FACILITY CONDITION ASSESSMENT

prepared for

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

FACILITY CONDITION ASSESSMENT

OF

BACH ELEMENTARY
600 WEST JEFFERSON STREET
ANN ARBOR, MICHIGAN 48103

PREPARED BY:
EMG
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EMG PROJECT #:
129010.18R000-007.354

DATE OF REPORT:
June 28, 2018

ONSITE DATE:
March 1, 2018

Immediate Repairs Report
Bach Elementry
6/28/2018

Location Name	EMG Renamed Item Number	ID	Cost Description	Quantity	Unit	Unit Cost *	Subtotal	Deficiency Repair Estimate *
Bach Elementry	D30	885582	Air Conditioning, Central, Install	53090	SF	$11.50	$610,535	**$610,535**
Bach Elementry	C10	872789	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	1500	SF	$2.61	$3,916	**$3,916**
Bach Elementry		958704	Davis Bacon Prevailing Wages, Surcharge for Prevailing Wages, 10% surcharge for prevailing wages	47386.15	LS	$1.15	$54,494	**$54,494**
Immediate Repairs Total								**$668,945**

* Location Factor included in totals.

Replacement Reserves Report

Bach Elementry

6/28/2018

Location	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	Total Escalated Estimate
Bach Elementry	$668,945	$387,013	$1,630,113	$85,294	$1,562,868	$1,521,907	$324,346	$250,993	$290,510	$106,111	$953,060	$462,278	$181,160	$80,026	$1,240,459	$115,972	$210,521	$722,539	$394,885	$103,875	**$11,292,875**
GrandTotal	**$668,945**	**$387,013**	**$1,630,113**	**$85,294**	**$1,562,868**	**$1,521,907**	**$324,346**	**$250,993**	**$290,510**	**$106,111**	**$953,060**	**$462,278**	**$181,160**	**$80,026**	**$1,240,459**	**$115,972**	**$210,521**	**$722,539**	**$394,885**	**$103,875**	**$11,292,875**

