Revision Date - 09/24/2021

FACILITY CONDITION ASSESSMENT

Flat Rock Elementary School **| 2021**

Executive Summary

Flat Rock Elementary School is located at 4603 Evans Mill Rd in Lithonia, GA. It comprises 107,937 gross square feet. At the time of the assessment the oldest building was 13 years old.

The findings contained within this report are the result of an assessment of building systems performed by building professionals experienced in disciplines including architecture, mechanical, plumbing and electrical. Only those systems that were identified as having either an associated deficiency or life cycle event within a 10-year window is contained within this report. The full list of each school's systems that are present along with the associated priorities can be found in the flat file data grids submitted to Dekalb County. The projected replacement year of those assets within each system is also included within this table.The total current deficiencies for this site, in 2020 construction cost dollars, are estimated at $2,727,998. A ten-year need was developed to provide an understanding of the current need as well as the projected needs in the near future. For Flat Rock Elementary School the ten-year need is $13,125,134.

For planning purposes, the total current deficiencies and the first five years of projected life cycle needs were combined to calculate a Facility Condition Index (FCI). A 5-year FCI was calculated by dividing the 5-year need by the total replacement cost. Costs associated with new construction are not included in the FCI calculation. After the 5-year FCI was calculated, this value was subtracted from 100 to calculate the FCA Score in a similar fashion to report cards.

The Flat Rock Elementary School facility has a FCA score of 87.24% which is considered "Average".

Summary of Findings

The table below summarizes the condition findings at Flat Rock Elementary School.

Table 1: Facility Condition by Building

Number	Building Name	Current Deficiencies	5-Year Life Cycle Cost	Yrs 6-10 Life Cycle Cost	Total 5 Yr Need (Yr 1-5 + Current Defs)	Total 10 Yr Need (Yr 1-10 + Current Defs)	Replacement Cost	FCA Score
Exterior Site								
	Exterior Site	$465,093	$0	$371,407	$465,093	$836,500		
Permanent Building(s)								
2010	Building 2010	$2,262,905	$1,091,756	$8,933,974	$3,354,661	$12,288,635	$29,927,690	88.79%
	Sub Total for Permanent Building(s):	*$2,262,905*	*$1,091,756*	*$8,933,974*	*$3,354,661*	*$12,288,635*	*$29,927,690*	
	Total for Site:	**$2,727,998**	**$1,091,756**	**$9,305,381**	**$3,819,754**	**$13,125,134**	**$29,927,690**	**87.24%**

Note 1: Sitework improvements are proportionally incorporated into the building CRV and used to calulate the overall FCA Score.

Note 2: Aerial map including building number, gross SF, and year built of each building on the site is found on Page 3.

Aerial Images

Approach and Methodology

The facility condition assessment includes a visual assessment of building systems that are readily available during a facility walk-through. The standard process does not reflect invasive, destructive assessment methods that would require special equipment, testing or scheduled power outages. The assessment was accomplished with a view toward identifying significant maintenance and repair deficiencies that need correction. For the purposes of this assessment, deficient conditions captured were limited to those items that did not qualify as routine maintenance repairs. Copies of previous reports and other documentation that were relevant to the inspection were utilized if made available in the process. Additionally, feedback from appropriate personnel to provide background information relative to specific building operations, function, equipment conditions, past improvements and planned upgrades were incorporated into the results if made available to the teams while on site. Two components of the facility condition assessment are combined to total the cost for facility need. The two components of the facility condition assessment are current deficiencies and life cycle forecast.

Current Deficiencies: Deficiencies are items in need of repair or replacement as a result of being broken, obsolete, deferred maintenance, or beyond useful life. The existing deficiencies that currently require correction are identified and assigned a priority. An example of a current deficiency might include a broken lighting fixture or an inoperable roof top air conditioning unit.

Life Cycle Forecast: Life cycle analysis evaluates the ages of a building's systems to forecast system replacement as they reach the end of serviceable life. Estimated Useful Lives were determined based on a combination of our (Jacobs) professional experience, RS Means, and from industry standard tables (BOMA, ASHRAE). An example of a life cycle system replacement is a roof with a 20-year life that has been in place for 15 years and may require replacement in five years.

All members of the survey team recorded existing conditions, identified problems and deficiencies, and documented corrective action and quantities. The team took digital photos at each site to better identify significant deficiencies.

