



# Midland Public Schools

*Inspiring Excellence*

## Facilities Assessment

[DRAFT]

March 16, 2026

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In November and December 2025, GMB conducted a comprehensive facilities assessment of 17 Midland Public Schools buildings to evaluate the condition of building systems and identify long-term capital renewal needs. Overall, the district’s facilities were found to be well maintained, and the assessment team noted the strong work of the district’s facilities staff in caring for a large and diverse portfolio of buildings. Many of the identified needs are consistent with normal lifecycle replacement of building systems and infrastructure as facilities age.

The assessment identified approximately \$549 million in potential capital renewal and modernization needs over a ten-year planning horizon, representing planning-level estimates that include construction costs, professional services, contingencies, and projected cost escalation. Detailed scopes and costs would be refined as individual projects are developed.

The largest investment areas include mechanical infrastructure upgrades, interior modernization at several secondary schools, and major building system replacements in aging facilities, with Northeast Middle School reflecting the largest near-term capital investment due to the scale of systems reaching the end of their service life.

These findings are intended to support long-range facility planning and responsible prioritization of capital improvements, and do not include furniture, instructional technology, or future programmatic expansion needs. Civil and site assessments are currently being finalized and will be incorporated into the overall facility planning framework.

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## District: Overall Review

Midland Public Schools commissioned this facility assessment to better understand the long-term capital needs of its building and infrastructure so the district can plan responsibly for maintenance, modernization, and future investment. The GMB team conducted a facilities assessment of Midland Public Schools in November and December 2025. Following the facilities assessment, Clark Construction’s team estimated the costs associated with the identified needs.

Overall, the district’s buildings were found to be well maintained. The assessment team noted the high level of care provided by the district’s facilities staff and the scope of work they manage across the district. Paraphrasing one of the assessors – “Every school district needs the facilities staff MPS has; I wish more were like them.” However, within a school district, there will always be recommendations for replacement/upgrade that require larger capital expenses to cover as is indicated in this facility assessment.

The team reviewed buildings to assess lifecycle replacement needs and infrastructure items based on visual observations.

This report evaluates building materials, systems, and components and is intended to be used as a guide for capital planning over approximately the next ten years across the 17 MPS facilities. This report is only one piece of the puzzle, and does not address furniture, individual technology devices, future programmatic needs, future growth and improvements needs.

Material quantities were estimated using visual observations, Google Earth images, and plans made available to GMB during our visit to each site. The quantities are estimates. Further verification of quantities may be needed as specific projects are identified and construction costs developed into projects. Material replacement costs are based on 2025/6 information and future cost escalation is included in the budgets identified.

All costs are presented in net present value for the identified items. **The costs associated with identified needs are inclusive of direct and indirect costs.** Direct costs are those that cover the material of the product/item identified. The indirect costs cover the additional expenses for labor, professional service fees, contingency at an SD level, and general conditions. This all-in cost provides the reader with a better understanding of the full cost associated with the item when reviewing. Escalation factors account for anticipated inflation and are calculated as an estimated average across action thresholds. The timing of project execution will directly influence costs, and long-range projections may require future adjustments to reflect market conditions.

The 17 buildings reviewed were:

- Carpenter Pre-Primary Center
- Adams Elementary
- Central Park Elementary
- Chestnut Hill Elementary
- Plymouth Elementary
- Siebert Elementary
- Woodcrest Elementary
- Jefferson Middle School
- Northeast Middle School
- H. H. Dow High School
- Midland High School
- Central Auditorium
- Midland Community Stadium
- Transportation and Maintenance Building
- Grounds Building
- Administration Building
- Fast Ice Drive

Items identified as a 10+ year need are not estimated in the total cost because of the long-term escalation uncertainty.

All categories may not be applicable for each site. In those cases, the category is skipped and identified as “\$0” in the Overall Cost Summary.

The following image is what can be observed in the full report. When indicated as an “Action Threshold” item within a certain time period, the associated cost for replacement in that time period will be indicated.



The following charts and figures provide a breakdown of costs at the district level across all of the buildings along with a general review of which building categories are associated with the largest percentage of need in terms of dollars.

You will notice some of the following from these charts:

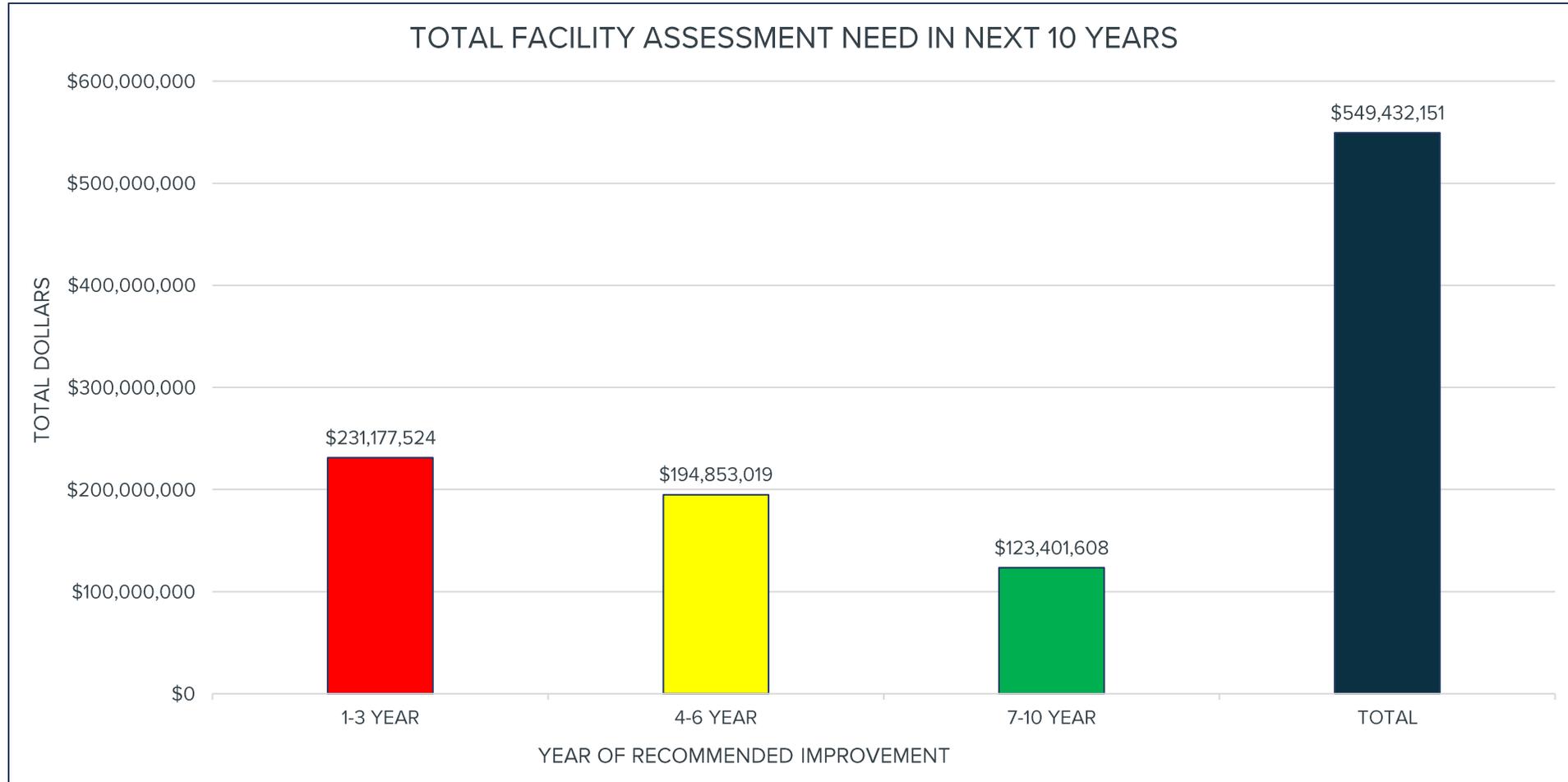
- Northeast Middle School reflects the largest near-term capital investment in the district due to the scale of building systems and infrastructure reaching the end of their service life.
- The recommended 4-6 year need highlighted at H.H. Dow High School and Jefferson Middle School is due to the recommendation to upgrade the interior spaces – ie renovate large areas of the building. This interior finish allowance includes some work associated with infrastructure as needed to support the renovation.
- The largest recommended need within the next 1-3 years across the district is for mechanical system infrastructure. This need is primarily concentrated on the middle and high schools and additional buildings still on steam.
- At the time of this issuance, the Civil/Site review is being completed by the project team. The winter weather of 2025-2026 delayed the completion of that assessment. The seasonal change and snow melt will allow that team to complete their assessment.

## District: Overall Cost Review

BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Carpenter Pre-Primary	\$7,372,194	\$8,175,540	\$2,899,225	\$18,446,960
Adams Elementary	\$2,842,219	\$1,262,216	\$5,818,035	\$9,922,470
Central Park Elementary	\$134,280	\$126,534	\$1,334,112	\$1,594,927
Chestnut Hill Elementary	\$5,005,345	\$1,033,248	\$3,956,002	\$9,994,594
Plymouth Elementary	\$5,238,784	\$1,994,191	\$6,321,634	\$13,554,609
Siebert Elementary	\$4,478,129	\$3,320,581	\$4,427,185	\$12,225,895
Woodcrest Elementary	\$4,922,952	\$2,095,281	\$4,854,128	\$11,872,361
Jefferson Middle School	\$17,491,275	\$44,742,376	\$21,459,732	\$83,693,383
Northeast Middle School	\$100,248,830	\$5,670,505	\$24,997,620	\$130,916,955
Dow High School	\$32,484,236	\$101,252,618	\$16,120,443	\$149,857,297
Midland High School	\$32,320,276	\$15,175,730	\$20,797,064	\$68,293,069
Central Auditorium	\$4,806,839	\$442,881	\$1,726,784	\$6,976,504
Midland Community Stadium	\$3,563,201	\$615,105	\$894,960	\$5,073,267
Transportation and Maintenance	\$6,096,992	\$906,422	\$2,894,038	\$9,897,452
Grounds	\$1,857,669	\$604,073	\$1,465,533	\$3,927,275
Administration	\$2,158,822	\$5,737,082	\$2,969,417	\$10,865,321
Fast Ice	\$155,480	\$1,698,636	\$465,697	\$2,319,812
<b>TOTALS</b>	<b>\$231,177,524</b>	<b>\$194,853,019</b>	<b>\$123,401,608</b>	<b>\$549,432,151</b>

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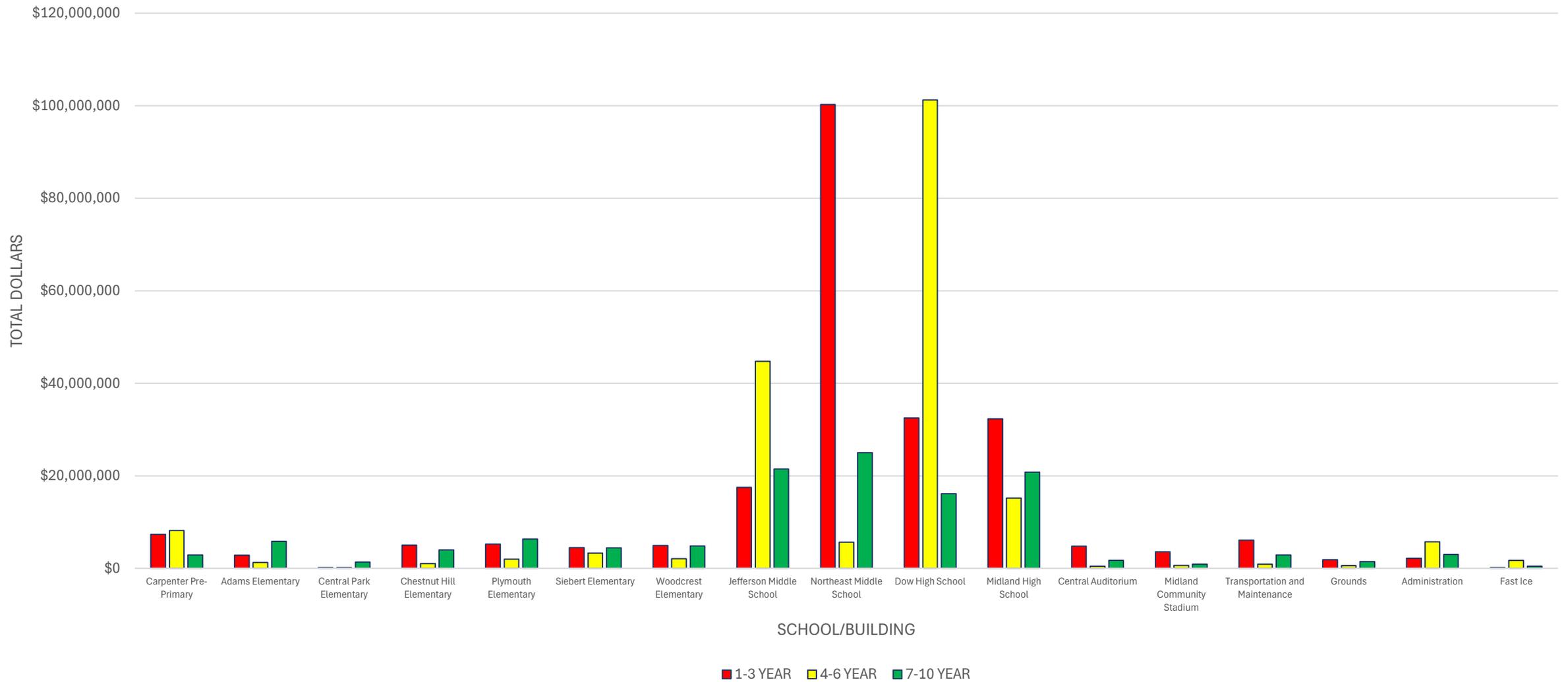
## District: Overall Cost Review



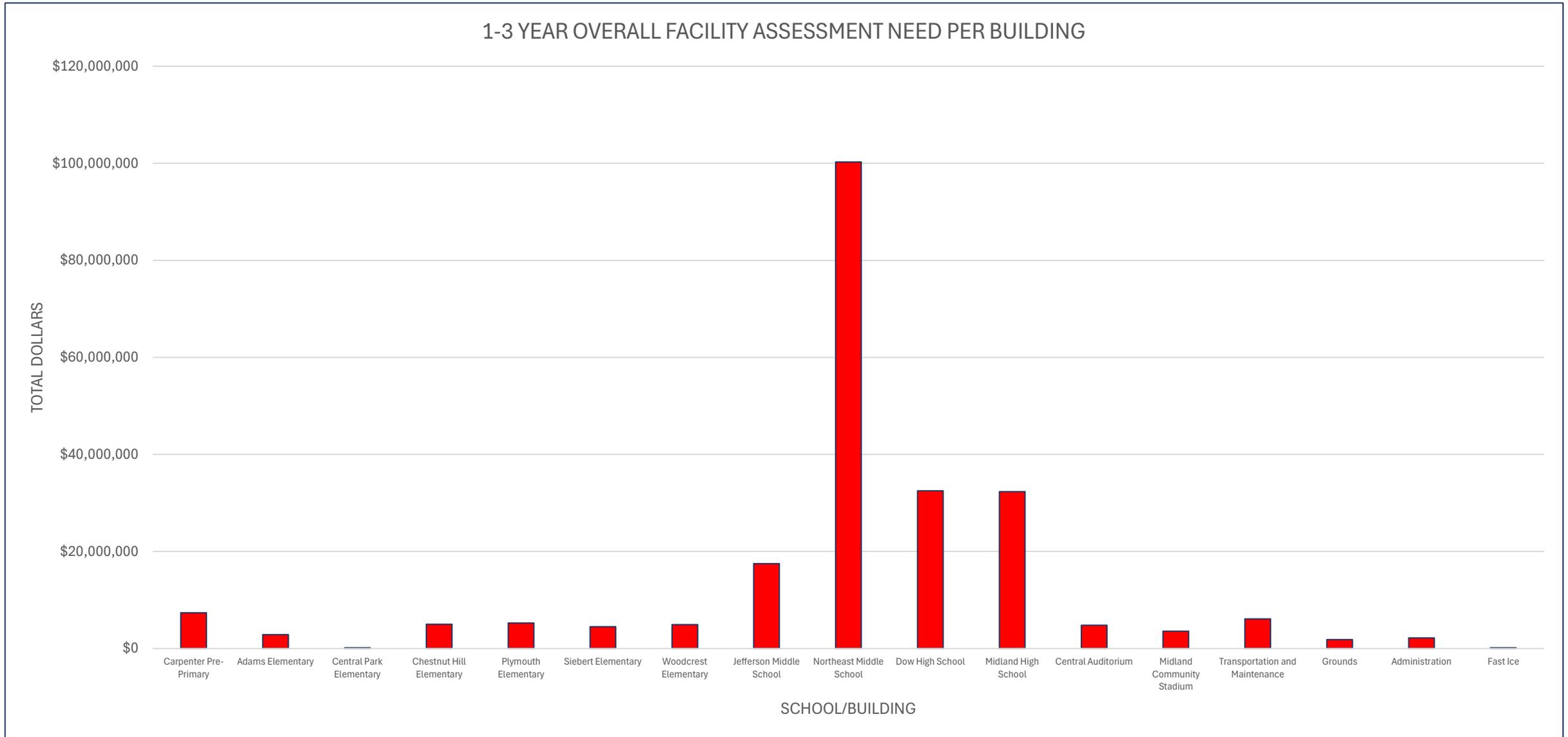
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## District: Overall Cost Review

