

School Facilities Assessment Status

School Facilities Assessment Status

- There are a total of 375 buildings being assessed
- Containing 17,642,970 gross square feet
- 242 Single Building reports will be generated
- 51 Campus reports will be delivered comprised of
133 buildings
- Financial data for 361 buildings has been entered into the
Asset Calc Database
 - The data received thus far will be used to extrapolate
costs across the school buildings portfolio to derive an
idea of costs that can be expected

Building Report Key Elements

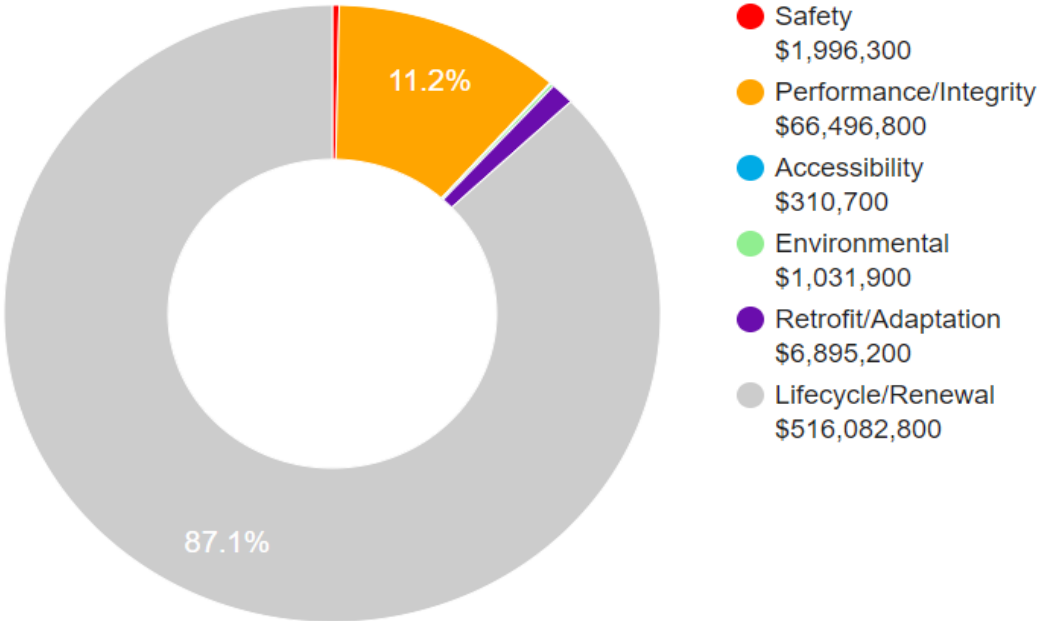
- Plan Types
- Condition Value
- Remaining Useful Life
- Level II Energy Audit
- Building capacity and utilization assessment
- Capacity to deliver STEAM assessment
- A limited high-level ADA accessibility assessment
- A PCB remediation cost placeholder for those facilities completing PCB testing by time of report issuance. \$500/sq. ft. of impacted space.

Plan Types

Each item assessed in the study is assigned a Plan Type

Plan Type Descriptions		
Safety	■	An observed or reported unsafe condition that if left unaddressed could result in injury; a system or component that presents potential liability risk.
Performance/Integrity	■	Component or system has failed, is almost failing, performs unreliably, does not perform as intended, and/or poses 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.
Retrofit/Adaptation	■	Components, systems, or spaces recommended for upgrades in in order to meet current standards, facility usage, or client/occupant needs.
Lifecycle/Renewal	■	Any component or system that is not currently deficient or problematic but for which future replacement or repair is anticipated and budgeted.

Donut Chart of Costs Aggregated by Plan Type



10-YEAR TOTAL: \$592,813,700

Condition Value

- Each item in the assessment is assigned a condition value
 - Failed
 - Poor
 - Fair
 - Good
 - Excellent
- These condition values are based on observed deficiencies during the assessment and/or on the Remaining Useful Life (RUL) expected, according to the manufacturer
- All items that are recorded as Failed and most items that are recorded as Poor are placed in the Immediate Needs category for prioritized spending

Remaining Useful Life (RUL)

