



Facility Condition Assessment Findings: New Hope-Solebury School District

02/26/2019

Presentation Outline

- EMG Intro
- Scope Outline
- Project Organization
- Methodology
- Overall FCI Summary
- FCI Results by Building
- Conclusions

EMG Intro

- Extensive Experience with FCAs
- Firm specializing in facility consulting and capital planning
- 25+ years of industry experience
- Maintenance and capital planning experience
- Software specifically developed to support FCA / reporting
- Extensive experience setting up Capital Planning

Scope

- Comprehensive Facility Condition Assessment
- Database implementation
- Basis for long range facility planning
- Building Immediate Concerns
- Prioritization
- Maintenance planning

Project Organization

Project	ServiceDescription	Site_Name	Site_Address2	Site_City	Site_State	Site_ZIP	Site_County
131080.18R000-001.322	FacilityDude - FCA w/Inventory - 322	Lower Elementary School	3020 North Sugas Road	Solebury	PA	18936	Bucks
131080.18R000-002.322	FacilityDude - FCA w/Inventory - 322	Upper Elementary School	180 West Bridge Street	New Hope	PA	18938	Bucks
131080.18R000-003.322	FacilityDude - FCA w/Inventory - 322	Middle School	180 West Bridge Street	New Hope	PA	18938	Bucks
131080.18R000-004.322	FacilityDude - FCA w/Inventory - 322	New Hope-Solebury High School	182 West Bridge Street	New Hope	PA	18938	Bucks

Methodology

Kick-Off Phase

- Kickoff Meeting
- Existing Data Gathering
- Documents Review
- Data Scheme Setup
- Scheduling
- Interviews and Questionnaires

Field Phase

- Field Assessments
- Equipment Inventory

Reporting Phase

- Individual Building Reports
- Cost Estimating
- FCI Index
- Recommended Actions
- Equipment Naming

Final Deliverable

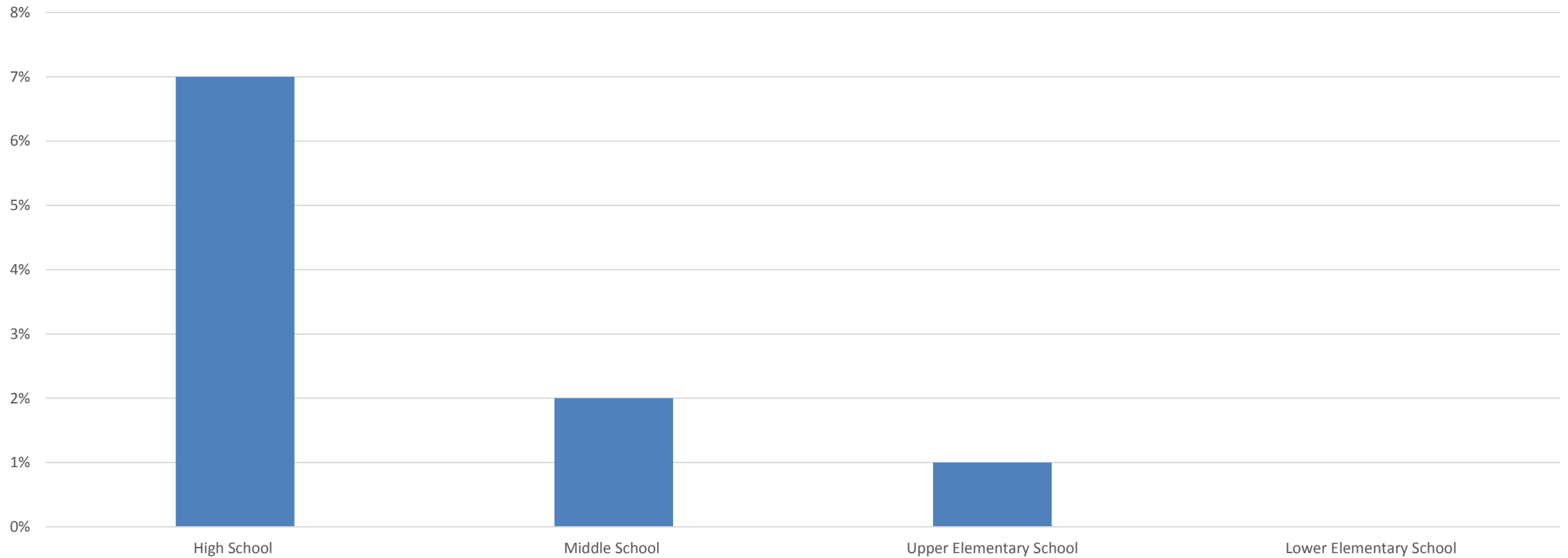
- Final FCA Reports
- DudeSolutions Capital Forecast

Recommended Five-Year Cycle Assessment

- Adjust and confirm remaining useful lives (RULs) of systems and equipment
- Validate completed projects, update with actual costs and determine whether to reset projections or retire existing equipment
- Document new equipment information (manufacturer, model number, serial number, photographs)
- Rerun Capital Plan and Inventory Reports
- Update Dude Solutions applications keeping work order and preventative maintenance schedules and history

Results: Current Year FCI Summary (2019)

Current(2019)



