



# FACILITY CONDITION ASSESSMENT

*Boone ES* | February 2022



## Executive Summary

Boone ES is located at 8101 Croftwood Dr in Austin, Texas. The oldest building is 34 years old (at time of 2020 assessment). It comprises 73,689 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 \$8,937,003. 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 Boone ES the ten-year need is \$18,599,499.

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 Boone ES facility has a 5-year FCA score of 46.08%.

## Summary of Findings

The table below summarizes the condition findings at Boone 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
<b>Exterior Site</b>								
	Exterior Site	\$3,243,822	\$0	\$0	\$3,243,822	\$3,243,822	\$0	
<b>Permanent Building(s)</b>								
170A	Main building includes Administration Offices, Classrooms, Cafeteria, & Gym.	\$4,974,399	\$3,718,538	\$5,112,177	\$8,692,937	\$13,805,114	\$20,909,250	58.43%
170B	Stand-Alone Classroom Building	\$718,781	\$391,727	\$440,054	\$1,110,508	\$1,550,562	\$3,289,483	66.24%
<b>Sub Total for Permanent Building(s):</b>		<b>\$5,693,181</b>	<b>\$4,110,265</b>	<b>\$5,552,231</b>	<b>\$9,803,446</b>	<b>\$15,355,677</b>	<b>\$24,198,733</b>	
<b>Total for Site:</b>		<b>\$8,937,003</b>	<b>\$4,110,265</b>	<b>\$5,552,231</b>	<b>\$13,047,268</b>	<b>\$18,599,499</b>	<b>\$24,198,733</b>	<b>46.08%</b>

## 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	\$259,087	\$336,615	\$2,641,664	\$3,237,367	36.22 %
Roofing	\$1,607,176	\$0	\$0	\$0	\$0	\$1,607,176	17.98 %
Structural	\$6,455	\$0	\$0	\$0	\$0	\$6,455	0.07 %
Exterior	\$0	\$128,049	\$0	\$0	\$0	\$128,049	1.43 %
Interior	\$0	\$0	\$0	\$28,045	\$0	\$28,045	0.31 %
Mechanical	\$0	\$426,648	\$99,870	\$34,036	\$0	\$560,554	6.27 %
Electrical	\$0	\$487,111	\$1,680	\$0	\$0	\$488,790	5.47 %
Plumbing	\$0	\$4,663	\$7,262	\$36,963	\$0	\$48,889	0.55 %
Fire and Life Safety	\$774,565	\$0	\$0	\$0	\$0	\$774,565	8.67 %
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	0.00 %
Specialties	\$0	\$0	\$0	\$378,480	\$0	\$378,480	4.23 %
Crawlspace	\$0	\$0	\$0	\$0	\$1,678,632	\$1,678,632	18.78 %
<b>Total:</b>	\$2,388,196	\$1,046,471	\$367,900	\$814,140	\$4,320,296	\$8,937,003	

