

FACILITY CONDITION ASSESSMENT

prepared for

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



FACILITY CONDITION ASSESSMENT

OF

FREEMAN ELEMENTARY
3540 NORTH DIXBORO ROAD
ANN ARBOR, MICHIGAN 48105

PREPARED BY:

EMG

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**Immediate Repairs Report
Freeman Elementary
6/29/2018**



Location Name	EMG Renamed Item Number	ID	Cost Description	Quantity	Unit	Unit Cost *	Subtotal	Deficiency Repair Estimate *
Freeman Elementary	11.1	846723	ADA, Door, Lever Handle Hardware, Install	40	EA	\$345.00	\$13,800	\$13,800
Freeman Elementary	11.1	851243	Accessible Restroom, Restroom, Lavatory Pipe Wraps,	18	EA	\$92.00	\$1,656	\$1,656
Freeman Elementary	D30	885589	Air Conditioning, Central, Install	32080	SF	\$11.50	\$368,920	\$368,920
Freeman Elementary	A10	851125	Foundations, , Repair	1200	SF	\$17.08	\$20,493	\$20,493
Freeman Elementary	B20	850117	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	24000	SF	\$3.30	\$79,231	\$79,231
Freeman Elementary	B20	846738	Exterior Door, Steel w/ Safety Glass, Replace	8	EA	\$1,555.63	\$12,445	\$12,445
Freeman Elementary	B20	846747	Exterior Door, , Replace	16	EA	\$1,092.64	\$17,482	\$17,482
Freeman Elementary	B20	846752	Roof Skylight, Plexiglass Dome Fixed 9-20 SF, Replace	4	EA	\$1,388.27	\$5,553	\$5,553
Freeman Elementary	C10	846760	Floor Finishings, , Replace	1500	SF	\$18.12	\$27,177	\$27,177
Freeman Elementary	C10	850219	Floor Finishings, , Replace	3000	SF	\$5.52	\$16,562	\$16,562
Freeman Elementary	C10	846743	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10000	SF	\$2.61	\$26,105	\$26,105
Freeman Elementary	C10	846732	Ceilings, , Replace	32080	SF	\$3.58	\$114,771	\$114,771
Freeman Elementary	D20	846753	Sink, Porcelain Enamel, Cast Iron, Replace	18	EA	\$1,342.38	\$24,163	\$24,163
Freeman Elementary	D30	846733	Make-Up Air Unit, 2,000 to 6,000 CFM, Replace	1	EA	\$36,872.06	\$36,872	\$36,872
Freeman Elementary	D30	846841	Make-Up Air Unit, 2,000 to 6,000 CFM, Replace	1	EA	\$36,872.06	\$36,872	\$36,872
Freeman Elementary	D30	846761	Packaged Unit (RTU), 26 to 50 Ton, Replace	1	EA	\$96,011.66	\$96,012	\$96,012
Freeman Elementary	D30	846839	Packaged Unit (RTU), 26 to 50 Ton, Replace	1	EA	\$96,011.66	\$96,012	\$96,012
Freeman Elementary	D30	851373	Building Automation System (HVAC Controls), Upgrade	32080	SF	\$6.17	\$197,833	\$197,833
Freeman Elementary	G40	846751	Flood Light, Exterior, Replace	8	EA	\$1,144.79	\$9,158	\$9,158
Freeman Elementary	D50	846735	Lighting System, Interior, School, Upgrade	32080	SF	\$17.67	\$566,787	\$566,787
Freeman Elementary	D40	852325	Fire Alarm System, School, Install	32080	SF	\$3.60	\$115,535	\$115,535
Freeman Elementary	D40	846765	Fire Alarm Control Panel, Addressable, Replace	1	EA	\$23,342.23	\$23,342	\$23,342
Freeman Elementary	E10	850215	Residential Appliances, Dishwasher, Replace	1	EA	\$820.94	\$821	\$821
Freeman Elementary	D20	850212	Bathroom Vanity Cabinet, Wood, with Cultured Marble Sink Top, 24 to 30", Replace	4	EA	\$1,245.27	\$4,981	\$4,981
Freeman Elementary	D20	850214	Kitchen Cabinet, Base and Wall Section, Wood, Replace	100	LF	\$537.78	\$53,778	\$53,778
Freeman Elementary		958680	Davis Bacon Prevailing Wages, Surcharge for Prevailing Wages, 10% surcharge for prevailing wages	39532.54	LS	\$1.15	\$45,462	\$45,462
Freeman Elementary	G20	846730	Parking Lot, , Repair	34000	SF	\$3.77	\$128,264	\$128,264

Immediate Repairs Report
Freeman Elementary
6/29/2018



Location Name	EMG Renamed Item Number	ID	Cost Description	Quantity	Unit	Unit Cost *	Subtotal	Deficiency Repair Estimate *
Freeman Elementary	G20	846763	Pedestrian Pavement, , Replace	20000	SF	\$10.35	\$207,000	\$207,000
Freeman Elementary	G20	846842	Fences & Gates, Chain Link, 4' High, Replace	100	LF	\$35.09	\$3,509	\$3,509
Freeman Elementary	G20	846741	Fences & Gates, Wood Board, Replace	100	SF	\$6.11	\$611	\$611
Freeman Elementary	G20	846745	Site Signage, , Replace/Install	1	EA	\$9,892.30	\$9,892	\$9,892
Freeman Elementary	D30	850148	Engineer, Environmental, Asbestos (ACM) & Lead Base Paint (LBP), Evaluate/Report	1	EA	\$5,750.00	\$5,750	\$5,750
Freeman Elementary	A10	851098	Engineer, Structural, General, Design	1	EA	\$7,475.00	\$7,475	\$7,475
Immediate Repairs Total								\$2,374,325

* Location Factor included in totals.

