# POUDRE SCHOOL DISTRICT DUNN ELEMENTARY SCHOOL



FACILITY CONDITION ASSESSMENT FORT COLLINS, CO OCTOBER 2023



Together, Building a Thriving Planet



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# Executive Summary



# **Project Goals**

The contents of this report present the results of the Facility Condition Assessment (FCA) performed at Dunn ES within the Poudre School District (PSD) on July 19, 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
DUNN ES	45,957	1949
TOTAL	45,957	

#### **Facility Summary**

#### Dunn ES

Dunn ES is located at 501 S. Washington Ave., Fort Collins, CO 80521. This 45,957 SF facility consists of one level and was initially constructed in 1949. The equity index for this school is 0.79.



Dunn ES

#### **Assessment Summary**

This section summarizes the building systems at the facility and describes the general condition observed based on the assessment performed on July 19, 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

# 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.

Subsystem	Years 1-5	Years 6-10	Years 11-15	Years 15-20	
B20 - Enclosure	\$236,491	\$192,480	\$829,327	\$0	
B30 - Roofing	\$27,583	\$115,657	\$0	\$910,192	
C10 - Int. Construction	\$15,735	\$281,387	\$375,816	\$367,640	
C20 - Stairs	\$0	\$0	\$8,568	\$0	
C30 - Interior Finishes \$12,322		\$1,019,416 \$92,153		\$827,579	
D10 - Conveying \$0		\$0 \$0		\$0	
D20 - Plumbing	D20 - Plumbing \$37,355		\$38,347	\$3,129	
D30 - HVAC	\$503,358	\$294,754	\$117,489	\$1,896,258	
D40 - Fire Suppression	\$0	\$0	\$0	\$0	
D50 - Electrical \$991,082		\$661,538 \$4,802		\$295,323	
E10 - Equipment \$0		\$0	\$0	\$0	
Total:	\$1,531,795	\$956,292	\$160,638	\$2,194,711	

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





# **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 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.

#### UniFormat Classification of Building Systems

# **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:

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

ASSET TYPE	ASSET SIZE	ENERGY Cost impact (1-5)
	less than 5 ton	2
Rooftop Unit	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		
Air Curtain		
Air Dryer		
Cabinet Unit Heater		
Dehumidifier		
Electric Duct Heater	All sizes	2
Humidifier		
Unit Heater	1	
Unit Ventilator	1	
Walk-In Condenser	1	
Walk-In Unit	]	
All Other	All sizes	1

\*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.

# **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.

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:

# School Percentage in these areas added together as decimals 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 Dunn ES is 0.79.

# 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.; McKinnney-Vento - Homeless Assistance





# SYSTEMS DESCRIPTION

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

#### **Exterior Enclosure**

The exterior façade of this building is primarily masonry (brick and CMU). There are several periods of construction (1948, 1987, 1992, 2006) with most of the masonry matching in color, size, and texture. The 2006 addition has a different color masonry. There are four different canopy assemblies on the exterior of the building. Glazing is primarily aluminum framed, although the glazing is from different periods of construction.

#### Roofing

The roof over the original footprint is a ballasted roof. Newer portions of the building have rolled asphalt roofs. At the main entry (1992 addition) there is an area of metal roofing.

#### **Interior Construction and Finishes**

Interior partitions are primarily masonry of the period of construction of that area. There are some drywall partitions are in the building as well. Note that the original area of the classrooms (1948) have original wall and ceiling materials. The ceiling has evidence of repaired damage. Additionally there are glass block windows on the corridor walls. Newer portions of the building have modern masonry and more modern glazing assemblies. Newer portions of the building have ACT ceilings and carpet for flooring.