OVERALL FACILITY ASSESSMENT NEED PER BUILDING

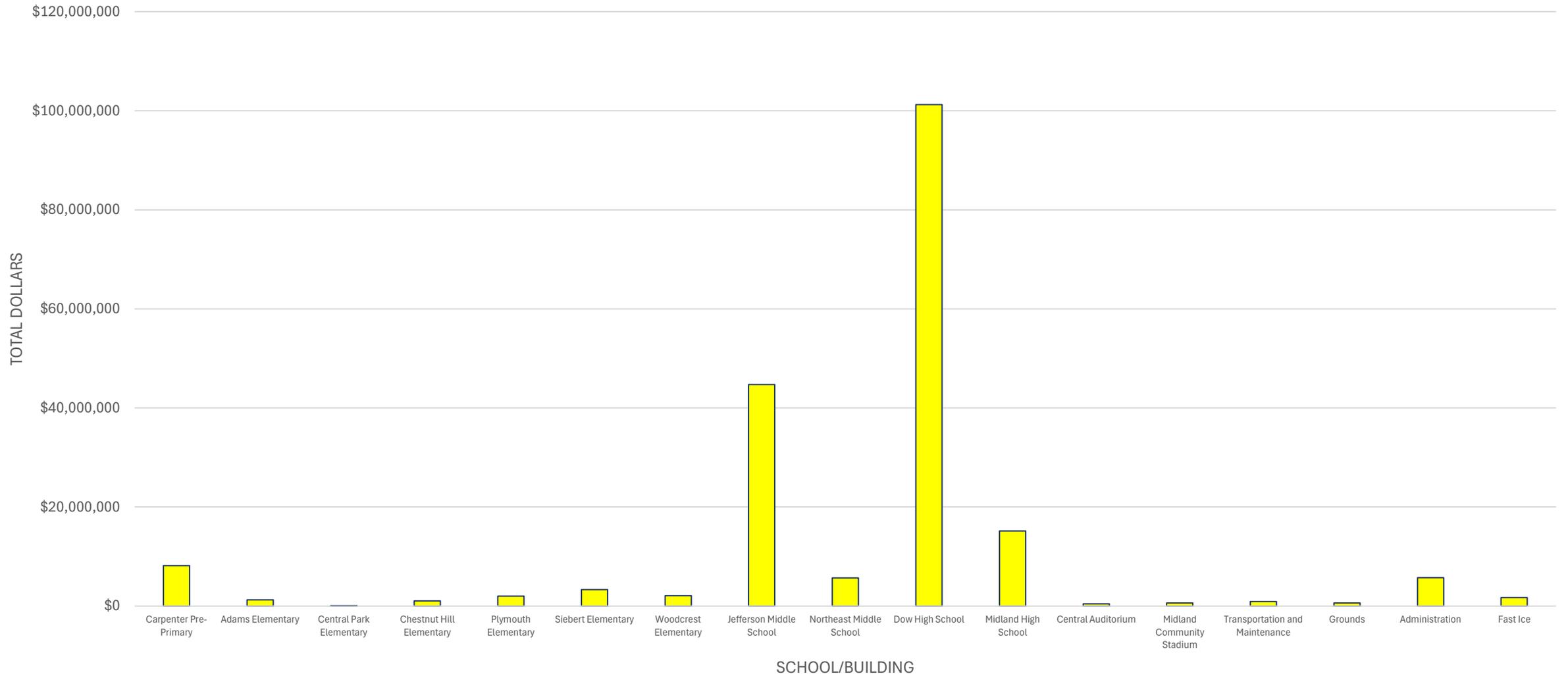


## District: Overall Cost Review



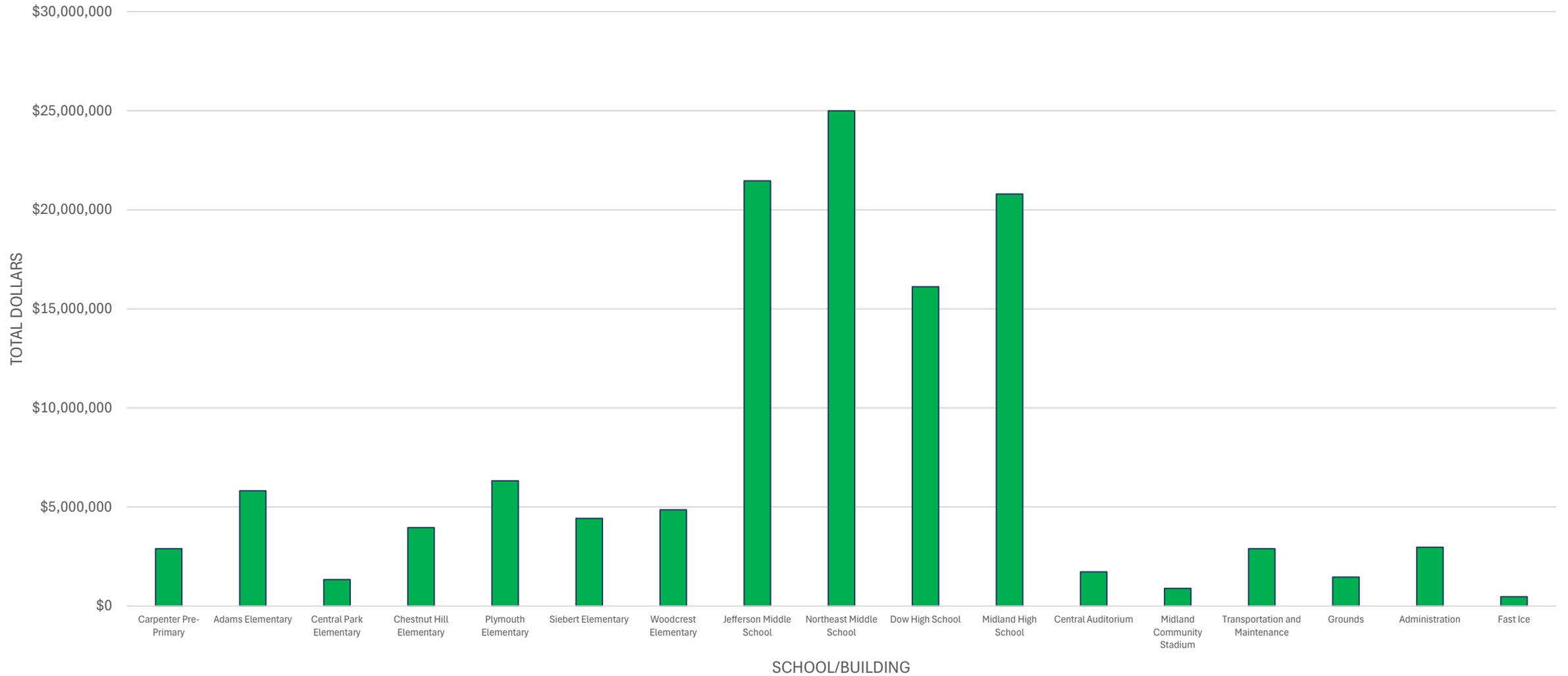
## District: Overall Cost Review

4-6 YEAR OVERALL FACILITY ASSESSMENT NEED PER BUILDING

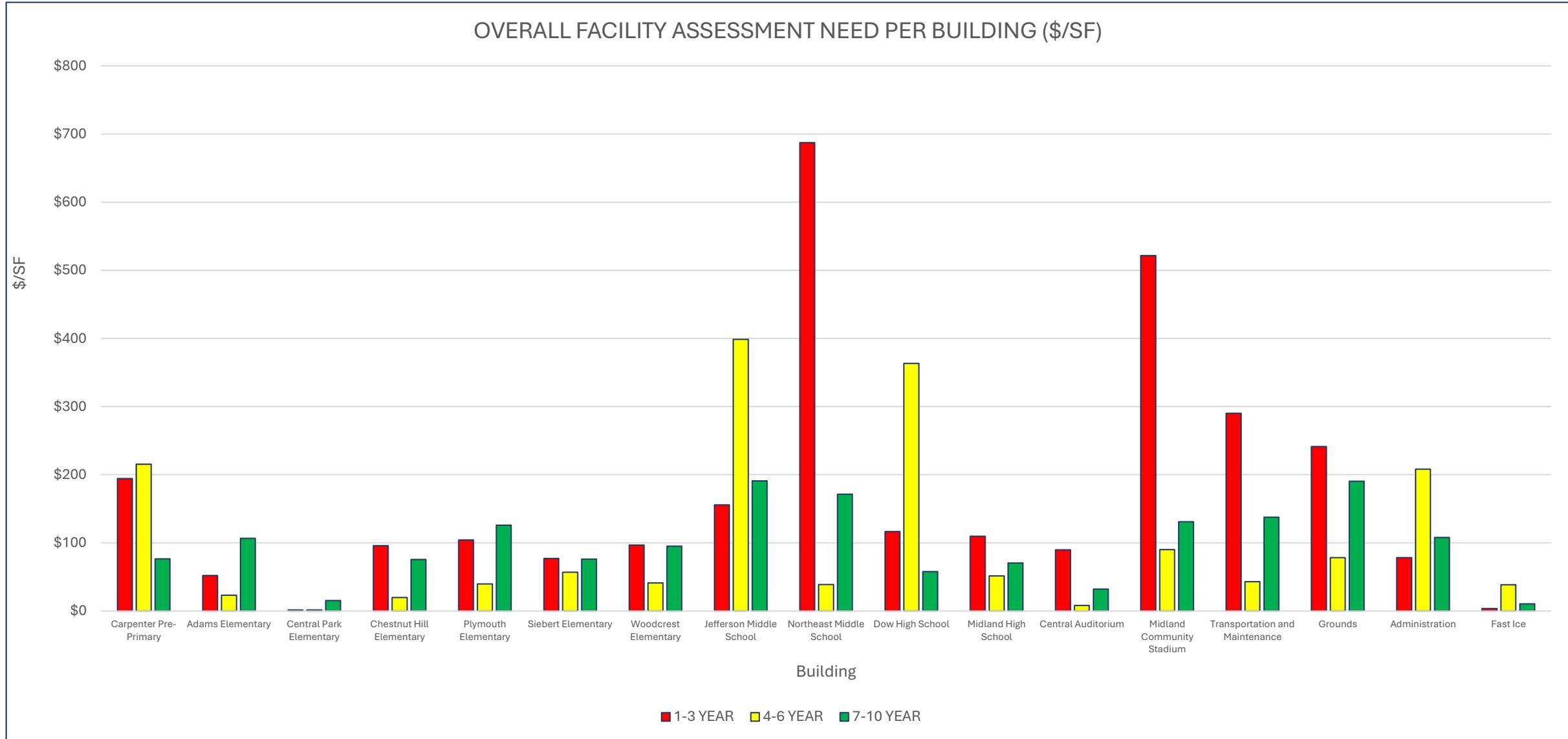


## District: Overall Cost Review

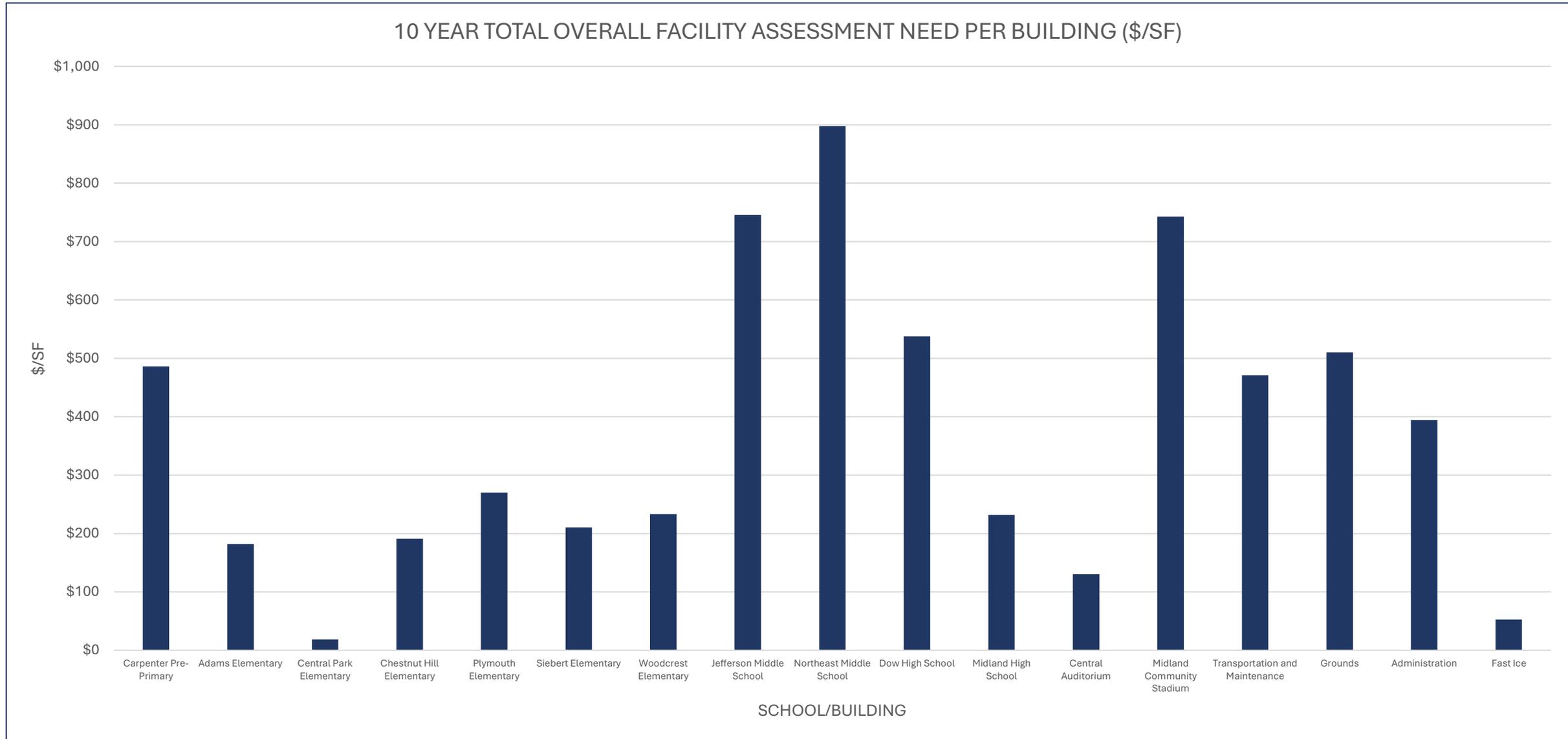
7-10 YEAR OVERALL FACILITY ASSESSMENT NEED PER BUILDING



## District: Overall Cost Review

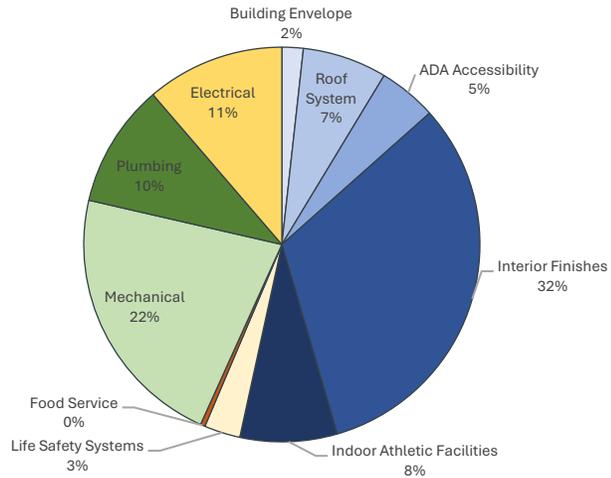


## District: Overall Cost Review

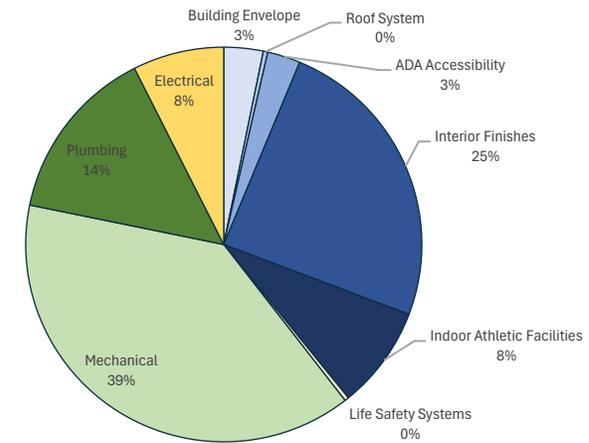


# District: Overall Cost Review

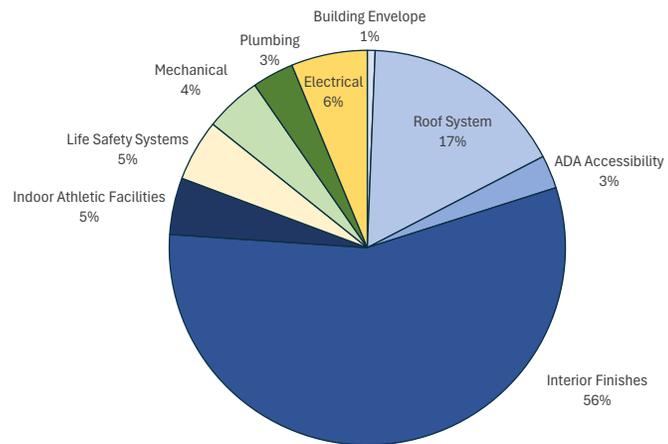
TOTAL NEED BY ASSESSMENT CATEGORY



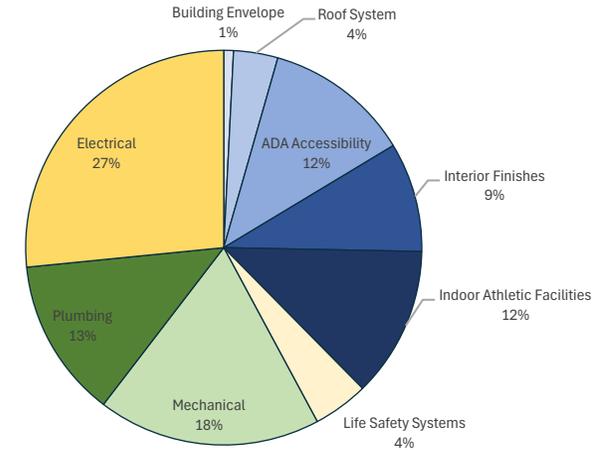
1-3 YEAR TOTAL NEED BY ASSESSMENT CATEGORY



4-6 YEARTOTAL NEED BY ASSESSMENT CATEGORY



7-10 YEAR TOTAL NEED BY ASSESSMENT CATEGORY





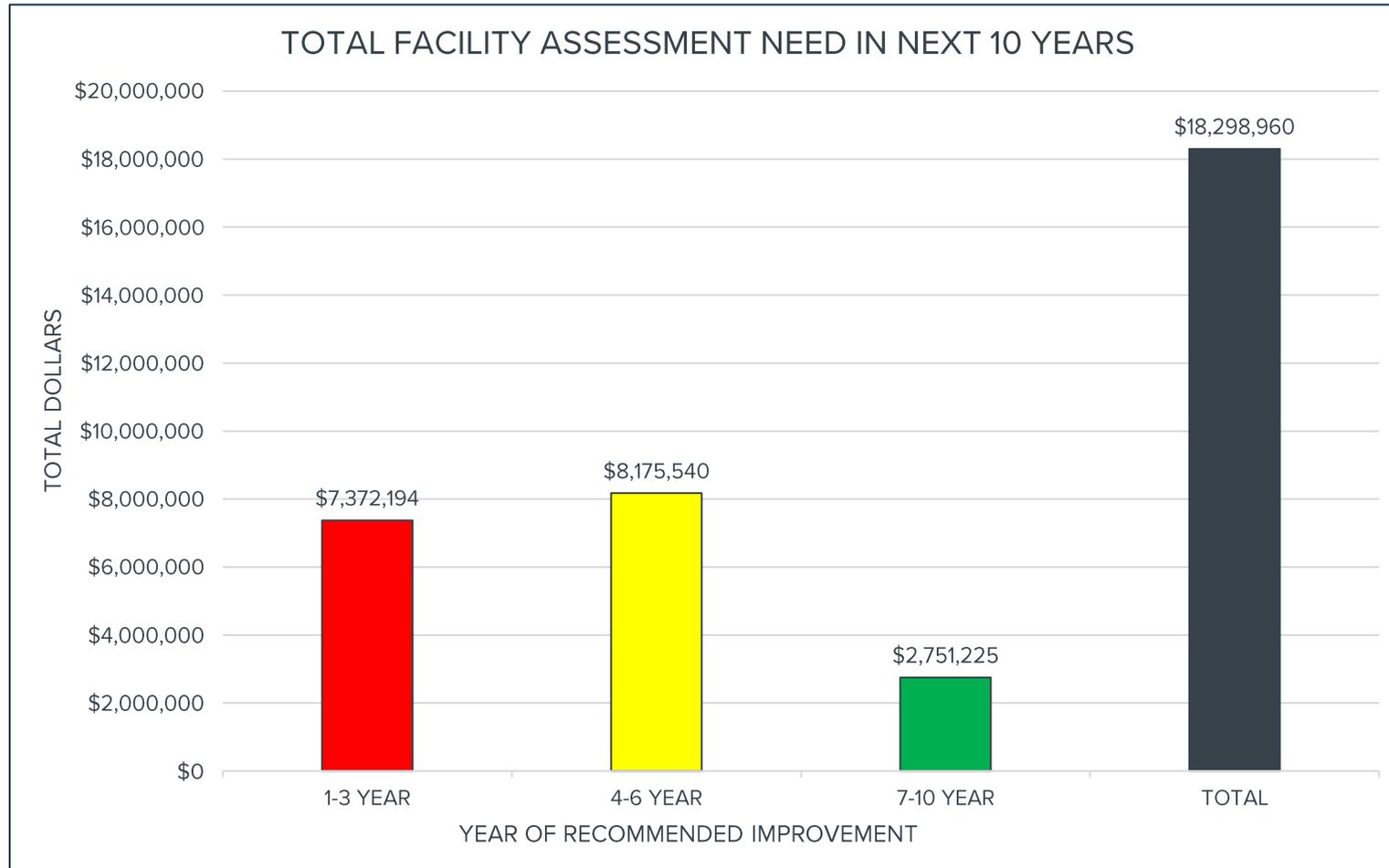
# CARPENTER

## PRE-PRIMARY CENTER

## Carpenter Pre-Primary Center: Overall Cost Review

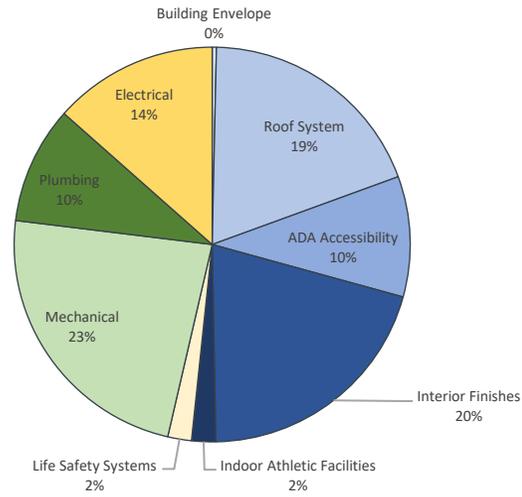
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$58,686	\$0	\$4,502	\$63,188
Roof System	\$0	\$3,490,330	\$0	\$3,490,330
ADA Accessibility	\$614,800	\$0	\$1,190,136	\$1,804,936
Interior Finishes	\$0	\$3,737,624	\$0	\$3,737,624
Indoor Athletic Facilities	\$359,289	\$0	\$0	\$359,289
Life Safety Systems	\$0	\$354,427	\$0	\$354,427
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$4,270,065	\$0	\$0	\$4,270,065
Plumbing	\$1,758,619	\$0	\$0	\$1,758,619
Electrical	\$310,735	\$593,160	\$1,556,587	\$2,460,482
<b>TOTALS</b>	<b>\$7,372,194</b>	<b>\$8,175,540</b>	<b>\$2,751,225</b>	<b>\$18,298,960</b>

## Carpenter Pre-Primary Center: Overall Cost Review

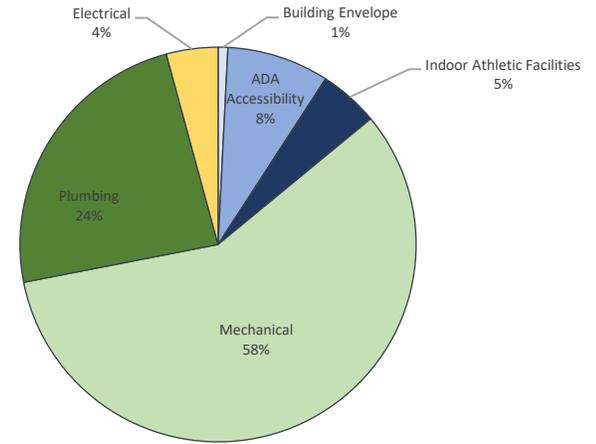


# Carpenter Pre-Primary Center: Overall Cost Review

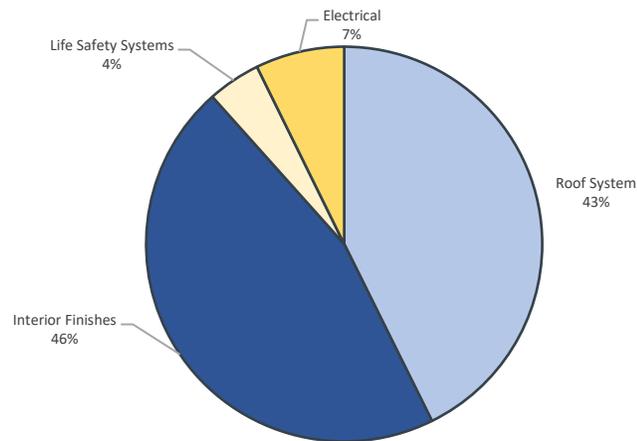
TOTAL NEED BY ASSESSMENT CATEGORY



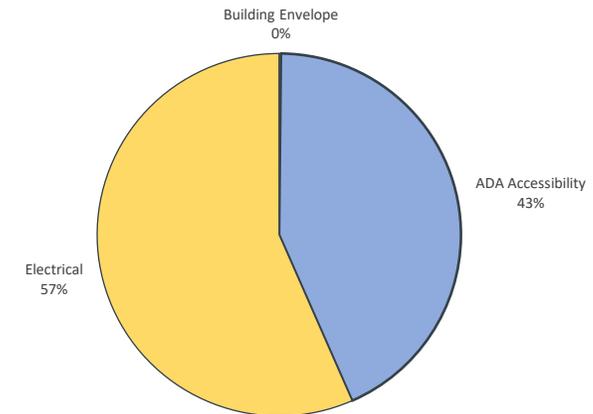
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



## Carpenter Pre-Primary Center School: Architectural Summary

Carpenter Pre-Primary Center is the oldest facility in the district and exhibits architectural systems that are largely original and identified for near-term replacement throughout the assessment. The building envelope includes aging masonry walls and are starting to no longer provide adequate thermal performance, or weather resistance. Roofing systems are documented as being at or beyond typical service life, with replacement identified in the near-term timeframe due to condition. Interior layouts limit some flexibility, and offer poor adjacencies – particular in reference to toilet rooms, art, Spanish and cafeteria space. Interior finishes—including ceilings, flooring, and wall systems—have been updated as needed to provide additional classroom spaces, however all the upgrades are cosmetic in nature. Numerous ADA deficiencies are noted across the building, including restroom accessibility, door clearances, and egress routes. Collectively, the architectural findings indicate that addressing deficiencies would require extensive, building-wide intervention rather than isolated repairs.



Existing Classroom Entry



Existing Toilet Partition



Existing Exterior Brick



Existing Front Entry



Existing Corridor



Existing Windows in Basement Classroom

# Carpenter Pre-Primary Center School: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick / Masonry	Generally observed in fair condition.				x	\$0			
Brick / Tuck Pointing	Generally observed in good condition but with a few areas needing tuck pointing repairs to maintain integrity of brick. Observed at the north side of the building.	x				\$11,406	\$11,976		
Limestone Sills & Elements	Observed in good condition but needing caulking replacement. See joint sealants for cost.	x				\$0	\$0		
Joint Sealants	Torn or missing caulking observed at limestone elements. Budget for replacement.					\$0			
Painted Wood Soffits	Observed in fair condition but paint is beginning to peel. Budget for refresh.	x				\$4,563	\$4,791		
Steel Lintels	Observed in fair condition.				x	\$0			
Concrete Stairs	Concrete showing cracking and repairs / remediation needed.			x		\$0			\$0
Steel Guardrail & Handrails	Showing rust and paint / preventative maintenance needed at South side of building.	x				\$39,922	\$41,918		
<b>Exterior / Vestibule Doors</b>									
Aluminum Doors	Aluminum door frames with aluminum doors observed in good condition.				x	\$0			
Wood Doors & Frames	Observed in good condition. Budget for refinishing aged finishes to prolong life. Seal around doors.			x		\$3,042			\$4,502
Exterior Door Hardware	Observed in good condition.				x	\$0			
<b>Windows</b>									
Aluminum Windows	Aluminum framed windows observed in good condition.				x	\$0			
<b>Exterior Grilles / Louvers</b>									
Aluminum Louvers	Observed in fair condition.				x	\$0			
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$58,933</b>	<b>\$58,686</b>	<b>\$0</b>	<b>\$4,502</b>

# Carpenter Pre-Primary Center School: Roof Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>5.0 Roof Systems Assessment</b>									
<b>Roofing Membrane</b>									
EPDM (Non-Ballasted)	2002 & 2004 vintage roofing approaching end of life cycle. Budget for roof replacement.		x			\$2,726,820		\$3,490,330	
<b>Drainage Components</b>									
Primary Roof Drains	Observed via google earth imagery.					\$0			
Secondary Roof Drains	Not present. Future roofing projects should budget for adding secondary roof drains to meet todays code requirements.		x			\$0		\$0	
<b>Perimeter / Fascia / Soffit</b>									
Metal Coping	Budget for replacing metal copings and flashings concurrent with roof replacement. Cost included above.		x			\$0		\$0	
<b>5.0 Roof Systems Assessment SUBTOTAL</b>						<b>\$2,726,820</b>	<b>\$0</b>	<b>\$3,490,330</b>	<b>\$0</b>

# Carpenter Pre-Primary Center School: ADA Accessibility

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
Parking Lot Signage	Observed in fair condition.				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed in good condition.				x	\$0			
Curb Cuts	Observed at ramp areas				x	\$0			
Tactile Warning Strips	Observed adequate.				x	\$0			
Exterior Ramps & Sidewalks.	Observed. Selective concrete replacement needed.	x				\$15,208	\$15,968		
Exterior/Exits	Observed with good accessibility.				x	\$0			
<b>Interior Accessibility (General)</b>									
Interior Building Signage (general)	Signs observed and generally compliant with ADA code however some are mounted on the wrong side of the latch.				x	\$0			
Corridor Clearances	Observed compliant with code.				x	\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	There were drinking fountains that project into path of travel and do not meet code requirements for visually impaired. Recommend adding wing walls to the floor to meet code requirements.	x				\$36,500	\$38,325		
Doors & Hardware (knobs/levers/panic hardware/closers (general))	There is knob handle hardware throughout the building. This condition is grandfathered, but we recommend replacing knob hardware to meet current ADA code standards.					\$0			
Pull/Push Side Clearances	There are many rooms without side clearance required to meet ADA Accessibility. This condition is grandfathered, but future renovations will require reconstructing entrances to meet accessibility requirements.	x				\$533,816	\$560,507		

# Carpenter Pre-Primary Center School: ADA Accessibility

## Group Restroom Accessibility

General Comment 1	ADA deficiencies (grandfathered) observed throughout the group restrooms. (Turning radius, grab bar, insulation shield, door hardware, signage, etc.) Recommend planning for group restroom renovations with future bond to refresh space and address ADA deficiencies			x		\$804,146			\$1,190,136
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Knob hardware observed at some of the restrooms. This should be replaced with hardware that meets today's ADA requirements. (cost included in door hardware comment above)			x		\$0			\$0
Turning Clearances	Non sufficient turning clearance observed in some areas.			x		\$0			\$0
Plumbing Fixtures (water closets)	Observed non compliant with today's code standards.			x		\$0			\$0
urinals	Observed.			x		\$0			\$0
Sinks	Common deficiencies include missing insulation shields.			x		\$0			\$0
Lavatory Insulation/Shields	Missing in several restrooms.			x		\$0			\$0
Accessories	Missing vertical grab bars and non compliant stalls observed.			x		\$0			\$0

## Elevators, Lifts and Interior Ramps

Elevators/Lifts Present Where Needed					x	\$0			
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<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$1,389,670</b>	<b>\$614,800</b>	<b>\$0</b>	<b>\$1,190,136</b>
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# Carpenter Pre-Primary Center School: Interior Finishes