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

Site	-	\$3,237,367
Roofing	-	\$1,607,176
Fire and Life Safety	-	\$774,565

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

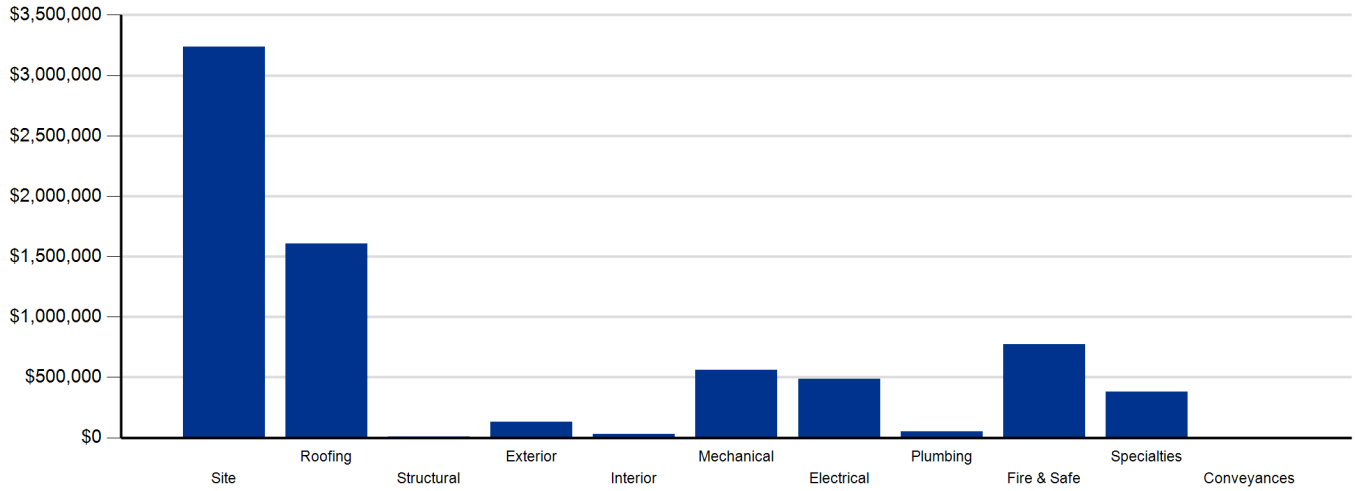


Figure 1: System Deficiencies

## 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	\$0	\$0	\$0
Roofing	\$0	\$0	\$0	\$0	\$110,348	\$110,348
Exterior	\$0	\$131,802	\$0	\$40,857	\$0	\$172,659
Interior	\$0	\$0	\$105,517	\$939,375	\$674,068	\$1,718,960
Mechanical	\$0	\$0	\$114,023	\$1,147,854	\$114,900	\$1,376,777
Electrical	\$0	\$0	\$0	\$0	\$0	\$0
Plumbing	\$0	\$0	\$4,768	\$0	\$0	\$4,768
Fire and Life Safety	\$0	\$0	\$117,005	\$169,611	\$0	\$286,616
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$0	\$0	\$0	\$0	\$0	\$0
Crawlspace	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$131,802</b>	<b>\$341,313</b>	<b>\$2,297,697</b>	<b>\$899,316</b>	<b>\$3,670,128</b>

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	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Roofing	\$110,348	\$0	\$0	\$0	\$0	\$0	\$0	\$110,348
Exterior	\$172,659	\$34,117	\$0	\$0	\$0	\$0	\$34,117	\$206,776
Interior	\$1,718,960	\$222,380	\$0	\$134,612	\$69,627	\$78,700	\$505,319	\$2,224,279
Mechanical	\$1,376,777	\$463,978	\$55,544	\$0	\$0	\$185,152	\$704,674	\$2,081,451
Electrical	\$0	\$30,901	\$0	\$115,176	\$0	\$1,468,630	\$1,614,707	\$1,614,707
Plumbing	\$4,768	\$2,841,434	\$0	\$0	\$0	\$96,031	\$2,937,465	\$2,942,233
Fire and Life Safety	\$286,616	\$0	\$0	\$0	\$0	\$0	\$0	\$286,616
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Crawlspace	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$3,670,128</b>	<b>\$3,592,810</b>	<b>\$55,544</b>	<b>\$249,788</b>	<b>\$69,627</b>	<b>\$1,828,513</b>	<b>\$5,796,282</b>	<b>\$9,466,410</b>

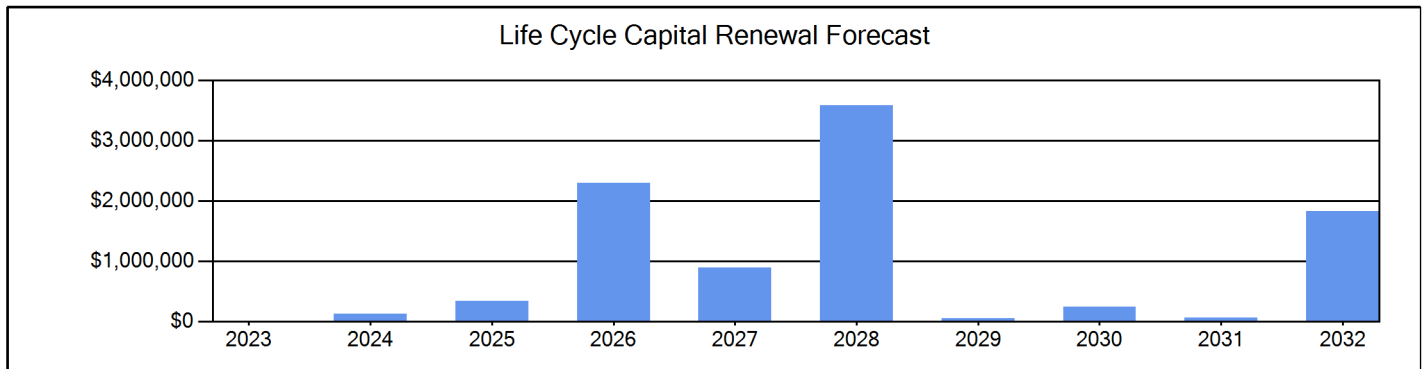


Figure 2: Ten Year Capital Renewal Forecast

## 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 \$24,198,733. For planning purposes, the total 5-year need at the Boone ES is \$13,047,268 (Life Cycle Years 1-5 plus the FCA deficiency cost). The Boone ES facility has a 5-year FCA of 46.08%.

**5-Year Need vs. Replacement**

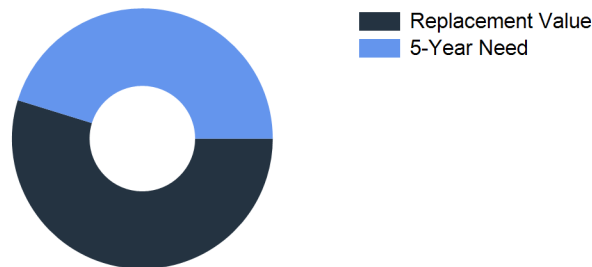


Figure 3: 5-Year FCA



**Boone ES - Deficiency Summary**

**Site Level Deficiencies**

**Site**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Concrete Driveways Replacement	Capital Renewal	2,000	SF	3	\$24,967	2354
Concrete Walks Replacement	Capital Renewal	14,750	SF	3	\$167,077	2355
Playground Equipment Replacement	Capital Renewal	3	Ea.	3	\$67,044	2356
Concrete Paving Replacement	Capital Renewal	81	CAR	4	\$199,743	2353
Fencing Replacement (4' Chain Link Fence)	Capital Renewal	2,900	LF	4	\$136,872	2352
PROGRAM DEFICIENCIES	ADA Compliance	338,856	EACH	5	\$581,809	2252

