

FACILITY CONDITION ASSESSMENT

prepared for

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



PREPARED BY:

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DATE OF REPORT:

July 2, 2018

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January 30-31, 2018

FACILITY CONDITION ASSESSMENT

OF

SKYLINE HIGH SCHOOL
2552 NORTH MAPLE ROAD
ANN ARBOR, MICHIGAN 48104



engineering | environmental | capital planning | project management

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Immediate Repairs Report
Skyline High School
7/2/2018



Location Name	EMG Renamed Item Number	ID	Cost Description	Quantity	Unit	Unit Cost *	Subtotal	Deficiency Repair Estimate *
Skyline High School	D30	938081	Air Conditioning, Central, Install	380564	SF	\$11.50	\$4,376,486	\$4,376,486
Skyline High School	D40	845293	Fire Extinguisher, , Replace	25	EA	\$410.02	\$10,251	\$10,251
Skyline High School	C50	839556	Lighting Fixture, 20 WATT, Replace	6	EA	\$207.21	\$1,243	\$1,243
Skyline High School		958703	Davis Bacon Prevailing Wages, Surcharge for Prevailing Wages, 10% surcharge for prevailing wages	304467.33	LS	\$1.15	\$350,137	\$350,137
Skyline High School	G20	839573	Parking Lot, Cut & Patch, Replace	500	SF	\$5.70	\$2,852	\$2,852
Skyline High School	G20	839546	Parking Lot, Seal & Stripe, Repair	180000	SF	\$0.44	\$78,557	\$78,557
Skyline High School	G20	839589	Parking Lot, Mill & Overlay, Repair	180000	SF	\$3.77	\$679,043	\$679,043
Skyline High School	G20	839567	Parking Lot, , Repair	24850	SF	\$3.77	\$93,746	\$93,746
Skyline High School	G20	839580	Parking Lot, , Repair	24580	SF	\$0.44	\$10,727	\$10,727
Skyline High School	G20	839574	Parking Lot, Cut & Patch, Replace	1000	SF	\$5.70	\$5,704	\$5,704
Skyline High School	G20	839550	Pedestrian Pavement, Sidewalk, Concrete Sections/Small Areas, Replace	100	SF	\$21.85	\$2,185	\$2,185
Skyline High School	D30	885420	Engineer, Mechanical/HVAC, General, Design	1	EA	\$7,475.00	\$7,475	\$7,475
Skyline High School		882800	Architect/Engineer, Building Envelope, Masonry, Evaluate/Report	1	EA	\$7,475.00	\$7,475	\$7,475
Skyline High School	G20	839586	ADA Van, Parking, Signage, Pole-Mounted, Install	3	EA	\$575.00	\$1,725	\$1,725
Immediate Repairs Total								\$5,627,606

* Location Factor included in totals.

Uniformat Code	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost *	Subtotal	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	Deficiency Repair Estimate	
G2031	839550	Pedestrian Pavement, Sidewalk, Concrete Sections/Small Areas, Replace	30	30	0	100	SF	\$21.85	\$2,185	\$2,185																					\$2,185	
G2031	839562	Pedestrian Pavement, Sidewalk, Concrete Sections/Small Areas, Replace	30	10	20	20000	SF	\$21.85	\$437,000																					\$437,000	\$437,000	
G2041	839560	Fencing, 6' High Chain Link, Replace	30	10	20	1650	LF	\$43.17	\$71,228																						\$71,228	\$71,228
G2041	839587	Fencing, 6' High Chain Link, Replace	30	10	20	3100	LF	\$43.17	\$133,823																						\$133,823	\$133,823
G2041	839552	Fencing, 8' High Chain Link, Replace	30	10	20	1400	LF	\$61.99	\$86,779																						\$86,779	\$86,779
G2041	845289	Fencing, , Replace	30	10	20	1805	LF	\$61.99	\$111,883																						\$111,883	\$111,883
G2044	885421	Signage, Property, Monument/Pylon, Replace	20	10	10	1	EA	\$9,892.30	\$9,892											\$9,892											\$9,892	
G2047	834575	Basketball Backboard, ,	10	8	2	12	EA	\$10,850.99	\$130,212			\$130,212										\$130,212									\$260,424	
G2047	945612	Play Surfaces, Artificial Turf, 1/2" Pile, 5/16" Pad, Replace	20	13	7	176000	SF	\$11.51	\$2,026,024						\$2,026,024																\$2,026,024	
G2047	839564	Play Surface/Court, Rubber, Replace	20	12	8	52000	SF	\$25.30	\$1,315,600								\$1,315,600														\$1,315,600	
G2047	850840	Scoreboard, ,	20	10	10	2	EA	\$24,272.51	\$48,545											\$48,545											\$48,545	
G2047	845291	Play Surface/Court, ,	20	10	10	32000	SF	\$25.30	\$809,600											\$809,600											\$809,600	
G2047	839548	Scoreboard, ,	20	10	10	4	EA	\$24,272.51	\$97,090											\$97,090											\$97,090	
G2047	945611	Play Surfaces & Sports Courts, Poured-in-place Rubber, Replace	20	10	10	56000	SF	\$25.30	\$1,416,800											\$1,416,800											\$1,416,800	
G2047	845294	Bleacher,	25	10	15	72	EA	\$226.55	\$16,312															\$16,312							\$16,312	
G2049	839572	Prefabricated/Ancillary Building or Structure, All Components, Replace	30	10	20	900	SF	\$143.97	\$129,572																					\$129,572	\$129,572	
G4021	845290	Exterior Light Pole, 135 - 1000 WATT, Replace	20	10	10	4	EA	\$9,801.84	\$39,207											\$39,207											\$39,207	
G4021	845287	Exterior Light Pole, 135 - 1000 WATT	20	10	10	56	EA	\$3,129.15	\$175,232											\$175,232											\$175,232	
P000X	885420	Engineer, Mechanical/HVAC, General, Design	0	0	0	1	EA	\$7,475.00	\$7,475	\$7,475																					\$7,475	
P000X	882800	Architect/Engineer, Building Envelope, Masonry, Evaluate/Report	0	0	0	1	EA	\$7,475.00	\$7,475	\$7,475																					\$7,475	
Z106X	839586	ADA Van, Parking, Signage, Pole-Mounted, Install	0	0	0	3	EA	\$575.00	\$1,725	\$1,725																					\$1,725	
Totals, Unescalated										\$5,627,629	\$748,810	\$2,869,370	\$2,299,544	\$6,438,976	\$7,195,537	\$381,007	\$2,463,101	\$3,127,089	\$350,137	\$16,219,982	\$386,477	\$3,680,691	\$2,278,240	\$571,722	\$1,317,444	\$593,003	\$350,137	\$366,347	\$366,812	\$14,867,872	\$72,499,930	
Totals, Escalated (3.0% inflation, compounded annually)										\$5,627,629	\$771,275	\$3,044,115	\$2,512,774	\$7,247,124	\$8,341,600	\$454,943	\$3,029,304	\$3,961,303	\$456,850	\$21,798,300	\$534,975	\$5,247,785	\$3,345,672	\$864,780	\$2,052,534	\$951,596	\$578,724	\$623,681	\$643,208	\$26,853,032	\$98,941,203	

* 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.