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 7.0 Interior Finishes Assessment

### Offices / Auxiliary Offices / Support Areas

General Comment:	Functional office observed in fair condition. The office feels small and could benefit from renovations addressing refreshing finishes, abatement, storage, bathroom, conference room renovation, and secure entry improvements.		x			\$638,754		\$817,605	
Walls	Painted plaster finishes in good condition.		x			\$0		\$0	
Ceiling	Suspended ceiling observed at midlife.		x			\$0		\$0	
Flooring	Broadloom carpet at midlife.		x			\$0		\$0	
Base Material	Rubber base in good condition.		x			\$0		\$0	
Signage	Observed.				x	\$0			
Casework	Old wood cabinets with plastic laminate countertops observed at end of useful life cycle.		x			\$0		\$0	
Countertops	Plastic laminate reception desk observed at end of useful life cycle.		x			\$0		\$0	
Furniture/Furnishings	Observed.		x			\$0		\$0	

### Corridors

General Comment:	Recently refreshed corridors in good condition.				x	\$0			
Walls	Painted plaster in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings in good condition.				x	\$0			
Signage	Observed with some mounted on the wrong side. See ADA.				x	\$0			

## Carpenter Pre-Primary Center School: Interior Finishes

### Restrooms

General Comment 1	Student group restrooms have been refreshed recently and are in fair condition. Larger group restrooms should be considered for interior renovation addressing ADA deficiencies. Cost included in ADA Assessment.			x		\$0			\$0
Walls	Painted plaster walls in good condition			x		\$0			\$0
Ceiling	Suspended ceilings observed in good condition.			x		\$0			\$0
Flooring	Quarry tile or ceramic tile observed in good condition.			x		\$0			\$0
Base Material	Glazed block in good condition.			x		\$0			\$0
Countertops	Solid surface countertops with integral bowls in fair condition.			x		\$0			\$0
Toilet Partitions	Mixed partition materials observed generally in good condition.			x		\$0			\$0
Restroom Accessories	Observed but noting ADA deficiencies.			x		\$0			\$0

### Classrooms

General Comment 1	Upper level classrooms recently refreshed and generally observed in good condition.				x	\$0			
General Comment 2	Lower level would benefit from light renovations to refresh the rooms. Materials are old and aging. Casework and countertops are old and at end of useful life.		x			\$2,243,244		\$2,871,352	
Walls	Painted walls in good condition.		x			\$0		\$0	
Ceiling	Acoustical tile ceiling in fair condition. A few water stains present.		x			\$0		\$0	
Flooring	VCT tile in fair condition but aesthetically dated.		x			\$0		\$0	
Base Material	Rubber base in fair condition.		x			\$0		\$0	
Signage	Observed with some ADA deficiencies noted.		x			\$0		\$0	
Casework & Countertops	Casework and countertops are old and at end of useful life.		x			\$0		\$0	
Furniture/Furnishings	Observed in fair condition.		x			\$0		\$0	

# Carpenter Pre-Primary Center School: Interior Finishes

### Cafeteria

General Comment	Older finishes throughout.				x	\$0			
Walls	Painted block and plaster throughout.				x	\$0			
Ceiling	Acoustical ceiling tile.				x	\$0			
Flooring	Older VCT in fair condition.				x	\$0			
Base Material	Rubber base				x	\$0			

### General

General Comment	Plaster finishes showing signs of water damage and spalling in a few small areas throughout the building. Budget for selective repairs and refinishing.		x			\$38,021		\$48,667			
<b>7.0 Interior Finishes Assessment SUBTOTAL</b>								<b>\$2,920,019</b>	<b>\$0</b>	<b>\$3,737,624</b>	<b>\$0</b>

# Carpenter Pre-Primary Center School: Indoor Athletic Facilities

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>8.0 Indoor Athletic Facilities Assessment</b>									
<b>Competition Gymnasium</b>									
General Comment 1	Old gymnasium in fair condition.				x	\$0			
General Comment 2	Elevated wood stage area off end of gym observed.				x	\$0			
Court Surface	Old wood flooring in fair condition.				x	\$0			
Doors	Wood doors in fair condition.				x	\$0			
Paint	Painted brick in fair condition.				x	\$0			
Ceilings	Acoustical ceiling in good condition but showing water damage in one small area.				x	\$0			
Brick Wall	Showing a large crack in one area requiring repair.	x				\$342,180	\$359,289		
Retractable Goals	Observed in good condition.				x	\$0			
Fixed Goals	Observed in fair condition. Old equipment.				x	\$0			
<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$342,180</b>	<b>\$359,289</b>	<b>\$0</b>	<b>\$0</b>

# Carpenter Pre-Primary Center School: Life Safety Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Emergency Plan Available	Observed adequate.				x	\$0			
Adequate Corridor Widths	Observed adequate.				x	\$0			
Clear/Defined Egress Paths	Observed adequate.				x	\$0			
Knox Box	Unknown.				x	\$0			
Clear Lines of Site at Building Perimeter	Poor line of site from office to main entrance. Consider improvement concurrent with office remodel. See interior finishes for cost.		x			\$0		\$0	
AED/Location	Observed in corridor near gym & office area.				x	\$0			
<b>Fire Safety System / Equipment</b>									
Fire Extinguishers/Cabinets	Wall mounted fire extinguishers observed in corridors.				x	\$0			
Fire Suppression Heads/Piping	Fire protection is recommended for life-safety considerations; building is not currently sprinkled. Estimated system cost shown here for district planning purposes; building can also be portioned and separated to meet fire codes as it currently is.					\$303,472			
<b>Emergency Lighting / Power</b>									
Emergency Lighting/Power Source	Integral fixture battery packs for emergency lighting, evaluate with future lighting replacements or addition of generator (whole building square footage); refer to generator line item in Electrical Section			x		\$0			\$0
<b>Emergency Alarm Systems</b>									
Fire Alarm Control Panel	Faraday MPC-1500 Plus. Upgrading to a panel with voice communication will be required in the future.		x			\$201,028		\$257,316	
Horns/Strobes	Coverage appeared to be adequate, upgrade to speaker/strobes will be required in the future. (Building sqft)		x			\$75,868		\$97,111	
Smoke Detection	Coverage of area smoke detectors appears adequate, required for Childcare licenscing				x	\$0			

# Carpenter Pre-Primary Center School: Life Safety Systems

**Access Control / Intrusion Detection**

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

**Video Surveillance System / Equipment**

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$0			\$0
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$580,368</b>	<b>\$0</b>	<b>\$354,427</b>	<b>\$0</b>
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# Carpenter Pre-Primary Center School: Food Service

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>10.0 Food Service Assessment</b>									
<b>Food Service Equipment</b>									
General Comment	Small warming kitchen observed.				x	\$0			
Freestanding Freezer	Observed functional.				x	\$0			
Milk Cooler	Observed.				x	\$0			
Steam Jacketed Kettles	Observed functional.				x	\$0			
Work Tables	Observed.				x	\$0			
<b>Food Service Plumbing Fixtures</b>									
3-Compartment Sink (with Air Gaps)	Observed.				x	\$0			
Hand Wash Sink	Observed.				x	\$0			
<b>Food Service Storage</b>									
Dry Goods Storage/Shelving	Observed.				x	\$0			
<b>10.0 Food Service Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Carpenter Pre-Primary Center School: Mechanical Summary

Mechanical and plumbing systems at Carpenter are predominantly original and consistently identified in the assessment tables as requiring near-term replacement. HVAC systems are outdated, inefficient, and lack the ventilation capacity expected under current standards. Distribution systems are difficult to access, limiting maintainability and increasing the likelihood of service disruption. Plumbing infrastructure—including domestic water, sanitary waste, and storm drainage piping—is original and has experienced documented failures, leaks, and blockages. Fixtures are aged, inefficient, and do not meet current code or water-use standards. The tables indicate that mechanical and plumbing deficiencies are systemic rather than isolated, and that meaningful reinvestment would necessitate comprehensive system replacement across the building.



Existing Mechanical Equipment



Existing Plumbing



Existing Air Handling Unit for Gym



Existing Unit Vent



Existing Steam Piping



Existing Condensate Receiver



Existing Steam Boiler

# Carpenter Pre-Primary Center School: Mechanical Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Steam boilers were installed in 1960s and are well beyond their expected life.	X				\$431,920	\$453,516		
Boiler Plant Accessories	Existing boiler feedwater tank, condensate receiver tank, and miscellaneous plant accessories are a similar age to boilers and in poor condition. Approx. (3) CRPs observed throughout building. One CRP has had the controller replaced; the others appear to be original. Units are in poor condition and in need of replacement.	X				\$148,282	\$155,696		
Heat Exchangers	Steam to hot water heat exchangers installed in 1960s for heating hot water in addition, one for lower level heating equipment and one for upper level radiant floor. Units are in poor condition, would recommend replacement.	X				\$121,667	\$127,750		
Heat Exchangers	Plant accessories for steam to hot water plants feed separate loops including air separator, expansion tank, and constant volume circulating pump per system. Pumps appear to have been replaced on an as-needed basis while remaining accessories are original. Equipment is in poor condition and past useful life, would recommend replacement.	X				\$121,668	\$127,751		
<b>Building Cooling Equipment</b>									
Split System Heat Pumps	Recently installed split system heat pumps are less than (5) years old; most units are twinned with one exterior condensing unit for (2) interior wall cassettes. Installed to provide cooling in all classrooms. Units are in good condition. Listed qty. is for wall cassettes.				X	\$0			

# Carpenter Pre-Primary Center School: Mechanical Systems

## Heating / Cooling Piping

Steam & Condensate Piping and Pumps	Steam and condensate piping original to building construction year (1920s to 1950s); piping is in poor condition and is beyond expected useful life of 40-60 years (if well maintained); replacement is recommended. Consideration should be given to providing new heating hot water piping in lieu of steam due to system inefficiencies, would recommend replacement.	X				\$1,213,451	\$1,274,124		
Hydronic Piping	Some hydronic piping was installed in the 1940s Southwest Wing Addition; piping is in poor condition. Life expectancy of piping like this is 50-75 years if well maintained, piping is at end of useful life and should be replaced. Estimated sq. footage.	X				\$297,021	\$311,872		

## Building HVAC Air Distribution System / Equipment

VUV/HUV Units	Steam unit ventilators are installed in classrooms spaces; original to dates of building construction (60+ years old) and in poor condition. Many are integral with casework on exterior walls.	X				\$105,393	\$110,663		
VUV/HUV Units	Hot water unit ventilators are installed in basement spaces; original to dates of building construction (60+ years old) and in poor condition. Current installations likely do not meet code requirements for ventilation air in assembly or art room spaces.	X				\$140,524	\$147,550		
Rooftop Exhaust Fans	Approximately (10) total exhaust fans of various ages and in poor condition. Several fans are original to dates of building construction and are 60+ years old.	X				\$135,355	\$142,123		
Air Handling Units	(1) Large air handling unit serving gymnasium, media center, classrooms, and some ancillary spaces; unit is in poor condition and appears to be original to the building (1920s). Unit is likely not ventilating classrooms per code and is operating as a constant volume, single-zone unit.	X				\$410,780	\$431,319		
Air Handling Units	(1) Packaged rooftop unit installed for office area; installed in 2003 and 3 tons. Accessibility is poor as roof does not have a permanent means of access. Unit is at end of expected useful life of 15-20 years and should be replaced. Single zone configuration does not allow for zone control.	X				\$71,936	\$75,533		

# Carpenter Pre-Primary Center School: Mechanical Systems

## Terminal Heating / Cooling Equipment

Finned Tube Heaters	Combination of radiators / finned tube elements / convectors installed throughout building, steam heating. Equipment is all original and in poor condition. Control limitations result in zones that are fighting due to multiple heating sources. Approx. (25) units.	X				\$166,532	\$174,859		
Radiant Floor	Radiant floor tubing installed in 1940s addition for (2) classrooms; tubing limits rework of space floor. Supporting plant equipment is in poor condition.	X				\$152,084	\$159,688		
Finned Tube Heaters	Electric radiant baseboard in classroom bathrooms is in poor condition.	X				\$33,154	\$34,812		
Wall/Ceiling Unit Heaters	Electric radiant ceiling panels in classroom bathrooms are in poor condition.	X				\$29,200	\$30,660		

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	Original pneumatic controls installed throughout the building. Controls are in poor condition and owner has very limited accessibility or options to view and control building performance. Would recommend replacement along with building equipment upgrades.	X				\$483,399	\$507,569		
Specialty Equipment	Dryer in basement service room is not vented per code.	X				\$4,363	\$4,581		

<b>11.0 Mechanical Assessment SUBTOTAL</b>						<b>\$4,066,729</b>	<b>\$4,270,065</b>	<b>\$0</b>	<b>\$0</b>
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# Carpenter Pre-Primary Center School: Plumbing Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Gas fired atmospheric water heater, 199 MBH, appears to be approximately 20-30 years old. Unit is in fair to poor condition. Venting routes through existing ductwork. Life expectancy of this style of unit is 15-20 years, would recommend replacement.	X				\$29,200	\$30,660		
Domestic Water Piping	Generally original to year of construction (1940s or earlier), much of the piping is fed through tunnels. Original building piping has significant portions of galvanized piping that are corroding and breaking down, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained. System is in need of complete replacement.	X				\$597,140	\$626,997		
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Generally original to year of construction (1940s or earlier). General life expectancy of a sanitary piping system is 50-75 years if well maintained; would recommend replacing in the near future. Building currently has issues with clogs and other sanitary piping failures.	X				\$598,304	\$628,219		

# Carpenter Pre-Primary Center School: Plumbing Systems

## Storm Drainage System / Equipment

Storm Drainage Piping	Where installed, generally original to the year of construction (1940s or earlier). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. System does not have overflow drains; if any roof work is done additional overflow drains will be required to bring system up to code.	X				\$308,686	\$324,120		
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement.	X				\$0	\$0		

## Plumbing Fixtures

Water Closets & Urinals	Water closets and urinals are generally original to the time of building construction and in fair to poor condition. Would recommend replacement of all water closets and urinals with new low flow fixtures and sensed flush valves.	X				\$97,790	\$102,680		
Lavatories & Sinks	Toilet room lavatories and classrooms sinks are generally original to the building. Would recommend replacement of remaining lavatories with new low-flow faucets. Art room sinks do not appear to have code-required traps installed; these should be added (4 total). One instance of exposed sanitary runs along wall observed in toilet rooms.	X				\$43,755	\$45,943		
Electric Water Coolers & Drinking Fountains	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district, several drinking fountains are still installed at Carpenter. New units are in good condition.				X	\$0			

<b>12.0 Plumbing Assessment SUBTOTAL</b>						\$1,674,875	\$1,758,619	\$0	\$0
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# Carpenter Pre-Primary Center School: Electrical Summary

Electrical systems at Carpenter are identified as being at or beyond their useful life, with near-term replacement recommended throughout the assessment. Power distribution equipment and panelboards are from the early 2000s. Interior lighting systems, while having been retrofitted with LED lamps, are inefficient. Lighting controls do not meet current energy code requirements. Fire alarm and life-safety systems are aging and nearing end-of-life, with limited ability to integrate modern components. Technology and communications infrastructure is minimal and inadequate for current instructional or operational needs. The assessment clearly indicates that continued operation would require investment in the electrical, lighting, and technology systems.



Existing Main Electrical Equipment



Existing Clock System



Existing Fire Alarm



Existing IT



Existing Outdoor Infrastructure



Existing PA



Existing Surface Mounted Lights

# Carpenter Pre-Primary Center School: Electrical Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	Pole mounted fixtures are LED with sensors(?)				x	\$0			
Building Exterior Lighting	Minimal soffit lighting at building entrances, with wall packs added to supplement				x	\$0			
<b>Power Distribution &amp; Control Equipment</b>									
Exterior Transformers	2003 Consumers Energy, metering on xfmr				x	\$0			
Interior Transformers	2003 150 kVA SQD 480/208 xfmr		x			\$23,725		\$30,368	
Distribution Panelboards	2003 600A 480V MDP SQD I-line 2003 225A 480V Distribution SQD I-line 2003 400A 208V Distribution SQD I-line		x			\$55,511		\$71,054	
Panelboards	Early 2000s SQD NQ Branch Panels		x			\$83,951		\$107,457	
Electrical Receptacles & Devices	Classrooms have surface raceway front and back for receptacles, classrooms appear to all have ample (classroom sqft)			x		\$166,958			\$247,098
Generator	No Generator present, recommend exploring generator for life safety and standby systems	x				\$127,447	\$133,819		

## Carpenter Pre-Primary Center School: Electrical Systems

### Interior Lighting

Interior Lighting Fixtures	All spaces have been retrofitted with LED lamps, light fixture replacements suggested to follow other renovation scope (entire building sqft)			x		\$710,880			\$1,052,102
Lighting Controls	Line voltage occupancy sensors in corridors and classrooms, classroom controls do not meet current energy codes, lighting controls scope suggested to follow other renovation scope (entire building sqft)			x		\$0			\$0
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in lighting fixture sqft)				x	\$0			
Emergency Lighting	refer to Life Safety Systems					\$0			

### Communications

Communications Room/Cooling	MDF has cooling			x		\$0			\$0
Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDFs			x		\$12,167			\$18,007
Structured Cabling	CAT6 observed (entire building sqft)			x		\$149,576			\$221,372

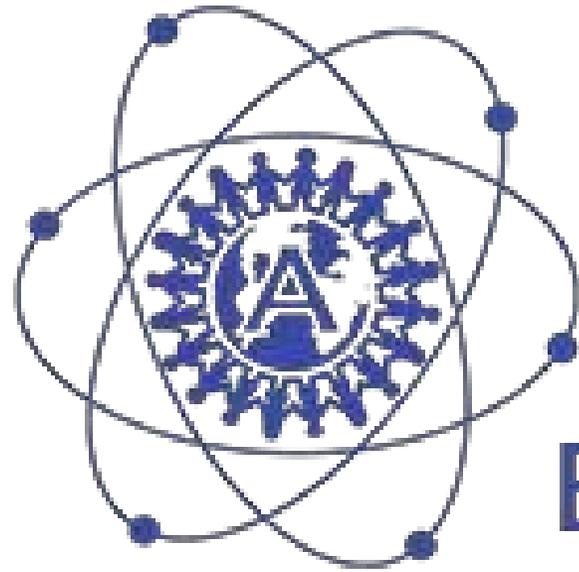
### Telephone, Paging, Signaling & Clock Systems

Clock System	National Time & Signal (building sqft)	x				\$113,741	\$119,428		
Public Address/Intercom System	Old Dukane system (building sqft)	x							

# Carpenter Pre-Primary Center School: Electrical Systems

## Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$4		\$5	
Wireless Access Points	Ruckus (primarily R720) EOL 2028	x				\$54,750	\$57,488		
Classroom Audio System	Lightspeed 955 (per classroom)		x						
Classroom Video System	Direct HDMI to Epson Projector & manual pull down screen (per classroom)		x			\$234,210		\$299,789	
Media Center AV System	Currently similar to classroom setup (projector and Lightspeed)		x			\$53,230		\$68,134	
Maker Space AV System	Crestron, not functioning	x							
Gym AV System	Audio System, Projection screen		x			\$12,775		\$16,352	
Add telecomm rooms to generator standby	Part of generator addition, add standby system and include telecomm rooms	x				\$0	\$0		
<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$1,811,092</b>	<b>\$310,735</b>	<b>\$593,160</b>	<b>\$1,556,587</b>



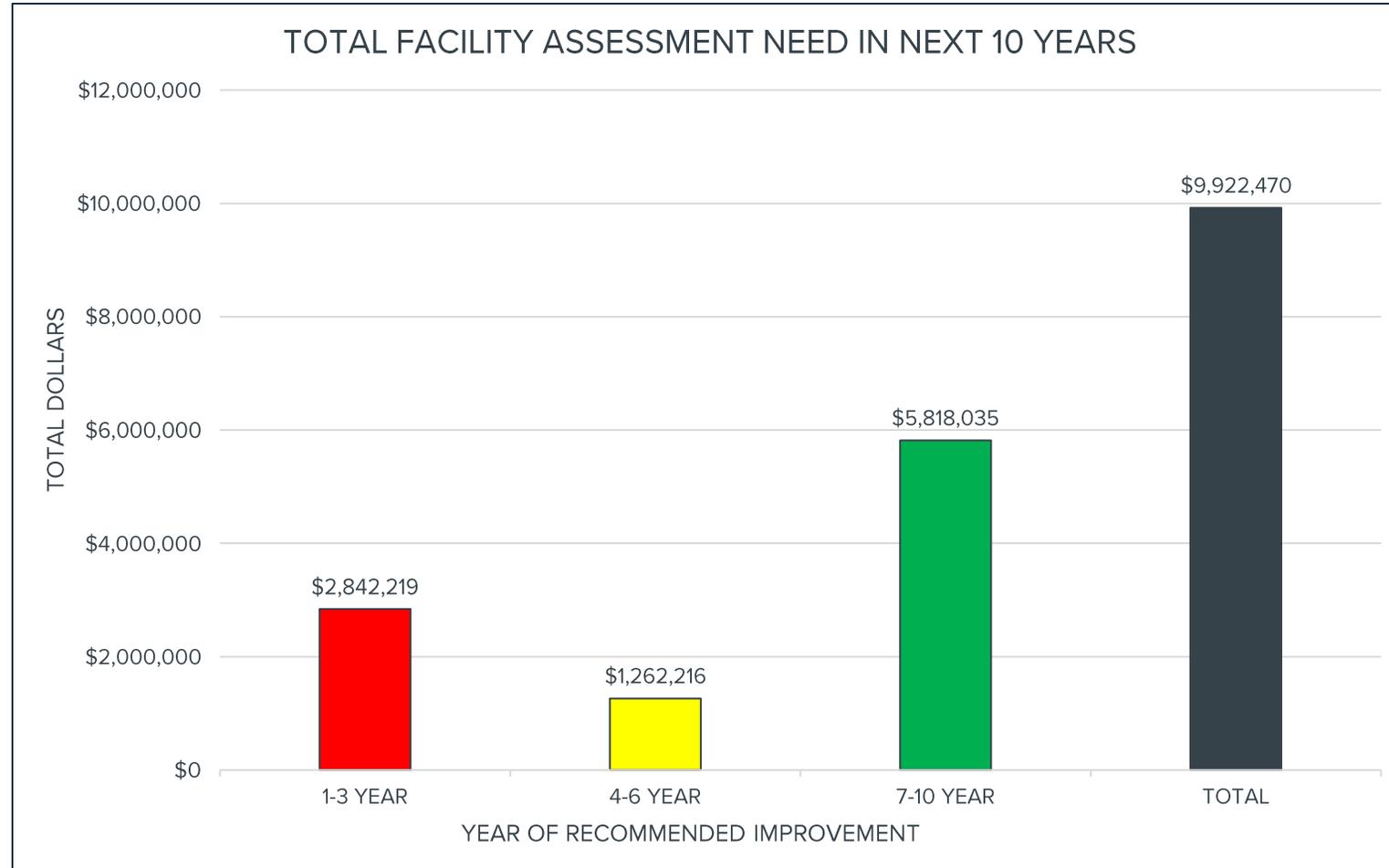
# ADAMS

## ELEMENTARY SCHOOL

## Adams Elementary School: Overall Cost Review

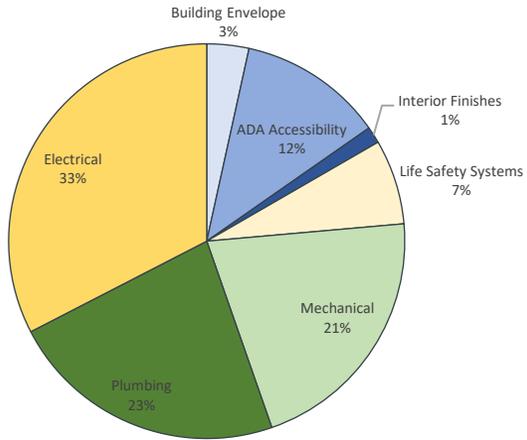
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$340,935	\$0	\$0	\$340,935
Roof System	\$0	\$0	\$0	\$0
ADA Accessibility	\$0	\$0	\$1,175,361	\$1,175,361
Interior Finishes	\$0	\$134,612	\$0	\$134,612
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$0	\$442,764	\$247,586	\$690,350
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$288,238	\$224,257	\$1,578,445	\$2,090,940
Plumbing	\$1,150,066	\$37,376	\$1,069,269	\$2,256,711
Electrical	\$1,062,980	\$423,206	\$1,747,374	\$3,233,560
<b>TOTALS</b>	<b>\$2,842,219</b>	<b>\$1,262,216</b>	<b>\$5,818,035</b>	<b>\$9,922,470</b>

## Adams Elementary School: Overall Cost Review

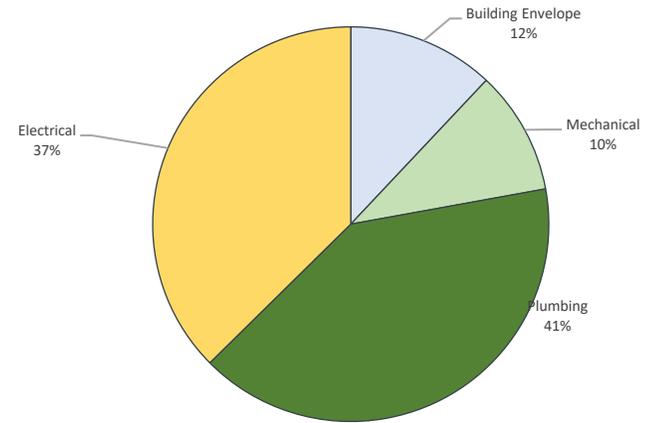


# Adams Elementary School: Overall Cost Review

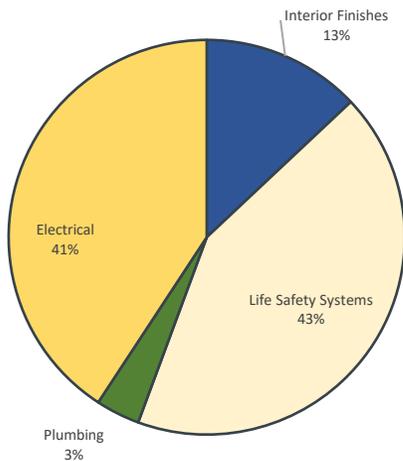
TOTAL NEED BY ASSESSMENT CATEGORY



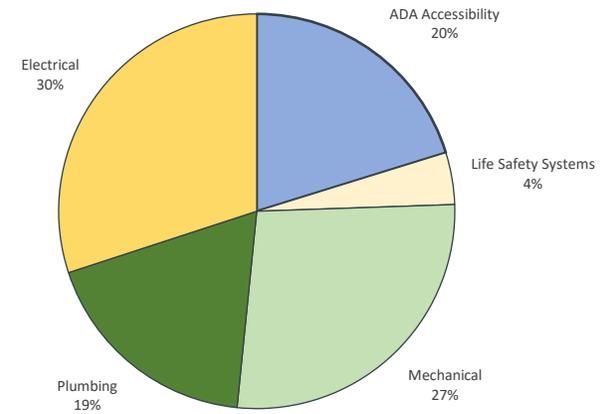
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



# Adams Elementary School: Architectural Summary

Overall, the architectural systems at Adams Elementary are in generally good condition, with many areas benefitting from recent renovations and additions completed around 2019. The building envelope, including masonry, windows, doors, and EIFS, is largely performing well, with only localized issues such as minor EIFS delamination and an isolated rusted lintel that should be addressed in conjunction with future roofing work. Roof systems are a mix of original and newer installations; older EPDM roofs are at or beyond their intended service life and should be planned for replacement, including code-required secondary drainage improvements. ADA accessibility is generally adequate, particularly in newer areas, though several deficiencies remain in older portions of the building, including restroom accessibility, door clearances, drinking fountain projections, and the need for additional automatic door operators, which should be addressed during future renovations. Interior finishes throughout offices, classrooms, corridors, cafeteria, media center, and gymnasium are largely in good to very good condition due to recent refreshes, with selective needs such as aging casework and delaminating restroom flooring. Life safety systems are functional and generally compliant, though future upgrades will be required to modernize the fire alarm system to voice communication, improve visibility at the main entrance, and evaluate emergency power strategies. Food service spaces, equipment, plumbing fixtures, and safety systems are newer and observed to be in good condition, with no immediate deficiencies noted.