**Note:** PROGRAM DEFICIENCIES Interior Improvements Estimated Construction Cost for Floor Plan Area 413,586.55\$ Estimated Construction Cost for Floor Plan Area 589,168.10\$ Estimated Construction Cost for Floor Plan Area 6 57,837.81\$ Estimated Construction Cost for Floor Plan Area 7 (x2 locations) 163,648.73\$ Estimated Construction Cost for Floor Plan Area 814,615.11\$ Estimated Construction Cost Subtotal for Interior Improvements Excluding Division 1338,856.30\$ Total Estimated Construction Cost Subtotal for Program Deficiency Improvements 338,856.30

PUBLIC DEFICIENCIES	ADA Compliance	235,339	EACH	5	\$404,073	2251
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**Note:** PUBLIC DEFICIENCIES Site/Exterior Improvements Estimated Construction Cost for Site Plan Area A33,460.47\$ Estimated Construction Cost for Site Plan Area B22,341.62\$ Estimated Construction Cost for Site Plan Area C37,956.60\$ Estimated Construction Cost Subtotal for Site/Exterior Improvements Excluding Division 193,758.69\$ Interior Improvements Estimated Construction Cost for Floor Plan Area 120,186.97\$ Estimated Construction Cost for Floor Plan Area 260,511.26\$ Estimated Construction Cost for Floor Plan Area 360,882.58\$ Estimated Construction Cost Subtotal for Interior Improvements Excluding Division 1141,580.80\$ Total Estimated Construction Cost Subtotal for Public Deficiency Improvements 235,339.49

TAS ACCESSIBILITY DEFICIENCIES	ADA Compliance	1,282,595	EACH	5	\$1,655,783	2253
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**Note:** TAS ACCESSIBILITY DEFICIENCIES Site/Exterior Improvements Estimated Construction Cost for Site Plan Area D54,577.76\$ Estimated Construction Cost for Site Plan Area E1,060.87\$ Estimated Construction Cost for Site Plan Area F4,865.83\$ Estimated Construction Cost Subtotal for Site/Exterior Improvements Excluding Division 160,504.45\$ Interior Improvements Estimated Construction Cost for Floor Plan Area 9 90,661.64\$ Estimated Construction Cost for Floor Plan Area 10 (Building B) 7,263.32\$ Estimated Construction Cost for Floor Plan Area 11 75,414.78\$ Estimated Construction Cost for Floor Plan Area 1268,583.93\$ Estimated Construction Cost for Floor Plan Area 1340,671.36\$ Estimated Construction Cost Subtotal for TAS Improvements Excluding Division 1282,595.03

**Sub Total for System 8 items \$3,237,367**

**Structural**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Structural Study Recommended	Deferred Maintenance	1	Job	1	\$6,455	6813

**Note:** Structural study to detail scope of work based on the 2017 crawlspace deficiencies provided by AISD

**Sub Total for System 1 items \$6,455**

**Sub Total for School and Site Level 9 items \$3,243,822**

**Building: 170A - Main building includes Administration Offices, Classrooms, Cafeteria, & Gym.**

**Roofing**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
AISD ROOFING P1	Capital Renewal	16,531	EACH	1	\$16,531	2248
AISD ROOFING P2	Capital Renewal	166,050	EACH	1	\$166,046	2249
AISD ROOFING P3	Capital Renewal	1,424,630	EACH	1	\$1,424,599	2250
<b>Sub Total for System</b>					<b>3 items</b>	<b>\$1,607,176</b>

**Exterior**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Aluminum Window Replacement	Capital Renewal	1,224	SF	2	\$122,066	2350
Aluminum Window Replacement	Capital Renewal	60	SF	2	\$5,984	2351
<b>Sub Total for System</b>					<b>2 items</b>	<b>\$128,049</b>

**Interior**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Acoustical Ceiling Tile Replacement	Capital Renewal	100	SF	4	\$338	826
<b>Note:</b> Stained Tiles						
<b>Location:</b> Throughout building and Room D4						
Metal Interior Door Replacement	Capital Renewal	4	Door	4	\$11,575	841
<b>Note:</b> Rusted Doors						
<b>Location:</b> Kitchen Area						

**Interior**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Toilet Partition Replacement	Capital Renewal	8	Stall	4	\$16,132	836
<b>Note:</b> Rusted/deteriorated/old						
<b>Location:</b> Restrooms						
<b>Sub Total for System</b>		<b>3</b>	<b>items</b>		<b>\$28,045</b>	