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1. Executive Summary

1.1. Property Information and General Physical Condition

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

Property Information		
Address:	3540 North Dixboro Road, Ann Arbor, Washtenaw, Ann Arbor 48105	
Year Constructed/Renovated:	1952, Renovated 1977	
Current Occupants:	Montessori School	
Percent Utilization:	100	
Management Point of Contact:	Ann Arbor Public Schools, Jim Vibbart, Title 734.320.3613 phone vibbart.j@aaps.k12.mi.us email	
Property Type:	Classrooms	
Site Area:	40 acres	
Building Area:	32,080 SF	
Number of Buildings:	1	
Number of Stories:	1	
Parking Type and Number of Spaces:	58 spaces in open lots.	
Building Construction:	Masonry bearing walls and metal-framed decks.	
Roof Construction:	Flat roofs with built-up membrane.	
Exterior Finishes:	Brick	
Heating, Ventilation and Air Conditioning:	Central system with boilers, package units, makeupair units, baseboard radiators and cabinet heaters.	
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 32,080 square feet of the building are occupied by a single occupant, Montessori School. The spaces are a combination of classrooms, and supporting restrooms, administrative offices, mechanical and other utility spaces.		
The following table identifies the unit types and mix at the subject property:		
Unit Types and Mix		
Quantity	Type	Floor Area (Sf)
--	Administrative	200
--	Classrooms, Hallways and Other	28,880
1	Gymnasium	3,000
--	TOTAL	32080
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.		



Property Information		
Key Spaces Not Observed		
Room Number	Area	Access Issues
Site Locations	Roof assets, Playground areas	Snowy conditions hindered a thorough, visible inspection
A "down unit" or area is a term used to describe a unit or space that cannot be occupied due to poor conditions such as fire damage, water damage, missing equipment, damaged floor, wall or ceiling surfaces, or other significant deficiencies. There are no down units or areas.		
Assessment Information		
Dates of Visit:	2/5/2018	
On-Site Point of Contact (POC):	Jim Vibbart	
Assessment and Report Prepared by:	James Cuellar	
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 parking lot has multiple cracks from erosion. The sidewalk has major cracking and trip hazards. The fencing on the west side of the property is damaged. The site lighting is inadequate and antiquated. The site signage has minor damage. In addition the basketball backboards are distressed. A cost allowance to repair and/or replace these deficient attributes is included in the cost tables.

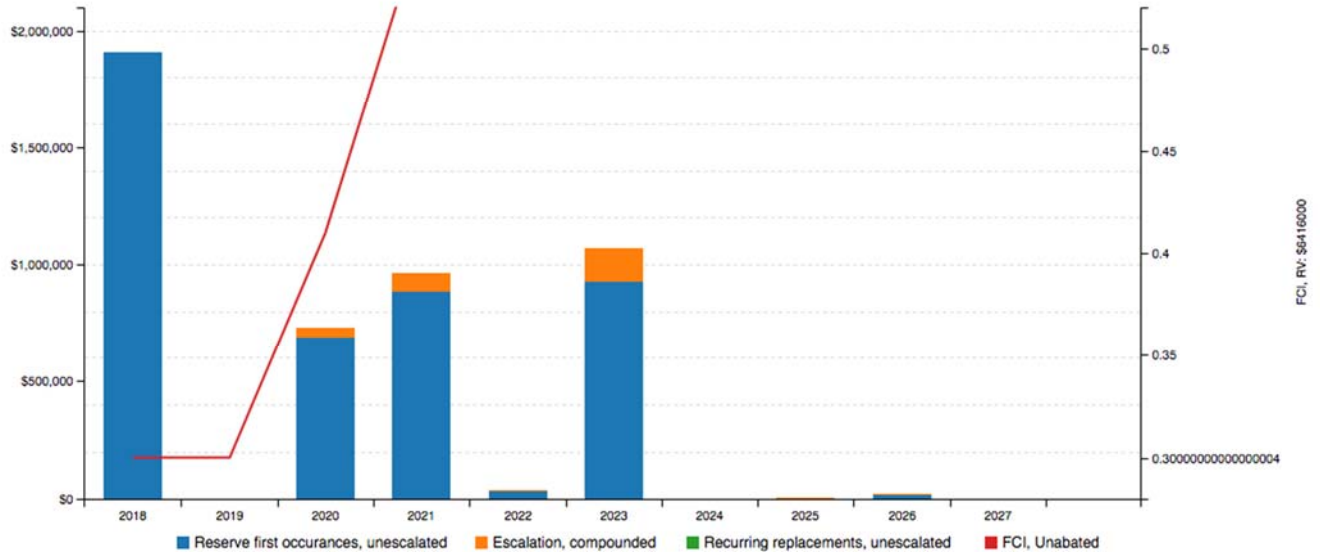
Architectural : The foundation has significant areas of damage. A professional engineer must be retained to analyze the existing condition, provide recommendations and, if necessary, estimate the scope and cost of any required repairs. The exterior doors are rusted and will require replacement. The vinyl tile is damaged in the gymnasium. a A cost allowance to repair and/or replace these deficient attributes is included in the cost tables

MEPF : Most of the electrical components are antiquated and will require replacement over the evaluation period. The piping in the building may contain asbestos. A professional engineer must be retained to analyze the existing condition, provide recommendations and, if necessary, estimate the scope and cost of any required repairs. A The kitchen cabinets, vanities, appliances and sinks are damaged. Some of the makeup air units are in failed or poor condition. The main RTU's have become antiquated and have been reported to be problematic. A cost allowance to repair and/or replace these deficient attributes is included in the cost tables.

1.3. Facility Condition Index (FCI)

FCI Analysis: Freeman Elementary

Replacement Value: \$ 6,416,000; Inflation rate: 3.0%



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

Fci Condition Rating	Definition	Percentage Value
Good	In new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies.	0 to .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):	29.69%
Current Year FCI Rating:	2018
10-Year Facility Condition Index (FCI) FCI = (RR)/(CRV):	73.94%
10-Year FCI Rating:	0.74
Current Replacement Value (CRV):	\$6,416,000
Year 0 (Current Year) - Immediate Repairs (IR):	\$1,905,097
Years 1-10 - Replacement Reserves (RR):	\$2,838,941
Total Capital Needs:	\$4,744,038

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	Slab on grade with integral footings	Poor
Basement and Crawl Space	None	--

Anticipated Lifecycle Replacements

- Slab Foundation

Actions/Comments:

- The foundations and footings cannot be directly observed. However, there are isolated areas of cracking, movement, and vertically displaced slabs along the east side of the building. This condition typically indicates excessive settlement or other potential problems with the foundation system. A Professional Engineer with specific expertise in structural design and construction in this geographical area must be retained to evaluate the structure and to provide remedial recommendations consistent with local regulatory and code requirements. Although the estimated cost of repair cannot be accurately determined without the recommended study, a budgetary cost allowance to repair the affected elements is included.