Facility Deficiency Priority Levels

Deficiencies were ranked according to five priority levels, with Priority 1 items being the most critical to address:

Priority 1 – Mission Critical Concerns: Deficiencies or conditions that may directly affect the site's ability to remain open or deliver the educational curriculum. These deficiencies typically relate to building safety, code compliance, severely damaged or failing building components, and other items that require near-term correction. An example of a Priority 1 deficiency is a fire alarm system replacement.

Priority 2 – Indirect Impact to Educational Mission: Items that may progress to a Priority 1 item if not addressed in the near term. Examples of Priority 2 deficiencies include inadequate roofing that could cause deterioration of integral building systems, and conditions affecting building envelopes, such as roof and window replacements.

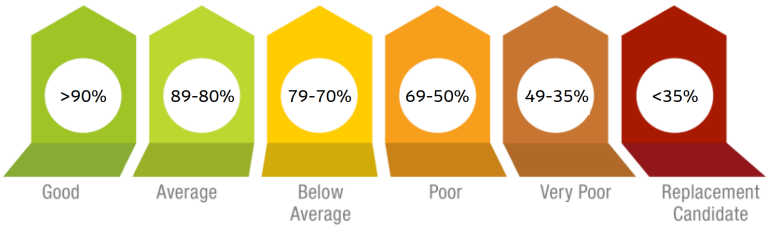
Priority 3 – Short-Term Conditions: Deficiencies that are necessary to the site's mission but may not require immediate attention. These items should be considered necessary improvements required to maximize facility efficiency and usefulness. Examples of Priority 3 items include site improvements and plumbing deficiencies.

Priority 4 – Long-Term Requirements: Items or systems that may be considered improvements to the instructional environment. The improvements may be aesthetic or provide greater functionality. Examples include cabinets, finishes, paving, removal of abandoned equipment, and educational accommodations associated with special programs.

Priority 5 – Enhancements: Deficiencies aesthetic in nature or considered enhancements. Typical deficiencies in this priority include repainting, replacing carpet, improved signage, or other improvements to the facility environment.

Facility Condition Assessment(FCA) Score

Facility Condition Assessment (FCA) Scores are assigned after the Facility Condition Index (FCI) is calculated. The Facility Condition Index (FCI) is used throughout the facility condition assessment industry as a general indicator of a building's health. Since 1991, the facility management industry has used an index called the FCI to benchmark the relative condition of a group of sites. The FCI is derived by dividing the total repair cost, including site-related repairs, by the total replacement cost of all buildings. It should be noted that costs in the New Construction category are not included in the FCI calculation. **In an effort to match the report card metrics, the FCI is subtracted from 100 to assign the FCA Score. A facility with a lower FCA Score has more need, or higher priority, than a facility with a higher FCA Score.**



The replacement value represents the estimated cost of replacing the current building with another building of like size, based on 2021 estimated cost of construction in the DeKalb County area. The estimated replacement cost for this facility is $29,927,690. For planning purposes, the total 5-year need at the Flat Rock Elementary School is $3,819,754 (Life Cycle Years 1-5 plus the current FCI deficiency cost).

The Flat Rock Elementary School facility has an FCA Score of 87.24%. which is considered "Average".

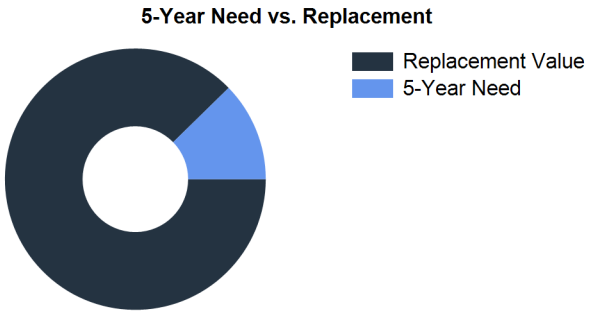


Figure 1: 5-Year FCI

The following table summarizes this site's current deficiencies by building system and priority.