EMG Renamed Item Number	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	885582	Air Conditioning, Central, Install	50	50	0	53090	SF	$10.00	$11.50	$610,535	$610,535																				**$610,535**
B20	872819	Window, Aluminum Double-Glazed 24 SF, 1-2 Stories, Replace	30	25	5	70	EA	$870.45	$1,001.02	$70,071						$70,071																**$70,071**
B20	872806	Exterior Door, Steel w/ Safety Glass, Replace	25	22	3	12	EA	$1,352.72	$1,555.63	$18,668				$18,668																		**$18,668**
B20	872830	Exterior Door, Steel, Replace	25	20	5	4	EA	$950.12	$1,092.64	$4,371						$4,371																**$4,371**
B20	872826	Roof, Single-Ply EPDM Membrane, Replace	20	15	5	19000	SF	$10.52	$12.10	$229,862						$229,862																**$229,862**
C10	872824	Interior Door, Wood Solid-Core, Replace	20	18	2	50	EA	$1,423.11	$1,636.58	$81,829			$81,829																			**$81,829**
D70	946128	Exterior Door Hardware, Electronic Doors ANSI F39 Lockset, Replace	30	29	1	12	EA	$1,345.00	$1,546.75	$18,561		$18,561																				**$18,561**
C10	872791	Toilet Partitions, Metal Overhead-Braced, Replace	20	15	5	14	EA	$850.00	$977.50	$13,685						$13,685																**$13,685**
C10	872776	Lockers, Steel Baked Enamel 12" W x 15" D x 72" H, 1 to 5 Tiers, Replace	20	14	6	220	LF	$482.50	$554.88	$122,073							$122,073															**$122,073**
C10	872818	Interior Wall Finish, Concrete/Masonry, Prep & Paint	8	6	2	98216	SF	$1.45	$1.67	$163,888			$163,888								$163,888								$163,888		**$491,664**
C10	872805	Interior Floor Finish, Vinyl Tile (VCT), Replace	15	13	2	32900	SF	$4.80	$5.52	$181,631			$181,631															$181,631			**$363,261**
C10	872797	Interior Floor Finish, Wood Strip, Replace	30	24	6	6000	SF	$13.52	$15.55	$93,318							$93,318														**$93,318**
C10	872812	Interior Floor Finish, Clay Brick, Replace	50	40	10	7600	SF	$42.65	$49.04	$372,737											$372,737										**$372,737**
C10	872790	Interior Floor Finish, Terrazzo, Replace	50	35	15	725	SF	$12.06	$13.86	$10,051																$10,051					**$10,051**
C10	872828	Interior Floor Finish, Carpet Standard-Commercial Medium-Traffic, Replace	10	8	2	5800	SF	$7.26	$8.34	$48,400			$48,400										$48,400								**$96,799**
C10	872789	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	10	0	1500	SF	$2.27	$2.61	$3,916	$3,916										$3,916										**$7,832**
C10	872823	Interior Ceiling Finish, Acoustical Tile (ACT) Dropped Fiberglass, Replace	20	15	5	52000	SF	$5.05	$5.80	$301,858						$301,858																**$301,858**
D10	872799	Elevator Cab Finishes, Standard w/out Stainless Steel Doors, Replace	10	8	2	1	EA	$3,000.00	$3,450.00	$3,450			$3,450										$3,450								**$6,900**
D10	872810	Elevator Controls, Automatic, 1 or 2 Car Cluster, Modernize	20	16	4	1	EA	$11,547.25	$13,279.34	$13,279					$13,279																**$13,279**
D10	872795	Elevator, Hydraulic, 1500 to 2500 LB, 3 Floors, Renovate	30	22	8	1	EA	$144,487.20	$166,160.28	$166,160									$166,160												**$166,160**
D20	872814	Toilet, Tankless (Water Closet), Replace	20	18	2	14	EA	$842.97	$969.41	$13,572			$13,572																		**$13,572**
D20	872788	Sink, Stainless Steel, Replace	20	15	5	12	EA	$1,054.05	$1,212.16	$14,546						$14,546															**$14,546**
D20	872822	Sink, Vitreous China, Replace	20	13	7	8	EA	$861.51	$990.74	$7,926								$7,926													**$7,926**
D20	872775	Drinking Fountain, Refrigerated, Replace	10	2	8	6	EA	$1,257.51	$1,446.13	$8,677									$8,677										$8,677		**$17,354**
D20	872809	Water Heater, Gas, Commercial, 60 to 120 GAL, Replace	15	4	11	1	EA	$10,698.82	$12,303.64	$12,304												$12,304									**$12,304**
D20	872803	Sump Pump, 1/2 HP, Replace	15	11	4	2	EA	$2,062.81	$2,372.23	$4,744					$4,744															$4,744	**$9,489**
D30	872829	Air Compressor, controls duplex, 3 HP, Replace	20	13	7	1	EA	$9,652.21	$11,100.05	$11,100								$11,100													**$11,100**
	960781	Solar Instillation Project, Roof Mounted Solar Instillation, Install	20	18	2	288000	SF	$1.00	$1.15	$331,200			$331,200																		**$331,200**
D30	872831	Boiler, Gas, 4,201 to 10,000 MBH, Replace	25	11	14	2	EA	$332,867.50	$382,797.62	$765,595															$765,595						**$765,595**
D30	872815	Split System HVAC, Interior & Exterior Component Pairing, 2 Ton, Replace	15	10	5	1	EA	$4,400.00	$5,060.00	$5,060						$5,060																**$5,060**
D30	873231	Condensing Unit/Heat Pump, Split System, 3 Ton, Replace	15	5	10	1	EA	$3,578.67	$4,115.46	$4,115												$4,115										**$4,115**
D30	872802	Air Handler, Exterior, 28,001 to 40,000 CFM, Replace	15	13	2	1	EA	$171,501.00	$197,226.15	$197,226			$197,226																$197,226			**$394,452**
D30	872804	Air Handler, Interior, 50,001 to 65,000 CFM, Replace	30	25	5	1	EA	$191,166.07	$219,840.98	$219,841						$219,841																**$219,841**
D30	872778	Exhaust Fan, Centrifugal, 251 to 800 CFM, Replace	15	10	5	8	EA	$2,021.87	$2,325.15	$18,601						$18,601																**$18,601**
D30	872787	Distribution Pump, Heating Water, 5 HP, Replace	20	13	7	2	EA	$5,518.88	$6,346.72	$12,693								$12,693														**$12,693**
D30	872781	Unit Heater, Hydronic, 13 to 36 MBH, Replace	20	11	9	2	EA	$1,516.80	$1,744.32	$3,489										$3,489												**$3,489**
D30	945784	Building Automation System (HVAC Controls), Upgrade	20	18	2	53090	SF	$5.36	$6.17	$327,399			$327,399																			**$327,399**
	928276	Sprinkler System, Full Retrofit, School (per SF), Renovate	50	46	4	53000	SF	$6.25	$7.19	$381,151					$381,151																	**$381,151**
D50	872783	Building/Main Switchgear, 208 Y, 120 V, 2,400 Amp, Replace	30	25	5	1	EA	$311,961.98	$358,756.28	$358,756						$358,756																**$358,756**
D50	872820	Lighting System, Interior, School, Upgrade	25	21	4	52000	SF	$15.36	$17.67	$918,731					$918,731																	**$918,731**
D60	946127	Intercom Master Station, Replace	20	19	1	1	EA	$3,814.50	$4,386.67	$4,387		$4,387																				**$4,387**
D50	945785	Clock and Bell System, Wireless or Ethernet Enabled, Up To 100 Total Clocks / Bells, Replace	15	14	1	53090	SF	$0.51	$0.59	$31,137		$31,137																$31,137				**$62,275**
D70	872786	Fire Alarm System, School, Install	20	18	2	36000	SF	$3.13	$3.60	$129,652			$129,652																			**$129,652**
D70	872807	Fire Alarm Control Panel, Addressable, Replace	15	6	9	1	EA	$20,297.59	$23,342.23	$23,342											$23,342										**$23,342**
D70	946129	Security/Surveillance System, Cameras and CCTV, Install	10	9	1	53090	SF	$4.35	$5.00	$265,412		$265,412										$265,412										**$530,824**
C10	872817	Stage Curtain, Medium Weight Velour, Flameproof (per SF), Replace	15	8	7	3500	SF	$13.00	$14.95	$52,325								$52,325														**$52,325**
E10	872774	Commercial Kitchen, Refrigerator, 2-Door Reach-In, Replace	15	12	3	1	EA	$4,256.00	$4,894.40	$4,894				$4,894																$4,894		**$9,789**