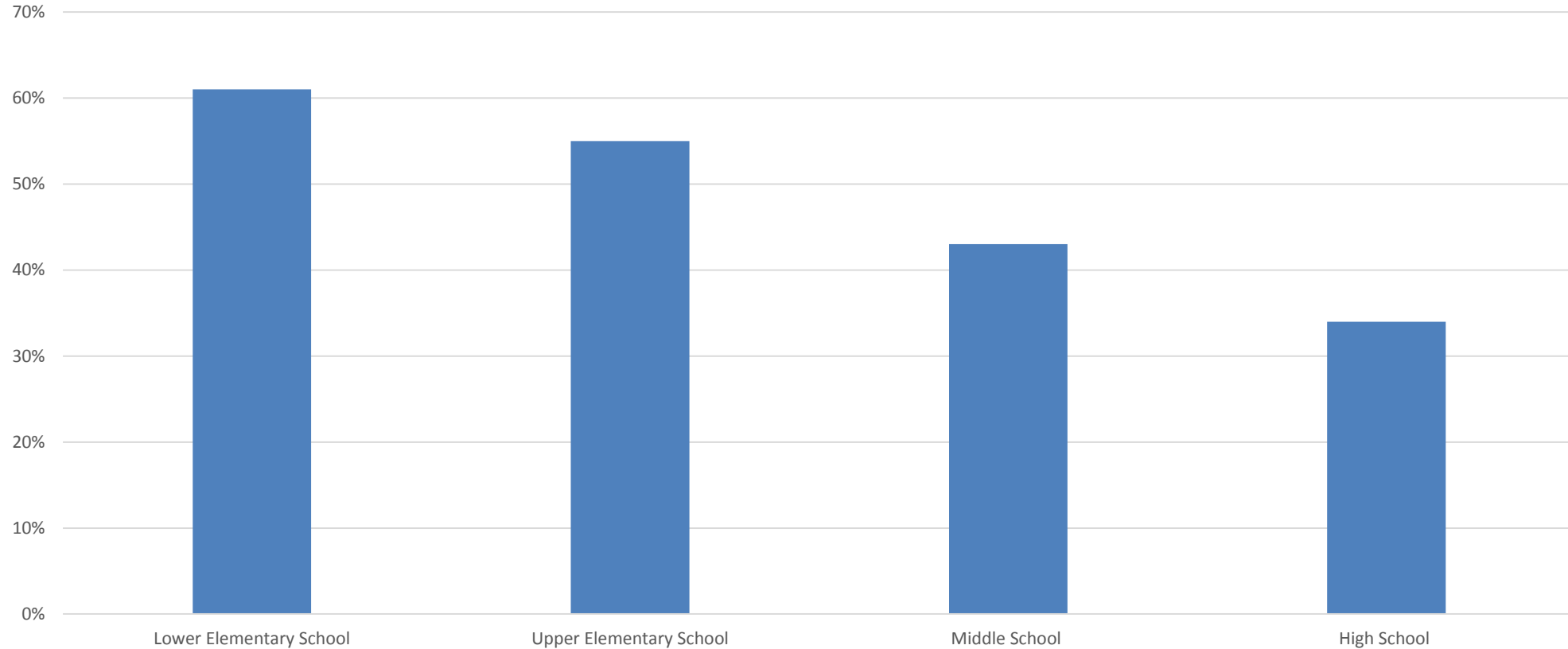
Facility Condition Index (FCI) Rating

- The Current Year FCI is the ratio of Immediate Repair Costs to the building's Current Replacement Value.

FCI CONDITION RATING	DEFINITION	PERCENTAGE VALUE	NUMBER OF SITES
Good	In new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies.	0% to 5%	3
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.	> than 5% to 10%	1
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	> than 10% to 60%	0
Very Poor	Has reached the end of its useful or serviceable life. Renewal is now necessary.	> than 60%	0

Results: 10-Year FCI Summary

10-Year



10 Year Facility Condition Index (FCI) Rating

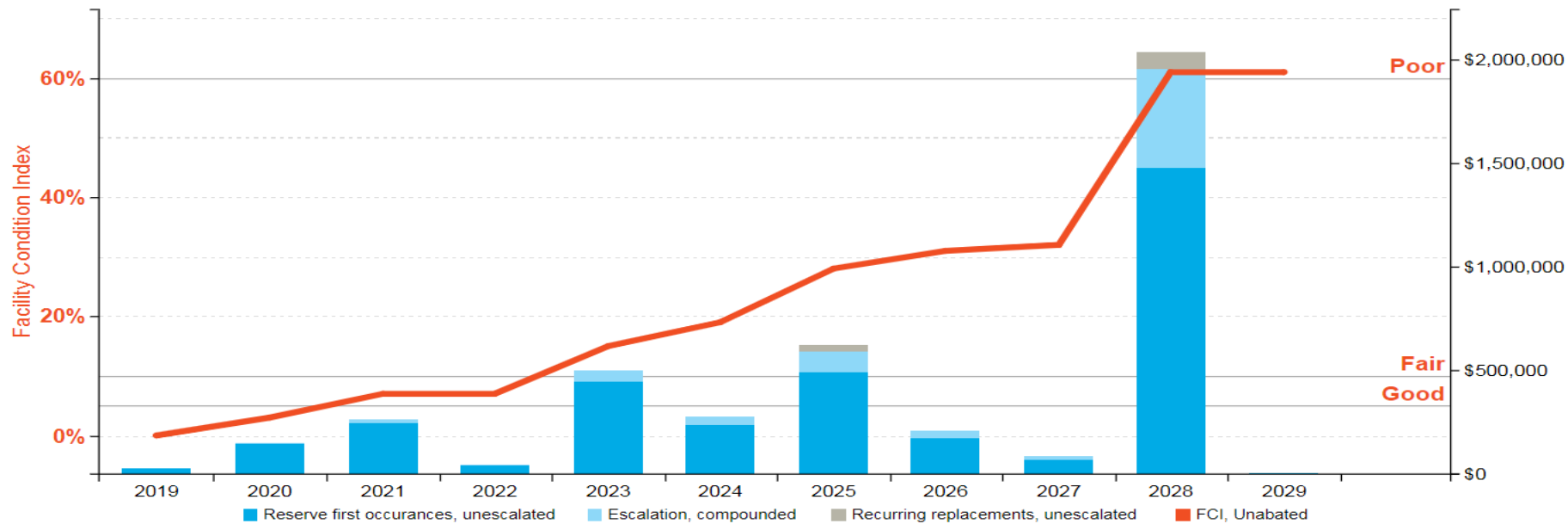
- The 10 Year FCI is the ratio of Replacement Repair Costs over the period of 10 years to the building's Current Replacement Value.

FCI CONDITION RATING	DEFINITION	PERCENTAGE VALUE	NUMBER OF SITES
Good	In new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies.	0% to 5%	0
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.	> than 5% to 10%	0
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	> than 10% to 60%	3
Very Poor	Has reached the end of its useful or serviceable life. Renewal is now necessary.	> than 60%	1

Results by Building: Lower Elementary School

FCI Analysis: Lower Elementary School

Replacement Value: \$ 6,710,400; Inflation rate: 3.0%



Top Upcoming Concerns:

- Replacement of modular building exterior wood siding - \$23,116 in 2019
- Painting of interior walls - \$85,007 in 2020