B10 Superstructure

B1010 Floor Construction and B1020 Roof Construction		
Item	Description	Condition
Framing / Load-Bearing Walls	Masonry walls	Poor
Ground Floor	Concrete slab	Fair
Upper Floor Framing	--	--
Upper Floor Decking	--	--
Balcony Framing	--	--
Balcony Decking	None	--
Balcony Deck Toppings	None	--
Balcony Guardrails	None	--
Roof Framing	Steel beams or girders	Fair
Roof Decking	Plywood or OSB	Fair

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Caulk minor cracking	<input type="checkbox"/>	Monitor cracking for growth	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>



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.

B1080 Stairs					
Type	Description	Riser	Handrail	Balusters	Condition
Building Exterior Stairs	None	--	--	--	--
Building Interior Stairs	None	--	--	--	--

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	Fair
Secondary Finish	Metal siding	Fair
Accented with	N/A	--
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	<input type="checkbox"/>	Efflorescence	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- Exterior paint
- Metal siding
- Masonry re-pointing

Actions/Comments:

- The exterior finishes have significant areas of fading, chipped paint throughout the perimeter of the building. The damaged finishes must be repainted. In addition to these repairs, the exterior walls will require painting.

B2020 Exterior Windows				
Window Framing	Glazing	Location	Window Screen	Condition
Aluminum framed, fixed	Double glaze	Entire Building	<input type="checkbox"/>	Fair
Aluminum framed, operable	Double glaze	Entire Building	<input checked="" type="checkbox"/>	Fair

B2050 Exterior Doors		
Main Entrance Doors	Door Type	Condition
	Metal, hollow	Poor
Secondary Entrance Doors	Metal, hollow	Poor
Service Doors	None	--
Overhead Doors	None	--



Anticipated Lifecycle Replacements:

- Windows
- Exterior doors

Actions/Comments:

- There are a significant number of damaged, delaminated, deteriorated, rusted doors and door frames. The damaged doors and frames must be replaced.

B30 Roofs

B3010 Primary Roof			
Location	Entire Building	Finish	Single-ply membrane
Type / Geometry	Flat	Roof Age	25 Yrs (Estimated)
Flashing	Sheet metal	Warranties	None reported
Parapet Copings	Parapet with sheet metal coping	Roof Drains	Gutters and downspouts
Fascia	Metal Panel	Insulation	Rigid Board
Soffits	Concealed Soffits	Skylights	Yes
Attics	Steel beams	Ventilation Source-1	Power Vents
Roof Condition	Fair	Ventilation Source-2	--

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Drainage components broken/missing	<input type="checkbox"/>	Vegetation/fungal growth	<input type="checkbox"/>
Blocked Drains	<input type="checkbox"/>	Debris	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Degradation Issues			
Observation	Exists At Site	Observation	Exists At Site
Evidence of roof leaks	<input type="checkbox"/>	Significant ponding	<input type="checkbox"/>
Excessive patching or repairs	<input type="checkbox"/>	Blistering or ridging	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- EPDM roof membrane
- Roof flashings (included as part of overall membrane replacement)
- Parapet wall copings (included as part of overall membrane replacement)
- Skylights
- Gutters and downspouts



Actions/Comments:

- The roof finishes appear to be more than 20 years old. Information regarding roof warranties or bonds was not available. The roofs are maintained by an outside contractor.
- There is evidence of active roof leaks. There are water-damaged ceiling tiles and water-damaged interior finishes throughout the entire building. All active leaks must be repaired.
- The skylights show signs of problems. There are significant areas of water damaged finishes throughout the building. The affected skylights must be replaced.

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	Exists At Site	Observation	Exists At Site
Improperly adjusted door closures	<input type="checkbox"/>	Damaged/loose door hardware	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

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

Interior Finishes - Freeman Elementary

Location/Space	Finish	Quantity (SF)	Condition	Action	RUL	Est. Cost
Common area restrooms	Floor Interior Floor Finish, Ceramic Tile, Replace	1500	Poor	Replace	0	23,633
Gymnasium	Floor Vinyl Tile (VCT)	3000	Poor	Replace	0	14,402
Throughout	Floor Vinyl Tile (VCT)	25000	Fair	Replace	3	120,015
Throughout	Floor Carpet Standard-Commercial Medium-Traffic	7500	Fair	Replace	3	54,422
Throughout	Ceilings Exposed/Generic	10000	Poor	Prep & Paint	0	22,700
Throughout	Ceilings Suspended Acoustical Tile (ACT)	32080	Poor	Replace	0	99,801
Throughout	Walls Gypsum Board/Plaster/Metal	80000	Fair	Prep & Paint	3	113,856

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Loose carpeting/flooring	<input type="checkbox"/>	Minor areas of stained ceiling tiles	<input type="checkbox"/>
Minor paint touch-up	<input type="checkbox"/>	Areas of damaged/missing baseboard	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- Carpet
- Vinyl tile
- Ceramic tile
- Interior paint
- Suspended acoustic ceiling tile



- Interior doors
- Lockers

Actions/Comments:

- The interior areas appear to be last renovated in 1977.
- The ceilings have significant areas of water-damaged ceilings and show signs of wear and tear throughout the building. The damaged ceiling areas need to be replaced.
- The vinyl tiles have significant areas of damage throughout the building. The damaged vinyl tile areas need to be replaced.

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

Not applicable. There are no elevators or conveying systems.

