															$1,769					**$3,539**
Scarlett Middle School	7.1	813305	Exhaust Fan, 501 - 800, Replace	15	36	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	813444	Exhaust Fan, 501 - 800, Replace	15	36	0	1	EA	$1,750.30	$1,750	$1,750															$1,750					**$3,501**
Scarlett Middle School	7.1	812031	Exhaust Fan, Roof Mounted, 1,001 to 1,500 CFM, Replace	15	12	3	1	EA	$1,927.94	$1,928				$1,928														$1,928			**$3,856**
Scarlett Middle School	7.1	813434	Exhaust Fan, 1100, Replace	15	12	3	1	EA	$1,927.94	$1,928				$1,928														$1,928			**$3,856**
Scarlett Middle School	7.1	812019	Exhaust Fan, Roof Mounted, 1,001 to 1,500 CFM, Replace	15	12	3	1	EA	$1,927.94	$1,928				$1,928														$1,928			**$3,856**
Scarlett Middle School	7.1	813324	Exhaust Fan, 1692, Replace	15	12	3	1	EA	$2,045.12	$2,045				$2,045														$2,045			**$4,090**
Scarlett Middle School	7.1	813344	Exhaust Fan, 501 - 800, Replace	15	12	3	1	EA	$1,750.30	$1,750				$1,750														$1,750			**$3,501**
Scarlett Middle School	7.1	813435	Exhaust Fan, 501 - 800, Replace	15	12	3	1	EA	$1,750.30	$1,750				$1,750														$1,750			**$3,501**
Scarlett Middle School	7.1	813299	Exhaust Fan, 750, Replace	15	12	3	1	EA	$1,750.30	$1,750				$1,750														$1,750			**$3,501**
Scarlett Middle School	7.1	813309	Exhaust Fan, 1100, Replace	15	12	3	1	EA	$1,927.94	$1,928				$1,928														$1,928			**$3,856**
Scarlett Middle School	7.1	813349	Exhaust Fan, 501 - 800, Replace	15	12	3	1	EA	$1,750.30	$1,750				$1,750														$1,750			**$3,501**
Scarlett Middle School	7.1	813397	Exhaust Fan, 501 - 800, Replace	15	11	4	1	EA	$1,750.30	$1,750					$1,750															$1,750	**$3,501**
Scarlett Middle School	7.1	812038	Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	10	5	1	EA	$1,750.30	$1,750						$1,750														**$1,750**
Scarlett Middle School	7.1	813421	Exhaust Fan, 501 - 800, Replace	15	8	7	1	EA	$1,750.30	$1,750								$1,750												**$1,750**
Scarlett Middle School	7.1	813316	Circulation Pump, 5, Replace	20	16	4	1	EA	$5,518.88	$5,519					$5,519															**$5,519**
Scarlett Middle School	7.1	813340	Circulation Pump, 5, Replace	20	16	4	1	EA	$5,518.88	$5,519					$5,519															**$5,519**
Scarlett Middle School	7.1	814608	HVAC System Hydronic Piping, 2-Pipe, Replace	30	20	10	178650	SF	$6.50	$1,161,225										$1,161,225										**$1,161,225**
Scarlett Middle School	7.1	813436	Unit Heater, 37 - 85, Replace	20	18	2	1	EA	$1,900.28	$1,900			$1,900																	**$1,900**
Scarlett Middle School	7.1	813432	Unit Heater, 37 - 85, Replace	20	18	2	1	EA	$1,900.28	$1,900			$1,900																	**$1,900**
Scarlett Middle School	7.1	813368	Unit Heater, .33, Replace	20	18	2	2	EA	$1,516.80	$3,034			$3,034																	**$3,034**
Scarlett Middle School	7.1	813455	Radiator, Hydronic Baseboard (per LF), Replace	50	35	15	1525	LF	$132.77	$202,474																$202,474					**$202,474**
Scarlett Middle School	7.1	813410	Unit Heater, 3 - 6, Replace	20	2	18	1	EA	$1,741.57	$1,742																		$1,742			**$1,742**
Scarlett Middle School	7.1	813312	Heat Pump, 3.5 - 5, Replace	15	28	0	1	EA	$8,928.22	$8,928	$8,928															$8,928					**$17,856**
Scarlett Middle School	7.1	812906	Package Unit, 3.5,	15	13	2	1	EA	$10,226.65	$10,227			$10,227														$10,227				**$20,453**
Scarlett Middle School	7.1	812905	Package Unit, 5, Replace	15	12	3	1	EA	$11,239.29	$11,239				$11,239														$11,239			**$22,479**
Scarlett Middle School	7.1	812040	Packaged Unit (RTU), 8 to 10 Ton, Replace	15	11	4	1	EA	$18,554.44	$18,554					$18,554														$18,554	**$37,109**
Scarlett Middle School	7.1	813338	HVAC Automation/Safety, Full Upgrade (per SF),	20	18	2	178650	SF	$5.36	$958,011			$958,011																	**$958,011**
Scarlett Middle School	7.1	813308	Air Purifier, 225, Replace	5	0	5	1	EA	$7,999.68	$8,000						$8,000				$8,000						$8,000					**$23,999**

Location Name	EMG Renamed Item Number	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	Subtotal	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	Deficiency Repair Estimate
Scarlett Middle School	7.1	813310	Variable Frequency Drive, 7.5, Replace	20	6	14	1	EA	$5,638.29	$5,638															$5,638						**$5,638**
Scarlett Middle School	7.1	813362	Variable Frequency Drive, 7.5, Replace	20	6	14	1	EA	$5,638.29	$5,638															$5,638						**$5,638**
Scarlett Middle School	7.1	813411	Gas Cabinet, , Replace	15	7	8	32	EA	$1,867.40	$59,757									$59,757												**$59,757**
Scarlett Middle School	7.1	813319	Ceiling Fan, Residential, Replace	15	10	5	3	EA	$354.11	$1,062						$1,062															**$1,062**
Scarlett Middle School	7.1	814683	Engineer, Mechanical/HVAC, General, Design	0	0	0	1	EA	$6,500.00	$6,500	$6,500																				**$6,500**
Scarlett Middle School	7.2	812883	Toilet, , Replace	20	8	12	40	EA	$842.97	$33,719													$33,719								**$33,719**
Scarlett Middle School	7.2	812908	Urinal, Vitreous China, Replace	20	6	14	17	EA	$1,193.44	$20,288															$20,288						**$20,288**
Scarlett Middle School	7.2	813460	Service Sink, Floor, Replace	35	23	12	5	EA	$1,599.51	$7,998													$7,998								**$7,998**
Scarlett Middle School	7.2	813377	Sink, Stainless Steel, Replace	20	8	12	1	EA	$1,054.05	$1,054													$1,054								**$1,054**
Scarlett Middle School	7.2	812907	Sink, Plastic, Replace	20	7	13	6	EA	$575.99	$3,456														$3,456							**$3,456**
Scarlett Middle School	7.2	812915	Sink, Vitreous China, Replace	20	6	14	26	EA	$861.51	$22,399															$22,399						**$22,399**
Scarlett Middle School	7.2	812912	Bathtub/Shower, Enameled Steel, Replace	20	12	8	29	EA	$2,708.69	$78,552									$78,552												**$78,552**
Scarlett Middle School	7.2	813348	Drinking Fountain, Vitreous China, Replace	15	8	7	9	EA	$1,938.99	$17,451								$17,451													**$17,451**
Scarlett Middle School	7.2	813361	Drinking Fountain, Refrigerated, Replace	10	2	8	6	EA	$1,257.51	$7,545									$7,545											$7,545	**$15,090**
Scarlett Middle School	7.2	813395	Emergency Eye Wash, , Replace	15	8	7	2	EA	$2,114.70	$4,229								$4,229													**$4,229**
Scarlett Middle School	7.2	813345	Water Pumps, 7.5, Replace	20	18	2	1	EA	$11,641.34	$11,641			$11,641																		**$11,641**
Scarlett Middle School	7.2	813429	Water Filter, , Replace	15	13	2	1	EA	$8,975.51	$8,976			$8,976															$8,976			**$17,951**
Scarlett Middle School	7.2	813446	Water Pumps, .08, Replace	20	9	11	1	EA	$3,414.40	$3,414												$3,414									**$3,414**
Scarlett Middle School	7.2	813378	Water Pumps, .33, Replace	20	9	11	1	EA	$3,414.40	$3,414												$3,414									**$3,414**
Scarlett Middle School	7.2	813452	Water Softener, 200, Replace	20	5	15	1	EA	$2,778.24	$2,778																$2,778					**$2,778**
Scarlett Middle School	7.2	814606	Plumbing System, Domestic Supply, Replace	40	33	7	40000	SF	$5.84	$233,600								$233,600													**$233,600**
Scarlett Middle School	7.2	814587	Plumbing System, Sanitary Waste, Replace	40	28	12	10000	SF	$3.89	$38,900													$38,900								**$38,900**
Scarlett Middle School	7.2	813400	Pool, 98, Replace	15	6	9	3	EA	$6,733.29	$20,200										$20,200											**$20,200**
Scarlett Middle School	7.4	813408	Distribution Panel, 400, Replace	30	29	1	1	EA	$9,487.85	$9,488		$9,488																			**$9,488**
Scarlett Middle School	7.4	813456	Switchgear, 2000, Replace	30	29	1	1	EA	$285,917.81	$285,918		$285,918																			**$285,918**
Scarlett Middle School	7.4	813356	Secondary Transformer, 112.5, Replace	30	29	1	1	EA	$11,920.05	$11,920		$11,920																			**$11,920**
Scarlett Middle School	7.4	813409	Secondary Transformer, 150, Replace	30	29	1	1	EA	$15,803.27	$15,803		$15,803																			**$15,803**
Scarlett Middle School	7.4	813385	Distribution Panel, 600, Replace	30	29	1	1	EA	$13,423.81	$13,424		$13,424																			**$13,424**
Scarlett Middle School	7.4	813404	Distribution Panel, 400, Replace	30	29	1	1	EA	$9,487.85	$9,488		$9,488																			**$9,488**
Scarlett Middle School	7.4	813329	Distribution Panel, 400, Replace	30	29	1	1	EA	$9,487.85	$9,488		$9,488																			**$9,488**
Scarlett Middle School	7.4	813449	Distribution Panel, 100, Replace	30	29	1	1	EA	$7,242.19	$7,242		$7,242																			**$7,242**
Scarlett Middle School	7.4	813337	Distribution Panel, 600, Replace	30	29	1	1	EA	$13,423.81	$13,424		$13,424																			**$13,424**
Scarlett Middle School	7.4	813374	Distribution Panel, 400, Replace	30	29	1	1	EA	$9,777.06	$9,777		$9,777																			**$9,777**
Scarlett Middle School	7.4	813383	Distribution Panel, 200, Replace	30	29	1	1	EA	$9,777.06	$9,777		$9,777																			**$9,777**
Scarlett Middle School	7.4	813369	Secondary Transformer, 112.5, Replace	30	29	1	1	EA	$11,920.05	$11,920		$11,920																			**$11,920**
Scarlett Middle School	7.4	813392	Secondary Transformer, 112.5, Replace	30	29	1	1	EA	$11,920.05	$11,920		$11,920																			**$11,920**
Scarlett Middle School	7.4	812904	Distribution Panel, 400, Replace	30	20	10	1	EA	$9,487.85	$9,488											$9,488										**$9,488**
Scarlett Middle School	7.4	813393	Distribution Panel, 225, Replace	30	12	18	1	EA	$7,951.00	$7,951																			$7,951		**$7,951**
Scarlett Middle School	7.4	813430	Secondary Transformer, 75, Replace	30	12	18	1	EA	$8,844.95	$8,845																			$8,845		**$8,845**
Scarlett Middle School	7.4	813367	Distribution Panel, 600, Replace	30	12	18	1	EA	$9,487.85	$9,488																			$9,488		**$9,488**
Scarlett Middle School	7.4	813463	Distribution Panel, 250, Replace	30	12	18	1	EA	$9,777.06	$9,777																			$9,777		**$9,777**
Scarlett Middle School	7.4	813418	Distribution Panel, 250, Replace	30	12	18	1	EA	$9,777.06	$9,777																			$9,777		**$9,777**
Scarlett Middle School	7.4	813457	Secondary Transformer, 150, Replace	30	12	18	1	EA	$15,803.27	$15,803																			$15,803		**$15,803**
Scarlett Middle School	7.4	813389	Distribution Panel, 225, Replace	30	12	18	1	EA	$7,951.00	$7,951																			$7,951		**$7,951**
Scarlett Middle School	7.4	813407	Distribution Panel, 400, Replace	30	12	18	1	EA	$9,487.85	$9,488																			$9,488		**$9,488**
Scarlett Middle School	7.4	813424	Distribution Panel, 400, Replace	30	12	18	1	EA	$11,202.02	$11,202																			$11,202		**$11,202**
Scarlett Middle School	7.4	813375	Distribution Panel, 800, Replace	30	12	18	1	EA	$11,540.85	$11,541																			$11,541		**$11,541**
Scarlett Middle School	7.4	814767	Electrical Distribution System, School, Upgrade	40	39	1	500	SF	$49.78	$24,888		$24,888																			**$24,888**
Scarlett Middle School	7.4	813382	Lighting Fixture, 250, Replace	20	19	1	6	EA	$719.95	$4,320		$4,320																			**$4,320**
Scarlett Middle School	7.4	813298	Lighting Fixture, 32, Replace	20	18	2	42	EA	$136.01	$5,712			$5,712																		**$5,712**
Scarlett Middle School	7.4	813443	Lighting & Branch Wiring System, , Replace	15	13	2	1	EA	$1,596.61	$1,597			$1,597															$1,597			**$3,193**
Scarlett Middle School	7.4	813343	Lighting & Branch Wiring System, Digital Multi-Purpose Time Control Clock & Photosensor, Replace	15	10	5	1	EA	$4,261.42	$4,261						$4,261															**$4,261**
Scarlett Middle School	7.4	813406	Lighting Fixture, 20, Replace	20	12	8	32	EA	$180.19	$5,766									$5,766												**$5,766**
Scarlett Middle School	7.4	813440	Lighting Fixture, 20, Replace	20	12	8	112	EA	$180.19	$20,181									$20,181												**$20,181**
Scarlett Middle School	7.4	813339	Lighting & Branch Wiring System, Full Upgrade, School (per SF),	25	12	13	185000	SF	$15.36	$2,842,229														$2,842,229							**$2,842,229**
Scarlett Middle School	7.4	813405	Building Communication System, , Replace	20	18	2	1	EA	$694.11	$694			$694																		**$694**