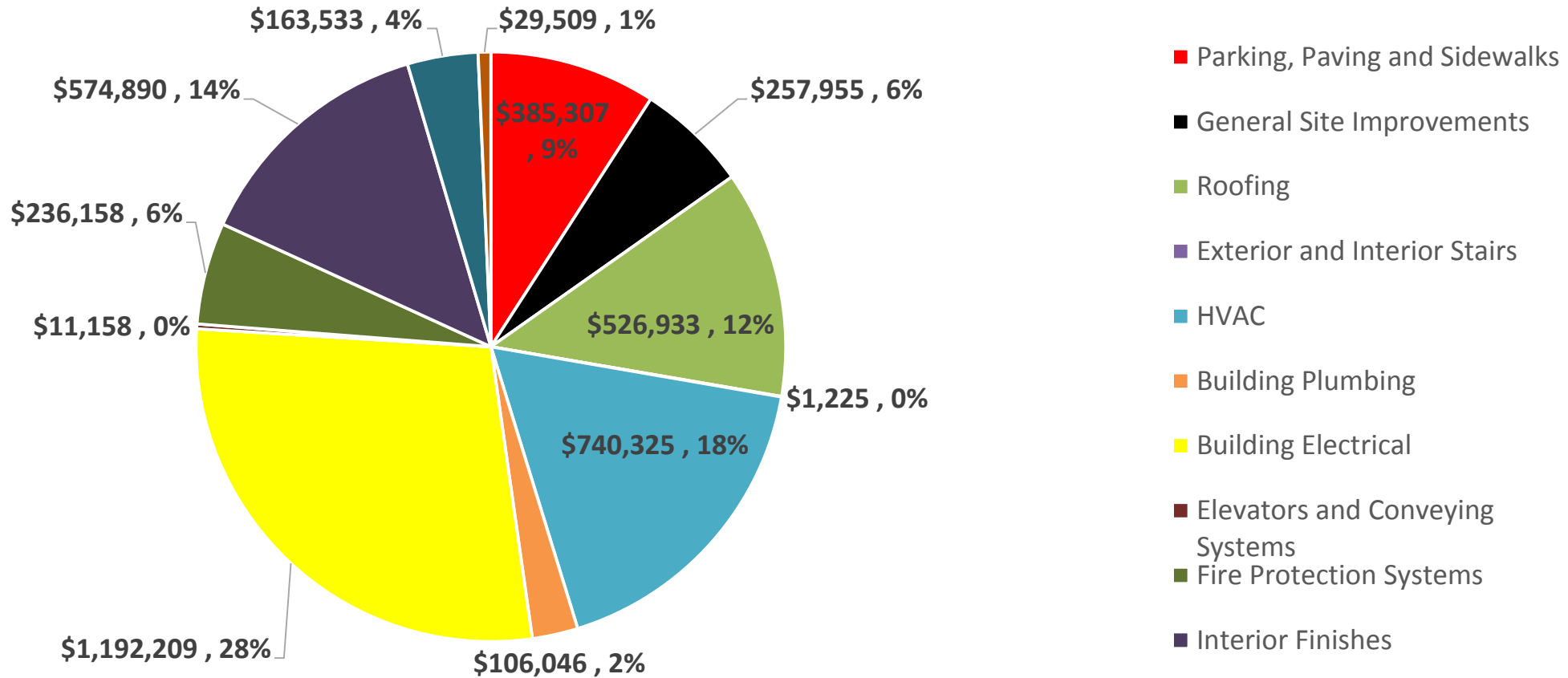
Results By Building: Lower Elementary School

Executive Summary													
Lower Elementary School													
Report Section		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Deficiency Repair Total, Unescalated *	Total, Escalated **
5.2	Parking, Paving and Sidewalks	\$0	\$28,570	\$0	\$0	\$0	\$0	\$28,570	\$0	\$0	\$246,606	\$284,141	\$385,307
5.5	General Site Improvements	\$0	\$0	\$0	\$0	\$126,292	\$0	\$20,173	\$0	\$61,067	\$11,010	\$204,437	\$257,955
6.3	Roofing	\$1,375	\$0	\$0	\$0	\$1,867	\$0	\$423,324	\$14,624	\$0	\$0	\$412,713	\$526,933
6.5	Exterior and Interior Stairs	\$0	\$0	\$167	\$51	\$641	\$0	\$0	\$167	\$51	\$0	\$1,008	\$1,225
7.1	HVAC	\$0	\$33,288	\$239,356	\$9,027	\$15,738	\$8,347	\$7,491	\$39,434	\$6,668	\$267,450	\$586,342	\$740,325
7.2	Building Plumbing	\$0	\$0	\$4,410	\$616	\$32,327	\$0	\$7,444	\$41,477	\$0	\$3,380	\$83,867	\$106,046
7.4	Building Electrical	\$0	\$0	\$0	\$0	\$5,430	\$8,500	\$12,877	\$22,430	\$0	\$868,567	\$858,562	\$1,192,209
7.5	Elevators and Conveying Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,552	\$8,000	\$11,158
7.6	Fire Protection Systems	\$0	\$0	\$0	\$1,507	\$161,663	\$0	\$0	\$1,344	\$1,507	\$37,553	\$190,433	\$236,158
8.1	Interior Finishes	\$1,214	\$86,429	\$0	\$29,492	\$63,024	\$221,786	\$7,002	\$4,153	\$0	\$85,007	\$465,956	\$574,890
8.2	Commercial Kitchen Equipment	\$0	\$0	\$0	\$0	\$39,497	\$0	\$14,101	\$47,814	\$0	\$33,291	\$126,008	\$163,533
9	Other	\$24,944	\$0	\$4,303	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27,360	\$29,509
Totals, Unescalated		\$25,756	\$138,715	\$232,214	\$38,066	\$417,661	\$223,230	\$487,355	\$160,376	\$64,821	\$1,460,632	\$3,248,826	
Location Factor (1.07)		\$1,777	\$9,571	\$16,023	\$2,627	\$28,819	\$15,403	\$33,627	\$11,066	\$4,473	\$100,784	\$224,169	
Totals, Escalated (3.0%, compounded annually)		\$27,534	\$152,735	\$263,354	\$44,465	\$502,517	\$276,641	\$622,080	\$210,852	\$87,779	\$2,037,293	\$4,225,250	\$4,225,250

* Markup included in totals.

