

4101



**Johnson Elementary**  
*Preparing Today's Child for Tomorrow's World*

POUDRE SCHOOL  
DISTRICT  
JOHNSON  
ELEMENTARY  
SCHOOL

**FACILITY CONDITION ASSESSMENT**

FORT COLLINS, CO

OCTOBER 2023



**Together, Building a Thriving Planet**



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# Contacts

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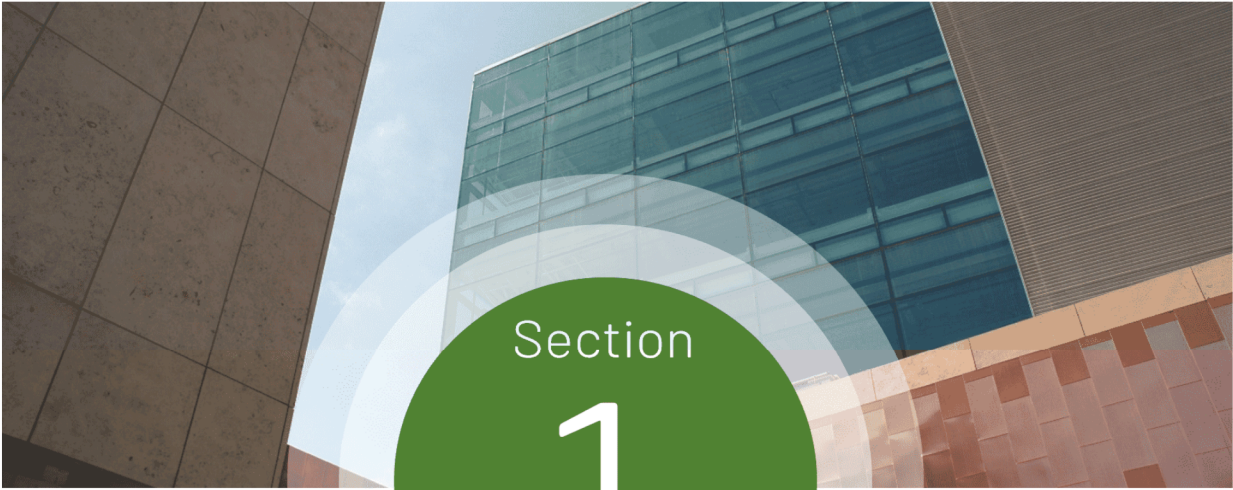
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Section

1

# Executive Summary



# Executive Summary

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## Project Goals

The contents of this report present the results of the Facility Condition Assessment (FCA) performed at Johnson ES within the Poudre School District (PSD) on August 9, 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
JOHNSON ES	56,396	1988
<b>TOTAL</b>	<b>56,396</b>	

## Facility Summary

### Johnson ES

Johnson ES is located at 4101 Seneca St., Fort Collins, CO 80526. This 56,396 SF facility consists of one level and was initially constructed in 1988. The equity index for this school is 0.93.



*Johnson ES*

# Executive Summary

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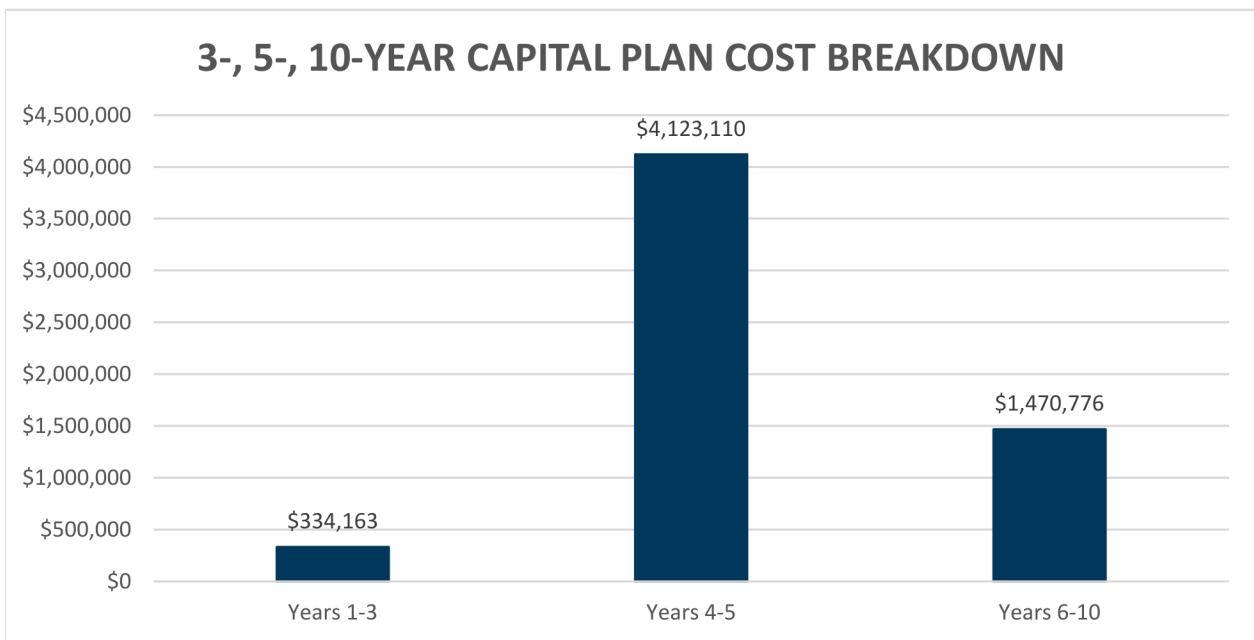
## Assessment Summary

This section summarizes the building systems at the facility and describes the general condition observed based on the assessment performed on August 9, 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.



