FACILITY CONDITION ASSESSMENT

Prepared for

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

FACILITY CONDITION ASSESSMENT

OF

A2 TECH/STONE/PATHWAYS
2800 STONE SCHOOL ROAD
ANN ARBOR, MICHIGAN 48104

PREPARED BY:
EMG
10461 Mill Run Circle, Suite 1100
Owings Mills, Maryland 21117
800.733.0660
www.emgcorp.com

EMG CONTACT:
Andrew Hupp
Program Manager
800.733.0660 x6632
arhupp@emgcorp.com

EMG PROJECT #:
129010.18R000-030.354

DATE OF REPORT:
July 2, 2018

ONSITE DATE:
March 7, 2018

Immediate Repairs Report
A2 Tech/Stone/Pathways

7/2/2018

EMG Renamed Item Number	Location Description	ID	Cost Description	Quantity	Unit	Unit Cost *	Subtotal	Deficiency Repair Estimate *
1.2	Commons	878316	Engineer, Environmental, Asbestos (ACM) & Lead Base Paint (LBP), Evaluate/Report	1	EA	$5,750.00	$5,750	**$5,750**
		928260	Air Conditioning, Central, Install	44450	SF	$11.50	$511,175	**$511,175**
B20	Building exterior	878073	Exterior Wall, Concrete Block (CMU), 3+ Stories, Repoint	100	SF	$9.18	$918	**$918**
B20	Exterior wall	878336	Exterior Wall, Joint Caulking 1/2" to 1", 1-2 Stories, Replace	15000	LF	$5.90	$88,493	**$88,493**
B20	Upper level Windows and roofs	877821	Fascia, Wood, Replace	3000	SF	$19.97	$59,918	**$59,918**
D20	restroom	878362	Bathroom Vanity Cabinet, Wood, with Cultured Marble Sink Top, 24 to 30", Replace	2	EA	$1,245.27	$2,491	**$2,491**
	Site	958673	Davis Bacon Prevailing Wages, Surcharge for Prevailing Wages, 10% surcharge for prevailing wages	44037.96	LS	$1.15	$50,644	**$50,644**
Immediate Repairs Total								**$719,387**

* Location Factor (1.0) included in totals.

Replacement Reserves Report

A2 Tech/Stone/Pathways

7/2/2018

Location	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	Total Escalated Estimate
A2 Tech/Stone/Pathways	$719,387	$336,315	$1,060,764	$1,307,522	$699,579	$61,842	$432,754	$142,866	$77,353	$1,432,660	$432,328	$380,923	$723,874	$132,090	$832,679	$83,111	$141,231	$605,978	$821,787	$263,099	**$10,688,141**
GrandTotal	**$719,387**	**$336,315**	**$1,060,764**	**$1,307,522**	**$699,579**	**$61,842**	**$432,754**	**$142,866**	**$77,353**	**$1,432,660**	**$432,328**	**$380,923**	**$723,874**	**$132,090**	**$832,679**	**$83,111**	**$141,231**	**$605,978**	**$821,787**	**$263,099**	**$10,688,141**

EMG Renamed Item Number	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	RRR_RowGrandTotalLabel
1.2	Commons	878316	Engineer, Environmental, Asbestos (ACM) & Lead Base Paint (LBP), Evaluate/Report	0	0	0	1	EA	$5,000.00	$5,750.00	$5,750	$5,750																				**$5,750**
	A2 Tech/Stone/Pathways	928260	Air Conditioning, Central, Install	50	69	0	44450	SF	$10.00	$11.50	$511,175	$511,175																				**$511,175**
B10	North side	878473	Exterior Stair/Ramp Rails, Metal, Refinish	10	6	4	500	LF	$1.44	$1.44	$720					$720										$720						**$1,439**
B20	Building exterior	878073	Exterior Wall, Concrete Block (CMU), 3+ Stories, Repoint	25	25	0	100	SF	$9.18	$9.18	$918	$918																				**$918**
B20	Exterior wall	878336	Exterior Wall, Joint Caulking 1/2" to 1", 1-2 Stories, Replace	10	10	0	15000	LF	$5.13	$5.90	$88,493	$88,493											$88,493									**$176,985**
B20	soffit	878436	Exterior Wall, soffit, Prep & Paint	10	8	2	15000	SF	$2.87	$3.30	$49,520			$49,520										$49,520								**$99,039**
B20	Exterior wall	878340	Exterior Wall, Brick Veneer, 1-2 Stories, Replace	40	22	18	250	SF	$48.58	$55.87	$13,967																			$13,967		**$13,967**
B20	Gymnasium	878339	Exterior Wall, Aluminum Siding, 1-2 Stories, Replace	40	22	18	3600	SF	$6.00	$6.90	$24,840																			$24,840		**$24,840**
B20	Upper level Windows and roofs	877821	Fascia, Wood, Replace	20	20	0	3000	SF	$17.37	$19.97	$59,918	$59,918																				**$59,918**
B20	Throughout	878092	Window Screen, Aluminum 12 SF, Replace	10	6	4	50	EA	$518.50	$596.28	$29,814					$29,814										$29,814						**$59,628**
B20	Throughout	878091	Window, Aluminum Double-Glazed 12 SF, 1-2 Stories, Replace	30	12	18	300	EA	$584.21	$671.84	$201,551																			$201,551		**$201,551**
B20	Throughout	878499	Exterior Door, Fully-Glazed Aluminum-Framed Swinging, Replace	30	16	14	15	EA	$2,106.57	$2,422.55	$36,338															$36,338						**$36,338**
B20	Storage Shed	878080	Exterior Door, Steel, Replace	25	23	2	2	EA	$950.12	$1,092.64	$2,185			$2,185																	**$2,185**
B20	Building exterior	878752	Exterior Door, Steel, Replace	25	23	2	8	EA	$950.12	$1,092.64	$8,741			$8,741																	**$8,741**
B20	Main roof	877854	Roof, Single-Ply EPDM Membrane, Replace	20	11	9	40750	SF	$10.52	$12.10	$492,994										$492,994										**$492,994**
B20	Gymnasium	878454	Roof, Metal, Replace	40	22	18	3700	SF	$12.45	$14.32	$52,970																			$52,970		**$52,970**
C10	208	878440	Wall Partitions, Movable/Hinged/Folding, Acoustical Dampening, Replace	25	13	12	40	LF	$245.58	$282.42	$11,297														$11,297						**$11,297**
C10	202/200	878428	Wall Partitions, Movable/Hinged/Folding, Acoustical Dampening, Replace	25	9	16	20	LF	$245.58	$282.42	$5,648																		$5,648			**$5,648**
C10	206/208	878260	Wall Partitions, Movable/Hinged/Folding, Acoustical Dampening, Replace	25	9	16	20	LF	$245.58	$282.42	$5,648																		$5,648			**$5,648**
C10	Throughout	878740	Interior Door, Steel w/ Safety Glass, Replace	20	11	9	80	EA	$1,352.72	$1,555.63	$124,450										$124,450										**$124,450**
C10	Hallway	878254	Interior Door, Fire 90-Minutes and Over, Replace	20	11	9	6	EA	$1,649.06	$1,896.42	$11,379										$11,379										**$11,379**
D70	Throughout	946117	Exterior Door Hardware, Electronic Doorlocks ANSI F39 Lockset, Replace	30	29	1	15	EA	$1,345.00	$1,546.75	$23,201		$23,201																			**$23,201**
C10	restrooms	878348	Toilet Partitions, Metal Overhead-Braced, Replace	20	11	9	20	EA	$850.00	$977.50	$19,550										$19,550										**$19,550**
C10	Interior Stairs	878435	Interior Stair Treads, Raised Rubber Tile, Replace	18	10	8	120	SF	$8.98	$10.32	$1,239									$1,239											**$1,239**
C10	Throughout	878745	Interior Wall Finish, General Surface, Prep & Paint	8	6	2	82232	SF	$1.45	$1.67	$137,122			$137,122								$137,122								$137,122		**$411,366**
C10	commons	878309	Interior Wall Finish, Acoustical Tile (ACT), Replace	10	8	2	2500	SF	$7.57	$8.71	$21,763			$21,763										$21,763								**$43,526**
C10	commons	878306	Interior Floor Finish, Maple Sports Floor, Refinish	10	8	2	6915	SF	$4.53	$5.21	$36,055			$36,055										$36,055								**$72,109**
C10	Throughout	878095	Interior Floor Finish, Vinyl Tile (VCT), Replace	15	9	6	30450	SF	$4.80	$5.52	$168,105							$168,105													**$168,105**
C10	restroom	878357	Interior Floor Finish, Ceramic Tile, Replace	50	41	9	500	SF	$15.76	$18.12	$9,059										$9,059										**$9,059**
C10	Throughout	878734	Interior Floor Finish, Carpet Tile Commercial-Grade, Replace	10	8	2	6000	SF	$6.96	$8.01	$48,044			$48,044										$48,044								**$96,088**
C10	commons	878310	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	7	3	6915	SF	$2.27	$2.61	$18,052				$18,052										$18,052							**$36,103**
C10	Throughout	878090	Interior Ceiling Finish, Suspended Acoustical Tile (ACT), Replace	20	16	4	36450	SF	$3.11	$3.58	$130,405					$130,405																**$130,405**
D20	restroom	878349	Toilet, Tankless (Water Closet), Replace	20	11	9	20	EA	$842.97	$969.41	$19,388										$19,388										**$19,388**
D20	restroom	878350	Urinal, Vitreous China, Replace	20	11	9	8	EA	$1,193.44	$1,372.46	$10,980										$10,980										**$10,980**
D20	307	878294	Sink, Stainless Steel, Replace	20	11	9	1	EA	$1,054.05	$2,266.21	$2,266										$2,266										**$2,266**
D20	Throughout	878447	Sink, Stainless Steel, Replace	20	11	9	4	EA	$1,054.05	$1,212.16	$4,849										$4,849										**$4,849**
D20	Restroom	878448	Sink, Vitreous China, Replace	20	11	9	24	EA	$861.51	$990.74	$23,778										$23,778										**$23,778**
D20	kitchen	878322	Sink, Stainless Steel, Replace	20	11	9	1	EA	$1,054.05	$2,266.21	$2,266										$2,266										**$2,266**
C10	locker rooms	878439	Shower, Ceramic Tile, Replace	30	16	14	4	EA	$1,983.78	$2,281.35	$9,125																$9,125					**$9,125**
D20	Hallway	877454	Drinking Fountain, Refrigerated, Replace	10	7	3	2	EA	$1,257.51	$1,446.13	$2,892				$2,892										$2,892						**$5,785**
D20	hallway	878112	Drinking Fountain, Stainless, Replace	10	6	4	3	EA	$1,257.51	$1,446.13	$4,338					$4,338										$4,338						**$8,677**
D20	406	878431	Emergency Eye Wash & Shower Station, Replace	15	8	7	1	EA	$2,114.70	$2,431.90	$2,432								$2,432													**$2,432**
D20	402	878343	Emergency Eye Wash & Shower Station, Replace	15	8	7	1	EA	$2,114.70	$2,431.90	$2,432								$2,432													**$2,432**
D20	Mechanical room	878351	Water Heater, Gas, Tankless, 4.0 to 6.4 GPM, Replace	15	12	3	1	EA	$1,407.41	$1,618.52	$1,619				$1,619															$1,619		**$3,237**
D20	Mechanical room	876998	Water Heater, Condensing Style, High Efficiency, 71 to 120 GAL, Replace	10	7	3	1	EA	$15,964.79	$18,359.51	$18,360				$18,360										$18,360						**$36,719**
D20	Mechanical room	878369	Water Heater, Gas, Residential, 30 to 50 GAL, Replace	10	5	5	1	EA	$2,349.48	$2,701.91	$2,702						$2,702											$2,702				**$5,404**
D30	hallway 300 mech	878356	Water Heater, Electric, Commercial, 30 to 80 GAL, Replace	15	9	6	1	EA	$6,963.24	$8,007.73	$8,008							$8,008													**$8,008**
D20	Mechanical room	878363	Water Heater, Electric, Residential, 30 to 52 GAL, Replace	15	7	8	1	EA	$1,738.90	$1,999.74	$2,000									$2,000											**$2,000**
D20	kitchen	878330	Grease Trap/Interceptor, Underground, Replace	10	6	4	1	EA	$10,850.00	$12,477.50	$12,478					$12,478										$12,478					**$24,955**
D30	Mechanical room	877147	Air Compressor, 2 HP, Replace	20	16	4	1	EA	$6,611.73	$7,603.48	$7,603					$7,603															**$7,603**
D30	Mechanical room	877001	Air Compressor, 2 HP, Replace	20	16	4	1	EA	$6,611.73	$7,603.48	$7,603					$7,603															**$7,603**