#### Conveyance

N/A

#### **Electrical and Lighting**

The building's electrical distribution equipment consists of 120/208 panels and switchgear.

the emergency generator and automatic transfer switch which have surpassed their life expectancies and should be replaced within the next 3-4 years. The fire alarm system dates to 2014. Interior lighting consists of fluorescent fixtures. Exterior lighting is made up of incandescent lighting fixtures **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, an air handling unit, three rooftop units, radiant heaters, hot water coils, and VUVs. The building automation system is made up of Schneider Electric controls. Additional HVAC equipment includes a makeup air unit, fan coil units, exhaust fans, unit heaters, and cabinet unit heaters. Two of the rooftop units, several radiant heaters, exhaust fans, hot water coils, and unit heaters have surpassed their life expectancies and should be replaced within the next 2-6 years. In addition, the boilers are nearing the end of their life expectancies and are anticipated to need replacement within the next four years.

#### Plumbing

Domestic hot water is provided by two (2) natural gas fired water heater installed in 1999 and 2008, which have surpassed its life expectancy and are anticipated to need replacement within the next 3-5 years. Additional plumbing equipment includes backflow preventers, expansion tanks, storage tank, and pumps.

#### **Fire Suppression**

N/A

#### Equipment

N/A

# **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.

Dunn ES

**Replace Wood Soffit** 

The wood soffit should be replaced within the next year.

The following assets are included within this measure:

FCAID-170006





Priority Level:	2
Estimated Cost:	\$5,120
Remaining Life:	1 year

# Condition Assessment

# Replace RTU-1 and RTU-2

RTU-1 and RTU-2, which serve various classrooms and the administration area, have surpassed their life expectancies by over 15 years and should be replaced within the next two years.

The following assets are included within this measure: FCAID-170122, FCAID-170123





Priority Level:	2
Estimated Cost:	\$158,380
Remaining Life:	2 years

#### **Replace Boilers**

The two boilers in serving the hot water system at Dunn Elementary School, are nearing the end of their life expectancy and are anticipated to need replacement within the next four years.

The following assets are included within this measure:

FCAID-170110, FCAID-170111



Priority Level:2Estimated Cost:\$231,160Remaining Life:4 years

#### **Replace Emergency Generator**

The emergency generator has surpassed its industry life expectancy and **surpassed** is recommended the the generator be replaced within the next three years.



The following assets are included within this measure:

FCAID-170143

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

# **Replace 2006 Asphalt Roofing**

The area of roof with rolled asphalt installed in 2006 is **a second second second** nearing the end of its life expectancy. This roofing is anticipated to need replacement within the next two years.

The following assets are included within this measure:

FCAID-170029





Priority Level:	2
Estimated Cost:	\$26,780
Remaining Life:	2 years

# 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	7	\$233,835
5-Year Plan	34	\$1,590,091
10-Year Plan	50	\$2,570,621
Total	91	\$4,394,547

# **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 \$233,835. 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	\$5,120	2%
B30 - Roofing	\$27,583	12%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$2,980	1%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$11,256	5%
D30 - HVAC	\$163,131	70%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$23,764	10%
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 \$1,590,091. 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	\$231,371	15%
B30 - Roofing	\$0	0%
C10 - Int. Construction	\$15,735	1%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$9,342	1%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$26,099	2%
D30 - HVAC	\$340,227	21%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$967,318	61%
E10 - Equipment	\$0	0%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%



# **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 \$2,570,621. 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	\$192,480	7%
B30 - Roofing	\$115,657	4%
C10 - Int. Construction	\$281,387	11%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$1,019,416	40%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$0	0%
D30 - HVAC	\$294,754	11%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$661,538	26%
E10 - Equipment	\$0	0%
G20 - Site Improvements	\$5,389	<1%
G40 - Site Electrical	\$0	0%



