



FACILITY CONDITION ASSESSMENT

Vancleave Lower Elementary | November 2020





Executive Summary

Vancleave Lower Elementary, located at 12602 Hwy 57 in Vancleave, Mississippi, oldest building is 22 years old (at time of 2020 assessment). It comprises 74,900 gross square feet.

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. The total current deficiencies for this site, in 2020 construction cost dollars, are estimated at \$1,741,575. 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 Vancleave Lower Elementary the ten-year need is \$7,872,991.

For master 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. The Vancleave Lower Elementary facility has a 5-year FCI of 19.89%.

Summary of Findings

The table below summarizes the condition findings at Vancleave Lower Elementary

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	5-Year FCI
Exterior Site								
	Exterior Site	\$41,258	\$438,746	\$88,783	\$480,004	\$568,787	\$0	
Permanent Building(s)								
01	Classrooms/office	\$1,700,317	\$1,902,883	\$3,701,004	\$3,603,200	\$7,304,204	\$20,525,600	17.55%
Sub Total for Permanent Building(s):		\$1,700,317	\$1,902,883	\$3,701,004	\$3,603,200	\$7,304,204	\$20,525,596	
Total for Site:		\$1,741,575	\$2,341,629	\$3,789,787	\$4,083,204	\$7,872,991	\$20,525,596	19.89%



Approach and Methodology

A facility condition assessment evaluates each building's overall condition. 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, 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. 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.



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

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

System	Priority					Total	% of Total
	1	2	3	4	5		
Site	\$0	\$0	\$41,258	\$0	\$0	\$41,258	2.38 %
Roofing	\$0	\$0	\$32,720	\$0	\$0	\$32,720	1.89 %
Structural	\$11,519	\$0	\$0	\$0	\$0	\$11,519	0.66 %
Exterior	\$0	\$0	\$3,794	\$117,009	\$0	\$120,802	6.96 %
Interior	\$0	\$0	\$16,731	\$37,774	\$0	\$54,506	3.14 %
Mechanical	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Electrical	\$104	\$0	\$1,325,140	\$0	\$0	\$1,325,243	76.38 %
Plumbing	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Fire and Life Safety	\$110,405	\$0	\$0	\$0	\$0	\$110,405	6.36 %
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Specialties	\$0	\$0	\$288	\$38,313	\$0	\$38,601	2.22 %
Total:	\$122,028	\$0	\$1,419,931	\$193,096	\$0	\$1,735,055	

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

Electrical	-	\$1,325,243
Exterior	-	\$120,802
Fire and Life Safety	-	\$110,405



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

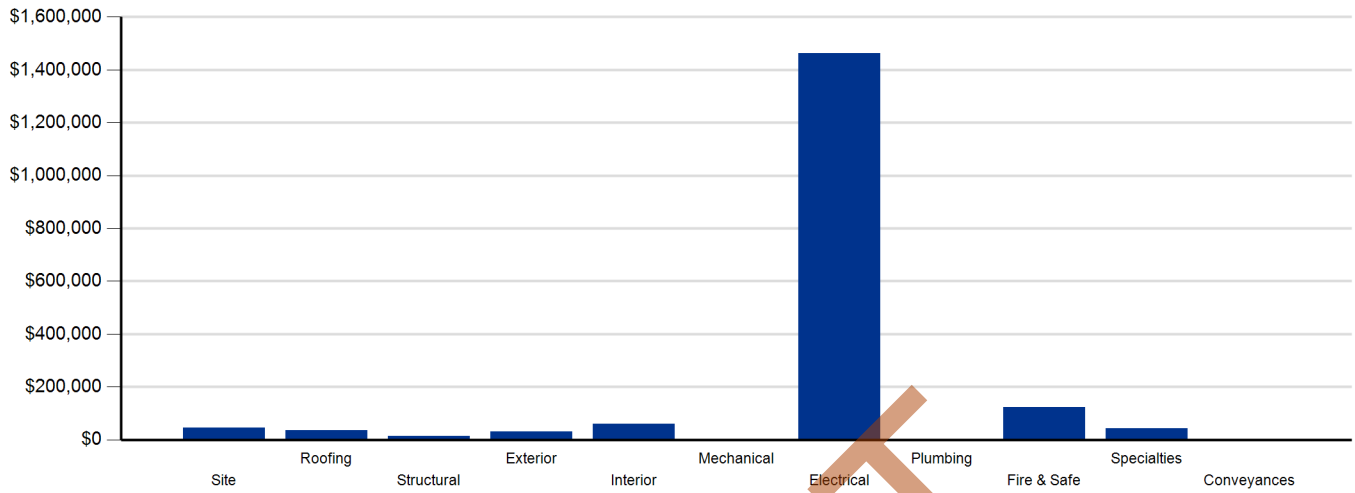


Figure 1: System Deficiencies

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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 current deficiencies and the subsequent 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)

