

POUDRE SCHOOL
DISTRICT
BAUDER
ELEMENTARY
SCHOOL

FACILITY CONDITION ASSESSMENT

FORT COLLINS, CO

OCTOBER 2023



Together, Building a Thriving Planet

Table of Contents

KEY CONTACT INFORMATION.....	2
EXECUTIVE SUMMARY.....	3
SCOPE AND APPROACH.....	7
Scope of work.....	8
Ratings, Methods and Scoring.....	9
Cost Estimating.....	12
CONDITION ASSESSMENT.....	14
Systems Description - Bauder ES.....	15
Priorities.....	16
3-, 5-, 10-Year Plans.....	19
APPENDICES	24
Appendix A: 3-Year Plan Assets List.....	A
Appendix B: 5-Year Plan Assets List.....	B
Appendix C: 10-Year Plan Assets List.....	C

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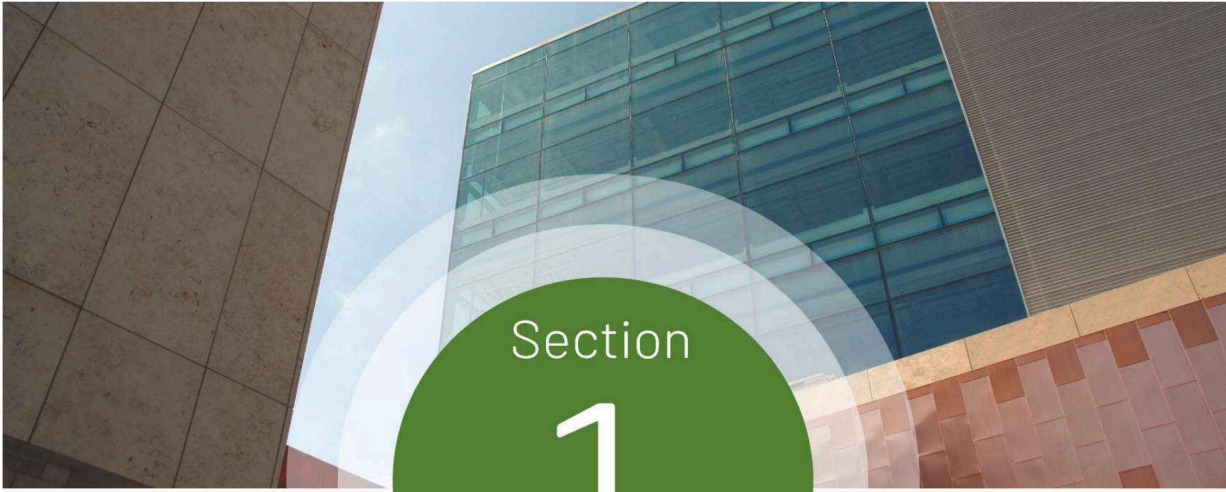
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Executive Summary

Executive Summary

Project Goals

The contents of this report present the results of the Facility Condition Assessment (FCA) performed at Bauder ES within the Poudre School District (PSD) on March 22, 2023. PSD intends to utilize the findings of this report to inform both capital and operating budgets, prioritize maintenance efforts, and optimize planning processes as replacements and upgrades of assets and facility systems become necessary in the future.

Facility List

The scope of the FCA project included the assessment of the following campus.

FACILITY NAME	AREA (SF)	YEAR(S) BUILT
BAUDER ES	63,156	1968
TOTAL	63,156	

Facility Summary

Bauder ES

Bauder ES is located at 2345 W. Prospect Rd., Fort Collins, CO 80526. This 63,156 SF facility consists of one level and was initially constructed in 1968. The equity index for this school is 1.62.



Bauder ES

Executive Summary

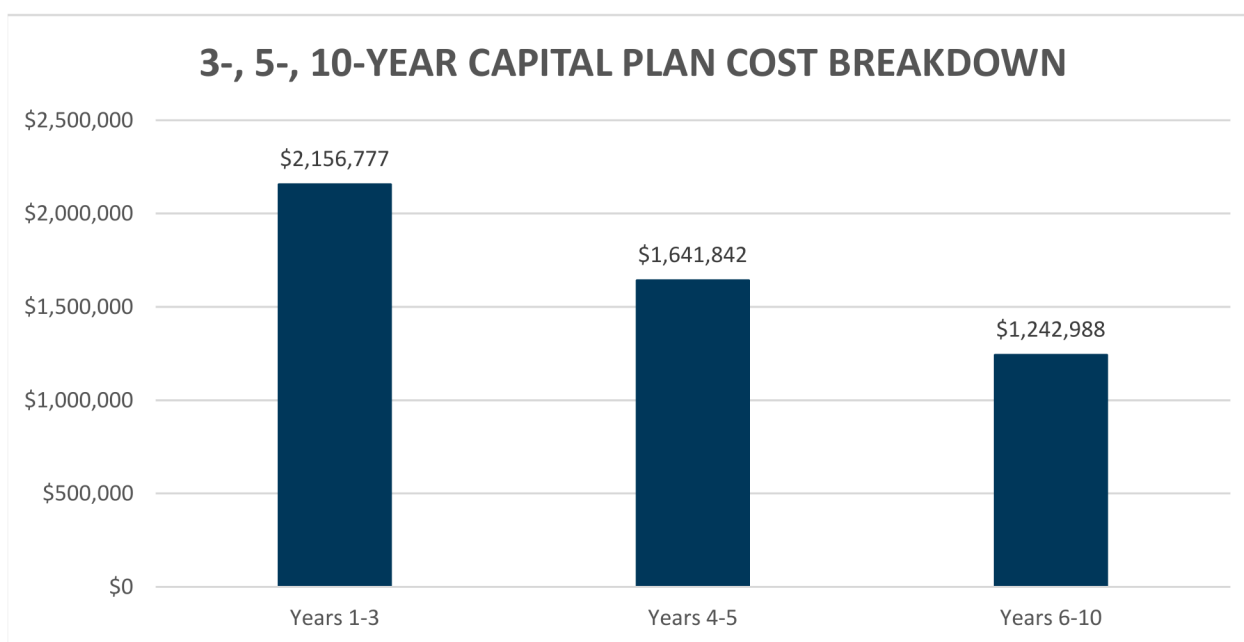
Assessment Summary

This section summarizes the building systems at the facility and describes the general condition observed based on the assessment performed on March 22, 2023. Additional details, findings and recommendations are presented in Section 3 of this report.

Capital Plan Summary

The estimated replacement costs for equipment expected to fail within the next ten years are shown below, divided into three separate plans. These plans are the 3-Year Plan, 5-Year Plan, and the 10-Year Plan. Each plan includes the cost for replacement of equipment expected to fail during these periods, based on the observed condition of the equipment at the time of the assessment.

Replacement costs include 3% inflation year over year.