EMG Renamed Item Number	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	RRR_RowGrandTotalLabel
D30	Mechanical room	878371	Compressed Air Dryer, Replace	15	9	6	1	EA	$5,077.01	$5,838.57	$5,839							$5,839														**$5,839**
D30	Mechanical room	878370	Air Compressor, 2 HP, Replace	20	6	14	1	EA	$6,611.73	$7,603.48	$7,603															$7,603						**$7,603**
	Roof	960739	Solar Instillation Project, Roof Mounted Solar Instillation, Install	20	18	2	426000	SF	$1.00	$1.15	$489,900			$489,900																		**$489,900**
D30	Boiler room	877270	Boiler, Gas, 2,501 to 4,200 MBH, Replace	25	13	12	1	EA	$120,905.15	$139,040.92	$139,041												$139,041									**$139,041**
D30	Boiler room	877264	Boiler, Gas, 2,501 to 4,200 MBH, Replace	25	13	12	1	EA	$120,905.15	$139,040.92	$139,041												$139,041									**$139,041**
D30	Main roof	878072	Evaporative Cooler, Direct, Packaged w/ Heat, 3,201 to 4,000 CFM, Replace	15	13	2	1	EA	$37,955.84	$43,649.22	$43,649			$43,649														$43,649				**$87,298**
D30	Main roof	878068	Evaporative Cooler, Direct, Packaged w/ Heat, 3,201 to 4,000 CFM, Replace	15	13	2	1	EA	$37,955.84	$43,649.22	$43,649			$43,649														$43,649				**$87,298**
D30	Main roof	877469	Evaporative Cooler, Direct, Packaged w/ Heat, 2,401 to 3,200 CFM, Replace	15	9	6	1	EA	$34,658.19	$39,856.92	$39,857							$39,857														**$39,857**
D30	Main roof	877464	Evaporative Cooler, Direct, Packaged w/ Heat, 2,401 to 3,200 CFM, Replace	15	5	10	1	EA	$34,658.19	$39,856.92	$39,857											$39,857										**$39,857**
D30	Main roof	877857	Condenser, Air-Cooled, 5 Ton, Replace	15	11	4	1	EA	$4,237.42	$4,873.03	$4,873					$4,873														$4,873		**$9,746**
D30	Main roof	877849	Condenser, Air-Cooled, 2 Ton, Replace	15	11	4	1	EA	$2,587.75	$2,975.91	$2,976					$2,976														$2,976		**$5,952**
D30	Main roof	877810	Condensing Unit/Heat Pump, Split System, 2 Ton, Replace	15	7	8	1	EA	$3,122.18	$3,590.50	$3,591									$3,591												**$3,591**
D30	Main roof	877812	Condensing Unit/Heat Pump, Split System, 2 Ton, Replace	15	7	8	1	EA	$3,122.18	$3,590.50	$3,591									$3,591												**$3,591**
D30	Main roof	877470	Condensing Unit/Heat Pump, Split System, 2 Ton, Replace	15	6	9	1	EA	$3,122.18	$3,590.50	$3,591										$3,591											**$3,591**
D30	Boiler room	877449	Air Handler, Exterior, 3,001 to 4,000 CFM, Replace	15	13	2	1	EA	$19,738.18	$22,698.91	$22,699			$22,699														$22,699				**$45,398**
D30	310	878303	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	IT Room	878711	Fan Coil Unit, 2 to 2.5 Ton, Replace	15	9	6	1	EA	$2,756.89	$3,170.42	$3,170							$3,170														**$3,170**
D30	Staff Lounge	878709	Fan Coil Unit, 2 to 2.5 Ton, Replace	15	9	6	1	EA	$2,756.89	$3,170.42	$3,170							$3,170														**$3,170**
D30	307	878293	Fan Coil Unit, 2 to 2.5 Ton, Replace	15	9	6	1	EA	$2,756.89	$3,170.42	$3,170							$3,170														**$3,170**
D30	hallway 100	878360	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	hallway 400	878346	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	314	878298	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	200	878438	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	208	878430	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	U of M	878441	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	312	878296	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	202	878429	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	hallway	878372	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	308	878353	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	Mechanical room	878366	Fan Coil Unit, Hydronic, 401 to 800 CFM, Replace	15	9	6	1	EA	$2,198.58	$2,528.37	$2,528							$2,528														**$2,528**
D30	206	878291	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	204	878256	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	210	878110	Fan Coil Unit, Hydronic, 801 to 1,200 CFM, Replace	15	9	6	1	EA	$3,235.37	$3,720.68	$3,721							$3,721														**$3,721**
D30	Mechanical room	878368	Air Handler, Interior, 1,301 to 2,500 CFM, Replace	20	13	7	1	EA	$9,413.96	$10,826.06	$10,826								$10,826													**$10,826**
D30	U of M	878442	Variable Air Volume (VAV) Unit, 801 to 1,300 CFM, Replace	15	6	9	1	EA	$6,038.83	$6,944.65	$6,945										$6,945											**$6,945**
D30	Main roof	877456	Air Handler, Exterior, Variable Volume, 4,001 to 6,000 CFM, Replace	15	6	9	1	EA	$55,734.16	$64,094.28	$64,094										$64,094											**$64,094**
D30	Boiler room	877451	Fan Coil Unit, Hydronic, 200 to 400 CFM, Replace	15	5	10	1	EA	$2,186.29	$2,514.23	$2,514											$2,514										**$2,514**
D30	Main roof	877477	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	11	4	1	EA	$2,664.18	$3,063.80	$3,064					$3,064														$3,064		**$6,128**
D30	Main roof	877459	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	11	4	1	EA	$2,664.18	$3,063.80	$3,064					$3,064														$3,064		**$6,128**
D30	Main roof	877814	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	11	4	1	EA	$2,021.87	$2,325.15	$2,325					$2,325														$2,325		**$4,650**
D30	Main roof	877880	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	11	4	1	EA	$2,664.18	$3,063.80	$3,064					$3,064														$3,064		**$6,128**
D30	Main roof	877848	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	11	4	1	EA	$2,664.18	$3,063.80	$3,064					$3,064														$3,064		**$6,128**
D30	Main roof	877855	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	11	4	1	EA	$2,664.18	$3,063.80	$3,064					$3,064														$3,064		**$6,128**
D30	Main roof	877878	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	11	4	1	EA	$2,664.18	$3,063.80	$3,064					$3,064														$3,064		**$6,128**
D30	Main roof	877816	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	11	4	1	EA	$2,664.18	$3,063.80	$3,064					$3,064														$3,064		**$6,128**
D30	Main roof	877458	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	11	4	1	EA	$2,664.18	$3,063.80	$3,064					$3,064														$3,064		**$6,128**
D30	Store RM Roof	878337	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	8	7	1	EA	$2,664.18	$3,063.80	$3,064								$3,064													**$3,064**
D30	Main roof	877879	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	8	7	1	EA	$2,664.18	$3,063.80	$3,064								$3,064													**$3,064**
D30	Main roof	878067	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	15	5	10	1	EA	$2,664.18	$3,063.80	$3,064											$3,064										**$3,064**
D30	Main roof	877461	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	4	11	1	EA	$2,021.87	$2,325.15	$2,325												$2,325									**$2,325**
D30	Boiler room	877225	Distribution Pump, Heating Water, 2 HP, Replace	20	13	7	1	EA	$4,652.29	$5,350.13	$5,350								$5,350													**$5,350**
D30	Boiler room	877272	Distribution Pump, Heating Water, 2 HP, Replace	20	13	7	1	EA	$4,652.29	$5,350.13	$5,350								$5,350													**$5,350**
D30	310	878302	Air Conditioner, Window/Thru-Wall, 1.5 to 2 Ton, Replace	10	6	4	1	EA	$2,588.52	$2,976.80	$2,977					$2,977												$2,977				**$5,954**
D30	312	878295	Air Conditioner, Window/Thru-Wall, 1.5 to 2 Ton, Replace	10	6	4	1	EA	$2,588.52	$2,976.80	$2,977					$2,977												$2,977				**$5,954**
D30	314	878297	Air Conditioner, Window/Thru-Wall, 1.5 to 2 Ton, Replace	10	6	4	1	EA	$2,588.52	$2,976.80	$2,977					$2,977												$2,977				**$5,954**
D30	office	878358	Air Conditioner, Window/Thru-Wall, 1.5 to 2 Ton, Replace	10	6	4	1	EA	$2,588.52	$2,976.80	$2,977					$2,977												$2,977				**$5,954**
D30	308	878352	Air Conditioner, Window/Thru-Wall, 1.5 to 2 Ton, Replace	10	6	4	1	EA	$2,588.52	$2,976.80	$2,977					$2,977												$2,977				**$5,954**
D30	Commons	878319	Unit Heater, Hydronic, 161 to 250 MBH, Replace	20	11	9	1	EA	$4,239.16	$4,875.03	$4,875										$4,875											**$4,875**
D30	hallway 300 mech	878355	Building Automation System (HVAC Controls), Upgrade	20	16	4	44450	SF	$5.36	$6.17	$274,118					$274,118																**$274,118**
E10	Boiler room	878077	Radon Monitoring, Commercial Grade, Multi-Point Continuous Sampling, Replace	15	6	9	1	EA	$27,210.00	$31,291.50	$31,292										$31,292											**$31,292**