EMG Renamed Item Number	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
E10	872784	Commercial Kitchen, Food Warmer, Replace	15	8	7	1	EA	$1,551.91	$1,784.69	$1,785								$1,785														**$1,785**
	958704	Davis Bacon Prevailing Wages, Surcharge for Prevailing Wages, 10% surcharge for prevailing wages	1	1	0	47386.15	LS	$1.00	$1.15	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	$54,494	**$1,089,881**
G20	872793	Parking Lots, Asphalt Pavement, Seal & Stripe	5	3	2	8700	SF	$0.38	$0.44	$3,797			$3,797					$3,797					$3,797					$3,797			**$15,188**
G20	872801	Parking Lots, Asphalt Pavement, Mill & Overlay	25	18	7	8700	SF	$3.28	$3.77	$32,820								$32,820														**$32,820**
G20	872796	Pedestrian Pavement, Sidewalk, Concrete Large Areas, Replace	30	18	12	800	SF	$9.00	$10.35	$8,280													$8,280								**$8,280**
G20	872808	Exterior Stairs & Ramps, Concrete (per LF of Nosing), Replace	25	20	5	230	LF	$38.43	$44.20	$10,165						$10,165															**$10,165**
G20	872821	Exterior Stairs & Ramps, Handrails, Metal, Replace	25	20	5	200	LF	$50.00	$57.50	$11,500						$11,500															**$11,500**
G20	872816	Fences & Gates, Chain Link, 6' High, Replace	30	26	4	375	LF	$37.54	$43.17	$16,188					$16,188																**$16,188**
G20	872813	Signage, Property, Monument/Pylon, Replace	20	5	15	1	EA	$8,602.00	$9,892.30	$9,892																$9,892					**$9,892**
G20	872782	Site Furnishings, Picnic Table, Plastic-Coated Metal, Replace	20	8	12	4	EA	$1,391.50	$1,600.23	$6,401													$6,401								**$6,401**
G20	872827	Site Furnishings, Park Bench, Metal/Wood/Plastic, Replace	20	8	12	4	EA	$487.03	$560.08	$2,240													$2,240								**$2,240**
G20	872792	Play Surfaces & Sports Courts, Asphalt, Seal & Stripe	5	4	1	4000	SF	$0.38	$0.44	$1,750		$1,750					$1,750					$1,750				$1,750					**$7,001**
G20	872785	Play Surfaces & Sports Courts, Asphalt, Replace	25	18	7	4000	SF	$5.90	$6.79	$27,140								$27,140														**$27,140**
G20	872798	Play Structure, Large, Replace	20	10	10	1	EA	$53,130.00	$61,099.50	$61,100											$61,100										**$61,100**
G20	872794	Play Structure, Medium, Replace	20	10	10	1	EA	$40,005.63	$46,006.47	$46,006											$46,006										**$46,006**
G20	872777	Flagpole, Metal, Replace	20	10	10	1	EA	$2,530.00	$2,909.50	$2,910											$2,910										**$2,910**
G40	872780	Pole Light, Exterior, 80 to 100 W LED (Fixture & Bracket Arm Only), Replace	20	4	16	14	EA	$2,721.00	$3,129.15	$43,808																	$43,808				**$43,808**
Totals, Unescalated											**$668,945**	**$375,741**	**$1,536,538**	**$78,056**	**$1,388,588**	**$1,312,810**	**$271,635**	**$204,080**	**$229,331**	**$81,325**	**$709,166**	**$333,960**	**$127,062**	**$54,494**	**$820,089**	**$74,438**	**$131,190**	**$437,148**	**$231,953**	**$59,239**	**$9,125,788**
Totals, Escalated (3.0% inflation, compounded annually)											**$668,945**	**$387,013**	**$1,630,113**	**$85,294**	**$1,562,868**	**$1,521,907**	**$324,346**	**$250,993**	**$290,510**	**$106,111**	**$953,060**	**$462,278**	**$181,160**	**$80,026**	**$1,240,459**	**$115,972**	**$210,521**	**$722,539**	**$394,885**	**$103,875**	**$11,292,875**

* Markup/LocationFactor (1) 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:	600 West Jefferson Street, Ann Arbor, Washtenaw, Michigan 48103
Year Constructed/Renovated:	1922
Current Occupants:	Bach Elementary
Percent Utilization:	100%
Management Point of Contact:	Ann Arbor Public Schools/Facilities, Jim Vibbart, Maintenance Supervisor vibbartj@aaps.k12.mi.us email
Property Type:	Elementary School
Site Area:	7.8 acres
Building Area:	53,090 SF
Number of Buildings:	One
Number of Stories:	Two
Parking Type and Number of Spaces:	24 spaces in open lots,
Building Construction:	Masonry bearing walls and concrete-topped metal decks.
Roof Construction:	Flat roofs with single-ply membrane.
Exterior Finishes:	Brick Veneer
Heating, Ventilation and Air Conditioning:	Central system with boilers, air handlers, and rooftop units feeding hydronic terminal units. Supplemental components: ductless split-systems, suspended unit heaters.
Fire and Life/Safety:	Hydrants, smoke detectors, alarms, strobes, extinguishers, pull stations, alarm panel, and exit signs.
ADA :	This building does not have any major ADA issues.
All 53,090 square feet of the building are occupied by a single occupant, Bach Elementary. The spaces are a combination of offices, classrooms, extracurricular spaces, and supporting restrooms, mechanical and other utility spaces.	
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. All areas of the property were available for observation during the site visit.	
Assessment Information	
Dates of Visit:	March 1, 2018
On-Site Point of Contact (POC):	None
Assessment and Report Prepared by:	Joshua Knisley
Reviewed by:	Al Diefert Technical Report Reviewer For Andrew Hupp Program Manager ahupp@emgcorp.com 800.733.0660 x6632

