



FACILITY CONDITION ASSESSMENT

Cowan ES | February 2022



Executive Summary

Cowan ES is located at 2817 Kentish Dr in Austin, Texas. The oldest building is 21 years old (at time of 2020 assessment). It comprises 70,234 gross square feet.

The findings contained within this report are the result of an assessment of building systems and the conditions found on the site at the time of the visit. The assessment was 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 \$2,328,639. 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 Cowan ES the ten-year need is \$10,038,333.

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 Assessment (FCA) score. A 5-year FCA was calculated by dividing the 5-year need by the total replacement cost. Costs associated with new construction are not included in the FCA calculation. The Cowan ES facility has a 5-year FCA score of 58.14%.

Summary of Findings

The table below summarizes the condition findings at Cowan ES

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 FCA
Exterior Site								
	Exterior Site	\$963,261	\$983,819	\$0	\$1,947,080	\$1,947,080	\$0	
Permanent Building(s)								
183A	Main building includes Administration Offices, Classrooms, Cafeteria, & Gym.	\$1,365,378	\$6,341,932	\$383,943	\$7,707,310	\$8,091,253	\$23,064,140	66.58%
Sub Total for Permanent Building(s):		\$1,365,378	\$6,341,932	\$383,943	\$7,707,310	\$8,091,253	\$23,064,144	
Total for Site:		\$2,328,639	\$7,325,751	\$383,943	\$9,654,390	\$10,038,333	\$23,064,144	58.14%

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	\$0	\$0	\$963,261	\$963,261	41.37 %
Roofing	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Structural	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Exterior	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Interior	\$0	\$0	\$0	\$20,427	\$0	\$20,427	0.88 %
Mechanical	\$0	\$14,530	\$17,573	\$0	\$0	\$32,102	1.38 %
Electrical	\$0	\$0	\$1,308,088	\$0	\$0	\$1,308,088	56.17 %
Plumbing	\$0	\$4,760	\$0	\$0	\$0	\$4,760	0.20 %
Fire and Life Safety	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Specialties	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Crawlspace	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Total:	\$0	\$19,290	\$1,325,661	\$20,427	\$963,261	\$2,328,639	