Existing Work/Storage Room



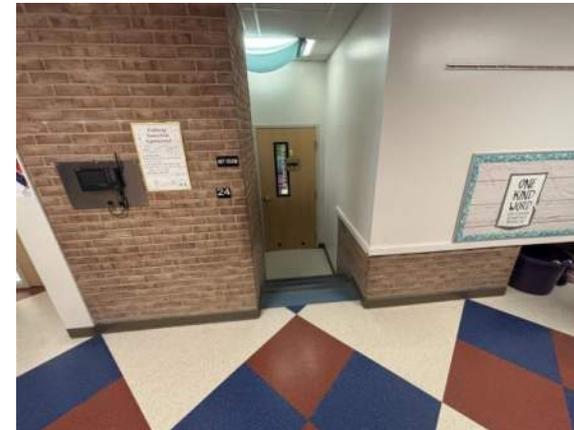
Existing Corridor



Existing Laminate Counters



Existing Entry



Existing Art Room Entry; ADA Ramp on other side of room



Existing Ceiling Tile

# Adams Elementary School: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
General Comment	The exterior of the building is in good condition.				x	\$0			
Brick/Masonry	Brick observed in good condition.				x	\$0			
Brick/Masonry	Split face block observed in good condition but some efflorescent staining present.				x	\$0			
Brick/Masonry	One opening (25) observed with rusting swollen lintel and cracked brick in need of repair. Repair will require EIFS removal (30 sqft), shoring, brick demo, new lintel, and brick work.	x				\$313,294	\$328,959		
Store Front	Aluminum storefront windows observed in good condition.				x	\$0			
EIFS	EIFS soffits observed in good condition. Minor delamination observed in a few areas most likely related to roof leaks. Budget to repair concurrent with roofing projects.	x				\$11,406	\$11,976		
Control Joints / Joint Sealants	Joint sealants observed in good condition.				x	\$0			
<b>Exterior / Vestibule Doors</b>									
Aluminum Frames	Aluminum frames in good condition.				x	\$0			
FRP Doors	Newer FRP doors observed in good condition.				x	\$0			
Exterior Door Hardware	Observed in good condition.				x	\$0			
<b>Windows</b>									
Aluminum Windows	Observed in good condition.				x	\$0			
<b>Exterior Grilles / Louvers</b>									
Aluminum Louvers	Observed in good condition.				x	\$0			
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$324,700</b>	<b>\$340,935</b>	<b>\$0</b>	<b>\$0</b>

# Adams Elementary School: Roof Systems

Survey Item		Survey Notes				1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>													
<b>Roofing Membrane</b>													
General Comment	Refer to MPS roof survey information								\$0				
Roof Area 1	EPDM roofing installed in 2002 with warranty expiring in 2017. Budget for replacement.				x				\$1,008,000				
Roof Area 2	EPDM roofing assumed to be 2002 installation.				x				\$10,350				
Roof Area 3	EPDM roofing installed in 2019.							x	\$0				
Roof Area 4	Asphalt shingle roofing installed in 2019.							x	\$0				
<b>Drainage Components</b>													
Primary Roof Drains	Observed adequate.							x	\$0				
Secondary Roof Drains	Budget to add secondary roof drains required by today's code standards concurrent with future reroofing projects.				x				\$0	\$0			
<b>Perimeter / Fascia / Soffit</b>													
Metal Coping	Plan for metal fascias and copings to be replaced concurrent with reroofing projects. <u>Cost included in reroofing.</u>				x				\$0	\$0			
<b>5.0 Roof System Assessment SUBTOTAL</b>									<b>\$1,018,350</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	

# Adams Elementary School: ADA Accessibility

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
General Comment	In general ADA accessibility is adequate.				x	\$0			
Parking Lot Signage	Observed in good condition				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed with annual maintenance required.				x	\$0			
Curb Cuts	Observed adequate but recommend adding ADA dub down sidewalk and tactile warning at main entry concurrent with future paving projects.			x		\$8,821			\$13,055
Tactile Warning Strips	Observed adequate.				x	\$0			
Exterior/Exits	Observed. Additional ADA actuators and auto operators are recommended at a few entrances.				x	\$0			
<b>Interior Accessibility (General)</b>									
General Comment	Generally good, but recommend adding a few auto operators at interior vestibule at the main office.			x		\$11,406			\$16,881
Interior Building Signage (general)	Observed adequate.				x	\$0			
Corridor Clearances	Observed adequate.				x	\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	There are several drinking fountains that protrude into path of travel for the visually impaired. Recommend adding wing walls with future renovations.			x		\$54,750			\$81,030
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Most of the building has lever hardware but a few knob door hardware observed within the building that does not meet today's code standards. Recommend replacement with future renovations. See interior finishes for cost.			x		\$3,650			\$5,402
Pull/Push Side Clearances	Many classrooms don't meet today's code for side clearance. Recommend budgeting for improvements with future renovations. This is an expensive undertaking involving involve widening masonry openings, structural elements, new doors, frames, and hardware.			x		\$711,755			\$1,053,397

# Adams Elementary School: ADA Accessibility

## Group Restroom Accessibility

General Comment 1	New addition bathroom meets ADA accessibility standards.				x	\$0			
General Comment 2	Older area of building is has non accessible bathrooms. Consider refreshing and ADA accessibility improvements with future renovations.				x	\$0			
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Lever handles observed.				x	\$0			
Pull/Push Side Clearance	Deficient at classroom bathrooms.				x	\$0			
Turning Clearances	Deficiencies observed at older section of building.				x	\$0			
Plumbing Fixtures (water closets	Observed.				x	\$0			
urinals	Observed.				x	\$0			
Sinks	Observed.				x	\$0			
Lavatory Insulation/Shields	Missing insulation shields observed in several locations.			x		\$1,500			\$2,220
Accessories	Missing vertical grab bars at older section required by today's code.			x		\$2,281			\$3,376

## Elevators, Lifts and Interior Ramps

Appropriate Guards/Rails Provided at Ramps					x	\$0			
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<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$794,163</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,175,361</b>
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# Adams Elementary School: Interior Finishes

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>7.0 Interior Finishes Assessment</b>									
<b>Offices / Auxiliary Offices / Support Areas</b>									
General Comment	Recently renovated office area observed in good condition.				x	\$0			
Flooring	Newer carpet tile observed in good condition.				x	\$0			
Flooring	LVP tiles observed at workroom lounge area.				x	\$0			
Walls	Painted drywall observed in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings observed.				x	\$0			
Base Material	Rubber base.				x	\$0			
Signage	Observed.				x	\$0			
Casework	New plastic laminate casework observed in good condition.				x	\$0			
Countertops	New solid surface countertops observed in good condition.				x	\$0			
Furniture/Furnishings	Observed in good condition.				x	\$0			
<b>Corridors</b>									
General Comment:	Observed Recently refreshed and in good condition.				x	\$0			
Walls	Exposed brick and painted plaster in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings in good condition. There were a few spots that appear to have roof leaks with stained tile.				x	\$0			
Flooring	New LVP tiles and ceramic tile observed in good condition.				x	\$0			
Signage	Observed adequate.				x	\$0			
Lockers	None. Wooden cubbies / lockers observed in classrooms.				x	\$0			
Wall Mounted Visual Display Units	Display cases observed in good condition.				x	\$0			

## Adams Elementary School: Interior Finishes

### Restrooms

General Comment 1	Student group restrooms have been refreshed recently and are in fair condition. Some ADA deficiencies observed.				x	\$0			
Walls	Painted block walls in good condition				x	\$0			
Ceiling	Plaster or drywall ceilings observed in good condition.				x	\$0			
Flooring	Painted resinous flooring installed on top of 1x1 ceramic tile. Delamination observed. Recommend flooring replacement with a more durable finish.		x			\$10,874		\$13,919	
Toilet Partitions	Partitions observed in good condition.				x	\$0			
Restroom Accessories	Observed but noting ADA deficiencies.				x	\$0			

### Classrooms

General Comment	Recently refreshed and in good condition.				x	\$0			
Walls	Painted masonry and drywall in good condition.				x	\$0			
Ceiling	Direct applied acoustical tile and suspended ceilings in good condition.				x	\$0			
Flooring	Carpet tile in good condition.				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			
Casework	Mix of old and new casework observed. Older casework and countertops are at end of useful life. Recommend budgeting for replacement selectively.		x			\$94,292		\$120,694	
Lockers	Wooden locker cubbies in good condition.				x	\$0			
Furniture/Furnishings	Observed in good condition.				x	\$0			

# Adams Elementary School: Interior Finishes

## Cafeteria

General Comment	Observed with new finishes throughout.				x	\$0			
Walls	Painted masonry in good condition.				x	\$0			
Ceiling	Exposed painted structure in good condition.				x	\$0			
Flooring	LVP tile in good condition.				x	\$0			
Base Material	rubber base in good condition.				x	\$0			

## Media Center

General Comment	Recently renovated into makerspace and observed in good condition.				x	\$0			
Walls	Painted masonry and drywall walls.				x	\$0			
Ceiling	Suspended acoustical ceilings.				x	\$0			
Flooring	LVP floor tiles.				x	\$0			
Base Material	Rubber base.				x	\$0			

<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						\$105,166	\$0	\$134,612	\$0
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# Adams Elementary School: Indoor Athletic Facilities

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>8.0 Indoor Athletic Facilities Assessment</b>									
<b>Competition Gymnasium</b>									
General Comment	New addition built in approximately 2019.				x	\$0			
Court Surface	LVP tile flooring observed.				x	\$0			
Doors	New wood doors and hardware.				x	\$0			
Paint	Painted masonry walls.				x	\$0			
Ceilings	Exposed painted structure and acoustical deck.				x	\$0			
Retractable Goals	Observed in good condition.				x	\$0			
Fixed Goals	Observed in good condition.				x	\$0			
<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Adams Elementary School: Life Safety Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Emergency Plan Available	Observed adequate.				x	\$0			
Adequate Corridor Widths	Observed adequate.				x	\$0			
Emergency/Automatic Shut-offs (Food Service/Kilns/Science Labs/Shop Equipment)	Observed adequate.				x	\$0			
Clear/Defined Egress Paths	Observed adequate.				x	\$0			
Knox Box	Unknown.				x	\$0			
Clear Lines of Site at Building Perimeter	Poor line of site from office to main entrance. Consider improvement concurrent with office remodel. See interior finishes for cost.				x	\$0			
AED/Location	Observed at main office vestibule area and gym.				x	\$0			
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Fire protection is recommended for life-safety considerations; building is not currently sprinkled. Estimated system cost shown here for district planning purposes; building can also be portioned and separated to meet fire codes as it currently is.					\$436,280			
Fire Extinguishers/Cabinets	Observed with adequate coverage.				x	\$0			
<b>Emergency Lighting / Power</b>									
Emergency Lighting/Power Source	Integral fixture battery packs for emergency lighting, evaluate with future lighting replacements or addition of generator (whole building square footage); refer to generator line item in electrical.			x		\$0			\$0

# Adams Elementary School: Life Safety Systems

## Emergency Alarm Systems

Fire Alarm Control Panel	National Time & Signal 902 Series, annunciator in Reception area. Upgrading to a panel with voice communication will be required in the future.		x			\$236,839		\$303,154	
Horns/Strobes	Coverage appeared to be adequate, upgrade to speaker/strobes will be required in the future. (Building sqft)		x			\$109,070		\$139,610	
Remote Monitoring						\$0			

## Access Control / Intrusion Detection

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

## Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$167,288			\$247,586
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$949,477</b>	<b>\$0</b>	<b>\$442,764</b>	<b>\$247,586</b>
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# Adams Elementary School: Food Service

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>10.0 Food Service Assessment</b>									
<b>Food Service Equipment</b>									
General Comment	Newer kitchen observed in good condition.				x	\$0			
Freestanding Cooler/Refrigerator					x	\$0			
Milk Cooler					x	\$0			
Freestanding Freezer					x	\$0			
Ice Maker					x	\$0			
Oven					x	\$0			
Range					x	\$0			
Work Tables					x	\$0			
<b>Food Service Plumbing Fixtures</b>									
General Comment	Newer fixtures observed in good condition.				x	\$0			
3-Compartment Sink (with Air Gaps)					x	\$0			
Hand Wash Sink					x	\$0			
Grease Trap					x	\$0			
Floor Drains					x	\$0			
<b>Food Service Point-of-Purchase</b>									
General Comment	Service lines and point of purchase observed in good condition.				x	\$0			
Cash Register Stand on Wheels					x	\$0			
Serving Counters					x	\$0			
Delivery Carts					x	\$0			
Sneeze Guards					x	\$0			

# Adams Elementary School: Food Service

### Food Service Life Safety

General Comment	Observed compliant with todays code requirements.				x	\$0			
Gas Shutoff(s) Hood Suppression System(s)					x	\$0			
Fire Suppression System					x	\$0			

### Food Service Storage

General Comment	Observed functional and adequate for needs.				x	\$0			
Cooler.					x	\$0			
Freezer.					x	\$0			
Dry Goods Storage/Shelving					x	\$0			
Food Preparation Storage					x	\$0			

<b>10.0 Food Service Assessment SUBTOTAL</b>						\$0	\$0	\$0	\$0
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# Adams Elementary School: Mechanical Summary

Mechanical and plumbing systems reflect a combination of significant recent investment and aging original infrastructure. Boilers, rooftop units, air handling units, unit ventilators, controls, and most cooling equipment was replaced or upgraded in 2019 and remains in good condition with substantial remaining useful life. A small quantity of exhaust fans and terminal heat units (convectors, finned tube, etc.) still need replacement. General ventilation improvements are recommended including ventilation and conditioning of the corridors. Hydronic piping routed in tunnels is approaching the end of its useful life and needing replacement. Long-term planning consideration should be given to maximizing boiler efficiencies by lowering building equipment water temperatures. Plumbing systems present more significant long-term concerns: while fixtures and equipment in renovated areas are in good condition, much of the domestic water, sanitary, and storm piping in the original building dates to the 1960s, includes galvanized materials. These systems are at or beyond typical service life and should be planned for phased or comprehensive replacement, ideally coordinated with roof or major renovation projects to address storm drainage and overflow requirements.



Existing Rooftop Equipment



Existing (original) Convector



Existing Boiler Plant



Existing 2015 Bond AHU



Existing Water Heater



Existing Toilet Room



Existing Boiler Plant

# Adams Elementary School: Mechanical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Boilers replaced in 2019 with Aerco condensing boilers, equipment is in good condition. Original building heating equipment designed for high temperature hot water; recently replaced UVs are still at 180° EWT/141° LWT so opportunities for condensing conditions are limited (requires return water temps of 135°F or lower to start capturing efficiency gains). Future consideration should be given to lowering loop water temperatures with new heating coils.				X	\$0			
Boiler Plant Accessories	Plant accessories, including air/dirt separator and expansion tank, replaced in 2019 during recent bond work. Equipment is in good condition.				X	\$0			
<b>Building Cooling Equipment</b>									
Refrigerant Condensers	New condensing units installed in 2019 to accompany new AHU cooling coils; in good condition. Tonnages (12.5 tons) (30 tons).				X	\$0			
Refrigerant Condensers	New condensing units installed in 2019 to accompany interior unit ventilators; in good condition. Tonnages (3.5 tons ea).				X	\$0			
<b>Heating / Cooling Piping</b>									
Hydronic Piping	Piping original to year of building construction; majority of building is 1960s piping installed primarily in tunnels. Life expectancy of piping like this is 50-75 years if maintained, provisions should be made for replacement.			X		\$1,066,517			\$1,578,445
Hydronic Pumps	New main distribution pumps installed in 2019 during recent bond work are in good condition.				X	\$0			

# Adams Elementary School: Mechanical Systems

## Building HVAC Air Distribution System / Equipment

Air Handling Units	New air handling units serving gym/cafeteria addition installed in 2019 during recent bond work are in good condition. Zone temperature control is limited due to single zone units serving multiple spaces (stage, kitchen, cafeteria). (3000 CFM) (6000 CFM).				X	\$0			
Rooftop Units	New packaged cooling, gas-fired rooftop units installed in 2019 to serve various classrooms and front office. Units are in good condition with an expected useful life of 15-20 years.				X	\$0			
Rooftop Units	New cooling-only rooftop units with duct-mounted heating coils installed in 2019 to serve Art Room, Maker Space, and Meida Center. Equipment is in good condition, anticipated useful life is 15-20 years.				X	\$0			
VUV/HUV Units	New Daikin unit ventilators (some self-contained cooling, some split DX) installed during recent bond work in 2019 and are in good condition. Anticipated useful life of 20-25 years.				X	\$0			
Exhaust Fans	Newer exhaust fans serving renovation work during recent bond are in good condition, installed 2019.				X	\$0			
Exhaust Fans	Older exhaust fans from original building construction are past their useful life, would recommend replacement.	X				\$48,059	\$50,462		
Fan Coil Units	Ducted fan coil unit heat pumps with outdoor units were installed in 2019 and are in good condition, serving interior office spaces.				X	\$0			

# Adams Elementary School: Mechanical Systems

## Terminal Heating / Cooling Equipment

Finned Tube Heaters	Misc. finned tube & convectors are still installed from original building construction (1960s) on walls and in vestibules. Equipment is in fair to poor condition and should be replaced.	X				\$45,625	\$47,906		
Cabinet Unit Heaters	Misc. cabinet unit heaters are still installed from original building construction (1960s) for perimeter heat. Equipment is in fair to poor condition and should be replaced.	X				\$165,620	\$173,901		
Finned Tube Heaters	Finned tube, cabinet unit heaters, and unit heaters installed to support perimeter heating in 2019 addition and in good condition.				X	\$0			
Split Systems	Installed 2019 for MDF room and in good condition.				X	\$0			
Split Systems	Heat pump fan coil units installed 2019 for office areas and in good condition.				X	\$0			
Unit Heaters	Unit heaters installed in 2019 in addition are in good condition.				X	\$0			
Split Systems	Split system installed to serve kitchen is less than 5 years old and is in good condition. Anticipated useful life of 15-20 years.				X	\$0			
Cabinet Unit Heaters	Cabinet unit heaters installed in 2019 in addition are in good condition.				X	\$0			

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	Temperature controls upgraded with building equipment replacement in 2019; Automated Logic system throughout the building with new control devices. System is in good condition.				X	\$0			
Tunnel Ventilation	Tunnels are vented with roof caps; no mechanical or powered ventilation observed. No known issues with tunnel ventilation.				X	\$0			
Ventilation	Interior workroom D120 (shared between Classrooms D121 and D116) does not receive any outside air. Recommend adding new system or tying in to an adjacent system to meet ventilation codes.	X				\$15,208	\$15,968		
Decentralized HVAC Equipment	No space conditioning or ventilation air provided to corridors; would recommend installation of new HVAC equipment for comfort and to meet current codes.		X			\$175,201		\$224,257	

<b>11.0 Mechanical Assessment SUBTOTAL</b>						<b>\$1,516,230</b>	<b>\$288,238</b>	<b>\$224,257</b>	<b>\$1,578,445</b>
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# Adams Elementary School: Plumbing Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Gas fired atmospheric water heater, 199 MBH, appears to be approximately 10-15 years old. Unit is in fair condition. Venting is routing through the existing chimney. Life expectancy of this style of unit is 15-20 years, would recommend replacement.		X			\$29,200		\$37,376	
Domestic Water Heater	New Lochinvar domestic water heater, 125 MBH, added in recent bond renovations (2019) to serve addition; equipment is in good condition.				X	\$0			
Domestic Water Piping	Generally original to year of construction (1960s or recent 2019 addition); much of the 1960s piping is routed in tunnels (with limited access). Original building piping has significant portions of galvanized piping that are corroding and breaking down, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained. Original systems are in need of replacement; new systems in addition are in good condition.			X		\$722,479			\$1,069,269
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Generally original to year of construction (early 1960s). General life expectancy of a sanitary piping system is 50-70 years if well maintained; would recommend replacing in the near future. Building currently has issues with clogs and other sanitary piping failures.	X				\$723,888	\$760,082		

# Adams Elementary School: Plumbing Systems

## Storm Drainage System / Equipment

Storm Drainage Piping	Generally original to year of construction (early 1960s). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. System in main building (1960s) does not have overflow drains; if any roof work additional overflow drains will be required to bring system up to code.	X				\$371,413	\$389,984		
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement.	X				\$0	\$0		

## Plumbing Fixtures

Water Closets & Urinals	Water closet and urinals flush valves have been replaced recently with sensed valves; fixtures are in fair to good condition.				X	\$0			
Lavatories & Sinks	Sinks in classrooms were replaced in recent bond work (2019) and are in good condition. Group toilet rooms lavatories are in good condition and appear to have been replaced recently.				X	\$0			
Electric Water Coolers & Drinking Fountains	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district. New units are in good condition.				X	\$0			

## Miscellaneous Plumbing Systems / Equipment

Compressed air piping	Compressed air system installed in main boiler room; unit is in fair condition but does not appear to be operational nor required. Confirm with owner.				X	\$0			
Specialty Classrooms	Art Room - Classrooms sinks recently replaced include solids interceptors in decent condition.				X	\$0			

<b>12.0 Plumbing Assessment SUBTOTAL</b>						<b>\$1,846,980</b>	<b>\$1,150,066</b>	<b>\$37,376</b>	<b>\$1,069,269</b>
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# Adams Elementary School: Electrical Summary

Electrical systems at Adams Elementary are a mix of modernized components and aging legacy infrastructure. Site and exterior lighting were upgraded in 2017 and are in good condition, and much of the building has been retrofitted with LED interior lighting, though lighting controls do not fully meet current energy code requirements outside of recent bond work. Power distribution includes newer switchboards and panels alongside a substantial number of original 1960s panelboards that lack modern features such as surge protection and metering, indicating a need for long-term replacement planning. Classroom power distribution is limited, with insufficient receptacle coverage for modern instructional needs. No standby generator is currently provided, and future consideration should be given to adding generator capacity for life safety, emergency systems, and telecommunications. Communications and technology infrastructure is generally functional, with structured cabling and network equipment in place, though some systems—such as clocks, AV systems, and wireless access points approaching end of life—will require future upgrades to maintain reliability and instructional support.