**Mechanical**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Cast Iron Water Boiler Replacement	Capital Renewal	1	Ea.	2	\$41,601	895
<b>Note:</b> Unit is beyond its useful life and need to be replaced.						
<b>Location:</b> Mechanical Room						
Exterior Metal Cooling Tower Replacement	Capital Renewal	1	Ea.	2	\$57,829	899
<b>Note:</b> Unit is beyond its useful life and needs to be replaced.						
<b>Location:</b> Mechanical Yard						
Fan Coil HVAC Component Replacement	Capital Renewal	1	Ea.	2	\$2,617	900
<b>Note:</b> Unit is beyond its useful life and needs to be replaced.						
<b>Location:</b> Serving kitchen above ceiling						
Gas Unit Heater Replacement	Capital Renewal	1	Ea.	2	\$2,796	898
<b>Note:</b> Unit is beyond its useful life and needs to be replaced.						
<b>Location:</b> Mechanical Room						
Heat Exchanger Replacement	Capital Renewal	1	Ea.	2	\$241,636	897
<b>Note:</b> Unit is beyond its useful life and needs to be replaced.						
<b>Location:</b> Mechanical Room						
Circulation Pump Replacement	Capital Renewal	2	Ea.	3	\$28,763	905
<b>Note:</b> Unit is beyond its useful life and needs to be replaced.						
<b>Location:</b> Mechanical Room						
Kitchen Exhaust Hood Replacement	Capital Renewal	3	Ea.	3	\$33,574	909
<b>Note:</b> Units are beyond its useful life and needs to be replaced.						
<b>Location:</b> Kitchen						
Replace Variable Frequency Drive	Capital Renewal	2	Ea.	3	\$10,446	901
<b>Note:</b> Unit is beyond its useful life and needs to be replaced.						
<b>Location:</b> Mechanical Room						
Circulation Pump Replacement	Capital Renewal	2	Ea.	4	\$8,626	903
<b>Note:</b> Unit is beyond its useful life and needs to be replaced.						
<b>Location:</b> Mechanical Room						
Circulation Pump Replacement	Capital Renewal	1	Ea.	4	\$4,313	904
<b>Note:</b> Unit is beyond its useful life and needs to be replaced.						
<b>Location:</b> Mechanical Room						
Kitchen Air/Exhaust Replacement	Capital Renewal	2	Ea.	4	\$21,097	907
<b>Note:</b> Unit is beyond its useful life and needs to be replaced.						
<b>Location:</b> Roof						
<b>Sub Total for System</b>		<b>11</b>	<b>items</b>		<b>\$453,298</b>	

**Electrical**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Distribution Panel Replacement	Capital Renewal	1	Ea.	2	\$17,802	861
<b>Note:</b> Age						
<b>Location:</b> DP/Main Mechanical Room						
Distribution Panel Replacement	Capital Renewal	1	Ea.	2	\$16,905	863
<b>Note:</b> Age						
<b>Location:</b> MTDP/Main Mechanical Room						
Electrical Transformer Replacement	Capital Renewal	1	Ea.	2	\$9,908	848
<b>Note:</b> Age						
<b>Location:</b> Main Electrical						
Electrical Transformer Replacement	Capital Renewal	1	Ea.	2	\$9,908	852
<b>Note:</b> Age						
<b>Location:</b> Main Electrical						

**Electrical**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Electrical Transformer Replacement <b>Note:</b> Age <b>Location:</b> Book Room	Capital Renewal	4	Ea.	2	\$16,912	854
Electrical Transformer Replacement <b>Note:</b> Age <b>Location:</b> Electrical Room 2	Capital Renewal	1	Ea.	2	\$5,358	855
Electrical Transformer Replacement <b>Note:</b> Age <b>Location:</b> Electrical Room 3	Capital Renewal	1	Ea.	2	\$5,519	857
Electrical Transformer Replacement <b>Note:</b> Age <b>Location:</b> Telecom Room	Capital Renewal	1	Ea.	2	\$5,358	858
Electrical Transformer Replacement <b>Note:</b> Age <b>Location:</b> Cafe Electrical Room	Capital Renewal	1	Ea.	2	\$7,287	860
Generator Replacement	Capital Renewal	5	Ea.	2	\$112,098	2349
Panelboard Replacement <b>Note:</b> Age L1 <b>Location:</b> Main Electrical Room	Capital Renewal	1	Ea.	2	\$12,342	866
Panelboard Replacement <b>Note:</b> Age L5 <b>Location:</b> Book Room	Capital Renewal	1	Ea.	2	\$5,500	867
Panelboard Replacement <b>Note:</b> Age L4 <b>Location:</b> Electrical Room 2	Capital Renewal	1	Ea.	2	\$2,782	868
Panelboard Replacement <b>Note:</b> Age <b>Location:</b> Main Mechanical Roo,	Capital Renewal	1	Ea.	2	\$13,891	869
Panelboard Replacement <b>Note:</b> Age L3 (Left and Right) <b>Location:</b> Electrical Room 3	Capital Renewal	1	Ea.	2	\$9,372	870
Panelboard Replacement <b>Note:</b> Age/L3 (Left and Right) <b>Location:</b> Electrical Room 3	Capital Renewal	2	Ea.	2	\$5,564	871
Panelboard Replacement <b>Note:</b> Age/H3-1 <b>Location:</b> Electrical Room 3	Capital Renewal	1	Ea.	2	\$9,372	872
Panelboard Replacement <b>Note:</b> Age/H3-2 <b>Location:</b> Electrical Room 3	Capital Renewal	1	Ea.	2	\$13,891	873
Panelboard Replacement <b>Note:</b> Age/C2 <b>Location:</b> Telecom Room	Capital Renewal	1	Ea.	2	\$2,782	874
Panelboard Replacement <b>Note:</b> Age / H2 <b>Location:</b> Telecomm Room	Capital Renewal	1	Ea.	2	\$9,372	875
Panelboard Replacement <b>Note:</b> Age, Safety exposed bus/H6 <b>Location:</b> Cafe Electrical Room	Capital Renewal	1	Ea.	2	\$9,372	876
Panelboard Replacement <b>Note:</b> Age / L6 <b>Location:</b> cafe electrical room	Capital Renewal	1	Ea.	2	\$5,500	877
Panelboard Replacement <b>Note:</b> Age / 100A <b>Location:</b> Stage	Capital Renewal	1	Ea.	2	\$2,782	878