Table 2: System by Priority (Site & Permanent Buildings)

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	$0	$0	$319,977	$148,676	$2,340	$470,992	17.27 %
Roofing	$0	$0	$0	$467	$0	$467	0.02 %
Structural	$12,137	$0	$0	$0	$0	$12,137	0.44 %
Exterior	$0	$0	$0	$0	$0	$0	0.00 %
Interior	$0	$0	$0	$18,958	$0	$18,958	0.69 %
Mechanical	$0	$0	$256,191	$157,023	$0	$413,215	15.15 %
Electrical	$0	$0	$85,574	$0	$0	$85,574	3.14 %
Plumbing	$0	$0	$0	$0	$0	$0	0.00 %
Fire and Life Safety	$1,726,654	$0	$0	$0	$0	$1,726,654	63.29 %
Conveyances	$0	$0	$0	$0	$0	$0	0.00 %
Specialties	$0	$0	$0	$0	$0	$0	0.00 %
Total:	$1,738,791	$0	$661,742	$325,125	$2,340	$2,727,998	

The building systems at the site with the most need include:

Fire and Life Safety	-	$1,726,654
Site	-	$470,992
Mechanical	-	$413,215

The chart below represents the building systems and associated deficiency costs.

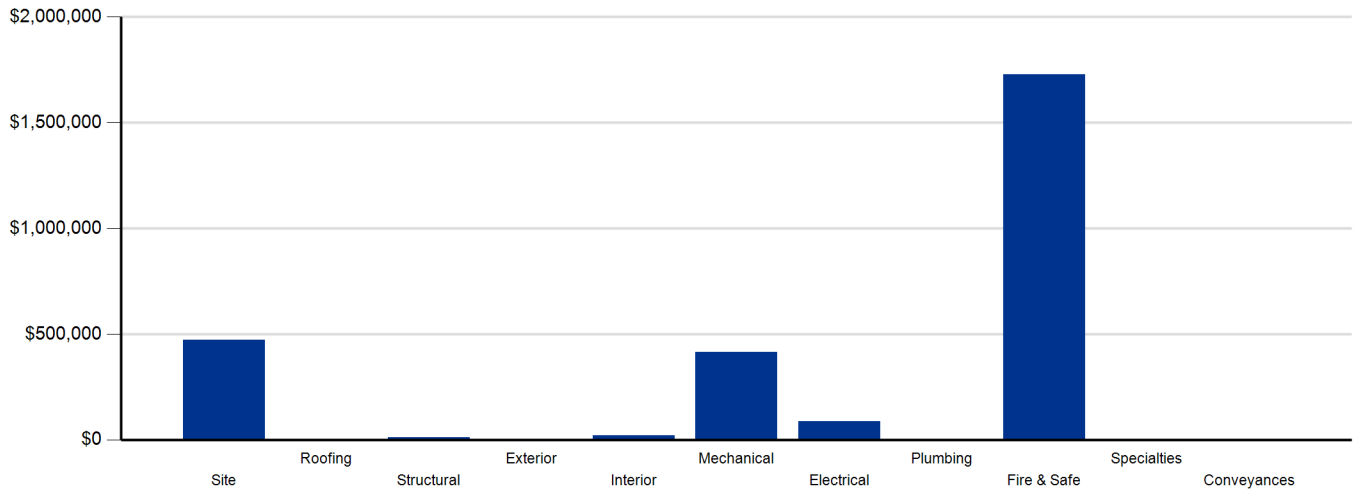


Figure 2: System Deficiencies

Life Cycle Capital Renewal Forecast

During the facility condition assessment, assessors inspected all major building systems. If an assessor identified a need for immediate replacement, a deficiency was created with the item's repair costs. The identified deficiency contributes to the facility's total current repair costs.

However, capital planning scenarios span multiple years, as opposed to being constrained to immediate repairs. Construction projects may begin several years after the initial facility condition assessment. Therefore, in addition to the current year repair costs, it is necessary to forecast the facility's future costs using a ten-year life cycle renewal forecast model.

Life cycle renewal is the projection of future building system costs based upon each individual system's expected serviceable life. Building systems and components age over time, eventually break down, reach the end of their useful lives, and may require replacement. While an item may be in good condition now, it might reach the end of its life before a planned construction project occurs.

The following tables show ten-year life cycle capital renewal projections. The projections outline costs for major building systems in which a component is expected to reach the end of its useful life and require capital funding for replacement.