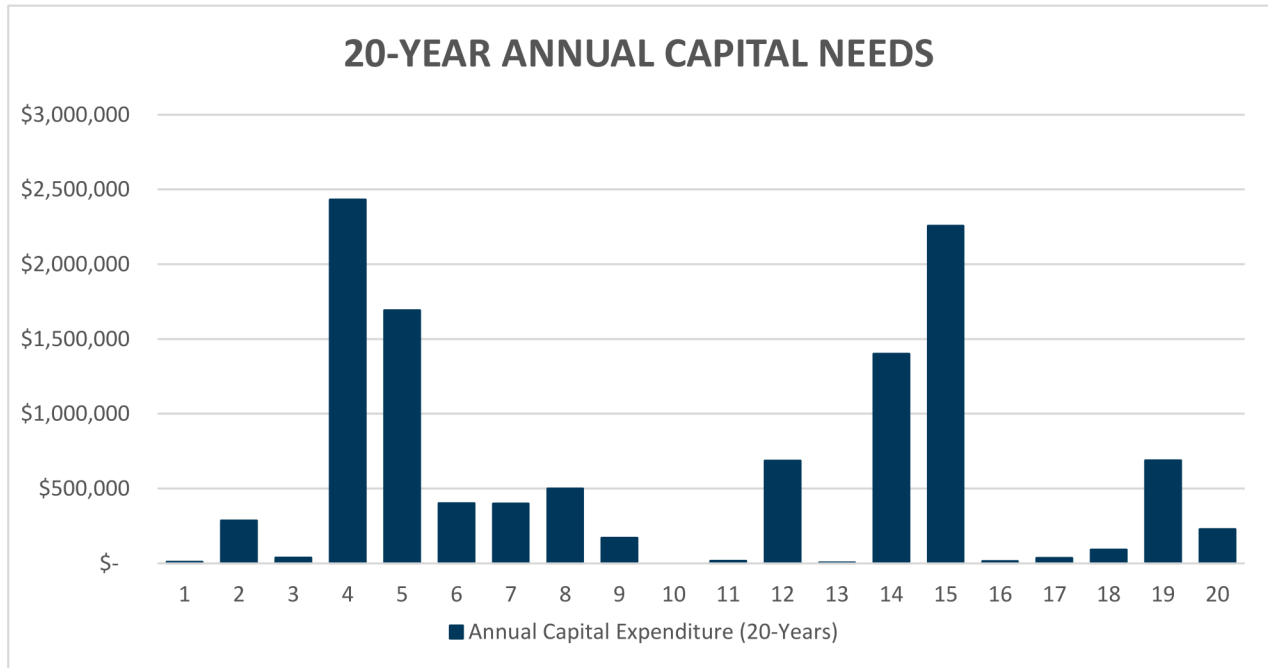
**3-, 5-, 10-Year Capital Plan Cost Breakdown**

# 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**

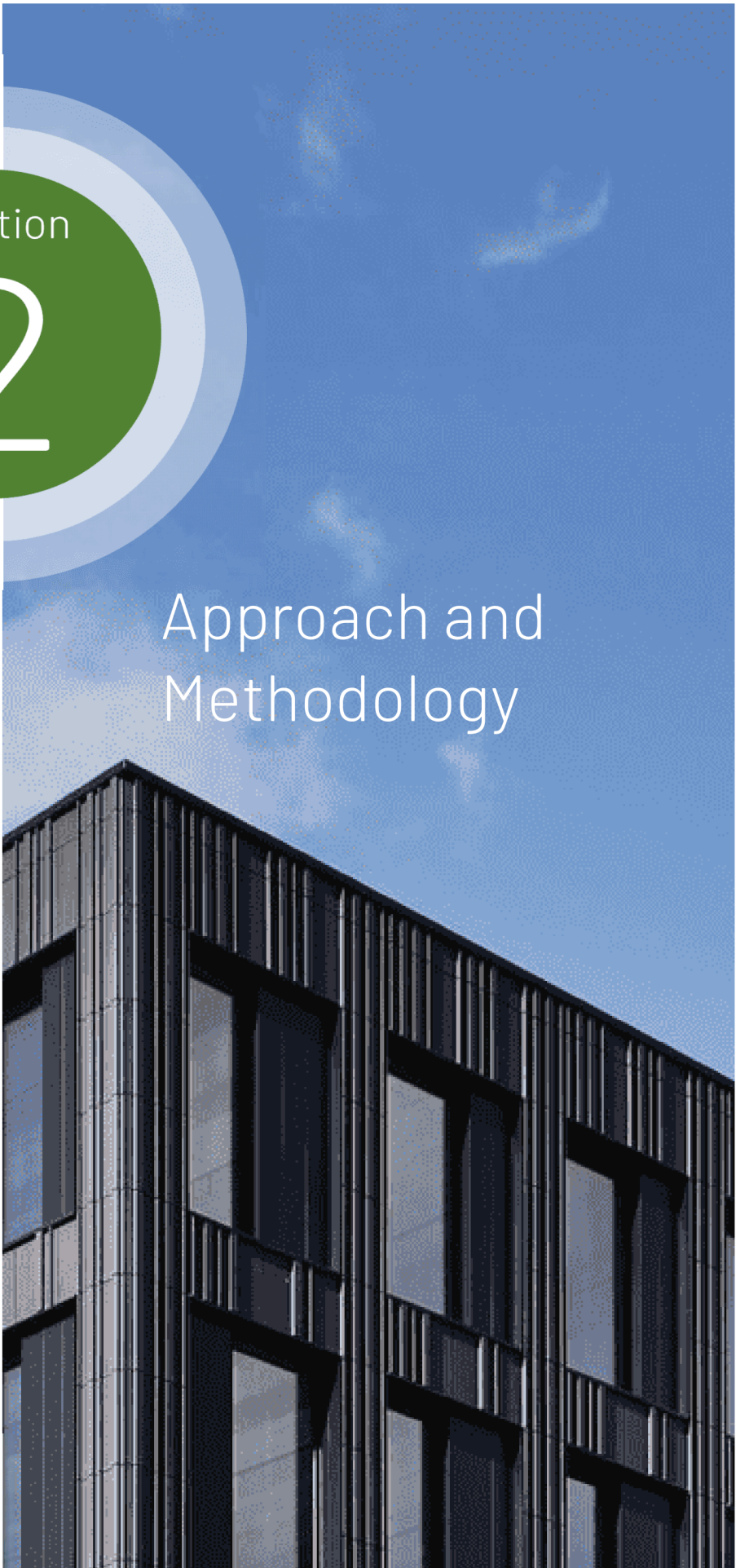
Replacement costs associated with the Annual Capital Expenditure graph and table include values that are adjusted for inflation.