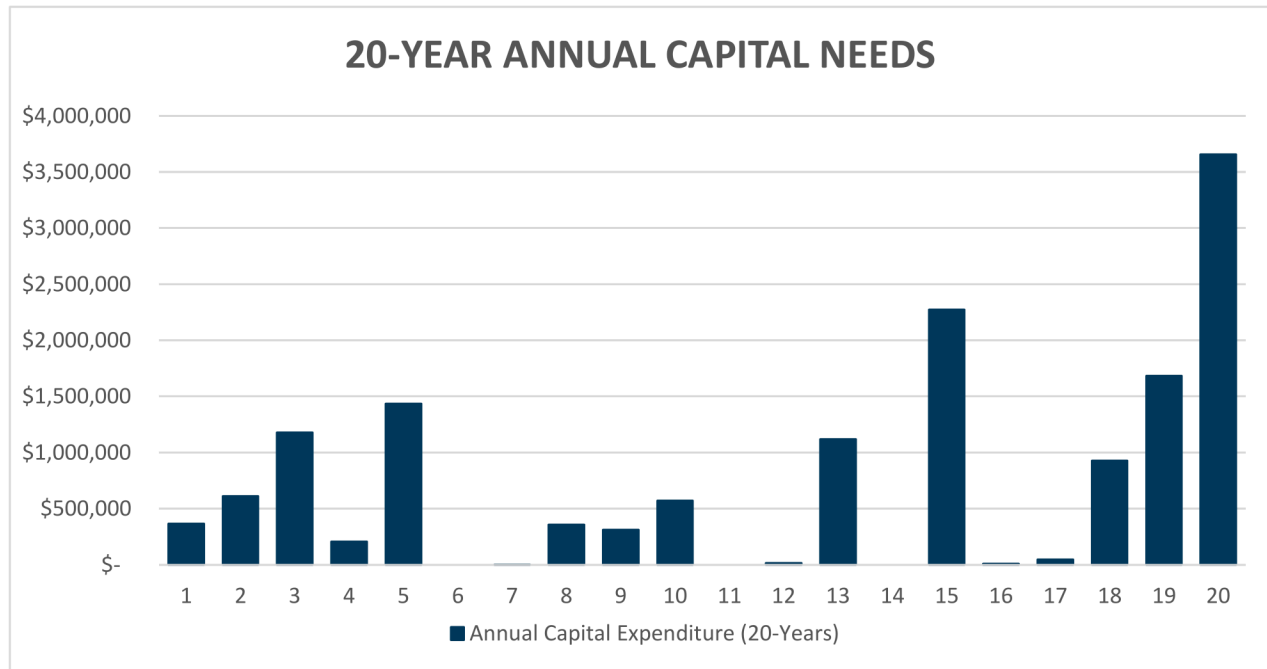
3-, 5-, 10-Year Capital Plan Cost Breakdown

Executive Summary

Annual Capital Expenditure (20 Years)

20-Year Annual Capital Needs and 20-Year Annual Capital Expenditure by Subsystem below indicate the estimated replacement costs for equipment expected to fail within the next twenty years, and are displayed both by year and by subsystem.

Replacement costs include 3% inflation year over year.



Annual Capital Expenditure by Year

Replacement costs associated with the Annual Capital Expenditure graph and table include values that are adjusted for inflation.

20-Year Annual Capital Expenditure by Subsystem

Subsystem	Years 1-5	Years 6-10	Years 11-15	Years 15-20
B20 - Enclosure	\$172,208	\$0	\$0	\$740,348
B30 - Roofing	\$505,245	\$38,608	\$0	\$0
C10 - Int. Construction	\$164,981	\$0	\$16,805	\$1,702,209
C20 - Stairs	\$0	\$0	\$0	\$0
C30 - Interior Finishes	\$927,281	\$524,454	\$1,111,081	\$111,903
D10 - Conveying	\$0	\$0	\$0	\$0
D20 - Plumbing	\$15,697	\$14,062	\$14,687	\$24,750
D30 - HVAC	\$745,302	\$357,329	\$1,505,632	\$1,234,641
D40 - Fire Suppression	\$0	\$0	\$0	\$0
D50 - Electrical	\$1,242,315	\$308,535	\$759,549	\$2,508,824
E10 - Equipment	\$25,589	\$0	\$0	\$0
Total:	\$2,028,904	\$679,926	\$2,279,868	\$3,768,215

Section

2

Approach and Methodology

Scope and Approach

Scope and Approach

SCOPE OF WORK

The scope of this facility condition assessment includes all major mechanical, electrical, and plumbing equipment, and commercial refrigeration equipment. In addition, the building enclosure, roofing, interior construction and finishes, and fire suppression systems are included within the assessment. Turf, site assets, kitchen assets besides walk-in freezers, exhaust fans and kitchen make up air units are not included in scope.

The following table lists the general asset types included within the scope of this assessment. Also shown is the corresponding Unifomat code, which has been used to catalog equipment based on type and intended use.

UniFormat Classification of Building Systems

UNIFORMAT CODE	CATEGORY DESCRIPTION
B20	Exterior Enclosure (i.e. windows, walls, doors)
B30	Roofing (i.e. roofing covering, skylights, etc.)
C10	Interior Construction (i.e. doors, walls)
C20	Interior Stairs (i.e. stair construction)
C30	Interior Finishes (i.e. flooring, ceiling finishes, etc.)
D10	Conveying (i.e., elevators)
D20	Plumbing (i.e., water heating, pumps, compressors)
D30	Heating, Ventilation, and Air Conditioning
D40	Fire Suppression Systems
D50	Electrical (panelboards, transformers, switchgear)
E10	Equipment, Kitchen Hoods, Walk-in Units, etc.

Scope and Approach

RATINGS, METHODS AND SCORING

To allow Poudre School District more flexibility in prioritizing capital planning efforts, McKinstry has developed the following metrics which assign various scores to each asset.

Asset Condition

Condition ratings are presented for each asset as a score of 1 – 5. Scores are based upon a visual inspection during the building evaluation period. A score of 1 signifies that the asset is in great, “like new” condition. A score of 2 indicates that the asset is in good condition. A score of 3 signifies that the asset is in expected “average” condition based on function and the age of the asset. A score of 4 signifies that the asset is in poor condition, in need of repair, and will require replacement in the near future. A score of 5 signifies that the asset is in very poor or failed condition and in need of imminent replacement.

SCORE	CONDITION ASSESSMENT
1	Asset is in great condition, no action required.
2	Asset is in good condition, regular maintenance expected.
3	Asset is in expected condition, regular replacement/maintenance expected.
4	Asset is in poor condition, maintenance/replacement recommended soon.
5	Asset is in very poor condition, urgent replacement needed.

Student/Teacher Impact

Student/Teacher Impact scores are presented for each asset on a scale of 1 – 5 (low to high impact). This metric considers educational (student and/or teacher) impact caused if the equipment were to fail. Assets serving classrooms and other educational spaces are assigned scores of 2-5 depending on the impact the failure of an asset would have and if backups are available. A student/teacher impact score of 1 indicates that there is little to no impact to educational activities.

SCORE	STUDENT/TEACHER IMPACT
1	Failure poses no significant educational impact.
2	Failure poses low educational impact.
3	Failure poses moderate impact. Asset serves teaching area, but has backup.
4	Failure poses high educational impact.
5	Failure poses severe impact. Asset serves teaching area and has no backup.