# **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.

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

# **Condition Assessment**

# **PRIORITY SCORE SUMMARY - DUNN ES**

	DUNN	N ES
	BUILDING TYPE:	Elementary School
	YEAR BUILT:	1949
	GROSS AREA (SF):	45,957
	DATE ASSESSED:	July 19, 2023
	PRIORITY SCORE:	15.7
SUBSYSTEM:	DESCRIPTION	PRIORITY SCORE
B20 - Ext. Enclosure	The exterior façade of this building is primarily masonry (brick and CMU). There are sex periods of construction (1948, 1987, 1992, 2006) with most of the masonry matching ir size, and texture. The 2006 addition has a different color masonry. There are four diffe canopy assemblies on the exterior of the building. Glazing is primarily aluminum frame although the glazing is from different periods of construction.	n color, erent <b>12.1</b>
B30 - Roofing	The roof over the original footprint is a ballasted roof. Newer portions of the building has a sphalt roofs. At the entry (1992 addition) there is an area of metal roofing.	
C10 - Int. Construction	Interior partitions are primarily masonry of the period of construction of that area. The some drywall partitions are in the building as well. Note that the original area of the cla	
C20 - Interior Stairs	(1948) have original wall and ceiling materials. The ceiling has evidence of repaired dar	
C30 - Interior Finishes	Additionally there are glass block windows on the corridor walls. Newer portions of the have modern masonry and more modern glazing assemblies. Newer portions of the bun have ACT ceilings and carpet for flooring.	-
D20 - Plumbing	Domestic hot water is provided by two (2) natural gas fired water heater installed in 199 2008, which have surpassed its life expectancy and are anticipated to need replacemen the next 3-5 years. Additional plumbing equipment includes backflow preventers, expan tanks, storage tank, and pumps.	nt within 12 8
D30 - HVAC	The building's heating, ventilation, and air conditioning (HVAC) system consists of a hot system, an air handling unit, three rooftop units, radiant heaters, hot water coils, and V building automation system is made up of Schneider Electric controls. Additional HVAC equipment includes a makeup air unit, fan coil units, exhaust fans, unit heaters, and cat heaters. Two of the rooftop units, several radiant heaters, exhaust fans, hot water coils, heaters have surpassed their life expectancies and should be replaced within the next 2 In addition, the boilers are nearing the end of their life expectancies and are anticipated replacement within the next four years.	VUVs. The binet unit s, and unit 2-6 years.
D40 - Fire Suppression	N/A	N/A
D50 - Electrical	The building's electrical distribution equipment consists of 120/208 panels and switcher the emergency generat automatic transfer switch which have surpassed their life expectancies and should be re within the next 3-4 years. The fire alarm system dates to 2014. Interior lighting consists fluorescent fixtures. Exterior lighting is made up of incandescent lighting fixtures and is, generally, in poor condition. Consider upgrading the interior and exterior lighting to ligh emitting diode (LED) fixtures to reduce energy costs and maintenance needs.	replaced s of <b>22.1</b>
E10 - Equipment	N/A	N/A

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. [ $\leq 12$  = green, 12-24 = yellow,  $\geq 24$  = red]

Appendices

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

#### **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.

#### **DUNN ES**

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING	REPLACEMENT Cost	PRIORITY SCORE
FCAID-170122	RTU-1	D30 - HVAC	2	\$123,000	
FCAID-170123	RTU-2	D30 - HVAC	2	\$35,380	20
FCAID-170143	Generator	D50 - Electrical	3	\$22,400	18
FCAID-170029	Roofing: Rolled Asphalt	B30 - Roofing	2	\$26,780	17
FCAID-170054	Interior Floor Finishes: Carpet (Older)	C30 - Int. Finishes	1	\$2,980	16
FCAID-170006	Exterior: Old Wood Canopy	B20 - Ext. Enclosure	1	\$5,120	15
FCAID-170072	Water Heater-2	D20 - Plumbing	3	\$10,610	15