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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:	2552 North Maple Road, Ann Arbor, Michigan 48103	
Year Constructed/Renovated:	2008	
Current Occupants:	Skyline High School	
Percent Utilization:	100 % .	
Management Point of Contact:	Ann Arbor Public Schools,Jim Vibbart 734.320.3613 phone Vibbart.j@aaps.k12.mi.us email	
Property Type:	High School	
Site Area:	108.00 acres	
Building Area:	380,564 SF	
Number of Buildings:	One	
Number of Stories:	Four	
Parking Type and Number of Spaces:	678 spaces in open lots[]	
Building Construction:	Masonry bearing walls and concrete columns,beams and metal decking.	
Roof Construction:	Flat roofs with built-up membrane.	
Exterior Finishes:	Brick Veneer	
Heating, Ventilation and Air Conditioning:	Central system , air handlers, cabinets units. Individual package heat pump , split-system. Supplemental components: ductless split-systems,electric unit heaters make-up air unit.	
Fire and Life/Safety:	Fire sprinklers, hydrants, smoke detectors, alarms, strobes, extinguishers, pull stations, alarm panel, and exit signs.	
ADA :	This building does not have any major ADA issues	
All 380,564 square feet of the building are occupied by a single occupant, Skyline High School, The spaces are mostly, a combination of classrooms, laboratory spaces, gymnasiums,cafeterias, and supporting restrooms, administrative offices, mechanical and other utility spaces.		
Key Spaces Not Observed		
Room Number	Area	Access Issues
Exterior sports building	Concessions area	Locked room and no key would work in the lock
Assessment Information		
Dates of Visit:	1/30/2018 and 2/1/2018	
On-Site Point of Contact (POC):	Jim Vibbart	
Assessment and Report Prepared by:	Larry SIRRIDGE and Tammy Prusa	



Property Information	
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 asphalt parking and drive lanes are generally in fair/ poor condition. A cost allowance to repair and /or replace these deficient attributes is included in the cost tables.

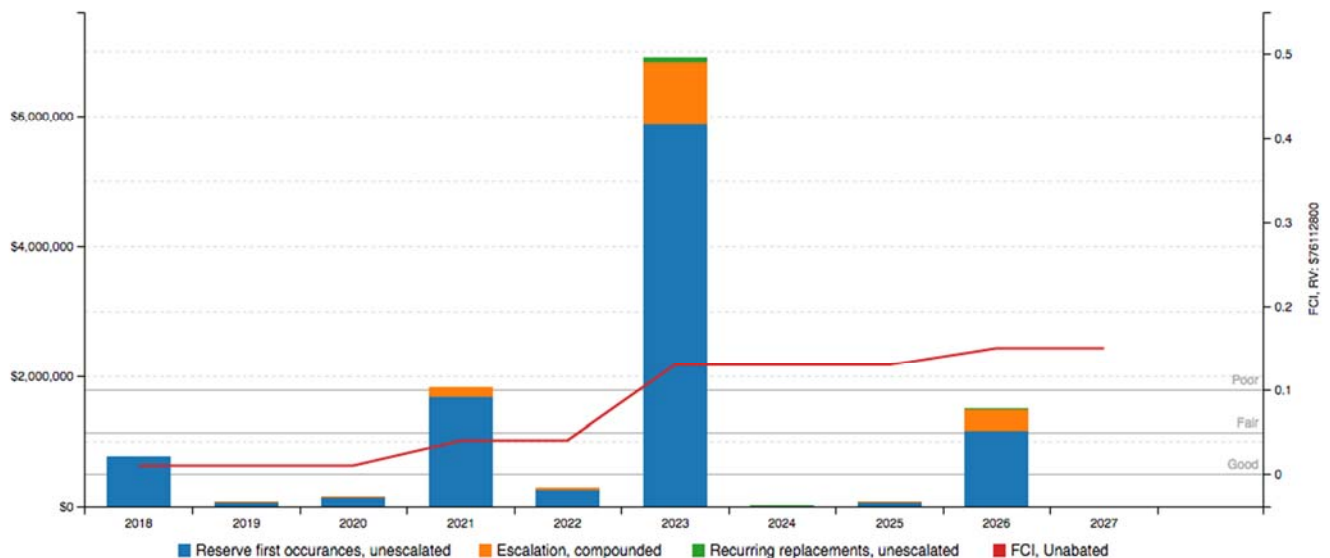
Architectural : The interior walls in two stairwells (North side and west side) have cracks in the masonry running in a vertical direction. A cost allowance to repair and paint these deficiencies is included in the cost tables. It was noted by staff that water is leaking in several areas of the building. It was not possible to determine if it was from the exterior or interior.

MEPF : Geothermal loop temperature not providing the base line temperature to efficient heating and cooling of the building. A Professional Engineer with specific expertise in mechanical design and construction in this geographical area must be retained to evaluate the structure and to provide remedial recommendations consistent with local regulatory and code requirements. Although the estimated cost of repair cannot be accurately determined without the recommended study, a budgetary cost allowance to repair the affected elements is also included.

1.3. Facility Condition Index (FCI)

FCI Analysis: Skyline High School

Replacement Value: \$ 76,112,800; 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):	1.03%
Current Year FCI Rating:	2018
10-Year Facility Condition Index (FCI) FCI = (RR)/(CRV):	15.36%
10-Year FCI Rating	0.15
Current Replacement Value (CRV):	\$76,112,800
Year 0 (Current Year) - Immediate Repairs (IR):	\$783,463
Years 1-10 - Replacement Reserves (RR):	\$10,905,665
Total Capital Needs:	\$11,689,129

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



2. Building Structure

A10 Foundations

Building Foundation		
Item	Description	Condition
Foundation	Concrete foundation walls	Good
Basement and Crawl Space	None	--

Anticipated Lifecycle Replacements

- No components of significance

Actions/Comments:

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

B10 Superstructure

B1010 Floor Construction and B1020 Roof Construction		
Item	Description	Condition
Framing / Load-Bearing Walls	Cast-in-place concrete	Good
Ground Floor	Concrete slab	Good
Upper Floor Framing	Steel beams	Good
Upper Floor Decking	Metal decking with concrete topping	Good
Balcony Framing	Steel beams	Good
Balcony Decking	None	--
Balcony Deck Toppings	None	--
Balcony Guardrails	None	--
Roof Framing	Open-web steel joists	Good
Roof Decking	Metal decking with concrete topping	Good

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

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

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

B1080 Stairs					
Type	Description	Riser	Handrail	Balusters	Condition
Building Exterior Stairs	Concrete stairs	Closed	Metal	None	Good
Building Interior Stairs	Steel Framed With Vinyl treads	Closed	Metal	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. Future lifecycle replacements of the components listed above will be required.

3. Building Envelope

B20 Exterior Vertical Enclosures

B2010 Exterior Walls		
Type	Location	Condition
Primary Finish	Brick veneer	Good
Secondary Finish	Curtain wall	Good
Accented with	Stone veneer	Good
Soffits	Exposed	Good
Building sealants	Between dissimilar materials, at joints, around windows and doors	Good

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:

- Masonry re-pointing

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance, including patching repairs, graffiti removal, and re-caulking, is highly recommended. Future lifecycle replacements of the components listed above will be required.

B2020 Exterior Windows				
Window Framing	Glazing	Location	Window Screen	Condition
Aluminum framed, fixed	Double glaze	Throughout the building	<input type="checkbox"/>	Good

B2050 Exterior Doors		
Main Entrance Doors	Door Type	Condition
	Fully glazed, metal framed	Good
Secondary Entrance Doors	Metal, insulated	Good
Service Doors	Metal, insulated	Good
Overhead Doors	Aluminium	Good



Anticipated Lifecycle Replacements:

- Windows
- Exterior Metal doors
- Window sealants

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	Building wide	Finish	Built-up membrane
Type / Geometry	Flat	Roof Age	10 Yrs
Flashing	Sheet metal	Warranties	Unknown
Parapet Copings	Parapet with sheet metal coping	Roof Drains	Internal drains
Fascia	None	Insulation	Rigid Board
Soffits	Concealed Soffits	Skylights	No
Attics	Concrete-topped steel decks	Ventilation Source-1	None
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:

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

Actions/Comments:

- The roof finishes were installed in 2008 appear to be original. Information regarding roof warranties or bonds was not available.
- Roof leaks have occurred in the past year. The leaks have since been repaired, and no active roof leaks are evident.
- There is no evidence of roof deck or insulation deterioration. The roof substrate and insulation should be inspected during any future roof repair or replacement work.



