

POUDRE SCHOOL  
DISTRICT  
TRAUT ELEMENTARY  
SCHOOL

FACILITY CONDITION ASSESSMENT

FORT COLLINS, CO

OCTOBER 2023



Together, Building a Thriving Planet

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# Contacts

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## Key Contact Information

### McKinstry Contacts

Devin Boyce  
Program Manager, Facility Condition Assessments  
720.408.4573  
[devinb@mckinstry.com](mailto:devinb@mckinstry.com)

Roger Noonan  
Senior Facility Assessment Consultant  
970.531.1527  
[rogern@mckinstry.com](mailto:rogern@mckinstry.com)

Josh Phillips  
Facility Assessment Consultant  
719.480.1372  
[joshph@mckinstry.com](mailto:joshph@mckinstry.com)

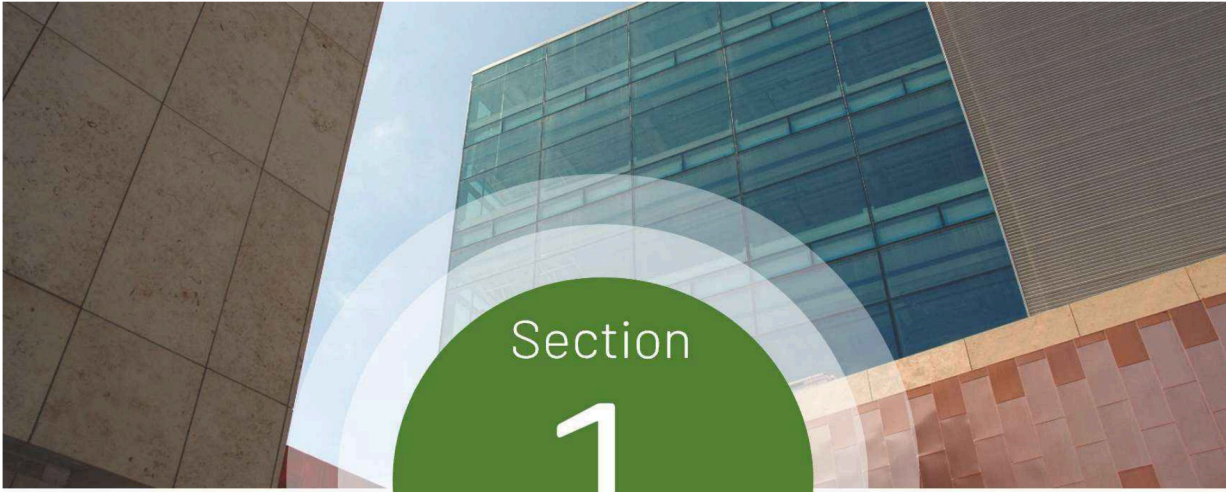
Tracey Cousins  
Strategic Account Manager  
720.445.7608  
[traceyc@mckinstry.com](mailto:traceyc@mckinstry.com)

Jaime Villarino-Eilenberger  
Project Manager - Technical Services  
949.933.7996  
[jaimev@mckinstry.com](mailto:jaimev@mckinstry.com)

### Poudre School District Contacts

Trudy Trimbath  
Energy and Sustainability Manager  
970.490.3502  
[ttrimbath@psdschools.org](mailto:ttrimbath@psdschools.org)

Jessie Ericson  
Administrative Assistant - Operations  
970.490.3080  
[jericson@psdschools.org](mailto:jericson@psdschools.org)



# 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 Traut Core Knowledge ES within the Poudre School District (PSD) on April 12, 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
TRAUT CORE KNOWLEDGE ES	50,871	1998
<b>TOTAL</b>	<b>50,871</b>	

## Facility Summary

### Traut Core Knowledge ES

Traut Core Knowledge ES is located at 2515 Timberwood Dr., Fort Collins, CO 80528. This 50,871 SF facility consists of one level and was initially constructed in 1998. The equity index for this school is 0.58.