**Electrical**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Panelboard Replacement <b>Note:</b> Age / K(Right) <b>Location:</b> Kitchen	Capital Renewal	1	Ea.	2	\$12,342	879
Panelboard Replacement <b>Note:</b> Age / K(Left) <b>Location:</b> Kitchen	Capital Renewal	1	Ea.	2	\$12,342	880
Panelboard Replacement <b>Note:</b> Age / HK <b>Location:</b> Kitchen	Capital Renewal	1	Ea.	2	\$6,688	881
Panelboard Replacement <b>Note:</b> Age/KS <b>Location:</b> Kitchen	Capital Renewal	1	Ea.	2	\$2,782	882
Panelboard Replacement <b>Note:</b> Age / H1 (Left and Right) <b>Location:</b> Main Electrical Room	Capital Renewal	2	Ea.	2	\$27,782	883
Panelboard Replacement <b>Note:</b> Age / H5 (Left and Right) <b>Location:</b> Book Room	Capital Renewal	2	Ea.	2	\$18,745	884
Switchgear Replacement <b>Note:</b> ALE/Switchgear, MSB Main Electrical	Capital Renewal	2	Ea.	2	\$76,774	847
<b>Sub Total for System</b>		<b>30</b>	<b>items</b>		<b>\$467,030</b>	

**Plumbing**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Water Heater Replacement <b>Note:</b> Unit is beyond useful life and needs to be replaced <b>Location:</b> Janitors closet C03	Capital Renewal	1	Ea.	2	\$1,264	886
Water Heater Replacement <b>Note:</b> 2.5 Gallon <b>Location:</b> Janitor Closet C03	Capital Renewal	1	Ea.	2	\$1,264	2388
Backflow Preventer Replacement <b>Note:</b> Missing	Capital Renewal	1	Ea.	3	\$879	888
Gas Water Heater Replacement <b>Note:</b> Unit is beyond useful Life and needs to be replaced. <b>Location:</b> Mechanical Room	Capital Renewal	1	Ea.	3	\$6,384	887
Custodial Mop Or Service Sink Replacement <b>Note:</b> All plumbing fixtures are considered original to the building construction date and are beyond its useful life. Need to be replaced. <b>Location:</b> Janitor's closet	Capital Renewal	5	Ea.	4	\$3,979	891
Non-Refrigerated Drinking Fountain Replacement <b>Note:</b> All plumbing fixtures are considered original to the building construction date and are beyond its useful life. Need to be replaced. <b>Location:</b> Hallways	Capital Renewal	7	Ea.	4	\$16,686	894
Restroom Lavatories Plumbing Fixtures Replacement <b>Note:</b> All plumbing fixtures are considered original to the building construction date and are beyond its useful life. Need to be replaced. <b>Location:</b> Throughout Restrooms	Capital Renewal	6	Ea.	4	\$16,298	890
<b>Sub Total for System</b>		<b>7</b>	<b>items</b>		<b>\$46,753</b>	

**Fire and Life Safety**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Fire Alarm Panel Replacement <b>Note:</b> Age	Capital Renewal	1	Ea.	1	\$6,868	885
Fire Sprinkler System Replacement (SF Basis) <b>Note:</b> Missing <b>Location:</b> Building Wide	Capital Renewal	63,672	SF	1	\$663,339	908
<b>Sub Total for System</b>		<b>2</b>	<b>items</b>		<b>\$670,207</b>	

**Specialties**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Cabinetry In Classes/Labs <b>Note:</b> Deteriorated/old <b>Location:</b> Building Wide	Capital Renewal	35	Room	4	\$308,066	845
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$308,066</b>	