- Roof drainage appears to be adequate. Clearing and minor repair of drain system components should be performed regularly as part of the property management's routine maintenance and operations program.
- The 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	Good
Door Framing	Metal	Good
Fire Doors	Yes	Good
Closet Doors	Solid core wood , Sliding, Bi-fold	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"/>

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

Interior Finishes - SKYLINE HIGH SCHOOL

Location	Finish		Quantity (SF)	Condition	Action	RUL	Est. Cost
Classrooms	Walls	Gypsum Board/Plaster/Metal	45500	Fair	Prep & Paint	4	64,756
Classrooms	Floor	Vinyl Tile (VCT)	16500	Fair	Replace	5	79,210
Classrooms	Floor	Vinyl Sheeting	145000	Fair	Replace	5	1,016,334
Classrooms	Ceilings	Suspended Acoustical Tile (ACT)	185000	Fair	Replace	10	575,535
Gymnasium	Floor	Maple Sports Floor	25000	Fair	Replace	20	256,288
Gymnasium	Floor	Rubber Tile	10000	Fair	Replace	5	84,349
Hallways	Ceilings	Suspended Acoustical Tile (ACT)	170000	Fair	Replace	10	528,870
Office	Floor	Carpet Standard-Commercial Medium-Traffic	11250	Fair	Replace	4	81,633
Pool	Floor	Quarry Tile	10000	Fair	Replace	40	151,876
Restrooms	Walls	Concrete/Masonry	6800	Fair	Prep & Paint	3	9,867
Restrooms	Walls	Ceramic Tile	6500	Fair	Replace	15	107,601
Restrooms	Floor	Vinyl Tile (VCT)	8500	Fair	Replace	5	40,805
Restrooms,lower level	Ceilings	Suspended Acoustical Tile (ACT)	16200	Fair	Replace	10	50,398

Maintenance Issues			
Observation	Exists at Site	Observation	Exists at Site
Loose carpeting/flooring	<input type="checkbox"/>	Minor areas of stained ceiling tiles	<input checked="" type="checkbox"/>
Minor paint touch-up	<input checked="" 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
- Vinyl wall covering
- Suspended acoustic ceiling tile
- Hard tile ceilings
- Interior doors
- Toilet partitions
- Lockers
- Maple sports floor

Actions/Comments:

- It appears that the interior finishes are original. The property is relatively new and the interior finishes have not required replacement since the original 2008 construction.
- 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	Otis	Machinery Location	Ground floor or basement adjacent to shaft
Safety Stops	Electronic	Emergency Communication Equipment	Yes
Cab Floor Finish	Vinyl-tiled	Cab Wall Finish	Plastic-laminated wood
Cab Finish Condition	Fair	Elevator Cabin Lighting	F42T8
Hydraulic Elevators	Three cars at 3000 LB each		
Overhead Traction Elevators	None		
Freight Elevators	Hydraulic one car at 3000 each		
Machinery Condition	Good	Controls Condition	Good
Other Conveyances	None	Other Conveyance Condition	--

Maintenance Issues			
Observation	Exists at Site	Observation	Exists at Site
Inspection certificate not available	<input type="checkbox"/>	Inspection certificate expired	<input type="checkbox"/>
Service call needed	<input checked="" type="checkbox"/>	Minor cab finish repairs	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Anticipated Lifecycle Replacements:

- Elevator controls
- Hydraulic machinery

Actions/Comments:

- The elevators are serviced by outside contractor on a routine basis. The elevator machinery and controls are the originally installed system. in 2008..
- The elevators appear to provide adequate service. The elevators are serviced by outside contractor on a routine basis. The elevator machinery and controls are the originally installed system. The elevators will require continued periodic maintenance.
- 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.
- The finishes in the elevator cabs will require replacement. The cost to replace the finishes is relatively insignificant and the work can be performed as part of the property management’s operations program.



D20 Plumbing

D2010 Domestic Water Distribution		
Type	Description	Condition
Water Supply Piping	Copper	Good
Water Meter Location	Back of the building near maintenance shop	

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

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

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 - SKYLINE HIGH SCHOOL

Location	Component	Component Description	Quantity	Unit	Condition	Action	RUL	Est. Cost
Baseball Restrooms	Backflow Preventer	1"	1	EA	Fair	Replace	5	1,276
C122	Backflow Preventer	6"	1	EA	Good	Replace	5	9,528
Cafeteria	Sink	Stainless Steel	1	EA	Fair	Replace	10	1,054
Classrooms	Emergency Eye Wash	Emergency Eye Wash	11	EA	Fair	Replace	5	15,587
Concessions (main stadium)	Toilet	Tankless (Water Closet)	16	EA	Fair	Replace	10	13,487
Concessions (main stadium)	Urinal	Vitreous China	10	EA	Fair	Replace	10	11,934
Concessions (main stadium)	Sink	Vitreous China	1	EA	Fair	Replace	10	862
Concessions (main stadium)	Sink	Pot, Multi-compartment	1	LF	Fair	Replace	20	1,263
Concessions Main Stadium	Backflow Preventer	2"	1	EA	Fair	Replace	5	2,603
Concessions Main Stadium	Water Heater	Electric, Commercial, 30 to 80 GAL	1	EA	Fair	Replace	5	6,963
Gymnasium	Sink	Vitreous China	17	EA	Fair	Replace	10	14,646
Kitchen	Sink	Pot, Multi-compartment	1	LF	Fair	Replace	20	1,263
Kitchen	Sink	Pot, Multi-compartment	75	LF	Fair	Replace	20	94,688
Kitchen	Water Heater	Instant Hot, Electric	1	EA	Fair	Replace	5	1,908
Mechanical room	Water Storage Tank	251 to 500 GAL	1	EA	Fair	Replace	10	4,447
Mechanical room	Water Pumps	Domestic Circulator or Booster Pump, 0.75 HP	1	EA	Fair	Replace	10	4,017
Mechanical room	Boiler	Gas, 801 to 1,400 MBH	1	EA	Fair	Replace	10	42,853
Mechanical room	Water Pumps	Domestic Circulator or Booster Pump, 0.75 HP	1	EA	Fair	Replace	10	4,017
Mechanical room	Boiler	Gas, 501 to 800 MBH	1	EA	Fair	Replace	10	34,559
Mechanical room	Water Storage Tank	501 to 1,000 GAL	1	EA	Fair	Replace	10	5,216
Mechanical room	Water Pumps	Domestic Circulator or Booster Pump, 0.75 HP	1	EA	Fair	Replace	10	4,017
Mechanical room	Water Pumps	Domestic Circulator or Booster Pump, 0.75 HP	1	EA	Fair	Replace	10	3,414
Mechanical room	Water Storage Tank	251 to 500 GAL	1	EA	Fair	Replace	10	4,447
Mechanical room	Boiler	Gas, 801 to 1,400 MBH	1	EA	Fair	Replace	10	42,853
Mechanical room	Boiler	Gas, 501 to 800 MBH	1	EA	Fair	Replace	12	34,559
Mechanical room	Water Pumps	Domestic Circulator or Booster Pump, 0.75 HP	1	EA	Fair	Replace	10	4,017
Pool mechanical	Sump Pump	20 HP	1	EA	Fair	Replace	10	7,158
Restrooms	Toilet	Tankless (Water Closet)	167	EA	Fair	Replace	10	140,775
Softball Diamond restroom	Urinal	Vitreous China	1	EA	Fair	Replace	10	1,193
Softball diamond restroom	Sink	Porcelain Enamel, Cast Iron	1	EA	Fair	Replace	10	1,167
Throughout building	Urinal	Vitreous China	23	EA	Fair	Replace	10	27,449
Throughout building	Sink	Vitreous China	17	EA	Fair	Replace	10	14,646
Throughout building	Drinking Fountain	Refrigerated	18	EA	Fair	Replace	2	22,635
Throughout building	Drinking Fountain	Vitreous China	6	EA	Fair	Replace	5	11,634
Utility closet	Water Heater	Electric, Residential, 30 to 52 GAL	1	EA	Fair	Replace	5	1,739