Table 3a: Capital Renewal Forecast (Yrs 1-5)

	Life Cycle Capital Renewal Projections					
System	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	**Total 1-5**
Site	$0	$0	$0	$0	$0	$0
Roofing	$0	$0	$0	$0	$0	$0
Exterior	$0	$0	$0	$0	$0	$0
Interior	$0	$94,530	$0	$0	$0	$94,530
Mechanical	$0	$0	$0	$84,231	$893,092	$977,323
Electrical	$0	$0	$0	$0	$0	$0
Plumbing	$0	$0	$0	$0	$19,902	$19,902
Fire and Life Safety	$0	$0	$0	$0	$0	$0
Conveyances	$0	$0	$0	$0	$0	$0
Specialties	$0	$0	$0	$0	$0	$0
Total	**$0**	**$94,530**	**$0**	**$84,231**	**$912,994**	**$1,091,756**

Table 3b: Capital Renewal Forecast (Yrs 6-10)

		Life Cycle Capital Renewal Projections						
System	**Total 1-5**	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031	**Total 6-10**	**Total 1-10**
Site	$0	$0	$0	$0	$0	$253,578	$253,578	$253,578
Roofing	$0	$0	$3,451,199	$0	$0	$0	$3,451,199	$3,451,199
Exterior	$0	$0	$0	$0	$0	$0	$0	$0
Interior	$94,530	$76,705	$27,964	$0	$901,161	$692,119	$1,697,949	$1,792,479
Mechanical	$977,323	$47,603	$0	$15,914	$0	$349,578	$413,096	$1,390,419
Electrical	$0	$0	$0	$117,829	$0	$2,566,366	$2,684,195	$2,684,195
Plumbing	$19,902	$509,456	$0	$278,110	$0	$0	$787,566	$807,468
Fire and Life Safety	$0	$7,710	$0	$0	$0	$0	$7,710	$7,710
Conveyances	$0	$0	$0	$0	$0	$10,089	$10,089	$10,089
Specialties	$0	$0	$0	$0	$0	$0	$0	$0
Total	**$1,091,756**	**$641,473**	**$3,479,162**	**$411,853**	**$901,161**	**$3,871,731**	**$9,305,381**	**$10,397,136**

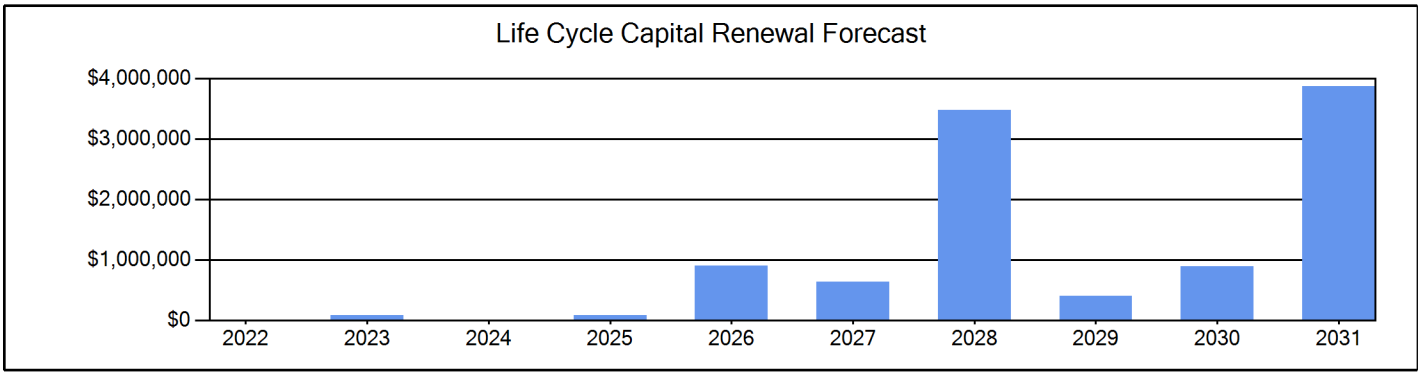


Figure 3: Ten Year Capital Renewal Forecast

Summary of High Priority Deficiencies

Priority 1 - Mission Critical Concerns		Cost
Evidence of Structural Deficiency		$12,137
Fire Alarm Replacement		$593,456
Security Alarm Replacement		$1,133,199
	Total for Priority 1	**$1,738,791**

Deficiency Summary

(Items below detail the totals referenced in Table 2)