**20-Year Annual Capital Expenditure by Subsystem**

Subsystem	Years 1-5	Years 6-10	Years 11-15	Years 15-20
B20 - Enclosure	\$0	\$0	\$13,704	\$687,681
B30 - Roofing	\$0	\$751,740	\$0	\$0
C10 - Int. Construction	\$0	\$61,014	\$1,499,128	\$0
C20 - Stairs	\$0	\$0	\$0	\$0
C30 - Interior Finishes	\$1,229,056	\$0	\$732,804	\$228,727
D10 - Conveying	\$0	\$0	\$0	\$0
D20 - Plumbing	\$19,590	\$21,276	\$26,327	\$22,464
D30 - HVAC	\$673,442	\$608,083	\$1,101,244	\$58,478
D40 - Fire Suppression	\$1,068,589	\$0	\$0	\$0
D50 - Electrical	\$1,466,598	\$14,264	\$991,275	\$57,741
E10 - Equipment	\$0	\$14,400	\$0	\$0
<b>Total:</b>	<b>\$3,228,218</b>	<b>\$658,023</b>	<b>\$2,118,846</b>	<b>\$138,683</b>

Section  
2

Approach and  
Methodology





# Scope and Approach

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## 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 Uniformat 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

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## 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

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## 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, RSMeans, 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 Johnson ES is 0.93.

Sample Calculation:

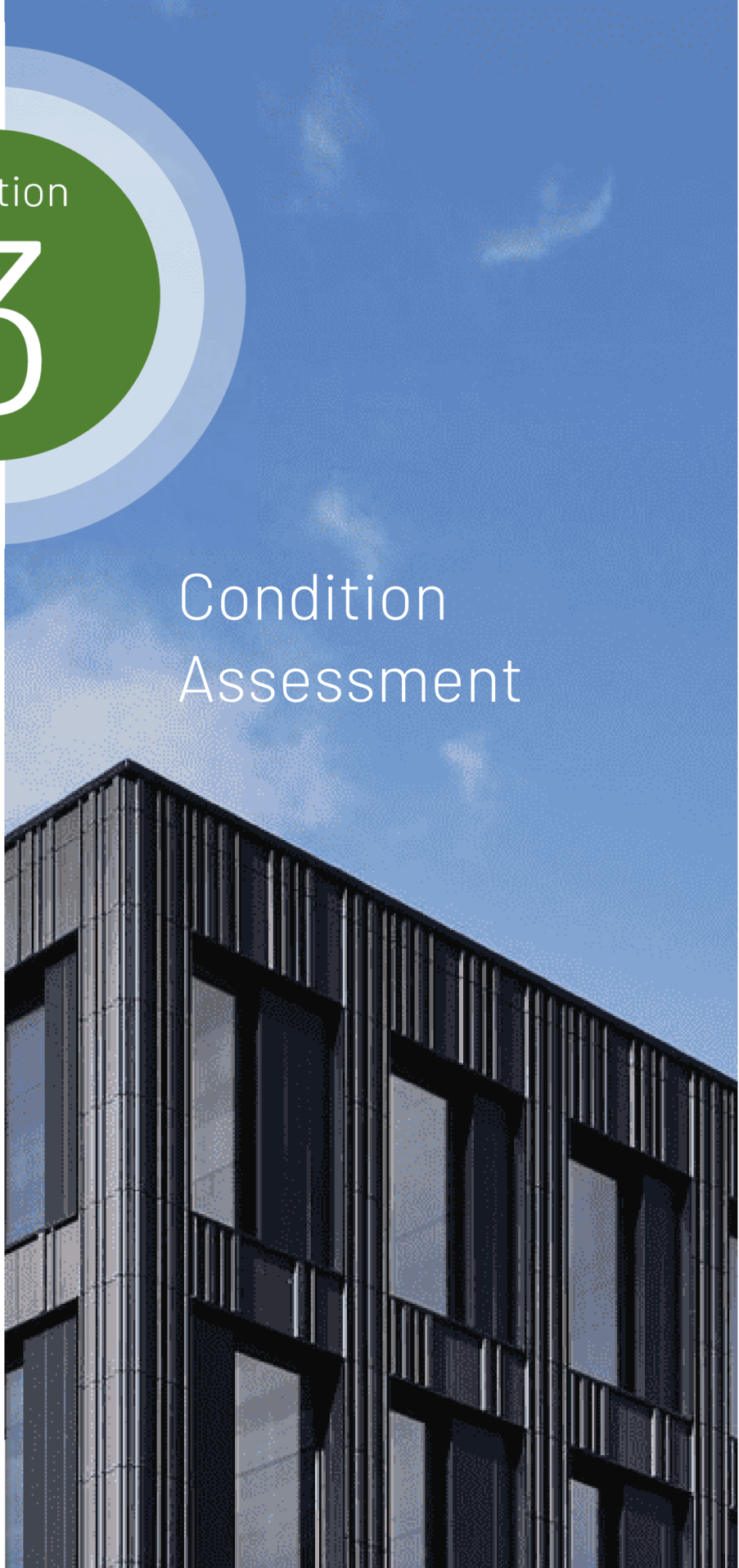
School Name	School Population K-12 Total	F/R	ELL	SPED	McKinney-Vento	Total of Previous Columns	Equity Index Number = school average / district average
Sample	381	15.20%	0.00%	8.40%	0.00%	0.24	0.24/0.48 = 0.49
<b>Grand PSD Total - Oct 2022 Count</b>	<b>26,163</b>	<b>29.5%</b>	<b>5.8%</b>	<b>9.5%</b>	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

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

Section

3

# Condition Assessment



# Condition Assessment

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## SYSTEMS DESCRIPTION

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

### Exterior Enclosure

The facility's exterior is primarily CMU with aluminum framed windows. [REDACTED] Of note, there are several feature rounded CMU elements at featured corners. Additionally there are several gable metal roofs at major entry points.

### Roofing

The roof of this facility has recently had a fluid applied coating applied to the rolled asphalt roofing. [REDACTED]  
[REDACTED]

### Interior Construction and Finishes

Interior floor finishes are primarily carpet with VCT, tile, concrete, and fluid applied rubberized flooring on the gym. Interior partitions are primarily CMU with select walls made from drywall. There are some elements with glass block in the student restroom in the classroom block. [REDACTED]  
[REDACTED] Otherwise ceilings are primarily ACT with select areas of Drywall ceilings.

### Conveyance

N/A

### Electrical and Lighting

The building's electrical distribution equipment consists of 120/208 panels, transformers, and switchgear. [REDACTED]  
[REDACTED] The fire alarm system dates to 2020. Interior lighting consists of mostly fluorescent fixtures. Exterior lighting is made up of LED lights and is, generally, in good condition. Consider upgrading the interior and exterior lighting to light emitting diode (LED) fixtures to reduce energy costs and maintenance needs.

### HVAC Systems

The building's heating, ventilation, and air conditioning (HVAC) system consists of a hot water system, two air handling unit, four rooftop units, unit ventilators and radiant heaters. The building automation system is made up of Honeywell controls. Additional HVAC equipment includes makeup air units, fan coil units, exhaust fans, unit heaters, and cabinet unit heaters. The boilers, the two air handling units, a rooftop unit, several exhaust fans, unit heaters, and unit ventilators are neared or surpassed their life expectancies and should be replaced within the next 2-6 years.

### Plumbing

Domestic hot water is provided by three (3) natural gas fired water heater installed in 1997, 2001, and 2019. The water heaters installed in 1997 and 2001 have surpassed their life expectancy and are anticipated to need replacement within the next year. Additional plumbing equipment includes backflow preventers, expansion tanks, and pumps. [REDACTED]  
[REDACTED]

### Fire Suppression

The school has a wet sprinkler system [REDACTED]  
[REDACTED]

### Equipment

There is one (1) walk-in cooler and one (1) walk-in freezer in the school's kitchen. These units generally appear to be in good condition.



# 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.

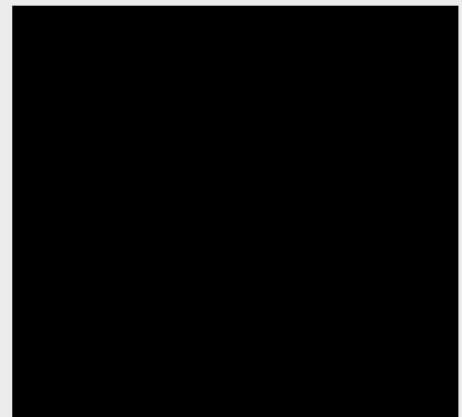
#### Johnson ES

##### Replace Boilers

The two boilers serving the school's hot water system have reached the end of their life expectancy. They are [REDACTED] anticipated to need replacement within the next five years.