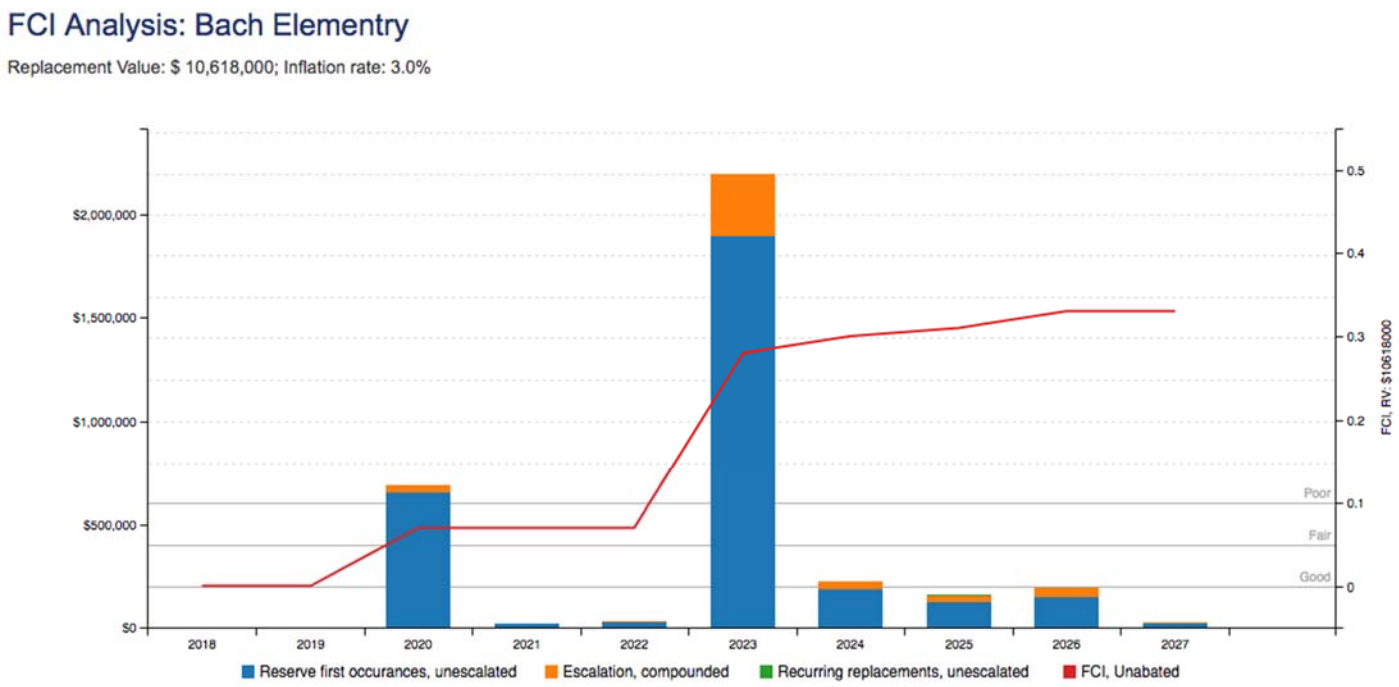
1.2. Key Findings

Site : Areas of asphalt parking pavement and basketball court/playground are generally in fair condition. A cost allowance to repair and /or replace these deficient items is included in the cost tables.

Architectural : Finishes include brick veneer exterior walls with concrete accents which are in fair condition and will require re-pointing. The interior ceiling in the gymnasium is damaged and in poor condition. The building lighting system as well as the interior vinyl tile flooring is aged and in fair condition which will need to be replaced. A cost allowance to replace/repair these deficient items is included in the cost tables.

MEPF : The majority of the systems are approaching the end of their useful life and will require replacement in the near term. These items include elevator controls, main electrical switchgear, exterior and interior air handlers and fire alarm system upgrades. A cost allowance to repair and /or replace these deficient items is included in the cost tables.

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 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):	0.02%
Current Year FCI Rating:	2018
10-Year Facility Condition Index (FCI) FCI = (RR)/(CRV):	33.45%
10-Year FCI Rating	0.33
Current Replacement Value (CRV):	$10,618,000
Year 0 (Current Year) - Immediate Repairs (IR):	$2,270
Years 1-10 - Replacement Reserves (RR):	$3,549,012
Total Capital Needs:	$3,551,282

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	Piles (concrete)	Good
Basement and Crawl Space	Crawl space, dirt floor	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.

B10 Superstructure

B1010 Floor Construction and B1020 Roof Construction		
Item	Description	Condition
Framing / Load-Bearing Walls	Masonry walls	Good
Ground Floor	Concrete slab	Good
Roof Framing	Steel beams or girders	Good
Roof Decking	Metal decking with concrete topping	Good

Maintenance Issues					
Observation	Location	Exists at Site	Observation	Location	Exists at Site
None		☐	None	N/A	☐
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	Cast in place concrete	Closed	Metal	Metal	Good
Building Interior Stairs	Concrete stairs	Closed	Wood	None	Good

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.

3. Building Envelope

B20 Exterior Vertical Enclosures

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

Maintenance Issues					
Observation	Location	Exists at Site	Observation	Location	Exists at Site
Graffiti		☐	Efflorescence		☐
Other		☐	Other		☐

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance, including patching repairs, 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, fixed	Double glaze	Building Exterior	☐	Fair
Aluminum framed, operable	Double glaze	Building Exterior	☒	Fair

B2050 Exterior Doors		
Main Entrance Doors	Door Type	Condition
	Steel with Safety Glass	Fair
Secondary Entrance Doors	Steel with Safety Glass	Fair
Service Doors	Metal, hollow	Fair
Overhead Doors	None	--

Anticipated Lifecycle Replacements:

- Windows
- Exterior steel doors with safety glass
- Exterior steel service doors

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.

B3010 Primary Roof			
Location	Main Building	Finish	Single-ply membrane
Type / Geometry	Flat	Roof Age	15 Yrs
Flashing	Sheet metal	Warranties	Unknown
Parapet Copings	Parapet with sheet metal coping	Roof Drains	Internal drains
Fascia	Metal Panel	Insulation	Rigid Board
Soffits	Concealed Soffits	Skylights	No
Attics	Concrete-topped steel decks	Ventilation Source-1	None
Roof Condition	Fair	Ventilation Source-2	N/A

Maintenance Issues					
Observation	Location	Exists at Site	Observation	Location	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:

- Single-Ply EPDM roof membrane

Actions/Comments:

- The roof finishes were installed over ten years ago. Information regarding roof warranties or bonds was not available. The roofs are maintained by an outside contractor.

- 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.
- There is evidence of active roof leaks. All active leaks must be repaired.
- 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 attics are not accessible and it could not be determined if there is moisture, water intrusion, or excessive daylight in the attics.