System	Life Cycle Capital Renewal Projections					Total 1-5
	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	
Site	\$0	\$0	\$0	\$0	\$438,746	\$438,746
Roofing	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$0	\$0	\$0	\$0	\$122,388	\$122,388
Interior	\$0	\$0	\$0	\$149,739	\$208,199	\$357,938
Mechanical	\$0	\$0	\$0	\$509,494	\$18,553	\$528,047
Electrical	\$0	\$0	\$0	\$29,771	\$46,466	\$76,237
Plumbing	\$0	\$0	\$16,423	\$320,584	\$112,128	\$449,135
Fire and Life Safety	\$0	\$0	\$0	\$0	\$0	\$0
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$0	\$0	\$0	\$369,138	\$0	\$369,138
Total	\$0	\$0	\$16,423	\$1,378,726	\$946,480	\$2,341,629



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

System	Life Cycle Capital Renewal Projections						Total 6-10	Total 1-10
	Total 1-5	Year 6 2026	Year 7 2027	Year 8 2028	Year 9 2029	Year 10 2030		
Site	\$438,746	\$0	\$0	\$88,783	\$0	\$0	\$88,783	\$527,529
Roofing	\$0	\$0	\$0	\$2,377,520	\$0	\$153,771	\$2,531,291	\$2,531,291
Exterior	\$122,388	\$0	\$117,009	\$0	\$0	\$89,699	\$206,708	\$329,096
Interior	\$357,938	\$0	\$0	\$279,434	\$0	\$11,135	\$290,569	\$648,507
Mechanical	\$528,047	\$0	\$0	\$285,483	\$0	\$58,236	\$343,719	\$871,766
Electrical	\$76,237	\$0	\$0	\$263,187	\$0	\$0	\$263,187	\$339,424
Plumbing	\$449,135	\$6,857	\$0	\$49,520	\$0	\$9,153	\$65,530	\$514,665
Fire and Life Safety	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$369,138	\$0	\$0	\$0	\$0	\$0	\$0	\$369,138
Total	\$2,341,629	\$6,857	\$117,009	\$3,343,927	\$0	\$321,994	\$3,789,787	\$6,131,416

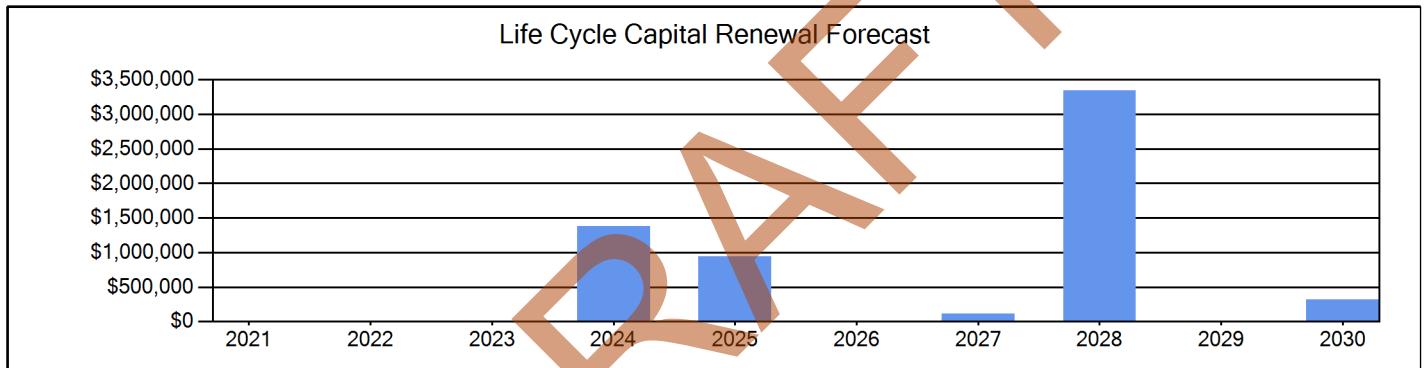
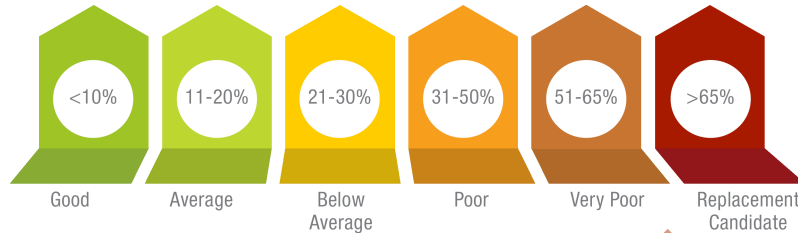


Figure 2: Ten Year Capital Renewal Forecast



Facility Condition Index (FCI)

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 educational adequacy and site-related repairs, by the total replacement cost. A facility with a higher FCI percentage has more need, or higher priority, than a facility with a lower FCI. It should be noted that costs in the New Construction category are not included in the FCI calculation.