*Traut Core Knowledge ES*

# Executive Summary

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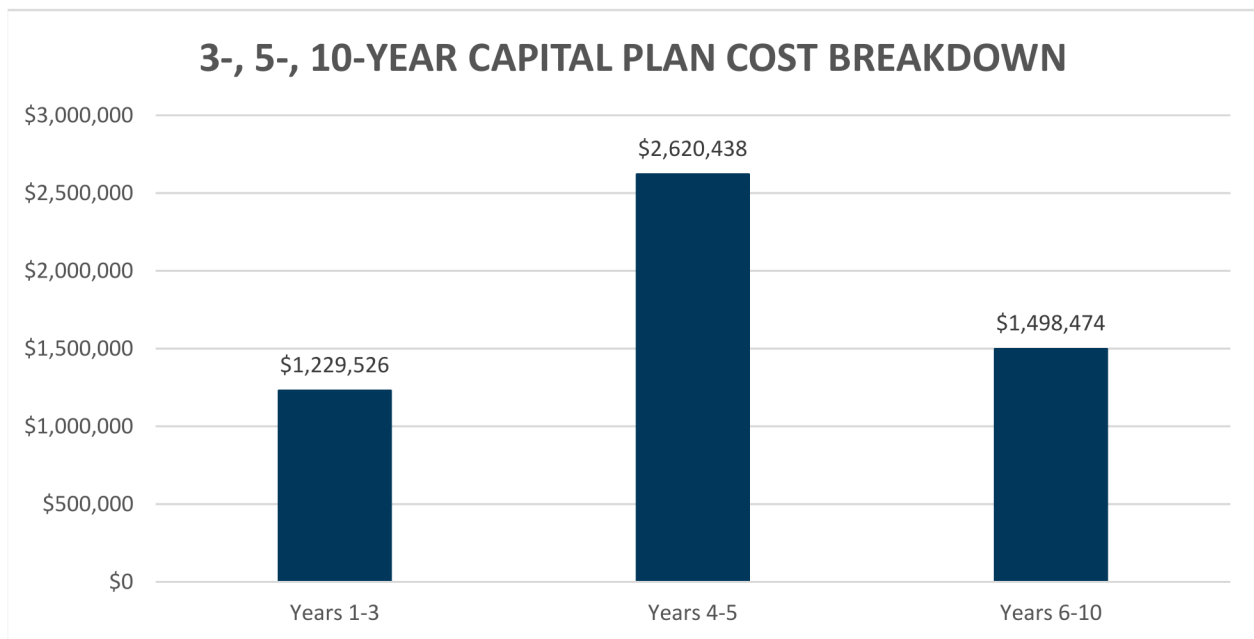
## Assessment Summary

This section summarizes the building systems at the facility and describes the general condition observed based on the assessment performed on April 12, 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.



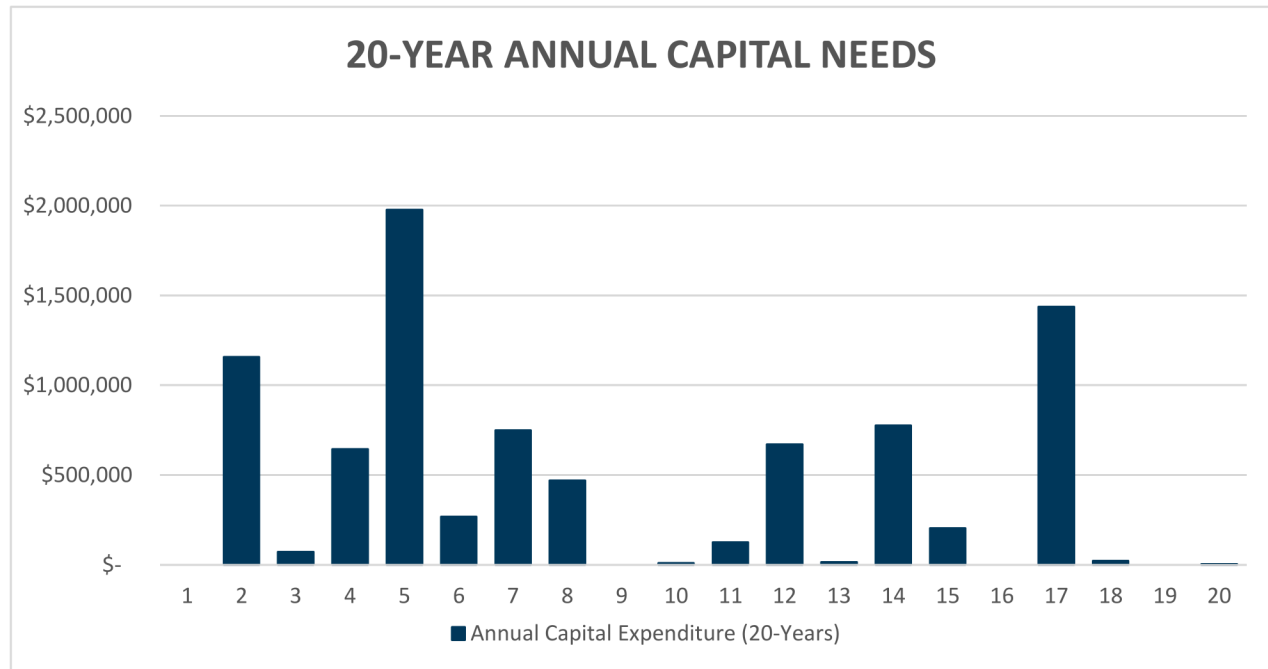
**3-, 5-, 10-Year Capital Plan Cost Breakdown**