4. Interiors

C10 Interior Construction

C1030 Interior Doors		
Item	Type	Condition
Interior Doors	Solid core wood	Fair
Door Framing	Wood	Fair
Fire Doors	No	--
Closet Doors	Solid core wood	Fair

Maintenance Issues					
Observation	Location	Exists at Site	Observation	Location	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 - BACH ELEMENTARY

Location	Finish	Master_Cost	Quantity (SF)	Condition	Action	RUL	Est. Cost
Bathroom	Floor	Terrazzo	725	Good	Replace	15	8,740
Gymnasium	Floor	Wood Strip	6000	Good	Replace	6	81,146
Gymnasium & Mech rooms	Ceiling	Exposed/Generic	1000	Poor	Prep & Paint	0	2,270
Select areas	Floor	Carpet Standard-Commercial Medium-Traffic	5800	Fair	Replace	2	42,087
Throughout	Wall	Concrete/Masonry	52000	Fair	Prep & Paint	2	75,452
Throughout	Floor	Vinyl Tile (VCT)	32900	Fair	Replace	2	157,940
Throughout	Floor	Clay Brick	7600	Fair	Replace	10	324,119
Throughout	Ceiling	Acoustical Tile (ACT) Dropped Fiberglass	52000	Fair	Replace	5	262,486

Maintenance Issues					
Observation	Location	Exists at Site	Observation	Location	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
- Terrazo Flooring
- Ceramic tile
- Interior paint
- Lockers
- Suspended acoustic ceiling tile
- Interior doors
- Refinish Wood Floor
- Stage Curtain
- Interior Ceiling - Exposed

Actions/Comments:

- It appears that the interior finishes have not been renovated within the last 10 years.
- 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.

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	Dover	Machinery Location	Ground floor or basement adjacent to shaft
Safety Stops	Mechanical	Emergency Communication Equipment	Yes
Cab Floor Finish	Vinyl-tiled	Cab Wall Finish	Stainless steel
Cab Finish Condition	Fair	Elevator Cabin Lighting	F42T8
Hydraulic Elevators	One cars at 2,500 LB each		
Overhead Traction Elevators	None		
Freight Elevators	None		
Machinery Condition	Fair	Controls Condition	Fair
Other Conveyances	None	Other Conveyance Condition	NA

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

Anticipated Lifecycle Replacements:

- Elevator controls
- Elevator machinery
- Elevator cab finishes

Actions/Comments:

- The elevators are serviced by an outside contractor on a routine basis. The elevator machinery and appear to be more than 20 years old.
- The elevators are inspected on an annual basis by the municipality, and a certificate of inspection is on file in the management office.
- The emergency communication equipment in the elevator cabs appears to be functional. Equipment testing is not within the scope of the work.

D20 Plumbing

D2010 Domestic Water Distribution		
Type	Description	Condition
Water Supply Piping	Copper	Good
Water Meter Location	Mechanical Room	

Domestic Water Heaters or Boilers	
Components	Water heater
Fuel	Natural gas
Boiler or Water Heater Condition	Fair
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	Good
Vent Piping	Cast iron	Good

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

Plumbing Systems - BACH ELEMENTARY

Location	Component	Component Description	Quantity	Unit	Condition	Action	RUL	Est. Cost
Boiler room	Water Heater	Gas, Commercial, 60 to 120 GAL	1	EA	Good	Replace	11	10,699
Boiler room	Sump Pump	3 HP	2	EA	Fair	Replace	4	4,126
Throughout	Toilet	Tankless (Water Closet)	14	EA	Fair	Replace	2	11,802
Throughout	Sink	Stainless Steel	12	EA	Fair	Replace	5	12,649
Throughout	Sink	Vitreous China	8	EA	Fair	Replace	7	6,892
Throughout	Drinking Fountain	Refrigerated	6	EA	Fair	Replace	8	7,545

Anticipated Lifecycle Replacements:

- Water heater
- Toilets
- Urinals
- Sinks

- Drinking fountains
- Sump pumps

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.

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	--
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	Hydronic wall units
Quantity and Capacity of Terminal Units	Approximately 900 LF of hydronic wall units
Location of Terminal Units	Within interior spaces

Packaged, Split and Individual Units	
Primary Components	Split system furnaces and condensing units
Cooling (if separate from above)	performed via components above
Heating Fuel	Electric
Location of Equipment	Rooftop
Space Served by System	Library and Main Office Area

Supplemental/Secondary Components	
Supplemental Component #1	Split system heat pumps
Location / Space Served by split system heat pump	Server Room
Condition	Good

Controls and Ventilation	
HVAC Control System	BAS, direct digital controls (DDC)
HVAC Control System Condition	Good
Building Ventilation	Roof top exhaust fans
Ventilation System Condition	Fair

Maintenance Issues					
Observation	Location	Exists at Site	Observation	Location	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 - BACH ELEMENTARY

Location	Component	Component Description	Quantity	Unit	Condition	Action	RUL	Est. Cost
Basement	Condensing Unit/Heat Pump	Split System, 3 Ton	1	EA	Fair	Replace	10	3,579
Boiler Room	Boiler	Gas, 4,201 to 10,000 MBH	2	EA	Fair	Replace	14	665,735
Boiler room	Unit Heater	Hydronic, 13 to 36 MBH	2	EA	Fair	Replace	9	3,034
Building interior	Air Handler	Interior, 50,001 to 65,000 CFM	1	EA	Fair	Replace	5	191,166
Building Roof	Split System HVAC	Interior & Exterior Component 2 Ton	1	EA	Fair	Replace	5	4,400
Main roof	Air Handler	Exterior, 28,001 to 40,000 CFM	1	EA	Fair	Replace	2	171,501
Roof	Exhaust Fan	Centrifugal, 251 to 800 CFM	8	EA	Fair	Replace	5	16,175
Roof HVAC Room	Distribution Pump	Heating Water, 5 HP	2	EA	Fair	Replace	7	11,038
Throughout	Radiator	Hydronic Baseboard	900	LF	Fair	Replace	39	119,493

Anticipated Lifecycle Replacements:

- Boilers
- Air handling units
- Distribution pumps and motor
- Split Condensing Unit
- Split system heat pumps
- Rooftop exhaust fans
- Package units
- Suspended hydronic unit heaters
- Hydronic baseboard heaters

Actions/Comments:

- The HVAC systems are maintained by an outside contractor.
- The HVAC equipment varies in age. HVAC equipment is replaced on an "as needed" basis.
- The HVAC equipment appears to be functioning adequately overall. However, due to the inevitable failure of parts and components over time, some of the equipment will require replacement.