Energy Cost Impact

The Energy Impact score is presented for each asset on a scale of 1-5 (low to high impact). Each of the asset types within the scope of this assessment were evaluated based on their impact to energy cost and consumption (including electrical, natural gas, and liquid fuels). Assets with a higher Energy Cost Impact score indicate that the asset has a large contribution to the overall energy costs of the facility. A sample of Energy impact scores is shown below:

Scope and Approach

ASSET TYPE	ASSET SIZE	ENERGY COST IMPACT (1-5)
Air Handling Unit	less than 10,000 CFM	3
	between 10,000 CFM – 50,000 CFM	4
	greater than 50,000 CFM	5
Chiller	less than 200 tons	3
	between 200 – 500 tons	4
	greater than 500 tons	5
Computer Room AC Condensing Unit Heat Pump	less than 10 tons	2
	greater than 10 tons	3
Cooling Tower	less than 200 tons of rejection	2
	greater than 200 tons of rejection	3
Dust Collector	less than 5 HP	2
	between 5 HP and 25 HP	3
	greater than 25 HP	4
Exhaust Fan	less than 5000 CFM	2
	greater than 5000 CFM	3
Fan Coil Unit	greater than 3000 CFM	2
Fuel Fired Boiler	less than 200 MBH	2
	between 200 – 1000 MBH	3
	between 1000 – 2000 MBH	4
	greater than 2000 MBH	5
Furnace	less than 100 MBH	2
	between 100 and 500 MBH	3
	greater than 500 MBH	4
Generator	less than 500 KW	2
	greater than 500 KW	3
Lighting, Exterior	LED	2
	Fluorescent	3
	HID/Incandescent	4
Lighting, Interior	LED	2
	Fluorescent	4
	HID/Incandescent	5
Make-Up Air Unit	less than 5,000 CFM	3
	between 5,000 and 25,000 CFM	4
	greater than 25,000 CFM	5
Pumps	less than 25 HP	2
	between 25 -150 HP*	3
	greater than 150 HP*	4
Return Fan Supply Fan	less than 20 HP	2
	greater than 20 HP*	3

Scope and Approach

ASSET TYPE	ASSET SIZE	ENERGY COST IMPACT (1-5)
Rooftop Unit	less than 5 ton	2
	between 5 and 20 tons	3
	between 20 and 50 tons	4
	greater than 50 tons	5
Transformer	greater than 200 kVA	2
VFD	greater than 50 HP	2
Air Compressor	All sizes	2
Air Curtain		
Air Dryer		
Cabinet Unit Heater		
Dehumidifier		
Electric Duct Heater		
Humidifier		
Unit Heater		
Unit Ventilator		
Walk-In Condenser		
Walk-In Unit		
All Other		

*Add 1 for direct drive motors

Operational Impact

Operational Impact scores are presented for each asset on a scale of 1 – 5 (low to high impact). This metric considers the operational impact caused if the equipment were to fail. Assets serving critical administrative and district operational spaces are assigned scores of 2-5 depending on the impact the failure of an asset would have and if backups are available. An operational impact score of 1 indicates that there is little to no impact to administrative or operational activities.

SCORE	OPERATIONAL COST IMPACT SCORE
1	Asset has little to no operational impact.
2	Asset has a low level of operational impact.
3	Asset has a moderate operational impact.
4	Asset has a high level of operational impact.
5	Asset has severe operational impact.

Industry Life Expectancy

The designed life expectancy for a given asset is determined using a combination of widely accepted industry standards including ASHRAE and BOMA, as well as a manufacturers’ database of equipment life expectancies. This value is expressed in number of years.

Scope and Approach

Observed Remaining Life

The Observed Remaining Life is also expressed in number of years and takes into consideration the function and operating environment of the asset, as well as a determination based upon a visual inspection of the asset. The Observed Remaining Life value may vary from the Design Life value. For example, a secondary heat exchanger that has been well maintained may have an Observed Remaining Life that is greater than the expected Design Life. Likewise, a primary chilled water pump that has not been well maintained, and shows visual signs of premature wear and tear, may have an Observed Remaining Life that is less than the expected Design Life.

Cost Estimating

Based on the constraints of the scope outlined in the contract we have based our asset pricing upon industry standards, RSMMeans, and pricing data sourced through McKinstry's construction division. This information is intended to assist in the prioritization and resource allocation associated with maintenance and capital replacement projects. Cost estimates are determined using specific characteristics of each asset (tonnage, motor size, capacity, etc.) along with one of several cost information data sets. Standard equipment warranties are included.

To clarify, all Estimated Replacement Costs include averages of the material cost of the asset, the demolition and installation of that asset type and are expressed in 2023 dollars. Additionally, site specific construction and equipment invoices have been utilized as available.

Costs associated with project design, contractor competence, commissioning, test and balance services and are excluded from the estimate and are the responsibility of the Client. McKinstry assumed a 3% inflation, applied year over year. All work is during normal business hours. For mechanical equipment any duct work, piping, existing appurtenances are to be reused; costs to repair or replace any lines going to or coming from the units is excluded. Existing isolation valves to be used; repair or replacement of isolation valves is excluded.

Costs typically associated with project-specific parameters are excluded and should be added at the discretion of the Client. Such exclusions include risks or contingencies such as asbestos abatement, other hazardous waste abatement, scope changes, design changes, taxes, special wage requirements such as Prevailing Wage rates, warranty management and unknown site conditions. Overtime and after-hours work is excluded. Any necessary structural or electrical upgrades to replace equipment is excluded. Incidental code violations resulting from project scope or execution are excluded. Correction of any existing code violations are excluded. Temporary heating, cooling, ventilation, and power during construction and the warranty period are excluded. Moving of heavy equipment or furniture to complete the work is excluded. Running and terminating new IP drops for equipment is excluded. Any changes to fire and life safety systems for mechanical equipment upgrades is excluded.

Data-Driven Maintenance Approach

Included with the submission of this report is the FCA Data Collection Workbook, which includes all data collected for each asset. The Workbook can be used to quickly sort through equipment and prioritize maintenance and replacement efforts. Additional observations and equipment details are provided within the workbook for each asset.

Scope and Approach

Each asset is classified according to building system, size, capacity, and other standards, as well as ratings of current condition and impact of failure. Such organization and classification facilitate searching and sorting the data for maintenance and replacement priorities. As mentioned, the impact ratings help to compare one asset to another. Based on observed condition and impact scores, the future maintenance priorities for each building are described further in later sections.

As each of the components identified in the workbook is repaired or replaced, the information can be revised to reflect the new conditions. Remaining useful life values can also be manually iterated one year from the assessment date to reflect fewer remaining years of life. Assets no longer in service can be removed from the list. Similarly, assets that have been newly installed can be added to the list. Following the impact guidelines, relative priority can be calculated for these assets.

Equity Index

As an additional metric to the six existing areas of the Facilities Condition Assessment, Poudre School District has created an Equity Index to assist in prioritizing facilities improvement projects. This number takes into account student poverty, students qualifying for ELA services, students qualifying for Special Education services, and students who are homeless. The calculated score for each school is based on these factors and where it falls in relation to the district average. The formula would be:

$$\frac{\text{School Percentage in these areas added together as decimals}}{\text{District Percentages in these areas added together as decimals}}$$

In this formula, a school with student needs equal to the district average would have an equity index of 1.0. Schools with student needs higher than the district average would have an Equity Index greater than 1.0. Schools with student needs less than the district average would have an Equity Index less than 1.0.

Category	Equity Index
Low	0.29
High	3.20
Average	1.11
Median	0.95

The equity index for Bauder ES is 1.62.