Anticipated Lifecycle Replacements:

- Boilers
- Circulation pumps
- Water heaters
- Toilets
- Urinals
- Sinks
- Drinking fountain
- Backflow preventors

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	Geothermal system
Heating Fuel	Natural gas
Location of Major Equipment	Mechanical rooms



Building Central Heating System	
Space Served by System	Entire building

Distribution System	
HVAC Water Distribution System	Two pipe
Air Distribution System	Variable volume
Location of Air Handlers	Rooftop, exterior
Terminal Units	Water source heat pumps
Quantity and Capacity of Terminal Units	Approximately 197 Water cooled heat pumps ranging from 1.5 tons to 10 Tons
Location of Terminal Units	Within interior spaces

Packaged, Split and Individual Units	
Primary Components	Split system heat pumps
Cooling (if separate from above)	performed via components above
Heating Fuel	Natural gas, electric
Location of Equipment	Mechanical rooms
Space Served by System	Entire building

Supplemental/Secondary Components	
Supplemental Component #1	Wall heaters
Location / Space Served by Wall heaters	Back stairwells
Wall heaters Condition	Fair
Supplemental Component #2	Suspended unit heaters
Location / Space Served by Suspended unit heaters	Loading docks
Suspended unit heaters Condition	Fair

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	Exists at Site	Observation	Exists at Site
Ductwork/grills need cleaned	<input checked="" type="checkbox"/>	Minor control adjustments needed	<input checked="" type="checkbox"/>
Leaking condensate lines	<input checked="" 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 type="checkbox"/>	Obsolete refrigerants : R11, R12, R22, R123, R502	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>



Mechanical Systems - SKYLINE HIGH SCHOOL

Location	Component	Component Description	Quantity	Unit	Condition	Category	RUL	Est. Cost
5th Floor Mechanical Room	Unit Heater	Unit Heater, Electric, 10 kW, Replace	8	EA	Fair	Replace	10	15,795
5th Floor Mechanical Room	Heat Pump	Heat Pump, Packaged (RTU), 3.5 to 5 Ton, Replace	10	EA	Good	Replace	5	89,282
5th Floor Mechanical Room	Heat Pump	Heat Pump, Packaged (RTU), 6 to 10 Ton, Replace	11	EA	Fair	Replace	5	168,578
Baseball Restrooms	Unit Heater	Unit Heater, Electric, 10 kW, Replace	2	EA	Fair	Replace	10	3,949
C103	Split System	Ductless Split System, Single Zone, 2.5 to 3 Ton, Replace	1	EA	Fair	Replace	5	6,577
C122	Air Handler	Air Handler, Interior, 4,001 to 4,700 CFM, Replace	1	EA	Fair	Replace	20	17,447
C122	Unit Heater	Unit Heater, Electric, 20 kW, Replace	1	EA	Fair	Replace	10	3,355
Concessions (main stadium)	Unit Heater	Unit Heater, Electric, 10 kW, Replace	5	EA	Fair	Replace	10	9,872
Concessions (main stadium)	Unit Heater	Unit Heater, Electric, 10 kW, Replace	17	EA	Fair	Replace	10	33,564
Electrical closet	Split System	Ductless Split System, Single Zone, 2.5 to 3 Ton, Replace	1	EA	Fair	Replace	5	6,577
Elevator	Unit Heater	Unit Heater, Hydronic, 37 to 85 MBH, Replace	1	EA	Fair	Replace	10	1,900
Mechanical closet	Split System	Ductless Split System, Single Zone, 2.5 to 3 Ton, Replace	1	EA	Fair	Replace	5	6,577
Mechanical room	Boiler Room Piping System	Air Separator, 8", Replace	1	EA	Fair	Replace	5	6,625
Mechanical room	Boiler Room Piping System	Expansion Tank, 801 to 1,500 GAL, Replace	1	EA	Fair	Replace	20	41,239
Mechanical room	Circulation Pump	Distribution Pump, Heating Water, 125 to 150 HP, Replace	1	EA	Fair	Replace	10	63,760
Mechanical Room	Circulation Pump	Distribution Pump, Heating Water, 125 to 150 HP, Replace	1	EA	Fair	Replace	10	63,760
Mechanical Room	Circulation Pump	Distribution Pump, Heating Water, 125 to 150 HP, Replace	1	EA	Fair	Replace	10	63,760
Mechanical room	Heat Pump	Heat Pump, Packaged (RTU), 2.5 to 3 Ton, Replace	9	EA	Fair	Replace	5	51,938
Mechanical room	Heat Pump	Heat Pump, Packaged (RTU), 1.5 to 2 Ton, Replace	38	EA	Good	Replace	5	191,166
Mechanical room	Heat Pump	Heat Pump, Packaged (RTU), 6 to 10 Ton, Replace	1	EA	Fair	Replace	5	15,325
Mechanical, closet	Heat Pump	Heat Pump, Packaged (RTU), 3.5 to 5 Ton, Replace	1	EA	Fair	Replace	5	8,928
Office	Heat Pump	Heat Pump, Packaged (RTU), 6 to 10 Ton, Replace	1	EA	Fair	Replace	5	15,325
Pool mechanical	Air Handler	Air Handler, Interior, 4,001 to 4,700 CFM, Replace	1	EA	Fair	Replace	20	17,447
Roof	Split System	Ductless Split System, Single Zone, 2.5 to 3 Ton, Replace	1	EA	Fair	Replace	5	6,577
Roof	Split System	Ductless Split System, Multi Zone (per 1 to 2 Ton Fan Coil Unit), Replace	1	EA	Fair	Replace	5	3,579
Roof	Split System	Condensing Unit/Heat Pump, Split System, 4 Ton, Replace	1	EA	Fair	Replace	5	4,620
Roof	Split System	Ductless Split System, Single Zone, 1.5 to 2 Ton, Replace	1	EA	Fair	Replace	5	4,473
Roof	Split System	Ductless Split System, Single Zone, 1.5 to 2 Ton, Replace	1	EA	Fair	Replace	5	4,473
Roof	Air Handler	Air Handler, Exterior, Variable Volume, 6,001 to 10,000 CFM, Replace	1	EA	Fair	Replace	5	84,241
Roof	Air Handler	Air Handler, Exterior, 10,001 to 16,000 CFM, Replace	5	EA	Fair	Replace	5	353,566
Roof	Air Handler	Air Handler, Exterior, 10,001 to 16,000 CFM, Replace	24	EA	Fair	Replace	5	1,697,119
Roof	Air Handler	Air Handler, Exterior, Variable Volume, 10,001 to 20,000 CFM, Replace	1	EA	Fair	Replace	5	150,234
Roof	Air Handler	Air Handler, Exterior, Variable Volume, 2,001 to 4,000 CFM, Replace	1	EA	Fair	Replace	5	41,221
Roof	Air Handler	Air Handler, Exterior, Variable Volume, 6,001 to 10,000 CFM, Replace	1	EA	Fair	Replace	5	84,241
Roof	Air Handler	Air Handler, Exterior, 20,001 to 28,000 CFM, Replace	1	EA	Fair	Replace	5	119,963
Roof	Air Handler	Air Handler, Exterior, 6,001 to 8,000 CFM, Replace	1	EA	Fair	Replace	5	37,803
Roof	Air Handler	Air Handler, Exterior, 10,001 to 16,000 CFM, Replace	1	EA	Fair	Replace	5	70,713
Roof	Air Handler	Air Handler, Exterior, 6,001 to 8,000 CFM, Replace	1	EA	Fair	Replace	5	37,803
Roof	Air Handler	Air Handler, Exterior, 16,001 to 20,000 CFM, Replace	1	EA	Fair	Replace	5	87,310
Roof	Air Handler	Air Handler, Exterior, 16,001 to 20,000 CFM, Replace	1	EA	Fair	Replace	5	87,310
Roof	Air Handler	Air Handler, Exterior, 28,001 to 40,000 CFM, Replace	1	EA	Fair	Replace	5	171,501
Roof	Air Handler	Air Handler, Exterior, 16,001 to 20,000 CFM, Replace	1	EA	Fair	Replace	5	87,310
Roof	Air Handler	Air Handler, Exterior, Variable Volume, 10,001 to 20,000 CFM, Replace	1	EA	Fair	Replace	5	150,234
Roof	Air Handler	Air Handler, Exterior, 4,001 to 6,000 CFM, Replace	1	EA	Fair	Replace	5	27,805
Roof	Air Handler	Air Handler, Exterior, 16,001 to 20,000 CFM, Replace	1	EA	Fair	Replace	5	87,310
Roof	Air Handler	Air Handler, Exterior, 4,001 to 6,000 CFM, Replace	1	EA	Fair	Replace	5	27,805
Roof	Air Handler	Air Handler, Interior, 30,001 to 40,000 CFM, Replace	1	EA	Good	Replace	20	93,685
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	1	EA	Fair	Replace	5	2,664
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	1	EA	Fair	Replace	5	2,664
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	1	EA	Fair	Replace	5	2,664
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	1	EA	Fair	Replace	5	2,664
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 10,001 to 16,000 CFM, Replace	1	EA	Fair	Replace	5	10,167
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 3,501 to 5,000 CFM, Replace	4	EA	Fair	Replace	5	17,290
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 3,501 to 5,000 CFM, Replace	1	EA	Fair	Replace	5	4,323
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	1	EA	Fair	Replace	5	2,664
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	1	EA	Fair	Replace	5	2,664
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	1	EA	Fair	Replace	5	2,664
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 3,501 to 5,000 CFM, Replace	1	EA	Fair	Replace	5	4,323
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 2,001 to 3,500 CFM, Replace	1	EA	Fair	Replace	5	3,073
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 2,001 to 3,500 CFM, Replace	1	EA	Fair	Replace	5	3,073
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 2,001 to 3,500 CFM, Replace	1	EA	Fair	Replace	5	3,073
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 5,001 to 8,000 CFM, Replace	1	EA	Fair	Replace	5	5,570
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 801 to 2,000 CFM, Replace	1	EA	Fair	Replace	5	2,664
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 2,001 to 3,500 CFM, Replace	1	EA	Fair	Replace	5	3,073
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 2,001 to 3,500 CFM, Replace	1	EA	Fair	Replace	5	3,073
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 3,501 to 5,000 CFM, Replace	1	EA	Fair	Replace	5	4,323
Roof	Exhaust Fan	Exhaust Fan, Centrifugal, 2,001 to 3,500 CFM, Replace	1	EA	Fair	Replace	5	3,073
Roof	Packaged Unit (RTU)	Packaged Unit (RTU), 51 to 60 Ton, Replace	1	EA	Fair	Replace	5	99,128