EMG Renamed Item Number	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	RRR_RowGrandTotalLabel
D40	Throughout	878443	Sprinkler System, Full Retrofit, School (per SF), Renovate	50	47	3	44450	SF	$6.25	$7.19	$319,663				$319,663																	**$319,663**
D50	Mechanical room	878365	Building/Main Switchgear, 208 Y, 120 V, 1,200 Amp, Replace	30	16	14	1	EA	$212,265.31	$244,105.10	$244,105														$244,105						**$244,105**
D50	307	878292	Distribution Panel, 208 Y, 120 V, 225 Amp, Replace	30	11	19	7	EA	$7,951.00	$9,143.65	$64,006																			$64,006	**$64,006**
D50	Throughout	878089	Lighting System, Interior, School, Upgrade	25	22	3	44450	SF	$15.36	$17.67	$785,339				$785,339																**$785,339**
D50	Front entrance	945517	Intercom Master Station, Replace	20	19	1	1	EA	$3,814.50	$4,386.67	$4,387		$4,387																		**$4,387**
D60	Office	878307	Sound System, 7 Channel, Replace	15	8	7	1	EA	$2,318.93	$2,666.77	$2,667								$2,667												**$2,667**
D50	Throughout	945514	Clock and Bell System, Wireless or Ethernet Enabled, Up To 100 Total Clocks / Bells, Replace	15	14	1	44450	SF	$0.51	$0.59	$26,070		$26,070															$26,070			**$52,140**
D70	Office	878437	Fire Alarm System, School, Install	20	3	17	44450	SF	$3.13	$3.60	$160,085																		$160,085			**$160,085**
D70	Throughout	945515	Security/Surveillance System, Cameras and CCTV, Install	10	9	1	44450	SF	$4.35	$5.00	$222,218		$222,218										$222,218								**$444,436**
C10	commons	878315	Stage Curtain, Medium Weight Velour, Flameproof (per SF), Replace	15	13	2	2060	SF	$13.00	$14.95	$30,797			$30,797															$30,797			**$61,594**
D20	402/406	878342	Sink, Epoxy Resin, Laboratory, Replace	15	9	6	14	EA	$649.50	$746.92	$10,457							$10,457													**$10,457**
D30	406	878432	Laboratory Exhaust Hood, 6 LF, Replace	15	8	7	1	EA	$3,582.15	$4,119.47	$4,119								$4,119												**$4,119**
D30	402	878344	Laboratory Exhaust Hood, 6 LF, Replace	15	8	7	1	EA	$3,582.15	$4,119.47	$4,119								$4,119												**$4,119**
E10	kitchen	878332	Commercial Kitchen, Convection Oven, Double, Replace	10	6	4	1	EA	$8,643.00	$9,939.45	$9,939					$9,939									$9,939						**$19,879**
E10	Kitchen	878324	Commercial Kitchen, Convection Oven, Double, Replace	10	6	4	1	EA	$8,643.00	$9,939.45	$9,939					$9,939									$9,939						**$19,879**
E10	Kitchen	878321	Commercial Kitchen, Steamer, Tabletop, Replace	10	6	4	1	EA	$6,344.00	$7,295.60	$7,296					$7,296									$7,296						**$14,591**
E10	kitchen	878329	Commercial Kitchen, Food Warmer, Replace	15	9	6	1	EA	$1,551.91	$1,784.69	$1,785							$1,785													**$1,785**
E10	Kitchen	878326	Commercial Kitchen, milk cooler, Replace	15	9	6	1	EA	$4,256.00	$4,894.40	$4,894							$4,894													**$4,894**
E10	kitchen	878331	Commercial Kitchen, Exhaust Hood, Replace	15	9	6	1	EA	$7,571.72	$8,707.48	$8,707							$8,707													**$8,707**
E10	Kitchen	878328	Commercial Kitchen, Refrigerator, 2-Door Reach-In, Replace	15	8	7	1	EA	$4,256.00	$4,894.40	$4,894								$4,894												**$4,894**
E10	Kitchen	878327	Commercial Kitchen, Refrigerator, 2-Door Reach-In, Replace	15	8	7	1	EA	$4,256.00	$4,894.40	$4,894								$4,894												**$4,894**
E10	Boiler room	877452	Residential Appliances, Clothes Washer, Replace	15	13	2	1	EA	$1,329.98	$1,529.47	$1,529			$1,529														$1,529			**$3,059**
E10	Boiler room	877453	Residential Appliances, Clothes Dryer, Replace	15	13	2	1	EA	$1,101.88	$1,267.16	$1,267			$1,267														$1,267			**$2,534**
D30	commons	878305	Fixtures, Ceiling Fan, Replace	15	11	4	2	EA	$354.11	$354.11	$708					$708														$708	**$1,416**
D20	restroom	878362	Bathroom Vanity Cabinet, Wood, with Cultured Marble Sink Top, 24 to 30", Replace	20	20	0	2	EA	$1,082.84	$1,245.27	$2,491	$2,491																			**$2,491**
C10	Throughout	878457	Kitchen Cabinet, Base and Wall Section, Wood, Replace	20	11	9	40	LF	$467.63	$537.78	$21,511										$21,511										**$21,511**
C10	402/406	878341	Kitchen Cabinet, Base and Wall Section, Wood, Replace	20	11	9	140	LF	$467.63	$537.78	$75,289										$75,289										**$75,289**
D30	Main roof	878069	Radon Mitigation, Ventilation System, Per Stack, Replace	20	6	14	1	EA	$2,500.00	$2,875.00	$2,875														$2,875						**$2,875**
D30	Main roof	877472	Radon Mitigation, Ventilation System, Per Stack, Replace	20	6	14	1	EA	$2,500.00	$2,875.00	$2,875														$2,875						**$2,875**
D30	Main roof	877474	Radon Mitigation, Ventilation System, Per Stack, Replace	20	6	14	1	EA	$2,500.00	$2,875.00	$2,875														$2,875						**$2,875**
D30	Main roof	877473	Radon Mitigation, Ventilation System, Per Stack, Replace	20	6	14	1	EA	$2,500.00	$2,875.00	$2,875														$2,875						**$2,875**
D30	Main roof	877460	Radon Mitigation, Ventilation System, Per Stack, Replace	20	6	14	1	EA	$2,500.00	$2,875.00	$2,875														$2,875						**$2,875**
D30	Main roof	877476	Radon Mitigation, Ventilation System, Per Stack, Replace	20	6	14	1	EA	$2,500.00	$2,875.00	$2,875														$2,875						**$2,875**
D30	Main roof	877475	Radon Mitigation, Ventilation System, Per Stack, Replace	20	6	14	1	EA	$2,500.00	$2,875.00	$2,875														$2,875						**$2,875**
	Site	958673	Davis Bacon Prevailing Wages, Surcharge for Prevailing Wages, 10% surcharge for prevailing wages	1	1	0	44037.96	LS	$1.00	$1.15	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	$50,644	**$1,012,873**
G20	Parking lot	878334	Roadways, Asphalt Pavement, Seal & Stripe	5	3	2	28200	SF	$0.38	$0.44	$12,307			$12,307					$12,307					$12,307				$12,307			**$49,229**
G20	Parking lot	878333	Parking Lots, Asphalt Pavement, Mill & Overlay	25	16	9	28200	SF	$3.28	$3.77	$106,383										$106,383										**$106,383**
G20	Sidewalk	878632	Pedestrian Pavement, Sidewalk, Concrete Large Areas, Replace	30	26	4	2550	SF	$9.00	$10.35	$26,393					$26,393															**$26,393**
G20	Sidewalk	878335	Pedestrian Pavement, Sidewalk, Concrete Large Areas, Replace	30	16	14	9000	SF	$9.00	$10.35	$93,150														$93,150						**$93,150**
G20	In Front	876976	Signage, Property, Monument/Pylon, Replace	20	11	9	1	EA	$8,602.00	$9,892.30	$9,892										$9,892										**$9,892**
G20	west side	878587	Play Structure, Swing Set, 4 Seats, Replace	20	11	9	1	EA	$2,210.00	$2,541.50	$2,542										$2,542										**$2,542**
Totals, Unescalated												**$719,387**	**$326,519**	**$999,872**	**$1,196,567**	**$621,567**	**$53,346**	**$362,425**	**$116,163**	**$61,063**	**$1,098,015**	**$321,693**	**$275,187**	**$507,711**	**$89,947**	**$550,499**	**$53,346**	**$88,010**	**$366,626**	**$482,713**	**$150,042**	**$8,440,697**
Totals, Escalated (3.0% inflation, compounded annually)												**$719,387**	**$336,315**	**$1,060,764**	**$1,307,522**	**$699,579**	**$61,842**	**$432,754**	**$142,866**	**$77,353**	**$1,432,660**	**$432,328**	**$380,923**	**$723,874**	**$132,090**	**$832,679**	**$83,111**	**$141,231**	**$605,978**	**$821,787**	**$263,099**	**$10,688,141**