Sample Calculation:

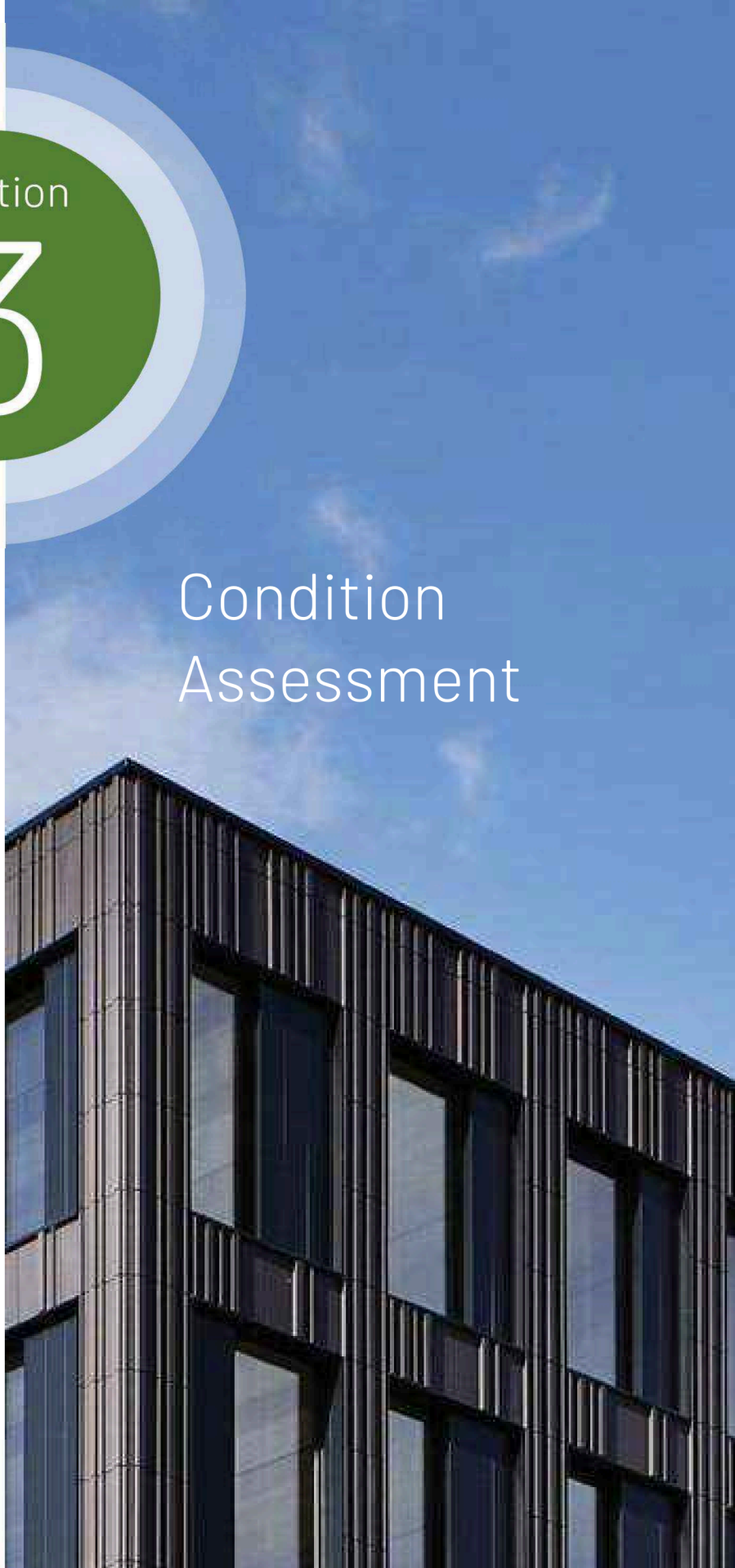
School Name	School Population K-12 Total	F/R	ELL	SPED	McKinney-Vento	Total of Previous Columns	Equity Index Number = school average / district average
Sample	381	15.20%	0.00%	8.40%	0.00%	0.24	0.24/0.48 = 0.49
Grand PSD Total - Oct 2022 Count	26,163	29.5%	5.8%	9.5%	3.4%	0.48	

F/R - Free or Reduced-Price Lunch; ELL- English Language Learners; SPED - Special Ed.; McKinney-Vento - Homeless Assistance

Section

3

Condition Assessment



Condition Assessment

SYSTEMS DESCRIPTION

This section summarizes the building systems at Bauder ES and describes the general condition observed based on the assessment. Specific findings and recommendations are detailed later in this report.

Exterior Enclosure

The original building was constructed in 1968. Subsequent additions to the school were completed in 1970, 1988, and 1992. Renovations occurred in 1982, 2003, and 2013. All sections of the school are primarily of brick construction, but standing metal seam mansard-type walls were installed during the 2013 renovation. Windows are typically of the steel framed type [REDACTED]

Roofing

Rolled asphalt roofing is present on all building sections. It is believed that the rolled asphalt roof was updated in 2003. However, staff reported multiple and ongoing roof leaks in the school.

Interior Construction and Finishes

Interior walls are primarily of brick and CMU and vary in age. Many of the interior finish components were updated in 2013 but some original finishes remain. There exists original 1968 acoustical tile ceiling in the gym [REDACTED] and a small section of 1968 VCT tile flooring.

Conveyance

The building is comprised of a single story and therefore does not require an elevator.

Electrical and Lighting

The building includes both 120/208V and 277/480V service. Electrical assets, including panelboards, transformers, and switchboards vary in age. The back-up generator serving this building dates to 1992 [REDACTED]. Emergency back-up lighting and all interior lighting was updated entirely to LED fixtures in 2022. Fourteen 1992 incandescent exterior wall packs [REDACTED]. The security system and fire alarm system were replaced in 2013. [REDACTED]. The interior main switchboard also dates to 1968 but may be abandoned in place as a 1992-built exterior switchboard also exists.

HVAC Systems

HVAC assets include (10) RTUs, (46) VAVs with HW Reheat, (9) Exhaust Fans, and two Condensing Units. The VAVs were replaced in 2013. Of the ten RTUs, 8 were replaced in 2013 but two (RTU-3 and RTU-103 (RTU-9)) date to 1992 [REDACTED]. All EFs are expected to require replacement within 2-3 years. The condensing units are 16 years past expected life but it is recommended to replace these units in conjunction with the two walk-in units in three years. The BAS was replaced in 2016 and is in good condition. The Heating System is comprised of two boilers and two HWPBs built in 1992. The HWPBs need to be replaced within two years and the boilers are expected to require replacement within 4 years.

Plumbing

Plumbing assets include two BFPs, two DHW circulation pumps, and two gas-fired water heaters. G [REDACTED]. GWH-2 and DHWCP-2 were replaced in 2018-2019 and are in good condition.

Fire Suppression

The fire alarm system was replaced in 2013 and is consistent with current fire code requirements. Anticipate replacement of the fire alarm system within 5 years.

Equipment

The Walk-In Cooler and Walk-In Freezer date to 1992 and are 11 years past expected life. Expect to replace both units within three years. The two associated condensing units are 16 years past expected life.

Condition Assessment

PRIORITIES

SPECIFIC PRIORITIES

The top capital measures (up to five max) have been detailed in the following tables. Each measure receives a priority level of 1, 2, or 3. A priority level of 1 indicates that the measure is considered an immediate concern or a potential hazard and should be addressed as soon as possible. A priority level of 2 indicates that the measure is considered urgent, but not a potential hazard or there is a less severe impact to occupants. A priority level of 3 indicates that the assets associated with the measure are nearing end of life, but have not yet failed or have a mild to moderate impact on occupant safety and comfort.