# 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	\$455,115	\$0	\$0
B30 - Roofing	\$616,272	\$0	\$0	\$0
C10 - Int. Construction	\$0	\$0	\$0	\$0
C20 - Stairs	\$0	\$0	\$0	\$0
C30 - Interior Finishes	\$1,021,506	\$258,043	\$776,208	\$0
D10 - Conveying	\$0	\$0	\$0	\$0
D20 - Plumbing	\$23,198	\$5,367	\$47,773	\$0
D30 - HVAC	\$496,337	\$60,495	\$497,321	\$1,432,510
D40 - Fire Suppression	\$631,534	\$0	\$0	\$0
D50 - Electrical	\$1,061,117	\$704,622	\$472,154	\$28,227
E10 - Equipment	\$0	\$14,832	\$0	\$0
<b>Total:</b>	<b>\$2,212,186</b>	<b>\$785,317</b>	<b>\$1,017,247</b>	<b>\$1,460,737</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 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

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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, 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 Traut Core Knowledge ES is 0.58.

Sample Calculation:

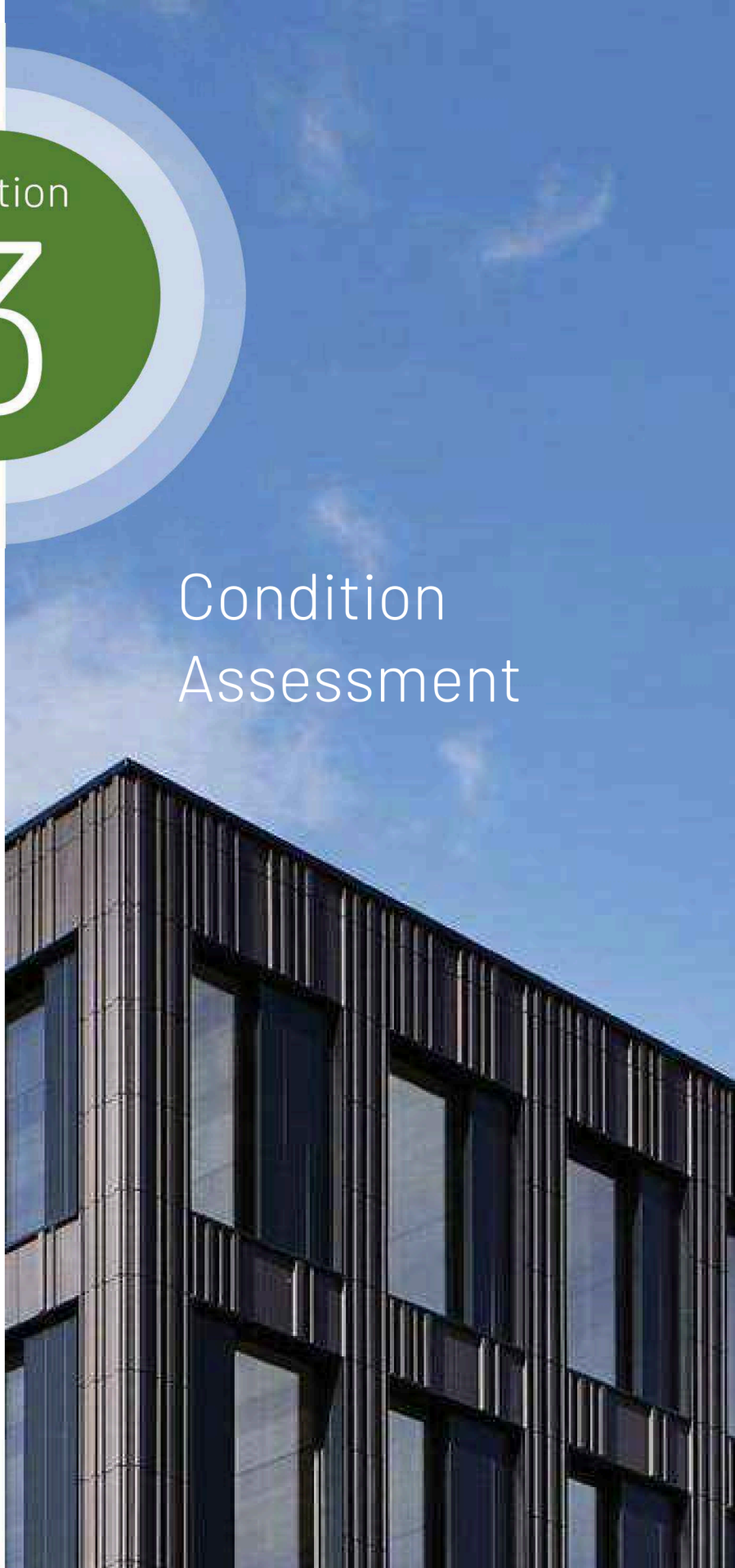
School Name	School Population K-12 Total	F/R	ELL	SPED	McKinney-Vento	Total of Previous Columns	Equity Index Number = school average / district average
Sample	381	15.20%	0.00%	8.40%	0.00%	0.24	0.24/0.48 = 0.49
<b>Grand PSD Total - Oct 2022 Count</b>	<b>26,163</b>	<b>29.5%</b>	<b>5.8%</b>	<b>9.5%</b>	<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 Traut Core Knowledge 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 1998. A major renovation occurred in 2015. The exterior walls are of concrete masonry unit (CMU) construction. Exterior doors are the hollow metal type. Windows are original aluminum framed type. [REDACTED] [REDACTED] Expect to replace exterior doors and windows in approximately 8 years.