** Includes location factor, markup, soft costs and inflation.

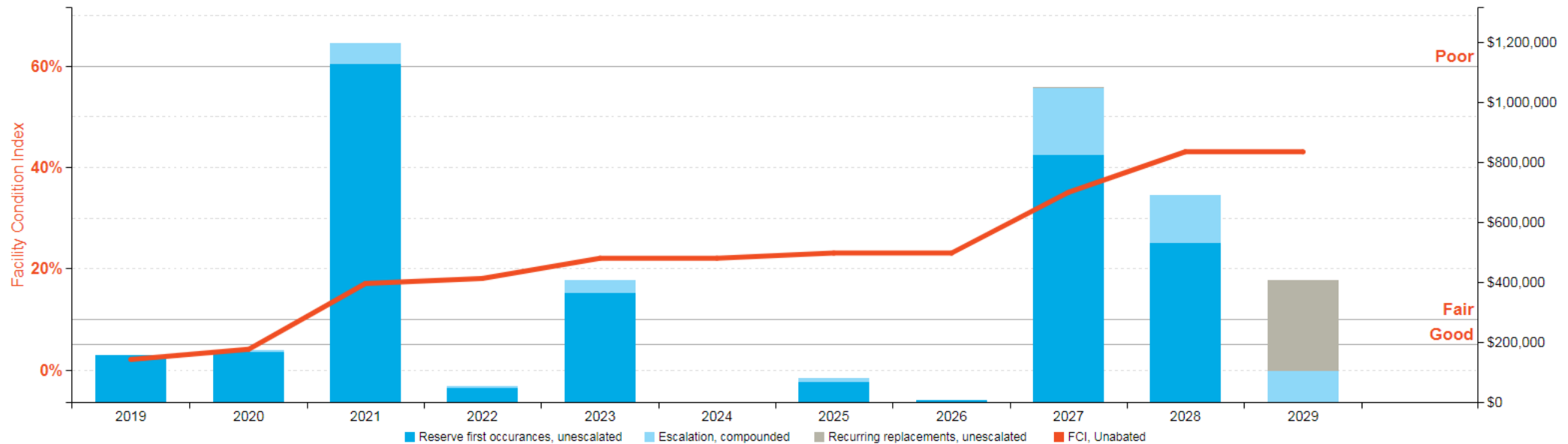
Results by Building Groups: Lower Elementary School



Results by Building: Middle School

FCI Analysis: Middle School

Replacement Value: \$ 8,964,000; Inflation rate: 3.0%



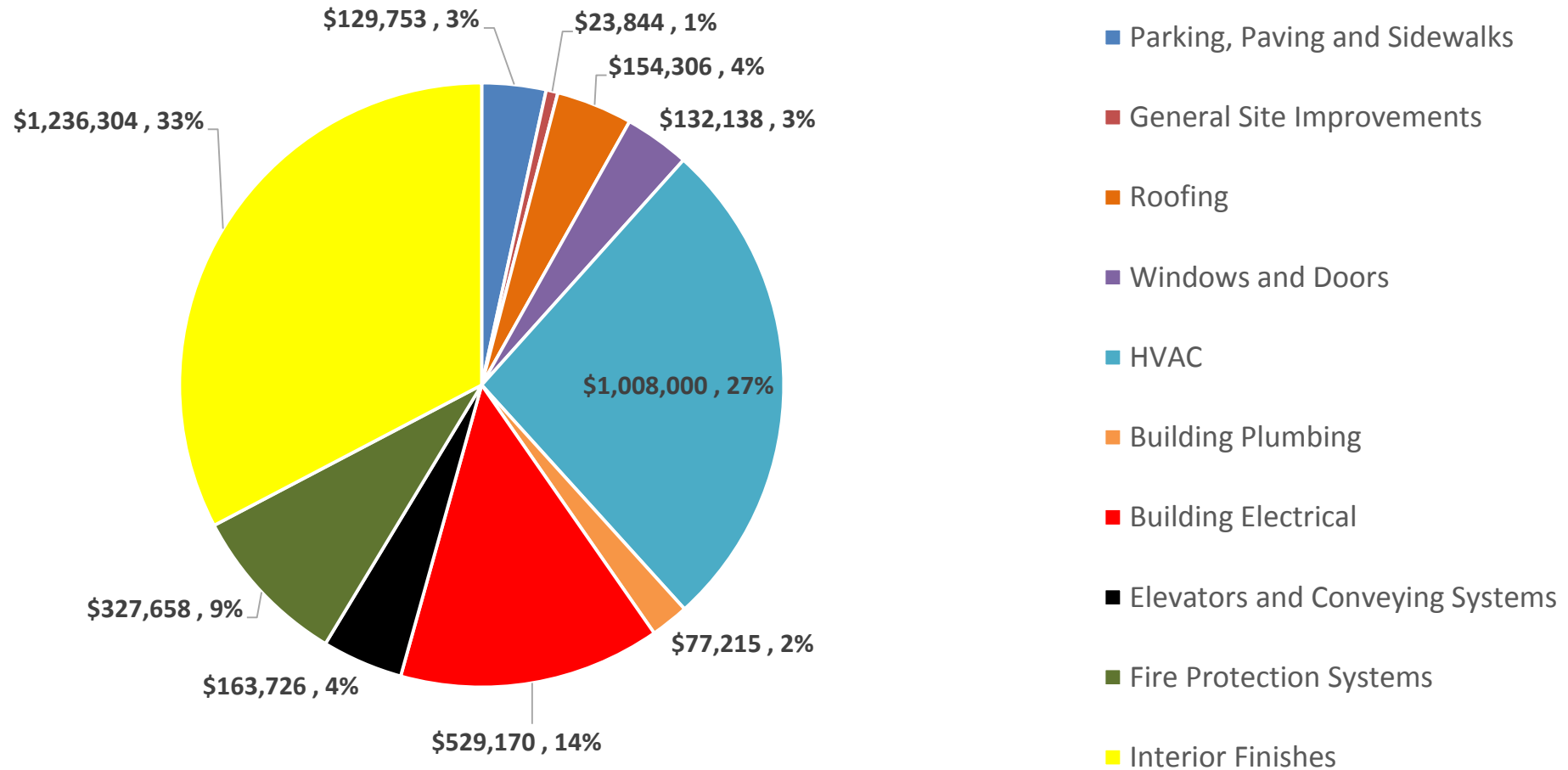
Top Upcoming Concerns:

- Replacement of interior carpeting - \$116,414 in 2019
- Replacement of 2 VFDs - \$19,234 each in 2019
- Replacement of sprinkler heads - \$85,306 in 2020