Existing Electrical Gear



Existing Panel Board



Existing Fire Alarm



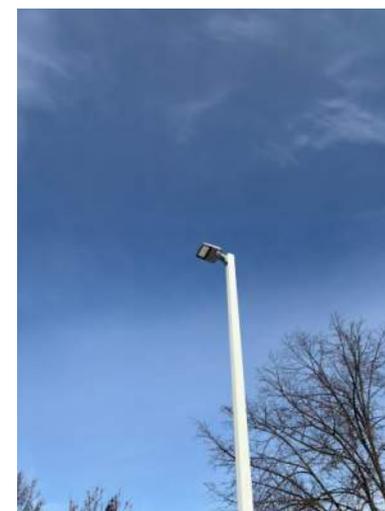
Existing IT



Existing Clock



Existing Technology



Existing Light Pole



Existing Lighting Control

# Adams Elementary School: Electrical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	2017 Site Lighting				x	\$0			
Building Exterior Lighting	Replaced in 2017				x	\$0			
Building Exterior Lighting	Wall packs at egress doors, LED retrofit		x			\$40,150		\$51,392	
<b>Power Distribution &amp; Control Equipment</b>									
Exterior Transformers	2018 Consumers Energy, utility metering on xfmr				x	\$0			
Switchboards	2018 Eaton 2000A 208V, No surge suppression or integral metering				x	\$0			
Switchboards	1960s SQD Switchboard, backfeed from service	x				\$223,716	\$234,902		
Distribution Panelboards	2007 600A 208V Distribution SQD I-line			x		\$35,284			\$52,220
Panelboards	2018 SQD NQ Branch Panels				x	\$0			
Panelboards	2012 SQD NQ Branch Panels			x		\$14,577			\$21,574
Panelboards	1960s SQD NQ Branch Panels	x				\$189,501	\$198,976		
Electrical Receptacles & Devices	Classrooms are lackign receptacles. There are some via surface raceway at teacher station and back of room, but lacking perimeter coverage for convenience use (classroom sqft)	x				\$174,547	\$183,274		
Generator	No Generator present, recommend exploring generator for life safety and standby systems	x				\$127,447	\$133,819		

# Adams Elementary School: Electrical Systems

## Interior Lighting

Interior Lighting Fixtures	Everything outside the 2017 bond work has been retrofitted with LED lamps, light fixture replacements suggested to follow other renovation scope (entire building sqft, minus the 2017 bond work)			x		\$860,094			\$1,272,939
Interior Lighting Fixtures	2017 Bond Work				x	\$0			
Lighting Controls	Line voltage occupancy sensors in corridors and classrooms, classroom controls do not meet current energy codes, lighting controls scope suggested to follow other renovation scope (entire building sqft, minus the 2017 bond work)			x		\$0			\$0
Lighting Controls	2017 Bond Work				x	\$0			
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in lighting fixture sqft)				x	\$0			

## Communications

Communications Room/Cooling	MDF has cooling			x		\$0			\$0
Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDFs			x		\$24,334			\$36,014
Structured Cabling	CAT6 observed (entire building sqft)			x		\$180,972			\$267,839

## Telephone, Paging, Signaling & Clock Systems

Clock System	National Time & Signal, many rooms not functioning	x				\$137,615	\$144,496		
Public Address/Intercom System	Carehawk CH1000, RingCentral Paging Adapter		x			\$0		\$0	

# Adams Elementary School: Electrical Systems

## Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$45,624		\$58,399	
Wireless Access Points	Ruckus (primarily R720) EOL 2028	x				\$83,950	\$88,148		
Classroom Audio System	Lightspeed 955 (per classroom)		x			\$244,856		\$313,416	
Classroom Video System	Direct HDMI to Epson Projector & manual pull down screen (per classroom)		x			\$0		\$0	
Maker Space AV System	2018 Crestron AV system not functioning	x				\$53,230	\$55,892		
Media Center AV System	2018: Currently similar to classroom setup (projector and Lightspeed) with additional standalone monitors			x		\$53,230			\$78,780
Gym AV System	No AV system in gym from 2017 bond	x				\$22,356	\$23,474		
Add telecomm rooms to generator standby	<u>Part of generator addition</u> , add standby system and include telecomm rooms	x				\$0	\$0		
<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$2,523,650</b>	<b>\$1,062,980</b>	<b>\$423,206</b>	<b>\$1,747,374</b>



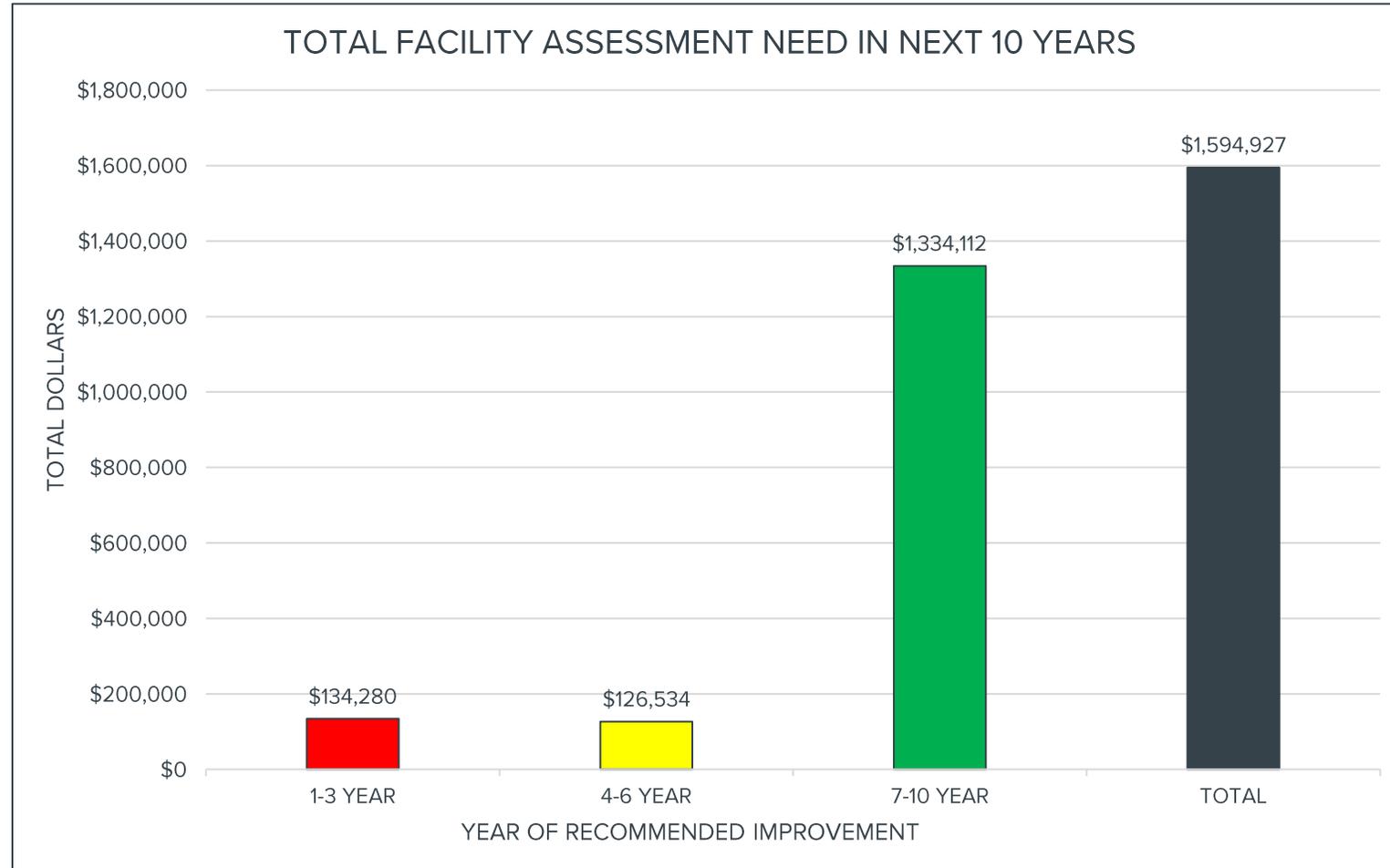
# CENTRAL PARK ELEMENTARY

a STEM exploration school

## Central Park Elementary School: Overall Cost Review

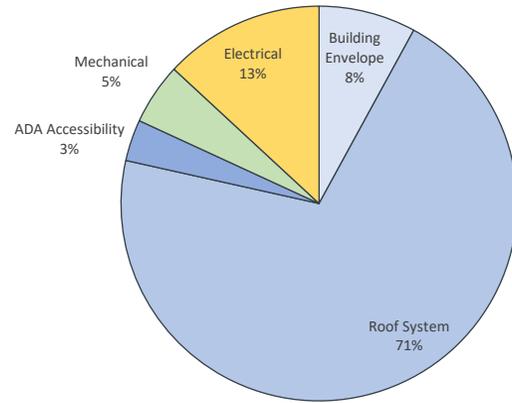
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$0	\$126,534	\$0	\$126,534
Roof System	\$0	\$0	\$1,125,540	\$1,125,540
ADA Accessibility	\$0	\$0	\$54,020	\$54,020
Interior Finishes	\$0	\$0	\$0	\$0
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$0	\$0	\$0	\$0
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$0	\$0	\$80,130	\$80,130
Plumbing	\$0	\$0	\$0	\$0
Electrical	\$134,280	\$0	\$74,422	\$208,702
<b>TOTALS</b>	<b>\$134,280</b>	<b>\$126,534</b>	<b>\$1,334,112</b>	<b>\$1,594,927</b>

# Central Park Elementary School: Overall Cost Review

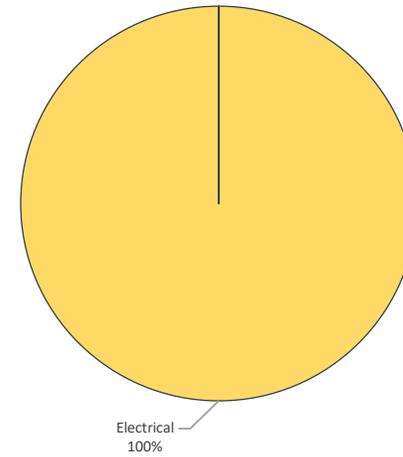


# Central Park Elementary School: Overall Cost Review

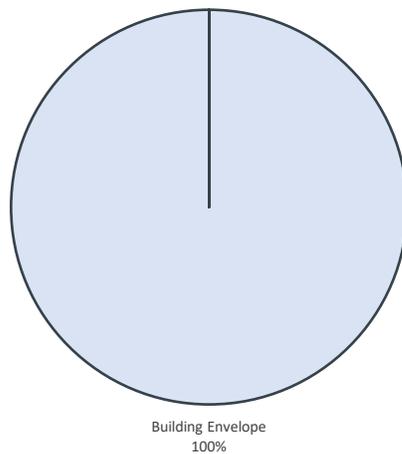
TOTAL NEED BY ASSESSMENT CATEGORY



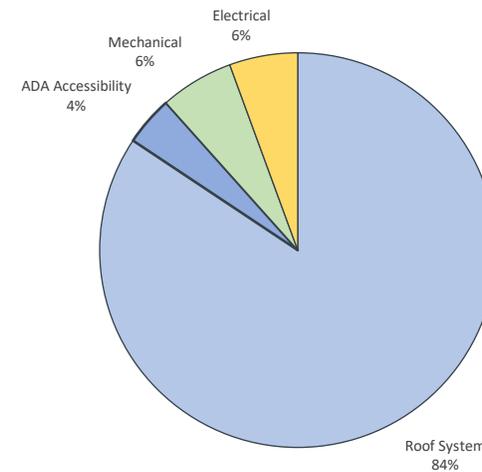
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



## Central Park Elementary School: Architectural Summary

Central Park Elementary is a relatively new facility, with architectural systems that are overall in very good condition and largely original to the building's construction. The building envelope, including exterior walls, windows, doors, and roofing systems, is performing as intended, with no significant deficiencies noted and no near-term replacement needs anticipated. Interior finishes throughout classrooms, corridors, common spaces, and support areas are consistent with the building's age and remain in good condition, requiring only routine maintenance. ADA accessibility is generally compliant with current standards, reflecting modern design practices at the time of construction. Life safety systems are functional and aligned with contemporary codes, with no immediate upgrades required beyond normal lifecycle planning. Food service spaces and equipment are appropriately sized, well organized, and in good condition, adequately supporting current operational needs.



Existing Front Entry Canopy



Existing Toilet Rooms



Existing Collaboration Spaces



Existing Classroom

# Central Park Elementary School: Building Envelope

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
General Comment	New building. The exterior of the building is in good condition.				x	\$0			
Brick/Masonry	Brick observed in good condition.				x	\$0			
Brick/Masonry	Split face block observed in good condition.				x	\$0			
Brick/Masonry	Painted brick at the gymnasium area showing spall and in need of tuck pointing repair and new paint.		x			\$98,855		\$126,534	
Burnished Block	Observed in good condition.				x	\$0			
Metal Panel	Metal panels observed in good condition.				x	\$0			
Exposed Steel Structure	Showing some rusting bleed through painted finish. Pan for remediation.		x			\$0		\$0	
Store Front	Aluminum storefront windows observed in good condition.				x	\$0			
Metal Soffits	Observed in good condition.				x	\$0			
Control Joints / Joint Sealants	Joint sealants observed in good condition.				x	\$0			
<b>Exterior / Vestibule Doors</b>									
Aluminum Frames	Aluminum frames in good condition.				x	\$0			
FRP Doors	Newer FRP doors observed in good condition.				x	\$0			
Exterior Door Hardware	Observed in good condition.				x	\$0			
<b>Windows</b>									
Aluminum Windows	New windows observed in good condition.				x	\$0			
<b>Exterior Grilles / Louvers</b>									
Painted Metal Louvers	Observed in good condition.				x	\$0			
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$98,855</b>	<b>\$0</b>	<b>\$126,534</b>	<b>\$0</b>

# Central Park Elementary School: Roof Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
General Comment	Roofing age estimated using google earth imagery.				x	\$0			
Roof Area 1	Assumed TPO Roof - New in approximately 2016.				x	\$0			
Roof Area 2	Metal Roofing 2017.				x	\$0			
Roof Area 3	Gym - EPDM roofing assumed at mid life based on google earth imagery.			x		\$355,500			\$526,140
Roof Area 4	Cafeteria - EPDM roofing assumed at mid life based on google earth imagery.			x		\$405,000			\$599,400
<b>Drainage Components</b>									
Primary Roof Drains	Observed adequate.				x	\$0			
<b>Perimeter / Fascia / Soffit</b>									
Metal Coping	Plan for metal fascias and copings to be replaced concurrent with reroofing projects. <u>Cost included in reroofing.</u>			x		\$0			
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$760,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,125,540</b>

# Central Park Elementary School: ADA Accessibility

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
General Comment	In general ADA accessibility is adequate.				x	\$0			
Parking Lot Signage	Observed in good condition				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed with annual maintenance required.				x	\$0			
Curb Cuts	Observed and accessible.				x	\$0			
Tactile Warning Strips	Observed adequate.				x	\$0			
Exterior/Exits	Observed with ADA actuators and operators in appropriate locations.				x	\$0			
<b>Interior Accessibility (General)</b>									
General Comment	Observed with good ADA Accessibility.				x	\$0			
Interior Building Signage (general)	Observed with good ADA Accessibility.				x	\$0			
Corridor Clearances	Observed with good ADA Accessibility.				x	\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	There is one drinking fountain that protrude into path of travel for the visually impaired. Recommend adding wing walls with future renovations.			x		\$18,250			\$27,010
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	There is display cases that project into path of travel without wing walls. Noting this as a deficiency but considered a grandfathered condition.			x		\$18,250			\$27,010
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Lever door handles observed throughout building.				x	\$0			
Pull/Push Side Clearances	Observed with good ADA accessibility.				x	\$0			

# Central Park Elementary School: ADA Accessibility

### Group Restroom Accessibility

General Comment 1	Group restrooms observed meeting today's ADA code standards.				x	\$0			
Turning Clearances	Observed with good ADA accessibility.				x	\$0			
Plumbing Fixtures (water closets)	Observed with good ADA accessibility.				x	\$0			
urinals	Observed with good ADA accessibility.				x	\$0			
Sinks	Observed with good ADA accessibility.				x	\$0			
Lavatory Insulation/Shields	Observed with good ADA accessibility.				x	\$0			
Accessories	Observed with good ADA accessibility.				x	\$0			

### Elevators, Lifts and Interior Ramps

Elevators/Lifts Present Where Needed					x	\$0			
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<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$36,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$54,020</b>
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# Central Park Elementary School: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 7.0 Interior Finishes Assessment

### Offices / Auxiliary Offices / Support Areas

General Comment	New office in 2017 observed in good condition throughout.				x	\$0			
Flooring	Newer carpet tile observed in good condition.				x	\$0			
Flooring	Newer LVP at workrooms.				x	\$0			
Walls	Painted drywall observed in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings observed.				x	\$0			
Base Material	Rubber base.				x	\$0			
Signage	Observed.				x	\$0			
Casework	New plastic laminate casework observed in good condition.				x	\$0			
Countertops	New solid surface countertops observed in good condition.				x	\$0			
Furniture/Furnishings	Observed in good condition.				x	\$0			

### Corridors

General Comment	New corridors observed in good condition.				x	\$0			
Flooring	Polished concrete observed in good condition.				x	\$0			
Flooring	Carpet tiles at some of the entrances in good condition.				x	\$0			
Walls	Painted masonry in good condition.				x	\$0			
Ceiling	Exposed painted structure in good condition.				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			
Signage	Observed in good condition.				x	\$0			
Built-in (benches/display cases)	Observed in good condition.				x	\$0			
Wall Mounted Visual Display Units	Observed in good condition.				x	\$0			
Lockers	Observed in good condition.				x	\$0			

## Central Park Elementary School: Interior Finishes

### Restrooms

General Comment	New bathrooms with new finishes.				x	\$0			
Walls	Painted block and ceramic tile in good condition.				x	\$0			
Ceiling	Suspended acoustical ceiling in good condition.				x	\$0			
Flooring	Painted epoxy flooring in good condition.				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			
Countertops	Integral bowl sinks in good condition.				x	\$0			
Restroom Accessories	In good condition.				x	\$0			

### Classrooms

General Comment	New classrooms with new finishes.				x	\$0			
Walls	Painted masonry in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings in good condition.				x	\$0			
Flooring	Carpet tiles in good condition.				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			
Signage	New signs in good condition.				x	\$0			
Casework	Plastic laminate casework in good condition.				x	\$0			
Countertops	Solid surface countertops in good condition.				x	\$0			
Furniture/Furnishings	New furniture in good condition.				x	\$0			

### Cafeteria

General Comment	Renovated cafeteria with new finishes.				x	\$0			
Walls	Painted masonry and acoustical panels in good condition.				x	\$0			
Ceiling	Exposed structure and acoustical panels in good condition.				x	\$0			
Flooring	Stained concrete in good condition.				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			
Signage	New signage in good condition.				x	\$0			
Furniture/Furnishings	Folding tables in good condition.				x	\$0			

# Central Park Elementary School: Interior Finishes

**Media Center**

General Comment	New media center in good condition.				x	\$0			
Walls	Painted masonry and acoustical panels in good condition.				x	\$0			
Ceiling	Exposed structure and suspended acoustical clouds in good condition.				x	\$0			
Flooring	Carpet tiles in good condition.				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			
Signage	New signage in good condition.				x	\$0			
Furniture/Furnishings	New furniture in good condition.				x	\$0			
<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Central Park Elementary School: Indoor Athletic Facilities

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>8.0 Indoor Athletic Facilities Assessment</b>									
<b>Competition Gymnasium</b>									
General Comment	Recently renovated gym in good condition.				x	\$0			
Court Surface	LVP tile flooring observed.				x	\$0			
Doors	New wood doors and hardware.				x	\$0			
Paint	Painted masonry walls with acoustical panels.				x	\$0			
Ceilings	Exposed painted structure with acoustical deck and acoustical panels.				x	\$0			
Retractable Goals	Observed in good condition.				x	\$0			
Fixed Goals	Observed in good condition.				x	\$0			
<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Central Park Elementary School: Life Safety Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Emergency Plan Available	Observed adequate.				x	\$0			
Adequate Corridor Widths	Observed adequate.				x	\$0			
Emergency/Automatic Shut-offs (Food Service/Kilns/Science Labs/Shop Equipment)	Observed adequate.				x	\$0			
Clear/Defined Egress Paths	Observed adequate.				x	\$0			
Knox Box	Unknown.				x	\$0			
Clear Lines of Site at Building Perimeter	Poor line of site from office to main entrance. Consider improvement concurrent with office remodel. See interior finishes for cost.				x	\$0			
AED/Location	Observed at main office vestibule area and gym.				x	\$0			
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Building has new wet pipe fire protection system installed throughout; piping and equipment are in excellent condition.				x	\$0			
Fire Extinguishers/Cabinets	Observed with adequate coverage.				x	\$0			
<b>Emergency Lighting / Power</b>									
Emergency Lighting/Power Source	Integral fixture battery packs for emergency lighting, evaluate with future lighting replacements or addition of generator (whole building square footage)				x	\$0			

# Central Park Elementary School: Life Safety Systems

### Emergency Alarm Systems

Fire Alarm Control Panel	National Time & Signal 901 Series, annunciator in Reception area. With voice evac				x	\$0		\$0	
Speaker/Strobes	Coverage appeared to be adequate				x	\$0		\$0	
Remote Monitoring						\$0			

### Access Control / Intrusion Detection

Access Control System	Allegion access controls				x	\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

### Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$0			\$0
Security Camera Monitoring	Threat detection system			x		\$0			\$0

<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						\$0	\$0	\$0	\$0
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# Central Park Elementary School: Food Service

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>10.0 Food Service Assessment</b>									
<b>Food Service Equipment</b>									
General Comment	Newer kitchen observed in good condition.				x	\$0			
Freestanding Cooler/Refrigerator					x	\$0			
Milk Cooler					x	\$0			
Freestanding Freezer					x	\$0			
Ice Maker					x	\$0			
Oven					x	\$0			
Range					x	\$0			
Work Tables					x	\$0			
<b>Food Service Plumbing Fixtures</b>									
General Comment	Newer fixtures observed in good condition.				x	\$0			
3-Compartment Sink (with Air Gaps)					x	\$0			
Hand Wash Sink					x	\$0			
Grease Trap					x	\$0			
Floor Drains					x	\$0			
<b>Food Service Point-of-Purchase</b>									
General Comment	Service lines and point of purchase observed in good condition.				x	\$0			
Cash Register Stand on Wheels					x	\$0			
Serving Counters					x	\$0			
Delivery Carts					x	\$0			
Sneeze Guards					x	\$0			

# Central Park Elementary School: Food Service

### Food Service Life Safety

General Comment	Observed compliant with todays code requirements.				x	\$0			
Gas Shutoff(s) Hood Suppression System(s)					x	\$0			
Fire Suppression System					x	\$0			

### Food Service Storage

General Comment	Observed functional and adequate for needs.				x	\$0			
Cooler.					x	\$0			
Freezer.					x	\$0			
Dry Goods Storage/Shelving					x	\$0			
Food Preparation Storage					x	\$0			

<b>10.0 Food Service Assessment SUBTOTAL</b>						\$0	\$0	\$0	\$0
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# Central Park Elementary School: Mechanical Summary

Mechanical and plumbing systems at Central Park Elementary are in good condition and reflect modern design standards consistent with the building's age. HVAC equipment, controls, and distribution systems are operating as intended, with sufficient remaining useful life and no systemic deficiencies identified. Ventilation is appropriately provided to occupied spaces and meets current code requirements. Plumbing systems, including domestic water, sanitary, and storm drainage piping remain well within expected service life, with no material performance concerns observed. Fixtures and equipment are in good condition, and only routine maintenance and long-term lifecycle planning are anticipated at this time..