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

Electrical	-	\$1,308,088
Site	-	\$963,261
Mechanical	-	\$32,102

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

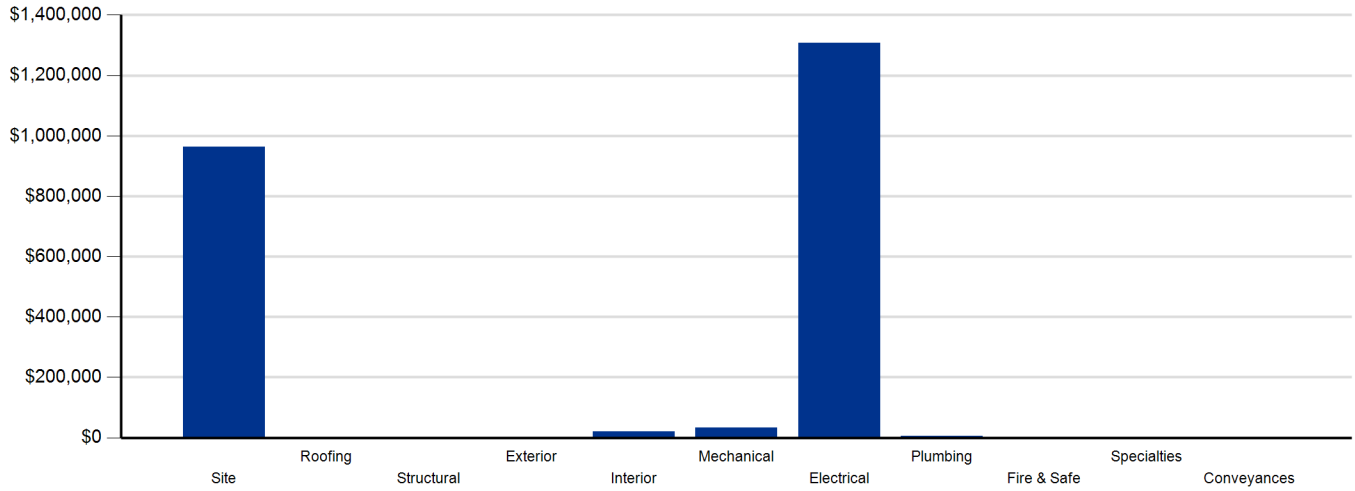


Figure 1: System Deficiencies

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 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 2023	Year 2 2024	Year 3 2025	Year 4 2026	Year 5 2027	
Site	\$0	\$0	\$0	\$193,590	\$778,590	\$972,180
Roofing	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$334,840	\$522,181	\$0	\$0	\$11,563	\$868,584
Interior	\$0	\$0	\$487,733	\$295,101	\$766,191	\$1,549,025
Mechanical	\$0	\$0	\$189,434	\$466,296	\$1,764,592	\$2,420,322
Electrical	\$0	\$0	\$83,415	\$68,662	\$272,464	\$424,541
Plumbing	\$0	\$0	\$4,760	\$354,816	\$94,079	\$453,655
Fire and Life Safety	\$0	\$0	\$0	\$161,657	\$118,385	\$280,042
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$0	\$0	\$0	\$357,402	\$0	\$357,402
Crawlspace	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$334,840	\$522,181	\$765,342	\$1,897,524	\$3,805,864	\$7,325,751

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 2028	Year 7 2029	Year 8 2030	Year 9 2031	Year 10 2032		
Site	\$972,180	\$0	\$0	\$0	\$0	\$0	\$0	\$972,180
Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$868,584	\$0	\$0	\$0	\$0	\$0	\$0	\$868,584
Interior	\$1,549,025	\$0	\$0	\$334,044	\$0	\$44,423	\$378,467	\$1,927,492
Mechanical	\$2,420,322	\$0	\$0	\$0	\$0	\$28,764	\$28,764	\$2,449,086
Electrical	\$424,541	\$0	\$0	\$0	\$0	\$0	\$0	\$424,541
Plumbing	\$453,655	\$0	\$0	\$0	\$0	\$6,384	\$6,384	\$460,039
Fire and Life Safety	\$280,042	\$0	\$0	\$0	\$0	\$0	\$0	\$280,042
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$357,402	\$0	\$0	\$0	\$0	\$0	\$0	\$357,402
Crawlspace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$7,325,751	\$0	\$0	\$334,044	\$0	\$79,571	\$413,615	\$7,739,366

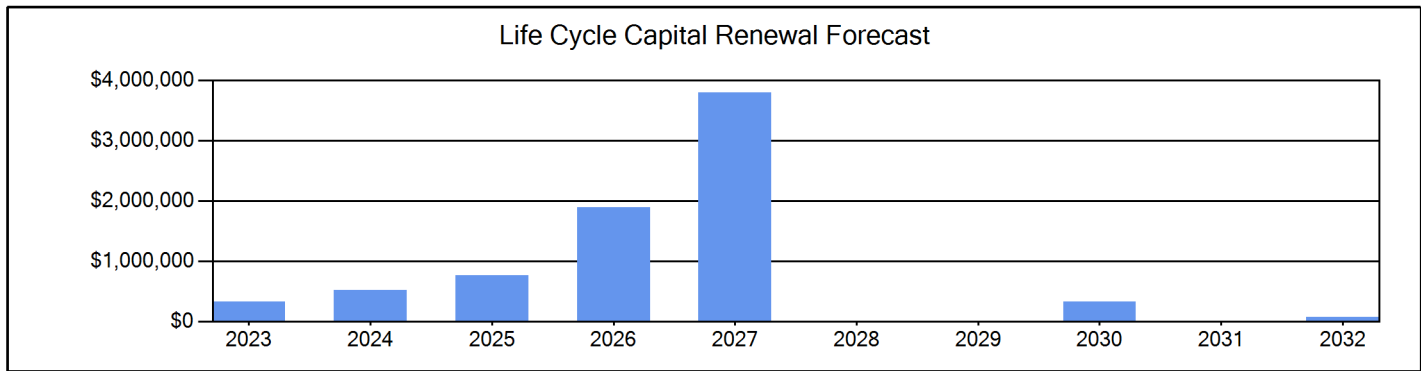


Figure 2: Ten Year Capital Renewal Forecast

Facility Condition Assessment Score

The Facility Condition Assessment Score (FCAS) is used throughout the facility condition assessment industry as a general indicator of a building’s health. The FCAS is used to benchmark the relative condition of a group of sites. The FCAS is derived by dividing the total repair cost, site-related repairs, by the total replacement cost and subtracting it from 100. A facility with a lower FCAS percentage has more need, or higher priority, than a facility with a lower FCAS. It should be noted that costs in the New Construction category are not included in the FCAS calculation.