The following assets are included within this measure:

FCAID-270078, FCAID-270079



Priority Level:	2
Estimated Cost:	\$182,030
Remaining Life:	5

# Condition Assessment

## Replace Wet Sprinkler System

The school has a wet sprinkler system [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

The following assets are included within this measure:

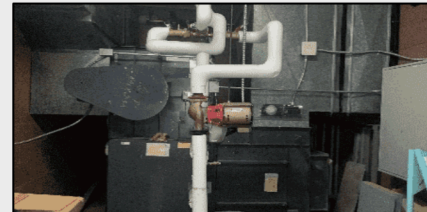
FCAID-270132



**Priority Level:** 1  
**Estimated Cost:** \$977,910  
**Remaining Life:** 4

## Replace Air Handling and Rooftop Units

The two air handling units in the mezzanine, along with RTU-3, have surpassed their industry life expectancies and [REDACTED] should be replaced within the next 2-3 years.



The following assets are included within this measure:

FCAID-270037, FCAID-270038, FCAID-270126



**Priority Level:** 2  
**Estimated Cost:** \$228,420  
**Remaining Life:** 2-3 years

# Condition Assessment

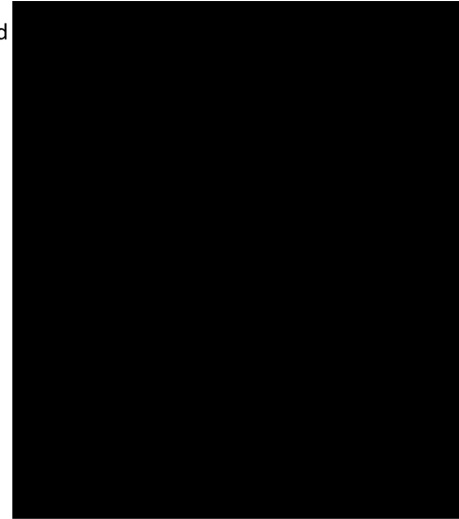
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## Replace Water Heaters

The water heaters installed in 1997 and 2001 have surpassed their life expectancy and are anticipated to need replacement within the next year or two. [REDACTED]

The following assets are included within this measure:

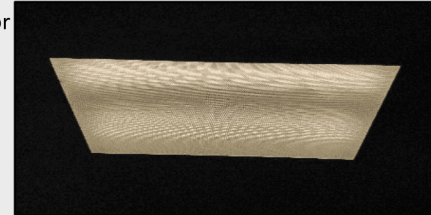
FCAID-270034, FCAID-270036



**Priority Level:** 2  
**Estimated Cost:** \$19,300  
**Remaining Life:** 1-2 years

## Replace Fluorescent Lighting Fixtures

Interior lighting consists of mostly fluorescent fixtures. Consider upgrading the interior and exterior lighting to light emitting diode (LED) fixtures to reduce energy costs and maintenance needs.



The following assets are included within this measure:

FCAID-270138

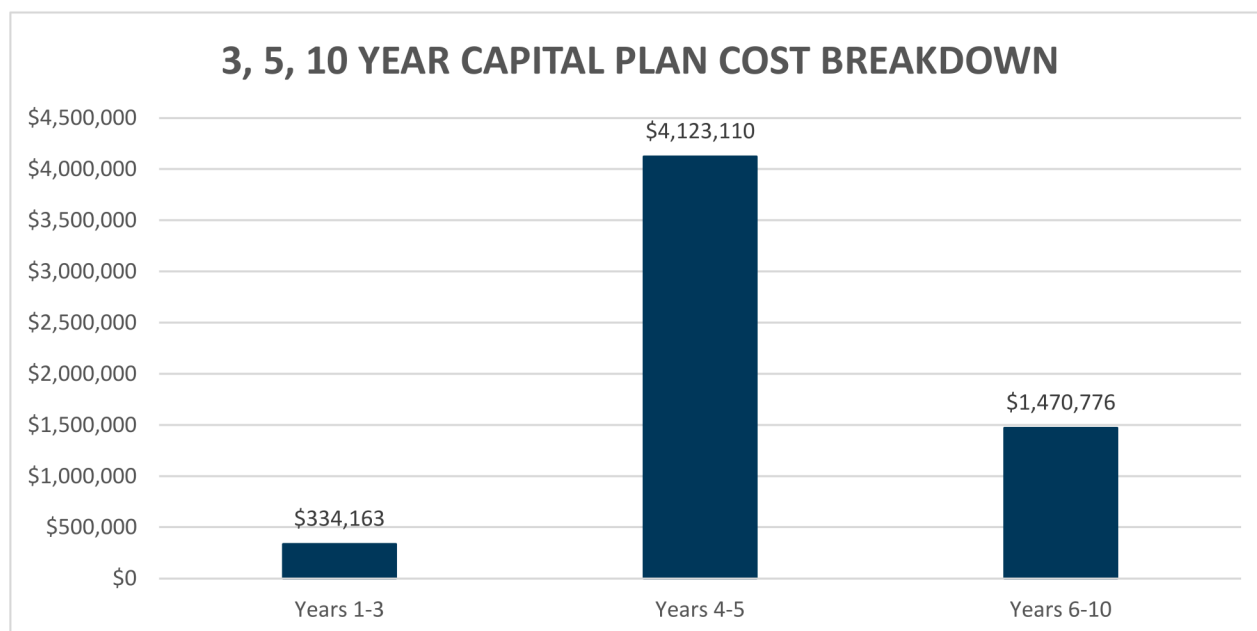
**Priority Level:** 2  
**Estimated Cost:** \$817,490  
**Remaining Life:** 4 years