Existing HHW Plant Pumps



Existing RTU



Existing Air-Cooled Chiller



Existing Water Heater



Existing Unit Ventilator



Existing Plumbing Fixtures



Existing Indoor AHU

# Central Park Elementary School: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Condensing boilers are in good condition, installed in 2016 during original building construction. Boilers are each provided with their own pump.				X	\$0			
Boiler Plant Accessories	Boiler plant distribution pumps are in good condition and zoned based on building areas, including supplying hot water to the auditorium building through dedicated pipe mains. Plant accessories including air separator, expansion tanks, etc. are in good condition. A glycol fill tank provides makeup glycol to the system.				X	\$0			
<b>Building Cooling Equipment</b>									
Chillers	Air cooled chiller installed in 2016 as part of original building construction is in good condition with an anticipated life of 20-25 years if well maintained. Chiller plant is piped in a primary/secondary configuration with two primary pumps and two secondary pumps.				X	\$0			
Cooling Plant Accessories	Chiller plant distribution pumps are in good condition and zoned based on building areas, including supplying chilled glycol to the auditorium building through dedicated pipe mains. Plant accessories including air separator, expansion tanks, etc. are in good condition.				X	\$0			
<b>Heating / Cooling Piping</b>									
Hydronic Piping	Hydronic piping is in excellent condition, installed during new building construction in 2016. Piping systems of this nature have an anticipated lifetime of 50-75 years if well maintained.				X	\$0			

## Central Park Elementary School: Mechanical Systems

### Building HVAC Air Distribution System / Equipment

Rooftop Units	Rooftop units serving corridors and specialty STEM/maker spaces are in good condition; hot water and chilled water heating and cooling with pumped hot water coils. High volumes of exposed ductwork can create noise issues, particularly in a building like this with a high quantity of reflective surfaces.				X	\$0		
Air Handling Units	Air handling units are installed to serve interior offices/classrooms, the cafeteria, kitchen/server, and gymnasium. Units are in good condition and have hot water/chilled water coils.				X	\$0		
VUV/HUV Units	Vertical unit ventilators with ducted discharge installed throughout classroom spaces; units are in good condition and have an anticipated life of 20-25 years. There may be some acoustic concerns with constraints of exposed ductwork/duct design on units without branch ductwork.				X	\$0		
Rooftop Units	Packaged cooling rooftop unit with gas heat serving front offices is in good condition.				X	\$0		
Rooftop Exhaust Fans	Exhaust fans are in good condition.				X	\$0		
VAV Terminal Units	Terminal units supporting RTUs and AHU-1 provide zone control for interior classrooms and office spaces; units are in good condition. Duct layouts do provide some limitations on zone control in front office areas where occupancy may be intermittent, some boxes serve multiple spaces.				X	\$0		
Through-wall Exhaust Fans	Several transfer or supply fans are installed in the building for air movement, space pressurization, or makeup air; units are all in good condition.				X	\$0		

# Central Park Elementary School: Mechanical Systems

## Terminal Heating / Cooling Equipment

Cabinet Unit Heaters	Cabinet Unit Heaters are in good condition, primarily utilized in vestibule/corridor spaces.				X	\$0			
Unit Heaters	Unit Heaters are in good condition, primarily utilized in storage and mechanical areas.				X	\$0			
Split Systems	Split systems serving head end room are in good condition, anticipated life of these systems is approximately 15-20 years. Units installed in 2016/2017 and will be approaching end of useful life in about 10 years.			X		\$54,142			\$80,130
Finned Tube Heaters	Finned tube elements/enclosures are in good condition, primarily utilized in small exterior rooms with replacement only.				X	\$0			
Fan Coil Units	Fan coil units installed for office spaces are in good condition.				X	\$0			
Radiant Panel	Radiant panels are in good condition, primarily utilized in exposed areas.				X	\$0			

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	New temperature controls installed with new building construction and are in good condition, Automated Logic system.				X	\$0			
HVLS Fans	Macro Air HVLS are provided for comfort and destratification in spaces with high volume and are in good condition.				X	\$0			
Kiln Hoods	Kiln room provided with dedicated exhaust to meet current codes.				X	\$0			

<b>11.0 Mechanical Assessment SUBTOTAL</b>							\$54,142	\$0	\$0	\$80,130
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# Central Park Elementary School: Plumbing Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Main building gas-fired domestic water heater is in good condition, installed during building construction in 2016.				X	\$0			
Domestic Water Heater	Separate gas-fired domestic water heater serving condition is in good condition during building construction in 2016.				X	\$0			
Domestic Water Heater	Separate gas-fired domestic water heater serving Unit 'B' is in good condition during building construction in 2016.				X	\$0			
Domestic Water Piping	Domestic water piping is in excellent condition as building is less than 10 years old. Anticipated life for this system is 50-75 years if well maintained.				X	\$0			
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Sanitary waste and vent piping is in excellent condition as building is less than 10 years old. Anticipated life for this system is 50-75 years if well maintained.				X	\$0			
<b>Storm Drainage System / Equipment</b>									
Storm Drainage Piping	Storm primary and overflow piping is in excellent condition as building is less than 10 years old. Anticipated life for this system is 50-75 years if well maintained.				X	\$0			
Roof Drains	Roof drains are in good condition, original to building construction and less than 10 years old.				X	\$0			

# Central Park Elementary School: Plumbing Systems

**Plumbing Fixtures**

Water Closets & Urinals	Fixtures are in excellent condition; original to building construction and less than 10 years old.				X	\$0			
Lavatories & Sinks	Fixtures are in excellent condition; original to building construction and less than 10 years old.				X	\$0			
Electric Water Coolers	Fixtures are in excellent condition; original to building construction and less than 10 years old.				X	\$0			
<b>12.0 Plumbing Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Central Park Elementary School: Electrical Summary

Electrical systems at Central Park Elementary are modern and in good overall condition. Interior and exterior lighting systems are consistent with contemporary standards, and lighting controls generally meet current energy code requirements. Power distribution equipment is appropriately sized and configured for the facility's needs, with no widespread deficiencies noted. Classroom power and technology infrastructure adequately support instructional requirements but should be evaluated with any district-wide planning efforts for consistency. Emergency and life safety systems are functional and code compliant, and while standby generation may be evaluated as part of districtwide resilience planning, no immediate electrical system upgrades are required.



Existing Main Electrical Gear



Existing Fire Alarm



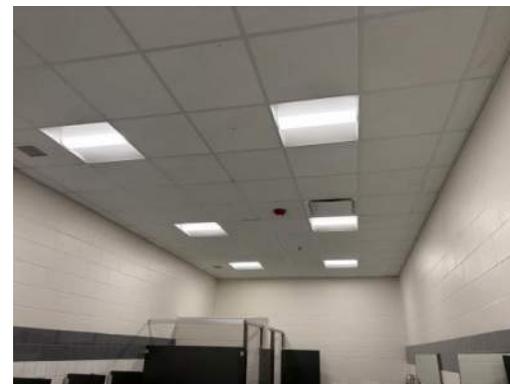
Existing IT



Existing Lighting Control



Existing Clocks



Existing Recessed Lighting



Existing Classroom Technology

# Central Park Elementary School: Electrical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	New in 2017, includes auditorium				x	\$0			
Building Exterior Lighting	New in 2017				x	\$0			
<b>Power Distribution &amp; Control Equipment</b>									
Medium Voltage	Unknown age metal clad switchgear				x	\$0			
Exterior Transformers	2017 1500KVA				x	\$0			
Switchboards	2017 1600A Eaton				x	\$0			
Distribution Panelboards	2017 Eaton				x	\$0			
Panelboards	2017 Eaton Branch Panels				x	\$0			
Electrical Receptacles & Devices	Sufficient receptacles in classrooms and throughout (building sqft)				x	\$0			
Generator	No Generator present, recommend exploring generator for life safety and standby systems	x				\$127,886	\$134,280		
<b>Interior Lighting</b>									
Interior Lighting Fixtures	2017				x	\$0			\$0
Lighting Controls	2017 Acuity nLight				x	\$0			\$0
Lighting Controls	2017 Bond Work				x	\$0			\$0
Exit Signs	2017				x	\$0			\$0

# Central Park Elementary School: Electrical Systems

### Communications

Communications Room/Cooling	telecomm rooms have cooling				x	\$0			
Communications Cabinets/Racks/Enclosures	MDF				x	\$0			
Communications Cabinets/Racks/Enclosures	IDFs				x	\$0			
Structured Cabling	CAT6				x	\$0			

### Telephone, Paging, Signaling & Clock Systems

Clock System	National Time & Signal				x	\$0	\$0		
Public Address/Intercom System	Valcom Class Connect Paging system				x	\$0		\$0	

### Network Electronics & Wireless Equipment

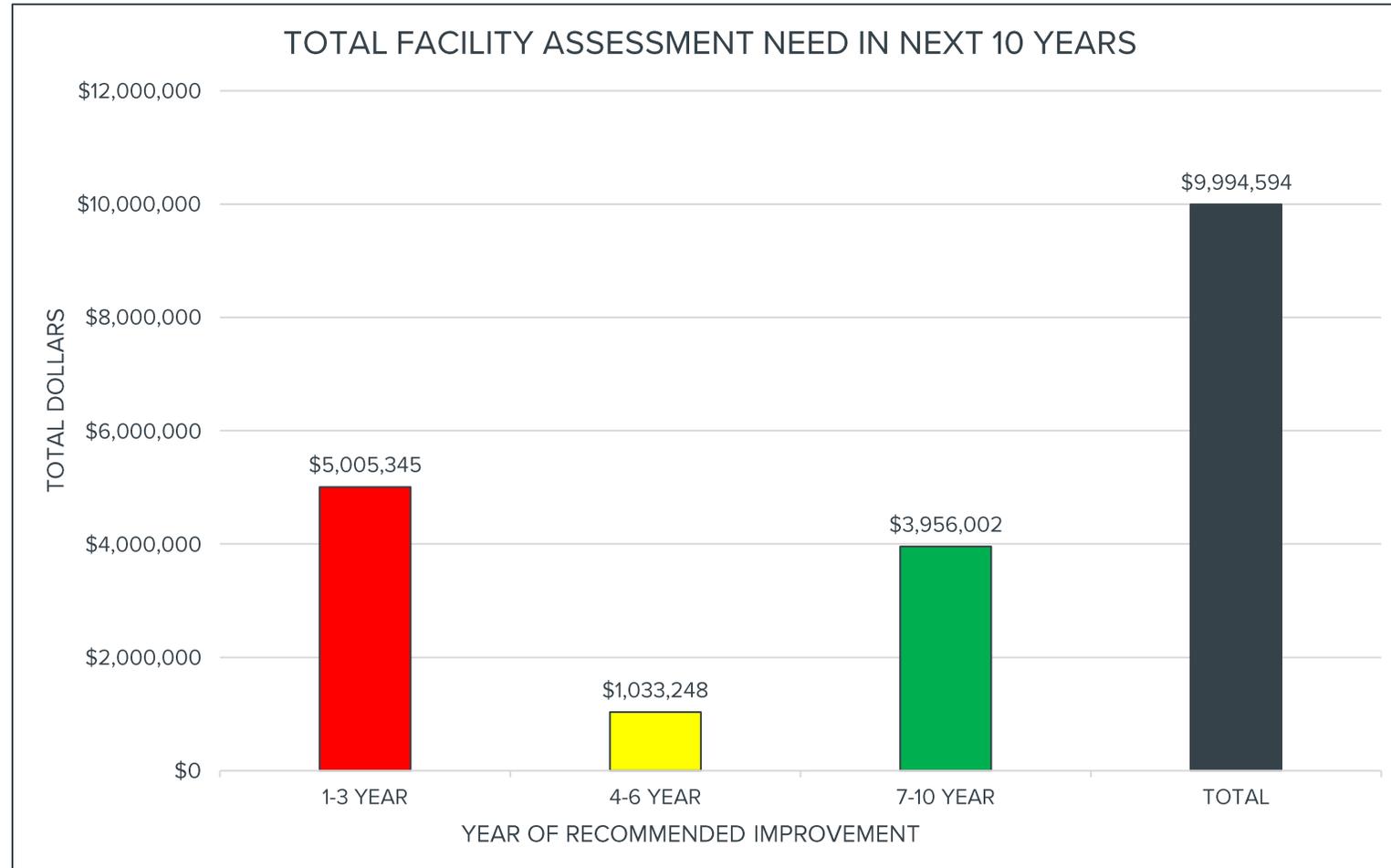
Network Switches	Ruckus				x	\$0			
Wireless Access Points	Ruckus				x	\$0			
Classroom Audio System	Lightspeed 955 (per classroom)			x		\$0			\$0
Classroom Video System	Direct HDMI to Epson short throw Projector (per classroom)			x		\$0			\$0
Cafeteria AV system	2017 Crestron			x		\$0			\$0
Media Center AV System	2017 Crestron			x		\$50,285			\$74,422
Gym AV System	2017 Audio System			x		\$0			\$0
Add telecomm rooms to generator standby	Part of generator addition, add standby system and include telecomm rooms	x				\$0	\$0		

<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$178,171</b>	<b>\$134,280</b>	<b>\$0</b>	<b>\$74,422</b>
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# Chestnut Hill Elementary School

# Chestnut Hill Elementary School: Overall Cost Review

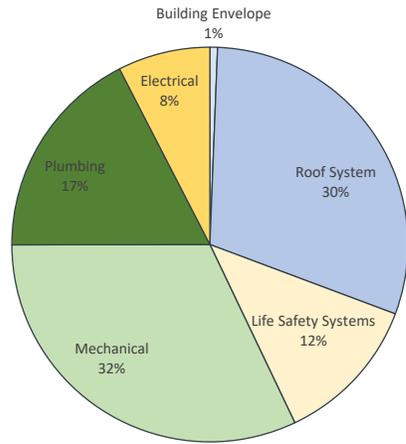


## Chestnut Hill Elementary School: Overall Cost Review

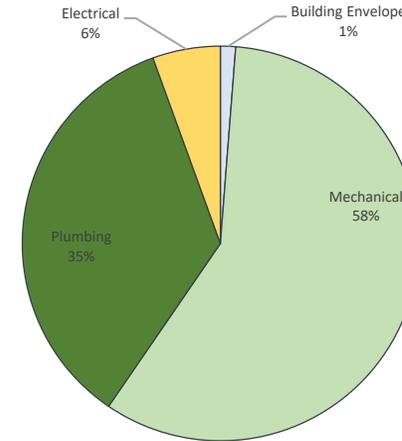
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$62,180	\$0	\$0	\$62,180
Roof System	\$0	\$0	\$3,008,056	\$3,008,056
ADA Accessibility	\$0	\$0	\$0	\$0
Interior Finishes	\$0	\$0	\$0	\$0
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$0	\$388,509	\$833,151	\$1,221,661
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$2,918,392	\$282,657	\$0	\$3,201,049
Plumbing	\$1,747,872	\$0	\$0	\$1,747,872
Electrical	\$276,901	\$362,081	\$114,795	\$753,777
<b>TOTALS</b>	<b>\$5,005,345</b>	<b>\$1,033,248</b>	<b>\$3,956,002</b>	<b>\$9,994,594</b>

# Chestnut Hill Elementary School: Overall Cost Review

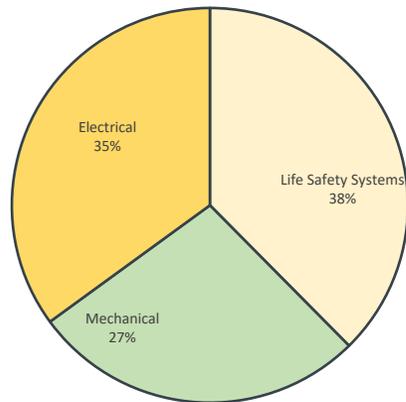
TOTAL NEED BY ASSESSMENT CATEGORY



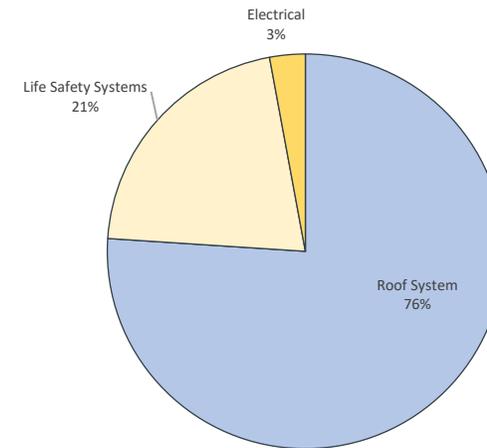
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



# Chestnut Hill Elementary School: Architectural Summary

Chestnut Hill Elementary School consists of a mix of original construction and newer additions, resulting in varied conditions across architectural systems. The building envelope is generally in good condition, with exterior brick and windows performing well; however, localized masonry issues were observed, including missing control joint sealants, horizontal movement at steel lintels, and areas where perimeter landscaping is built up above finish floor elevation and should be corrected. The EPDM roof system, installed in 2009, is functioning as intended but is approaching an age where future replacement planning is appropriate. Interior spaces reflect a combination of recently renovated areas and older finishes, with corridors, ceilings, signage, and some classroom and restroom layouts benefitting from future modernization and ADA-related improvements. Food service spaces were completed as part of a recent addition and are in good condition with no near-term needs identified.



Existing Brick Cracking



Existing Classroom



Existing Window/Grade



Existing Toilet Room Entry/Lack of ADA



Existing Soffit at Roof Edge



Existing Classroom

# Chestnut Hill Elementary School: Building Envelope

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick/Masonry	Horizontal steel lintels at existing locker room windows are creating large horizontal movement joints in the brick veneer.	x				\$33,459	\$35,132		
Store Front					x	\$0			
<b>Exterior / Vestibule Doors</b>									
FRP Doors					x	\$0			
<b>Windows</b>									
Aluminum Windows	Exterior windows are all double pane and in great condition				x	\$0			
<b>Joint Sealants</b>									
Control Joint Sealants	One section of control joint at masonry wall that is missing.	x				\$760	\$798		
Control Joint Sealants	Balance of sealants all appear in good condition					\$0			
<b>Exterior Grilles / Louvers</b>									
Aluminum Louvers					x	\$0			
<b>Perimeter Maintenance Strip</b>									
Wood Fiber Mulch	Building up above finish floor level and should be removed and replaced	x				\$25,000	\$26,250		
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$59,219</b>	<b>\$62,180</b>	<b>\$0</b>	<b>\$0</b>

# Chestnut Hill Elementary School: Roof Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
Roofing Membrane									
EPDM (Non-Ballasted)	2009 installation			x		\$2,032,470			\$3,008,056
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$2,032,470</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,008,056</b>

# Chestnut Hill Elementary School: ADA Accessibility

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>6.0 ADA Accessibility Assessment</b>									
<b>Interior Accessibility (General)</b>									
Corridor Clearances					x	\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)					x	\$0			
Doors & Hardware (knobs/levers/panic hardware/closers (general))					x	\$0			
Pull/Push Side Clearances	OK at Toilet rooms that are ADA Accessibility				x	\$0			
<b>Classroom Accessibility</b>									
Doors & Hardware (knobs/levers/panic hardware/closers (general))					x	\$0			
Classroom Restroom Accessibility (Turning Clearance/Plumbing Fixtures/Accessories)					x	\$0			
Pull/Push Side Clearance					x	\$0			
<b>Group Restroom Accessibility</b>									
General Comment	There were 2 sets of Restrooms that met ADA Requirements				x	\$0			
General Comment	There were no ADA compliant restrooms for Staff; should be reviewed with district. Location and size TBD.	x				\$0	\$0		
<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Chestnut Hill Elementary School: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>7.0 Interior Finishes Assessment</b>									
<b>Offices / Auxiliary Offices / Support Areas</b>									
Walls					x	\$0			
Ceiling					x	\$0			
Flooring					x	\$0			
Base Material					x	\$0			
Wayfinding					x	\$0			
Signage					x	\$0			
Casework					x	\$0			
Countertops					x	\$0			
Built-in (benches/display cases)					x	\$0			
<b>Corridors</b>									
Walls	Brick				x	\$0			
Flooring	LVT (luxury vinyl tile)				x	\$0			
Ceiling	Suspended (acoustical ceiling tile)				x	\$0			
<b>Restrooms</b>									
Walls	Exposed (brick)				x	\$0			
Flooring	Tile Flooring				x	\$0			
Toilet Partitions	HDPE				x	\$0			

# Chestnut Hill Elementary School: Interior Finishes

## Classrooms

Flooring	Carpet (tile)				x	\$0			
Ceiling	Suspended (acoustical ceiling tile)				x	\$0			
Base Material	Glazed brick				x	\$0			
Walls	Painted masonry block					\$0			
Casework	New				x	\$0			
Doors and Hardware	Wood doors and Lever function hardware				x	\$0			
Exterior Windows	Storefront				x	\$0			

## Cafeteria

Walls	Painted (concrete block)				x	\$0			
Ceiling	Exposed painted structure				x	\$0			
Flooring	LVT				x	\$0			

## Media Center

Walls	Painted (concrete block)				x	\$0			
Flooring	Parquet Gym Flooring				x	\$0			
Ceiling	Suspended (acoustical ceiling tile)				x	\$0			

<b>7.0 Interior Finishes Assessment SUBTOTAL</b>							\$0	\$0	\$0	\$0
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# Chestnut Hill Elementary School: Indoor Athletic Facilities

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>8.0 Indoor Athletic Facilities Assessment</b>									
Gymnasium / Cafeteria	Operable partition between the two spaces to create one large room				x				
Court Surface	VCT				x	\$0			
	Newer section of the building in great condition				x	\$0			
<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Chestnut Hill Elementary School: Life Safety Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 9.0 Life Safety Systems Assessment

### General Life Safety

Emergency Plan Available					x	\$0			
Adequate Corridor Widths					x	\$0			
Clear/Defined Egress Paths	Teacher desk or stand along casework is placed in front of exterior exit doors within several classrooms. Section of Corridor off large gathering room is being used as band instrument storage and is blocking clear path of travel to the exterior exit doors.					\$0			
Knox Box						\$0			
Clear Lines of Site at Building Perimeter					x	\$0			
AED/Location						\$0			

### Fire Safety System / Equipment

Fire Alarm Pull Stations/Locations	Pull station at all exterior doors				x	\$0			
Fire Suppression Heads/Piping	Fire protection is recommended for life-safety considerations; building is not currently sprinkled. Estimated system cost shown here for district planning purposes; building can also be portioned and separated to meet fire codes as it currently is.			x		\$418,464			\$619,327

### Emergency Lighting / Power

Emergency Lighting/Power Source	Integral fixture battery packs for emergency lighting, evaluate with future lighting replacements or addition of generator (whole building square footage); refer to generator line item in Electrical Section			x		\$0			\$0
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# Chestnut Hill Elementary School: Life Safety Systems

## Emergency Alarm Systems

Fire Alarm Control Panel	National Time & Signal 902 Series, annunciator in Reception area. Upgrading to a panel with voice communication will be required in the future.		x			\$220,291		\$281,972	
Horns/Strobes	Coverage appeared to be adequate, upgrade to speaker/strobes will be required in the future. (Building sqft)		x			\$83,232		\$106,537	
Remote Monitoring						\$0			

## Access Control / Intrusion Detection

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

## Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$144,476			\$213,824
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$866,463</b>	<b>\$0</b>	<b>\$388,509</b>	<b>\$833,151</b>
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# Chestnut Hill Elementary School: Food Service

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>10.0 Food Service Assessment</b>									
Food Service Equipment									
General Comment	All new as part of recent building addition				x	\$0			
<b>10.0 Food Service Assessment SUBTOTAL</b>						\$0	\$0	\$0	\$0

## Chestnut Hill Elementary School: Mechanical Summary

Mechanical systems at Chestnut Hill have seen targeted reinvestment in recent years, most notably the replacement of boilers and boiler plant accessories in 2021–2022 and the installation of new air handling units and condensing equipment serving newer additions. These systems are in good condition and operating as intended. Conversely, portions of the original hydronic and plumbing infrastructure remain in place from the 1950s and 1960s, particularly piping located in tunnels, which has reached the end of its expected service life. While currently functional, plan for phased piping replacement, insulation upgrades, and replacement of remaining original building equipment & ductwork.