Bauder ES

Replace Panel C

Panel C dates to 1968 and is now 15 years past expected life. [REDACTED]



The following assets are included within this measure:

FCAID-03137



Priority Level:	1
Estimated Cost:	\$4,740
Remaining Life:	1 Year

Condition Assessment

Replace Emergency Back-Up Generator

The Generator was built in 1992 and is 11 years past expected life. Per PSD, the Total Generator Run Hours = 339.5 . Recommend replacement within three years.



The following assets are included within this measure:

FCAID-03126

Priority Level: 2
Estimated Cost: \$22,400
Remaining Life: 3 Years

Replace 1992 Rooftop Units

RTU-3 and RTU-103 (RTU-9) are both 1992-built Temptrol units 6 years past expected life. RTU-3 is [REDACTED], requiring replacement within the year. RTU-103 (RTU-9 in the BAS) [REDACTED] a recommended replacement within two years.



The following assets are included within this measure:

FCAID-03073, FCAID-03070



Priority Level: 2
Estimated Cost: \$213,300
Remaining Life: 1-2 Years

Condition Assessment

Replace P-1 & P-2

P-1 and P-2 serve as the HWS circulation pumps. They date to 1992 and are both 11 years past expected life. [REDACTED]. Recommend replacement within two years, or in 4 years when Boilers 1 and 2 are expected to require replacement.

The following assets are included within this measure:

FCAID-03066, FCAID-03067



Priority Level: 2
Estimated Cost: \$16,600
Remaining Life: 2-4 Years

Replace GWH-1 & DHWCP-1

GWH-1 and associated circulation pump DHWCP-1 were both observed to have leakage and corrosion. Both are recommended to be replaced within two years

The following assets are included within this measure:

FCAID-03045, FCAID-03043



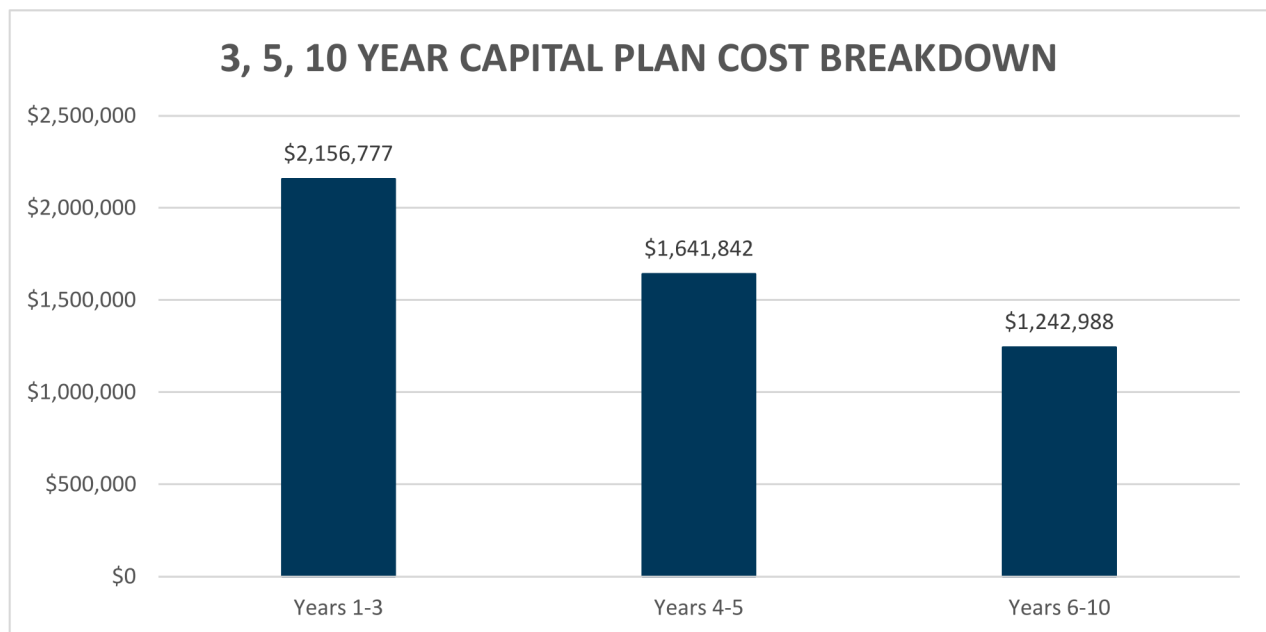
Priority Level: 2
Estimated Cost: \$15,240
Remaining Life: 2 Years

Condition Assessment

3-, 5-, 10-YEAR PLANS

The following sections present the expected equipment replacement costs over the next ten years, broken into three separate plans. These plans are the 3-Year Plan, 5-Year Plan, and the 10-Year Plan. Each plan includes the equipment expected to fail during these periods, based on the observed condition of the equipment at the time of the assessment. Note, the 3-Year Plan includes assets failing within the next three years, the 5-Year Plan includes assets failing between four and five years, and the 10-Year Plan includes assets failing between in the next six to ten years from the assessment date.

The chart below presents the total expected replacement costs for each plan. Note that these figures include 3% inflation YOY.



Future Capital Plan

The table below displays replacement costs for the campus, and the number of associated assets expected to fail within the next ten years. Assets requiring replacement or extensive maintenance in this plan are presented in Appendices A, B, and C.

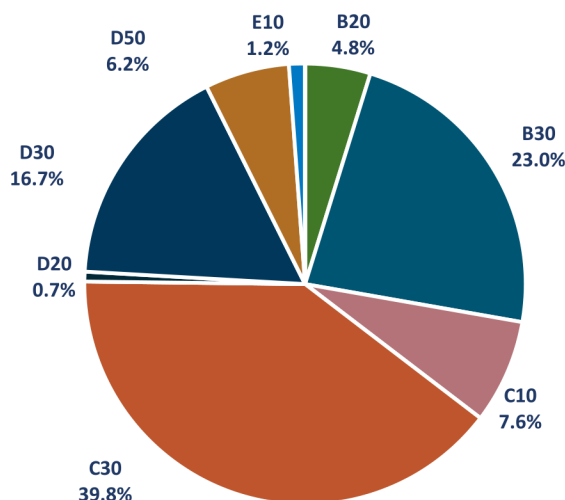
REPLACEMENT PERIOD	ASSET QUANTITY	CUMULATIVE REPLACEMENT COST
3-Year Plan	44	\$2,156,777
5-Year Plan	12	\$1,641,842
10-Year Plan	68	\$1,242,988
Total	124	\$5,041,606

Condition Assessment

3-YEAR PLAN BREAKDOWN

The three-year plan includes the estimated capital expenditure needed to replace assets reaching end of life in years 1-3, or between 2024 and 2026. The sum of the anticipated capital needs is \$2,156,777. The specific assets that will reach end of life in this period are listed in Appendix A.