System Expenditure Forecast						
System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL
Structure	\$508,605	\$105,879	\$423,124	\$993,965	\$1,466,969	\$3,498,542
Facade	\$5,784,650	\$3,651,040	\$5,542,259	\$14,156,084	\$38,791,780	\$67,925,813
Roofing	\$9,884,193	\$5,279,576	\$15,011,431	\$24,449,036	\$56,989,516	\$111,613,752
Interiors	\$6,613,063	\$3,961,677	\$37,723,947	\$71,269,382	\$154,060,321	\$273,628,390
Conveying	\$282,000	\$610,749	\$1,984,108	\$2,764,047	\$4,284,784	\$9,925,688
Plumbing	\$6,070,538	\$2,035,025	\$21,770,957	\$35,657,241	\$62,101,400	\$127,635,161
HVAC	\$6,908,055	\$8,003,215	\$39,784,363	\$47,519,756	\$101,519,068	\$203,734,457
Fire Protection	\$948,462	\$93,946	\$3,012,671	\$2,235,513	\$12,288,833	\$18,579,425
Electrical	\$4,681,110	\$2,509,427	\$20,135,654	\$26,412,904	\$88,856,243	\$142,595,338
Fire Alarm & Electronic Systems	\$3,083,650	\$4,516,399	\$25,600,141	\$40,156,469	\$67,045,624	\$140,402,283
Equipment & Furnishings	\$1,699,900	\$565,151	\$7,947,931	\$20,426,118	\$35,651,603	\$66,290,703
Special Construction & Demo	\$1,145,350	\$248,405	\$294,822	\$811,262	\$7,398,315	\$9,898,154
Site Development	\$1,158,151	\$501,657	\$3,772,547	\$11,867,899	\$29,694,535	\$46,994,789
Site Pavement	\$4,574,694	\$2,766,748	\$6,186,170	\$12,560,969	\$31,720,871	\$57,809,452
Site Utilities	\$99,200	\$147,866	\$1,193,970	\$1,979,239	\$8,027,009	\$11,447,284
Follow-up Studies	\$335,600	\$73,130	-	\$15,373	-	\$424,103
Energy Savings Opportunity	\$5,280	-	-	-	-	\$5,280
Accessibility	\$242,080	\$59,456	-	-	-	\$301,536
Other (H0001)	-	-	-	-	-	-
TOTALS (3% inflation)	\$54,024,600	\$35,129,400	\$190,384,100	\$313,275,300	\$699,896,900	\$1,292,710,300

The RUL for the balance of assessed components is used to forecast future spending, with estimated costs aggregated by system type, as depicted in this sample table below

Level II Energy Audit of Each Building

- The purpose of the energy audit is to determine the where, when, why, and how energy is used in each facility
- Activities include
 - Collection of utility data
 - Interviews with relevant building staff
 - Visual inspection of building and key systems
 - Evaluation of utility and site data
 - Analyzation of energy and cost savings
 - Development of list of recommended **Energy Conservation Measures (ECM)**
 - Presentation of findings with estimated cost for implementation and estimated payback