Financial modeling has shown that over a 30-year period, it is more cost effective to replace than repair sites with a FCI of 65 percent or greater. This is due to efficiency gains with facilities that are more modern and the value of the building at the end of the analysis period. It is important to note that the FCI at which a facility should be considered for replacement is typically debated and adjusted based on property owners and facility managers approach to facility management. Of course, FCI is not the only factor used to identify buildings that need renovation, replacement, or even closure. Historical significance, enrollment trends, community sentiment, and the availability of capital are additional factors that are analyzed when making campus facility decisions.

For master planning purposes, the total current deficiencies and the first five years of projected life cycle needs were combined. This provides an understanding of the current needs of a facility as well as the projected needs in the near future. 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.

The replacement value represents the estimated cost of replacing the current building with another building of like size, based on today’s estimated cost of construction in the Jackson, MS area. The estimated replacement cost for this facility is \$20,525,596. For planning purposes, the total 5-year need at the Vancleave Lower Elementary is \$4,083,204 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Vancleave Lower Elementary facility has a 5-year FCI of 19.89%.

5-Year Need vs. Replacement

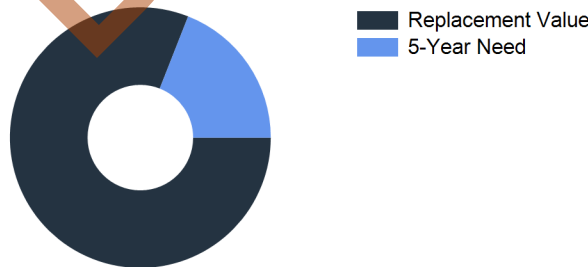


Figure 3: 5-Year FCI



Vancleave Lower Elementary - Deficiency Summary

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Car Accessible Parking Spaces Restriping	ADA Compliance	104	Ea.	3	\$10,543	49
Concrete Walks Replacement	Capital Renewal	2,640	SF	3	\$26,684	256
Note: ADA Deficiency						
Site Requires Civil/Drainage Study	Deferred Maintenance	1	LS	3	\$4,032	48
Note: Water is ponding						
Location: Northwest corner of property						
Sub Total for System		3	items		\$41,258	
Sub Total for School and Site Level		3	items		\$41,258	

Building: 01 - Classrooms/office

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Debris In Gutter Removal	Deferred Maintenance	10	LF	3	\$46	59
Location: In between building						
Gutter Replacement	Deferred Maintenance	1,730	LF	3	\$31,407	60
Note: Entire system leaks, has rust and holes						
Metal Downspout Installation	Deferred Maintenance	60	LF	3	\$1,267	61
Note: Downspout has rust, holes, and leaks						
Sub Total for System		3	items		\$32,720	

Structural

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Foundation Study Recommended	Deferred Maintenance	1	Job	1	\$5,760	40
Note: Slab is cracked 60' across the entire width of the cafe.						
Location: Cafeteria						
Foundation Study Recommended	Deferred Maintenance	1	Job	1	\$5,760	41
Note: 12LF crack in pre-cast panel from exterior to interior of mechanical room.						
Location: Exterior Mechanical Room						
Sub Total for System		2	items		\$11,519	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Exterior Metal Door Repainting	Deferred Maintenance	37	Door	3	\$3,794	54
Exterior Painting (Bldg SF)	Capital Renewal	74,900	SF	4	\$117,009	52
Sub Total for System		2	items		\$120,802	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Entry Door Does Not Have Power Assist Device	ADA Compliance	1	Ea.	3	\$14,134	51
Location: Main entry						
Expansion Joints Missing or Deteriorated	Deferred Maintenance	4,200	SF	3	\$2,597	53
Note: Cracks in expansion joints. 84LF						
Location: Multiple locations: West, east, and interior of mechanical yard						
Carpet Flooring Replacement	Capital Renewal	2,247	SF	4	\$25,384	55
Note: Carpets have water damage, worn, and faded						
Location: Media and computer room						