### Roofing

Rolled asphalt roofing is original to 1998 construction and is present on the majority of the roof. There is a small section of 2015-built metal standing seam roof added in 2015. The metal roof flashing is original. Expect to replace both the rolled asphalt roofing metal flashing within 5 years.

### Interior Construction and Finishes

The interior construction components of the building include concrete masonry unit (CMU) walls with a ceramic tile veneer. All interior construction and finish assets date to the original 1998 construction. The interior doors are primarily of the wood and hollow metal type. Expect to update carpet, VCT flooring, ceramic tile floors, and acoustical tile ceilings in 4-6 years.

### Conveyance

The building is of single level construction and does not have, or require, a passenger or freight elevator.

### Electrical and Lighting

The building includes both 120/208V and 277/480V service. Electrical assets, including panelboards, transformers, and the main switchboard are a mix of original 1998 install and 2015 install. Emergency back-up lighting appears to date to 1998. The building's interior lighting system consists solely of fluorescent fixtures. Recommend replacement of the fluorescent lighting fixtures with LED lighting fixtures within 2 years. The LED exterior lighting wall packs date to 2022. The fire alarm and security systems were updated in 2015, as was the main switchboard, the main distribution board, and VFDs. [REDACTED] [REDACTED]

### HVAC Systems

The HVAC assets include (26) 2015-built Unit Ventilators. The building is also provided 3 rooftop units, 2 air handling units, a 2015-built cooling tower, exhaust fans, cabinet unit heaters, fan coil units, and 2 gas-fired boilers. The heating water system features two gas-fired boilers with 11-28 years of remaining life and associated circulation pumps that are expected to require replacement in 12 years. (8) of the original exhaust fans are expected to require replacement within two years. RTU-1 and RTU-2 [REDACTED] [REDACTED] have approximately 2 years of remaining life. The BAS was updated in 2015.

### Plumbing

Plumbing assets include two gas-fired water heaters and two circulation pumps. Two backflow preventers are also provided. GWH-1 and GWH-2 date to 2005 and 2009 respectively, [REDACTED] [REDACTED] Expect to replace GWH-1 within three years.

### Fire Suppression

The fire alarm system was replaced in 2015. [REDACTED] [REDACTED] The Fire Protection System appears to be well maintained and updated per fire code requirements. No deficiencies were noted with this system, [REDACTED] [REDACTED]

### Equipment

The Kitchen area is provided an original Walk-In Cooler, but not a Walk-In Freezer. Expect to replace the walk-in cooler in 8 years. However, the single condensing unit associated with the cooler is 10 years past expected life a [REDACTED] [REDACTED] Replace CU-1-Walk-In Cooler within two years.



# 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.

### *Traut Core Knowledge ES*

#### Replace RTU-1 & RTU-2

RTU-1 and RTU-2 are original 1998-built units [REDACTED]. They are 10 years past expected useful life, and have approximately 2 years of remaining life.

The following assets are included within this measure:

FCAID-580081, FCAID-580082

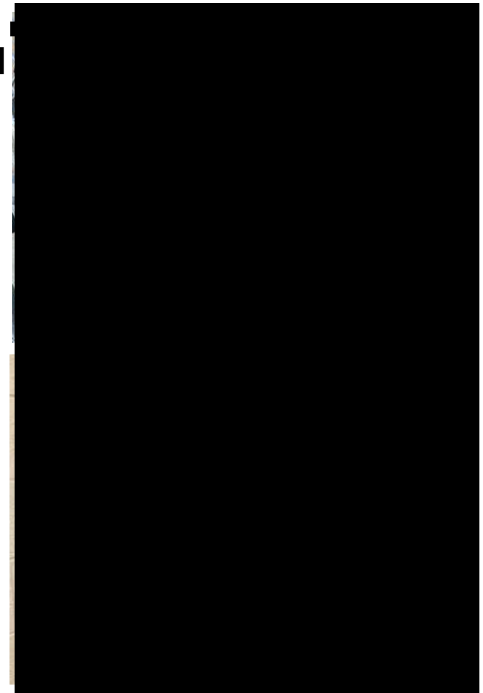


<b>Priority Level:</b>	2
<b>Estimated Cost:</b>	\$87,320
<b>Remaining Life:</b>	2 Years