Results by Building Groups: Middle School

Middle School														
Report Section		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Deficiency Repair Total, Unescalated *	Total, Escalated **	
5.2	Parking, Paving and Sidewalks	\$0	\$0	\$0	\$6,093	\$0	\$0	\$0	\$0	\$97,172	\$0	\$96,600	\$129,753	
5.5	General Site Improvements	\$0	\$0	\$0	\$0	\$21,185	\$0	\$0	\$0	\$0	\$0	\$19,818	\$23,844	
6.3	Roofing	\$0	\$0	\$0	\$0	\$137,099	\$0	\$0	\$0	\$0	\$0	\$128,250	\$154,306	
6.6	Windows and Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$104,311	\$0	\$97,578	\$132,138	
7.1	HVAC	\$0	\$26,566	\$714,412	\$0	\$0	\$0	\$0	\$0	\$175,815	\$0	\$857,618	\$1,008,000	
7.2	Building Plumbing	\$0	\$7,444	\$12,821	\$42,821	\$0	\$0	\$0	\$7,444	\$0	\$0	\$65,977	\$77,215	
7.4	Building Electrical	\$0	\$20,561	\$0	\$0	\$0	\$0	\$68,585	\$0	\$336,365	\$0	\$398,047	\$529,170	
7.5	Elevators and Conveying Systems	\$0	\$3,207	\$12,344	\$0	\$0	\$0	\$0	\$0	\$116,301	\$0	\$123,342	\$163,726	
7.6	Fire Protection Systems	\$0	\$111,334	\$200,758	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$291,948	\$327,658	
8.1	Interior Finishes	\$116,414	\$0	\$186,006	\$0	\$205,248	\$0	\$0	\$0	\$0	\$530,013	\$970,703	\$1,236,304	
Totals, Unescalated		\$108,900	\$158,197	\$1,053,640	\$45,757	\$340,068	\$0	\$64,158	\$6,963	\$776,393	\$495,803	\$3,049,879		
Location Factor (1.07)		\$7,514	\$10,916	\$72,701	\$3,157	\$23,465	\$0	\$4,427	\$480	\$53,571	\$34,210	\$210,442		
Totals, Escalated (3.0%, compounded annually)		\$116,414	\$174,186	\$1,194,935	\$53,450	\$409,159	\$0	\$81,894	\$9,155	\$1,051,374	\$691,547	\$3,782,114	\$3,782,114	

Results By Building: Middle School



Results By Building: Middle School

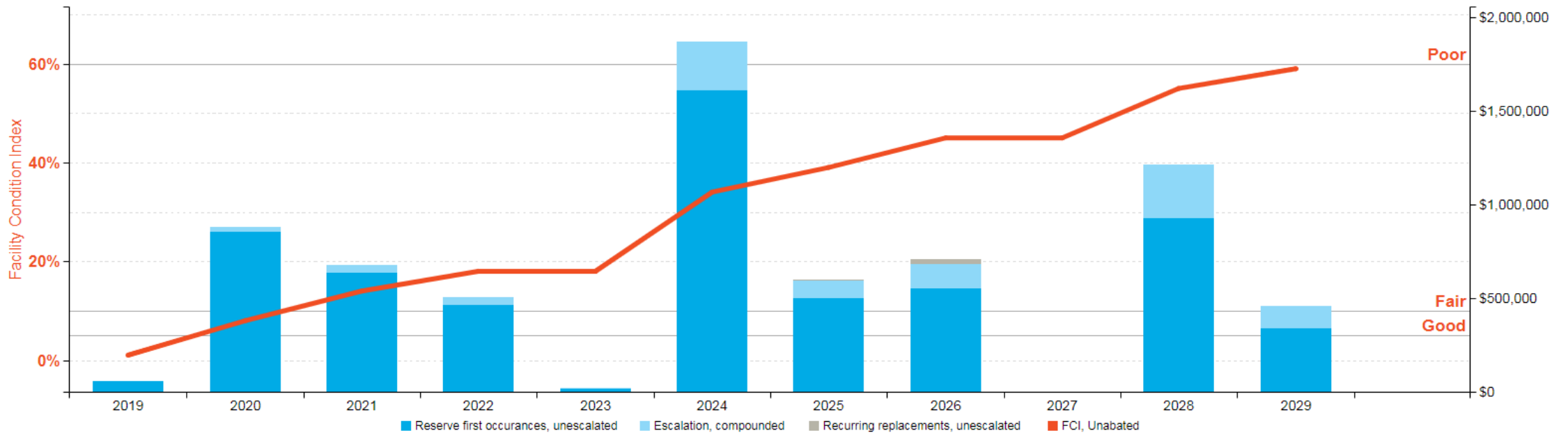
System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	-	-	\$132,100	-	\$132,100
Roofing	-	-	\$154,300	-	\$70,800	\$225,100
Interiors	\$116,400	\$197,300	\$231,000	\$1,098,000	\$676,600	\$2,319,300
Elevators	-	\$16,400	-	\$147,300	\$4,400	\$168,200
Plumbing	-	\$68,100	-	\$9,200	\$31,900	\$109,100
Fire Suppression	-	\$87,900	-	-	\$5,800	\$93,600
HVAC	-	\$785,300	-	\$222,700	\$691,800	\$1,699,800
Electrical	-	\$25,600	-	\$508,000	\$6,000	\$539,600
Fire Alarm & Comm	-	\$235,300	-	-	\$34,800	\$270,200
Pavement	-	\$6,700	-	\$123,100	\$19,300	\$149,100
Site	-	-	-	-	-	-
Site Lighting	-	-	\$23,800	-	-	\$23,800
TOTALS	\$116,400	\$1,422,600	\$409,100	\$2,240,400	\$1,541,400	\$5,729,900