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?			
	July 2017		Yes			
Hydrant Location	North and South Sides of the building					
Siamese Location	N/A					
Special Systems	Kitchen Suppression System	☐	Computer Room Suppression System	☐		

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

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.

D50 Electrical

Distribution and Lighting			
Electrical Lines	Underground	Transformer	Pad-mounted
Main Service Size	2500 Amps	Volts	277/480 Volt, three-phase
Meter and Panel Location	Mechanical Room	Branch Wiring	Copper
Conduit	Metallic	Step-Down Transformers?	Yes
Security / Surveillance System?	Yes	Building Intercom System?	Yes
Lighting Fixtures	T-8, CFL, LED		
Main Distribution Condition	Fair		
Secondary Panel and Transformer Condition	Fair		
Lighting Condition	Good		

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

Maintenance Issues					
Observation	Location	Exists at Site	Observation	Location	Exists at Site
Improperly stored material		☐	Unsecured high voltage area		☐
Other		☐	Other		☐

Anticipated Lifecycle Replacements:

- Main Distrubution Panel
- Interior Lighting System

Actions/Comments:

- The onsite electrical systems up to the meters are owned and maintained by the respective utility company.
- The electrical service and capacity appear to be adequate for the property's demands.

- The panels and switchboards are mostly 1990-2000 components. The electrical service appears to be adequate for the facility's needs. However, due to the age of the panels and switchboards and increasing difficulty of obtaining replacement parts over time, lifecycle replacements are recommended per above.

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			
	Main Office		2012			

Anticipated Lifecycle Replacements:

- Central alarm panel
- Alarm devices and 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.

6. Equipment & Furnishings

E10 Equipment

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

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

E1030 Commercial Kitchen Equipment		
Appliance	Comment	Condition
Refrigerators	Up-right	Fair
Freezers	☐	--
Ranges	☐	--
Ovens	☐	--
Griddles / Grills	☐	--
Fryers	☐	--
Hood	☐	--
Dishwasher	Leased	Fair
Microwave	☐	--
Ice Machines	☐	--
Steam Tables	☒	Fair

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

Anticipated Lifecycle Replacements:

- Reach-in cooler
- Food Warmer

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

Parking Count				
Open Lot	Carport	Private Garage	Subterranean Garage	Freestanding Parking Structure
21	-	-	-	-
Total Number of ADA Compliant Spaces			3	
Number of ADA Compliant Spaces for Vans			2	
Total Parking Spaces			24	

Site Stairs			
Location	Material	Handrails	Condition
Entrance walkway	Concrete stairs	Metal	Fair

Maintenance Issues					
Observation	Location	Exists at Site	Observation	Location	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
- Site ramps and handrails

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.

G2060 Site Development	
Property Signage	
Property Signage	Post mounted wood
Street Address Displayed?	Yes

Site Fencing		
Type	Location	Condition
Chain link with metal posts	Site Boundry/Sports Fields	Fair

Refuse Disposal				
Refuse Disposal	Common area dumpsters			
Dumpster Locations	Mounting	Enclosure	Contracted?	Condition
South Side of Site	Concrete pad	None	Yes	Good

Other Site Amenities			
	Description	Location	Condition
Playground Equipment	Metal	South Side of Building	Fair
Sports Field	Grass	South Side of Building	Good
Basketball Court	Asphalt	South Side of Building	Fair
Swimming Pool	None	--	--

Anticipated Lifecycle Replacements:

- Signage
- Site fencing
- Playground equipment
- Playground surfaces
- Flagpole

Actions/Comments:

- No 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	☒	Good
Pits	☐	--
Municipal System	☒	Good
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 north side of the property to the south property line.						
Landscaping	Trees	Grass	Flower Beds	Planters	Drought Tolerant Plants	Decorative Stone	None
	☒	☒	☒	☐	☐	☐	☐
Landscaping Condition	Choose an item.						
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 meter and regulator are located on the north side 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
	☒	☐	☐	☐	☐
	Choose an item.				
Building Lighting	None		Wall Mounted		Recessed Soffit
	☐		☒		☐
	Good				

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

Anticipated Lifecycle Replacements:

- Exterior 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

Not applicable. There are no major accessory structure.

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 Table* below. 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 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 (ADA Study Recommended)	Moderate Issue (ADA Study Recommended)	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.

12. Certification

Ann Arbor Public Schools retained EMG to perform this Facility Condition Assessment in connection with its continued operation of Bach Elementary, 600 West Jefferson Street, Ann Arbor, Michigan, 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: Joshua Knisley,
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