# Condition Assessment

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## Replace Back-Up Generator & ATS-1



The following assets are included within this measure:

FCAID-580037, FCAID-580112

**Priority Level:** 2  
**Estimated Cost:** \$55,610  
**Remaining Life:** 2-3 Years

## Replace Interior Fluorescent Lighting

Recommend replacement of the 1998-built fluorescent lighting fixtures with LED lighting fixtures within 2 years. Fluorescent fixtures are 5 years past expected life.

The following assets are included within this measure:

FCAID-580117



**Priority Level:** 2  
**Estimated Cost:** \$778,840  
**Remaining Life:** 2 Years

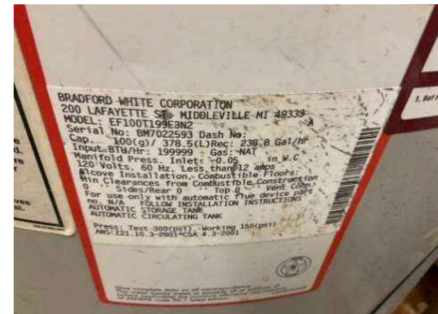
# Condition Assessment

## Replace GWH-1

GWH-1, built in 2005, is 8 years past expected life. Recommend replacement within the next three years.

The following assets are included within this measure:

FCAID-580031



Priority Level: 2  
Estimated Cost: \$10,610  
Remaining Life: 3 Years

## Replace CU-1-Walk-In Cooler

The single condensing unit associated with the cooler is 10 years past expected life. Replace CU-1-Walk-In Cooler within two years.

The following assets are included within this measure:

FCAID-580042



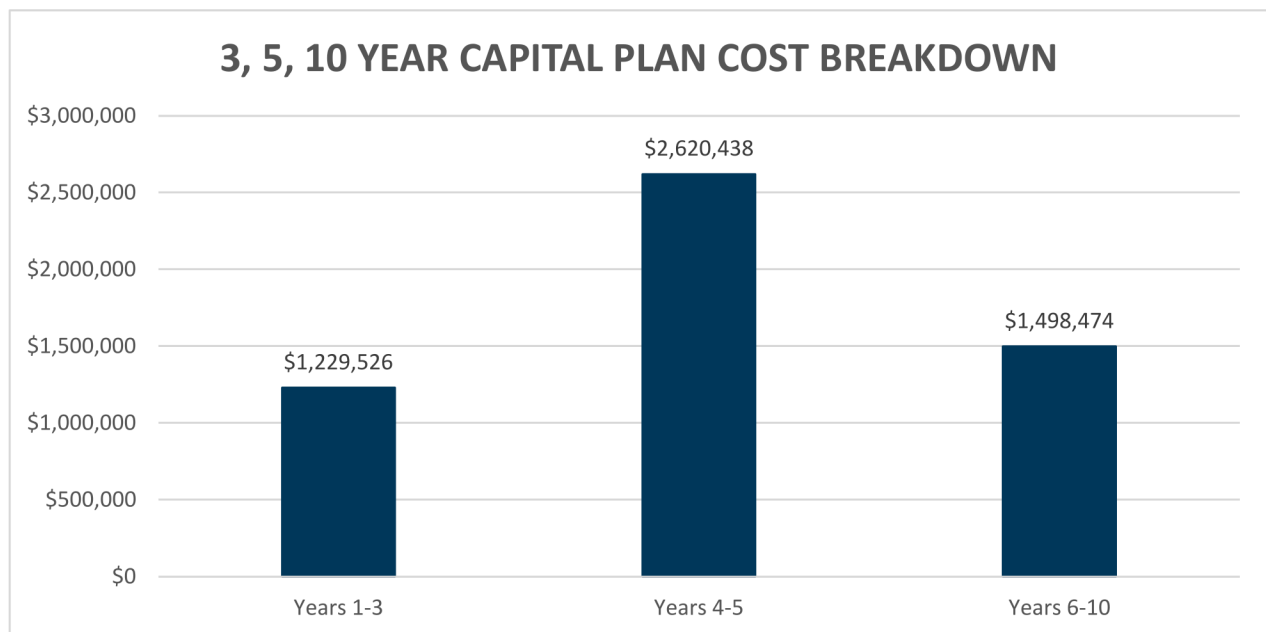
Priority Level: 2  
Estimated Cost: \$10,050  
Remaining Life: 2 Years