Energy Audit – Sample Energy Conservation Measure Summary

Energy Conservation Measures															
Description of ECM	Location	Net Projected Initial Investment (\$)	Estimated Annual Savings Propane (Gal)	Estimated Annual Savings #2 Oil (Gal)	Estimated Annual Savings Electricity (kWh)	Estimated Annual Savings Water (KGal)	Total Energy Savings (MMBTU)	Total Green House Gas Savings (MICO ² /Yr.)	Estimated Utility Cost Savings (\$)	Estimated Annual O&M Savings (\$)	Total Estimated Annual Cost Savings (\$)	Simple Payback (Yrs)	Life Cycle Savings (\$)	Expected Useful Life (EUL) (Yrs)	
1	Replace Inefficient Heating Plant, Replace (2x) Cast Iron boiler(s) with (2x) 95% efficient Condensing Boiler	Location: Main Building, Main Building 1, and Secondary Building	\$29,937	-3,678.4	3,298.0	0.0	0.0	120.2	12.2	\$5,816	\$291	\$6,106	4.9	\$76,396	25
2	Replace Inefficient Heating Plant, Replace (2x) Cast Iron boiler(s) with (2x) 95% efficient Condensing Boiler	Location: Main Building, Main Building 1, and Secondary Building	\$29,937	-3,678.4	3,298.0	0.0	0.0	120.2	12.2	\$5,816	\$291	\$6,106	4.9	\$76,396	25
3	Replace Inefficient Heating Plant, Replace (2x) Cast Iron boiler(s) with (2x) 95% efficient Condensing Boiler	Location: Main Building, Main Building 1, and Secondary Building	\$29,937	-3,678.4	3,298.0	0.0	0.0	120.2	12.2	\$5,816	\$291	\$6,106	4.9	\$76,396	25
4	Replace Existing Linear Fluorescent Lamps, Replace 146x F42T8 with F42LED; Replace 146x F42T8 with F42LED; Replace 75x F42T8 with F42LED	Location: Main Building, Main Building 1, Secondary Building	\$19,033	0.0	0.0	22,900.8	0.0	78.1	5.4	\$4,741	\$644	\$5,385	3.5	\$45,258	15
5	Improve Attic Insulation Levels, Improve existing attic insulation from R-19 to R-R-49by adding Loose Fill/ Cellulose	Location: Main Building 1	\$12,444	0.0	382.7	274.4	0.0	53.9	3.9	\$1,477	\$15	\$1,492	8.3	\$13,531	25
Totals for no/low cost items			\$0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$0	\$0	0.0		
Total for capital cost			\$121,289	-11,035.1	10,276.7	23,175.2	0.0	492.7	45.9	\$23,665	\$1,531	\$25,197	4.8		
Interactive Savings Discount @10%				1,103.5	-1,027.7	-2,317.5	0.0	-49.3	-4.6	-\$2,367	-\$153	-\$2,520			
Total Contingency Expenses @ 15%			\$18,193												
Totals for improvements			\$139,482	-9,931.6	9,249.0	20,857.6	0.0	443.4	41.3	\$21,299	\$1,378	\$22,677	6.2		

Other Elements of Building Reports

- Incorporated into the facilities assessment will be
 - An assessment of each building's capacity and utilization
 - An assessment of each building's capacity to deliver STEAM
 - A limited high-level ADA accessibility assessment that will help identify exposure to issues that would require further review
 - A \$500 per square foot of impacted space remediation placeholder will be calculated for each school that has PCB testing results completed by the time of assessment report submission

Preliminary Cost Projections

- The costs derived by this study are based upon construction cost estimates from RS Means, a comprehensive source of accurate construction data.
- These estimates do not capture the total costs likely to be encountered.
- The values come from direct replacement of in-kind systems and components.
- They do not account for unknowns that will be encountered when executing the work and they do not account for engineering, permits, disposal, code compliance upgrades, and other factors unique to each project
- There are multiple recommendations for ADA studies and the costs of the corrective actions these studies generate are yet to be known
- As such, some multiplier will have to be applied to the costs identified in the assessment study.

Preliminary Cost Projections

System Expenditure Forecast						
System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL
Structure	\$780,400	\$424,900	\$531,400	\$2,577,200	\$2,646,500	\$6,960,300
Facade	\$8,516,200	\$8,216,500	\$13,451,100	\$22,320,400	\$74,228,900	\$126,733,200
Roofing	\$14,047,200	\$12,117,500	\$27,886,100	\$38,559,300	\$100,190,700	\$192,800,900
Interiors	\$28,819,500	\$26,241,300	\$81,887,600	\$109,433,600	\$262,625,000	\$509,007,000
Conveying	\$510,000	\$1,808,100	\$3,305,100	\$3,384,400	\$6,289,800	\$15,297,300
Plumbing	\$7,576,700	\$11,237,100	\$35,545,800	\$62,750,600	\$136,155,500	\$253,265,700
HVAC	\$10,853,100	\$28,975,000	\$68,279,600	\$80,974,500	\$177,266,200	\$366,348,400
Fire Protection	\$991,800	\$1,955,200	\$5,785,500	\$13,075,700	\$6,038,700	\$27,846,900
Electrical	\$6,343,900	\$12,714,200	\$34,457,900	\$51,213,600	\$134,159,300	\$238,888,900
Fire Alarm & Electronic Systems	\$4,670,300	\$16,141,900	\$46,920,900	\$72,941,300	\$111,983,800	\$252,658,100
Equipment & Furnishings	\$2,160,700	\$5,857,800	\$22,522,500	\$32,582,600	\$53,504,000	\$116,627,600
Special Construction & Demo	\$1,364,800	\$251,300	\$425,500	\$2,397,900	\$15,603,400	\$20,042,900
Site Development	\$1,571,400	\$3,201,300	\$8,873,400	\$21,004,900	\$44,704,200	\$79,355,200
Site Pavement	\$8,832,300	\$8,583,600	\$11,807,300	\$21,343,200	\$52,618,400	\$103,184,700
Site Utilities	\$176,200	\$895,500	\$1,820,500	\$4,771,900	\$12,676,500	\$20,340,500
Follow-up Studies	\$3,181,600	-	-	\$14,900	-	\$3,196,500
Energy Savings Opportunity	\$5,300	-	-	-	-	\$5,300
Accessibility	\$588,900	-	-	-	-	\$588,900
Other (H0001)	-	-	-	-	-	-
TOTALS (3% inflation)	\$100,990,200	\$138,621,200	\$363,500,000	\$539,346,000	\$1,190,690,800	\$2,333,148,200