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	Good
Supplementary Storage Tanks?	No
Adequacy of Hot Water	Inadequate
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	<input checked="" type="checkbox"/>	Minor or isolated leaks	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Plumbing Systems - Freeman Elementary

Location	Component	Component Description	Quantity	Condition	Action	RUL	Est. Cost
Boiler room	Domestic Boiler	Gas, 260 to 500 MBH	1	Fair	Replace	8	20,417
Boiler room	Domestic Circulator or Booster Pump	0.5 HP	1	Fair	Replace	4	3,414
Boiler room	Domestic Circulator or Booster Pump	0.5 HP	1	Fair	Replace	12	3,414
Boiler room	Domestic Circulator or Booster Pump	0.5 HP	1	Fair	Replace	13	3,414
Boiler room	Domestic Circulator or Booster Pump	0.5 HP	1	Fair	Replace	17	3,414
Common area restrooms	Urinal	Vitreous China	1	Fair	Replace	3	1,193
Common area restrooms	Sink	Porcelain Enamel, Cast Iron	18	Poor	Replace	0	21,011
Common area restrooms	Sink	Stainless Steel	24	Fair	Replace	3	25,297
Common area restrooms	Toilet	Flush Tank (Water Closet)	19	Fair	Replace	3	20,048
Mechanical room	Backflow Preventer	0.75"	1	Fair	Replace	2	1,010
Mechanical room	Water Softener	1,000 GAL	1	Good	Replace	12	18,801
Mechanical room	Water Heater	Gas, Commercial, 60 to 120 GAL	1	Fair	Replace	3	10,699
Mechanical room	Domestic Circulator or Booster Pump	0.75 HP	1	Fair	Replace	4	4,017
Throughout	Drinking Fountain	Refrigerated	10	Fair	Replace	2	12,575
Utility closet	Service Sink	Floor	4	Fair	Replace	2	6,398

Anticipated Lifecycle Replacements:

- Boilers
- Circulation pumps
- Water heaters
- Toilets
- Urinals
- Sinks
- Vanities
- Kitchen cabinets
- Water softener
- Drinking Fountains

Actions/Comments:

- The common area restroom vanities appear outdated and exhibit significant evidence of damage. The vanities are missing doors and have damaged finishes. The restroom vanities require replacement.
- The kitchen cabinets appear outdated and exhibit significant evidence of damage. The kitchen cabinets require replacement.
- The porcelain sinks appear outdated and exhibit significant evidence of damage. The porcelain sinks require replacement.

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	Boiler room
Space Served by System	West wing

Distribution System	
HVAC Water Distribution System	Two-pipe
Air Distribution System	Constant



Distribution System	
Location of Air Handlers	Rooftop, exterior
Terminal Units	Cabinet Heaters
Quantity and Capacity of Terminal Units	Quantity and capacity of cabinet heaters, unit heaters difficult to determine without construction drawings.
Location of Terminal Units	Classrooms and Hallways

Packaged, Split and Individual Units	
Primary Components	Package units
Cooling (if separate from above)	performed via components above
Heating Fuel	Natural gas
Location of Equipment	Rooftop
Space Served by System	East wing

Supplemental/Secondary Components	
Supplemental Component #1	Make-up air units
Location / Space Served by make-up air units	Gymnasium
Make-up air units Condition	Fair
Supplemental Component #2	Make-up air units
Location / Space Served by make-up air units	West wing classrooms
Make-up air units Condition	Poor
Supplemental Component #3	Wall heaters
Location / Space Served by wall heaters	Hallways
Wall heaters Condition	Fair

Controls and Ventilation	
HVAC Control System	Individual non-programmable thermostats/controls
HVAC Control System Condition	Fair
Building Ventilation	Roof top exhaust fans
Ventilation System Condition	Fair

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Ductwork/grills need cleaned	<input type="checkbox"/>	Minor control adjustments needed	<input type="checkbox"/>
Leaking condensate lines	<input type="checkbox"/>	Poor mechanical area access	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Degradation Issues			
Observation	Exists At Site	Observation	Exists At Site
Heating, Cooling or Ventilation is not adequate	<input checked="" type="checkbox"/>	Major system inefficiencies	<input checked="" type="checkbox"/>
HVAC controls pneumatic or antiquated	<input checked="" type="checkbox"/>	Obsolete refrigerants : R11, R12, R22, R123, R502	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Mechanical Systems - Freeman Elementary

Location	Component	Component Description	Quantity	Unit	Condition	Action	RUL	Est. Cost
Mechanical room	Expansion Tank	101 to 175 GAL	1	EA	Fair	Replace	23	3,999
Mechanical room	Expansion Tank	1 to 3 GAL	1	EA	Good	Replace	19	278
Mechanical room	Unit Heater	Natural Gas, 76 to 125 MBH	1	EA	Fair	Replace	2	5,007
Roof	Make-Up Air Unit	2,000 to 6,000 CFM	1	EA	Fair	Replace	13	32,063
Roof	Make-Up Air Unit	2,000 to 6,000 CFM	1	EA	Failed	Replace	0	32,063
Roof	Make-Up Air Unit	2,000 to 6,000 CFM	1	EA	Poor	Replace	0	32,063
Roof	Exhaust Fan	Centrifugal, 251 to 800 CFM	1	EA	Fair	Replace	5	2,022
Roof	Packaged Unit (RTU)	26 to 50 Ton	1	EA	Poor	Replace	0	83,488
Roof	Packaged Unit (RTU)	26 to 50 Ton	1	EA	Poor	Replace	0	83,488
Throughout	Baseboard Heater	Electric, 3', 750 Watts	10	EA	Fair	Replace	4	1,706
Throughout	Unit Heater	Electric, 10 kW	10	EA	Fair	Replace	2	19,744
Throughout	Cabinet Heater	Electric	12	EA	Fair	Replace	10	38,159
Throughout	Building Automation System	HVAC Controls	32080	SF	NA	Upgrade	0	172,029

Anticipated Lifecycle Replacements:

- Boiler
- Air handling units
- Cabinet heaters
- Distribution pumps and motors
- Package units
- Electric wall heaters
- Suspended gas unit heaters
- Baseboard heaters
- Rooftop exhaust fans
- Expansion tanks

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 been maintained since the property was first occupied.
- The HVAC equipment varies in age. HVAC equipment is replaced on an "as needed" basis.