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Asphalt Driveway Replacement	Capital Renewal	45,000	SF	3	$272,056	5009
Note: Cracked						
Location: Left Driveway						
Playground Equipment Replacement	Capital Renewal	2	Ea.	3	$42,022	10459
Asphalt Paving Replacement	Capital Renewal	109	CAR	4	$148,676	5008
Note: Cracked 30,000Sf						
Location: Left Lot						
Site Signage Replacement	Capital Renewal	6	Ea.	5	$1,361	5010
Note: Cracked						
Location: Front Left						
Wheel Stop Replacement	Deferred Maintenance	6	Ea.	5	$978	10683
Note: Wheel Stops Are Damaged						
	Sub Total for System	**5**	**items**		**$465,093**	
	Sub Total for School and Site Level	**5**	**items**		**$465,093**	

Building: 2010 - Building 2010

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Access Is Not ADA Compliant - ADA Compliant Ramp Installation	ADA Compliance	1	Ea.	3	$5,899	5001
Note: No Ramp To Stage						
	Sub Total for System	**1**	**items**		**$5,899**	

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Splash Block Replacement	Deferred Maintenance	8	Ea.	4	$467	5000
Location: On Roof						
	Sub Total for System	**1**	**items**		**$467**	

Structural

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Evidence of Structural Deficiency	Capital Renewal	1	Ea.	1	$12,137	10682
Note: Structure For Cooling Tower						
	Sub Total for System	**1**	**items**		**$12,137**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Toilet Partition Replacement	Capital Renewal	10	Stall	4	$18,958	5002
Note: Broken Or Corroded						
Location: Boys And Girls Bathroom						
	Sub Total for System	**1**	**items**		**$18,958**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Kitchen Air/Exhaust Installation	Functional Deficiency	1	Ea.	3	$40,032	5012
Note: 10'-0"X18'-0"						
Testing And Balancing	Deferred Maintenance	107,937	SF	3	$216,159	5011
Existing Controls Are Obsolete	Capital Renewal	107,937	SF	4	$157,023	10460
	Sub Total for System	**3**	**items**		**$413,215**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Public Address System Head-End Requires Replacement	Functional Deficiency	1	Ea.	3	$13,739	5014
Note: Beyond Useful Life						
Public Address System Replacement, Non-main Building	Deferred Maintenance	107,937	SF	3	$71,835	5013
Note: Beyond Useful Life						
	Sub Total for System	**2**	**items**		**$85,574**	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Fire Alarm Replacement	Capital Renewal	107,937	SF	1	$593,456	5016
Note: Beyond Useful Life						
Security Alarm Replacement	Capital Renewal	107,937	SF	1	$1,133,199	5015
Note: Beyond Useful Life						
	Sub Total for System	**2**	**items**		**$1,726,654**	
	Sub Total for Building 2010 - Building 2010	**11**	**items**		**$2,262,905**	
	Total for Campus	**16**	**items**		**$2,727,998**	

Life Cycle Summary Yrs 1-10

(Items below detail the totals referenced in Tables 3a & 3b)

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Roadway Pavement	Asphalt Driveways	3	16,650	SF	$135,280	10
Roadway Pavement	Concrete Driveways	3	7,500	SF	$118,298	10
		Sub Total for System	**2**	**items**	**$253,578**	

Electrical

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Parking Lot Lighting	Pole Lighting	3	17	Ea.	$117,829	8
		Sub Total for System	**1**	**items**	**$117,829**	
		Sub Total for Building -	**3**	**items**	**$371,407**	

Building: 2010 - Building 2010

Roofing

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Low-Slope Roofing	Built-Up Roofing (BUR)	2	107,937	SF	$3,451,199	7
		Sub Total for System	**1**	**items**	**$3,451,199**	

Interior

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Compartments and Cubicles	Toilet Partitions	4	47	Stall	$94,530	2
Carpeting	Carpet	4	5,397	SF	$76,705	6
Wall Painting and Coating	Painting/Staining (Bldg SF)	5	5,397	SF	$27,964	7
Resilient Flooring	Vinyl Composition Tile Flooring	4	86,350	SF	$901,161	9
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	4	91,746	SF	$677,918	10
Suspended Plaster and	Painted ceilings	5	5,397	SF	$14,201	10
		Sub Total for System	**6**	**items**	**$1,792,479**	