**Crawlspace**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD <b>Note:</b> SOIL/DRAINAGE BELOW BUILDING - improve drainage - 64467 GSF	Deferred Maintenance	538,399	Ea.	5	\$632,539	6814
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD <b>Note:</b> PERIMETER SOIL RETAINERS - repair - 2117 LF	Deferred Maintenance	88,401	Ea.	5	\$103,858	6815
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD <b>Note:</b> CRAWL SPACE ACCESS/VENTILATION - improve ventilation - 64467 GSF	Deferred Maintenance	278,173	Ea.	5	\$326,812	6816
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD <b>Note:</b> CRAWL SPACE ACCESS/VENTILATION - repair access - 3 EA	Deferred Maintenance	8,352	Ea.	5	\$9,812	6817
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD <b>Note:</b> SPECIAL FOUNDATIONS - repair perimeter - 2117 LF	Deferred Maintenance	29,467	Ea.	5	\$34,619	6818
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD <b>Note:</b> SUSPENDED FLOOR BEAMS - repair beams - 64467 GSF	Deferred Maintenance	44,867	Ea.	5	\$52,712	6819
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD <b>Note:</b> SUSPENDED FLOOR SLABS - repair slab bottom - 64467 GSF	Deferred Maintenance	89,733	Ea.	5	\$105,423	6820
<b>Sub Total for System</b>		<b>7</b>	<b>items</b>		<b>\$1,265,775</b>	
<b>Sub Total for Building 170A - Main building includes Administration Offices, Classrooms, Cafeteria, &amp; Gym.</b>		<b>66</b>	<b>items</b>		<b>\$4,974,399</b>	

**Building: 170B - Stand-Alone Classroom Building**
**Mechanical**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Heat Pump HVAC Component Replacement <b>Note:</b> Equipment uses R-22 refrigerant and is obsolete <b>Location:</b> Mechanical Mezzanine	Capital Renewal	9	Ea.	2	\$80,169	919
Energy Recovery Unit Replacement <b>Note:</b> Unit is beyond its useful life and needs to be replaced. <b>Location:</b> Mechanical Mezzanine	Capital Renewal	1	Ea.	3	\$27,087	920
<b>Sub Total for System</b>		<b>2</b>	<b>items</b>		<b>\$107,256</b>	

**Electrical**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Exterior Dry Type Transformer Replacement <b>Note:</b> Corroded <b>Location:</b> West	Capital Renewal	1	Ea.	2	\$20,081	916
Lightning Protection Terminal Replacement <b>Location:</b> Building wide	Deferred Maintenance	10,017	SF	3	\$1,680	915
<b>Sub Total for System</b>		<b>2</b>	<b>items</b>		<b>\$21,761</b>	

**Plumbing**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Water Heater Replacement <b>Note:</b> Unit is beyond its useful life and needs to be replaced. <b>Location:</b> Janitor's closet	Capital Renewal	1	Ea.	2	\$2,135	918
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$2,135</b>	

**Fire and Life Safety**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Fire Sprinkler System Replacement (SF Basis)	Capital Renewal	10,017	SF	1	\$104,358	921
<b>Note:</b> Missing						
<b>Location:</b> Building Wide						
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$104,358</b>	

**Specialties**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Cabinetry In Classes/Labs	Capital Renewal	8	Room	4	\$70,415	913
<b>Note:</b> Peeling/Overall deteriorated						
<b>Location:</b> All Classrooms						
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$70,415</b>	

**Crawlspace**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD	Deferred Maintenance	76,817	Ea.	5	\$90,249	6821
<b>Note:</b> SOIL/DRAINAGE BELOW BUILDING - improve drainage - 9198 GSF						
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD	Deferred Maintenance	17,956	Ea.	5	\$21,096	6822
<b>Note:</b> PERIMETER SOIL RETAINERS - repair - 430 LF						
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD	Deferred Maintenance	51,212	Ea.	5	\$60,166	6823
<b>Note:</b> CRAWL SPACE ACCESS/VENTILATION - Improve ventilation - 9198 GSF						
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD	Deferred Maintenance	5,568	Ea.	5	\$6,542	6824
<b>Note:</b> CRAWL SPACE ACCESS/VENTILATION - repair access - 2 EA						
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD	Deferred Maintenance	51,212	Ea.	5	\$60,166	6825
<b>Note:</b> STANDARD FOUNDATIONS - repair columns - 9198 GSF						
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD	Deferred Maintenance	51,212	Ea.	5	\$60,166	6826
<b>Note:</b> SUSPENDED FLOOR SLABS - repair slab bottom - 9198 GSF						
CRAWL SPACE DEFICIENCIES - Estimate and Info by AISD	Deferred Maintenance	97,435	Ea.	5	\$114,472	6827
<b>Note:</b> CRAWL SPACE, EXPOSED PIPES - CRAWL SPACE, EXPOSED PIPES - 1 LS						
<b>Sub Total for System</b>		<b>7</b>	<b>items</b>		<b>\$412,857</b>	
<b>Sub Total for Building 170B - Stand-Alone Classroom Building</b>		<b>14</b>	<b>items</b>		<b>\$718,781</b>	
<b>Total for Campus</b>		<b>89</b>	<b>items</b>		<b>\$8,937,003</b>	

**Boone ES - Life Cycle Summary Yrs 1-10**

**Building: 170A - Main building includes Administration Offices, Classrooms, Cafeteria, & Gym.**

**Roofing**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Canopy Roofing	Steel panels	2,175	SF	\$110,348	5
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>	<b>\$110,348</b>	