# **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.

# **DUNN ES**

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED Remaining Life	REPLACEMENT Cost	PRIORITY Score
FCAID-170148	Interior Lighting - Fluorescent	D50 - Electrical	4	\$690 <i>,</i> 370	26
FCAID-170147	Emergency Lighting	D50 - Electrical	4	\$175,100	25
FCAID-170111	B-2	D30 - HVAC	4	\$115,580	24
FCAID-170110	B-1	D30 - HVAC	4	\$115,580	24
FCAID-170109	FC-1	D30 - HVAC	4	\$11,440	16
FCAID-170069	CP-3	D20 - Plumbing	4	\$4,630	15
FCAID-170144	Exterior Lighting: HID Wall Pack	D50 - Electrical	4	\$3,640	15
FCAID-170097	EF-10	D30 - HVAC	4	\$1,260	15
FCAID-170149	Panel 1A	D50 - Electrical	4	\$3,270	15
FCAID-170150	Panel 2A	D50 - Electrical	4	\$3,270	15
FCAID-170019	Exterior Windows: old Aluminum	B20 - Ext. Enclosure	5	\$77,660	14
FCAID-170099	EF-2	D30 - HVAC	5	\$5,550	13
FCAID-170098	EF-11	D30 - HVAC	5	\$1,260	13
FCAID-170071	Water Heater-1	D20 - Plumbing	5	\$10,610	13
FCAID-170101	EF-5	D30 - HVAC	5	\$9,590	13
FCAID-170152	Panel CR	D50 - Electrical	5	\$3,270	13
FCAID-170142	ATS-1	D50 - Electrical	4	\$4,340	13
FCAID-170105	EF-9	D30 - HVAC	5	\$1,260	13
FCAID-170145	Exterior Lighting: HID Wall Pack	D50 - Electrical	5	\$1,820	13
FCAID-170106	Exhaust Fan	D30 - HVAC	5	\$5 <i>,</i> 550	13
FCAID-170001	Exterior Windows: Glass Block	B20 - Ext. Enclosure	5	\$127,910	13
FCAID-170095	EF-1	D30 - HVAC	5	\$9,590	13
FCAID-170096	EF-1	D30 - HVAC	5	\$5,550	13
FCAID-170102	EF-6	D30 - HVAC	5	\$9,590	13
FCAID-170104	EF-8	D30 - HVAC	5	\$1,260	13

FCAID-170100	EF-3	D30 - HVAC	5	\$9,590	13
FCAID-170126	UH-2	D30 - HVAC	5	\$6,740	12
FCAID-170066	BFP-2	D20 - Plumbing	4	\$1,600	12
FCAID-170070	Storage Tank	D20 - Plumbing	5	\$6,530	11
FCAID-170061	Interior Floor Finishes: Sheet Vinyl	C30 - Int. Finishes	5	\$2,770	11
FCAID-170048	Interior Windows: Wood Framed	C10 - Int. Construct.	5	\$6,210	11
FCAID-170060	Interior Floor Finishes: LVT	C30 - Int. Finishes	5	\$2,210	11
FCAID-170062	Interior Floor Finishes: VCT	C30 - Int. Finishes	5	\$3,320	11
FCAID-170046	Interior Windows: Glass Block	C10 - Int. Construct.	5	\$7,770	11