Existing Outdoor Condensing Unit



Existing Mini Split



Existing Unit Ventilator



Existing Fan Coil



Existing Indoor AHU



Existing Cabinet Unit Heater

# Chestnut Hill Elementary School: Mechanical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Boilers replaced in 2022 with Raypak condensing boilers, equipment is in good condition.				X	\$0			
Boiler Plant Accessories	Boiler plant accessories including primary pumps, air/dirt separator, and expansion tank all replaced in 2021/2022 along with boilers. Equipment is in good condition.				X	\$0			
<b>Building Cooling Equipment</b>									
Refrigerant Condensers	New condensing units installed in 2019 to accompany new AHU cooling coils; in good condition. Tonnages (12.5 tons) (30 tons).				X	\$0			
Refrigerant Condensers	New Lennox condensing units installed 2018 to serve media center and maker space air handling units. Tonnages (10 tons) (20 tons).				X	\$0			
<b>Heating / Cooling Piping</b>									
Hydronic Piping	Piping original to year of building construction; majority of building is 1950s and 1960s piping installed primarily in tunnels with limited access. Life expectancy of piping like this is 50-75 years if maintained, provisions should be made for replacement. New piping serving addition is in good condition.	X				\$998,784	\$1,048,723		
Hydronic Pumps	Zone distribution pumps appear to have been replaced in recent bond work and are less than 5 years old; equipment is in good condition.				X	\$0			
Insulation	Portions of piping observed in boiler room and tunnels uninsulated, would recommend adding insulation to all piping.	X				\$21,900	\$22,995		
Gas Piping	Gas riser and meter is installed inside building in boiler room; would recommend relocation to building exterior in coordination with local gas utility.		X			\$30,417		\$38,934	

## Chestnut Hill Elementary School: Mechanical Systems

### Building HVAC Air Distribution System / Equipment

Air Handling Units	New air handling units serving gym/cafeteria addition installed in 2019 during recent bond work are in good condition. Zone temperature control is limited due to single zone units serving multiple spaces (stage, kitchen, cafeteria). (3000 CFM) (6000 CFM).				X	\$0			
VUV/HUV Units	New Daikin unit ventilators (some self-contained cooling, some split DX) installed during recent bond work in 2018 and are in good condition. Anticipated useful life of 20-25 years.				X	\$0			
Air Handling Units	New Daikin unit installed to serve media center during recent bond work in 2018, unit is in good condition. Cooling provided by split DX condensing unit.				X	\$0			
Air Handling Units	New Daikin air handling unit serving maker space installed during recent bond work in 2018; unit is in good condition. Unit requires condensate pump due to equipment location for condensate removal. Cooling provided by split DX condensing unit. Reconnected to existing ductwork.				X	\$0			
Air Handling Units	Heating and ventilating unit installed in D107 mechanical room serves front office and locker areas. Unit is in poor condition and original to date of installation; would recommend replacement. CFM unknown, estimated at 2500 CFM.	X				\$102,049	\$107,151		
VUV/HUV Units	Original unit ventilator from 1960s installed still in resource room is in fair condition and well beyond useful life, would recommend replacement.				X	\$0			
Rooftop Exhaust Fans	Exhaust fans installed in 2018 bond renovations are in good condition.				X	\$0			
Rooftop Exhaust Fans	Several exhaust fans are still original to the date of building construction, 1950s and 1960s. Units are in fair to poor condition and in need of replacement.	X				\$81,216	\$85,277		
HVAC Ducts	Supply/return/exhaust for original AHUs and fans is original; life expectancy is typically 25-30 years but can reach 50 years if well maintained. At this age, issues with duct sealing and insulation decay decrease efficiency and potential water or corrosion issues start to occur. Would recommend installation of new ductwork for all original air handling systems (AHU & EF systems) as noted above.	X				\$1,288,641	\$1,353,073		

## Chestnut Hill Elementary School: Mechanical Systems

### Terminal Heating / Cooling Equipment

Finned Tube Heaters	Misc. finned tube elements are still installed from original building construction (1950s/1960s) for perimeter heat. Equipment is in fair to poor condition and should be replaced.	X				\$44,106	\$46,311		
Convectors	Misc. convectors are still installed from original building construction (1950s/1960s) on walls for perimeter heat. Equipment is in fair to poor condition and should be replaced.	X				\$31,026	\$32,577		
Cabinet Unit Heaters	Misc. cabinet unit heaters are still installed from original building construction (1950s/1960s) on walls and in vestibules. Equipment is in fair to poor condition and should be replaced.	X				\$120,448	\$126,470		
Unit Heaters	One unit heater is still installed from original building construction (1957) and is in poor condition; needs replacement.	x				\$15,056	\$15,809		
Cabinet Unit Heaters	Cabinet unit heaters installed to support corridor and vestibule heating in 2017 gym addition are in good condition.				X	\$0			
Unit Heaters	Unit heaters installed to support perimeter heating in 2017 gym addition are in good condition.				X	\$0			
Finned Tube Heaters	Finned tube installed to support perimeter heating in 2017 gym addition is in good condition.				X	\$0			
Split Systems	Split systems installed in 2018 for MDF and IDF rooms are in good condition; anticipated life for this equipment is 15-20 years.				X	\$0			
Split Systems	Split systems providing cooling to front office areas are in poor condition and at the end of their useful life; installed in 2007. Life expectancy is 15-20 years. Would recommend replacement.	X				\$54,142	\$56,849		
Finned Tube Heaters	Electric baseboard heat to serving resource rooms adjacent main building entrance is in poor condition.	X				\$22,053	\$23,156		
Split Systems	Split system ceiling cassettes installed in 2018 to provide cooling to resource rooms adjacent main building entrance are in good condition.				X	\$0			
Split Systems	Split system installed to serve kitchen is less than 5 years old and is in good condition. Anticipated useful life of 15-20 years.				X	\$0			

# Chestnut Hill Elementary School: Mechanical Systems

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	Temperature controls upgraded with building equipment replacement in recent bond work; Automated Logic system throughout the building with new control devices. System is in good condition.				X	\$0			
Decentralized HVAC Equipment	No space conditioning or ventilation air provided to corridors; would recommend installation of new HVAC equipment for comfort and to meet current codes.		X			\$175,201		\$224,257	
Ventilation	Interior office adjacent to IT does not receive any outside air. Recommend adding new system or tying in to an adjacent system to meet ventilation codes.		X			\$15,208		\$19,466	
<b>11.0 Mechanical Assessment SUBTOTAL</b>						<b>\$3,000,247</b>	<b>\$2,918,392</b>	<b>\$282,657</b>	<b>\$0</b>

# Chestnut Hill Elementary School: Plumbing Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Gas fired atmospheric water heater, 40 MBH, was installed in 2018. Unit is in decent condition. Life expectancy of this style of unit is 15-20 years.				X	\$0			
Domestic Water Heater	New Bock domestic water heater added in recent bond renovations (2018) to serve addition; equipment is in good condition. Electric heating, 37 kW.				X	\$0			
Domestic Water Heater	Generally original to year of construction (1950s/1960s or recent 2018 addition); much of the old piping is routed in tunnels with poor access. Original building piping has significant portions of galvanized piping that are corroding and breaking down, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained. Original systems are in need of replacement; new systems in addition are in good condition.	X				\$665,856	\$699,149		
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Generally original to year of construction (1950s/1960s). General life expectancy of a sanitary piping system is 50-75 years if well maintained; would recommend replacing in the near future. Building currently has issues with clogs and other sanitary piping failures.	X				\$665,856	\$699,149		

## Chestnut Hill Elementary School: Plumbing Systems

### Storm Drainage System / Equipment

Storm Drainage Piping	Generally original to year of construction (1950s). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. System in main building (1950s) does not have overflow drains; if any roof work additional overflow drains will be required to bring system up to code.	X				\$332,928	\$349,574		
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement. Some portions of roof do not have roof drains and are sloped to edge.	X				\$0	\$0		

### Plumbing Fixtures

Water Closets & Urinals	Water closet and urinals flush valves were replaced during recent bond renovations with sensored valves and some urinals have been replaced; original fixtures are in fair to good condition.				X	\$0			
Lavatories & Sinks	Sinks in classrooms were replaced in recent bond work (2018) and are in good condition. Group toilet rooms lavatories are in good condition and were replaced during recent bond renovations.				X	\$0			
Electric Water Coolers & Drinking Fountains	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district. New units are in good condition.				X	\$0			

<b>12.0 Plumbing Assessment SUBTOTAL</b>						\$1,664,640	\$1,747,872	\$0	\$0
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# Chestnut Hill Elementary School: Electrical Summary

Electrical systems at Chestnut Hill Elementary are a mix of modernized components and aging legacy infrastructure. Site and exterior lighting were upgraded recently and are in good condition, and much of the building has been retrofitted with LED interior lighting, though lighting controls do not fully meet current energy code requirements outside of recent bond work. Power distribution includes newer switchboards and panels alongside a substantial number of original panelboards that lack modern features such as surge protection and metering and are beyond their useful life. All of this points to the need for long-term replacement planning. Classroom power distribution is limited, with insufficient receptacle coverage for modern instructional needs. No standby generator is currently provided, and future consideration should be given to adding generator capacity for life safety, emergency systems, and telecommunications. Communications and technology infrastructure is generally functional, with structured cabling and network equipment in place, though some systems—such as clocks, AV systems, and wireless access points approaching end of life—will require future upgrades to maintain reliability and instructional support.



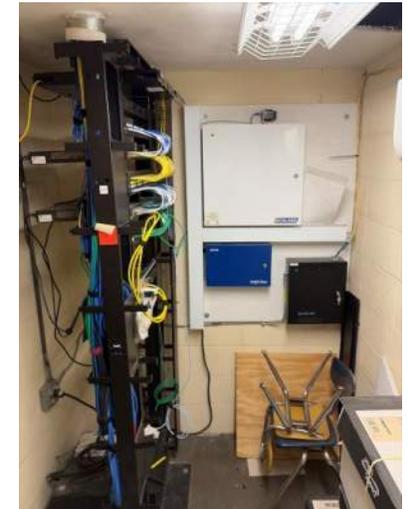
Existing Electrical Gear



Existing Panel Board



Existing Clock



Existing Technology



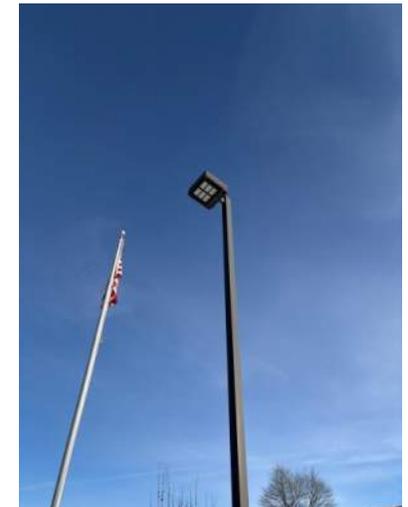
Existing Classroom Technology



Existing Lighting Controls



Existing Exterior Wall Packs



Existing Light Poles

# Chestnut Hill Elementary School: Electrical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	2017 Site Lighting				x	\$0			
Building Exterior Lighting	Replaced in 2017				x	\$0			
Building Exterior Lighting	Wall packs at egress doors, LED retrofit		x			\$0			
<b>Power Distribution &amp; Control Equipment</b>									
Exterior Transformers	2018 Consumers Energy, utility metering on xfmr				x	\$0	\$0		
Switchboards	2018 Eaton 2000A 208V, No surge suppression or integral metering				x	\$0	\$0		
Distribution Panelboards	2003 1000A 208V Distribution SQD I-line		x			\$100,680			
Panelboards	2018 Branch Panels				x	\$0		\$0	
Panelboards	2003 SQD NQ Branch Panels		x			\$135,360		\$0	
Electrical Receptacles & Devices	Classrooms are lackign receptacles. There are some via surface raceway at teacher station and back of room, but lacking perimeter coverage for convenience use (classroom sqft)	x				\$174,547			\$0
Generator	No Generator present, recommend exploring generator for life safety and standby systems	x				\$127,447	\$133,819		

# Chestnut Hill Elementary School: Electrical Systems

## Interior Lighting

Interior Lighting Fixtures	Everything outside the 2017 bond work has been retrofitted with LED lamps, light fixture replacements suggested to follow other renovation scope (entire building sqft, minus the 2017 bond work)			x		\$791,143			\$0
Interior Lighting Fixtures	2017 Bond Work				x	\$0			\$0
Lighting Controls	Line voltage occupancy sensors in corridors and classrooms, classroom controls do not meet current energy codes, lighting controls scope suggested to follow other renovation scope (entire building sqft, minus the 2017 bond work)					\$0			\$0
Lighting Controls	2017 Bond Work				x	\$0			\$0
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in lighting fixture sqft)				x	\$0			

## Communications

Communications Room/Cooling	MDF and IDF has cooling			x		\$0			\$0
Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDFs			x		\$12,167			\$18,007
Structured Cabling	CAT6 observed (entire building sqft)			x		\$0			\$0

## Telephone, Paging, Signaling & Clock Systems

Clock System	National Time & Signal, many rooms not functioning	x				\$0	\$0		
Public Address/Intercom System	Carehawk CH1000, RingCentral Paging Adapter		x			\$0		\$0	

# Chestnut Hill Elementary School: Electrical Systems

## Technology

Network Switches	Ruckus ICX 7150-48PF		x			\$38,020		\$48,666	
Wireless Access Points	Ruckus (primarily R720) EOL 2028	x				\$69,350	\$72,818		
Classroom Audio System	Lightspeed 955 (per classroom)		x						
Classroom Video System	Direct HDMI to Epson Projector & manual pull down screen (per classroom)		x			\$244,856		\$313,416	
Maker Space AV System	2018 Crestron AV system not functioning	x				\$53,230	\$55,892		
Media Center AV System	2018: Currently similar to classroom setup (projector and Lightspeed) with additional standalone monitors			x		\$53,230			\$78,780
Gym AV System	No AV system in gym from 2017 bond	x				\$13,688	\$14,372		
Add telecomm rooms to generator standby	Part of generator addition, add standby system and include telecomm rooms	x				\$0	\$0		
<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$1,825,885</b>	<b>\$276,901</b>	<b>\$362,081</b>	<b>\$114,795</b>



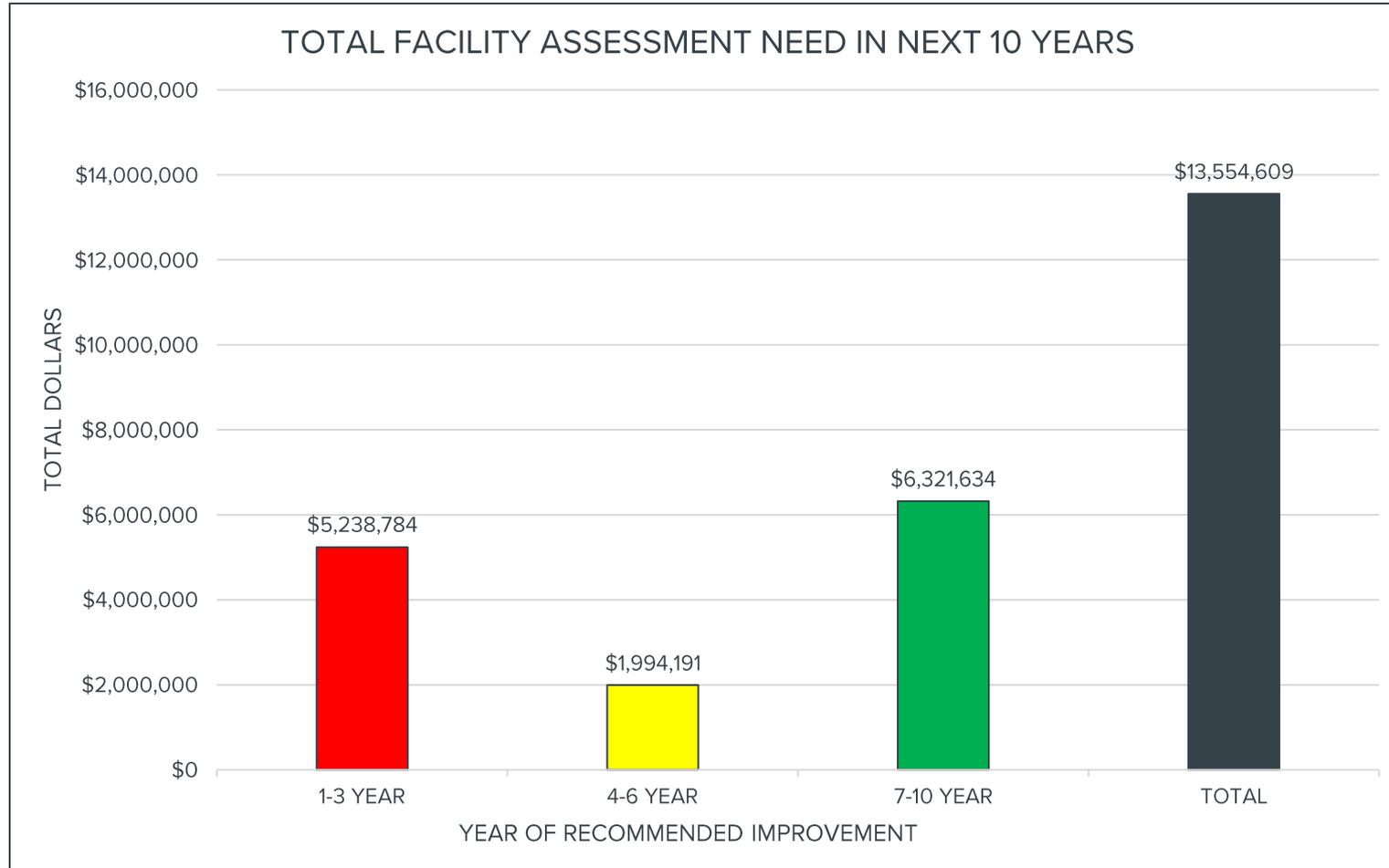
# PLYMOUTH

ELEMENTARY SCHOOL

## Plymouth Elementary School: Overall Cost Review

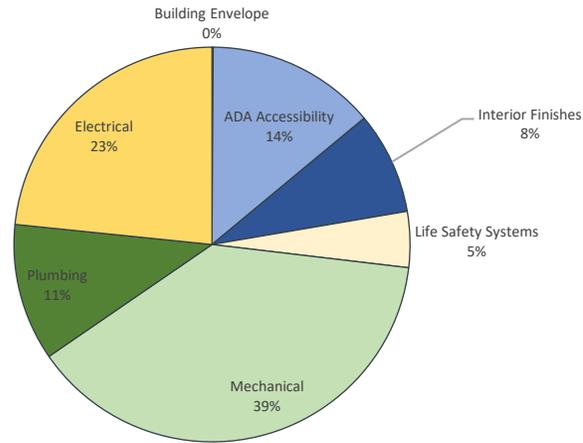
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$12,775	\$0	\$0	\$12,775
Roof System	\$0	\$0	\$0	\$0
ADA Accessibility	\$0	\$0	\$1,877,367	\$1,877,367
Interior Finishes	\$137,732	\$995,727	\$0	\$1,133,459
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$0	\$406,286	\$213,824	\$620,111
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$2,805,427	\$224,257	\$2,191,186	\$5,220,870
Plumbing	\$1,521,640	\$0	\$0	\$1,521,640
Electrical	\$761,210	\$367,921	\$2,039,256	\$3,168,387
<b>TOTALS</b>	<b>\$5,238,784</b>	<b>\$1,994,191</b>	<b>\$6,321,634</b>	<b>\$13,554,609</b>

# Plymouth Elementary School: Overall Cost Review

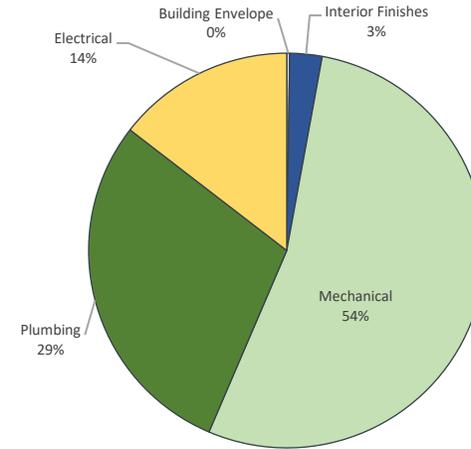


# Plymouth Elementary School: Overall Cost Review

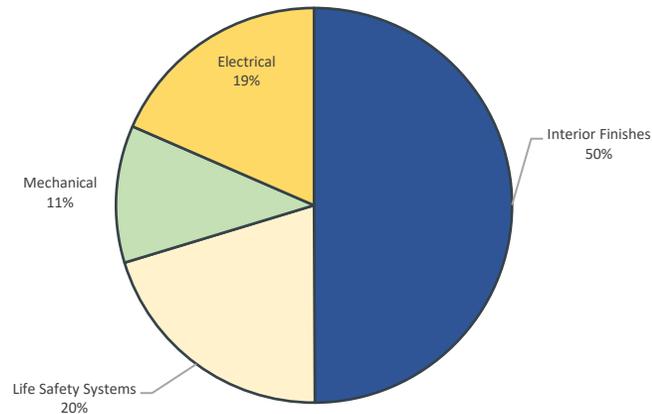
TOTAL NEED BY ASSESSMENT CATEGORY



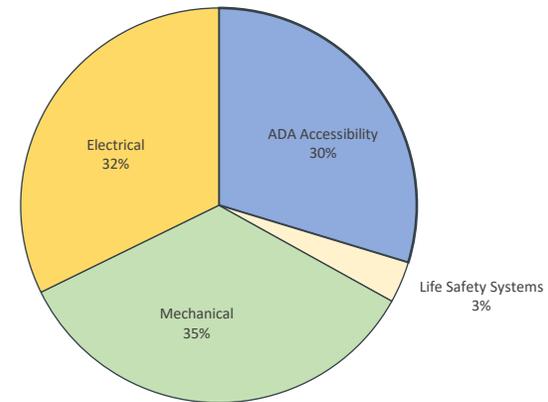
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



# Plymouth Elementary School: Architectural Summary

Plymouth Elementary School includes significant areas that were renovated or added in 2017, alongside original building components dating back to the mid-20th century. The building envelope is generally stable, with exterior walls, windows, and doors performing adequately. Minor maintenance items were identified, including repairs to masonry expansion joints, localized tuckpointing, and repainting of EIFS surfaces. Interior finishes show a clearer distinction between newer and older areas. Recently renovated offices, cafeteria, gymnasium, and media center are in good condition, whereas corridors, classrooms, and restrooms in the original portions of the building exhibit aging finishes, low ceiling heights, and layout inefficiencies. Several interior areas would benefit from future renovations to address ADA accessibility, improve wayfinding, and refresh dated finishes, particularly in student restrooms and classrooms.



Existing Drinking Fountain/ADA noted item



Existing Toilet Room and Partitions



Existing Classroom



Existing Exterior Brick



Existing Exterior Brick



Existing Exterior

# Plymouth Elementary School: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
General Comment	General observation ius that the building façade is aging but in good condition.				x	\$0			
Brick/Masonry	Observed in good condition. Some minor cracking at corners typical of brick not having control joints close enough to corners.				x	\$0			
EIFS	Generally good condition, but one small area observed near the front entrance with holes from previous sign. Budget for small hole repair and paint for consistent match	x				\$3,042	\$3,194		
Metal Panel	Observed in good condition.				x	\$0			
Control Joints / Joint Sealants	Control joints observed with weather checking and at mid life.				x	\$0			
<b>Exterior / Vestibule Doors</b>									
Aluminum Doors	Aluminum entrances with FRP doors and panels observed in good condition.				x	\$0			
FRP Doors	Observed in good condition.				x	\$0			
Exterior Door Hardware	Observed in good condition.				x	\$0			
<b>Windows</b>									
Aluminum Windows	Observed in good condition.				x	\$0			
<b>Joint Sealants</b>									
Control Joint Sealants	Observed. Corner control joints cracked/weather checked budget for repair. Original building inside corners	x				\$9,125	\$9,581		
Window/Door Sealants	Observed. Good Conditino				x	\$0			
<b>Exterior Grilles / Louvers</b>									
Aluminum Louvers	Observed in good condition.				x	\$0			
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$12,167</b>	<b>\$12,775</b>	<b>\$0</b>	<b>\$0</b>

# Plymouth Elementary School: Roof Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
EPDM (Non-Ballasted)	Replaced 2023. Warranty in good standing				x	\$0			
EPDM (Non-Ballasted)	Replaced 2017. Warranty in good standing				x	\$0			
<b>Drainage Components</b>									
Primary Roof Drains	Observed. Compliant				x	\$0			
Secondary Roof Drains	Observed. Compliant				x	\$0			
<b>Perimeter / Fascia / Soffit</b>									
Metal Coping	Observed. Good condition				x	\$0			
Metal Soffit	Observed. Good Condition				x	\$0			
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Plymouth Elementary School: ADA Accessibility

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
General Comment	In general ADA accessibility is adequate.				x	\$0			
Parking Lot Signage	Observed in good condition				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed with annual maintenance required.				x	\$0			
Curb Cuts	Observed adequate but recommend adding ADA dub down sidewalk and tactile warning at main entry concurrent with future paving projects.			x		\$8,821			\$13,055
Tactile Warning Strips	Observed adequate.				x	\$0			
Exterior/Exits	Observed. Additional ADA actuators and auto operators are recommended at a few entrances.				x	\$0			
<b>Interior Accessibility (General)</b>									
General Comment	Generally good, but recommend adding a few auto operators at interior vestibule at the main office.			x		\$17,160			\$25,397
Interior Building Signage (general)	Observed adequate.				x	\$0			
Corridor Clearances	Observed adequate.				x	\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	There are several drinking fountains that protrude into path of travel for the visually impaired. Recommend adding wing walls with future renovations.			x		\$54,750			\$81,030
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Observed adequate				x	\$0			
Pull/Push Side Clearances	Many classrooms don't meet today's code for side clearance. Recommend budgeting for improvements with future renovations. This is an expensive undertaking involving involve widening masonry openings, structural elements, new doors, frames, and hardware.			x		\$1,186,260			\$1,755,665

# Plymouth Elementary School: ADA Accessibility

## Classroom Accessibility

General Comment 1	Classroom Bathrooms do not meet todays ADA accesibility standards. Fixtures have been replaced one for one. Recommend budgeting updating to meet ADA standards		x			\$0		\$0	
General Comment 2	Art classroom sinks missing insulation shields			x		\$1,500			\$2,220

## Group Restroom Accessibility

General Comment 1	New addition bathroom meets ADA accessibility standards.				x	\$0			
General Comment 2	Older area bathrooms missing vertical grab bars and toilet accessory heights need to be addressed. Consider refreshing and ADA accessibility improvements with future	x				\$0	\$0		
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Bathroom doors have been removed. Consider refreshing and ADA accesibility improvements with future	x				\$0	\$0		
Pull/Push Side Clearance	Deficient at classroom bathrooms.	x				\$0	\$0		
Turning Clearances	Deficiencies observed at older section of building.	x				\$0	\$0		
Plumbing Fixtures (water closets	Observed.				x	\$0			
urinals	Observed.				x	\$0			
Sinks	Observed.				x	\$0			