**Exterior**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Entrance Doors	Steel - Insulated and Painted	12	Door	\$44,484	2
Exterior Entrance Doors	Storefront Doors - Glass/Aluminum	22	Door	\$87,318	2
Exterior Wall Veneer	Metal Panel - Bldg SF basis	9,551	SF	\$34,117	6
<b>Sub Total for System</b>		<b>3</b>	<b>items</b>	<b>\$165,919</b>	

**Interior**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Paneling	Wood Panel wall	19,102	SF	\$299,559	4
Interior Swinging Doors	Wooden Door	168	Door	\$315,101	4
Interior Door Supplementary Components	Door Hardware	190	Door	\$282,075	4
Suspended Plaster and	Painted ceilings	3,184	SF	\$6,631	5
Acoustical Suspended Ceilings	Exposed Tectum Ceilings	3,820	SF	\$49,685	5
Wall Painting and Coating	Painting/Staining (Bldg SF)	1	SF	\$4	5
Carpeting	Carpet	6,367	SF	\$80,607	5
Resilient Flooring	Vinyl Composition Tile Flooring	47,754	SF	\$390,518	5
Interior Swinging Doors	Metal Door (Steel)	22	Door	\$63,664	5
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	54,121	SF	\$182,753	6
Tile Wall Finish	Ceramic Tile wall	3,820	SF	\$31,713	8
Tile Flooring	Ceramic Tile	2,547	SF	\$44,999	8
Tile Flooring	Quarry Tile	2,547	SF	\$69,627	9
Compartments and Cubicles	Toilet Partitions	8	Stall	\$16,132	10
Athletic Flooring	Athletic/Sport Flooring	3,184	SF	\$48,847	10
Wood Flooring	Wood Flooring - All Types	637	SF	\$13,721	10
<b>Sub Total for System</b>		<b>16</b>	<b>items</b>	<b>\$1,895,637</b>	

**Mechanical**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Heating System Supplementary Components	Controls - Electronic (Bldg.SF)	63,672	SF	\$98,523	3
Decentralized Cooling	Heat Pump (10 Ton)	47	Ea.	\$1,130,077	4
Air Distribution	Make-up Air Unit	2	Ea.	\$17,777	4
<b>Note:</b> Roof					
Exhaust Air	Roof Exhaust Fan - Large	5	Ea.	\$40,181	5
Exhaust Air	Wall Exhaust Fan	3	Ea.	\$14,194	5
Facility Hydronic Distribution	2-Pipe System (Cold)	63,672	SF	\$113,856	6
Facility Hydronic Distribution	2-Pipe Water System (Hot)	63,672	SF	\$270,863	6
Heat Generation	Boiler - Copper Tube (1200 MBH)	1	Ea.	\$55,544	7
<b>Note:</b> HydroTherm KM-10					
Heat Generation	Boiler - Cast Iron - Water (1275 MBH)	1	Ea.	\$41,601	10
<b>Note:</b> Teledyne Laars					
Central Cooling	Cooling Tower - Metal (300 Tons)	1	Ea.	\$57,829	10
Other HVAC Distribution Systems	VFD (7.5 HP)	2	Ea.	\$10,446	10
Facility Hydronic Distribution	Pump - 1HP or Less (Ea.)	2	Ea.	\$8,626	10
Facility Hydronic Distribution	Pump - 1HP or Less (Ea.)	1	Ea.	\$4,313	10
Facility Hydronic Distribution	Pump- 25HP (Ea.)	2	Ea.	\$28,763	10
Exhaust Air	Kitchen Exhaust Hoods	3	Ea.	\$33,574	10
<b>Sub Total for System</b>		<b>15</b>	<b>items</b>	<b>\$1,926,167</b>	

**Electrical**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Building Mounted Fixtures (Ea.)	2	Ea.	\$1,803	6
Parking Lot Lighting	Pole Lighting	5	Ea.	\$29,098	6
Electrical Service	Transformer (112.5 KVA)	1	Ea.	\$9,908	8

**Electrical**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Electrical Service	Transformer (75 KVA)	1	Ea.	\$7,287	8
Power Distribution	Panelboard - 120/208 400A	2	Ea.	\$24,683	8
Power Distribution	Panelboard - 120/208 225A	1	Ea.	\$5,500	8
Audio-Video Systems	PA Communications No Head Unit (Bldg SF)	63,672	SF	\$45,072	8
Distributed Systems	Public Address System Head End Unit	1	Ea.	\$7,307	8
	<b>Note:</b> Connects to all VOIP phones				
Lighting Fixtures	Building Mounted Fixtures (Ea.)	6	Ea.	\$5,410	8
Lighting Fixtures	Canopy Mounted Fixtures (Ea.)	20	Ea.	\$41,659	10
Lighting Fixtures	Light Fixtures (Bldg SF)	63,672	SF	\$1,167,652	10
Power Distribution	Power Wiring	63,672	SF	\$75,622	10
	<b>Sub Total for System</b>	<b>12</b>	<b>items</b>	<b>\$1,421,003</b>	