$$FCAS = 100 - (\text{Total Repair Cost} / \text{Replacement Cost})$$

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 FCAS was calculated by dividing the 5-year need by the total replacement cost. Costs associated with new construction are not included in the FCAS calculation.

- Very Unsatisfactory (0-35)
- Unsatisfactory (36-50)
- Average (51-65)
- Satisfactory (66-80)
- Very Satisfactory (81-100)

Financial modeling has shown that over a 30-year period, it is more cost effective to replace than repair sites with a FCAS of 35 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 FCAS 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, FCAS 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.

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 Austin area. The estimated replacement cost for this facility is \$23,064,144. For planning purposes, the total 5-year need at the Cowan ES is \$9,654,390 (Life Cycle Years 1-5 plus the FCA deficiency cost). The Cowan ES facility has a 5-year FCA of 58.14%.

5-Year Need vs. Replacement

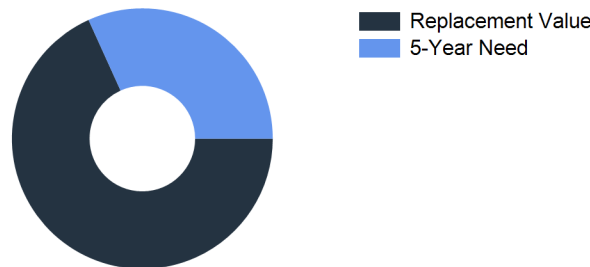


Figure 3: 5-Year FCA

Cowan ES - Deficiency Summary

Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Bollard Replacement	Deferred Maintenance	120	Ea.	5	\$149,261	5028
Exterior Basketball Goal Repair	Deferred Maintenance	2	Ea.	5	\$1,291	5027
PROGRAM DEFICIENCIES	ADA Compliance	45,335	EACH	5	\$77,839	5759
PUBLIC DEFICIENCIES	ADA Compliance	215,765	EACH	5	\$370,464	5758
TAS ACCESSIBILITY DEFICIENCIES	ADA Compliance	212,236	EACH	5	\$364,405	5760
Sub Total for System		5	items		\$963,261	
Sub Total for School and Site Level		5	items		\$963,261	

Building: 183A - Main building includes Administration Offices, Classrooms, Cafeteria, & Gym.

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Ceiling Grid Replacement Note: Stained/damaged	Capital Renewal	2,000	SF	4	\$8,328	5029
Toilet Partition Replacement Note: Beyond life of partition	Capital Renewal	6	Stall	4	\$12,099	5033
Sub Total for System		2	items		\$20,427	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Gas Furnace HVAC Component Replacement Note: Mech room/post life cycle	Capital Renewal	1	Ea.	2	\$3,686	5040
Unit Ventilator Replacement Note: Only blows hot air.	Capital Renewal	1	Ea.	2	\$10,844	5041
Replace Variable Frequency Drive Note: Exterior elec room/bad egress	Capital Renewal	4	Ea.	3	\$17,573	5042
Sub Total for System		3	items		\$32,102	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Canopy Lighting Replacement Note: Past life cycle	Capital Renewal	1	Ea.	3	\$2,083	5043
Exterior Mounted Building Lighting Replacement Note: Past life cycle	Capital Renewal	20	Ea.	3	\$18,035	5044
Lighting Fixtures Replacement Note: Past life cycle	Capital Renewal	70,233	SF	3	\$1,287,971	5045
Sub Total for System		3	items		\$1,308,088	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Water Heater Replacement Note: Post life cycle	Capital Renewal	3	Ea.	2	\$4,760	5036
Sub Total for System		1	items		\$4,760	
Sub Total for Building 183A - Main building includes Administration Offices, Classrooms, Cafeteria, & Gym.		9	items		\$1,365,378	
Total for Campus		14	items		\$2,328,639	