# 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.

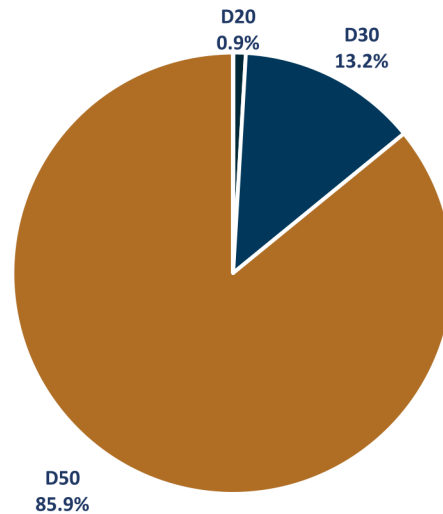
REPLACEMENT PERIOD	ASSET QUANTITY	CUMULATIVE REPLACEMENT COST
3-Year Plan	16	\$1,229,526
5-Year Plan	23	\$2,620,438
10-Year Plan	17	\$1,498,474
<b>Total</b>	<b>56</b>	<b>\$5,348,438</b>

# 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 \$1,229,526. The specific assets that will reach end of life in this period are listed in Appendix A.

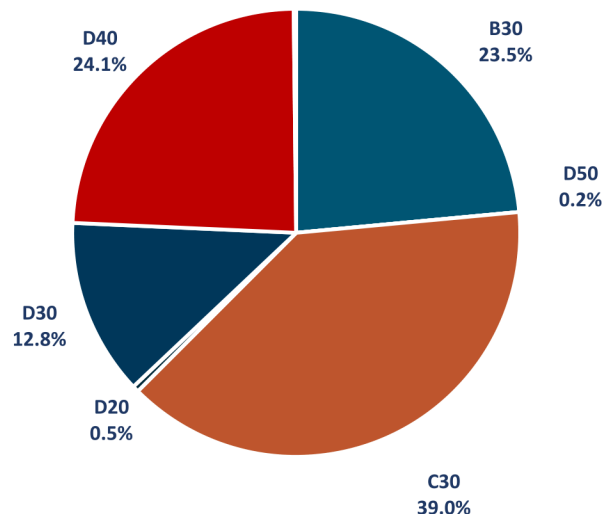
SUBSYSTEM	Years 1-3	Percent
A10 - Foundations	\$0	0%
B10 - Superstructure	\$0	0%
B20 - Exterior Enclosure	\$0	0%
B30 - Roofing	\$0	0%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$0	0%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$11,256	1%
D30 - HVAC	\$162,038	13%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$1,056,232	86%
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 \$2,620,438. 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	\$616,272	24%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$1,021,506	39%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$11,942	<1%
D30 - HVAC	\$334,299	13%
D40 - Fire Protection	\$631,534	24%
D50 - Electrical	\$4,885	<1%
E10 - Equipment	\$0	0%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%

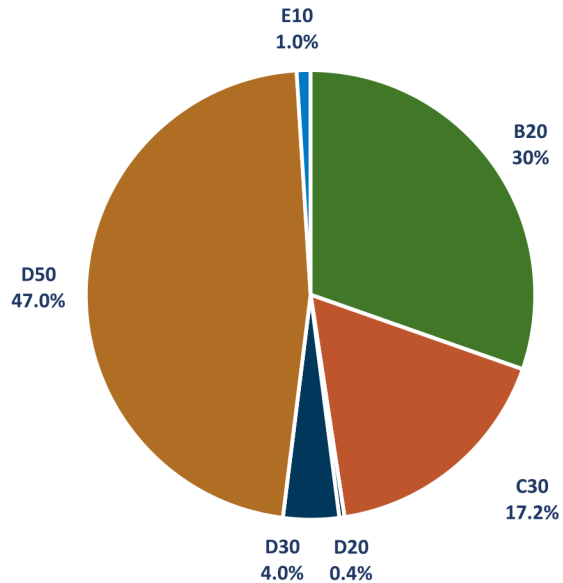


# Condition Assessment

## 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 \$1,498,474. 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	\$455,115	30%
B30 - Roofing	\$0	0%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$258,043	17%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$5,367	<1%
D30 - HVAC	\$60,495	4%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$704,622	47%
E10 - Equipment	\$14,832	1%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%



# Condition Assessment

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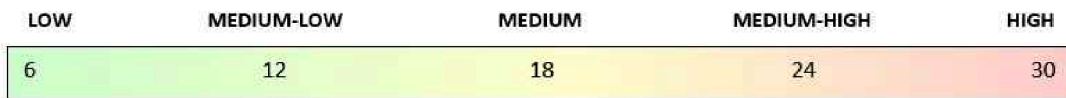
## PRIORITY SUMMARY

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.