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Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Vinyl Composition Tile Replacement Note: The cracked concrete slab has caused the VCT in the cafeteria to crack as well. Location: Cafeteria	Capital Renewal	200	SF	4	\$1,459	42
Vinyl Composition Tile Replacement Note: VCT is peeling at edges Location: Lobby	Capital Renewal	1,498	SF	4	\$10,931	56
Sub Total for System		5 items			\$54,506	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Electrical Receptacle Repair Note: Receptacle is protruding from the wall. Gap between wall and corner. Room for objects to be inserted into the side of the receptacle. Location: Room 207	Educational Adequacy	1	Ea.	1	\$104	39
Lighting Fixtures Replacement Note: Original to building and obsolete	Capital Renewal	74,900	SF	3	\$1,225,638	47
Lightning Protection System Installation Note: Lightning protection isn't present	Functional Deficiency	74,900	SF	3	\$52,192	46
Public Address System Replacement, Non-main Building Note: PA system is original, partially operational, and exceeded its life cycle	Deferred Maintenance	74,900	SF	3	\$47,310	43
Sub Total for System		4 items			\$1,325,243	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Fire Alarm Actuator Replacement Note: Fire door magnetic release not working. Location: All doors located by the expansion joints	Capital Renewal	8	Ea.	1	\$4,285	45
Fire Alarm Replacement Note: Original system, battery backup doesn't work, has a blown fuse, and trouble lights are illuminated	Capital Renewal	74,900	SF	1	\$106,120	44
Sub Total for System		2 items			\$110,405	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Public Address System Head-End Requires Replacement	Functional Deficiency	1	Ea.	3	\$6,520	952
Sub Total for System		1 items			\$6,520	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Counter Heights Exceed Maximum ADA Height Requirements (Modify Full)	ADA Compliance	5	LF	3	\$288	50
Base Storage Cabinet Replacement Note: Cabinets are damaged Location: Computer lab desk	Capital Renewal	30	LF	4	\$14,751	57
Replace Cabinetry In Classes/Labs Note: counters and cabinets are damaged. Location: Rooms: 105 and media room	Capital Renewal	3	Room	4	\$23,562	58
Sub Total for System		3 items			\$38,601	
Sub Total for Building 01 - Classrooms/office		22 items			\$1,700,317	
Total for Campus		25 items			\$1,741,575	



Vanleave Lower Elementary - Life Cycle Summary Yrs 1-10

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Parking Lot Pavement	Asphalt	104	CAR	\$134,635	5
Roadway Pavement	Asphalt Driveways	53,000	SF	\$304,111	5
Fences and Gates	Fencing - Chain Link (8-10 Ft)	1,270	LF	\$88,783	8
Sub Total for System		3	items	\$527,528	
Sub Total for Building -		3	items	\$527,528	

Building: 01 - Classrooms/office

Roofing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Steep Slope Roofing	Metal (Architectural - Standing Seam)	66,800	SF	\$2,377,520	8
Low-Slope Roofing	Modified Bitumen	5,000	SF	\$153,771	10
Note: East side canopy					
Sub Total for System		2	items	\$2,531,291	

Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Entrance Doors	Steel - Insulated and Painted	37	Door	\$122,388	5
Exterior Wall Veneer	Exterior Painting - Bldg SF basis	74,900	SF	\$117,009	7
Exterior Operating Windows	Aluminum - Windows per SF	324	SF	\$28,832	10
Exterior Operating Windows	Aluminum - Windows per SF	684	SF	\$60,867	10
Sub Total for System		4	items	\$329,096	