Cowan ES - Life Cycle Summary Yrs 1-10

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Fences and Gates	Fencing - Chain Link (8-10 Ft)	2,471	LF	\$193,590	4
Pedestrian Pavement	Sidewalks - Concrete	17,920	SF	\$202,984	5
Parking Lot Pavement	Asphalt	102	CAR	\$147,982	5
Roadway Pavement	Asphalt Driveways	66,500	SF	\$427,624	5
Sub Total for System		4	items	\$972,180	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Parking Lot Lighting	Pole Lighting	2	Ea.	\$11,639	4
Sub Total for System		1	items	\$11,639	
Sub Total for Building -		5	items	\$983,819	

Building: 183A - Main building includes Administration Offices, Classrooms, Cafeteria, & Gym.

Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Operating Windows	Aluminum - Windows per SF	2,800	SF	\$279,235	1
Exterior Entrance Doors	Steel - Insulated and Painted	15	Door	\$55,605	1
Exterior Wall Veneer	E.I.F.S. - Bldg SF basis	14,047	SF	\$434,494	2
Exterior Entrance Doors	Storefront Doors - Glass/Aluminum	20	Door	\$79,380	2
Exterior Utility Doors	Overhead Door	1	Door	\$8,307	2
Exterior Operating Windows	Steel - Windows per SF	80	SF	\$11,563	5
Sub Total for System		6	items	\$868,585	

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	65,317	SF	\$220,559	3
Wall Coverings	FRP Wall Finish	35,117	SF Wall	\$267,174	3
Wall Painting and Coating	Painting/Staining (Bldg SF)	42,140	SF	\$188,826	4
Carpeting	Carpet	7,023	SF	\$88,912	4
Interior Swinging Doors	Metal Door (Steel)	6	Door	\$17,363	4
Tile Flooring	Quarry Tile	3,161	SF	\$86,411	5
Resilient Flooring	Vinyl Composition Tile Flooring	54,079	SF	\$442,243	5
Interior Door Supplementary Components	Door Hardware	160	Door	\$237,537	5
Acoustical Suspended Ceilings	Ceilings - Acoustical Grid System	65,317	SF	\$271,996	8
Tile Flooring	Ceramic Tile	3,512	SF	\$62,048	8
Compartments and Cubicles	Toilet Partitions	6	Stall	\$12,099	10
Athletic Flooring	Athletic/Sport Flooring	2,107	SF	\$32,324	10
Sub Total for System		12	items	\$1,927,492	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Heating System Supplementary Components	Controls - DDC (Bldg.SF)	70,233	SF	\$189,434	3
Decentralized Heating Equipment	Heating Unit Vent - Gas	43	Ea.	\$466,296	4
Central Cooling	Cooling Tower - Plastic (100 Tons)	1	Ea.	\$30,591	5
HVAC Air Distribution	Roof Top Unit - DX Gas (40 Ton)	6	Ea.	\$492,701	5
Facility Hydronic Distribution	2-Pipe System (Cold)	70,233	SF	\$125,588	5
Facility Hydronic Distribution	2-Pipe Water System (Hot)	70,233	SF	\$298,773	5
Facility Hydronic Distribution	Pump- 25HP (Ea.)	2	Ea.	\$28,763	5
HVAC Air Distribution	AHU 2,000 CFM Outdoor	4	Ea.	\$162,331	5
HVAC Air Distribution	Ductwork (Bldg.SF)	70,233	SF	\$555,715	5
Exhaust Air	Roof Exhaust Fan - Large	8	Ea.	\$64,290	5
Exhaust Air	Interior Ceiling Exhaust Fan	12	Ea.	\$5,840	5
Other HVAC Distribution Systems	VFD (5 HP)	4	Ea.	\$17,573	10
Exhaust Air	Kitchen Exhaust Hoods	1	Ea.	\$11,191	10
Sub Total for System		13	items	\$2,449,086	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Power Distribution	Power Wiring	70,233	SF	\$83,415	3
Audio-Video Systems	PA Communications No Head Unit (Bldg SF)	70,233	SF	\$49,716	4
Distributed Systems	Public Address System Head End Unit	1	Ea.	\$7,307	4
Electrical Service	Transformer (45 KVA)	3	Ea.	\$17,757	5
Electrical Service	Transformer (75 KVA)	2	Ea.	\$14,575	5
Power Distribution	Distribution Panels (600 Amps)	3	Ea.	\$53,407	5
Power Distribution	Distribution Panels (400 Amps)	2	Ea.	\$33,810	5
Power Distribution	Distribution Panels (800 Amps)	1	Ea.	\$18,564	5
Power Distribution	Panelboard - 120/208 125A	3	Ea.	\$4,376	5
Power Distribution	Panelboard - 120/208 225A	10	Ea.	\$54,995	5
Power Distribution	Panelboard - 277/480 225A	4	Ea.	\$37,490	5
Power Distribution	Panelboard - 277/480 225A	4	Ea.	\$37,490	5
Sub Total for System		12	items	\$412,902	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Electric - 20 gallon	3	Ea.	\$4,760	3
Plumbing Fixtures	Restroom Lavatory	16	Ea.	\$43,461	4
Plumbing Fixtures	Sink - Service / Mop Sink	39	Ea.	\$31,039	4
Plumbing Fixtures	Showers	1	Ea.	\$1,306	4
Plumbing Fixtures	Toilets	52	Ea.	\$263,088	4
Plumbing Fixtures	Urinals	2	Ea.	\$2,708	4
Plumbing Fixtures	Refrigerated Drinking Fountain	6	Ea.	\$13,214	4
Domestic Water Equipment	Backflow Preventers - 3/4 in. (Ea.)	2	Ea.	\$1,757	5
Plumbing Fixtures	Classroom Lavatory	36	Ea.	\$92,322	5
Domestic Water Equipment	Water Heater - Gas - 100 Gallon	1	Ea.	\$6,384	10
Sub Total for System		10	items	\$460,040	