- Financial data received for 361 out of 375 buildings, representing 96.3% of the total portfolio of buildings
- This table represents the totalized costs aggregated by system type over time for these 361 buildings

Preliminary Cost Projections

System Expenditure Forecast

System	Immediate	Short Term (1-2 yr)	Near Term (3-5 yr)	Med Term (6-10 yr)	Long Term (11-20 yr)	TOTAL
Structure	\$780,400	\$424,900	\$531,400	\$2,577,200	\$2,646,500	\$6,960,300
Facade	\$8,516,200	\$8,216,500	\$13,451,100	\$22,320,400	\$74,228,900	\$126,733,200
Roofing	\$14,047,200	\$12,117,500	\$27,886,100	\$38,559,300	\$100,190,700	\$192,800,900
Interiors	\$28,819,500	\$26,241,300	\$81,887,600	\$109,433,600	\$262,625,000	\$509,007,000
Conveying	\$510,000	\$1,808,100	\$3,305,100	\$3,384,400	\$6,289,800	\$15,297,300
Plumbing	\$7,576,700	\$11,237,100	\$35,545,800	\$62,750,600	\$136,155,500	\$253,265,700
HVAC	\$10,853,100	\$28,975,000	\$68,279,600	\$80,974,500	\$177,266,200	\$366,348,400
Fire Protection	\$991,800	\$1,955,200	\$5,785,500	\$13,075,700	\$6,038,700	\$27,846,900
Electrical	\$6,343,900	\$12,714,200	\$34,457,900	\$51,213,600	\$134,159,300	\$238,888,900
Fire Alarm & Electronic Systems	\$4,670,300	\$16,141,900	\$46,920,900	\$72,941,300	\$111,983,800	\$252,658,100
Equipment & Furnishings	\$2,160,700	\$5,857,800	\$22,522,500	\$32,582,600	\$53,504,000	\$116,627,600
Special Construction & Demo	\$1,364,800	\$251,300	\$425,500	\$2,397,900	\$15,603,400	\$20,042,900
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Site Utilities	\$176,200	\$895,500	\$1,820,500	\$4,771,900	\$12,676,500	\$20,340,500
Follow-up Studies	\$3,181,600	-	-	\$14,900	-	\$3,196,500
Energy Savings Opportunity	\$5,300	-	-	-	-	\$5,300
Accessibility	\$588,900	-	-	-	-	\$588,900
TOTALS (3% inflation)	\$100,990,200	\$138,621,200	\$363,500,000	\$539,346,000	\$1,190,690,800	\$2,333,148,200
1.04 multiplier to extrapolate	\$105,029,808.00	\$144,166,048.00	\$378,040,000.00	\$560,919,840.00	\$1,238,318,432.00	\$2,426,474,128.00
2.0 times multiplier	\$210,059,616.00	\$288,332,096.00	\$756,080,000.00	\$1,121,839,680.00	\$2,476,636,864.00	\$4,852,948,256.00
2.5 times multiplier	\$262,574,520.00	\$360,415,120.00	\$945,100,000.00	\$1,402,299,600.00	\$3,095,796,080.00	\$6,066,185,320.00

- A multiplier of 1.04 has been applied to extrapolate the data. 361 out of 375 buildings.
- Multipliers applied to account for additional costs not captured in the study.

School Facilities Assessment Status - Summary

- School Assessments complete, report generation in progress
- Final Report submittals by October 2023
- <https://www.ecs.org/50-state-comparison-k-12-school-construction-funding-2023/>