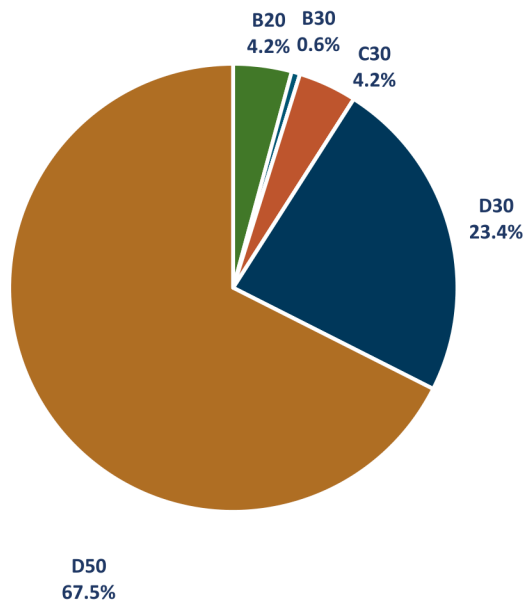
SUBSYSTEM	Years 1-3	Percent
A10 - Foundations	\$0	0%
B10 - Superstructure	\$0	0%
B20 - Exterior Enclosure	\$103,259	5%
B30 - Roofing	\$495,240	23%
C10 - Int. Construction	\$164,981	8%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$857,995	40%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$15,697	1%
D30 - HVAC	\$360,586	17%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$133,430	6%
E10 - Equipment	\$25,589	1%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%



5-YEAR PLAN BREAKDOWN

The five-year plan includes the estimated capital expenditure needed to replace assets reaching end of life in years 4-5, or between 2027 and 2028. The sum of the anticipated capital needs is \$1,641,842. The specific assets that will reach end of life in this period are listed in Appendix A.

SUBSYSTEM	Years 4-5	Percent
A10 - Foundations	\$0	0%
B10 - Superstructure	\$0	0%
B20 - Exterior Enclosure	\$68,949	4%
B30 - Roofing	\$10,006	1%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$69,286	4%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$0	0%
D30 - HVAC	\$384,716	23%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$1,108,885	68%
E10 - Equipment	\$0	0%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%

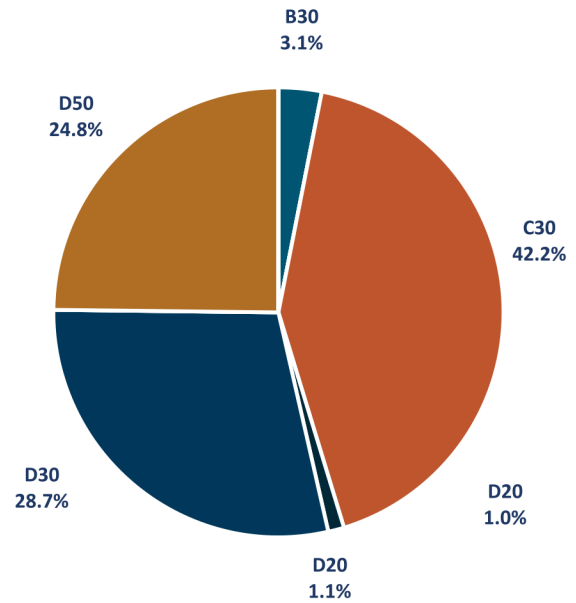


Condition Assessment

10-YEAR PLAN BREAKDOWN

The ten-year plan includes the estimated capital expenditure needed to replace assets reaching end of life in years 6-10, or between 2029 and 2033. The sum of the anticipated capital needs is \$1,242,988. The specific assets that will reach end of life in this period are listed in Appendix A.

SUBSYSTEM	Years 6-10	Percent
A10 - Foundations	\$0	0%
B10 - Superstructure	\$0	0%
B20 - Exterior Enclosure	\$0	0%
B30 - Roofing	\$38,608	3%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$524,454	42%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$14,062	1%
D30 - HVAC	\$357,329	29%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$308,535	25%
E10 - Equipment	\$0	0%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%



Condition Assessment

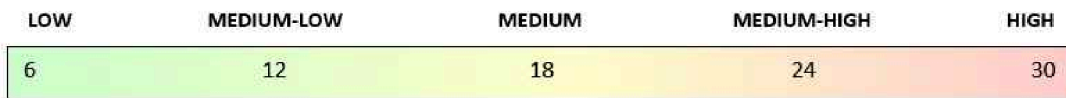
PRIORITY SUMMARY

The summary below assigns a composite Overall Priority Score to the campus as of the assessment date. Priority Scores range from 6 (low priority) to 30 (high priority), and are based on asset condition, operating impact, student impact, energy impact, estimated replacement cost, and observed remaining life.

In addition to the Overall Priority Score, each Subsystem category within the site is assigned a Priority Score. This score can differentiate systems that may need more attention than others, due to condition or impact on occupants or operations. Each Subsystem category includes a general narrative section under the Description column.

Future Capital Plan

The Subsystem scores are color coded to reflect the level of priority: ≤ 12 = Green, 12.1-23.9 = Yellow, ≥ 24 = Red. Higher priority scores indicate that a system should be considered for maintenance or capital improvements before other systems with lower scores. The rating scale for Priority Score is visualized below.



Condition Assessment

PRIORITY SCORE SUMMARY - BAUDER ES

	BAUDER ES	
	BUILDING TYPE:	Elementary School
	YEAR BUILT:	1968
	GROSS AREA (SF):	63,156
	DATE ASSESSED:	March 22, 2023
PRIORITY SCORE:	16.3	

SUBSYSTEM:	DESCRIPTION	PRIORITY SCORE
B20 - Ext. Enclosure	The original building was constructed in 1968. Subsequent additions to the school were completed in 1970, 1988, and 1992. Renovations occurred in 1982, 2003, and 2013. All sections of the school are primarily of brick construction, but standing metal seam mansard-type walls were installed during the 2013 renovation. [REDACTED]	12.9
B30 - Roofing	Rolled asphalt roofing is present on all building sections. It is believed that the rolled asphalt roof was updated in 2003. However, staff reported multiple and ongoing roof leaks in the school.	19.0
C10 - Int. Construction	Interior walls are primarily of brick and CMU and vary in age. Many of the interior finish components were updated in 2013 but some original finishes remain. There exists original 1968 acoustical tile ceiling in the gym [REDACTED] and a small section of 1968 VCT tile flooring.	13.4
C30 - Interior Finishes		15.4
D20 - Plumbing	Plumbing assets include two BFPs, two DHW circulation pumps, and two gas-fired water heaters. GWH-1 and DHWCP-1 are [REDACTED] exhibiting leakage and corrosion. GWH-2 and DHWCP-2 were replaced in 2018-2019 and are in good condition.	13.3
D30 - HVAC	HVAC assets include (10) RTUs, (46) VAVs with HW Reheat, (9) Exhaust Fans, and two Condensing Units. The VAVs were replaced in 2013. Of the ten RTUs, 8 were replaced in 2013 but two (RTU-3 and RTU-103 (RTU-9)) date to 1992 [REDACTED] All EFs are expected to require replacement within 2-3 years. The condensing units are 16 years past expected life but it is recommended to replace these units in conjunction with the two walk-in units in three years. The BAS was replaced in 2016 and is in good condition. The Heating System is comprised of two boilers and two HWPBs built in 1992. The HWPBs need to be replaced within two years and the boilers are expected to require replacement within 4 years.	17.7
D40 - Fire Suppression	The fire alarm system was replaced in 2013 and is consistent with current fire code requirements. Anticipate replacement of the fire alarm system within 5 years.	N/A
D50 - Electrical	The building includes both 120/208V and 277/480V service. Electrical assets, including panelboards, transformers, and switchboards vary in age. The back-up generator serving this building dates to 1992 [REDACTED] Emergency back-up lighting and all interior lighting was updated entirely to LED fixtures in 2022. [REDACTED] The security system and fire alarm system were replaced in 2013. [REDACTED] The interior main switchboard also dates to 1968 but may be abandoned in place as a 1992-built exterior switchboard also exists.	19.5
E10 - Equipment	The Walk-In Cooler and Walk-In Freezer date to 1992 and are 11 years past expected life. Expect to replace both units within three years. The two associated condensing units are 16 years past expected life.	16.0