# 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	18	\$334,163
5-Year Plan	32	\$4,123,110
10-Year Plan	42	\$1,470,776
<b>Total</b>	<b>92</b>	<b>\$5,928,050</b>

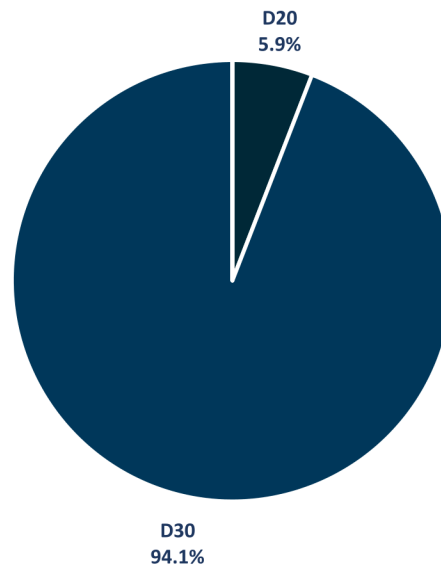


# Condition Assessment

## 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 \$334,163. The specific assets that will reach end of life in this period are listed in Appendix A.

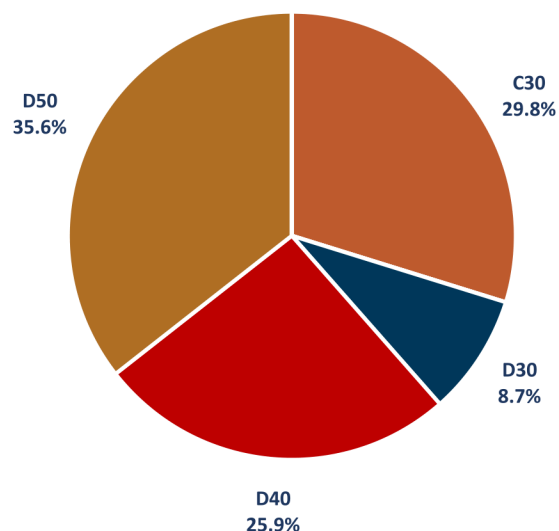
SUBSYSTEM	Years 1-3	Percent
A10 - Foundations	\$0	0%
B10 - Superstructure	\$0	0%
B20 - Exterior Enclosure	\$0	0%
B30 - Roofing	\$0	0%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$0	0%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$19,590	6%
D30 - HVAC	\$314,574	94%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$0	0%
E10 - Equipment	\$0	0%
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 \$4,123,110. 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	\$0	0%
B30 - Roofing	\$0	0%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$1,229,056	30%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$0	0%
D30 - HVAC	\$358,868	9%
D40 - Fire Protection	\$1,068,589	26%
D50 - Electrical	\$1,466,598	36%
E10 - Equipment	\$0	0%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%

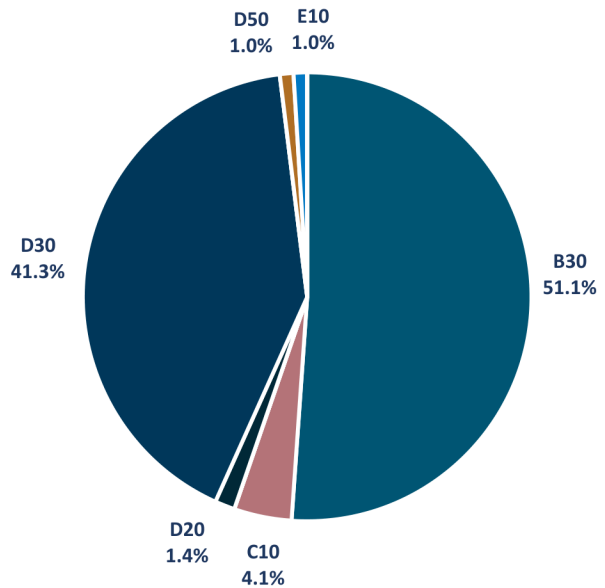


# Condition Assessment

## 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 \$1,470,776. 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	\$751,740	51%
C10 - Int. Construction	\$61,014	4%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$0	0%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$21,276	1%
D30 - HVAC	\$608,083	41%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$14,264	1%
E10 - Equipment	\$14,400	1%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%



# Condition Assessment

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## 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:  $\leq 12$  = Green, 12.1-23.9 = Yellow,  $\geq 24$  = 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.