Results by Building: Upper Elementary School

FCI Analysis: Upper Elementary School

Replacement Value: \$ 11,736,000; Inflation rate: 3.0%



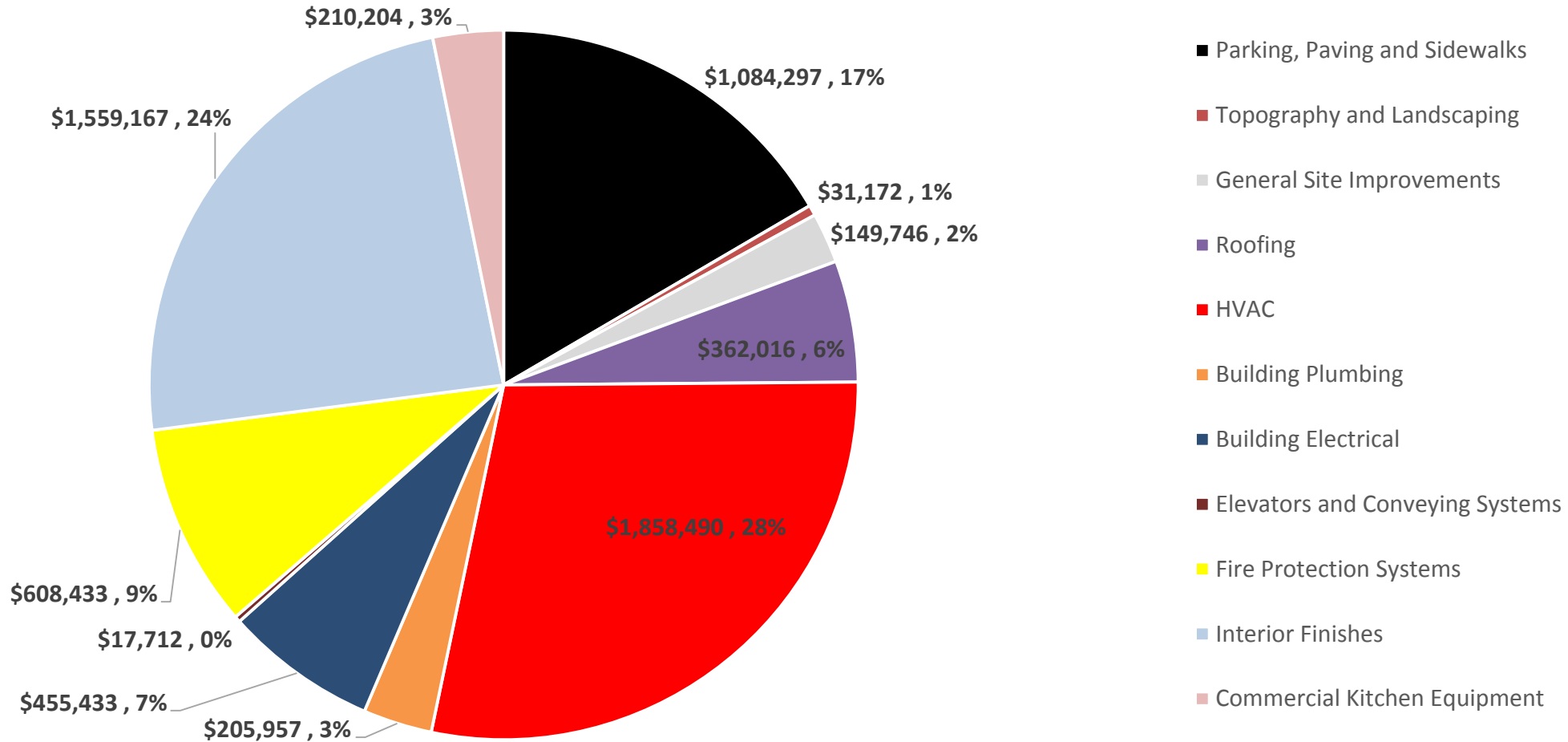
Top Upcoming Concerns:

- Re-slope/ Re-grade of site areas around playground, parking lot and boiler room to address rainwater flooding issues - \$24,245 in 2019
- Mill and Overlay of asphalt tennis courts - \$716,871 in 2020

Results by Building Groups: Upper Elementary School

Upper Elementary School													
Report Section		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Deficiency Repair Total, Unescalated *	Total, Escalated **
5.2	Parking, Paving and Sidewalks	\$5,131	\$716,871	\$26,404	\$0	\$0	\$0	\$0	\$254,315	\$0	\$0	\$938,000	\$1,084,297
5.4	Topography and Landscaping	\$31,172	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29,160	\$31,172
5.5	General Site Improvements	\$0	\$57,619	\$0	\$0	\$0	\$77,978	\$0	\$0	\$0	\$0	\$126,845	\$149,746
6.3	Roofing	\$1,790	\$0	\$0	\$115,452	\$19,685	\$182,799	\$0	\$0	\$0	\$0	\$299,088	\$362,016
7.1	HVAC	\$4,782	\$14,767	\$456,645	\$0	\$0	\$639,057	\$292,046	\$215,048	\$0	\$0	\$1,517,629	\$1,858,490
7.2	Building Plumbing	\$6,416	\$28,857	\$31,240	\$0	\$0	\$105,216	\$0	\$0	\$0	\$11,268	\$171,185	\$205,957
7.4	Building Electrical	\$0	\$0	\$0	\$22,497	\$0	\$114,345	\$0	\$0	\$0	\$228,616	\$341,870	\$455,433
7.5	Elevators and Conveying Systems	\$0	\$0	\$3,207	\$0	\$0	\$12,344	\$0	\$0	\$0	\$0	\$14,547	\$17,712
7.6	Fire Protection Systems	\$9,989	\$3,014	\$29,157	\$55,121	\$0	\$431,802	\$3,014	\$0	\$0	\$0	\$497,751	\$608,433
8.1	Interior Finishes	\$0	\$0	\$24,213	\$271,419	\$0	\$0	\$205,248	\$74,937	\$0	\$689,509	\$1,183,654	\$1,559,167
8.2	Commercial Kitchen Equipment	\$0	\$36,929	\$67,665	\$0	\$0	\$47,977	\$2,689	\$33,786	\$0	\$0	\$176,843	\$210,204
Totals, Unescalated		\$55,453	\$802,674	\$597,316	\$434,508	\$18,414	\$1,507,500	\$470,530	\$540,773	\$0	\$869,404	\$5,296,573	
Location Factor (1.07)		\$3,826	\$55,385	\$41,215	\$29,981	\$1,271	\$104,018	\$32,467	\$37,313	\$0	\$59,989	\$365,464	
Totals, Escalated (3.0%, compounded annually)		\$59,279	\$883,800	\$677,417	\$507,560	\$22,155	\$1,868,191	\$600,604	\$710,973	\$0	\$1,212,647	\$6,542,627	\$6,542,627