Location Name	EMG Renamed Item Number	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	Subtotal	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	Deficiency Repair Estimate
Scarlett Middle School	7.4	813334	Security System, Interior, Replace	10	6	4	32	EA	$779.69	$24,950					$24,950										$24,950						**$49,900**
Scarlett Middle School	7.4	813359	Security Camera System, Interior, Closed Circuit, PTZ Color, Replace	10	1	9	30	EA	$3,304.12	$99,123										$99,123										$99,123	**$198,247**
Scarlett Middle School	7.5	813438	Elevator, 2500,	30	19	11	1	EA	$108,794.40	$108,794												$108,794									**$108,794**
Scarlett Middle School	7.6	813301	Backflow Preventer, 8, Replace	15	1	14	1	EA	$13,054.75	$13,055															$13,055						**$13,055**
Scarlett Middle School	7.6	813331	Sprinkler System, Full Retrofit, School (per SF),	50	49	1	160000	SF	$6.25	$1,000,560		$1,000,560																			**$1,000,560**
Scarlett Middle School	7.6	813419	Fire Extinguisher, , Replace	15	4	11	42	EA	$356.54	$14,975												$14,975									**$14,975**
Scarlett Middle School	7.6	813342	Fire Suppression System, , Replace	15	13	2	1	EA	$4,447.10	$4,447			$4,447															$4,447			**$8,894**
Scarlett Middle School	7.6	813416	Fire Alarm System, Addressable, Replace	15	6	9	1	EA	$20,297.59	$20,298										$20,298											**$20,298**
Scarlett Middle School	7.6	814764	Annunciator Alarm Panel, Replace	15	5	10	1	EA	$1,448.32	$1,448											$1,448										**$1,448**
Scarlett Middle School	7.6	813311	Emergency Exit System, LED, Replace	10	8	2	46	EA	$405.01	$18,630			$18,630										$18,630								**$37,261**
Scarlett Middle School	7.6	813433	Defibrillator, Cabinet Mounted, Replace	5	2	3	2	EA	$1,409.50	$2,819				$2,819					$2,819					$2,819					$2,819		**$11,276**
Scarlett Middle School	7.7	814415	Aquatics, Swimming Pool Mechanics, Replace	10	10	0	1	EA	$110,250.00	$110,250	$110,250										$110,250										**$220,500**
Scarlett Middle School	8.1	813354	Interior Door, Fire 90-Minutes and Over, Replace	20	10	10	56	EA	$1,649.06	$92,347											$92,347										**$92,347**
Scarlett Middle School	8.1	813458	Interior Door, w/ Safety Glass, Interior Door, Replace	20	10	10	58	EA	$1,352.72	$78,458											$78,458										**$78,458**
Scarlett Middle School	8.1	813314	Interior Door, Solid Core, Painted/Stained, Interior Door, Replace	20	8	12	96	EA	$1,423.11	$136,619													$136,619								**$136,619**
Scarlett Middle School	8.1	812879	Toilet Partitions, Metal, Overhead Braced, Replace	20	10	10	26	EA	$850.00	$22,100											$22,100										**$22,100**
Scarlett Middle School	8.1	813448	Interior Stairs/Ramp, Interior Railing, Replace	30	50	0	12	LF	$50.00	$600	$600																				**$600**
Scarlett Middle School	8.1	813412	Interior Walls, Interior Wall, Repair	8	2	6	240000	SF	$1.45	$348,240							$348,240								$348,240						**$696,480**
Scarlett Middle School	8.1	813384	Interior Walls, Interior Wall Finish, Replace	20	12	8	2000	SF	$1.85	$3,702									$3,702												**$3,702**
Scarlett Middle School	8.1	813352	Interior Walls, Interior Wall Finish, Replace	25	10	15	2000	SF	$16.55	$33,108																$33,108					**$33,108**
Scarlett Middle School	8.1	813306	Floor Finishings, 1, Replace	10	7	3	3200	SF	$9.23	$29,550				$29,550										$29,550							**$59,100**
Scarlett Middle School	8.1	813442	Floor Finishings, , Repair	10	3	7	2200	SF	$4.53	$9,975								$9,975										$9,975			**$19,949**
Scarlett Middle School	8.1	813381	Floor Finishings, , Repair	10	2	8	7300	SF	$4.53	$33,097									$33,097										$33,097		**$66,195**
Scarlett Middle School	8.1	813300	Floor Finishings, , Replace	15	1	14	132000	SF	$4.80	$633,679															$633,679						**$633,679**
Scarlett Middle School	8.1	813321	Floor Finishings, , Replace	50	35	15	8120	SF	$15.76	$127,931																$127,931					**$127,931**
Scarlett Middle School	8.1	813447	Floor Finishings, Standard Commercial, Medium Traffic, Replace	10	2	8	6200	SF	$7.26	$44,989									$44,989										$44,989		**$89,978**
Scarlett Middle School	8.1	813307	Ceilings, , Replace	20	6	14	132000	SF	$3.11	$410,652															$410,652						**$410,652**
Scarlett Middle School	8.1	813428	Basketball Backboard, ,	10	5	5	6	EA	$9,435.64	$56,614						$56,614										$56,614					**$113,228**
Scarlett Middle School	8.1	813422	Bleacher	25	7	18	189	EA	$197.00	$37,233																			$37,233		**$37,233**
Scarlett Middle School	8.2	813399	Sink, 10, Replace	30	18	12	1	LF	$1,262.50	$1,263													$1,263								**$1,263**
Scarlett Middle School	8.2	812902	Freezer, Commercial, Walk-In, Replace	20	50	0	1	EA	$22,317.14	$22,317	$22,317																				**$22,317**
Scarlett Middle School	8.2	812893	Refrigerator	20	50	0	1	EA	$12,255.00	$12,255	$12,255																				**$12,255**
Scarlett Middle School	8.2	813390	Food Warmer, 1.5, Replace	15	13	2	1	EA	$1,551.91	$1,552			$1,552															$1,552			**$3,104**
Scarlett Middle School	8.2	813346	Garbage Disposal, 1, Replace	15	13	2	1	EA	$3,434.22	$3,434			$3,434															$3,434			**$6,868**
Scarlett Middle School	8.2	813373	Food Warmer, 1.5, Replace	15	13	2	1	EA	$1,551.91	$1,552			$1,552															$1,552			**$3,104**
Scarlett Middle School	8.2	813425	Food Warmer, 1, Replace	15	13	2	1	EA	$1,551.91	$1,552			$1,552															$1,552			**$3,104**
Scarlett Middle School	8.2	812901	Dishwasher, Commercial, Replace	10	7	3	1	EA	$19,661.82	$19,662				$19,662										$19,662							**$39,324**
Scarlett Middle School	8.2	813350	Convection Oven, , Replace	10	7	3	1	EA	$5,077.62	$5,078				$5,078										$5,078							**$10,155**
Scarlett Middle School	8.2	813401	Exhast Hood, Commercial, Replace	15	12	3	1	EA	$7,571.72	$7,572				$7,572															$7,572		**$15,143**
Scarlett Middle School	8.2	813380	Exhast Hood, Commercial, Replace	15	12	3	1	EA	$7,571.72	$7,572				$7,572															$7,572		**$15,143**
Scarlett Middle School	8.2	813414	Steam Kettle, 25	20	15	5	1	EA	$26,840.00	$26,840						$26,840															**$26,840**
Scarlett Middle School	8.2	813386	Convection Oven, , Replace	10	5	5	1	EA	$5,077.62	$5,078						$5,078										$5,078					**$10,155**
Scarlett Middle School	8.2	813351	Convection Oven, , Replace	10	5	5	1	EA	$5,077.62	$5,078						$5,078										$5,078					**$10,155**
Scarlett Middle School	8.2	813328	Convection Oven, , Replace	10	5	5	1	EA	$5,077.62	$5,078						$5,078										$5,078					**$10,155**
Scarlett Middle School	8.2	813358	Convection Oven, , Replace	10	5	5	1	EA	$5,077.62	$5,078						$5,078										$5,078					**$10,155**
Scarlett Middle School	8.2	813366	Steamer, 10	10	5	5	1	EA	$9,516.00	$9,516						$9,516										$9,516					**$19,032**
Scarlett Middle School	8.2	813313	Range/Oven	15	10	5	1	EA	$9,288.00	$9,288						$9,288															**$9,288**
Scarlett Middle School	8.2	813353	Steam Kettle, 45	20	15	5	1	EA	$26,840.00	$26,840						$26,840															**$26,840**
Scarlett Middle School	8.2	813462	Convection Oven, , Replace	10	5	5	1	EA	$5,077.62	$5,078						$5,078										$5,078					**$10,155**
Scarlett Middle School	8.2	813403	Steamer	10	4	6	1	EA	$6,344.00	$6,344							$6,344										$6,344				**$12,688**
Scarlett Middle School	8.2	812880	Food Warmer, , Replace	15	9	6	1	EA	$1,551.91	$1,552							$1,552														**$1,552**
Scarlett Middle School	8.2	812911	Food Warmer, , Replace	15	8	7	1	EA	$1,551.91	$1,552								$1,552													**$1,552**
Scarlett Middle School	8.2	812892	Food Warmer, , Replace	15	8	7	1	EA	$1,551.91	$1,552								$1,552													**$1,552**
Scarlett Middle School	8.2	812916	Food Warmer, , Replace	15	8	7	1	EA	$1,551.91	$1,552								$1,552													**$1,552**
Scarlett Middle School	8.2	812910	Food Warmer, , Replace	15	8	7	1	EA	$1,551.91	$1,552								$1,552													**$1,552**
Scarlett Middle School	8.2	812896	Freezer	15	8	7	1	EA	$7,224.00	$7,224								$7,224													**$7,224**