* Markup/LocationFactor (1.0) has been included in unit costs. Markup includes a and 15% Ann Arbor Premium factors applied to the location adjusted unit cost.

TABLE OF CONTENTS

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:	2800 Stone School Road, Ann Arbor, Washtenaw, Michigan 48104
Year Constructed/Renovated:	1949, Phase I / no date Phase II
Current Occupants:	Ann Arbor Public Schools and the University of Michigan
Percent Utilization:	95 percent used for A2 Tech/Stone/Pathways
Management Point of Contact:	Ann Arbor Pubic Schools/Physical Properties, Jim Vibbart, 734-320-3613 phone
Property Type:	Classrooms, Clinic, and Offices to support A2
Site Area:	9.39 acres
Building Area:	44,450 SF
Number of Buildings:	1
Number of Stories:	1
Parking Type and Number of Spaces:	50 spaces in open lots plus additional leased spaces in Church lot
Building Construction:	Masonry bearing walls with concrete roof decks and wood roof decks.
Roof Construction:	Flat roofs with standing seam metal system. Flat roofs with EPDM membrane.
Exterior Finishes:	Brick Veneer
Heating, Ventilation & Air Conditioning:	Central system with boilers, air handlers, hydronic fan coil, hydronic baseboard radiators and terminal units. Individual package units for fresh air and cooling for select areas. Supplemental components: ductless split-systems
Fire and Life/Safety:	Hydrants, smoke detectors, alarms, strobes, extinguishers, pull stations, alarm panel, and exit signs.
ADA:	This building has major ADA issues
All 44,450 square feet of the building are occupied by a single occupant, Ann Arbor Public Schools with two class rooms converted to a clinic and two class rooms converted to a day care. The space is mostly a combination of offices, classrooms, laboratory spaces, clinic daycare, supporting restrooms, administrative offices, mechanical and other utility spaces.	
A most representative sample of the interior spaces were observed 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
Numerous	Private offices	Meetings in process
Commons, 307 Roof, store Rm Roof	Commons, 307 Roof, store Rm Roof	Sloped sow covered roof, standing water, and no access
113 & 115	Day Care Rooms	Restricted access area

Property Information	
Assessment Information	
Dates of Visit:	March 7, 2018
On-Site Point of Contact (POC):	Jim Vibbart
Assessment and Report Prepared by:	Randall Patzke
Reviewed by:	Al Diefert Technical Report Reviewer For Andrew Hupp Program Manager ahupp@emgcorp.com 800.733.0660 x6632

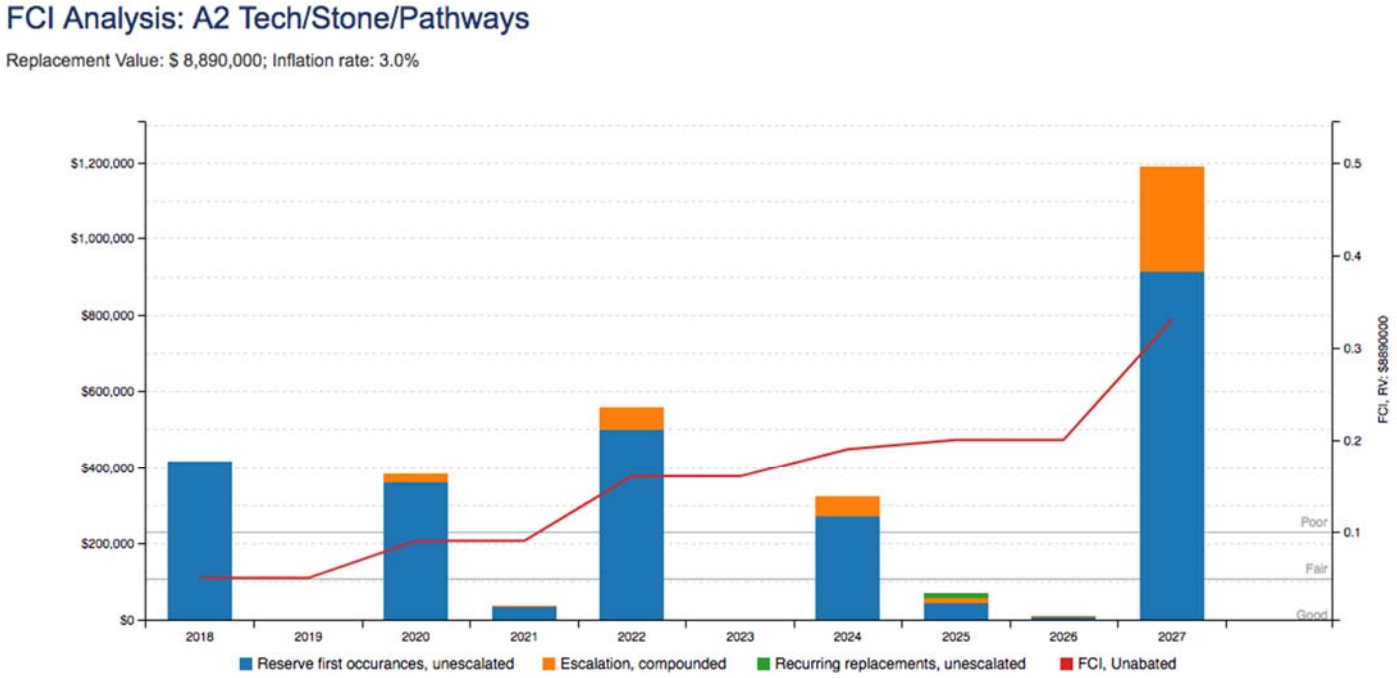
1.2. Key Findings

Site: The paving at the site needs to be seal coated and restriped. The side walk in some areas has lowered and is holding water back.

Architectural: The facility should have an asbestos study completed to make sure all areas are identified that asbestos exists. Some of the wall sound panels and pipe insulation may contain asbestos. The ramp in along the Commons may not comply with the ADA. Access to the 400-aisle area may also not be within the ADA guidelines. The exterior service doors should be reviewed for replacement.

MEPF: The facility should be updated with a sprinkler system. The building controls system should be updated to a completely networked DDC system. Work should be done to address the needs of the teachers related to having temperature control in their rooms. The mechanical equipment is nearing end of design life and should be reviewed for planned replacement.