Anticipated Lifecycle Replacements:

- Air handling units
- Distribution motors
- Fan coil units
- Package units

- Split system furnaces and condensing units
- Split system heat pumps
- electric wall heaters
- Rooftop exhaust fans

Actions/Comments:

- The HVAC systems are maintained by an outside contractor. Records of the installation, maintenance, upgrades, and replacement of the HVAC equipment at the property have been maintained since the property was first occupied.
- All of the HVAC equipment is original. The property is relatively new and has not required any major HVAC equipment replacements.
- The geothermal loop temperature appears to be inadequate to meet building or space demand, possibly undersized. Inadequate heating and chilling was stated by staff and contractor. Some associated engineering design services may be necessary to correct this issue. A cost allowance for engineering services is included.

D40 Fire Protection

Item	Description					
Type	Wet pipe					
Sprinkler System	None	<input type="checkbox"/>	Standpipes	<input checked="" type="checkbox"/>	Backflow Preventer	<input checked="" type="checkbox"/>
	Hose Cabinets	<input type="checkbox"/>	Fire Pumps	<input checked="" type="checkbox"/>	Siamese Connections	<input checked="" type="checkbox"/>
Sprinkler System Condition	Fair					
Fire Extinguishers	Last Service Date			Servicing Current?		
	July 2017			Yes		
Hydrant Location	Front of property					
Siamese Location	Front of property					
Special Systems	Kitchen Suppression System		<input checked="" type="checkbox"/>	Computer Room Suppression System		<input type="checkbox"/>

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

Anticipated Lifecycle Replacements:

- Fire extinguishers
- Fire control panel

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.



D50 Electrical

Distribution and Lighting			
Electrical Lines	Underground	Transformer	Pad-mounted
Main Service Size	3000 Amps	Volts	277/480 Volt, three-phase
Meter and Panel Location	Electrical closets,hallways	Branch Wiring	Copper
Conduit	Metallic	Step-Down Transformers?	Yes
Security / Surveillance System?	Yes	Building Intercom System?	Yes
Lighting Fixtures	T-8, T-6 in gym,LED		
Main Distribution Condition	Fair		
Secondary Panel and Transformer Condition	Fair		
Lighting Condition	Good		

Building Emergency Systems			
Size	800 kW	Fuel	Diesel
Generator / UPS Serves	Emergency lights, elevators, etc.	Tank Location	Under generator
Testing Frequency	Weekly	Tank Type	Integral ("belly") tank
Generator / UPS Condition	Fair		

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
- Switchboards
- Step-down transformers
- Interior light fixtures
- Emergency generator

Actions/Comments:

- The onsite electrical systems up to the meters are owned and maintained by the respective utility company.



- The panels, switchboards, step-down transformers are mostly original 2008 components. The electrical service appears to be adequate for the facility’s needs. However, due to the age of the panels, switchboards, step-down transformers and increasing difficulty of obtaining replacement parts over time, lifecycle replacements are recommended per above.
- The main electrical service and some of the higher capacity distribution circuits are installed with aluminum wiring. These services should be inspected on a biennial basis by performing an infrared inspection and by performing any necessary repairs such as tightening connections that may become loose. These inspections and typical repairs are considered part of the maintenance operations program.

D60 Communications

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

D70 Electronic Safety and Security

D7010 Access Control and Intrusion Detection / D7050 Detection and Alarm						
Item	Description					
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 type="checkbox"/>	Security Personnel On-Site	<input type="checkbox"/>	Intercom/Door Buzzer	<input checked="" type="checkbox"/>
Fire Alarm System	Central Alarm Panel	<input checked="" type="checkbox"/>	Battery-Operated Smoke Detectors	<input checked="" type="checkbox"/>	Alarm Horns	<input checked="" type="checkbox"/>
	Annunciator Panels	<input checked="" 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 checked="" 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			
	Front entrance		2008			

Anticipated Lifecycle Replacements:

- Central alarm panel
- Alarm devices and system
- Security/surveillance

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 tenant. The tenant 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	Walk-in , Up-right,Under-counter	Fair
Freezers	Walk-in , Up-right , Under-counter	Fair
Ranges	Gas	Fair
Ovens	Gas	Fair
Griddles / Grills	Gas	Fair
Fryers	Gas	Fair
Hood	Exhaust ducted to exterior	Fair
Dishwasher	Owned	Fair
Microwave	<input type="checkbox"/>	--
Ice Machines	<input checked="" type="checkbox"/>	Fair
Steam Tables	<input checked="" type="checkbox"/>	Fair
Work Tables	<input checked="" type="checkbox"/>	Fair
Shelving	<input checked="" type="checkbox"/>	Fair