PHOTO #1:	FRONT ELEVATION

PHOTO #2:	SIDE ELEVATION

PHOTO #3:	SIDE ELEVATION

PHOTO #4:	REAR ELEVATION

PHOTO #5:	MAIN ENTRANCE DOORS

PHOTO #6:	PROPERTY SIGNAGE

PHOTO #7:	CONCRETE SIDEWALKS AND ASPHALT PAVEMENT

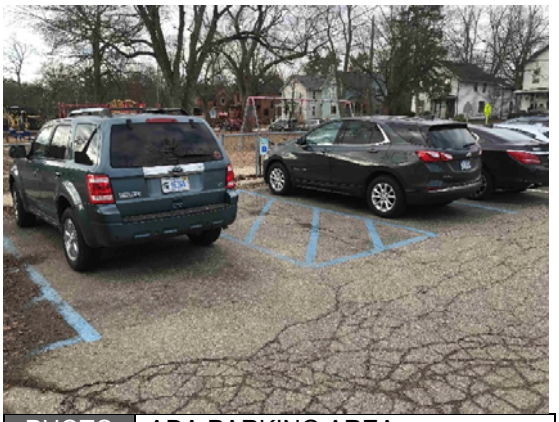


PHOTO #8:	ADA PARKING AREA

PHOTO #9:	SPORTS FIELDS

PHOTO #10:	BASKETBALL COURT

PHOTO #11:	CHAIN LINK PERIMETER FENCING

PHOTO #12:	CONCRETE STAIRS

PHOTO #13:	SINGLE-PLY ROOFING

PHOTO #14:	ROOFTOP UNIT

PHOTO #15:	HVAC BOILER

PHOTO #16:	CIRCULATION PUMPS

PHOTO #17:	HYDRONIC TERMINAL UNIT

PHOTO #18:	CLASSROOM UNIT VENTILATOR

PHOTO #19:	SUSPENDED UNIT HEATERS

PHOTO #20:	AIR HANDLER

PHOTO #21:	DOMESTIC WATER HEATER

PHOTO #22:	MAIN DISTRIBUTION PANEL

PHOTO #23:	FIRE PANEL

PHOTO #24:	KITCHEN EQUIPMENT

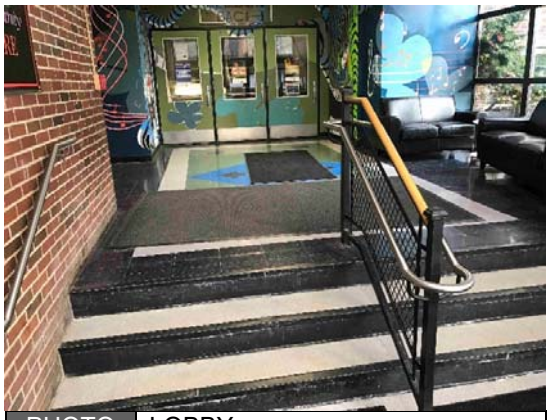


PHOTO #25:	LOBBY

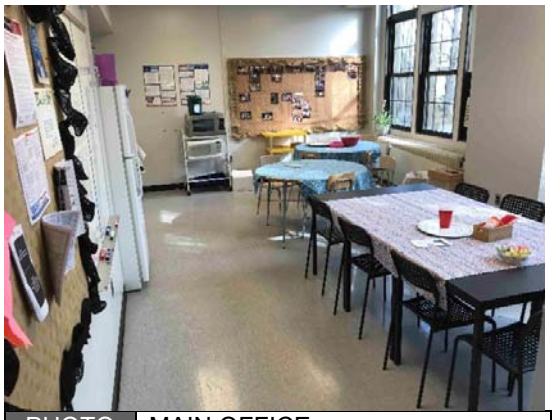


PHOTO #26:	MAIN OFFICE

PHOTO #27:	CONFERENCE ROOM

PHOTO #28:	CLASSROOM

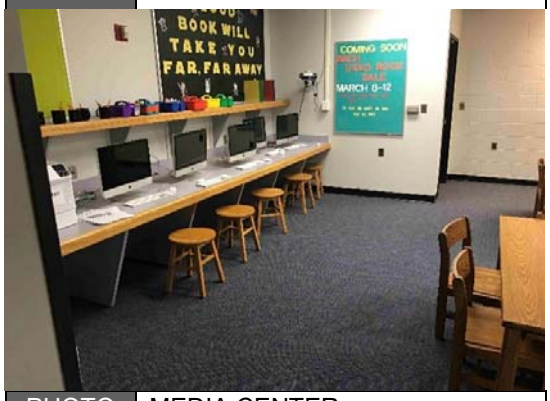


PHOTO #29:	MEDIA CENTER

PHOTO #30:	MULTI-PURPOSE ROOM

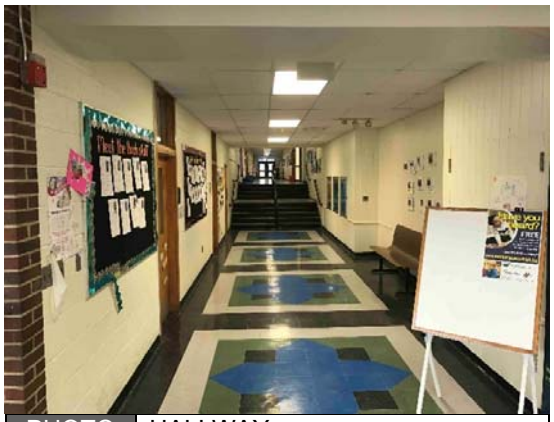


PHOTO #31:	HALLWAY

PHOTO #32:	GYMNASIUM

PHOTO #33:	AUDITORIUM

PHOTO #34:	AUDITORIUM CURTAIN

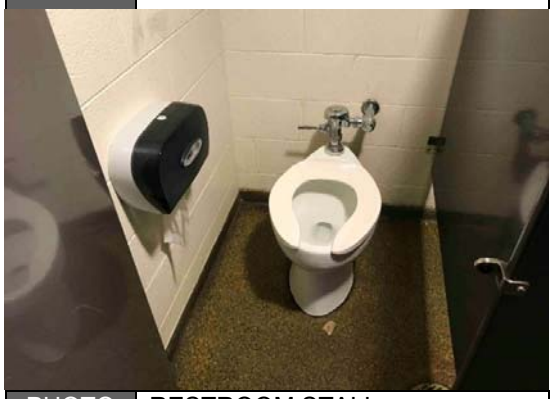


PHOTO #35:	RESTROOM STALL

PHOTO #36:	RESTROOM SINK

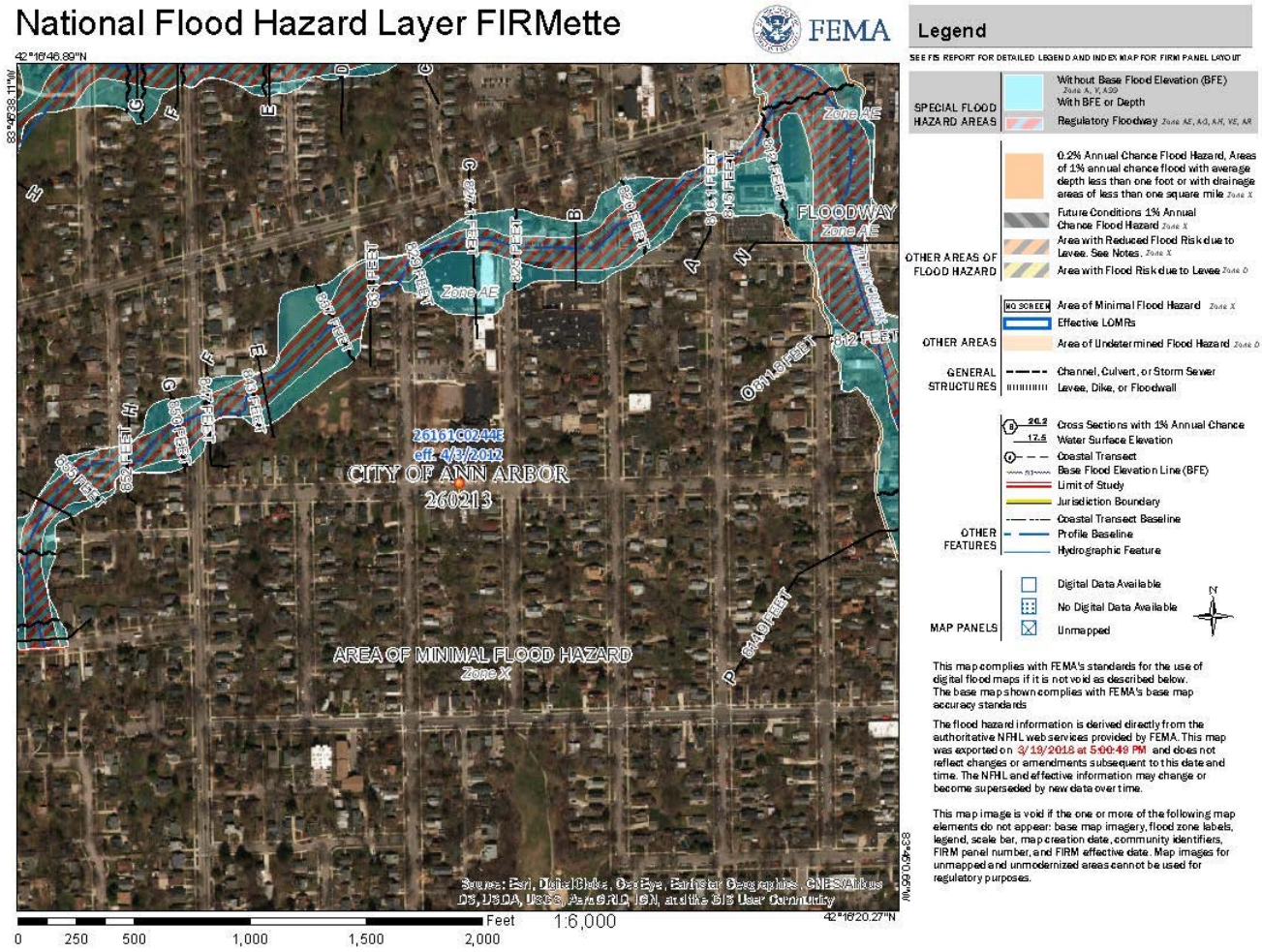
Appendix B:
Site Plan

Site Plan

emg	**Project Name:** Bach Elementary	**Project Number:** 129010.18R000-007.354
	Source: Google Earth Maps	**On-Site Date:** March 1, 2018

Appendix C:
Supporting Documentation

Flood Map



emg	**Project Name:** **Bach Elementary**	**Project Number:** **129010.18R000-007.354**
	Source: **FEMA**	**On-Site Date:** **March 1, 2018**

Appendix D:
Pre-Survey Questionnaire

EMG FACILITY CONDITION ASSESSMENT: PRE-SURVEY QUESTIONNAIRE

Building / Facility Name:	**Bach Elementary**
Name of person completing form:	**Joshua Knisley**
Title / Association with property:	**NA**
Length of time associated w/ property:	**NA**
Date Completed:	**March 1, 2018**
Phone Number:	**937-760-7707**