Location Name	EMG Renamed Item Number	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	Subtotal	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	Deficiency Repair Estimate
Scarlett Middle School	8.2	812909	Freezer, Chest, Replace	15	8	7	1	EA	$1,568.19	$1,568								$1,568													**$1,568**
Scarlett Middle School	8.2	812884	Refrigerator	15	8	7	1	EA	$4,256.00	$4,256								$4,256													**$4,256**
Scarlett Middle School	8.2	812891	Refrigerator	15	8	7	1	EA	$6,708.00	$6,708								$6,708													**$6,708**
Scarlett Middle School	8.2	812895	Refrigerator	15	7	8	1	EA	$4,256.00	$4,256									$4,256												**$4,256**
Scarlett Middle School	8.2	813315	Refrigerator	15	7	8	1	EA	$2,515.00	$2,515									$2,515												**$2,515**
Scarlett Middle School	8.2	813445	Convection Oven, , Replace	10	2	8	1	EA	$5,077.62	$5,078									$5,078										$5,078		**$10,155**
Scarlett Middle School	8.2	812899	Exhast Hood, Commercial, Replace	15	6	9	1	EA	$7,571.72	$7,572										$7,572											**$7,572**
Scarlett Middle School	8.2	812889	Refrigerator	15	5	10	1	EA	$2,515.00	$2,515											$2,515										**$2,515**
Scarlett Middle School	8.2	812885	Refrigerator	15	5	10	1	EA	$2,515.00	$2,515											$2,515										**$2,515**
Scarlett Middle School	8.2	812887	Freezer, Chest, Replace	15	5	10	1	EA	$1,568.19	$1,568											$1,568										**$1,568**
Scarlett Middle School	8.2	812888	Garbage Disposal, 1 to 3 HP, Replace	15	5	10	1	EA	$3,434.22	$3,434											$3,434										**$3,434**
Scarlett Middle School	8.2	812900	Freezer, Chest, Replace	15	2	13	1	EA	$1,568.19	$1,568														$1,568							**$1,568**
Scarlett Middle School		819872	Interior Floor Finish, Vinyl Tile (VCT), Replace	15	8	7	10000	SF	$4.80	$48,006								$48,006													**$48,006**
Totals, Unescalated											**$384,077**	**$1,521,468**	**$1,402,365**	**$100,249**	**$123,811**	**$431,156**	**$386,151**	**$360,634**	**$1,414,937**	**$435,647**	**$1,589,769**	**$202,710**	**$947,966**	**$2,979,889**	**$1,509,244**	**$576,729**	**$42,156**	**$165,602**	**$376,923**	**$126,065**	**$15,077,547**
Totals, Escalated (3.0% inflation, compounded annually)											**$384,077**	**$1,567,112**	**$1,487,769**	**$109,545**	**$139,351**	**$499,827**	**$461,085**	**$443,535**	**$1,792,400**	**$568,420**	**$2,136,517**	**$280,598**	**$1,351,573**	**$4,376,068**	**$2,282,866**	**$898,524**	**$67,647**	**$273,715**	**$641,687**	**$221,055**	**$19,983,371**

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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:	3300 Lorraine Street, Ann Arbor, MI 48108
Year Constructed/Renovated:	1968 Renovated 1989; 2006
Current Occupants:	Ann Arbor Public Schools
Percent Utilization:	100
Management Point of Contact:	Ann Arbor Public Schools, Jim Vibbart, Title 734.320.3613 phone vibbart.j@aaps.k12.mi.us email
Property Type:	Middle School
Site Area:	30.5 acres
Building Area:	178,650 SF
Number of Buildings:	1
Number of Stories:	2
Parking Type and Number of Spaces:	122 spaces in open lots
Building Construction:	Masonry bearing walls and concrete columns, beams, and decking.
Roof Construction:	Flat roofs with EPDM membrane.
Exterior Finishes:	Concrete Masonry
Heating, Ventilation & Air Conditioning:	Central system with boilers, air handlers, VAVs, and hydronic baseboard radiators and cabinets. Supplemental components: Ductless split-systems, suspended gas unit heaters, through window Air-Conditioners.
Fire and Life/Safety:	Fire sprinklers (in limited areas), hydrants, smoke detectors, alarms, strobes, extinguishers, pull stations, alarm panel, exit signs, and annunciator panel.
ADA :	This building does not have any major ADA issues
All 178,650 square feet of the building are occupied by a single occupant, Scarlett Middle School/Ann Arbor Public Schools. The spaces are a combination of classrooms, offices, typical school spaces, supporting restrooms, mechanical room, and other utility/storage spaces. The following table identifies the unit types and mix at the subject property:	

Unit Types and Mix		
Quantity	Type	Floor Area (Sf)
43	Classrooms	51,670
18	Offices	5,660
34	Mechanical/Utility Spaces	14450
23	Restrooms	8,120
1	Media Center	3,680

Unit Types and Mix		
Quantity	Type	Floor Area (Sf)
2	Gymnasiums	10,120
1	Cafeteria	9,335
1	Auditorium/Stage	4,280
1	Swimming Pool Area	4,590
--	Corridors, Stairwells, Common Areas, Miscellaneous	66,745
124	**TOTAL**	**178,650**
Most of the interior spaces were observed in order to gain a clear understanding of the property's overall condition. Other areas accessed included the site within the property boundaries, exterior of the property, and the roof. Areas of note that were either inaccessible or not observed for other reasons are listed in the table below:		

Key Spaces Not Observed		
Room Number	Area	Access Issues
Site Locations	Playing fields, Basketball Courts, Tennis Courts	Snowy conditions hindered a thorough, visible inspection
The following down units or areas were observed: The swimming pool is currently not operational for a number of mechanical deficiencies. The school has received a proposal outlining the work necessary to restore the pool to an operational state.		

Assessment Information	
Dates of Visit:	1/9/2018 and 1/10/2018
On-Site Point of Contact (POC):	Jim Vibbart
Assessment and Report Prepared by:	Ethan Abeles
Reviewed by:	Andrew Hupp Program Manager ahupp@emgcorp.com 800.733.0660 x6632

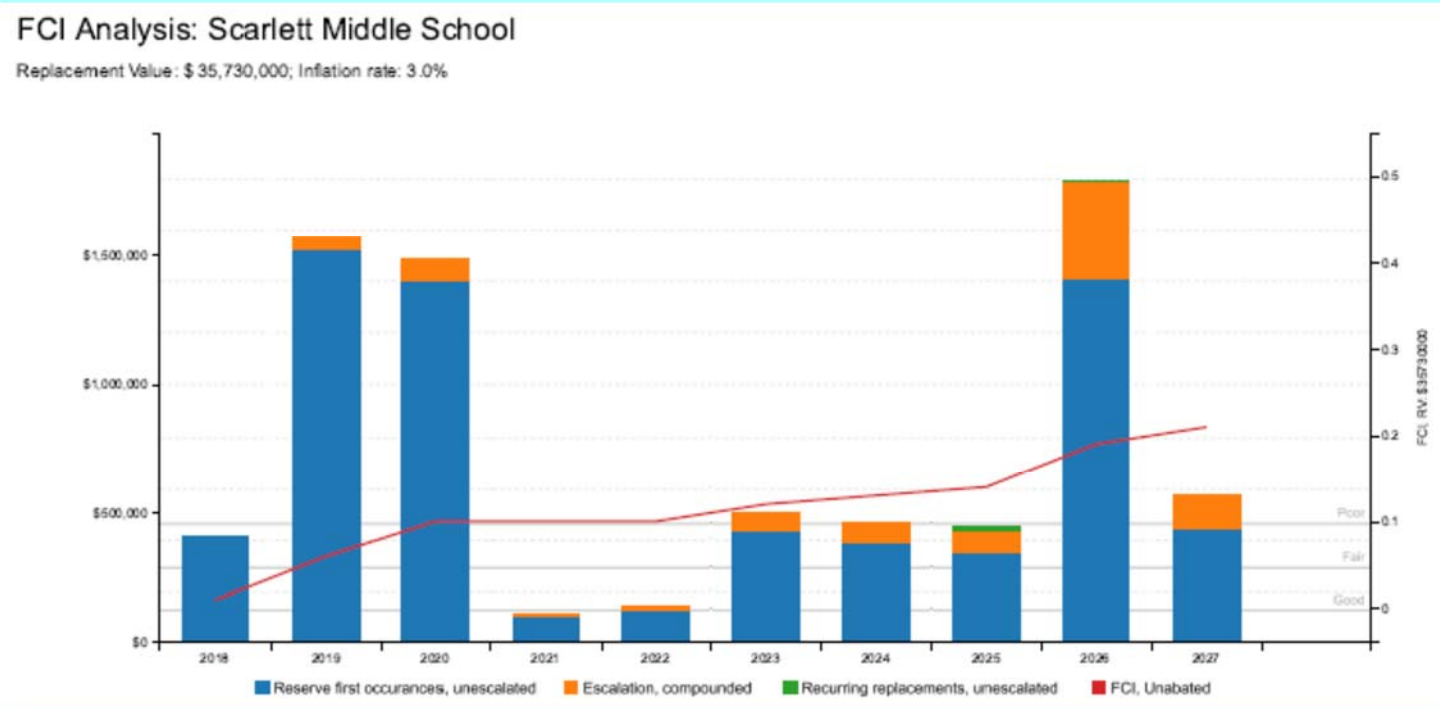
1.2. Key Findings

Site : The asphalt parking area and adjacent drive aisles are generally in poor condition. Additionally, much of the concrete sidewalks and curbing are distressed. A cost allowance to repair and/or replace these deficient attributes is included in the cost tables.

Architectural : The concrete exterior of the building has widespread cracking. A cost allowance for repairing and then painting the façade is a short-term expense facing the school. The building roof consists of an EPDM membrane and is in fair condition. The replacement of the roof will be required over the assessment period, as well as, windows, doors, and interior finishes.