E1030 Commercial Laundry		
Equipment	Comment	Condition
Commercial Washing Machines	<input type="checkbox"/>	--
Commercial Dryers	<input type="checkbox"/>	--
Residential Washers	<input checked="" type="checkbox"/>	Fair
Residential Dryers	<input checked="" type="checkbox"/>	Fair

Anticipated Lifecycle Replacements:

- Cooking Range
- Convection oven
- Dishwasher
- Walk-in freezer
- Walk-in cooler
- Steam kettle
- Ice maker



- Garbage disposal
- Exhaust Hood
- Two door reach in refrigerator

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	Poor
Drive Aisles	Asphalt	Poor
Service Aisles	Asphalt	Fair
Sidewalks	Concrete	Fair
Curbs	Concrete	Fair
Pedestrian Ramps	Concrete	Fair
Ground Floor Patio or Terrace		--

Parking Count				
Open Lot	Carport	Private Garage	Subterranean Garage	Freestanding Parking Structure
678	--	--	--	--
Total Number of ADA Compliant Spaces			17	
Number of ADA Compliant Spaces for Vans			6	
Total Parking Spaces			678	

Site Stairs			
Location	Material	Handrails	Condition
East and West side of building	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"/>
Other	<input 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 site. 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.

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

Site Fencing		
Type	Location	Condition
Chain link with metal posts	Around all sports fields	Good
Chain link with metal posts	Around tennis courts	Good
Chain link with metal posts	Dumpster and generator area	Fair

Refuse Disposal				
Refuse Disposal	Common area dumpsters			
Dumpster Locations	Mounting	Enclosure	Contracted?	Condition
Back of building	Concrete pad	CMU fence	Yes	Fair
				--

Other Site Amenities			
	Description	Location	Condition
Playground Equipment	None	--	--



Other Site Amenities			
	Description	Location	Condition
Tennis Courts	Asphalt	North east side of property	Fair
Basketball Court	Asphalt	Interior	Good
Swimming Pool	Yes	Lower level	Good

The tennis courts ,football field,track field,baseball fields are surrounded by a chain link fence. High-intensity light fixtures, mounted on metal poles, are provided for night-time court use.

Anticipated Lifecycle Replacements:

- Signage
- Site fencing
- Tennis court seal coating
- Pool equipment
- Pool relining
- Pool pumps

Actions/Comments:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.

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

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

- At some locations, the existing downspouts spill onto the soil, causing soil erosion. Concrete splash blocks must be installed at the base of the downspouts to prevent additional erosion.

Item	Description
Site Topography	Slopes gently down from the north side of the property to the south property line.



Item	Description						
	Trees	Grass	Flower Beds	Planters	Drought Tolerant Plants	Decorative Stone	None
Landscaping	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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
Concrete	West side	Fair

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

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

G30 Liquid & Gas Site Utilities

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

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

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



G40 Electrical Site Improvements

G4050 Site Lighting					
Site Lighting	None	Pole Mounted	Bollard Lights	Ground Mounted	Parking Lot Pole Type
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" 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"/>	
	Fair				

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:

- No significant actions are identified at the present time. On-going periodic maintenance is highly recommended. Future lifecycle replacements of the components listed above will be required.



8. Ancillary Structures

Other Ancillary Structures			
Type	Maintenance/Storage Shed, Free-standing restroom facility	Location	ADJACENT TO SPORT FIELDS
Item	Material	Item	Material
Exterior Siding	Metal	Roof Finishes	Metal
Interior Finishes	Floor : Unfinished Concrete, Ceiling : Exposed Walls : CMU, Gypsum board	MEPF	See Tables in Section 5
Overall Building Condition			Fair

Other Ancillary Structures			
Type	Storage Shed	Location	ADJACENT TO SPORTS FIELDS
Item	Material	Item	Material
Exterior Siding	Wood,	Roof Finishes	Asphalt Singles
Interior Finishes	Floor : Unfinished Concrete, Carpet Ceiling : Exposed, Walls : , Wood Paneld	MEPF	See Tables in Section 5
Overall Building Condition			Fair

Anticipated Lifecycle Replacements:

- No components of significance

Actions/Comments:

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

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.

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	<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 type="checkbox"/>	<input type="checkbox"/>
Restrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 and Seismic Zone

According to the Flood Insurance Rate Map, published by the Federal Emergency Management Agency (FEMA) and dated April 3, 2012, the property is located in Zone X, defined as an area outside the 500-year flood plain with less than 0.2% annual probability of flooding. Annual Probability of Flooding of Less than one percent.

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



12. Certification

Ann Arbor Public Schools retained EMG to perform this Facility Condition Assessment in connection with its continued operation of Skyline High School, 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: Lawrence Sirridge
Project Manager

Reviewed by:



Al Diefert
Technical Report Reviewer
For
Andrew Hupp
Program Manager

13. Appendices

Appendix A: Photographic Record

Appendix B: Site Plan

Appendix C: Supporting Documentation

Appendix D: Pre-Survey Questionnaire

Appendix A: Photographic Record



#1:	MAIN OFFICE ENTRANCE
-----	----------------------



#2:	FRONT ELEVATION
-----	-----------------



#3:	LEFT ELEVATION
-----	----------------



#4:	RIGHT ELEVATION
-----	-----------------



#5:	REAR ELEVATION
-----	----------------



#6:	PARKING LOT
-----	-------------



#7:	SITE DRAINAGE
-----	---------------



#8:	PARKING LOT
-----	-------------



#9:	ASPHALT PAVEMENT
-----	------------------



#10:	ASPHALT PAVEMENT
------	------------------



#11:	CURBS
------	-------



#12:	COMPACTOR
------	-----------



#13:	FENCES
------	--------



#14:	MAIN STADIUM
------	--------------



#15:	EXTERIOR BUILDING LIGHTING
------	----------------------------



#16:	POLE LIGHT
------	------------



#17:	MAIN STADIUM CONCESSIONS
------	--------------------------



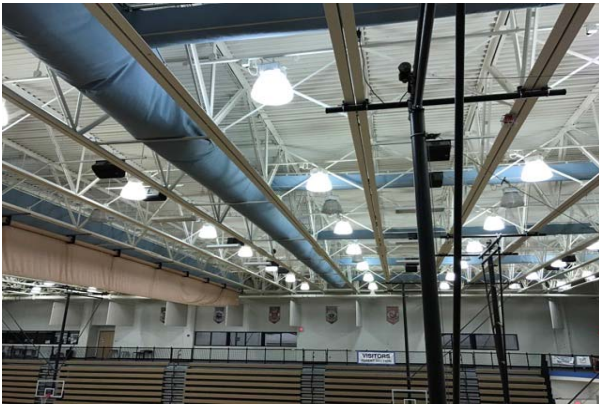
#18:	STORAGE BUILDING
------	------------------