# 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.

#### **DUNN ES**

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED Remaining Life	REPLACEMENT Cost	PRIORITY Score
FCAID-170146	Fire Alarm System	D50 - Electrical	8	\$358,010	20
FCAID-170162	Security System	D50 - Electrical	6	\$175,100	19
FCAID-170073	AHU-1	D30 - HVAC	8	\$63,990	18
FCAID-170053	Interior Floor Finishes: Carpet	C30 - Int. Finishes	6	\$521,850	16
FCAID-170124	RTU-3	D30 - HVAC	8	\$60,120	16
FCAID-170018	Exterior Windows: new Aluminum	B20 - Ext. Enclosure	7	\$116,490	15
FCAID-170052	Interior Ceiling Finishes: ACT	C30 - Int. Finishes	6	\$238,840	15
FCAID-170090	HWC-1-7	D30 - HVAC	6	\$8,280	14
FCAID-170088	HWC-1-5	D30 - HVAC	6	\$4,140	14
FCAID-170087	HWC-1-4	D30 - HVAC	6	\$3,500	14
FCAID-170081	HWC-1-10	D30 - HVAC	6	\$1,930	14
FCAID-170089	HWC-1-6	D30 - HVAC	6	\$4,140	14
FCAID-170091	HWC-1-8	D30 - HVAC	6	\$2,300	14
FCAID-170082	HWC-1-11	D30 - HVAC	6	\$1,930	14
FCAID-170092	HWC-1-9	D30 - HVAC	6	\$2,300	14
FCAID-170080	HWC-1-1	D30 - HVAC	6	\$2,300	14
FCAID-170086	HWC-1-3	D30 - HVAC	6	\$1,930	14
FCAID-170084	HWC-1-13	D30 - HVAC	6	\$1,930	14
FCAID-170085	HWC-1-2	D30 - HVAC	6	\$2,300	14
FCAID-170083	HWC-1-12	D30 - HVAC	6	\$2,300	14
FCAID-170118	BB-22A-1	D30 - HVAC	6	\$2,860	13
FCAID-170076	CUH-2	D30 - HVAC	6	\$6,610	13
FCAID-170120	BB-24-1	D30 - HVAC	6	\$5,720	13
FCAID-170028	Roofing: Pre-Cast Coping	B30 - Roofing	8	\$37,790	13
FCAID-170078	CUH-4	D30 - HVAC	6	\$6,610	13

FCAID-170024	Roofing: Skylight	B30 - Roofing	8	\$29,640	13
FCAID-170119	BB-23-1	D30 - HVAC	6	\$4,770	13
FCAID-170058	Interior Floor Finishes: Tile	C30 - Int. Finishes	6	\$71,900	13
FCAID-170121	BB-25-1	D30 - HVAC	6	\$2,860	13
FCAID-170027	Roofing: Metal Flashing	B30 - Roofing	8	\$20,570	13
FCAID-170077	CUH-3	D30 - HVAC	6	\$6,610	13
FCAID-170075	CUH-1	D30 - HVAC	6	\$6,610	13
FCAID-170094	EF-1	D30 - HVAC	6	\$5,550	13
FCAID-170159	Panel M	D50 - Electrical	9	\$3,600	12
FCAID-170154	Panel E	D50 - Electrical	9	\$3,600	12
FCAID-170153	Panel D	D50 - Electrical	9	\$3,600	12
FCAID-170032	Interior Ceiling Finishes: 48 Drywall	C10 - Int. Construct.	10	\$156,840	12
FCAID-170156	Panel F	D50 - Electrical	9	\$3,600	12
FCAID-170005	Exterior: Old Metal Canopy	B20 - Ext. Enclosure	6	\$46,050	12
FCAID-170030	Roofing: Roof Ladder	B30 - Roofing	8	\$2,920	12
FCAID-170079	CU-1	D30 - HVAC	10	\$7,540	12
FCAID-170055	Interior Floor Finishes: Concrete	C30 - Int. Finishes	10	\$33,960	11
FCAID-170125	UH-1	D30 - HVAC	7	\$4,520	11
FCAID-170059	Interior Floor Finishes: Tile	C30 - Int. Finishes	9	\$7,820	11
FCAID-170103	EF-7	D30 - HVAC	10	\$6,210	11
FCAID-170093	EF	D30 - HVAC	10	\$6,210	11
FCAID-170167	Interior Wall Construction: Chain Link	G20 - Site Imprvmnts	10	\$4,130	10
FCAID-170034	Interior Wall Construction: Drywall (1947)	C10 - Int. Construct.	10	\$58,820	10
FCAID-170023	Roofing: Roof Hatch	B30 - Roofing	8	\$3,120	9
FCAID-170074	AS-1	D30 - HVAC	8	\$7,530	8