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	1922			
2	Building size in SF	53,090 SF			
3	Major Renovation Dates	Façade	2005	HVAC	2007
		Roof	2010	Electrical	1995
		Interiors	2010	Site Pavement	2010
		Accessibility	2010	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).	Roof replacement, HVAC upgrades
5	List other significant but somewhat lesser capital improvements, focusing on recent years (provide approximate year completed).	Asphalt seal
6	List any major capital expenditures planned/requested for the next few years. Have they been budgeted?	Unknown
7	Describe any on-going extremely problematic, historically chronic, or immediate facility needs.	Unknown

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?		X			
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?		X			
10	Are there any wall, window, basement or roof leaks?		X			
11	Are there any plumbing leaks, water pressure, or clogging/back-up problems?		X			
12	Have there been any leaks or pressure problems with natural gas, HVAC supply/return lines, or steam service?		X			
13	Are any areas of the facility inadequately heated, cooled or ventilated? Any poorly insulated areas?		X			
14	Is the electrical service outdated, undersized, or otherwise problematic?		X			
15	Are there any problems or inadequacies with exterior building-mounted lighting?		X			
16	Is site/parking drainage inadequate, with excessive ponding or other problems?		X			
17	Are there any other unresolved construction defects or significant issues/hazards at the property that have not yet been identified above?		X			
18	ADA: Has an accessibility study been performed at the site? If so, indicate when.			X		
19	ADA: If a study has occurred, have the associated recommendations been addressed? In full or in part?				X	
20	ADA: Have there been regular complaints about accessibility issues, or associated previous or pending litigation?		X			

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 and 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.