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):	4.67%
Current Year FCI Rating:	2018
10-Year Facility Condition Index (FCI) FCI = (RR)/(CRV):	33.65%
10-Year FCI Rating	0.33
Current Replacement Value (CRV):	$8,890,000
Year 0 (Current Year) - Immediate Repairs (IR):	$415,104
Years 1-10 - Replacement Reserves (RR):	$2,576,062
Total Capital Needs:	$2,991,166

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	Masonry foundation walls	Fair
Basement and Crawl Space	None	--

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. There is minimal evidence of movement, the north wall of the commons as a crack on the roof.

B10 Superstructure

B1010 Floor Construction & B1020 Roof Construction		
Item	Description	Condition
Framing / Load-Bearing Walls	Masonry walls	Fair
Ground Floor	Concrete slab	Fair
Upper Floor Framing	None	--
Upper Floor Decking	None	--
Balcony Framing	None	--
Balcony Decking	None	--
Balcony Deck Toppings	None	--
Balcony Guardrails	None	--
Roof Framing	Open-web steel joists	Fair
Roof Decking	2x wood members	Fair

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 concealed. Walls and floors appear to be plumb, level, and stable. There are no significant signs of deflection or movement. Except for the crack visible on the north wall of the commons while on the roof.

B1080 Stairs					
Type	Description	Riser	Handrail	Balusters	Condition
Building Exterior Stairs	Concrete stairs	Closed	Metal	Metal	Good
Building Interior Stairs	Concrete stairs	Closed	Metal	None	Fair
Building Interior Stairs (Stage)	Wood-framed	Closed	None	None	Fair

Anticipated Lifecycle Replacements:

- Refinish stair railings

Actions/Comments:

- On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.

3. Building Envelope

B20 Exterior Vertical Enclosures

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

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Graffiti	☐	Efflorescence	☒
Brick damage along South stairs	☒	Other	☐

Anticipated Lifecycle Replacements:

- Exterior paint
- Metal siding
- Brick veneer spot replacement
- Wood trim (Fascia & Window)
- Caulking
- Masonry re-pointing

Actions/Comments:

- On-going periodic maintenance, including patching repairs, graffiti removal, and re-caulking, is highly recommended. Future lifecycle replacements of the components listed above will be required.
- The wood trim has significant areas of dry-rotted, weathered, deteriorated wood trim (upper level widow trim, fascia on upper roofs). The damaged materials must be replaced. In addition to these repairs, the exterior walls will require painting.
- The brick veneer has significant areas of cracking, loose units, deteriorated mortar joints (the north wall, west wall and south walls). The damaged veneer and joints must be repaired.
- There are significant areas of deteriorated sealant the west wall. The damaged sealant must be replaced.

B2020 Exterior Windows				
Window Framing	Glazing	Location	Window Screen	Condition
Aluminum framed, fixed	Double glaze	Throughout	☒	Good
Aluminum framed, operable	Double glaze	Throughout	☐	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	Poor
Overhead Doors	None	--

Anticipated Lifecycle Replacements:

- Windows
- Exterior doors

Actions/Comments:

- On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.
- The function of the windows should be tested and confirmed functional for Active Shooter. This should include the windows, screens and blinds.
- Upper level windows in some rooms create glare on walls as the blinds have gaps.
- The glazing system has significant areas of damaged and/or missing sealant (throughout the classrooms). The damaged sealant must be replaced.
- The rusted exterior doors should be repaired or replaced.

B30 Roof

B3010 Primary Roof			
Location	Main building	Finish	Single-ply membrane
Type / Geometry	Flat	Roof Age	10 Yrs.
Flashing	Membrane	Warranties	Unknown
Parapet Copings	Parapet with sheet metal coping	Roof Drains	Gutters, downspouts and internal drains
Fascia	Wood	Insulation	Rigid Board
Soffits	Concealed Soffits	Skylights	No
Attics	None	Ventilation Source-1	None
Roof Condition	Fair	Ventilation Source-2	--

B3010 Secondary Roof			
Roof Location	Over gym	Finish	Standing Seam metal
Type / Geometry	Flat	Roof Age	21 Yrs.
Flashing	Sheet metal	Warranties	
Parapet Copings	None	Roof Drains	Gutters and downspouts
Fascia	Metal Panel	Insulation	unknown
Soffits	None	Skylights	No
Attics	None	Ventilation Source-1	None
Roof Condition	Good	Ventilation Source-2	--

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
- Metal Roof
- Roof flashings (included as part of overall membrane replacement)
- Parapet wall copings (included as part of overall membrane replacement)

Actions/Comments:

- The roof finishes vary in age and appear to be more than 10 years old, the gym is the original roof. Information regarding roof warranties or bonds was not available. A copy of the warranty was requested but was not available. The roofs are maintained by an outside contractor.
- Roof leaks have occurred in the past year. The leaks have since been repaired, and no active roof leaks are evident.
- 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 ponding may be related to snow and ice on roof.
- The attics are not accessible, and it could not be determined if there is moisture, water intrusion, or excessive daylight in the attics.

- There was ponding on the lower roofs tis may be from the ice and snow on the roof. But the drains should be cleaned and cleared, and debris must be removed from the roof surfaces. Overhanging tree branches must have cleared from the perimeter of the roof. This work is considered to be routine maintenance.
- The roof hatch ladder is loose and should be re-secured.

4. Interiors

C10 Interior Construction

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

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

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

Interior Finishes - A2 TECH/STONE/PATHWAY

Location	Finish		Action	Quantity (SF)	Condition	RUL	Est. Cost
Commons	Ceiling	Exposed/Generic	Prep & Paint	6915	Fair	3	15,697
Commons	Wall	Acoustical Tile (ACT)	Replace	2500	Fair	2	18,925
Commons	Floor	Maple Sports Floor	Sand & Refinish	6915	Fair	1	31,352
Restroom	Floor	Ceramic Tile	Replace	500	Fair	9	7,878
Throughout	Wall	General Surface	Prep & Paint	54785	Fair	1	79,438
Throughout	Ceiling	Suspended Acoustical Tile (ACT)	Replace	36450	Fair	4	113,396
Throughout	Floor	Carpet Tile Commercial-Grade	Replace	6000	Fair	2	41,777
Throughout	Floor	Vinyl Tile (VCT)	Replace	30450	Fair	6	146,178

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
- Sheet vinyl
- Ceramic tile

- Interior paint
- Suspended acoustic ceiling tile
- Interior doors

Actions/Comments:

- It appears that the interior finishes have not been renovated within the last 6 years.
- On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.
- The ceiling tiles have significant areas of water-damaged ceilings tiles (media center, class rooms). The damaged ceiling tiles need to be replaced. Ceiling tiles should be in good repair in all rooms that temperature control is a priority.
- There are isolated areas of damaged wall finishes (front office, restrooms). The damaged wall areas need to be repaired.
- The toilet partitions are rusting out and require replacement.
- Some of the restroom vanities have peeling laminate and should be replaced.
- The stage curtains have multiple tears and holes in them, and should be replaced.

5. Services (MEPF)

D10 Conveying Systems

Not applicable. There are no elevators or conveying systems.

D20 Plumbing

D2010 Domestic Water Distribution		
Type	Description	Condition
Water Supply Piping	Galvanized iron	Fair
Water Meter Location	Mechanical room	

Domestic Water Heaters or Boilers	
Components	Water Heaters
Fuel	Natural gas & electric
Boiler or Water Heater Condition	Fair
Supplementary Storage Tanks?	No
Adequacy of Hot Water	Adequate
Adequacy of Water Pressure	Adequate

D2020 Sanitary Drainage		
Type	Description	Condition
Waste/Sewer Piping	Cast iron	Fair
Vent Piping	Cast iron	Fair

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

Plumbing Systems - A2 TECH/STONE/PATHWAY

Location	Component	Component Description	Quantity	Unit	Condition	Action	RUL	Est. Cost
307	Sink	Stainless Steel	1	EA	Fair	Replace	9	2,108
402	Emergency Station	Eye Wash & Shower	1	EA	Fair	Replace	7	2,115
406	Emergency Station	Eye Wash & Shower	1	EA	Fair	Replace	7	2,115
402/406	Water Heater	Condensing Style, High Efficiency, 71 to 120 GAL	1	EA	Fair	Replace	3	15,965
Hallway	Drinking Fountain	Stainless	3	EA	Fair	Replace	4	3,773
Hallway	Drinking Fountain	Refrigerated	2	EA	Fair	Replace	3	2,515
Kitchen	Grease Trap/Interceptor	Underground	1	EA	Fair	Replace	4	10,850
Kitchen	Sink	Stainless Steel	1	EA	Fair	Replace	9	2,108
Mechanical room	Water Heater	Gas, Residential, 30 to 50 GAL	1	EA	Good	Replace	5	2,349
Mechanical room	Water Heater	Electric, Residential, 30 to 52 GAL	1	EA	Good	Replace	8	1,739
Mechanical room	Water Heater	Gas, Tankless, 4.0 to 6.4 GPM	1	EA	Fair	Replace	3	1,407
Mechanical room	Water Heater	Electric, Commercial, 30 to 80 GAL	1	EA	Fair	Replace	6	6,963
Restroom	Toilet	Tankless (Water Closet)	20	EA	Fair	Replace	9	16,859
Restroom	Shower	Ceramic Tile	4	EA	Good	Replace	14	7,935
Restroom	Urinal	Vitreous China	8	EA	Fair	Replace	9	9,548
Restroom	Sink	Vitreous China	24	EA	Fair	Replace	9	20,676
Throughout	Sink	Stainless Steel	4	EA	Fair	Replace	9	4,216

Anticipated Lifecycle Replacements:

- Circulation pumps
- Water heaters
- Toilets
- Urinals
- Sinks
- Vanities

Actions/Comments:

- The plumbing systems appear to be well maintained and functioning adequately. The water pressure appears to be sufficient. No significant repair actions or short-term replacement costs are required. Routine and periodic maintenance is recommended. Future lifecycle replacements of the components or systems listed above will be required.
- There are isolated vanities that the P-lam is coming off and require replacement.
- Maintenance of the grease traps is the responsibility of the building owner. A plumber must inspect the grease traps and sewer lines on a regular basis to ensure that they are properly maintained.