Results By Building: Upper Elementary School



Results By Building: Upper Elementary School

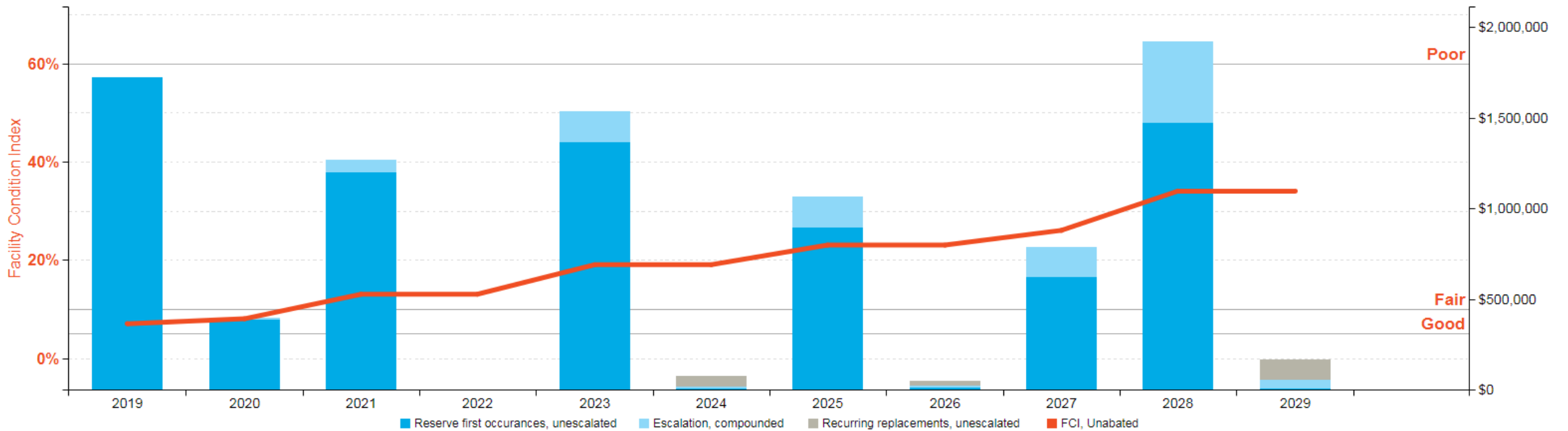
System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	-	-	\$13,600	\$238,200	\$251,800
Roofing	\$1,800	\$126,200	\$234,100	\$2,400	\$29,800	\$394,200
Interiors	-	\$322,300	-	\$1,236,900	\$691,800	\$2,251,000
Elevators	-	\$3,400	\$14,300	-	\$185,800	\$203,500
Plumbing	\$6,400	\$62,900	\$122,000	\$14,700	\$70,200	\$276,100
Fire Suppression	\$10,000	\$7,900	\$190,300	-	\$41,900	\$250,000
HVAC	\$4,800	\$499,600	\$740,800	\$674,200	\$920,900	\$2,840,400
Electrical	-	\$84,800	\$132,600	\$604,700	\$1,338,400	\$2,160,400
Fire Alarm & Comm	-	\$23,000	\$310,300	-	\$35,900	\$369,200
Equipment/Special	-	\$112,900	\$55,600	\$55,600	\$166,100	\$390,200
Site Development	-	\$797,700	\$8,500	-	\$7,600	\$813,800
Pavement	\$5,100	\$28,000	-	\$381,700	\$156,200	\$571,100
Landscaping	\$31,200	-	-	-	-	\$31,200
Site Lighting	-	-	\$81,900	-	-	\$81,900
TOTALS	\$59,300	\$2,068,700	\$1,890,400	\$2,983,800	\$3,882,800	\$10,884,800

Results by Building: High School

FCI Analysis: High School

Replacement Value: \$ 26,037,636; Inflation rate: 3.0%



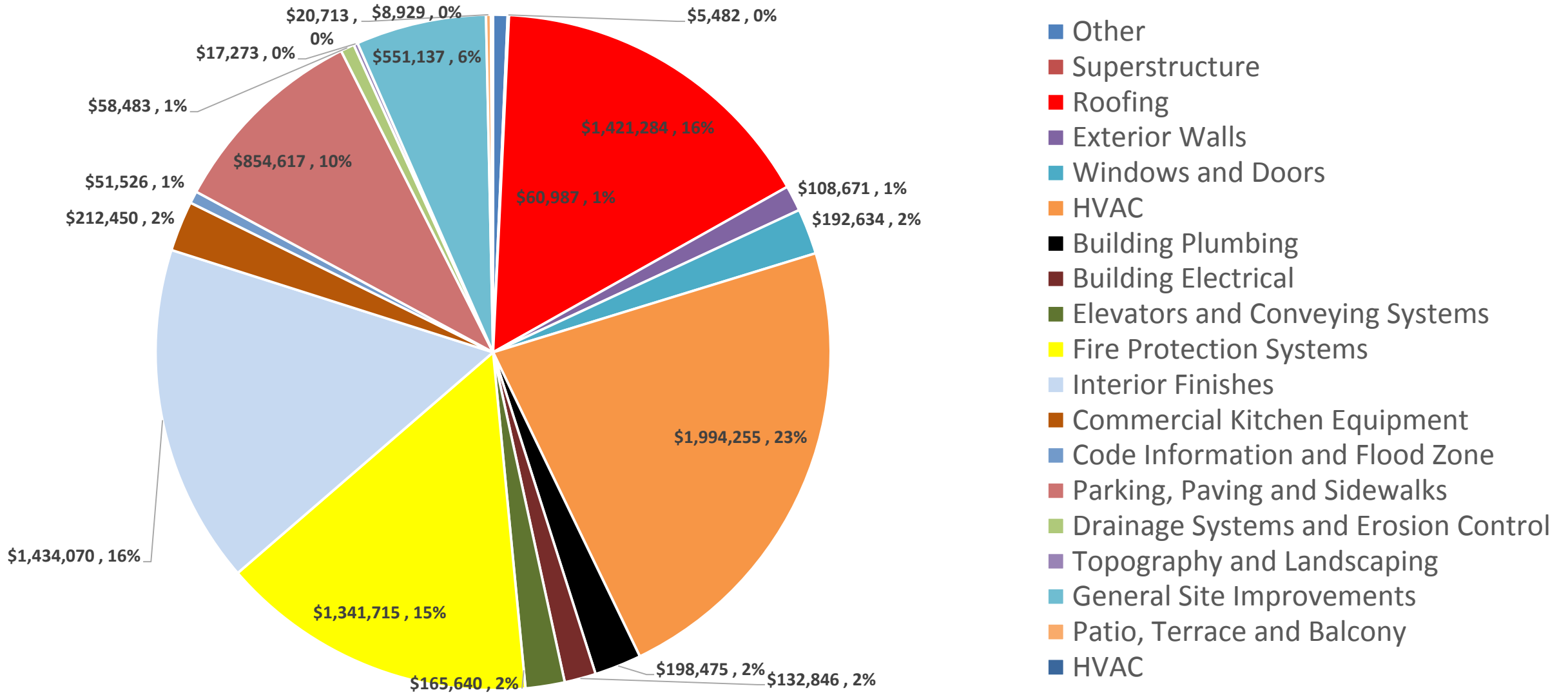
Top Upcoming Concerns:

- Replacement of built up roof - \$429,481 in 2019
- Replacement of a boiler - \$355,835 in 2019
- Synthetic track resurfacing - \$203,944 in 2019