#19:	MAIN STADIUM TICKET BOOTH
------	---------------------------



#20:	EXTERIOR FINISHES
------	-------------------



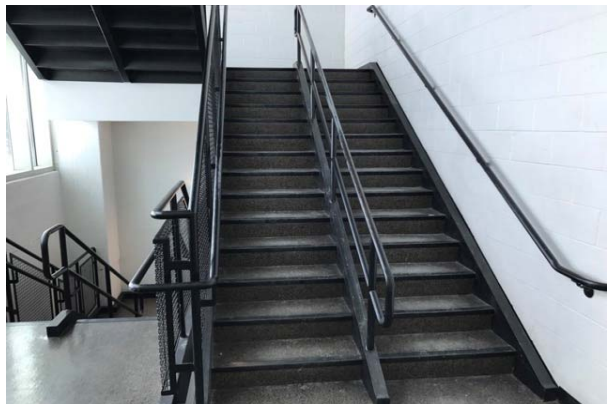
#21:	STRUCTURE
------	-----------



#22:	ROOF
------	------



#23:	BRICK VENEER
------	--------------



#24:	INTERIOR STAIRS
------	-----------------



#25:	STOREFRONT WINDOWS
------	--------------------



#26:	EXTERIOR DOOR
------	---------------



#27:	EXTERIOR DOOR, FULLY-GLAZED
------	-----------------------------



#28:	OVERHEAD DOOR
------	---------------



#29:	AIR HANDLER
------	-------------



#30:	DUCTLESS SPLIT SYSTEM
------	-----------------------



#31: MECHANICAL ROOM



#32: EXHAUST FAN



#33: SINK, EPOXY RESIN



#34: WATER STORAGE TANK



#35: URINAL, VITREOUS CHINA



#36: SINK, VITREOUS CHINA



#37: TOILET, TANKLESS (WATER CLOSET)



#38: RESTROOMS SINKS



#39: CIRCULATING PUMPS



#40: NATURAL GAS SERVICE



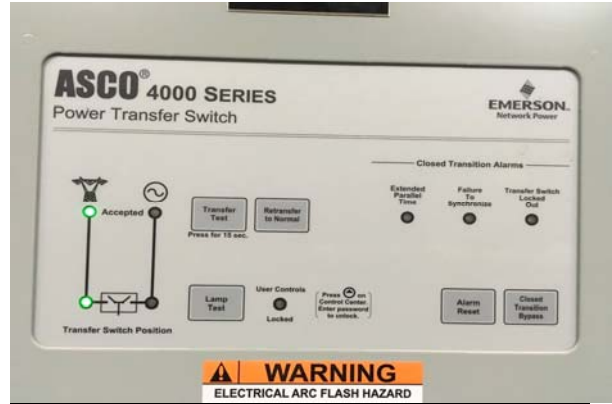
#41: GENERATOR, DIESEL



#42: DISTRIBUTION PANEL



#43: SWITCHBOARD



#44: AUTOMATIC TRANSFER SWITCH



#45: SWITCHBOARD



#46: DISTRIBUTION PANEL



#47: STEP DOWN TRANSFORMER



#48: ELECTRICAL ROOM



#49: WIND TURBINE



#50: ELEVATOR EQUIPMENT



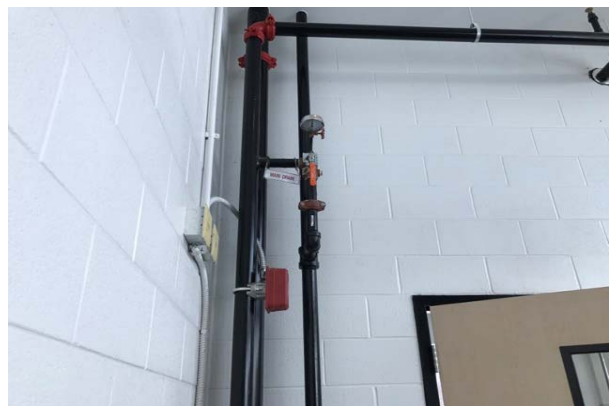
#51: ELEVATOR CONTROLS



#52: ELEVATOR CAB



#53: FIRE PUMP



#54: FIRE SPRINKLER STANDPIPE



#55: FIRE PUMP CONTROLLER



#56: FIRE PANEL



#57: FIRE EXTINGUISHER



#58: HORN AND STROBE



#59: EXIT SIGN



#60: VINYL SHEETING



#61: INTERIOR CASEWORK



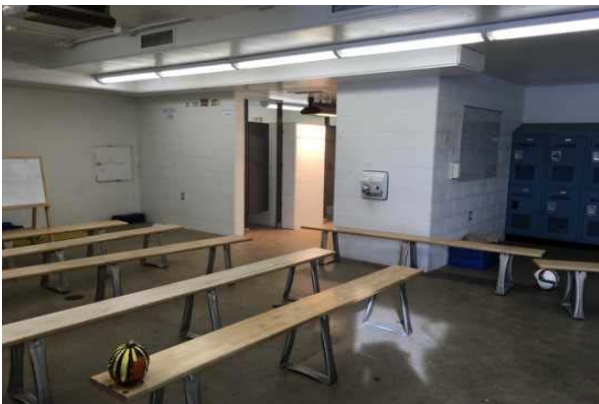
#62: MOVABLE PARTITION



#63: RESTROOM



#64: CARPET



#65: STADIUM LOCKER ROOM



#66: SUSPENDED ACOUSTICAL TILE (ACT) CEILING



#67:	VINYL TILE (VCT)
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#68:	THEATER SEATING
------	-----------------



#69:	HALLWAY
------	---------



#70:	BLACK BOX THEATRE
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#71:	LUNCH ROOM
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#72:	SWIMMING POOL
------	---------------



#73:	MAIN GYM
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#74:	COMMERCIAL KITCHEN
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#75:	ICEMAKER
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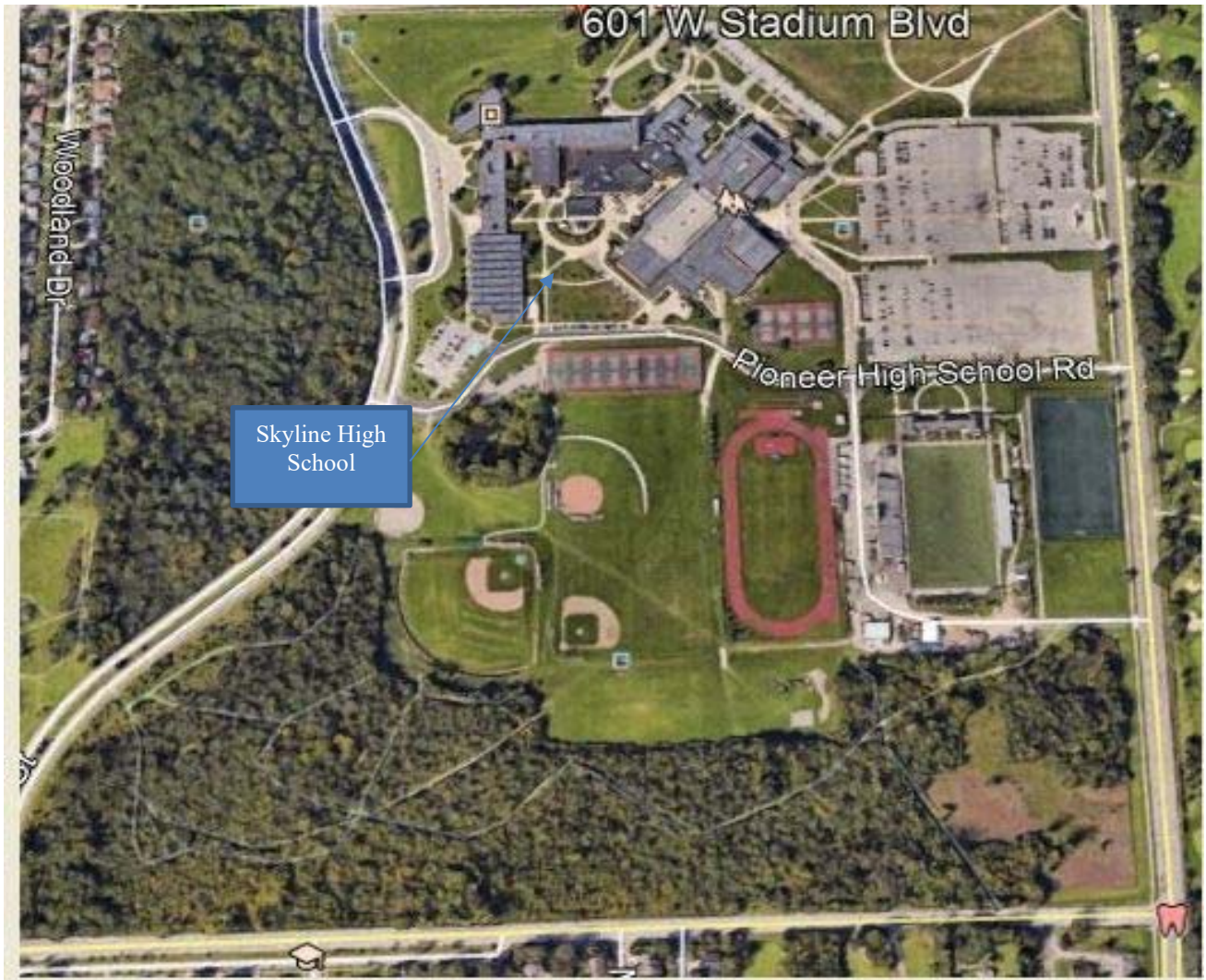
#76:	STEAMER
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#77:	FOOD WARMER
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Appendix B: Site Plan