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

Building Central Heating System	
Primary Heating System Type	Hot water 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	None
Refrigerant	--
Cooling Towers	--

Building Central Cooling System	
Location of Major Equipment	--
Space Served by System	--

Distribution System	
HVAC Water Distribution System	Two-pipe
Air Distribution System	Constant
Location of Air Handlers	Mechanical rooms
Terminal Units	Fan coil units (hydronic)
Quantity and Capacity of Terminal Units	approximately 23 fan coil units ranging from 800 to 1200 CFM plus radiators
Location of Terminal Units	Adjacent to windows

Packaged, Split & Individual Units	
Primary Components	Package units
Cooling (if separate from above)	None; no cooling
Heating Fuel	Natural gas
Location of Equipment	Rooftop
Space Served by System	Entire building

Supplemental/Secondary Components	
Supplemental Component #1	Ductless mini-split systems
Location / Space Served	Select class rooms, lounge and IT space
Condition	Good
Supplemental Component #2	Thru-Wall Air Conditioning Units
Location / Space Served	Class rooms & Offices
Condition	Fair

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

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Ductwork/grills need cleaned	☒	Minor 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	☐

Mechanical Systems - A2 TECH/STONE/PATHWAY

Location	Component	Component Description	Quantity	Unit	Condition	RUL	Est. Cost
200	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
202	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
204	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
206	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
208	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
210	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
307	Fan Coil Unit	2 to 2.5 Ton	1	EA	Fair	6	$2,756.89
308	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
308	Air Conditioner	Window/Thru-Wall, 1.5 to 2 Ton	1	EA	Fair	4	$2,588.52
310	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
310	Air Conditioner	Window/Thru-Wall, 1.5 to 2 Ton	1	EA	Fair	4	$2,588.52
312	Air Conditioner	Window/Thru-Wall, 1.5 to 2 Ton	1	EA	Fair	4	$2,588.52
312	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
314	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
314	Air Conditioner	Window/Thru-Wall, 1.5 to 2 Ton	1	EA	Fair	4	$2,588.52
Boiler room	Air Handler	Exterior, 3,001 to 4,000 CFM	1	EA	Fair	2	$19,738.18
Boiler room	Distribution Pump	Heating Water, 2 HP	1	EA	Fair	7	$4,652.29
Boiler room	Distribution Pump	Heating Water, 2 HP	1	EA	Fair	7	$4,652.29
Boiler room	Boiler	Gas, 2,501 to 4,200 MBH	1	EA	Fair	12	$120,905.15
Boiler room	Fan Coil Unit	Hydronic, 200 to 400 CFM	1	EA	Fair	10	$2,186.29
Boiler room	Boiler	Gas, 2,501 to 4,200 MBH	1	EA	Fair	12	$120,905.15
Commons	Unit Heater	Hydronic, 161 to 250 MBH	1	EA	Fair	9	$4,239.16
hallway	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
hallway 100	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
hallway 300 mech	Building Automation System	HVAC Controls	44450	SF	Fair	4	$238,363.13
hallway 400	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37
IT Room	Fan Coil Unit	2 to 2.5 Ton	1	EA	Fair	6	$2,756.89
Main roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Fair	4	$2,664.18
Main roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Fair	4	$2,664.18
Main roof	Exhaust Fan	Centrifugal, 251 to 800 CFM	1	EA	Fair	4	$2,021.87
Main roof	Air Handler	Exterior, Variable Volume, 4,001 to 6,000 CFM	1	EA	Fair	9	$55,734.16
Main roof	Condensing Unit/Heat Pump	Split System, 2 Ton	1	EA	Good	9	$3,122.18
Main roof	Evaporative Cooler	Direct, Packaged w/ Heat, 3,201 to 4,000 CFM	1	EA	Fair	2	$37,955.84
Main roof	Condensing Unit/Heat Pump	Split System, 2 Ton	1	EA	Good	8	$3,122.18
Main roof	Condenser	Air-Cooled, 5 Ton	1	EA	Fair	4	$4,237.42
Main roof	Condenser	Air-Cooled, 2 Ton	1	EA	Fair	4	$2,587.75
Main roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Fair	4	$2,664.18
Main roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Fair	4	$2,664.18
Main roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Fair	4	$2,664.18
Main roof	Condensing Unit/Heat Pump	Split System, 2 Ton	1	EA	Good	8	$3,122.18
Main roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Good	10	$2,664.18
Main roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Fair	4	$2,664.18
Main roof	Exhaust Fan	Centrifugal, 251 to 800 CFM	1	EA	Fair	11	$2,021.87
Main roof	Evaporative Cooler	Direct, Packaged w/ Heat, 3,201 to 4,000 CFM	1	EA	Fair	2	$37,955.84
Main roof	Evaporative Cooler	Direct, Packaged w/ Heat, 2,401 to 3,200 CFM	1	EA	Fair	6	$34,658.19
Main roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Fair	4	$2,664.18
Main roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Fair	4	$2,664.18
Main roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Fair	7	$2,664.18
Main roof	Evaporative Cooler	Direct, Packaged w/ Heat, 2,401 to 3,200 CFM	1	EA	Good	10	$34,658.19
Mechanical room	Air Handler	Interior, 1,301 to 2,500 CFM	1	EA	Fair	7	$9,413.96
Mechanical room	Fan Coil Unit	Hydronic, 401 to 800 CFM	1	EA	Fair	6	$2,198.58
office	Air Conditioner	Window/Thru-Wall, 1.5 to 2 Ton	1	EA	Fair	4	$2,588.52
Staff Lounge	Fan Coil Unit	2 to 2.5 Ton	1	EA	Fair	6	$2,756.89
Store RM Roof	Exhaust Fan	Centrifugal, 801 to 2,000 CFM	1	EA	Fair	7	$2,664.18
U of M	Variable Air Volume (VAV) Unit	801 to 1,300 CFM	1	EA	Fair	9	$6,038.83
U of M	Fan Coil Unit	Hydronic, 801 to 1,200 CFM	1	EA	Fair	6	$3,235.37

Anticipated Lifecycle Replacements:

- Boilers
- Air handling units
- Distribution pumps and motors
- VAV boxes

- Fan coil units
- Package units
- Split system condensing units
- Through-wall air conditioners
- Rooftop exhaust fans

Actions/Comments:

- The HVAC systems are maintained by an outside contractor. Records of the installation, maintenance, upgrades, and replacement of the HVAC equipment at the property have not been maintained since the property was first occupied.
- The HVAC equipment appears to vary in age and most was installed in 2006. HVAC equipment is replaced on an "as needed" basis.
- The HVAC equipment appears to be functioning adequately overall. Temperature control is an issue with the staff.
- The facility HVAC is controlled using an outdated hybrid pneumatic system supplied by an air compressor. For modernization, reliability, and increased control, full conversion to a web-based direct digital control (DDC) platform is highly recommended.

D40 Fire Protection

Item	Description					
Type	None					
Sprinkler System	None	☒	Standpipes	☐	Backflow Preventer	☐
	Hose Cabinets	☐	Fire Pumps	☐	Siamese Connections	☐
Sprinkler System Condition	--					
Fire Extinguishers	Last Service Date		Servicing Current?			
	August 2017		Yes			
Hydrant Location	Northeast corner of site by drive					
Siamese Location	none					
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:

- No components of significance

Actions/Comments:

- None of the building is protected by fire suppression. Due to its construction date, the facility is most likely “grandfathered” by code and the installation of fire sprinklers not required until major renovations are performed. Regardless of when or if installation of facility-wide fire suppression is required by the governing municipality, EMG recommends a retrofit be performed.

- The fire extinguishers have been inspected within the last year. But, some had been missed. A qualified fire equipment contractor must inspect and service the fire extinguishers.

D50 Electrical

Distribution & Lighting			
Electrical Lines	Underground	Transformer	Pad-mounted
Main Service Size	1200 Amps	Volts	120/208 Volt, three-phase
Meter & Panel Location	Mechanical Room	Branch Wiring	Copper
Conduit	Metallic	Step-Down Transformers?	No
Security / Surveillance System?	Yes	Building Intercom System?	Yes
Lighting Fixtures	T-8, CFL		
Main Distribution Condition	Fair		
Secondary Panel and Transformer Condition	Fair		
Lighting Condition	Fair		

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

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Improperly stored material	☒	Unsecured high voltage area	☐
Loose cables or improper use of conduit	☐	Poor electrical room ventilation	☐
Other	☐	Other	☐

Anticipated Lifecycle Replacements:

- Circuit breaker panels
- Main switchgear
- Switchboards
- Interior light fixtures

Actions/Comments:

- The onsite electrical systems up to the meter are owned and maintained by the respective utility company.
- The electrical service and capacity appear to be adequate for the property's demands.
- The panels, switchboards are mostly updates components. The electrical service appears to be adequate for the facility's needs. However, due to the age when the facility was built it might become a need to split circuits in some classrooms.