- Most of the mechanical equipment on the roof is antiquated, inefficient and shows signs of heavy use. Some of these units do not seem to be working and are physically missing panels. Most mechanical equipment on the roof requires replacement. The other mechanical equipment is near the end of its useful life. Replacement of most of the mechanical equipment within the observational term is recommended.
- The facility HVAC is controlled using an outdated electronic non programmable control system. 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	<input checked="" type="checkbox"/>	Standpipes	<input type="checkbox"/>	Backflow Preventer	<input type="checkbox"/>
	Hose Cabinets	<input type="checkbox"/>	Fire Pumps	<input type="checkbox"/>	Siamese Connections	<input type="checkbox"/>
Sprinkler System Condition	--					
Fire Extinguishers	Last Service Date			Servicing Current?		
	August 2017			Yes		
Hydrant Location	None found					
Siamese Location	None found					
Special Systems	Kitchen Suppression System		<input type="checkbox"/>	Computer Room Suppression System		<input type="checkbox"/>

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Extinguisher tag expired	<input type="checkbox"/>	Riser tag expired (5 year)	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

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 vast majority of the building is not protected by fire suppression. Due to its construction date, the facility is most likely “grandfathered” by code and the installation of fire sprinklers not required until major renovations are performed. Regardless of when or if installation of facility-wide fire suppression is required by the governing municipality, EMG recommends a retrofit be performed. As part of the major planned short term renovations, a facility-wide fire suppression retrofit is recommended. A budgetary cost is included.
- Fire extinguishers appear to be missing at many locations. New fire extinguishers must be installed at all required locations immediately.



D50 Electrical

Distribution and Lighting			
Electrical Lines	Underground	Transformer	Pad-mounted
Main Service Size	1200 Amps	Volts	120/240 Volt, single-phase
Meter and 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, HPS		
Main Distribution Condition	Fair		
Secondary Panel and Transformer Condition	Fair		
Lighting Condition	Poor		

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Improperly stored material	<input type="checkbox"/>	Unsecured high voltage area	<input type="checkbox"/>
Loose cables or improper use of conduit	<input type="checkbox"/>	Poor electrical room ventilation	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- Circuit breaker panels
- Main switchgear
- Step-down transformers
- 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 and switchboards are mostly original 1977 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.
- The light fixtures throughout most of the facility utilize older, inefficient T-8 lamps. Replacement with newer fixtures with electronic ballasts and LED lamps is highly recommended to save substantial amounts of energy.



D60 Communications

D6060 Public Address Systems						
Item	Description					
Communication Equipment	Public Address System	<input type="checkbox"/>	Nurse Call System	<input type="checkbox"/>	Clock	<input type="checkbox"/>

D70 Electronic Safety and Security

D7010 Access Control and Intrusion Detection / D7050 Detection and Alarm						
Item	Intrusion Alarm System, Camera System					
Access Control and Intrusion Detection	Exterior Camera	<input checked="" type="checkbox"/>	Interior Camera	<input checked="" type="checkbox"/>	Front Door Camera Only	<input type="checkbox"/>
	Cameras monitored	<input checked="" type="checkbox"/>	Security Personnel On-Site	<input checked="" type="checkbox"/>	Intercom/Door Buzzer	<input checked="" type="checkbox"/>
Fire Alarm System	Central Alarm Panel	<input checked="" type="checkbox"/>	Battery-Operated Smoke Detectors	<input type="checkbox"/>	Alarm Horns	<input checked="" type="checkbox"/>
	Annunciator Panels	<input type="checkbox"/>	Hard-Wired Smoke Detectors	<input checked="" type="checkbox"/>	Strobe Light Alarms	<input checked="" type="checkbox"/>
	Pull Stations	<input checked="" type="checkbox"/>	Emergency Battery-Pack Lighting	<input type="checkbox"/>	Illuminated EXIT Signs	<input checked="" type="checkbox"/>
Fire Alarm System Condition	Fair					
Central Alarm Panel System	Location of Alarm Panel		Installation Date of Alarm Panel			
	Administration offices		Known			

Anticipated Lifecycle Replacements:

- Central alarm panel
- Alarm devices and system
- Exit Signs
- Emergency Lights

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 area has a variety of commercial kitchen appliances, fixtures, and equipment. The equipment is owned and by outside tenant. The tenants are responsible for any necessary replacement costs.

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

E1030 Commercial Kitchen Equipment		
Appliance	Comment	Condition
Refrigerators	Up-right	--
Freezers	--	--
Ranges	Electric	Fair
Ovens	--	--
Griddles / Grills	--	--
Fryers	--	--
Hood	Exhaust ducted to recirculated	Fair
Dishwasher	Owned	Poor
Microwave	<input type="checkbox"/>	--
Ice Machines	<input type="checkbox"/>	--
Steam Tables	<input type="checkbox"/>	--
Work Tables	<input type="checkbox"/>	--
Shelving	<input type="checkbox"/>	--

Anticipated Lifecycle Replacements:

- Cooking Range
- Dishwasher

Actions/Comments:

- The kitchen equipment is outdated in general and is near to the end of their useful lifecycle. Future lifecycle replacements of the components listed above will be required.
- The G.E. dishwasher shows significant evidence of corrosion and damage. The dishwasher appears not to work and has stagnant water laying in the bottom. The G.E. dishwasher requires replacement.