MEPF : Many of the mechanical and electrical components in the building are original to the 1968 construction date, and will require replacement over the evaluation period. A professional engineer must be retained to assess the existing condition of the HVAC system, provide recommendations and, if necessary, estimate the scope and cost of any required improvements and upgrades. The cost of this study is included in the cost tables. Much of the electrical distribution system is original and should be upgraded as soon as reasonably possible.

1.3. Facility Condition Index (FCI)



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 .05
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.	> than .05 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):	1.15%
Current Year FCI Rating:	2018
10-Year Facility Condition Index (FCI) FCI = (RR)/(CRV):	20.94%
10-Year FCI Rating	0.21
Current Replacement Value (CRV):	$35,730,000
Year 0 (Current Year) - Immediate Repairs (IR):	$411,639
Years 1-10 - Replacement Reserves (RR):	$7,069,044
Total Capital Needs:	$7,480,683

Further detail on the specific costs that make up the Immediate Repair Costs can be found in the cost tables at the beginning of this report.

2. Building Structure

A10 Foundations

Building Foundation		
Item	Description	Condition
Foundation	Concrete foundation walls	Good
Basement and Crawl Space	Concrete slab and concrete walls	Good

Anticipated Lifecycle Replacements

- No components of significance

Actions/Comments:

- Isolated areas of the foundation systems are exposed, which allows for limited observation. There are no significant signs of settlement, deflection, or movement. The basement walls appear intact and structurally sound. There is no evidence of movement or water infiltration.

B10 Superstructure

B1010 Floor Construction & B1020 Roof Construction		
Item	Description	Condition
Framing / Load-Bearing Walls	Masonry walls	Good
Ground Floor	Concrete slab	Good
Upper Floor Framing	Concrete beams	Good
Upper Floor Decking	Concrete, cast-in-place	Good
Balcony Framing	None	--
Balcony Decking	None	--
Balcony Deck Toppings	None	--
Balcony Guardrails	None	--
Roof Framing	Concrete beams	Good
Roof Decking	Concrete, cast-in-place	Good

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Caulk minor cracking	☐	Monitor cracking for growth	☐
Other	☐	Other	☐

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- The superstructure is exposed in some locations, which allows for limited observation. Walls and floors appear to be plumb, level, and stable. There are no significant signs of deflection or movement.

B1080 Stairs					
Type	Description	Riser	Handrail	Balusters	Condition
Building Exterior Stairs	Concrete stairs	Closed	Metal	None	Fair
Building Interior Stairs	Concrete stairs	Closed	Metal	Metal	Good

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- No significant actions are identified for the interior stairs at the present time. On-going periodic maintenance is highly recommended.
- The exterior concrete stairs that serve the loading dock on the left elevation of the building have areas of degradation. The damaged portions of the stairs must be repaired. The cost to repair the stairs is relatively insignificant and the work can be performed as part of the property management's routine maintenance program.

3. Building Envelope

B20 Exterior Vertical Enclosures

B2010 Exterior Walls		
Type	Location	Condition
Primary Finish	Concrete Masonry	Poor
Secondary Finish	Brick veneer	Fair
Accented with	Metal siding	Good
Soffits	Concealed	Good
Building sealants	Between dissimilar materials, at joints, around windows and doors	Fair

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Graffiti	☐	Efflorescence	☐
Cracking	☒	Loose Mortar	☒

Anticipated Lifecycle Replacements:

- Exterior patching and painting
- Caulking
- Masonry re-pointing

Actions/Comments:

- The concrete walls have significant areas of cracked and damaged concrete consistent across all building elevations. The damaged concrete must be repaired as part of the preparation for exterior painting. The associated costs for repairs and painting are included in the cost tables.
- Isolated portions of the mortar joints along the brick veneer are degraded, particularly on the rear elevation of the building. The damaged mortar joints must be cleaned and re-pointed.
- On-going periodic maintenance, including patching repairs, graffiti removal, and re-caulking, is highly recommended. Future lifecycle replacements of the components listed above will be required.

B2020 Exterior Windows				
Window Framing	Glazing	Location	Window Screen	Condition
Aluminum framed, operable	Double glaze	Entire Building	☐	Fair
Aluminum framed, fixed	Double glaze	Entire Building	☐	Fair
Aluminum framed storefront	Double glaze	Front elevation	☐	Good

B2050 Exterior Doors		
Main Entrance Doors	Door Type	Condition
	Fully glazed, metal framed	Fair
Secondary Entrance Doors	Fully glazed, metal framed	Fair
Service Doors	Metal, insulated	Fair
Overhead Doors	Wood	Poor

Anticipated Lifecycle Replacements:

- Windows
- Storefront windows
- Exterior Entrance doors
- Exterior Service doors
- Overhead doors

Actions/Comments:

- The overhead doors at the loading dock on the left elevation of the building are in poor condition and should be replaced immediately.
- No other 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.

B3010 Primary Roof			
Location	Entire Building	Finish	Single-ply membrane
Type / Geometry	Flat	Roof Age	12 Yrs (Estimated)
Flashing	Sheet metal	Warranties	None reported
Parapet Copings	Parapet with sheet metal coping	Roof Drains	Internal drains
Fascia	Metal Panel	Insulation	Rigid Board
Soffits	Concealed Soffits	Skylights	No
Attics	Pre-cast floor slabs	Ventilation Source-1	Power Vents
Roof Condition	Fair	Ventilation Source-2	Turtle Vents

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Drainage components broken/missing	☐	Vegetation/fungal growth	☐
Blocked Drains	☒	Debris	☐
Other	☐	Other	☐

Degradation Issues			
Observation	Exists At Site	Observation	Exists At Site
Evidence of roof leaks	☐	Significant ponding	☐
Excessive patching or repairs	☐	Blistering or ridging	☐
Other	☐	Other	☐

Anticipated Lifecycle Replacements:

- EPDM roof membrane
- Roof flashings (included as part of overall membrane replacement)
- Parapet wall copings (included as part of overall membrane replacement)
- Roof hatches

Actions/Comments:

- The roof finishes are reported to be approximately 12 years old. Information regarding roof warranties or bonds was not available. The roofs are maintained by an outside contractor.
- According to the POC, there are no active roof leaks. There is no evidence of active roof leaks.
- There is no evidence of roof deck or insulation deterioration. The roof substrate and insulation should be inspected during any future roof repair or replacement work.
- Roof drainage appears to be adequate. Clearing and minor repair of drain system components should be performed regularly as part of the property management's routine maintenance and operations program.
- The POC reported that future roof replacement will consist of TPO or PVC membrane in accordance with a district-wide effort to standardize their roofing systems. A future lifecycle replacement reflecting the appropriate roofing system is included in the cost table.
- No other 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.

4. Interiors

C10 Interior Construction

C1030 Interior Doors		
Item	Type	Condition
Interior Doors	Solid core wood / Metal	Fair
Door Framing	Metal	Good
Fire Doors	Yes	Fair
Closet Doors	Solid core wood	Fair

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Improperly adjusted door closures	☐	Damaged/loose door hardware	☐
Damaged wire glass	☒	Other	☐

C2010 Wall Finishes; C2030 Floor Finishes; C2050 Ceiling Finishes: The following table generally describes the locations and typical conditions of the interior finishes within the facility:

Group Elements Report Scarlett Middle School						
Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Deficiency Repair Estimate
C2011 Interior Stair/Ramp Rails, Metal, Replace	30	50	0	12	LF	$600
C3012 Interior Wall Finish, Concrete/Masonry, Prep & Paint	8	2	6	240000	SF	$348,240
C3012 Interior Wall Finish, Fabric, Replace	20	12	8	2000	SF	$3,702
C3021 Interior Floor Finish, Concrete, Prep & Paint	10	7	3	3200	SF	$29,550
C3024 Interior Floor Finish, Maple Sports Floor, Sand & Refinish	10	2	8	7300	SF	$33,097
C3024 Interior Floor Finish, Maple Sports Floor, Sand & Refinish	10	3	7	2200	SF	$9,975
C3024 Interior Floor Finish, Vinyl Tile (VCT), Replace	15	8	7	10000	SF	$48,006

Group Elements Report Scarlett Middle School						
Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Deficiency Repair Estimate
C3025 Interior Floor Finish, Carpet Standard-Commercial Medium-Traffic, Replace	10	2	8	6200	SF	$44,989
Totals, Unescalated						$518,159
Location Factor (1.00)						$0
Totals, Escalated (3.0%, compounded annually)						$623,623

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Loose carpeting/flooring	☐	Minor areas of stained ceiling tiles	☒
Minor paint touch-up	☒	Areas of damaged/missing baseboard	☐
Other	☐	Other	☐

Anticipated Lifecycle Replacements:

- Carpet
- Vinyl tile
- Ceramic tile
- Interior painting
- Suspended acoustic ceiling tile
- Interior doors
- Maple sports floor refinishing
- Concrete floor painting

Actions/Comments:

- The interior areas were partially renovated in 2006. These renovations included updating the finishes in the lobby and the addition of a new cafeteria. Most of the interior walls are CMU blocks and highly resilient. The majority of the flooring is vinyl tile.
- The ceiling tiles have isolated areas of water damage, or wear and tear. The locations of the damage is scattered troughout the building. The damaged ceiling tiles should to be replaced. The cost to replace the damaged finishes is relatively insignificant and the work can be performed as part of the property management's routine maintenance program.
- No additional 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.

5. Services (MEPF)

See the Mechanical Equipment List in the Appendices for the quantity, manufacturer's name, model number, capacity and year of manufacturer of the major mechanical equipment, if available.

D10 Conveying Systems

D1030 Vertical Conveying (Building Elevators) – Building 1			
Manufacturer	Otis	Machinery Location	Ground floor or basement adjacent to shaft
Safety Stops	Electronic	Emergency Communication Equipment	Yes
Cab Floor Finish	Rubber flooring	Cab Wall Finish	Plastic-laminated wood
Cab Finish Condition	Fair	Elevator Cabin Lighting	F42T8
Hydraulic Elevators	1 cars at 2,500 LB		
Overhead Traction Elevators	None		
Freight Elevators	None		
Machinery Condition	Fair	Controls Condition	Fair
Other Conveyances	None	Other Conveyance Condition	NA

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Inspection certificate not available	☐	Inspection certificate expired	☐
Service call needed	☐	Minor cab finish repairs	☒
Other	☐	Other	☐

Anticipated Lifecycle Replacements:

- Elevator controls
- Hydraulic machinery
- Elevator cab finishes

Actions/Comments:

- The elevator appears to provide adequate service. The elevators are serviced by Otis on a routine basis. The elevator machinery and controls are the originally installed system and are reported to be 22 years old. The elevator will require modernization over the course of the evaluation period. A budgetary cost for this work is included.
- The elevators are inspected on an annual basis by the State of Michigan, and a certificate of inspection is on file in the administrative offices.
- The emergency communication equipment in the elevator cabs appears to be functional. Equipment testing is not within the scope of the work.
- The finishes in the elevator cabs will require replacement. The cost to replace the finishes is relatively insignificant and is included in the overall elevator modernization cost.