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	☒
Fire Alarm System Condition	Good					
Central Alarm Panel System	Location of Alarm Panel		Installation Date of Alarm Panel			
	Office		2016			

Anticipated Lifecycle Replacements:

- Fire alarm system and devices

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

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

E1030 Commercial Laundry		
Equipment	Comment	Condition
Residential Washers	☒	Fair
Residential Dryers	☒	Fair

Anticipated Lifecycle Replacements:

- Warming oven
- Exhaust hood
- Reach-in freezer
- Reach-in cooler
- Residential washer
- Residential dryer
- Gas Monitor

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.

7. Sitework

G20 Site Improvements

G2020 Parking Lots & G2030 Pedestrian Walkways		
Item	Material	Condition
Entrance Driveway Apron	Concrete	Fair
Parking Lot	Asphalt	Fair
Drive Aisles	Asphalt	Fair
Service Aisles	Asphalt	Fair
Sidewalks	Concrete	Poor
Curbs	Concrete	Fair
Pedestrian Ramps	Cast-in-place concrete	Fair
Ground Floor Patio or Terrace	Wood porch or deck	Fair

Parking Count				
Open Lot	Carport	Private Garage	Subterranean Garage	Freestanding Parking Structure
48	-	-	-	-
Total Number of ADA Compliant Spaces			0	
Number of ADA Compliant Spaces for Vans			2	
Total Parking Spaces			50	

Site Stairs			
Location	Material	Handrails	Condition
South side	Concrete stairs	Metal	Fair
North side	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 seal coating
- Asphalt pavement
- Sidewalks
- Curbs
- Site stairs

Actions/Comments:

- The concrete sidewalks have isolated areas of vertically-displaced concrete, settlement and cracking. These areas occur on the front side of the site. The damaged areas of concrete sidewalks require replacement.

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

Site Fencing		
Type	Location	Condition
None	--	--

Refuse Disposal				
Refuse Disposal	Common area dumpsters			
Dumpster Locations	Mounting	Enclosure	Contracted?	Condition
Off Main Entry	Concrete pad	None	Yes	Fair

Other Site Amenities			
	Description	Location	Condition
Playground Equipment	Metal	Near trees west side	Fair
Tennis Courts	None	--	--

Other Site Amenities			
	Description	Location	Condition
Basketball Court	None	--	--
Swimming Pool	None	--	--

Anticipated Lifecycle Replacements:

- Signage
- Swing set

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.

G2080 Landscaping		
Drainage System and Erosion Control		
System	Exists At Site	Condition
Surface Flow	☒	Fair
Inlets	☒	Fair
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	Slopes gently down from the northeast side of the property to the southwest property line.						
Landscaping	Trees	Grass	Flower Beds	Planters	Drought Tolerant Plants	Decorative Stone	None
	☒	☒	☒	☒	☐	☐	☐

Item	Description			
Landscaping Condition	Fair			
Irrigation	Automatic Underground	Drip	Hand Watering	None
	☐	☐	☐	☒
Irrigation Condition	--			

Retaining Walls		
Type	Location	Condition
Concrete	North side	Fair

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 meter and regulator are located along the exterior walls of the building. 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 meter and regulator 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
	☐	☐	☐	☐	☐
	--				

G4050 Site Lighting			
Building Lighting	None	Wall Mounted	Recessed Soffit
	☐	☒	☐
	Fair		

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

Anticipated Lifecycle Replacements:

- Exterior lighting
- Facility upgrade of lighting system

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/Storage Shed/	Location	South between parking lots
Item	Material	Item	Material
Exterior Siding	Pre-cast Concrete	Roof Finishes	Pre-cast Concrete
Interior Finishes	Floor: Unfinished Concrete Ceiling: Exposed concrete Walls: Exposed Concrete (based on Transportation bldg.)	MEPF	Electrical (was not able to access)
Overall Building Condition			Fair

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended.
- The exterior doors are rusting and damaged and require replacement.

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

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

The ramp along the commons maybe too steep. Also, to get to the 400 rooms you must cross through the commons and then up a slight ramp. Lower parking lot is not connected with front entries.

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 X, defined as an area outside the 500-year flood plain with less than 0.2% annual probability of flooding. Annual Probability of Flooding of Less than one percent.

According to the 1997 Uniform Building Code Seismic Zone Map of the United States, the property is 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 A2 Tech/Stone/Pathway, 2800 Stone School Road, Ann Arbor, MI, the "Property". It is our understanding that the primary interest of Ann Arbor Public Schools is to locate and evaluate materials and building system defects that might significantly affect the value of the property and to determine if the present Property has conditions that will have a significant impact on its continued operations.

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

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

This report has been prepared on behalf of and exclusively for the use of the 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 Ann Arbor Public Schools and the recipient's sole risk, without liability to EMG.

Prepared by: Randall Patzke,
Project Manager

Reviewed by:

Al Diefert
Technical Report Reviewer For
Andrew Hupp
Program Manager

13. Appendices

Appendix A: Photographic Record
Appendix B: Site Plan
Appendix C: Supporting Documentation
Appendix D: Pre-Survey Questionnaire

Appendix A:
Photographic Record

#1:	FRONT ELEVATION

#2:	LEFT ELEVATION

#3:	REAR ELEVATION

#4:	RIGHT ELEVATION

#5:	ROOFTOP PACKAGE UNIT

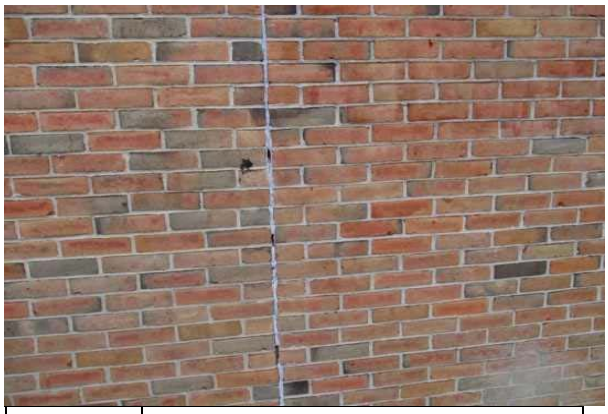
#6:	POSSIBLE ASBESTOS INSULATION

#7:	EXTERIOR WALL ON ROOF

#8:	EXTERIOR STAIR/RAMP RAILS

#9:	EXTERIOR DOORS AND RADIATOR

#10:	CEILING FAN



#11:	EXTERIOR WALL, JOINT CAULKING

#12:	CONDENSING UNIT MINI-SPLIT

#13:	PEDESTRIAN PAVEMENT, SIDEWALK

#14:	DRINKING FOUNTAIN

#15:	AIR HANDLER

#16:	ROOFTOP PACKAGE UNIT ABOVE COMMONS

#17:	EXHAUST FAN

#18:	AIR CONDITIONER, WINDOW/THRU-WALL

#19:	SINK AND CERAMIC TILE

#20:	KITCHEN EXHAUST HOOD

#21:	WALL PARTITIONS, MOVABLE/HINGED/FOLDING, ACOUSTICAL DAMPENING

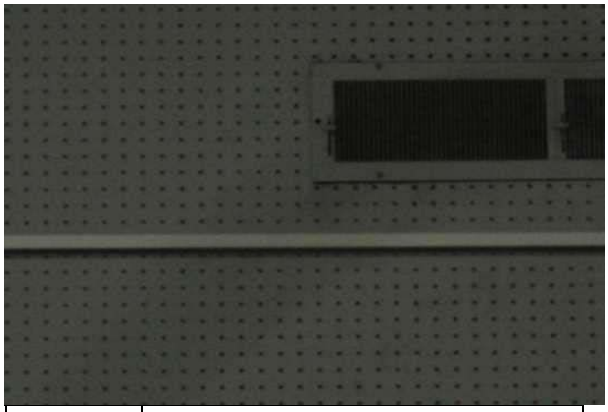
#22:	BOILER

#23:	BUILDING/MAIN SWITCHGEAR

#24:	WATER HEATER

#25:	CONDENSING UNIT MINI-SPLIT

#26:	KITCHEN CABINET



#27:	POSSIBLE ASBESTOS CONTAINING WALL COVERING

#28:	EXHAUST FANS

#29:	BUILDING AUTOMATION SYSTEM

#30:	HEATING WATER DISTRIBUTION PUMP

#31:	ASPHALT PAVEMENT

#32:	PEDESTRIAN PAVEMENT, SIDEWALK

#33:	STEEL EXTERIOR DOOR

#34:	EXTERIOR BRICK REPLACEMENT

#35:	INTERIOR FLOOR VINYL TILE (VCT)