7. Sitework

G20 Site Improvements

G2020 Parking Lots and G2030 Pedestrian Walkways		
Item	Material	Condition
Entrance Driveway Apron	Asphalt	Fair
Parking Lot	Asphalt	Poor
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	None	--

Parking Count				
Open Lot	Carport	Private Garage	Subterranean Garage	Freestanding Parking Structure
58	-	-	-	-
Total Number of ADA Compliant Spaces			2	
Number of ADA Compliant Spaces for Vans			1	
Total Parking Spaces			58	

Site Stairs			
Location	Material	Handrails	Condition
Entrance	Concrete stairs	Metal	Fair

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Pavement oil stains	<input type="checkbox"/>	Vegetation growth in joints	<input type="checkbox"/>
Stair/ramp rails loose	<input type="checkbox"/>	Stair/ramp rail needs scraped and painted	<input type="checkbox"/>
Fence damage	<input checked="" type="checkbox"/>	Other	<input type="checkbox"/>

Degradation Issues			
Observation	Exists At Site	Observation	Exists At Site
Potholes/depressions	<input checked="" type="checkbox"/>	Alligator cracking	<input checked="" type="checkbox"/>
Concrete spalling	<input checked="" type="checkbox"/>	Trip hazards (settlement/heaving)	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- Asphalt seal coating
- Asphalt pavement
- Concrete pavement
- Sidewalks
- Curbs
- Site stairs

Actions/Comments:

- The asphalt pavement exhibits significant areas of failure and deterioration, such as alligator cracking, transverse cracking, extensive raveling, and localized depressions throughout the parking areas. The most severely damaged areas of paving must be cut and patched in order to maintain the integrity of the overall pavement system. Complete milling and overlay of the entire lot is also recommended.
- The concrete sidewalks, curbs, and gutters have significant areas of vertically-displaced concrete due to settlement and heavy surface wear due to cracking and spalling concrete sidewalks. These areas occur throughout the entire property. 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
Chain link with metal posts	Perimeter	Poor
Stained wood board and posts	Rear	Fair

Refuse Disposal				
Refuse Disposal	Common area dumpsters			
Dumpster Locations	Mounting	Enclosure	Contracted?	Condition
North East	Asphalt paving	None	Yes	Fair



Other Site Amenities			
	Description	Location	Condition
Playground Equipment	Plastic and metal	South East	--
Tennis Courts	None	--	--
Basketball Court	Asphalt	South East	--
Swimming Pool	None	--	--

The playground equipment and basketball courts are surrounded by a chain link fence.

Anticipated Lifecycle Replacements:

- Signage
- Site fencing
- Playground surfaces

Actions/Comments:

- The property identification signs require replacement due their age and condition. The condition of the signs may impede the timely arrival of emergency services personnel and equipment. The signs require replacement.
- The metal site fencing has isolated portions of the fence that are damaged. The affected portions of the fence must be replaced.

G2080 Landscaping		
Drainage System and Erosion Control		
System	Exists At Site	Condition
Surface Flow	<input checked="" type="checkbox"/>	Fair
Inlets	<input checked="" type="checkbox"/>	Fair
Swales	<input checked="" type="checkbox"/>	Fair
Detention pond	<input type="checkbox"/>	--
Lagoons	<input type="checkbox"/>	--
Ponds	<input type="checkbox"/>	--
Underground Piping	<input type="checkbox"/>	--
Pits	<input type="checkbox"/>	--
Municipal System	<input type="checkbox"/>	--
Dry Well	<input type="checkbox"/>	--

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 northwest side of the property to the southeast property line.

Item	Description						
Landscaping	Trees	Grass	Flower Beds	Planters	Drought Tolerant Plants	Decorative Stone	None
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landscaping Condition	Fair						
Irrigation	Automatic Underground		Drip		Hand Watering		None
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>
Irrigation Condition	--						

Retaining Walls		
Type	Location	Condition
None	--	--

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

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

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

Maintenance Issues			
Observation	Exists At Site	Observation	Exists At Site
Isolated bulb/lamp replacement	<input checked="" type="checkbox"/>	Discolored/dirty lens cover	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- Exterior lighting

Actions/Comments:

- Missing and damaged exterior light fixtures are located along the building perimeter walls . All of the light fixtures require replacement to provide necessary levels of night lighting for security.
- Many of the exterior fixtures are damaged or inoperable. The lack of adequate illumination is a safety hazard. New light fixtures must be installed at all affected areas.



8. Ancillary Structures

Other Ancillary Structures			
Type	Storage trailer	Location	WEST
Item	Material	Item	Material
Exterior Siding	Metal	Roof Finishes	Metal
Interior Finishes	None	MEPF	See Tables in Section 5
Overall Building Condition			Fair

Anticipated Lifecycle Replacements:

- Storage trailer

Actions/Comments:

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

9. Opinions of Probable Costs

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

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

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

9.1 Methodology

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

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

9.2 Immediate Repairs

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

9.3 Replacement Reserves

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

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

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

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

10. Purpose and Scope

10.1. Purpose

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

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

CONDITIONS:

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

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

FORMAT OF THE BODY OF THE REPORT:

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

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

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.

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

The facility 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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exterior Accessible Route	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interior Accessible Route	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Restrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Elevators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

According to the Flood Insurance Rate Map, published by the Federal Emergency Management Agency (FEMA) and dated February 5, 2018, 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.



12. Certification

Ann Arbor Schools retained EMG to perform this Facility Condition Assessment in connection with its continued operation of Freeman Elementary, 3540 North Dixboro Road, Ann Arbor, Michigan, the "Property". It is our understanding that the primary interest of Ann Arbor 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 Ann Arbor Public Schools for the purpose stated within Section 10.1 of this report. The report, or any excerpt thereof, shall not be used by any party other than Ann Arbor Public Schools or for any other purpose than that specifically stated in our agreement or within Section 10.1 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 Schools and the recipient's sole risk, without liability to EMG.

Prepared by: James Cuellar,
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: EMG Accessibility Checklist

Appendix E: Pre-Survey Questionnaire

Appendix A: Photographic Record



#1:	FRONT ELEVATION
-----	-----------------



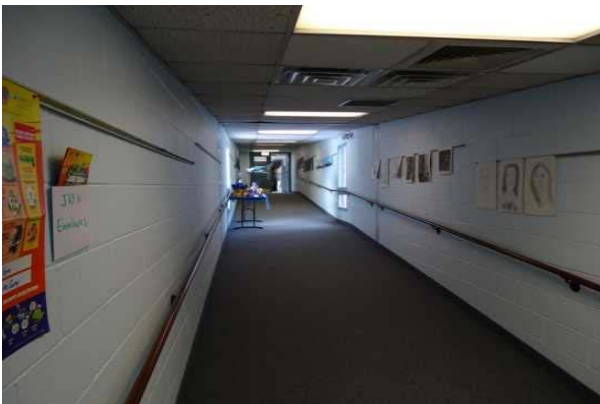
#2:	LEFT ELEVATION
-----	----------------