D20 Plumbing

D2010 Domestic Water Distribution		
Type	Description	Condition
Water Supply Piping	Copper	Fair
Water Meter Location	Loading Dock Area	

Domestic Water Heaters or Boilers	
Components	Boilers
Fuel	Natural gas
Boiler or Water Heater Condition	Good
Supplementary Storage Tanks?	Yes
Adequacy of Hot Water	Adequate
Adequacy of Water Pressure	Adequate

D2020 Sanitary Drainage		
Type	Description	Condition
Waste/Sewer Piping	Cast Iron/PVC Replacement	Fair
Vent Piping	Cast Iron/PVC Replacement	Fair

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Hot water temperature too hot or cold	☐	Minor or isolated leaks	☐
Other	☐	Other	☐

Group Elements Report Scarlett Middle School 1/24/2018						
Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Deficiency Repair Estimate
D2017 Shower, Enameled Steel, Replace	20	12	8	29	EA	$78,552
D2018 Drinking Fountain, Refrigerated, Replace	10	2	8	6	EA	$7,545
D2018 Drinking Fountain, Vitreous China, Replace	15	8	7	9	EA	$17,451

Group Elements Report Scarlett Middle School 1/24/2018						
Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Deficiency Repair Estimate
D2019 Emergency Eye Wash & Shower Station, Replace	15	8	7	2	EA	$4,229
D2023 Domestic Circulator or Booster Pump, 5 to 7.5 HP, Replace	20	18	2	1	EA	$11,641
D2023 Water Filter, Replace	15	13	2	1	EA	$8,976
D2029 Plumbing System, Domestic Supply, Replace	40	33	7	40000	SF	$233,600
D2091 Air Compressor, 5 HP, Replace	20	13	7	1	EA	$9,652
Totals, Unescalated						$371,647
Location Factor (1.00)						$0
Totals, Escalated (3.0%, compounded annually)						$456,771

Anticipated Lifecycle Replacements:

- Boilers (listed in Section D30)
- Circulation pumps
- Hot water storage tanks
- Toilets
- Urinals
- Sinks
- Showers
- Drinking fountains
- Emergency eye wash stations
- Water distribution piping
- Waste/sanitary distribution piping

Actions/Comments:

- The plumbing infrastructure is original to the 1968 construction of the property. Although there have been no reported chronic problems to date with the exception of the replacement of a damaged sewage line, the plumbing systems may begin to leak and fail due to the age of the piping. A budget for required repairs or partial replacements is included over the assessment period.
- The common area restroom accessories and fixtures range from fair to good condition. The restroom accessories and fixtures are recommended for replacement over the evaluation period.
- The facility has a commercial kitchen onsite, but the associated grease trap was not observable. The POC reported that the grease trap is cleaned and inspected regularly by a plumber, and performs adequately.
- Domestic hot water is provided by gas-fired boilers through supplemental storage tanks. The storage tanks and domestic water circulation pumps will require replacement.

D30 Building Heating, Ventilating, and Air Conditioning (HVAC)

Building Central Heating System	
Primary Heating System Type	Steam boilers
Heating Fuel	Natural gas
Location of Major Equipment	Mechanical rooms
Space Served by System	Entire building

Building Central Cooling System	
Primary Cooling System Type	Though window A/C units
Refrigerant	Unknown
Cooling Towers	None
Location of Major Equipment	--
Space Served by System	Select spaces throughout building

Distribution System	
HVAC Water Distribution System	Two-pipe
Air Distribution System	Variable volume
Location of Air Handlers	Mechanical rooms
Terminal Units	VAV boxes
Quantity and Capacity of Terminal Units	Approximately 38 VAV boxes ranging from 400 to 800 CFM 1,525 LF of hydronic radiators and 32 cabinet heaters
Location of Terminal Units	Within interior spaces

Packaged, Split & Individual Units	
Primary Components	Split system furnaces and condensing units
Cooling (if separate from above)	Window air conditioners
Heating Fuel	Natural gas
Location of Equipment	Windows and rooftops
Space Served by System	Entire building

Supplemental/Secondary Components	
Supplemental Component #1	Split system furnaces and condensing units
Location / Space Served by Split systems	Rooms 110, 114, other interior spaces

Supplemental/Secondary Components	
Split systems Condition	Fair
Supplemental Component #2	Package units
Location / Space Served by Package Units	Cafeteria, other interior spaces
Package Units Condition	Fair
Supplemental Component #3	Evaporative Cooler
Location / Space Served by Evaporative Cooler	Greenhouse
Evaporative Cooler Condition	Fair

Controls and Ventilation	
HVAC Control System	BAS, hybrid pneumatic/electronic system
HVAC Control System Condition	Fair
Building Ventilation	Roof top exhaust fans
Ventilation System Condition	Fair

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Ductwork/grills need cleaned	☒	Control adjustments needed	☒
Leaking condensate lines	☐	Poor mechanical area access	☐
Other	☐	Other	☐

Degradation Issues			
Observation	Exists At Site	Observation	Exists At Site
Heating, Cooling or Ventilation is not adequate	☒	Major system inefficiencies	☒
HVAC controls pneumatic or antiquated	☒	Obsolete refrigerants: R11, R12, R22, R123, R502	☐
Other	☐	Other	☐

Group Elements Report Scarlett Middle School 1/24/2018						Deficiency Repair Estimate
Cost Description	**Lifespan (EUL)**	**EAge**	**RUL**	**Quantity**	**Unit**	
D3022 Expansion Tank, 101 to 175 GAL, Replace	25	19	6	1	EA	$3,999
D3031 Evaporative Cooler, Direct, Packaged w/ Heat, 200 to 400 CFM, Replace	15	13	2	1	EA	$13,057
D3032 Condensing Unit/Heat Pump, Split System, 2.5 Ton, Replace	15	10	5	1	EA	$3,366
D3032 Condensing Unit/Heat Pump, Split System, 2.5 Ton, Replace	15	10	5	1	EA	$3,366
D3032 Condensing Unit/Heat Pump, Split System, 3 Ton, Replace	15	10	5	1	EA	$3,579
D3032 Condensing Unit/Heat Pump, Split System, 3.5 Ton, Replace	15	16	0	1	EA	$4,129
D3032 Condensing Unit/Heat Pump, Split System, 3.5 Ton, Replace	15	16	0	1	EA	$4,129
D3032 Ductless Split System, Single Zone, 2.5 to 3 Ton, Replace	15	28	0	1	EA	$6,577
D3032 Condensing Unit/Heat Pump, Split System, 2.5 Ton, Replace	15	11	4	1	EA	$3,366
D3041 Fan, Axial Flow, 15,001 to 30,000 CFM, Replace	20	15	5	1	EA	$24,687
D3041 Air Handler, Interior, 6,501 to 8,000 CFM, Replace	30	24	6	1	EA	$26,017
D3041 Air Handler, Interior, 10,001 to 15,000 CFM, Replace	30	26	4	1	EA	$41,979
D3041 Air Handler, Interior, 5,201 to 6,500 CFM, Replace	30	26	4	1	EA	$22,173
D3041 Air Handler, Interior, 6,501 to 8,000 CFM, Replace	30	50	0	1	EA	$26,017
D3041 Fan, Axial Flow, 15,001 to 30,000 CFM, Replace	20	15	5	1	EA	$24,687
D3041 Air Handler, Interior, 5,201 to 6,500 CFM, Replace	30	25	5	1	EA	$22,173
D3041 Fan, Axial Flow, 15,001 to 30,000 CFM, Replace	20	15	5	1	EA	$24,687
D3041 Air Handler, Interior, 5,201 to 6,500 CFM, Replace	30	25	5	1	EA	$22,173

Group Elements Report Scarlett Middle School 1/24/2018						Deficiency Repair Estimate
Cost Description	**Lifespan (EUL)**	**EAge**	**RUL**	**Quantity**	**Unit**	
D3041 Variable Air Volume (VAV) Unit, 401 to 800 CFM, Replace	15	6	9	38	EA	$189,376
D3041 Air Handler, Interior, 10,001 to 15,000 CFM, Replace	30	25	5	1	EA	$41,979
D3041 Air Handler, Interior, 20,001 to 25,000 CFM, Replace	30	50	0	1	EA	$64,707
D3041 Fan, Axial Flow, 15,001 to 30,000 CFM, Replace	20	15	5	1	EA	$24,687
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	36	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	10	5	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	36	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	36	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 1,001 to 1,500 CFM, Replace	15	12	3	1	EA	$1,928
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	11	4	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	36	0	1	EA	$1,750

Group Elements Report Scarlett Middle School 1/24/2018						Deficiency Repair Estimate
Cost Description	**Lifespan (EUL)**	**EAge**	**RUL**	**Quantity**	**Unit**	
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	36	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 1,001 to 1,500 CFM, Replace	15	12	3	1	EA	$1,928
D3042 Exhaust Fan, Roof Mounted, 1,001 to 1,500 CFM, Replace	15	12	3	1	EA	$1,928
D3042 Exhaust Fan, Roof Mounted, 1,501 to 2,000 CFM, Replace	15	12	3	1	EA	$2,045
D3042 Exhaust Fan, Roof Mounted, 801 to 1,000 CFM, Replace	15	15	0	1	EA	$1,769
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	12	3	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	12	3	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 801 to 1,000 CFM, Replace	15	15	0	1	EA	$1,769
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	36	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	15	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	8	7	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 801 to 1,000 CFM, Replace	15	15	0	1	EA	$1,769
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	36	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	12	3	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	36	0	1	EA	$1,750
D3042 Exhaust Fan, Roof Mounted, 1,001 to 1,500 CFM, Replace	15	12	3	1	EA	$1,928

Group Elements Report Scarlett Middle School 1/24/2018						Deficiency Repair Estimate
Cost Description	**Lifespan (EUL)**	**EAge**	**RUL**	**Quantity**	**Unit**	
D3042 Exhaust Fan, Roof Mounted, 501 to 800 CFM, Replace	15	12	3	1	EA	$1,750
D3044 Distribution Pump, Heating Water, 5 HP, Replace	20	16	4	1	EA	$5,519
D3044 Distribution Pump, Heating Water, 5 HP, Replace	20	16	4	1	EA	$5,519
D3051 Unit Heater, Hydronic, 37 to 85 MBH, Replace	20	18	2	1	EA	$1,900
D3051 Unit Heater, Hydronic, 37 to 85 MBH, Replace	20	18	2	1	EA	$1,900
D3051 Unit Heater, Hydronic, 13 to 36 MBH, Replace	20	18	2	2	EA	$3,034
D3052 Heat Pump, Packaged (RTU), 3.5 to 5 Ton, Replace	15	28	0	1	EA	$8,928
D3052 Packaged Unit (RTU), 3.5 Ton, Replace	15	13	2	1	EA	$10,227
D3052 Packaged Unit (RTU), 8 to 10 Ton, Replace	15	11	4	1	EA	$18,554
D3052 Packaged Unit (RTU), 5 Ton, Replace	15	12	3	1	EA	$11,239
D3068 Building Automation System (HVAC Controls), Upgrade	20	18	2	178650	SF	$958,011
D3095 Air Purifier, 225 SF, Replace	5	0	5	1	EA	$8,000
Totals, Unescalated						$1,692,563
Location Factor (1.00)						$0
Totals, Escalated (3.0%, compounded annually)						$1,864,361

Anticipated Lifecycle Replacements:

- Boilers
- Air handling units
- Heat exchangers
- Heating water circulation pumps
- Axial fans
- Distribution pumps and motors
- VAV boxes
- Package units
- Split system furnaces and condensing units
- Split system heat pumps
- Gas wall heaters

- Suspended gas unit heaters
- Baseboard heaters
- Through-wall air conditioners
- Rooftop exhaust fans
- HVAC system hydronic piping
- Building automation system

Actions/Comments:

- The HVAC systems are maintained by both outside contractors and the in-house maintenance staff. 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. Many of the air handling units are original, but most of the other HVAC equipment has been upgraded at various times. In the past, HVAC equipment has been replaced on an "as needed" basis.
- 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.
- The HVAC components listed above will require replacement or upgrades over the reserve term. These costs are listed in the cost tables.
- Additionally, it is recommended that the services of a professional engineer be contracted to assess the current HVAC system and provide recommendations for upgrading the system in an efficient and cost-effective manner. The associated cost for this assessment is listed in the cost tables.