**Plumbing**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Gas Piping System (BldgSF)	63,672	SF	\$2,207,844	6
Domestic Water Piping	Domestic Water Piping System (Bldg.SF)	63,672	SF	\$228,820	6
Sanitary Sewerage Piping	Sanitary Sewer Piping	63,672	SF	\$70,690	6
Plumbing Fixtures	Classroom Lavatory	40	Ea.	\$102,580	6
Plumbing Fixtures	Restroom Lavatory	6	Ea.	\$16,298	6
Plumbing Fixtures	Toilets	42	Ea.	\$212,494	6
Plumbing Fixtures	Urinals	2	Ea.	\$2,708	6
Domestic Water Equipment	Water Heater - Electric - 5 to 10 gallon	1	Ea.	\$1,264	10
Domestic Water Equipment	Water Heater - Gas - 100 Gallon	1	Ea.	\$6,384	10
Plumbing Fixtures	Non-Refrigerated Drinking Fountain	7	Ea.	\$16,686	10
	<b>Sub Total for System</b>	<b>10</b>	<b>items</b>	<b>\$2,865,768</b>	

**Fire and Life Safety**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm	63,672	SF	\$101,100	3
Security System Component	Security Alarm System	63,672	SF	\$146,555	4
	<b>Sub Total for System</b>	<b>2</b>	<b>items</b>	<b>\$247,655</b>	
	<b>Sub Total for Building 170A - Main building includes Administration Offices, Classrooms, Cafeteria, &amp; Gym.</b>	<b>59</b>	<b>items</b>	<b>\$8,632,496</b>	

**Building: 170B - Stand-Alone Classroom Building**
**Exterior**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Operating Windows	Aluminum - Windows per SF	261	SF	\$26,029	4
Exterior Entrance Doors	Steel - Insulated and Painted	4	Door	\$14,828	4
	<b>Sub Total for System</b>	<b>2</b>	<b>items</b>	<b>\$40,857</b>	

**Interior**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	9,516	SF	\$32,133	3
Wall Coverings	Vinyl/Fabric Wall Covering	50	SF	\$236	3
Interior Swinging Doors	Wooden Door	39	Door	\$73,148	3
Wall Painting and Coating	Painting/Staining (Bldg SF)	9,516	SF	\$42,640	4
Suspended Plaster and	Painted ceilings	501	SF	\$1,043	5
Resilient Flooring	Vinyl Composition Tile Flooring	10,017	SF	\$81,916	5
Acoustical Suspended Ceilings	Ceilings - Acoustical Grid System	9,516	SF	\$39,627	6
Interior Door Supplementary Components	Door Hardware	39	Door	\$57,900	8
	<b>Sub Total for System</b>	<b>8</b>	<b>items</b>	<b>\$328,644</b>	

**Mechanical**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Heating System Supplementary Components	Controls - Electronic (Bldg.SF)	10,017	SF	\$15,500	3
Facility Hydronic Distribution	2-Pipe System (Cold)	10,017	SF	\$17,912	5
Facility Hydronic Distribution	2-Pipe Water System (Hot)	10,017	SF	\$42,613	5
HVAC Air Distribution	Ductwork (Bldg.SF)	10,017	SF	\$79,259	6
	<b>Sub Total for System</b>	<b>4</b>	<b>items</b>	<b>\$155,283</b>	

**Electrical**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Power Distribution	Panelboard - 120/208 125A	2	Ea.	\$2,918	8



**Electrical**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Audio-Video Systems	PA Communications No Head Unit (Bldg SF)	10,017	SF	\$7,091	8
	<b>Note:</b> PA System Voice over IP is part of main building				
Lighting Fixtures	Light Fixtures (Bldg SF)	10,017	SF	\$183,697	10
	<b>Sub Total for System</b>	<b>3</b>	<b>items</b>	<b>\$193,706</b>	

**Plumbing**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Plumbing Fixtures	Non-Refrigerated Drinking Fountain	2	Ea.	\$4,768	3
Domestic Water Equipment	Water Heater - Electric - 30 gallon	1	Ea.	\$2,135	10
Plumbing Fixtures	Classroom Lavatory	8	Ea.	\$20,516	10
Plumbing Fixtures	Restroom Lavatory	1	Ea.	\$2,716	10
Plumbing Fixtures	Sink - Service / Mop Sink	1	Ea.	\$796	10
Plumbing Fixtures	Toilets	9	Ea.	\$45,534	10
	<b>Sub Total for System</b>	<b>6</b>	<b>items</b>	<b>\$76,465</b>	

**Fire and Life Safety**

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm	10,017	SF	\$15,905	3
Security System Component	Security Alarm System	10,017	SF	\$23,056	4
	<b>Sub Total for System</b>	<b>2</b>	<b>items</b>	<b>\$38,961</b>	
	<b>Sub Total for Building 170B - Stand-Alone Classroom Building</b>	<b>25</b>	<b>items</b>	<b>\$833,916</b>	
	<b>Total for: Boone ES</b>	<b>84</b>	<b>items</b>	<b>\$9,466,412</b>	

## Supporting Photos

### General Site Photos



Electrical room equipment



Obstructed electrical panel at stage



Outdated exterior transformer