#3:	RIGHT ELEVATION
-----	-----------------



#4:	REAR ELEVATION
-----	----------------



#5:	HALLWAY
-----	---------



#6:	HALLWAY
-----	---------



#7:	SIDEWALK, TRIP HAZARD
-----	-----------------------



#8:	DAMAGED FOUNDATIONS
-----	---------------------



#9:	EXTERIOR WALL, ALUMINUM SIDING
-----	--------------------------------



#10:	EXTERIOR WALL, BRICK
------	----------------------



#11:	EXTERIOR DOOR
------	---------------



#12:	EXTERIOR DOOR
------	---------------



#13:	WINDOWS
------	---------



#14:	WINDOWS
------	---------



#15:	VINYL TILE (VCT)
------	------------------



#16:	VINYL TILE (VCT)
------	------------------



#17:	VINYL TILE (VCT)
------	------------------



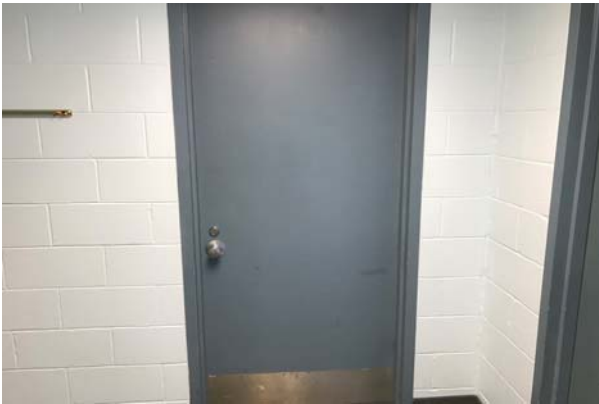
#18:	CERAMIC TILE
------	--------------



#19:	CARPET
------	--------



#20:	CARPET
------	--------



#21:	INTERIOR DOOR
------	---------------



#22:	CERAMIC TILE
------	--------------



#23:	LOCKERS
------	---------



#24:	TOILETS
------	---------



#25:	SINKS
------	-------



#26:	URINAL
------	--------



#27:	SINK, STAINLESS STEEL
------	-----------------------



#28:	WATER SOFTENING SYSTEM
------	------------------------



#29:	VARIABLE FREQUENCY DRIVE (VFD)
------	--------------------------------



#30:	WATER HEATER, GAS
------	-------------------



#31:	KITCHEN CABINETS
------	------------------



#32:	EXPANSION TANK
------	----------------



#33:	EXHAUST FAN
------	-------------



#34:	PACKAGED UNIT (RTU)
------	---------------------



#35:	PACKAGED (RTU)
------	----------------



#36:	MAKE-UP AIR UNIT
------	------------------



#37:	CABINET HEATER
------	----------------



#38:	DOMESTIC BOILER
------	-----------------



#39:	FIRE PANEL
------	------------



#40:	ACT CEILING
------	-------------



#41:	LIGHTING SYSTEM
------	-----------------



#42:	BUILDING/MAIN SWITCHBOARD
------	---------------------------



#43:	DISTRIBUTION PANEL
------	--------------------



#44:	DISTRIBUTION PANEL
------	--------------------



#45:	LIGHTING FIXTURES
------	-------------------



#46:	PARKING LOTS
------	--------------



#47:	PARKING LOTS
------	--------------



#48:	SIDEWALKS
------	-----------



#49:	BASKETBALL BACKSTOP
------	---------------------



#50:	FENCING
------	---------



#51:	PLAYGROUND
------	------------



#52:	PLAYGROUND
------	------------



#53:	SIGNAGE
------	---------



#54:	FLAGPOLE
------	----------



#55:	FENCES, CHAIN LINK
------	--------------------



#56:	FENCES, CHAIN LINK
------	--------------------



#57:	PLAY STRUCTURE
------	----------------



#58:	PLAY STRUCTURE
------	----------------



#59:	EXTERIOR LIGHTING
------	-------------------



#60:	EXTERIOR LIGHTING
------	-------------------



#61:	CLASSROOM
------	-----------



#62:	CLASSROOM
------	-----------



#63:	CLASSROOM
------	-----------



#64:	MECHANICAL ROOM
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Appendix B: Site Plan