D40 Fire Protection

Item	Description					
Type	Wet pipe					
Sprinkler System	None	☐	Standpipes	☒	Backflow Preventer	☒
	Hose Cabinets	☐	Fire Pumps	☐	Siamese Connections	☒
Sprinkler System Condition	Good					
Fire Extinguishers	Last Service Date		Servicing Current?			
	August 2017		Yes			
Hydrant Location	Two hydrants located on the north elevation adjacent to main parking lot					
Siamese Location	Loading Dock					
Special Systems	Kitchen Suppression System	☒	Computer Room Suppression System	☐		

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Extinguisher tag expired	☐	Riser tag expired (5 year)	☐
Other	☐	Other	☐

Anticipated Lifecycle Replacements:

- Sprinkler system for entire building
- Kitchen fire suppression system
- Backflow preventer
- Fire extinguishers

Actions/Comments:

- The vast majority of the building is not protected by fire suppression; Sprinkler heads are currently limited to the loading dock area and the performance stage. Due to its construction date, the facility is most likely "grandfathered" by code and the installation of fire sprinklers not required until major renovations are performed. Regardless of when or if installation of facility-wide fire suppression is required by the governing municipality, EMG recommends a retrofit be performed. A budgetary cost is included.
- No other 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

D50 Electrical

Distribution & Lighting			
Electrical Lines	Underground	Transformer	Pad-mounted
Main Service Size	2000 Amps	Volts	277/480 Volt, three-phase
Meter & Panel Location	Mechanical Rooms	Branch Wiring	Copper
Conduit	Metallic	Step-Down Transformers?	Yes
Security / Surveillance System?	Yes	Building Intercom System?	Yes
Lighting Fixtures	T-8 throughout; CFL in isolated areas; HPS in pool room		
Main Distribution Condition	Fair		
Secondary Panel and Transformer Condition	Fair		
Lighting Condition	Fair		

Building Emergency Systems			
Size	NA	Fuel	None
Generator / UPS Serves	NA	Tank Location	NA
Testing Frequency	NA	Tank Type	None
Generator / UPS Condition	--		

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Improperly stored material	☐	Unsecured high voltage area	☐

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Loose cables or improper use of conduit	☐	Poor electrical room ventilation	☐
Antiquated equipment	☒	Other	☐

Anticipated Lifecycle Replacements:

- Circuit breaker panels
- Main switchgear
- Switchboards
- Step-down transformers
- Interior light fixtures

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 majority of electrical components within the building, including the circuit breaker panels, switchboards, step-down transformers, and wiring, are original to the 1968 construction. Some of the electrical system was upgraded in 2006. A full modernization/upgrade is recommended to the aging interior electrical infrastructure. In addition to the component-by-component replacements listed above, an additional overall budgetary allowance is included to account for some corresponding wiring and sub-feed replacements and upgrades.

D60 Communications

D6060 Public Address Systems						
Item	Description					
Communication Equipment	Public Address System	☒	Nurse Call System	☐	Clock	☒

D70 Electronic Safety and Security

D7010 Access Control and Intrusion Detection / D7050 Detection and Alarm						
Item	Description					
Access Control and Intrusion Detection	Exterior Camera	☒	Interior Camera	☒	Front Door Camera Only	☐
	Cameras monitored	☒	Security Personnel On-Site	☐	Intercom/Door Buzzer	☒
Fire Alarm System	Central Alarm Panel	☒	Battery-Operated Smoke Detectors	☐	Alarm Horns	☒
	Annunciator Panels	☒	Hard-Wired Smoke Detectors	☒	Strobe Light Alarms	☐
	Pull Stations	☒	Emergency Battery-Pack Lighting	☐	Illuminated EXIT Signs	☒

D7010 Access Control and Intrusion Detection / D7050 Detection and Alarm		
Item	Description	
Fire Alarm System Condition	Fair	
Central Alarm Panel System	Location of Alarm Panel	Installation Date of Alarm Panel
	Main Office	2012

Anticipated Lifecycle Replacements:

- Central alarm panel
- Alarm devices and system
- Emergency exit signs
- Defibrillators

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.

6. Equipment & Furnishings

E10 Equipment

The cafeteria area has a wide 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:

E1030 Commercial Kitchen Equipment		
Appliance	Comment	Condition
Refrigerators	Walk-in and Up-right	Fair
Freezers	Walk-in and Up-right	Fair
Ranges	Gas	Fair
Ovens	Gas	Fair
Griddles / Grills	N/A	--
Fryers	N/A	--
Hood	Exhaust ducted to exterior	Fair
Dishwasher	Owned	Fair
Microwave	☒	Fair
Ice Machines	☐	--
Steam Tables	☒	Fair
Work Tables	☒	Fair
Shelving	☒	Fair

E1030 Commercial Laundry		
Equipment	Comment	Condition
Commercial Washing Machines	NA	--
Commercial Dryers	NA	--
Residential Washers	☐	--
Residential Dryers	☐	--

Anticipated Lifecycle Replacements:

- Cooking Ranges
- Convection Ovens
- Dishwasher
- Freezers
- Refrigerators
- Food warmers

- Exhaust Hoods
- Steam kettles
- Steamers

Actions/Comments:

- Both the commercial walk-in refrigerator and freezer show significant evidence of corrosion and damage, in addition to being outdated. Both walk-in units are recommended for immediate replacement.
- No additional significant actions are identified at the present time. On-going periodic maintenance is highly recommended. Some of the equipment is original to the 1968 school opening. It is anticipated that virtually all kitchen equipment will need to be replaced and upgraded over the assessment period. Future lifecycle replacements of the components listed above will be required.

7. Sitework

G20 Site Improvements

G2020 Parking Lots & G2030 Pedestrian Walkways		
Item	Material	Condition
Entrance Driveway Apron	Asphalt	Fair
Parking Lot	Asphalt	Poor
Drive Aisles	Asphalt	Poor
Service Aisles	Asphalt	Fair
Sidewalks	Concrete	Fair
Curbs	Concrete	Fair
Pedestrian Ramps	Cast-in-place concrete	Fair
Ground Floor Patio or Terrace	None	--

Parking Count				
Open Lot	Carport	Private Garage	Subterranean Garage	Freestanding Parking Structure
122	-	-	-	-
Total Number of ADA Compliant Spaces			7	
Number of ADA Compliant Spaces for Vans			0	
Total Parking Spaces			122	

Site Stairs			
Location	Material	Handrails	Condition
Loading Dock	Concrete stairs	Metal	Fair

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Pavement oil stains	☐	Vegetation growth in joints	☐
Stair/ramp rails loose	☐	Stair/ramp rail needs scraped and painted	☐
Other	☐	Other	☐

Degradation Issues			
Observation	Exists At Site	Observation	Exists At Site
Potholes/depressions	☒	Alligator cracking	☒
Concrete spalling	☒	Trip hazards (settlement/heaving)	☐
Other	☐	Other	☐

Anticipated Lifecycle Replacements:

- Asphalt pavement, mill and overlay
- Sidewalk concrete pavement
- Curb and gutter replacement

Actions/Comments:

- The asphalt pavement in both the parking area and along the drive aisles exhibit significant areas of failure and deterioration, such as alligator cracking, transverse cracking, extensive raveling, heavy overall surface wear, and localized depressions. All of the paving must be overlaid with new asphalt paving in order to maintain the integrity of the overall pavement system. Milling is recommended as part of the overall repair work.
- The concrete sidewalks, curbs, and gutters have isolated areas of settlement and cracking. These areas occur in numerous areas throughout the property. The damaged areas of concrete curbs and sidewalks require replacement.
- No other 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.

G2060 Site Development	
Property Signage	
Property Signage	Monument
Street Address Displayed?	No

Site Fencing		
Type	Location	Condition
Chain link with metal posts	Tennis court enclosure	Fair

Refuse Disposal				
Refuse Disposal	Common area dumpsters			
Dumpster Locations	Mounting	Enclosure	Contracted?	Condition
Left elevation of building	Concrete pad	None	Yes	Fair

Other Site Amenities			
	Description	Location	Condition
Bicycle Racks	Metal	Near main entrance	Good
Tennis Courts	Asphalt	Northeast of building	Fair
Basketball Court	Asphalt	Northeast of building	Fair
Swimming Pool	Yes	Interior; Southeast corner on building	Fair

The tennis courts are surrounded by a chain link fence. The basketball and tennis courts are located adjacent to one another next to the playing fields.

Anticipated Lifecycle Replacements:

- Signage
- Site fencing
- Tennis court seal coating
- Basketball court seal coating
- Pool equipment
- Basketball backboards
- Bicycle racks

Actions/Comments:

- The swimming pool is currently down due to a number of system failures. The school has received a proposal to upgrade and replace the necessary pool mechanical equipment. The cost for this work is included in the cost tables.
- The tennis and basketball courts are reported to have isolated areas of deterioration and cracking. The paving must have asphalt coat sealing and striping at regular intervals to extend the life of the playing surface.
- The property identification sign will require replacement over the evaluation period due its age and condition.
- The chain link fencing surrounding the tennis courts are starting to show damage, rust and deterioration, and will require replacement.
- No additional significant actions are identified at the present time. On-going periodic maintenance is highly recommended.

G2080 Landscaping		
Drainage System and Erosion Control		
System	Exists At Site	Condition
Surface Flow	☒	Good
Inlets	☒	Good
Swales	☐	--
Detention pond	☐	--
Lagoons	☐	--
Ponds	☐	--
Underground Piping	☒	Fair
Pits	☐	--
Municipal System	☒	Fair
Dry Well	☐	--

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- There is no evidence of storm water runoff from adjacent properties. The storm water system appears to provide adequate runoff capacity. There is no evidence of major ponding or erosion.

Item	Description						
Site Topography	Generally uniform and flat.						
Landscaping	Trees	Grass	Flower Beds	Planters	Drought Tolerant Plants	Decorative Stone	None
	☒	☒	☐	☐	☐	☐	☐
Landscaping Condition	Good						
Irrigation	Automatic Underground	Drip	Hand Watering	None			
	☐	☐	☐	☒			
Irrigation Condition	--						

Retaining Walls		
Type	Location	Condition
None		--

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

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

G30 Liquid & Gas Site Utilities

G3060 Site Fuel Distribution	
Item	Description
Natural Gas	Gas service is supplied from the gas main on the adjacent public street. The gas meters and regulators are located along the exterior walls of the buildings. The gas distribution piping within the building is malleable steel (black iron).

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

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

G40 Electrical Site Improvements

G4050 Site Lighting					
Site Lighting	None	Pole Mounted	Bollard Lights	Ground Mounted	Parking Lot Pole Type
	☐	☒	☒	☐	☒
	Good				
Building Lighting	None		Wall Mounted		Recessed Soffit
	☐		☒		☒
	Poor				

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Isolated bulb/lamp replacement	☐	Discolored/dirty lens cover	☐
Other	☐	Other	☐

Anticipated Lifecycle Replacements:

- Building-mounted exterior lighting
- Recessed soffit exterior lighting
- Pole-mounted exterior lighting
- Bollard lighting

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.