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

# Condition Assessment

## PRIORITY SCORE SUMMARY - JOHNSON ES

	<b>JOHNSON ES</b>	
	BUILDING TYPE:	Elementary School
	YEAR BUILT:	1988
	GROSS AREA (SF):	56,396
	DATE ASSESSED:	August 9, 2023
	PRIORITY SCORE:	<b>16.7</b>

SUBSYSTEM:	DESCRIPTION	PRIORITY SCORE
B20 - Ext. Enclosure	The facility's exterior is primarily CMU with aluminum framed windows. There are a few areas of exterior CMU damage. Of note, there area several feature rounded CMU elements at featured corners. Additionally there are several gable metal roofs at major entry points.	<b>12.6</b>
B30 - Roofing	The roof of this facility has recently had a fluid applied coating applied to the rolled asphalt roofing. [REDACTED]	<b>14.9</b>
C10 - Int. Construction	Interior floor finishes are primarily carpet with VCT, tile, concrete, and fluid applied rubberized flooring on the gym. Interior partitions are primarily CMU with select walls made from drywall. There are some elements with glass block in the student restroom in the classroom block. [REDACTED]	<b>14.3</b>
C30 - Interior Finishes	[REDACTED] Otherwise ceilings are primarily ACT with select areas of Drywall ceilings.	<b>14.7</b>
D20 - Plumbing	Domestic hot water is provided by three (3) natural gas fired water heater installed in 1997, 2001, and 2019. The water heaters installed in 1997 and 2001 have surpassed their life expectancy and are anticipated to need replacement within the next year. Additional plumbing equipment includes backflow preventers, expansion tanks, and pumps. [REDACTED]	<b>13.8</b>
D30 - HVAC	The building's heating, ventilation, and air conditioning (HVAC) system consists of a hot water system, two air handling unit, four rooftop units, unit ventilators and radiant heaters. The building automation system is made up of Honeywell controls. Additional HVAC equipment includes makeup air units, fan coil units, exhaust fans, unit heaters, and cabinet unit heaters. The boilers, the two air handling units, a rooftop unit, several exhaust fans, unit heaters, and unit ventilators are neared or surpassed their life expectancies and should be replaced within the next 2-6 years.	<b>16.3</b>
D40 - Fire Suppression	The school has a wet sprinkler system [REDACTED]	<b>23.0</b>
D50 - Electrical	The building's electrical distribution equipment consists of 120/208 panels, transformers, and switchgear. [REDACTED] The fire alarm system dates to 2020. Interior lighting consists of mostly fluorescent fixtures. Exterior lighting is made up of LED lights and is, generally, in good condition. Consider upgrading the interior and exterior lighting to light emitting diode (LED) fixtures to reduce energy costs and maintenance needs.	<b>21.6</b>
E10 - Equipment	There is one (1) walk-in cooler and one (1) walk-in freezer in the school's kitchen. These units generally appear to be in good condition.	<b>15.0</b>

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.

### JOHNSON ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING	REPLACEMENT COST	PRIORITY SCORE
FCAID-270037	AHU-1	D30 - HVAC	2	\$106,650	23
FCAID-270038	AHU-2	D30 - HVAC	2	\$86,390	22
FCAID-270126	RTU-3	D30 - HVAC	3	\$35,380	19
FCAID-270086	P-5	D30 - HVAC	2	\$6,690	17
FCAID-270034	WH-1	D20 - Plumbing	1	\$9,650	17
FCAID-270059	EF-24	D30 - HVAC	2	\$6,210	16
FCAID-270051	EF-10	D30 - HVAC	2	\$5,550	16
FCAID-270062	EF-28	D30 - HVAC	2	\$5,550	16
FCAID-270053	EF-13	D30 - HVAC	2	\$6,210	16
FCAID-270058	EF-21	D30 - HVAC	2	\$5,550	16
FCAID-270054	EF-16	D30 - HVAC	2	\$5,550	16
FCAID-270061	EF-27	D30 - HVAC	2	\$5,550	16
FCAID-270036	WH-3	D20 - Plumbing	2	\$9,650	16
FCAID-270065	EF-7	D30 - HVAC	2	\$5,550	16
FCAID-270056	EF-17	D30 - HVAC	2	\$5,550	16
FCAID-270052	EF-12	D30 - HVAC	2	\$6,210	16
FCAID-270057	EF-18	D30 - HVAC	2	\$5,550	16
FCAID-270055	EF-16	D30 - HVAC	2	\$6,210	16

# 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.

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.

### JOHNSON ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-270137	Emergency Lighting	D50 - Electrical	4	\$214,870	24
FCAID-270138	Lighting - Interior, Fluorescent	D50 - Electrical	4	\$817,490	24
FCAID-270132	Wet Sprinkler System	D40 - Fire Prot.	4	\$977,910	23
FCAID-270153	Security System	D50 - Electrical	4	\$214,870	21
FCAID-270079	B-2	D30 - HVAC	5	\$103,400	20
FCAID-270078	B-1	D30 - HVAC	5	\$78,630	19
FCAID-270134	Generator	D50 - Electrical	5	\$28,150	16
FCAID-270023	Carpet	C30 - Int. Finishes	5	\$470,120	16
FCAID-270131	UV-4	D30 - HVAC	5	\$30,370	16
FCAID-270128	UV-1	D30 - HVAC	5	\$30,370	16
FCAID-270129	UV-2	D30 - HVAC	5	\$30,370	16
FCAID-270130	UV-3	D30 - HVAC	5	\$30,370	16
FCAID-270021	Ceiling - Acoustic Tile	C30 - Int. Finishes	5	\$363,020	15
FCAID-270152	Panel MDP	D50 - Electrical	5	\$32,270	14
FCAID-270149	Panel LC	D50 - Electrical	5	\$3,270	13
FCAID-270147	Panel LA-1	D50 - Electrical	5	\$3,000	13
FCAID-270145	Panel K1	D50 - Electrical	5	\$3,000	13
FCAID-270060	EF-25	D30 - HVAC	5	\$6,210	13
FCAID-270146	Panel LA	D50 - Electrical	5	\$3,270	13
FCAID-270064	EF-6	D30 - HVAC	5	\$1,260	13
FCAID-270148	Panel LB	D50 - Electrical	5	\$3,000	13
FCAID-270025	Flooring - Ceramic Tile	C30 - Int. Finishes	5	\$80,340	13
FCAID-270151	Panel M	D50 - Electrical	5	\$3,270	13
FCAID-270140	Panel CU	D50 - Electrical	5	\$3,270	13
FCAID-270144	Panel EM	D50 - Electrical	5	\$3,000	13