Site Plan



Project Name:
Freeman Elementary

Project Number:
129010.18R000-012.354

Source:
Google Earth Pro

On-Site Date:
February 5, 2018

Appendix C: Supporting Documentation

Flood Map

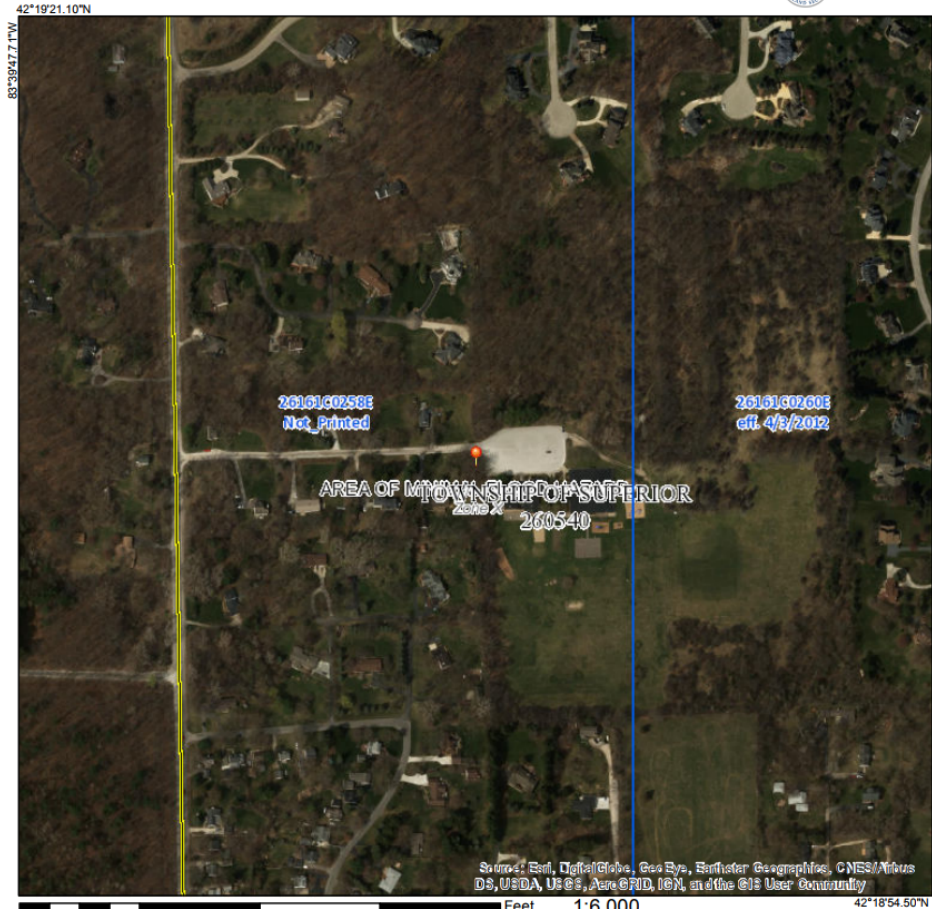
National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, AE, AH
	With BFE or Depth
	Regulatory Floodway Zone AE, AO, AH, VE, AR
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee. See Notes. Zone X
	Area with Flood Risk due to Levee Zone D
OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X
	Effective LOMRs
	Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
CROSS SECTIONS	20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
	17.5 Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
OTHER FEATURES	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
MAP PANELS	Digital Data Available
	No Digital Data Available
	Unmapped



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/12/2018 at 4:49:03 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

	Project Name: Freeman Elementary	Project Number: 129010.18R000-012.354
	Source: FEMA Map Number: 26161C0258E Dated: February 5, 2018	On-Site Date: February 5, 2018

Appendix D: Pre-Survey Questionnaire

PRE-SURVEY QUESTIONNAIRE

Name of Person Completing Questionnaire:	N/A - Not returned to EMG
Association with Property:	
Length of Association with Property:	
Date Completed:	
Phone Number:	
Property Name:	
EMG Project Number:	

Inspections		Date Last Inspected	List any Outstanding Repairs Required
1	Elevators		
2	HVAC, Mechanical, Electric, Plumbing		
3	Life-Safety/Fire		
4	Roofs		

Question	Response
5 List any major capital improvement within the last three years.	
6 List any major capital expenditures planned for the next year.	
7 What is the age of the roof(s)?	
8 What building systems (HVAC, roof, interior/exterior finishes, paving, etc.) are the responsibilities of the tenant to maintain and replace?	

Question	Yes	No	Unk	N/A	Comments
9 Are there any unresolved building, fire, or zoning code issues?					
10 Are there any "down" or unusable units?					
11 Are there any problems with erosion, stormwater drainage or areas of paving that do not drain?					
12 Is the property served by a private water well?					
13 Is the property served by a private septic system or other waste treatment systems?					
14 Are there any problems with foundations or structures?					
15 Is there any water infiltration in basements or crawl spaces?					
16 Are there any wall, or window leaks?					
17 Are there any roof leaks?					
18 Is the roofing covered by a warranty or bond?					
19 Are there any poorly insulated areas?					
20 Is Fire Retardant Treated (FRT) plywood used?					

PRE-SURVEY QUESTIONNAIRE

Question		Yes	No	Unk	N/A	Comments
21	Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used?					
22	Are there any problems with the utilities, such as inadequate capacities?					
23	Are there any problems with the landscape irrigation systems?					
24	Has a termite/wood boring insect inspection been performed within the last year?					
25	Do any of the HVAC systems use R-11, 12, or 22 refrigerants?					
26	Has any part of the property ever contained visible suspect mold growth?					
27	Is there a mold Operations and Maintenance Plan?					
28	Have there been indoor air quality or mold related complaints from tenants?					
29	Is polybutylene piping used?					
30	Are there any plumbing leaks or water pressure problems?					
31	Are there any leaks or pressure problems with natural gas service?					
32	Does any part of the electrical system use aluminum wiring?					
33	Do Residential units have a less than 60-Amp service?					
34	Do Commercial units have less than 200-Amp service?					
35	Are there any recalled fire sprinkler heads (Star, GEM, Central, Omega)?					
36	Is there any pending litigation concerning the property?					
37	Has the management previously completed an ADA review?					
38	Have any ADA improvements been made to the property?					
39	Does a Barrier Removal Plan exist for the property?					
40	Has the Barrier Removal Plan been approved by an arms-length third party?					
41	Has building ownership or management received any ADA related complaints?					
42	Does elevator equipment require upgrades to meet ADA standards?					
43	Are there any problems with exterior lighting?					
44	Are there any other significant issues/hazards with the property?					

PRE-SURVEY QUESTIONNAIRE

Question		Yes	No	Unk	N/A	Comments
45	Are there any unresolved construction defects at the property?					

Comments

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

INFORMATION REQUIRED

1. All available construction documents (blueprints) for the original construction of the building or for any tenant improvement work or other recent construction work.
2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features.
3. For commercial properties, provide a tenant list which identifies the names of each tenant, vacant tenant units, the floor area of each tenant space, and the gross and net leasable area of the building(s).
4. For apartment properties, provide a summary of the apartment unit types and apartment unit type quantities, including the floor area of each apartment unit as measured in square feet.
5. For hotel or nursing home properties, provide a summary of the room types and room type quantities.
6. Copies of Certificates of Occupancy, building permits, fire or health department inspection reports, elevator inspection certificates, roof or HVAC warranties, or any other similar, relevant documents.
7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies.

8. The company name, phone number, and contact person of all outside vendors who serve the property, such as mechanical contractors, roof contractors, fire sprinkler or fire extinguisher testing contractors, and elevator contractors.
9. A summary of recent (over the last 5 years) capital improvement work which describes the scope of the work and the estimated cost of the improvements. Executed contracts or proposals for improvements. Historical costs for repairs, improvements, and replacements.
10. Records of system 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.