8. Ancillary Structures

Other Ancillary Structures			
Type	Maintenance Shed	Location	Adjacent To Loading Dock
Item	Material	Item	Material
Exterior Siding	Masonry with embedded aggregate	Roof Finishes	EPDM
Interior Finishes	Floor : Unfinished Concrete, Ceiling : Exposed Walls : Exposed	MEPF	See Tables in Section 5
Overall Building Condition			Fair

Anticipated Lifecycle Replacements:

- None

Actions/Comments:

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

9. Opinions of Probable Costs

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.

9.1 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.

9.2 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.

9.3 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

10. Purpose and Scope

10.1. 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.

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.

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.

10.2. 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 fungal growth, conditions conducive to fungal growth, and/or evidence of moisture. EMG will also interview Project personnel regarding the presence of any known or suspected fungal growth, 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.
- Prepare a mechanical inventory list.

11. Accessibility and Property Research

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

Accessibility Issues			
Component	Major Issue	Moderate Issue	Minor Issue
Parking	☐	☐	☒
Exterior Accessible Route	☐	☐	☐
Interior Accessible Route	☐	☐	☐
Restrooms	☐	☐	☐
Elevators	☐	☐	☐

A full ADA Compliance Survey may reveal 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.

11.2. Flood Zone and Seismic Zone

According to the Flood Insurance Rate Map, published by the Federal Emergency Management Agency (FEMA) and dated April 3, 2012, the property is located in Zone D, defined as an unstudied area. Flood hazards are undetermined.

According to the 1997 Uniform Building Code Seismic Zone Map of the United States, the property is located in Seismic Zone 1, defined as an area of low probability of damaging ground motion.

12. Certification

Ann Arbor Public Schools retained EMG to perform this Facility Condition Assessment in connection with its continued operation of Scarlett Middle School, 3300 Lorraine Street, Ann Arbor, Michigan, the "Property". It is our understanding that the primary interest of the client 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 client for the purpose stated within Section 10 of this report. The report, or any excerpt thereof, shall not be used by any party other than the client or for any other purpose than that specifically stated in our agreement or within Section 10 of this report without the express written consent of EMG.

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

Prepared by: Ethan Abeles,
Project Manager

Reviewed by:

Andrew Hupp,
Program Manager
ahupp@emgcorp.com
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13. 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

Appendix A:
Photographic Record

#1:	MONUMENT SIGN

#2:	MAIN BUILDING ENTRANCE

#3:	FRONT ELEVATION

#4:	LEFT ELEVATION

#5:	REAR ELEVATION

#6:	RIGHT ELEVATION

#7:	EXTERIOR FINISHES

#8:	BRICK FACADE

#9:	CONCRETE FACADE

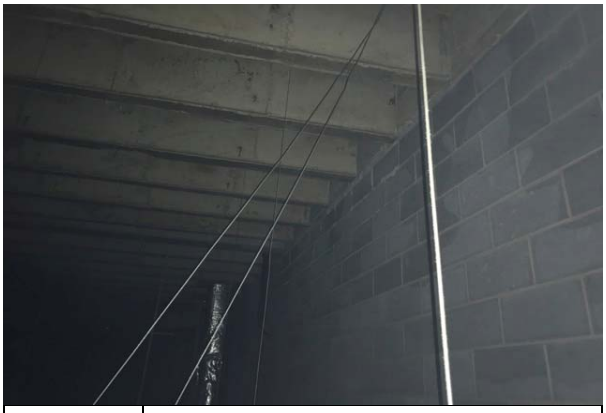
#10:	EXTERIOR DOORS

#11:	WINDOWS

#12:	OVERHEAD DOOR

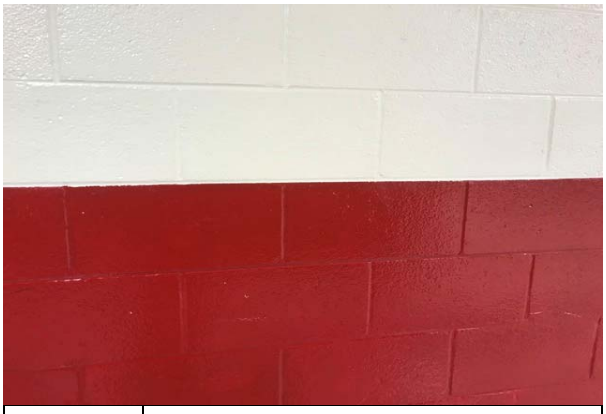
#13:	ROOF

#14:	EPDM ROOFING



#15:	EXPOSED SUPERSTRUCTURE

#16:	INTERIOR CEILING FINISH, SUSPENDED ACOUSTICAL TILE (ACT)



#17:	INTERIOR WALL FINISH, CMU

#18:	INTERIOR FLOOR FINISH, VINYL TILE (VCT)