Results by Building Groups: High School

Location Name	Report Section		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Deficiency Repair Total, Unescalated *	Total, Escalated **
High School	1.3	Other	\$17,639	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,500	\$17,639
High School	6.2	Superstructure	\$5,482	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,128	\$5,482
High School	6.3	Roofing	\$548,488	\$0	\$0	\$0	\$105,831	\$0	\$578,263	\$0	\$38,484	\$11,079	\$1,199,387	\$1,421,284
High School	6.4	Exterior Walls	\$5,193	\$0	\$0	\$0	\$52,954	\$0	\$0	\$0	\$34,638	\$0	\$86,796	\$108,671
High School	6.6	Windows and Doors	\$136,785	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,804	\$167,997	\$192,634
High School	7.1	HVAC	\$355,835	\$375,670	\$1,892	\$0	\$898,882	\$0	\$0	\$7,444	\$0	\$175,217	\$1,697,792	\$1,994,255
High School	7.2	Building Plumbing	\$0	\$0	\$0	\$0	\$36,503	\$0	\$0	\$0	\$0	\$120,627	\$146,988	\$198,475
High School	7.4	Building Electrical	\$0	\$0	\$20,025	\$0	\$0	\$0	\$0	\$0	\$55,971	\$31,193	\$100,270	\$132,846
High School	7.5	Elevators and Conveying Systems	\$0	\$0	\$0	\$0	\$12,344	\$0	\$0	\$0	\$0	\$116,301	\$120,342	\$165,640
High School	7.6	Fire Protection Systems	\$0	\$0	\$1,144,699	\$0	\$109,815	\$0	\$0	\$3,014	\$0	\$0	\$1,176,359	\$1,341,715
High School	8.1	Interior Finishes	\$151,594	\$0	\$0	\$0	\$0	\$0	\$306,910	\$0	\$487,248	\$228,989	\$1,098,916	\$1,434,070
High School	8.2	Commercial Kitchen Equipment	\$0	\$7,171	\$0	\$0	\$68,243	\$0	\$0	\$6,541	\$5,428	\$86,863	\$162,998	\$212,450
High School / Community/Transportation Office	9	Other	\$1,276	\$0	\$7,166	\$0	\$7,197	\$0	\$8,409	\$1,084	\$0	\$4,098	\$27,343	\$33,700
High School / Maintenance Shed	9	Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,278	\$1,195	\$1,667
High School / Operations Offices	9	Other	\$0	\$0	\$0	\$0	\$0	\$6,884	\$0	\$0	\$0	\$0	\$6,440	\$7,981
High School / Site	3.1	Code Information and Flood Zone	\$51,526	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,200	\$51,526
High School / Site	5.2	Parking, Paving and Sidewalks	\$92,362	\$0	\$24,373	\$0	\$0	\$56,871	\$0	\$24,373	\$0	\$490,885	\$644,400	\$854,617
High School / Site	5.3	Drainage Systems and Erosion Control	\$58,483	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$54,708	\$58,483
High School / Site	5.4	Topography and Landscaping	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,238	\$12,384	\$17,273
High School / Site	5.5	General Site Improvements	\$299,430	\$0	\$0	\$0	\$66,152	\$4,393	\$0	\$0	\$0	\$131,946	\$469,524	\$551,137
High School / Site	6.7	Patio, Terrace and Balcony	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,875	\$14,850	\$20,713
High School / Site	7.1	HVAC	\$0	\$3,443	\$0	\$0	\$4,782	\$0	\$0	\$0	\$0	\$0	\$7,694	\$8,929
Totals, Unescalated			\$1,612,809	\$361,351	\$1,120,818	\$0	\$1,274,746	\$63,749	\$835,904	\$39,715	\$581,635	\$1,375,483	\$7,266,210	
Location factor (1.07)			\$112,897	\$24,932	\$77,331	\$0	\$87,952	\$4,398	\$57,674	\$2,740	\$40,130	\$94,902		
Totals, Escalated (3.0%, compounded annually)			\$1,724,093	\$397,873	\$1,271,122	\$0	\$1,533,734	\$79,002	\$1,066,983	\$52,215	\$787,637	\$1,918,527	\$8,831,186	\$8,831,186

Results By Building: High School



Results By Building: High School

System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Structure	\$5,500	-	-	-	-	\$5,500
Facade	\$142,000	-	\$59,600	\$117,000	\$76,900	\$395,500
Roofing	\$548,500	-	\$119,100	\$765,600	\$578,300	\$2,011,500
Interiors	\$151,600	-	-	\$1,055,700	\$3,022,500	\$4,229,800
Elevators	-	-	\$13,900	\$151,700	\$26,900	\$192,600
Plumbing	\$1,300	-	\$41,100	\$173,200	\$73,400	\$288,900
Fire Suppression	-	\$1,211,200	\$36,400	-	\$56,700	\$1,304,200
HVAC	\$355,800	\$400,100	\$1,033,100	\$243,800	\$4,585,400	\$6,618,200
Electrical	-	\$21,200	-	\$111,600	\$472,900	\$605,700
Fire Alarm & Comm	-	-	\$87,200	-	\$1,129,600	\$1,216,800
Equipment/Special	-	\$10,600	\$76,800	\$544,000	\$140,200	\$771,500
Pavement	\$107,800	\$25,900	\$65,900	\$767,600	\$785,300	\$1,752,400
Site Development	\$279,600	-	\$79,500	\$64,800	\$1,487,100	\$1,911,000
Landscaping	\$41,600	-	-	-	-	\$41,600
Site Lighting	-	-	-	-	\$199,900	\$199,900
Site	\$19,800	-	-	-	-	\$19,800
Utilities	\$1,500	-	-	-	-	\$1,500
Follow-up Studies	\$17,600	-	-	-	-	\$17,600
Accessibility	\$51,500	-	-	-	-	\$51,500
TOTALS	\$1,724,100	\$1,669,000	\$1,612,600	\$3,995,000	\$12,635,100	\$21,635,500

Conclusions

- Facility condition assessment performed to assess the condition of all assets across properties
- Facility condition assessment allows planning for the repair, maintenance, and upgrade of assets and create a capital plan
- Unabated FCIs show the ability of schools to become poor in 10 years with capital
- High School with shared systems carries much higher percentage of need
- Make transition from FCA or Reserves to Capital Planning
- Five-year refresh of data and costs are recommended



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10461 Mill Run Circle, Suite 1100 • Owings Mills, MD 21117 • www.EMGcorp.com • p 800.733.0660

Thank you!

If you have any questions, please contact

Bill Champion: 800.733.0660 x6234, bchampion@emgcorp.com