System priority scored from 6 (lowest priority) to 30 (highest priority) based on condition, operating impact, student/teacher impact, energy impact, estimated replacement cost, and observed remaining life. [≤12 = green, 12-24 = yellow, ≥24 = red]

Appendices

- A. 3-YEAR PLAN ASSETS LIST
- B. 5-YEAR PLAN ASSETS LIST
- C. 10-YEAR PLAN ASSETS LIST

Appendix A

APPENDIX A: 3-YEAR PLAN ASSETS LIST

The individual assets associated with the 3-Year Plan are shown below, sorted from highest to lowest priority score. The priority score key is shown below for convenience.

Note that these values represent current replacement costs expressed in 2023 dollar amounts and are not adjusted for inflation.

LOW	MEDIUM-LOW	MEDIUM	MEDIUM-HIGH	HIGH
6	12	18	24	30

The asset ID listed for each entry has been assigned during this assessment and reflects the corresponding asset in the FCA workbook.

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ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING	REPLACEMENT COST	PRIORITY SCORE
FCAID-03073	RTU-3	D30 - HVAC	1	\$142,200	24
FCAID-03152	Main Switchboard - Section 2 of 2	D50 - Electrical	1	\$40,180	21
FCAID-03070	RTU-103 (RTU-9)	D30 - HVAC	2	\$71,100	21
FCAID-03151	Main Switchboard - Section 1 of 2	D50 - Electrical	1	\$40,180	21
FCAID-03013	Roofing: Rolled Asphalt	B30 - Roofing	2	\$421,840	20
FCAID-03009	Exterior Windows: Steel Framed (1970)	B20 - Exterior Enclosure	1	\$22,280	18
FCAID-03052	CU-2-Walk-In Cooler	D30 - HVAC	2	\$10,050	18
FCAID-03014	Skylights - Large Rectangular	B30 - Roofing	1	\$44,640	18
FCAID-03051	CU-1-Walk-In Freezer	D30 - HVAC	2	\$10,050	18
FCAID-03008	Exterior Windows: Steel Framed (1967)	B20 - Exterior Enclosure	1	\$56,950	18
FCAID-03126	Back-Up Generator	D50 - Electrical	3	\$22,400	17
FCAID-03134	Panel AA Section 1	D50 - Electrical	1	\$3,600	17
FCAID-03130	Exterior Lighting: Wall Pack, Incandescent	D50 - Electrical	1	\$8,490	17
FCAID-03066	P-1	D30 - HVAC	2	\$8,300	17
FCAID-03137	Panel C	D50 - Electrical	1	\$4,740	17
FCAID-03067	P-2	D30 - HVAC	2	\$8,300	17
FCAID-03037	Interior Flooring: Carpet	C30 - Interior Finishes	3	\$779,290	17
FCAID-03058	EF-7	D30 - HVAC	2	\$6,710	16
FCAID-03158	Walk-In Cooler-2	E10 - Equipment	3	\$12,060	16
FCAID-03059	EF-8	D30 - HVAC	2	\$6,710	16
FCAID-03043	DHWCP-1	D20 - Plumbing	2	\$4,630	16
FCAID-03159	Walk-In Freezer-1	E10 - Equipment	3	\$12,060	16
FCAID-03045	GWH-1	D20 - Plumbing	2	\$10,610	16
FCAID-03019	Interior Doors: Movable Partition (1967)	C10 - Interior Construction	3	\$29,760	16
FCAID-03010	Exterior Windows: Steel Framed (1988)	B20 - Exterior Enclosure	3	\$22,650	15
FCAID-03078	GUH-1	D30 - HVAC	2	\$7,540	15

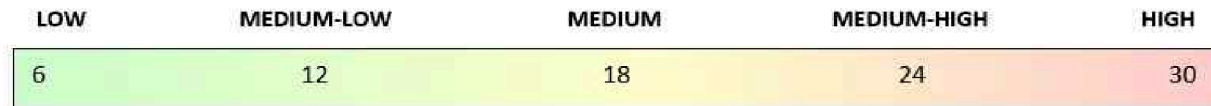
FCAID-03035	Interior Ceiling: Acoustical Tile (1968)	C30 - Interior Finishes	2	\$27,870	15
FCAID-03020	Interior Doors: Movable Partition (1970)	C10 - Interior Constr	3	\$9,920	15
FCAID-03038	Interior Floors: VCT (1968)	C30 - Interior Finishes	1	\$2,540	15
FCAID-03053	EF-1	D30 - HVAC	3	\$6,710	14
FCAID-03061	EF-Kitchen	D30 - HVAC	3	\$9,590	14
FCAID-03146	Panel L	D50 - Electrical	3	\$3,270	14
FCAID-03054	EF-2	D30 - HVAC	3	\$6,710	14
FCAID-03057	EF-5	D30 - HVAC	3	\$6,710	14
FCAID-03015	Skylights - Small Square	B30 - Roofing	3	\$15,180	14
FCAID-03060	EF-6	D30 - HVAC	3	\$9,590	14
FCAID-03056	EF-4	D30 - HVAC	3	\$6,710	14
FCAID-03055	EF-3	D30 - HVAC	3	\$6,710	14
FCAID-03032	Interior Windows: Steel Framed	C10 - Interior Constr	3	\$20,420	13
FCAID-03129	Exterior Lighting: Wall Pack - Fluorescent	D50 - Electrical	3	\$8,490	13
FCAID-03017	Interior Walls: Drywall (1968)	C10 - Interior Constr	3	\$71,230	13
FCAID-03027	Interior Walls: Drywall (1970)	C10 - Interior Constr	3	\$24,180	13
FCAID-03062	ET-1	D30 - HVAC	3	\$18,250	11
FCAID-03047	AS-1	D30 - HVAC	3	\$9,860	11

Appendix B

APPENDIX B: 5-YEAR PLAN ASSETS LIST

The individual assets associated with the 5-Year Plan are shown below, sorted from highest to lowest priority score. The priority score key is shown below for convenience.

Note that these values represent current replacement costs expressed in 2023 dollar amounts and are not adjusted for inflation.



The asset ID listed for each entry has been assigned during this assessment and reflects the corresponding asset in the FCA workbook.