#19:	LOBBY

#20:	CORRIDOR

#21:	MAIN OFFICE

#22:	MEDIA CENTER

#23:	CAFETERIA

#24:	KITCHEN

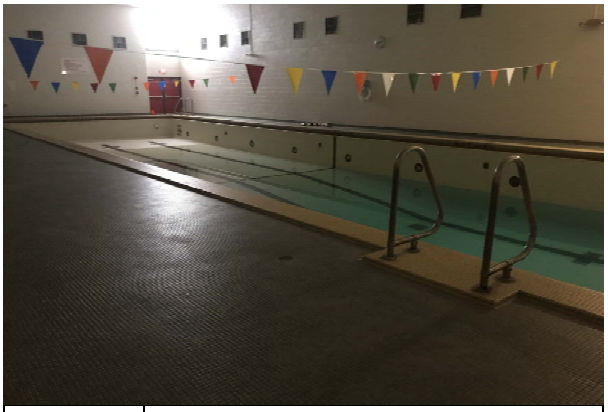
#25:	SECOND FLOOR COMMON AREA

#26:	AUXILIARY GYMNASIUM

#27:	AUDITORIUM/STAGE

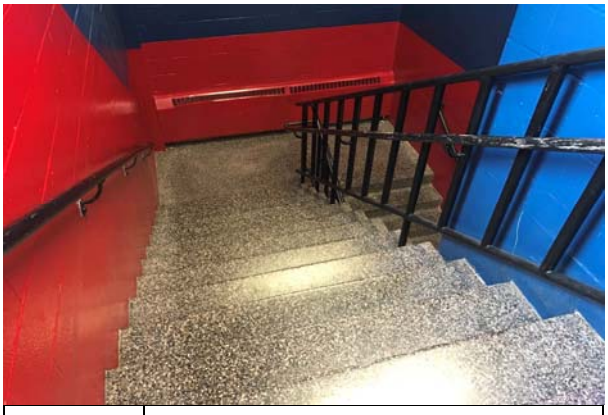
#28:	GYMNASIUM

#29:	CLASSROOM

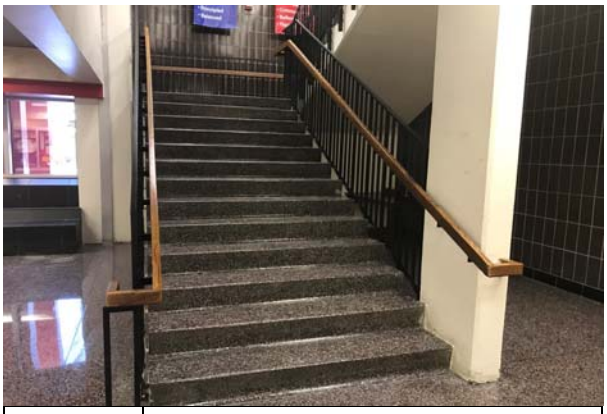


#30:	SWIMMING POOL

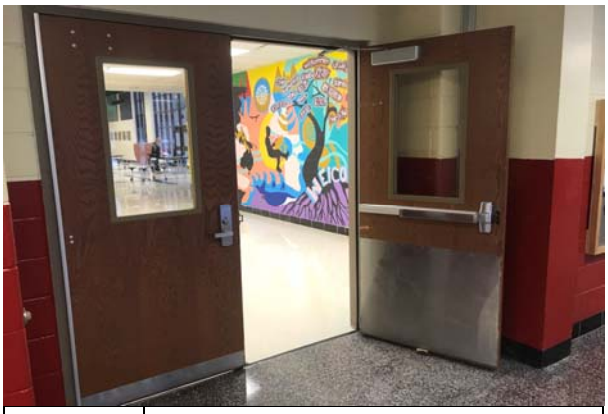
#31:	RESTROOM



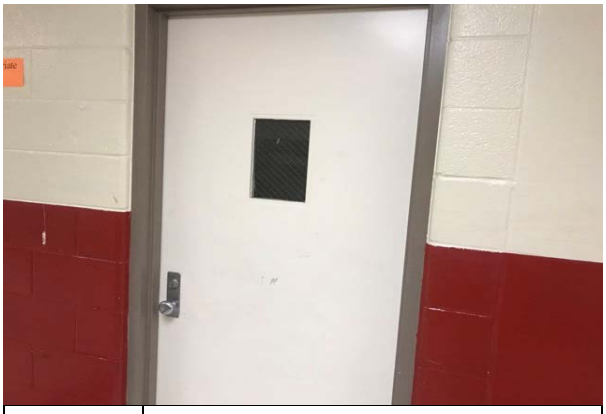
#32:	STAIRWELL



#33:	LOBBY STAIRS



#34:	FIRE-RATED DOORS



#35:	STEEL DOOR

#36:	MAIN ENTRANCE

#37:	SOLID CORE WOOD DOOR

#38:	ELEVATOR

#39:	BOILERS

#40:	SWIMMING POOL EQUIPMENT

#41:	AIR HANDLER, ORIGINAL

#42:	AIR HANDLER, NEWER

#43:	AXIAL FAN, ORIGINAL

#44:	RADIATOR, HYDRONIC BASEBOARD

#45:	RADIATOR, HYDRONIC CABINET

#46:	NATURAL GAS REGULATOR/METER

#47:	EXISTING SPRINKLER SYSTEM

#48:	FIRE ALARM PANEL

#49:	FIRE SAFETY COMPONENTS

#50:	SIAMESE CONNECTION

#51:	FIRE HYDRANT

#52:	ELECTRICAL SWITCHGEAR

#53:	TRANSFORMER

#54:	T-8 LIGHTING SYSTEM

#55:	DISTRIBUTION PANEL, NEWER

#56:	PROGRAMMABLE TIME CONTROLLER

#57:	CAMERA, INTERIOR

#58:	MAIN PARKING AREA

#59:	ADA PARKING STALL

#60:	PAVEMENT CONDITION

#61:	SIDEWALK AND DRIVE AISLE

#62:	SIDEWALK CONDITION

#63:	LOADING DOCK STAIRS

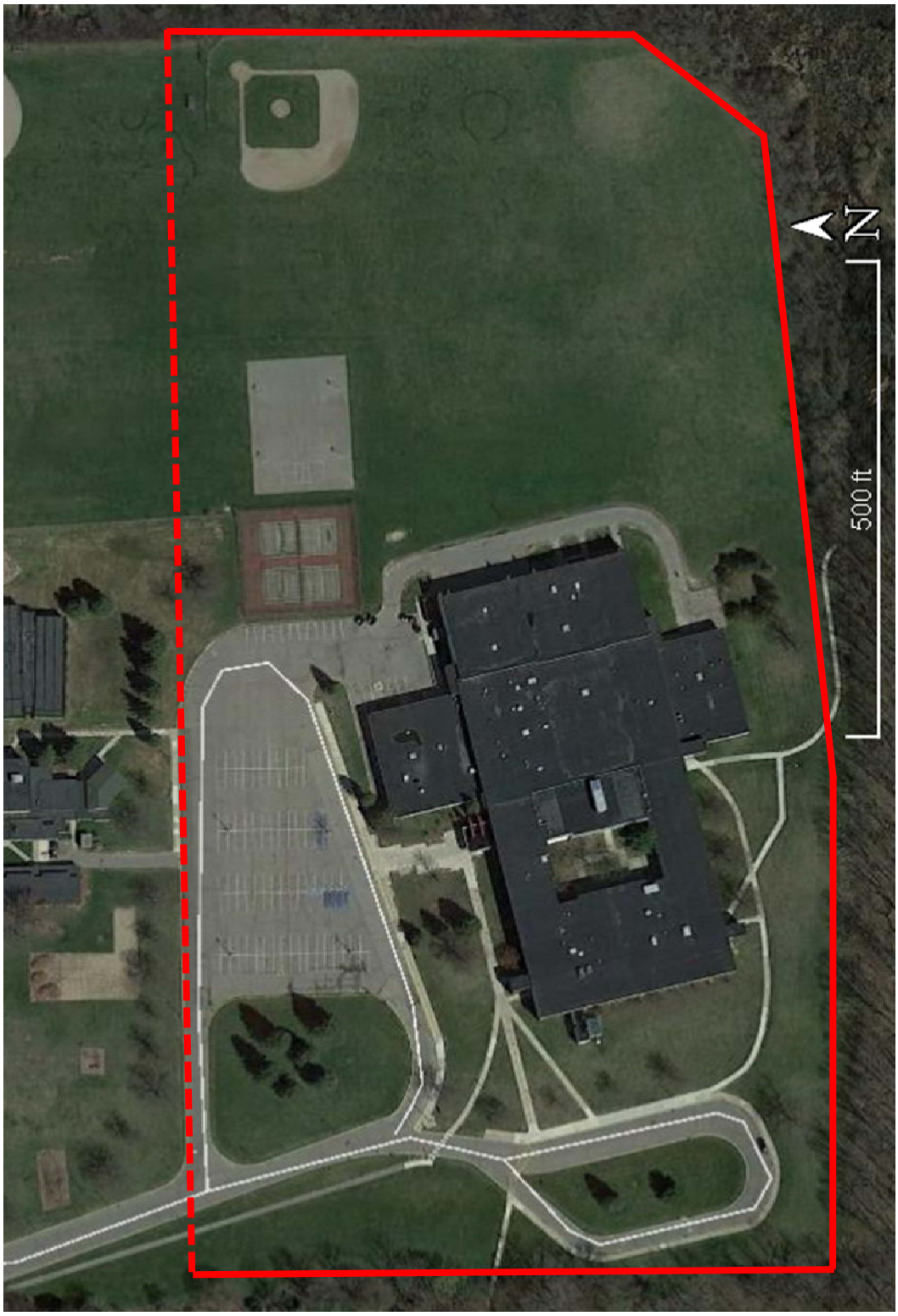
#64:	SIDEWALKS AND LANDSCAPING AT REAR ELEVATION

#65:	PEDESTRIAN CROSSWALK

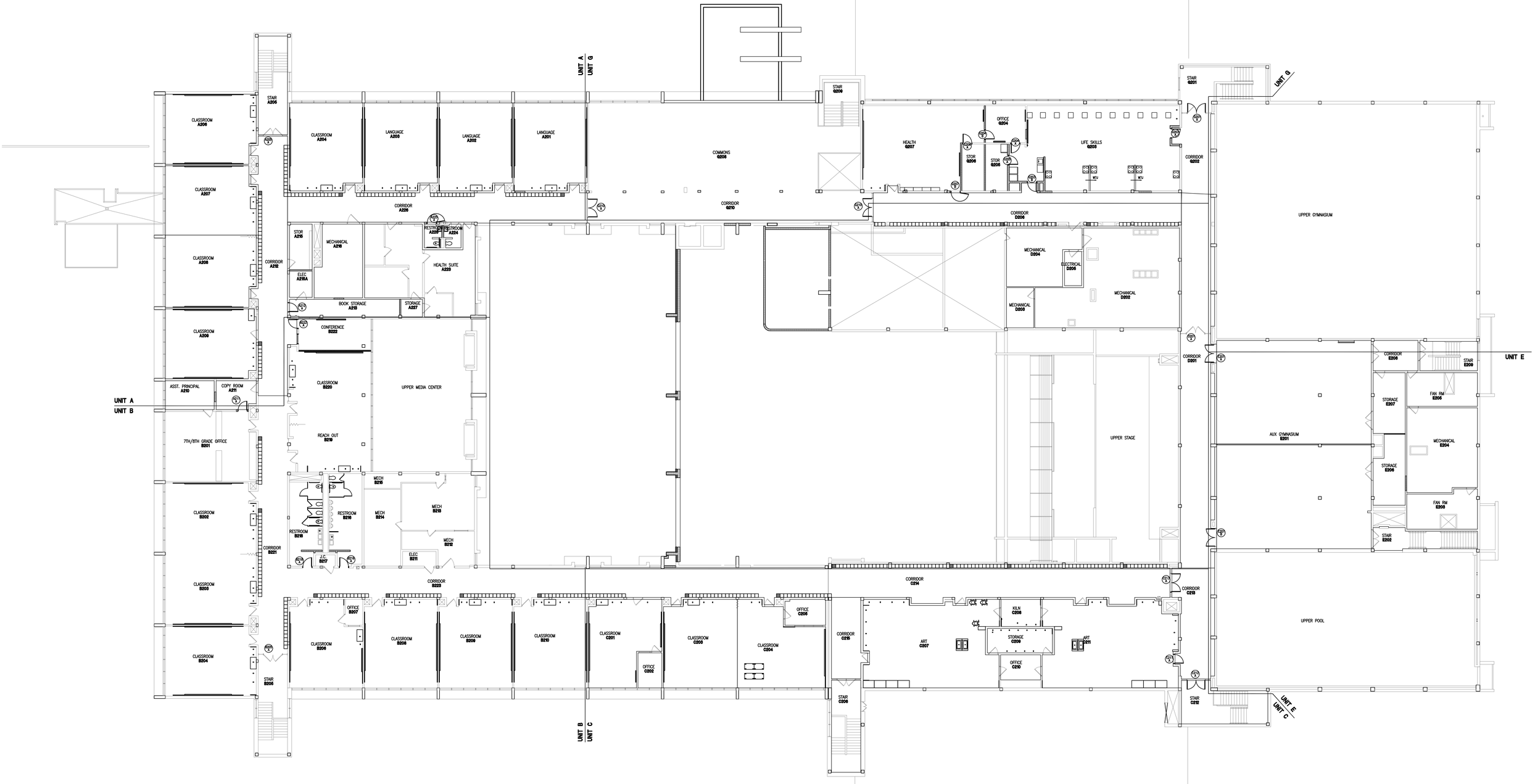
#66:	TENNIS/BASKETBALL COURTS AND PLAYING FIELDS

Appendix B:
Site and Floor Plans

Site Plan



emg	**Project Name:** Scarlett Middle School	**Project Number:** 129010.18R000-001.354
	Source: Google Earth	**On-Site Date:** January 9-10, 2018


UNIT A
UNIT G
STAIR A206
CLASSROOM A208
CLASSROOM A207
CLASSROOM A208
CLASSROOM A209
CLASSROOM A204
LANGUAGE A203
LANGUAGE A202
LANGUAGE A201
COMMONS G208
STAIR G209
HEALTH G207
OFFICE G204
STOR G206
STOR G205
LIFE SKILLS G203
CORRIDOR G202
STAIR G201
UNIT G
CORRIDOR A212
CORRIDOR A220
CORRIDOR G210
CORRIDOR D206
UPPER GYMNASIUM
STOR A215
MECHANICAL A216
RESTROOM A223
RESTROOM A224
ELEC A215A
HEALTH SUITE A225
BOOK STORAGE A218
STORAGE A227
MECHANICAL D204
ELECTRICAL D205
MECHANICAL D203
MECHANICAL D202
CONFERENCE B222
CLASSROOM B220
UPPER MEDIA CENTER
REACH OUT B219
ASST. PRINCIPAL A210
COPY ROOM A211
7TH/8TH GRADE OFFICE B201
CORRIDOR D201
CORRIDOR E206
STAIR E209
UNIT E
STORAGE E207
FAN RM E205
MECHANICAL E204
STORAGE E208
FAN RM E203
STAIR E202
AUX GYMNASIUM E201
UNIT A
UNIT B
MECH B215
MECH B214
MECH B213
MECH B212
RESTROOM B216
RESTROOM B218
J.C. B217
ELEC B211
CORRIDOR B221
UPPER STAGE
CLASSROOM B202
CLASSROOM B203
CLASSROOM B204
CORRIDOR B223
CORRIDOR C214
CORRIDOR E203
UPPER POOL
OFFICE B207
CLASSROOM B206
CLASSROOM B208
CLASSROOM B209
CLASSROOM B210
CLASSROOM C201
OFFICE C202
CLASSROOM C203
CLASSROOM C204
OFFICE C205
CORRIDOR C215
ART C207
KILN C208
STORAGE C209
OFFICE C210
ART C211
STAIR B205
STAIR C206
STAIR C212
UNIT B
UNIT C
UNIT E
UNIT C

UNIT A
UNIT B
UNIT C
UNIT D
UNIT E
UNIT F
UNIT G

Appendix C:
Supporting Documentation

Flood Map

emg	**Project Name:** **Scarlett Middle School**	**Project Number:** **129010.18R000-001.354**
	Source: **FEMA Map Number: 2616C0402E** **Dated: April 3, 2012**	**On-Site Date:** **January 9-10, 2018**

Appendix D:
EMG Accessibility Checklist

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Appendix E:
Pre-Survey Questionnaire

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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	
1. All available construction documents (blueprints) for the original construction of the building or for any tenant improvement work or other recent construction work. 2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features. 3. For commercial properties, provide a tenant list which identifies the names of each tenant, vacant tenant units, the floor area of each tenant space, and the gross and net leasable area of the building(s). 4. For apartment properties, provide a summary of the apartment unit types and apartment unit type quantities, including the floor area of each apartment unit as measured in square feet. 5. For hotel or nursing home properties, provide a summary of the room types and room type quantities. 6. Copies of Certificates of Occupancy, building permits, fire or health department inspection reports, elevator inspection certificates, roof or HVAC warranties, or any other similar, relevant documents. 7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies.	8. The company name, phone number, and contact person of all outside vendors who serve the property, such as mechanical contractors, roof contractors, fire sprinkler or fire extinguisher testing contractors, and elevator contractors. 9. A summary of recent (over the last 5 years) capital improvement work which describes the scope of the work and the estimated cost of the improvements. Executed contracts or proposals for improvements. Historical costs for repairs, improvements, and replacements. 10. Records of system & material ages (roof, MEP, paving, finishes, furnishings). 11. Any brochures or marketing information. 12. Appraisal, either current or previously prepared. 13. Current occupancy percentage and typical turnover rate records (for commercial and apartment properties). 14. Previous reports pertaining to the physical condition of property. 15. ADA survey and status of improvements implemented. 16. Current / pending litigation related to property condition.

Your timely compliance with this request is greatly appreciated.