# Condition Assessment

## PRIORITY SCORE SUMMARY - TRAUT CORE KNOWLEDGE ES

	<b>TRAUT CORE KNOWLEDGE ES</b>	
	BUILDING TYPE:	Elementary School
	YEAR BUILT:	1998
	GROSS AREA (SF):	50,871
	DATE ASSESSED:	April 12, 2023
PRIORITY SCORE:	<b>16.7</b>	

SUBSYSTEM:	DESCRIPTION	PRIORITY SCORE
B20 - Ext. Enclosure	The original building was constructed in 1998. A major renovation occurred in 2015. The exterior walls are of concrete masonry unit (CMU) construction. Exterior doors are the hollow metal type. Windows are original aluminum framed type. [REDACTED] Expect to replace exterior doors and windows in approximately 8 years.	<b>13.0</b>
B30 - Roofing	Rolled asphalt roofing is original to 1998 construction and is present on the majority of the roof. There is a small section of 2015-built metal standing seam roof added in 2015. The metal roof flashing is original. Expect to replace both the rolled asphalt roofing metal flashing within 5 years.	<b>15.7</b>
C10 - Int. Construction	The interior construction components of the building include concrete masonry unit (CMU) walls with a ceramic tile veneer. All interior construction and finish assets date to the original 1998 construction. The interior doors are primarily of the wood and hollow metal type. Expect to update carpet, VCT flooring, ceramic tile floors, and acoustical tile ceilings in 4-6 years.	<b>13.3</b>
C30 - Interior Finishes		<b>15.5</b>
D20 - Plumbing	Plumbing assets include two gas-fired water heaters and two circulation pumps. Two backflow preventers are also provided. GWH-1 and GWH-2 date to 2005 and 2009 respectively, making them well past expected useful life. Expect to replace GWH-1 within three years.	<b>12.6</b>
D30 - HVAC	The HVAC assets include (26) 2015-built Unit Ventilators. The building is also provided 3 rooftop units, 2 air handling units, a 2015-built cooling tower, exhaust fans, cabinet unit heaters, fan coil units, and 2 gas-fired boilers. The heating water system features two gas-fired boilers with 11-28 years of remaining life and associated circulation pumps that are expected to require replacement in 12 years. (8) of the original exhaust fans are expected to require replacement within two years. RTU-1 and RTU-2 [REDACTED] have approximately 2 years of remaining life. The BAS was updated in 2015.	<b>15.0</b>
D40 - Fire Suppression	The fire alarm system was replaced in 2015. [REDACTED] The Fire Protection System appears to be well maintained and updated per fire code requirements. No deficiencies were noted with this system, [REDACTED]	<b>22.0</b>
D50 - Electrical	The building includes both 120/208V and 277/480V service. Electrical assets, including panelboards, transformers, and the main switchboard are a mix of original 1998 install and 2015 install. Emergency back-up lighting appears to date to 1998. The building's interior lighting system consists solely of fluorescent fixtures. Recommend replacement of the fluorescent lighting fixtures with LED lighting fixtures within 2 years. The LED exterior lighting wall packs date to 2022. The fire alarm and security systems were updated in 2015, as was the main switchboard, the main distribution board, and VFDs. [REDACTED]	<b>22.3</b>
E10 - Equipment	The Kitchen area is provided an original Walk-In Cooler, but not a Walk-In Freezer. Expect to replace the walk-in cooler in 8 years. However, the single condensing unit associated with the cooler is 10 years past expected life [REDACTED] Replace CU-1-Walk-In Cooler within two years.	<b>14.0</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.

### TRAUT CORE KNOWLEDGE ES

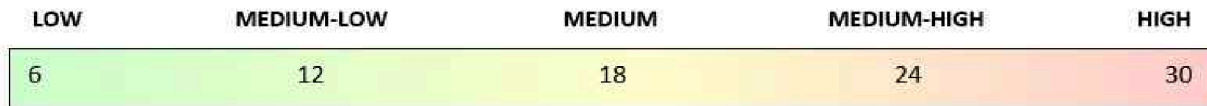
ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING	REPLACEMENT COST	PRIORITY SCORE
FCAID-580117	Lighting: Fluorescent	D50 - Electrical	2	\$778,840	27
FCAID-580082	RTU-2	D30 - HVAC	2	\$51,940	21
FCAID-580081	RTU-1	D30 - HVAC	2	\$35,380	20
FCAID-580114	Emergency Back-Up Lighting	D50 - Electrical	2	\$193,820	19
FCAID-580042	CU-1-Walk-In Cooler	D30 - HVAC	2	\$10,050	18
FCAID-580037	Back-Up Generator	D50 - Electrical	3	\$51,270	17
FCAID-580059	EX-04	D30 - HVAC	2	\$1,260	16
FCAID-580061	EX-06	D30 - HVAC	2	\$8,190	16
FCAID-580045	EX-01	D30 - HVAC	2	\$6,710	16
FCAID-580050	EX-14	D30 - HVAC	2	\$6,710	16
FCAID-580058	EX-03	D30 - HVAC	2	\$8,190	16
FCAID-580051	EX-15	D30 - HVAC	2	\$6,710	16
FCAID-580057	EX-23	D30 - HVAC	2	\$6,710	16
FCAID-580055	EX-02	D30 - HVAC	2	\$8,660	16
FCAID-580031	GWH-1	D20 - Plumbing	3	\$10,610	14
FCAID-580040	CUH-3	D30 - HVAC	3	\$6,610	14