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	37,450	SF	\$149,739	4
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	67,410	SF	\$203,114	5
Wall Coverings	FRP Wall Finish	749	SF Wall	\$5,085	5
Carpeting	Carpet	2,247	SF	\$25,384	8
Carpeting	Carpet	1,498	SF	\$16,923	8
Interior Door Supplementary Components	Door Hardware	179	Door	\$237,127	8
Suspended Plaster and	Painted ceilings	5,992	SF	\$11,135	10
Sub Total for System		7	items	\$648,506	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Heating System Supplementary Components	Controls - Electronic (Bldg.SF)	74,900	SF	\$103,415	4
Decentralized Cooling	Fan Coil - DX Cool w/Electric Heat (3 Ton)	6	Ea.	\$10,547	4
Decentralized Cooling	Fan Coil - DX cool w/Electric Heat (5 Ton)	31	Ea.	\$98,238	4
Decentralized Cooling	Fan Coil - DX Cool w/Electric Heat (3 Ton)	22	Ea.	\$38,673	4
Decentralized Cooling	Fan Coil - DX cool w/Electric Heat (5 Ton)	4	Ea.	\$12,676	4
Decentralized Cooling	Fan Coil - DX Cool w/Electric Heat (10 ton)	3	Ea.	\$12,189	4
Decentralized Cooling	Heat Pump (5 Ton)	11	Ea.	\$119,110	4
Decentralized Cooling	Heat Pump (10 Ton)	1	Ea.	\$21,455	4
Decentralized Cooling	Heat Pump (3 Ton)	9	Ea.	\$71,535	4
Decentralized Cooling	Heat Pump (5 Ton)	2	Ea.	\$21,656	4
Exhaust Air	Wall Exhaust Fan	1	Ea.	\$4,222	5
Exhaust Air	Interior Ceiling Exhaust Fan	33	Ea.	\$14,331	5
Decentralized Cooling	Fan Coil - DX cool w/Electric Heat (5 Ton)	3	Ea.	\$9,507	8
Decentralized Cooling	Heat Pump (5 Ton)	7	Ea.	\$75,798	8
Decentralized Cooling	Heat Pump (5 Ton)	8	Ea.	\$86,626	8
Decentralized Cooling	Heat Pump (10 Ton)	2	Ea.	\$42,910	8
Decentralized Cooling	Heat Pump (12 Ton)	1	Ea.	\$22,952	8
Decentralized Cooling	Heat Pump (3 Ton)	5	Ea.	\$39,742	8
Decentralized Cooling	Heat Pump (3 Ton)	1	Ea.	\$7,948	8
Exhaust Air	Roof Exhaust Fan - Large	8	Ea.	\$57,367	10



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Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exhaust Air	Interior Ceiling Exhaust Fan	2	Ea.	\$869	10
Sub Total for System		21	items	\$871,767	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Building Mounted Fixtures (Ea.)	37	Ea.	\$29,771	4
Lighting Fixtures	Canopy Mounted Fixtures (Ea.)	25	Ea.	\$46,466	5
Electrical Service	Switchgear - Main Dist Panel (2000 Amps)	1	Ea.	\$58,426	8
Electrical Service	Transformer (112.5 KVA)	1	Ea.	\$8,841	8
Electrical Service	Transformer (75 KVA)	3	Ea.	\$19,508	8
Power Distribution	Distribution Panels (600 Amps)	3	Ea.	\$47,656	8
Power Distribution	Distribution Panels (400 Amps)	1	Ea.	\$15,085	8
Power Distribution	Panelboard - 120/208 400A	2	Ea.	\$22,025	8
Power Distribution	Panelboard - 120/208 100A	1	Ea.	\$2,482	8
Power Distribution	Panelboard - 277/480 225A	5	Ea.	\$41,815	8
Power Distribution	Panelboard - 277/480 100A	3	Ea.	\$17,905	8
Power Distribution	Panelboard - 120/208 225A	6	Ea.	\$29,444	8
Sub Total for System		12	items	\$339,424	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Gas - 300 Gallon	1	Ea.	\$16,423	3
Plumbing Fixtures	Restroom Lavatory	21	Ea.	\$50,899	4
Plumbing Fixtures	Sink - Service / Mop Sink	3	Ea.	\$2,131	4
Plumbing Fixtures	Toilets	52	Ea.	\$234,756	4
Plumbing Fixtures	Urinals	6	Ea.	\$7,250	4
Plumbing Fixtures	Refrigerated Drinking Fountain	13	Ea.	\$25,548	4
Plumbing Fixtures	Classroom Lavatory	49	Ea.	\$112,128	5
Domestic Water Equipment	Backflow Preventers - 4 in. (Ea.)	1	Ea.	\$6,857	6
Plumbing Fixtures	Restroom Lavatory	4	Ea.	\$9,695	8
Plumbing Fixtures	Showers	1	Ea.	\$1,166	8
Plumbing Fixtures	Toilets	7	Ea.	\$31,602	8
Plumbing Fixtures	Urinals	2	Ea.	\$2,417	8
Plumbing Fixtures	Refrigerated Drinking Fountain	2	Ea.	\$3,930	8
Plumbing Fixtures	Sink - Service / Mop Sink	1	Ea.	\$710	8
Plumbing Fixtures	Classroom Lavatory	4	Ea.	\$9,153	10
Sub Total for System		15	items	\$514,666	

Specialties

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Casework	Fixed Cabinetry	47	Room	\$369,138	4
Sub Total for System		1	items	\$369,138	
Sub Total for Building 01 - Classrooms/office		62	items	\$5,603,887	
Total for: Vancleave Lower Elementary		65	items	\$6,131,415	



Supporting Photos



Typical classroom area



Water damaged carpet



Main entrance



Parking lot



Obsolete fire alarm system



Obsolete PA system