Fire and Life Safety

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Security System Component	Security Alarm System	70,233	SF	\$161,657	4
Fire Detection and Alarm	Fire Alarm	70,233	SF	\$111,517	5
Fire Detection and Alarm	Fire Alarm Panel	1	Ea.	\$6,868	5
Sub Total for System		3	items	\$280,042	

Specialties

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Casework	Fixed Cabinetry	40	Room	\$352,075	4
Casework	Lockers	10	Ea.	\$5,327	4
Sub Total for System		2	items	\$357,402	
Sub Total for Building 183A - Main building includes Administration Offices, Classrooms, Cafeteria, & Gym.		58	items	\$6,755,549	
Total for: Cowan ES		63	items	\$7,739,368	

Supporting Photos

General Site Photos



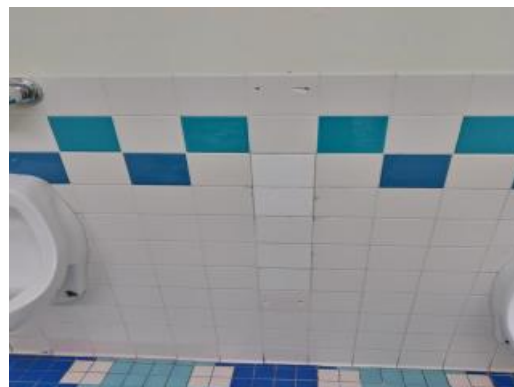
Aged acoustical ceiling tile



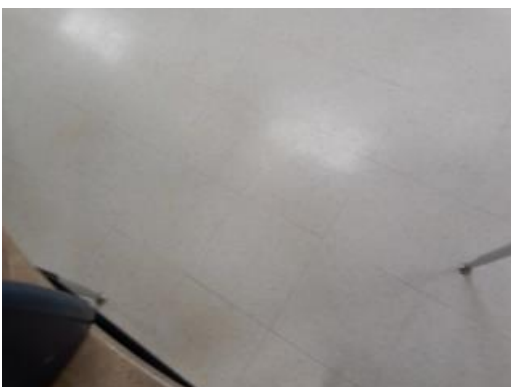
Aged boiler and heating water pipes



Damaged casework



Damaged ceramic tiles



Vinyl composition tiles past useful life



Aged floor ceramic tiles



Stained ceiling tiles