FCAID-270066	EF-8	D30 - HVAC	5	\$1,260	13
FCAID-270027	Flooring - VCT	C30 - Int. Finishes	5	\$78,260	12
FCAID-270022	Athletic Flooring	C30 - Int. Finishes	5	\$48,080	12
FCAID-270026	Flooring - Resilient (Kitchen)	C30 - Int. Finishes	5	\$26,090	12
FCAID-270050	FCU-3	D30 - HVAC	5	\$6,610	12
FCAID-270028	Flooring- Resilient Flooring	C30 - Int. Finishes	5	\$26,090	12
FCAID-270133	ATS	D50 - Electrical	5	\$6,650	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.

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.

### JOHNSON ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-270039	RTU-1	D30 - HVAC	7	\$147,750	21
FCAID-270040	RTU-2	D30 - HVAC	7	\$126,700	20
FCAID-270012	Roofing	B30 - Roofing	6	\$252,890	17
FCAID-270127	RTU-4	D30 - HVAC	7	\$35,380	17
FCAID-270010	Skylights	B30 - Roofing	8	\$351,020	16
FCAID-270068	RH-1	D30 - HVAC	7	\$6,210	16
FCAID-270158	Walk-in Cooler	E10 - Equipment	7	\$6,030	15
FCAID-270159	Walk-in Freezer	E10 - Equipment	7	\$6,030	15
FCAID-270011	Roof Flashing	B30 - Roofing	6	\$23,170	14
FCAID-270084	P-1	D30 - HVAC	9	\$13,190	13
FCAID-270085	P-2	D30 - HVAC	9	\$13,190	13
FCAID-270044	CUH-3	D30 - HVAC	6	\$6,610	13
FCAID-270049	CUH-9	D30 - HVAC	6	\$6,610	13
FCAID-270045	CUH-4	D30 - HVAC	6	\$6,610	13
FCAID-270033	DHW Circulation Pump	D20 - Plumbing	7	\$4,630	13
FCAID-270046	CUH-5	D30 - HVAC	6	\$6,610	13
FCAID-270043	CUH-2	D30 - HVAC	6	\$6,610	13
FCAID-270047	CUH-7	D30 - HVAC	6	\$6,610	13
FCAID-270048	CUH-8	D30 - HVAC	6	\$6,610	13
FCAID-270042	CH-1	D30 - HVAC	6	\$10,740	13
FCAID-270083	BP-4	D30 - HVAC	9	\$6,690	12
FCAID-270077	FCU-8	D30 - HVAC	9	\$9,490	12
FCAID-270072	FCU-3	D30 - HVAC	9	\$9,490	12
FCAID-270073	FCU-4	D30 - HVAC	9	\$6,610	12
FCAID-270082	BP-3	D30 - HVAC	9	\$6,690	12

FCAID-270074	FCU-5	D30 - HVAC	9	\$6,610	12
FCAID-270035	WH-2	D20 - Plumbing	6	\$9,650	12
FCAID-270075	FCU-6	D30 - HVAC	9	\$6,610	12
FCAID-270076	FCU-7	D30 - HVAC	9	\$9,490	12
FCAID-270070	FCU-1	D30 - HVAC	9	\$6,610	12
FCAID-270071	FCU-2	D30 - HVAC	9	\$6,610	12
FCAID-270063	EF-3	D30 - HVAC	9	\$6,210	12
FCAID-270017	Pocket Doors	C10 - Int. Construct.	8	\$49,610	11
FCAID-270067	FF-28	D30 - HVAC	8	\$6,210	11
FCAID-270155	VFD P-1	D50 - Electrical	9	\$5,630	10
FCAID-270081	Glycol Feeder	D30 - HVAC	7	\$1,780	10
FCAID-270156	VFD P-2	D50 - Electrical	9	\$5,630	10
FCAID-270031	Backflow Preventer	D20 - Plumbing	9	\$1,600	10
FCAID-270029	Backflow Preventer	D20 - Plumbing	9	\$400	10
FCAID-270030	Backflow Preventer	D20 - Plumbing	9	\$1,600	10
FCAID-270080	Gas Meter	D30 - HVAC	6	\$3,430	10
FCAID-270069	ET-1	D30 - HVAC	9	\$11,620	8