Mechanical

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Decentralized Cooling	Package DX Unit (5 Ton)	2	7	Ea.	$84,231	4
Heat Generation	Boiler - Steel Tube (2400 MBH)	3	1	Ea.	$109,151	5
Decentralized Heating Equipment	Unit Heater Gas (80 MBH)	3	2	Ea.	$7,221	5
Central Cooling	Cooling Tower - Metal (130 Tons)	2	1	Ea.	$54,150	5
Decentralized Cooling	Package DX Unit (5 Ton)	2	5	Ea.	$61,969	5
Decentralized Cooling	Package DX Unit (5 Ton)	2	3	Ea.	$37,181	5
Decentralized Cooling	Package DX Unit (5 Ton)	2	5	Ea.	$61,969	5
Decentralized Cooling	Package DX Unit (30 Ton)	2	1	Ea.	$48,907	5
Facility Hydronic Distribution	Pump- 10HP (Ea.)	4	2	Ea.	$25,200	5
Facility Hydronic Distribution	Pump- 25HP (Ea.)	4	2	Ea.	$31,349	5
HVAC Air Distribution	VAV Boxes / Terminal Device	4	108	Ea.	$455,993	5
Decentralized Cooling	Package DX Unit (15 Ton)	2	2	Ea.	$47,603	6
Decentralized Heating Equipment	Unit Heater Electric (5 KW)	3	2	Ea.	$3,095	8
Decentralized Heating Equipment	Unit Heater Electric (3 KW)	3	2	Ea.	$2,235	8
Air Distribution	Make-up Air Unit	3	1	Ea.	$10,585	8
Air Distribution	Energy Recovery Unit (10,000 CFM)	3	2	Ea.	$68,450	10
Facility Hydronic Distribution	2-Pipe System (Cold)	3	107,937	SF	$243,870	10
Exhaust Air	Roof Exhaust Fan - Small	3	2	Ea.	$4,952	10
Exhaust Air	Roof Exhaust Fan - Large	3	3	Ea.	$30,461	10
Exhaust Air	Interior Ceiling Exhaust Fan	3	3	Ea.	$1,845	10
		Sub Total for System	**20**	**items**	**$1,390,419**	

Electrical

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Packaged Generator Assemblies	Emergency Generator (100 KW)	2	1	Ea.	$65,369	10
Lighting Fixtures	Light Fixtures (Bldg SF)	4	107,937	SF	$2,500,997	10
		Sub Total for System	**2**	**items**	**$2,566,366**	

Plumbing

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Electric - 66 gallon	2	1	Ea.	$4,404	5
Domestic Water Equipment	Water Heater - Electric - 120 gallon	2	1	Ea.	$6,233	5
Domestic Water Equipment	Water Heater - Electric - 80 gallon	2	1	Ea.	$4,861	5
Domestic Water Equipment	Water Heater - Electric - 66 gallon	2	1	Ea.	$4,404	5
Plumbing Fixtures	Sink - Service / Mop Sink	5	6	Ea.	$5,361	6
Plumbing Fixtures	Toilets	3	77	Ea.	$437,338	6
Plumbing Fixtures	Refrigerated Drinking Fountain	4	27	Ea.	$66,756	6
Plumbing Fixtures	Restroom Lavatory	3	75	Ea.	$242,628	8
Plumbing Fixtures	Urinals	3	22	Ea.	$35,482	8
		Sub Total for System	**9**	**items**	**$807,468**	

Fire and Life Safety

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm Panel	1	1	Ea.	$7,710	6
		Sub Total for System	**1**	**items**	**$7,710**	

Conveyances

Uniformat Description	LC Type Description	Priority	Qty	UoM	Repair Cost	Remaining Life
Elevators	Passenger elevator cab finishes	4	1	Ea.	$10,089	10
		Sub Total for System	**1**	**items**	**$10,089**	
		Sub Total for Building 2010 - Building 2010	**40**	**items**	**$10,025,730**	
		Total for: Flat Rock Elementary School	**43**	**items**	**$10,397,136**	

Supporting Photos

Need New Urinal Partitions

Replace Wheel Stops

Replace Splash Blocks On Roof

Replace Bathroom Partitions

Cooling Tower Steel Beam Rusting