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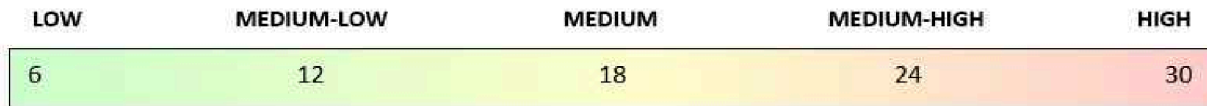
ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-03132	Fire Alarm System	D50 - Electrical	5	\$491,990	22
FCAID-03063	Boiler-1	D30 - HVAC	4	\$93,980	21
FCAID-03064	Boiler-2	D30 - HVAC	4	\$93,980	21
FCAID-03150	Security System	D50 - Electrical	5	\$252,620	20
FCAID-03076	RTU-6	D30 - HVAC	5	\$51,940	18
FCAID-03068	RTU- 7	D30 - HVAC	5	\$51,940	18
FCAID-03071	RTU-11	D30 - HVAC	5	\$31,160	17
FCAID-03128	Emergency Back-Up Lighting	D50 - Electrical	5	\$240,620	17
FCAID-03077	RTU-8	D30 - HVAC	5	\$24,290	17
FCAID-03011	Exterior Windows: Steel Framed (1992)	B20 - Exterior Enclosu	5	\$61,260	14
FCAID-03016	Skylights - Light Tunnels	B30 - Roofing	5	\$8,890	13
FCAID-03039	Interior Floors: VCT (2013)	C30 - Interior Finishes	5	\$61,560	12

Appendix C

APPENDIX C: 10-YEAR PLAN ASSETS LIST

The individual assets associated with the 10-Year Plan are shown below, sorted from highest to lowest priority score. The priority score key is shown below for convenience.

Note that these values represent current replacement costs expressed in 2023 dollar amounts and are not adjusted for inflation.



The asset ID listed for each entry has been assigned during this assessment and reflects the corresponding asset in the FCA workbook.

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ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-03157	Pad Transformer	D50 - Electrical	9	\$49,150	17
FCAID-03155	Exterior Switchgear: Section 3 of 4	D50 - Electrical	9	\$40,180	16
FCAID-03154	Exterior Switchgear: Section 2 of 4	D50 - Electrical	9	\$40,180	16
FCAID-03153	Exterior Switchgear: Section 1 of 4	D50 - Electrical	9	\$40,180	16
FCAID-03156	Exterior Switchgear: Section 4 of 4	D50 - Electrical	9	\$40,180	16
FCAID-03036	Interior Ceiling: Acoustical Tile (2013)	C30 - Interior Finishes	10	\$401,950	13
FCAID-03141	Panel CPC	D50 - Electrical	9	\$3,270	12
FCAID-03139	Panel CPA	D50 - Electrical	9	\$3,270	12
FCAID-03138	Panel CC	D50 - Electrical	9	\$3,600	12
FCAID-03143	Panel DD Section 2	D50 - Electrical	9	\$4,740	12
FCAID-03140	Panel CPB	D50 - Electrical	9	\$3,270	12
FCAID-03135	Panel AA Section 2	D50 - Electrical	9	\$3,600	12
FCAID-03142	Panel DD Section 1	D50 - Electrical	9	\$4,740	12
FCAID-03136	Panel BB	D50 - Electrical	9	\$3,600	12
FCAID-03147	Panel MM	D50 - Electrical	9	\$3,600	12
FCAID-03122	VAV-5-6	D30 - HVAC	8	\$5,640	11
FCAID-03114	VAV-4-7	D30 - HVAC	8	\$7,270	11
FCAID-03088	VAV-2-1	D30 - HVAC	8	\$8,900	11
FCAID-03091	VAV-2-12	D30 - HVAC	8	\$4,700	11
FCAID-03118	VAV-5-2	D30 - HVAC	8	\$4,700	11
FCAID-03092	VAV-2-13	D30 - HVAC	8	\$7,270	11
FCAID-03084	VAV-1-6	D30 - HVAC	8	\$8,900	11
FCAID-03093	VAV-2-2	D30 - HVAC	8	\$7,270	11
FCAID-03112	VAV-4-5	D30 - HVAC	8	\$8,900	11
FCAID-03094	VAV-2-3	D30 - HVAC	8	\$8,900	11

FCAID-03116	VAV-4-9	D30 - HVAC	8	\$7,270	11
FCAID-03095	VAV-2-4	D30 - HVAC	8	\$5,640	11
FCAID-03120	VAV-5-4	D30 - HVAC	8	\$5,640	11
FCAID-03096	VAV-2-5	D30 - HVAC	8	\$4,700	11
FCAID-03124	VAV-5-8	D30 - HVAC	8	\$8,900	11
FCAID-03097	VAV-2-6	D30 - HVAC	8	\$3,300	11
FCAID-03086	VAV-1-8	D30 - HVAC	8	\$4,700	11
FCAID-03098	VAV-2-7	D30 - HVAC	8	\$4,700	11
FCAID-03090	VAV-2-11	D30 - HVAC	8	\$7,270	11
FCAID-03099	VAV-2-8	D30 - HVAC	8	\$5,640	11
FCAID-03113	VAV-4-6	D30 - HVAC	8	\$3,300	11
FCAID-03100	VAV-2-9	D30 - HVAC	8	\$7,270	11
FCAID-03115	VAV-4-8	D30 - HVAC	8	\$8,900	11
FCAID-03101	VAV-4-1	D30 - HVAC	8	\$7,270	11
FCAID-03117	VAV-5-1	D30 - HVAC	8	\$5,640	11
FCAID-03102	VAV-4-10	D30 - HVAC	8	\$3,300	11
FCAID-03119	VAV-5-3	D30 - HVAC	8	\$8,900	11
FCAID-03103	VAV-4-11	D30 - HVAC	8	\$5,640	11
FCAID-03121	VAV-5-5	D30 - HVAC	8	\$5,640	11
FCAID-03105	VAV-4-13	D30 - HVAC	8	\$7,270	11
FCAID-03123	VAV-5-7	D30 - HVAC	8	\$5,640	11
FCAID-03082	VAV-1-4	D30 - HVAC	8	\$4,700	11
FCAID-03083	VAV-1-5	D30 - HVAC	8	\$4,140	11
FCAID-03081	VAV-1-3	D30 - HVAC	8	\$8,900	11
FCAID-03085	VAV-1-7	D30 - HVAC	8	\$4,700	11
FCAID-03079	VAV-1-1	D30 - HVAC	8	\$3,300	11
FCAID-03087	VAV-1-9	D30 - HVAC	8	\$8,900	11
FCAID-03109	VAV-4-2	D30 - HVAC	8	\$8,900	11
FCAID-03089	VAV-2-10	D30 - HVAC	8	\$4,700	11
FCAID-03110	VAV-4-3	D30 - HVAC	8	\$7,270	11
FCAID-03111	VAV-4-4	D30 - HVAC	8	\$7,270	11
FCAID-03046	GWH-2	D20 - Plumbing	8	\$10,610	11
FCAID-03050	CUH-1	D30 - HVAC	10	\$6,610	11
FCAID-03107	VAV-4-15	D30 - HVAC	8	\$2,680	11
FCAID-03080	VAV-1-2	D30 - HVAC	8	\$4,700	11
FCAID-03108	VAV-4-16	D30 - HVAC	8	\$5,640	11
FCAID-03106	VAV-4-14	D30 - HVAC	8	\$2,680	11
FCAID-03104	VAV-4-12	D30 - HVAC	8	\$3,300	11
FCAID-03041	BFP-RTU-5 Evap	D20 - Plumbing	9	\$400	10
FCAID-03012	Roofing: Metal Flashing	B30 - Roofing	10	\$29,590	10
FCAID-03042	Glycol Feeder-1	D30 - HVAC	7	\$1,780	10
FCAID-03040	BFP-Boiler Make-up	D20 - Plumbing	9	\$400	10
FCAID-03049	Bypass Feeder-HWS	D30 - HVAC	9	\$1,010	9