Site Plan



	<u>Project Name:</u> Skyline High School	<u>Project Number:</u> 129010.18R000-025.354
	<u>Source:</u> Google Earth Pro	<u>On-Site Date:</u> January 30, 2018

Appendix C: Supporting Documentation

Flood Map

National Flood Hazard Layer FIRMette



Legend

SEE FIRM REPORT FOR DETAILED LEGEND AND IND BY MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, AO
		With BFE or Depth
		Regulatory Floodway Zone AE, A0, AN, 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		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
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transsect Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transsect Baseline
		Profile Baseline
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 3/21/2018 at 1:55:37 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.

Scale: Feet 1:6,000
Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
42°18'33.66\"/>



Project Name:
Skyline High School

Project Number:
129010.18R000-025.354

Source:
FEMA Flood Services

On-Site Date:
January 30, 2018

Appendix D: Pre-Survey Questionnaire

PCA: PRE-SURVEY QUESTIONNAIRE



Name of person completing questionnaire: Mr. Jim Vibbart

Association with property: Facilities consultant

Length of association with property: 1 year

Phone Number: 734.320.3613

Property Name: Skyline High School

EMG Project Number: 129010.18R000-025.354

Signature: Larry Sirridge Date: January 29,2018

Directions: Please answer all questions to the best of your knowledge and in good faith. Mark the column corresponding to the appropriate response. Additional details necessary to explain any **yes or unknown responses** should be provided in the "Comments" column.

GENERAL PROPERTY INFORMATION			
Year constructed:	2008	Number of units:	One
Number of buildings:	Five	Gross SF:	11000
Number of stories:	Four	Net rentable SF:	-

INSPECTIONS	DATE LAST INSPECTED	LIST ANY OUTSTANDING REPAIRS OR IMPROVEMENTS REQUIRED
Elevators:	April 2017	None
HVAC:	Quarterly	In house and contractors
Electrical:	NA	
Plumbing:	NA	
Fire Alarm:	Yearly	None
Fire Sprinklers:	Yearly	None
Roofs:	Quarterly	Clean roof drains and check for leaks
ADA / Accessibility:	Unknown	
Termites / Wood Destroying Insects:	Unknown	

QUESTION		RESPONSE
1	List any major capital improvement within the last five years.	Interior painting
2	Provide date and summary of the most recent renovation.	
3	List any major capital expenditures planned for the next year.	Unknown
4	What is the age of the roof(s)?	Ten years
5	What building systems (HVAC, roof, finishes, paving, etc.) are the responsibilities of the tenant to maintain and replace?	All
6	Are any of the buildings ground lease pads (building is owned by the tenant)?	No

QUESTION		RESPONSE				COMMENTS
		Y	N	Unk	NA	
7	Are there any unresolved building, fire, or zoning code issues?		x			
8	Are there any unresolved construction defects?		x			
9	Is there any pending litigation concerning the physical condition of the property?			x		
10	Are there any "down" or unusable units?		x			
11	Are there any problems with the utilities, such as inadequate capacities?		x			
12	Are there any plumbing leaks, water pressure problems, or waste line problems?		x			
13	Is polybutylene or galvanized steel water piping used? If so, describe the history of any issues or repairs		x			
14	Is the property served by a private water well, septic system or waste water treatment plant? If so, please describe and provide a copy of permits and operator's information.		x			
15	Are there any leaks or pressure problems with natural gas service?		x			



QUESTION		RESPONSE				COMMENTS
		Y	N	Unk	NA	
16	Do the electrical system branch circuits (between panels and fixtures) use aluminum wiring? If so, how has it been mitigated?		x			
17	Do Residential units have a less than 60-Amp service?		x			
18	Do Commercial units have less than 200-Amp service?		x			
19	Is GFCI circuit protection provided in kitchens and bathrooms or other wet locations?	x				
20	Are there any issues with the circuit breakers or circuit breaker panels?		x			
21	Are there any problems with inadequate exterior lighting?		x			
22	Do any of the HVAC systems use R-11, 12, or 22 refrigerants?		x			
23	Are there any recalled fire sprinkler heads (such as Star, GEM, Central, Omega)?		x			
24	Are there any problems with erosion, stormwater drainage or areas of paving that do not drain?				x	
25	Are there any problems with the landscape irrigation systems?				x	
26	Are there any problems with foundations or structures?	x				Minor cracking in west side stairwell walls
27	Is there any water infiltration in basements or crawl spaces?		x			
28	Are there any roof leaks?		x			None active at this time
29	Is the roofing covered by a warranty or bond? If so, please provide a copy.			x		
30	For buildings constructed 1955-1989, is Fire Retardant Treated (FRT) plywood used? If so, please describe.		x			
31	Are there any roofs with phenolic foam roof insulation (PFRI)?		x			
32	Are there any areas of the building with inadequate insulation?		x			
33	Is exterior insulation and finish system (EIFS) used? If so, please indicate if there are any issues.					
34	Are there any wall or window leaks?		x			
35	Has any part of the property ever contained visible suspect mold or fungal growth?		x			

QUESTION		RESPONSE				COMMENTS
		Y	N	Unk	NA	
36	Have there been any indoor air quality related complaints from tenants/occupants?			x		
37	Has "Chinese drywall" been identified at the property?			x		
38	For hotel/residential properties, are there currently, or is there a history of, bed bug infestations?				x	
39	If a swimming pool is present, do the drains comply with the Virginia Graeme Baker Act?				x	
40	Has an ADA survey previously been completed for the property?			x		
41	Has building ownership or management received any ADA related complaints or litigation?			x		
42	Have any ADA improvements been made to the property since the original construction?		x			
43	Are there any other significant issues/hazards with the property?		x			

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

- Construction documents (blueprints) for the original construction of the building or for any tenant improvement work or other recent construction work.
- A site plan which depicts the arrangement of buildings, roads, parking stalls, and other site features.
- Certificates of Occupancy, building permits, fire or health department inspection reports, elevator inspection certificates, roof or HVAC warranties, or any other similar, relevant documents.
- The names of the local utility companies which serve the property.
- A summary of recent (over the last 5 years) capital improvement work.
- Historical costs for repairs, improvements, and replacements.
- Records of system & material ages (roof, MEP, paving, finishes, and furnishings).
- Brochures or marketing information.
- Mold Operations and Maintenance Program.
- Previous reports pertaining to the physical condition of property.
- ADA survey and status of improvements implemented.
- For commercial properties, 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).
- For apartment properties, 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.
- A summary of hotel room types and quantities, including the number and type of ADA rooms.



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.