#36:	FAN COIL UNIT

#37:	SUSPENDED ACOUSTICAL TILE

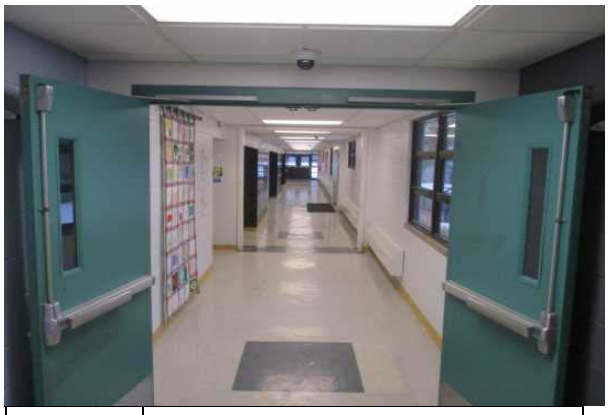
#38:	LEAK MONITORING SYSTEM,

#39:	PAINTED EXTERIOR WALL

#40:	CERAMIC TILE

#41:	INTERIOR STAIR TREADS

#42:	EXHAUST FAN



#43:	FIRE DOORS

#44:	DRINKING FOUNTAIN

#45:	STAGE CURTAIN

#46:	EXHAUST FAN (RADON)

#47:	EMERGENCY EYE WASH & SHOWER STATION AND LAB FUME HOOD

#48:	STAINLESS STEEL SINK (OVER SIZED)

#49:	SOFFIT PAINTED SURFACE

#50:	TOILET PARTITIONS

#51:	SUSPENDED ACOUSTICAL TILE

#52:	URINAL

#53:	INTERIOR FLOOR VINYL TILE

#54:	DISTRIBUTION PANEL

#55:	EXTERIOR WALL ON ROOF

#56:	REFINISH MAPLE SPORTS FLOOR

#57:	WINDOW STRIP

#58:	PYLON SIGN

#59:	SINKS AND VANITY

#60:	KITCHEN REFRIGERATOR, 2-DOOR REACH-IN

#61:	RESIDENTIAL APPLIANCES WASHER AND DRYER

#62:	SUSPENDED ACOUSTICAL TILE (ACT)

#63:	CARPET TILE

#64:	DEMOUNTABLE PARTITION

#65:	GREASE TRAP/INTERCEPTOR

#66:	EXHAUST FAN

#67:	FAN COIL UNIT, HYDRONIC

#68:	SUSPENDED ACOUSTICAL TILE (ACT)

#69:	BATHROOM VANITY P-LAM

#70:	TOILET PARTITIONS

#71:	SOFFIT, WOOD

#72:	EXTERIOR WALL JOINT CAULKING

#73:	REFINISH MAPLE SPORTS FLOOR

#74:	PEDESTRIAN PAVEMENT, SIDEWALK

#75:	WINDOW TRIM ON ROOF

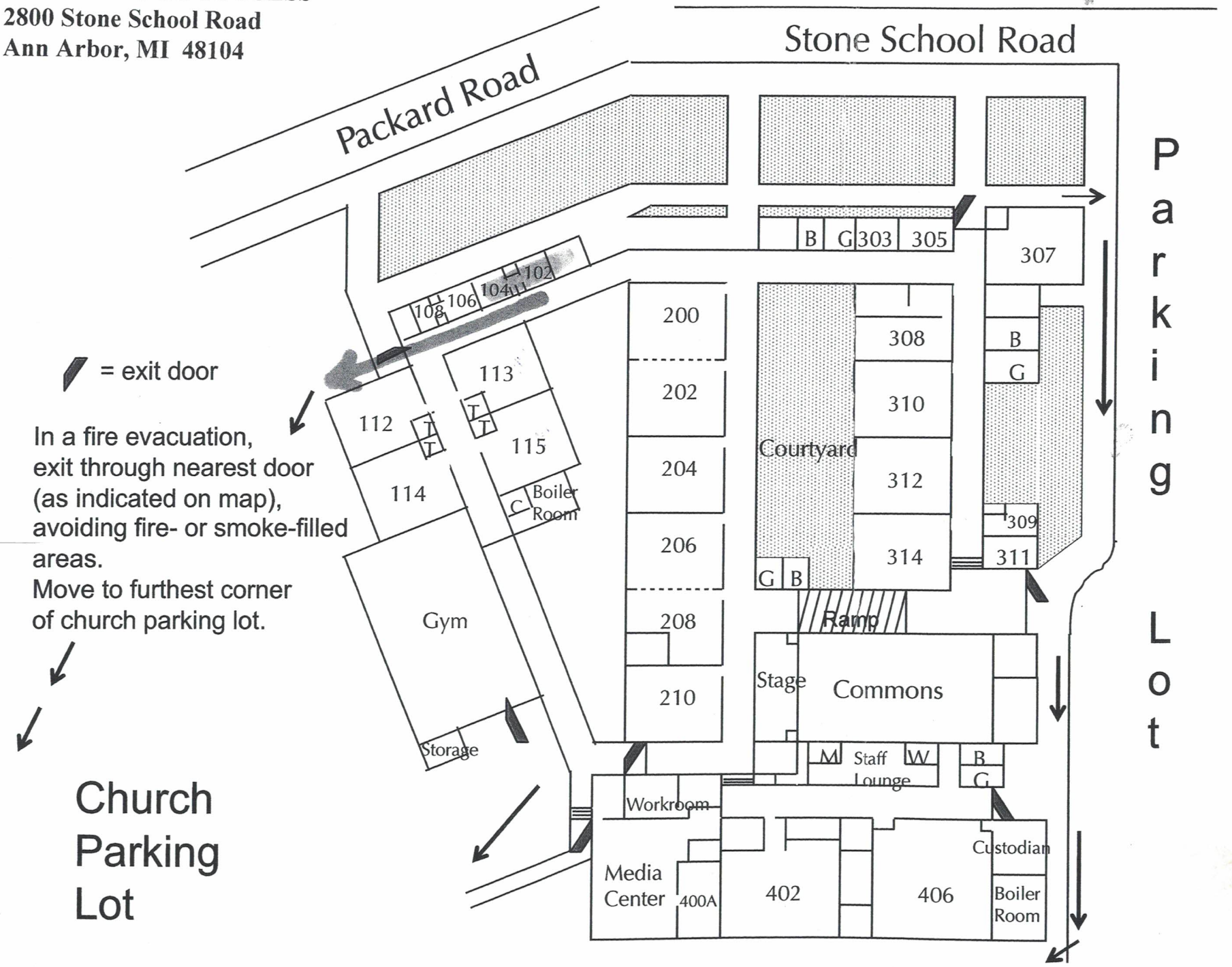
#76:	ASPHALT PAVEMENT

#77:	METAL SIDING

#78:	ROOF, EXTERIOR WINDOWS AND AC UNITS

Appendix B:
Site Plan

PATHWAYS TO SUCCESS
2800 Stone School Road
Ann Arbor, MI 48104



Appendix C:
Supporting Documentation

Flood Map

emg	**Project Name:** A2 Tech/Stone/Pathways	**Project Number:** 129010.18R000-030.354
	Source: FEMA Map Number: 26161C0401E Dated: April 3, 2012	**On-Site Date:** March 7, 2018

Appendix D:
Pre-Survey Questionnaire

EMG FACILITY CONDITION ASSESSMENT: PRE-SURVEY QUESTIONNAIRE

Building / Facility Name: Not Returned to EMG

Name of person completing form:

Title / Association with property:

Length of time associated w/ property:

Date Completed:

Phone Number:

Directions: Please answer all questions to the best of your knowledge and in good faith. Please provide additional details in the Comments column, or backup documentation for any ***Yes*** responses.

DATA OVERVIEW		RESPONSE			
1	Year/s constructed				
2	Building size in SF				
3	Major Renovation Dates	Façade		HVAC	
		Roof		Electrical	
		Interiors		Site Pavement	
		Accessibility		other	

QUESTION		RESPONSE
4	Provide additional detail about the scope of the MAJOR additions, renovations, or systemic rehabilitations since construction (referenced above in Question 3).	
5	List other significant but somewhat lesser capital improvements, focusing on recent years (provide approximate year completed).	
6	List any major capital expenditures planned/requested for the next few years. Have they been budgeted?	
7	Describe any on-going extremely problematic, historically chronic, or immediate facility needs.	

Mark the column corresponding to the appropriate response. Please provide additional details in the Comments column, or backup documentation for any ***Yes*** responses. (**NA** indicates "*Not Applicable*", **Unk** indicates *"Unknown"*)						
QUESTION		RESPONSE				COMMENTS
		Yes	No	Unk	NA	
8	Are there any problems with foundations or structures, like excessive settlement?					
9	Has any part of the facility ever contained visible suspect mold growth, or have there been any indoor air quality or mold related complaints from occupants?					
10	Are there any wall, window, basement or roof leaks?					
11	Are there any plumbing leaks, water pressure, or clogging/back-up problems?					
12	Have there been any leaks or pressure problems with natural gas, HVAC supply/return lines, or steam service?					
13	Are any areas of the facility inadequately heated, cooled or ventilated? Any poorly insulated areas?					
14	Is the electrical service outdated, undersized, or otherwise problematic?					
15	Are there any problems or inadequacies with exterior building-mounted lighting?					
16	Is site/parking drainage inadequate, with excessive ponding or other problems?					
17	Are there any other unresolved construction defects or significant issues/hazards at the property that have not yet been identified above?					
18	ADA: Has an accessibility study been performed at the site? If so, indicate when.					
19	ADA: If a study has occurred, have the associated recommendations been addressed? In full or in part?					
20	ADA: Have there been regular complaints about accessibility issues, or associated previous or pending litigation?					

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.