# 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.

### TRAUT CORE KNOWLEDGE ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-580111	Wet Fire Sprinkler System	D40 - Fire Protection	5	\$561,110	22
FCAID-580034	AHU-1	D30 - HVAC	5	\$120,870	20
FCAID-580035	AHU-2	D30 - HVAC	5	\$99,540	19
FCAID-580017	Interior Flooring: Carpet	C30 - Interior Finishes	4	\$528,560	17
FCAID-580007	Roofing: Rolled Asphalt	B30 - Roofing	5	\$355,610	17
FCAID-580016	Interior Ceilings: Acoustic Tile	C30 - Interior Finishes	5	\$394,430	15
FCAID-580053	EX-26	D30 - HVAC	4	\$6,710	14
FCAID-580052	EX-16	D30 - HVAC	4	\$6,710	14
FCAID-580056	EX-20	D30 - HVAC	4	\$6,710	14
FCAID-580054	EX-19	D30 - HVAC	4	\$6,710	14
FCAID-580060	EX-05	D30 - HVAC	4	\$8,190	14
FCAID-580063	EX-18	D30 - HVAC	4	\$1,260	14
FCAID-580062	EX-07	D30 - HVAC	4	\$1,260	14
FCAID-580046	EX-10	D30 - HVAC	4	\$6,710	14
FCAID-580064	EX-09	D30 - HVAC	4	\$1,260	14
FCAID-580047	EX-11	D30 - HVAC	4	\$8,190	14
FCAID-580006	Roofing: Metal Flashing	B30 - Roofing	5	\$191,940	14
FCAID-580048	EX-12	D30 - HVAC	4	\$6,710	14
FCAID-580032	GWH-2	D20 - Plumbing	5	\$10,610	13
FCAID-580112	ATS-1	D50 - Electrical	5	\$4,340	12
FCAID-580033	Air Compressor-1	D30 - HVAC	5	\$3,820	12
FCAID-580041	Air Dryer-1	D30 - HVAC	5	\$2,510	11
FCAID-580066	ET-2	D30 - HVAC	5	\$11,620	10

# 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.

### TRAUT CORE KNOWLEDGE ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-580116	Fire Alarm System	D50 - Electrical	7	\$396,290	22
FCAID-580128	Security System	D50 - Electrical	7	\$193,820	19
FCAID-580083	RTU-3	D30 - HVAC	7	\$31,160	17
FCAID-580136	Walk-In Cooler	E10 - Equipment	8	\$12,060	14
FCAID-580005	Exterior Windows: Aluminum Framed	B20 - Exterior Enclosure	8	\$147,550	14
FCAID-580027	BP-3	D30 - HVAC	6	\$4,630	14
FCAID-580021	Interior Flooring: VCT	C30 - Interior Finishes	6	\$136,710	13
FCAID-580028	BP-4	D20 - Plumbing	6	\$4,630	13
FCAID-580019	Interior Flooring: Ceramic Tile	C30 - Interior Finishes	6	\$80,340	13
FCAID-580001	Exterior Doors: Hollow Metal, Single	B20 - Exterior Enclosure	8	\$128,830	13
FCAID-580080	BBR-028	D30 - HVAC	7	\$480	13
FCAID-580003	Exterior Doors: Hollow Metal, Double	B20 - Exterior Enclosure	8	\$79,360	12
FCAID-580084	GUH-1	D30 - HVAC	7	\$4,520	12
FCAID-580020	Interior Flooring: Rolled Sheet Vinyl	C30 - Interior Finishes	6	\$5,540	11
FCAID-580004	Exterior: Steel Door w/ Windows Surround	B20 - Exterior Enclosure	8	\$14,310	11
FCAID-580026	Glycol Feeder-1	D30 - HVAC	7	\$1,780	10
FCAID-580036	AS-1	D30 - HVAC	10	\$7,530	7