## Elevators, Lifts and Interior Ramps

Appropriate Guards/Rails Provided at Ramps					x	\$0			
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<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$1,268,491</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,877,367</b>
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# Plymouth Elementary School: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>7.0 Interior Finishes Assessment</b>									
<b>Offices / Auxiliary Offices / Support Areas</b>									
General Comment	Recently renovated office area observed in good condition.				x	\$0			
Flooring	Newer carpet tile observed in good condition.				x	\$0			
Base Material	Rubber base.				x	\$0			
Signage	Observed.				x	\$0			
Casework	Observed. Good condition				x	\$0			
Countertops	Observed. Good condition				x	\$0			
Furniture/Furnishings	Observed in good condition.				x	\$0			
Walls	Painted drywall observed in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings observed.				x	\$0			
<b>Corridors</b>									
General Comment	Functional in fair condition. Corridors could benefit from renovations				x	\$0			
Walls	Painted Brick. Observed in good condition				x	\$0			
Ceiling	1x1 ceiling tiles (splined, tongue and grooved, or glued?). Nearing end of lifecycle. Observed low ceiling heights throughout. Areas where tiles are stained or uneven. Corridors could benefit replacing ceilings with updated accoustical suspended ceilings and recessed LED lighting	x				\$104,558	\$109,786		
Flooring	Observed. Replaced in 2017 remodel. SVT flooring and carpet tile. Future Budget to replace along with ceilings		x			\$150,564		\$192,722	
Base Material	Rubber base			x		\$0			\$0
Signage	Signage is outdated and in need of updating. Oversved group bathrooms with new ADA compliant signs.	x				\$26,615	\$27,946		

## Plymouth Elementary School: Interior Finishes

### Restrooms

General comment 1	Student Large group restrooms. Observed fair condition. Restrooms should be considered for interior renovation to address ADA deficiencies and Finish upgrades.		x			\$0		\$0	
General Comment 2	Classroom restrooms should be considered for interior renovation. Materials are old and aging. Fixtures have been updated. budget New ceilings, flooring and accesories. Painted brick walls. Budge to enlarge the bathrooms	x							
Walls	Observed painted brick and brick without paint			x		\$0			\$0
Ceiling	Suspended ceilings observed in good condition.			x		\$0			\$0
Flooring	Observed Terazzo flooring in fair condition		x			\$0		\$0	
Toilet Partitions	Observed. General in good condition		x			\$0		\$0	
Restroom Accessories	Observed. General in fair condition. missing mirrors over sinks		x			\$0		\$0	
Countertops	Solid surface countertops with integral bowls in fair condition.		x			\$0		\$0	

### Classrooms

General Comment 1	Classrooms would benefit from light renovations to refresh the rooms					\$0			
Walls	Painted block, brick, Plaster bulkheads. Observed good condition			x		\$0			\$0
Ceiling	observed two ceiling hieghts in each classroom. High ceiling suspended ACT in good condition				x	\$0			
Ceiling General Comment 1	Low ceiling height same as corridors ceilings with same condition. budget replaceing updating to suspended ACT		x			\$148,282		\$189,801	
Flooring	Carpet tiles observed fair condition		x			\$479,066		\$613,204	
Casework	Replaced in 2017. Observed in good condition			x		\$0			\$0
Countertops	Solid Surface. Observed in good condition			x		\$0			\$0
Base Material	Rubber Base. replace with flooring		x			\$0		\$0	
Furniture/Furnishings	Observed in good condition			x		\$0			\$0

# Plymouth Elementary School: Interior Finishes

### Cafeteria

General Comment 1	2017 Gymnasium addition serves as a cafeteria. Observed in good condition				x	\$0			
Walls	Painted block observed in good condition				x	\$0			
Ceiling	Observed in good condition.				x	\$0			
Flooring	LVT Observed in good condition				x	\$0			

### Media Center

General Comment	Observed. Recently renovated in good condition				x	\$0			
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<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						<b>\$909,085</b>	<b>\$137,732</b>	<b>\$995,727</b>	<b>\$0</b>
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# Plymouth Elementary School: Indoor Athletic Facilities

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>8.0 Indoor Athletic Facilities Assessment</b>									
<b>Competition Gymnasium</b>									
General Comment	New Addition Built in approximately 2017				x	\$0			
Court Surface	SVT flooring observed				x	\$0			
Doors	Observed in good condition				x	\$0			
Paint	Painted masonry walls				x	\$0			
Ceilings	Exposed painted structure				x	\$0			
Retractable Goals	Observed in good condition				x	\$0			
<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Plymouth Elementary School: Life Safety Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Emergency Plan Available	Observed adequate.				x	\$0			
Adequate Corridor Widths	Observed adequate.				x	\$0			
Emergency/Automatic Shut-offs (Food Service/Kilns/Science Labs/Shop Equipment)	Observed adequate.				x	\$0			
Clear/Defined Egress Paths	Observed adequate.				x	\$0			
Knox Box	Unknown.				x	\$0			
Clear Lines of Site at Building Perimeter	Observed adequate.				x	\$0			
AED/Location	Observed at main office corridor				x	\$0			
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Limited fire protection in boiler house only, remaining building is not sprinklered. Fire protection is recommended for life-safety considerations. Estimated system cost shown here for district planning purposes; building can also be portioned and separated to meet fire codes as it currently is.					\$401,456			
Fire Extinguishers/Cabinets	Observed adequate				x	\$0			
<b>Emergency Lighting / Power</b>									
Emergency Lighting/Power Source	Integral fixture battery packs for emergency lighting, evaluate with future lighting replacements or addition of generator (whole building square footage); refer to generator line item in Electrical Section			x		\$0			\$0

# Plymouth Elementary School: Life Safety Systems

## Emergency Alarm Systems

Fire Alarm Control Panel	National Time & Signal 902 Series, annunciator in Reception area. Upgrading to a panel with voice communication will be required in the future.		x			\$217,047		\$277,820	
Horns/Strobes	Coverage appeared to be adequate, upgrade to speaker/strobes will be required in the future. (Building sqft)		x			\$100,364		\$128,466	
Remote Monitoring						\$0			

## Access Control / Intrusion Detection

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

## Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$144,476			\$213,824
Security Camera Monitoring	Threat detection system			x		\$0			\$0

<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$863,343</b>	<b>\$0</b>	<b>\$406,286</b>	<b>\$213,824</b>
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# Plymouth Elementary School: Food Service

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>10.0 Food Service Assessment</b>									
<b>Food Service Equipment</b>									
General Comment	Newer kitchen observed in good condition.				x	\$0			
<b>Food Service Plumbing Fixtures</b>									
General Comment	Newer fixtures observed in good condition				x	\$0			
<b>Food Service Point-of-Purchase</b>									
General Comment	Service lines and point of purchase observed in good condition.				x	\$0			
<b>Food Service Life Safety</b>									
General Comment	Observed compliant with todays code requirements.				x	\$0			
Gas Shutoff(s) Hood Suppression System(s)					x	\$0			
Fire Suppression System					x	\$0			
<b>Food Service Storage</b>									
General Comment	Observed functional and adequate for needs.				x	\$0			
<b>10.0 Food Service Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Plymouth Elementary School: Mechanical Summary

Mechanical systems at Plymouth are a blend of newer equipment installed during recent bond work and original infrastructure that has exceeded or is approaching its expected service life. HVAC equipment serving newer additions and classrooms is in good condition, while portions of the distribution piping remain original and some minor equipment is in need of replacement. Steam heating systems limit building efficiency and boilers are beginning to approach end of life. Plumbing systems, including sanitary and storm piping, are largely original and are at end of useful life; piping and water heaters are both in need of replacement. Long-term replacement planning should focus on these infrastructure improvements and transitioning the building from steam to hot water heating.



Existing Steam Tunnel/Equipment



Existing Steam Boiler Plant



Existing Condensate Receiver



Existing Chase



Existing Unit Vent



Existing AHU

# Plymouth Elementary School: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Smith cast iron steam boilers appear to be installed in 2008 and are in fair condition; 1,458 MBH max input each. Anticipated lifetime is 25-30 years, based on equipment condition and useful life plans should be made for replacement. At the time of replacement, we would recommend converting to a heating hot water plant with high-efficiency condensing boilers.			X		\$431,920			\$639,242
Boiler Plant Accessories	Boiler feedwater unit / pumps is in fair condition, appears to be approximately 20 years old and similar vintage to boilers. Unit is approaching end of useful life and should be replaced with boilers.			X		\$148,282			\$219,457
Heat Exchangers	New steam to hot water heat exchangers installed in 2017 for HWS/R to misc. building equipment and addition. Equipment is in good condition.				X	\$0			
Boiler Plant Accessories	New expansion tank, pot feeder, and air separator provided for new 2017 heat exchangers (steam to hot water) along with (2) new circulation pumps. Equipment is in good condition.				X	\$0			
<b>Building Cooling Equipment</b>									
Refrigerant Condensers	New condensing unit installed in 2017 to accompany new AHU Cooling Units; in good condition. Tonnages (12.5 tons) (30 tons).				x	\$0			
Refrigerant Condensers	New condensing unit installed in 2017 to accompany interior unit ventilator for Maker Space; in good condition. Tonnage (3 tons).				X	\$0			

# Plymouth Elementary School: Mechanical Systems

## Heating / Cooling Piping

Steam & Condensate Piping and Pumps	Piping is original to building construction (1950s/1960s and 2017) and primarily routed in tunnels below building. Piping is beyond expected useful life of 40-60 years (if well maintained) and replacement is recommended. Consideration should be given to providing new heating hot water piping in lieu of steam due to system inefficiencies.	X				\$981,720	\$1,030,806		
Hydronic Piping	Hydronic piping serving new 2017 building addition is in good condition.				X	\$0			
Steam & Condensate Piping and Pumps	Condensate receiver and pumps located in tunnel pump room are in fair to poor condition, leaks observed during assessment. Unit appears to be 20+ years old with selective repairs; would recommend full unit replacement.	X				\$1,274,619	\$1,338,350		

# Plymouth Elementary School: Mechanical Systems

## Building HVAC Air Distribution System / Equipment

Air Handling Units	Newer air handling units serving gym/cafeteria addition installed during recent bond work are in good condition. Zone temperature control is limited due to single zone units serving multiple spaces (stage, kitchen, and half of gym). 3000 & 6000 CFM.				X	\$0			
Air Handling Units	New air handling unit installed in 2017 to serve media center, 3000 CFM. In good condition.				X	\$0			
VUV/HUV Units	New self-contained cooling, steam heat unit ventilators installed in 2017 and in good condition. Anticipated useful life of 20-25 years. Given need to replace boilers and piping, we would recommend converting these to hot water unit ventilators at the time of those other replacements.			X		\$808,013			\$1,195,859
VUV/HUV Units	New self-contained cooling, hot water heating unit ventilators installed in 2017 and in good condition. Anticipated useful life of 20-25 years.				X	\$0			
VUV/HUV Units	New split DX unit ventilator, steam heating unit ventilator installed in 2017 and in good condition. Given need to replace boilers and piping, we would recommend converting these to hot water unit ventilators at the time of those other replacements.			X		\$35,131			\$51,994
Rooftop Units	New cooling-only packaged rooftop unit installed in 2017 to serve main office; good condition. Associated heating coil in ductwork.				X	\$0			
Rooftop Units	Existing rooftop unit serving offices installed in 2001 and beyond expected life of 15-20 years. Condition is poor, would recommend replacement. (2.5 tons, 1000 CFM)	X				\$79,540	\$83,517		
VAV Terminal Units	New terminal units with reheat coils installed in 2017 for media center and adjacent spaces. Units are in good condition with an anticipated useful life of 25-30 years.				X	\$0			
VAV Terminal Units	New fan-powered terminal units installed in 2017 for media center and adjacent spaces. Units are in good condition with an anticipated useful life of 25-30 years.				X	\$0			
Rooftop Exhaust Fans	Exhaust fans installed in 2018 bond renovations are in good condition.				X	\$0			
Rooftop Exhaust Fans	One exhaust fan is still original to the date of building construction (1960s). Units are in fair condition but in need of replacement and beyond anticipated useful life.	X				\$13,536	\$14,213		

# Plymouth Elementary School: Mechanical Systems

## Terminal Heating / Cooling Equipment

Convectors	Misc. convectors are still installed from original building construction (1950s/1960s) on walls for perimeter heat. Equipment is in fair to poor condition and should be replaced.	X				\$186,156	\$195,464		
Cabinet Unit Heaters	Misc. cabinet unit heaters are still installed from original building construction (1950s/1960s) on walls and in vestibules. Equipment is in fair to poor condition and should be replaced.	X				\$60,224	\$63,235		
Finned Tube Heaters	Misc. finned tube elements are still installed from original building construction (1950s/1960s) for perimeter heat. Equipment is in fair to poor condition and should be replaced.	X				\$57,029	\$59,880		
Unit Heaters	Unit heaters installed to support perimeter heating in 2017 gym addition are in good condition.				X	\$0			
Cabinet Unit Heaters	Cabinet unit heaters installed to support corridor and vestibule heating in 2017 gym addition are in good condition.				X	\$0			
Finned Tube Heaters	Finned tube installed to support perimeter heating in 2017 gym addition is in good condition.				X	\$0			
Split Systems	Split system installed in 2017 for storage room is in good condition; anticipated life for this equipment is 15-20 years.			X		\$27,071			\$40,065
Unit Heaters	Steam LJ Wing heating and ventilating unit in boiler room was installed in 2009 and is in decent condition. Trane unit heater of similar vintage also installed and in good condition.			X		\$30,114			\$44,569

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	Temperature controls upgraded with building equipment replacement in 2017; Automated Logic system throughout the building with new control devices. System is in good condition. Some original terminal heating equipment was not added to temperature control system during bond updates and remains standalone.				X	\$0			
Kiln Hoods	Kiln hood is in poor condition and in need of replacement.	X				\$19,011	\$19,962		
Decentralized HVAC Equipment	No space conditioning or ventilation air provided to corridors; would recommend installation of new HVAC equipment for comfort and to meet current codes.		X			\$175,201		\$224,257	

**11.0 Mechanical Assessment SUBTOTAL**

**\$4,327,567**

**\$2,805,427**

**\$224,257**

**\$2,191,186**

# Plymouth Elementary School: Plumbing Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Electric AO Smith water heater, 9 kW, is installed in tunnels. Unit is in fair to poor condition and was installed in 2003. Life expectancy of this style of unit is 15-20 years.	X				\$20,379	\$21,398		
Domestic Water Heater	New Lochinvar domestic water heater added in recent bond renovations (2017) to serve addition; equipment is in good condition. Electric heating, 27 kW.				X	\$0			
Domestic Water Piping	Generally original to year of construction (1950s & 1960s or recent 2019 addition); much of the 1960s piping is routed in tunnels (with limited access). Original building piping has significant portions of galvanized piping that are corroding and breaking down including the building water main, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained. Original systems are in need of replacement; new systems in addition are in good condition.	X				\$654,480	\$687,204		
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Generally original to year of construction (1950s & 1960s). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. Building currently has issues with clogs and other sanitary piping failures.	X				\$401,456	\$421,529		
Sanitary Waste & Vent Piping	Duplex sump/bilge pumps installed in tunnels appear to be original to building construction with repairs made as needed; units are in poor condition and would recommend replacement.	X				\$45,626	\$47,907		

# Plymouth Elementary School: Plumbing Systems

## Storm Drainage System / Equipment

Storm Drainage Piping	Generally original to year of construction (1950s & 1960s). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. System in main building does not have overflow drains; if any roof work additional overflow drains will be required to bring system up to code.	X				\$327,240	\$343,602		
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement.	X				\$0	\$0		

## Plumbing Fixtures

Water Closets & Urinals	Water closet and urinals flush valves were replaced during recent bond renovations with sensed valves and some urinals have been replaced; original fixtures are in fair to good condition.				X	\$0			
Lavatories & Sinks	Sinks in classrooms were replaced in recent bond work (2018) and are in good condition. Group toilet rooms lavatories are in good condition and were replaced during recent bond renovations.				X	\$0			
Electric water Coolers & Drinking Fountains	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district. New units are in good condition.				X	\$0			

<b>12.0 Plumbing Assessment SUBTOTAL</b>							\$1,449,181	\$1,521,640	\$0	\$0
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# Plymouth Elementary School: Electrical Summary

Electrical systems at Plymouth Elementary are a mix of modernized components and aging legacy infrastructure. Site and exterior lighting were upgraded recently and are in good condition, and much of the building has been retrofitted with LED interior lighting, though lighting controls do not fully meet current energy code requirements outside of recent bond work. Power distribution includes newer switchboards and panels alongside a substantial number of original panelboards that lack modern features such as surge protection and metering and are beyond their useful life. All of this points to the need for long-term replacement planning. Classroom power distribution is limited, with insufficient receptacle coverage for modern instructional needs. No standby generator is currently provided, and future consideration should be given to adding generator capacity for life safety, emergency systems, and telecommunications. Communications and technology infrastructure is generally functional, with structured cabling and network equipment in place, though some systems—such as clocks, AV systems, and wireless access points approaching end of life—will require future upgrades to maintain reliability and instructional support.



Existing Electrical Gear



Existing Panel Board



Existing IT



Existing Exterior Wall Packs



Existing Clocks



Existing Phones/IT



Existing Light Poles



Existing Classroom Lighting and Technology

# Plymouth Elementary School: Electrical Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	2017 Site Lighting				x	\$0			
Building Exterior Lighting	New in 2017				x	\$0			
<b>Power Distribution &amp; Control Equipment</b>									
Exterior Transformers	2017 Consumers Energy, utility metering on xfmr				x	\$0			
Switchboards	2017 SQD 2000A 208V, No surge suppression or integral metering				x	\$0			
Distribution Panelboards	2011 600A 208V Distribution SQD I-line			x		\$23,117			\$34,213
Panelboards	2017 SQD NQ Branch Panels				x	\$0			
Panelboards	2011 SQD NQ Branch Panels			x		\$148,887			\$220,353
Panelboards	1960s SQD NQ Branch Panels	x				\$33,086	\$34,740		
Electrical Receptacles & Devices	Classrooms are lacking receptacles. There are some via surface raceway at teacher station and back of room, but lacking perimeter coverage for convenience use (classroom sqft)	x				\$197,314	\$207,180		
Generator	No Generator present, recommend exploring generator for life safety and standby systems	x				\$127,447	\$133,819		

# Plymouth Elementary School: Electrical Systems

## Interior Lighting

Interior Lighting Fixtures	Everything outside the 2017 bond work has been retrofitted with LED lamps, light fixture replacements suggested to follow other renovation scope (entire building sqft, minus the 2017 bond work)			x		\$777,626			\$1,150,886
Interior Lighting Fixtures	2017 Bond Work				x	\$0			
Lighting Controls	Line voltage occupancy sensors in corridors and classrooms, classroom controls do not meet current energy codes, lighting controls scope suggested to follow other renovation scope (entire building sqft, minus the 2017 bond work)			x		\$0			\$0
Lighting Controls	2017 Bond Work				x	\$0			
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in lighting fixture sqft)				x	\$0			
Emergency Lighting	refer to Life Safety Systems					\$0			

## Communications

Communications Room/Cooling	MDF and IDF has cooling			x		\$0			\$0
Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDFs			x		\$12,167			\$18,007
Structured Cabling	CAT6 observed (entire building sqft)			x		\$163,620			\$242,158

## Telephone, Paging, Signaling & Clock Systems

Clock System	National Time & Signal, many rooms not functioning	x				\$0	\$0		
Public Address/Intercom System	Carehawk CH1000, RingCentral Paging Adapter		x			\$0		\$0	

# Plymouth Elementary School: Electrical Systems

## Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$30,420		\$38,938	
Wireless Access Points	Ruckus (primarily R720) EOL 2028	x				\$54,735	\$57,472		
Classroom Audio System	Lightspeed 955 (per classroom)		x						
Classroom Video System	Direct HDMI to Epson Projector & manual pull down screen (per classroom)		x			\$244,856		\$313,416	
Maker Space AV System	2017 Crestron AV system not functioning	x				\$53,230	\$55,892		
Media Center AV System	2017: Currently similar to classroom setup (projector and Lightspeed) with additional standalone monitors			x		\$53,230			\$78,780
Gym AV System	No AV system in gym from 2017 bond	x				\$22,813	\$23,954		
Add telecomm rooms to generator standby	Part of generator addition, add standby system and include telecomm rooms	x				\$0	\$0		
<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$1,954,715</b>	<b>\$513,056</b>	<b>\$352,353</b>	<b>\$1,762,405</b>



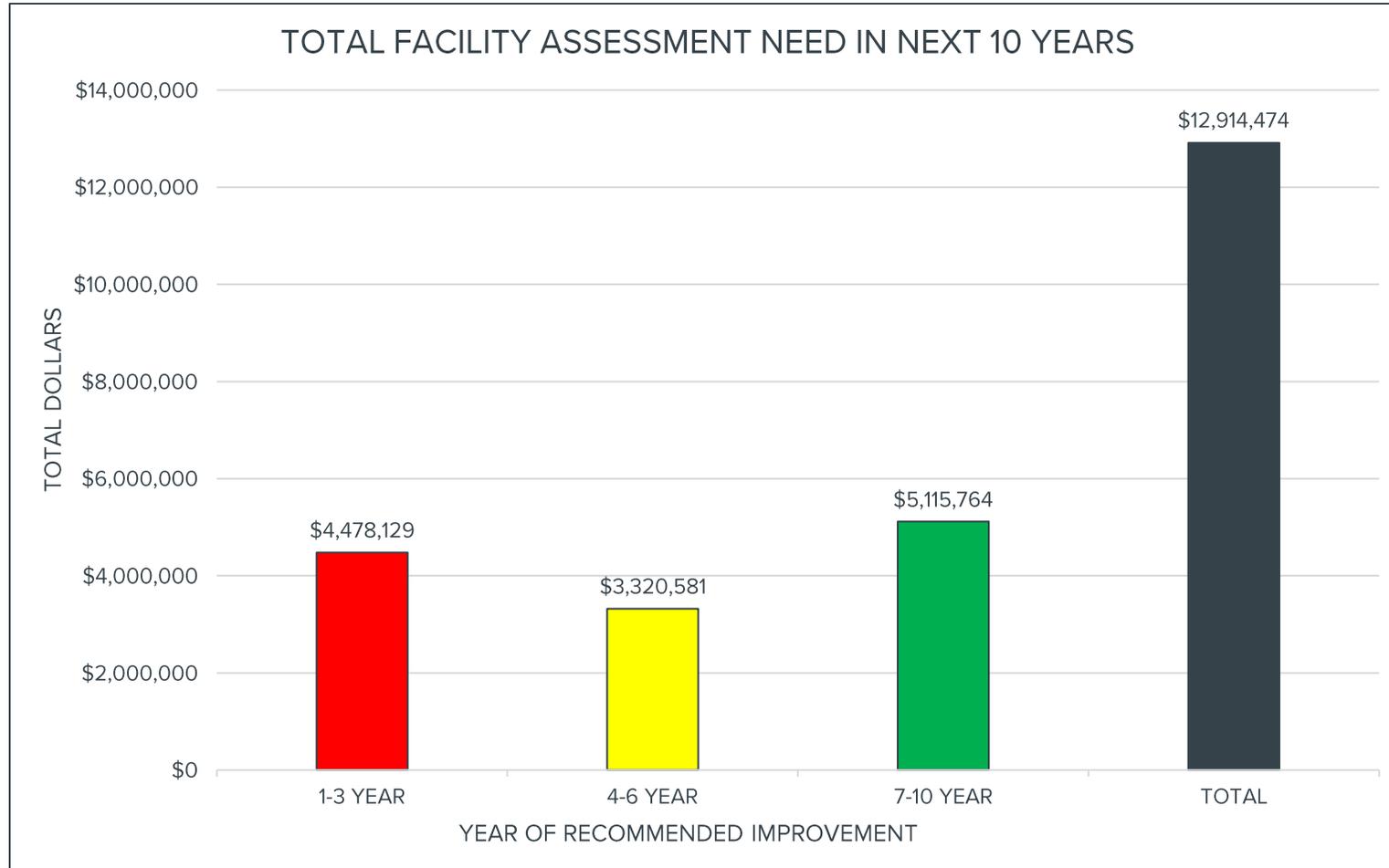
# SIEBERT

## ELEMENTARY SCHOOL

## Siebert Elementary School: Overall Cost Review

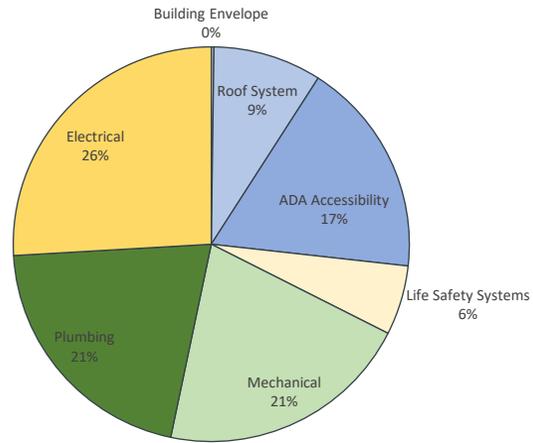
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$26,166	\$0	\$0	\$26,166
Roof System	\$89,425	\$993,658	\$0	\$1,083,083
ADA Accessibility	\$0	\$0	\$2,162,844	\$2,162,844
Interior Finishes	\$0	\$0	\$0	\$0
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$0	\$470,742	\$225,084	\$695,826
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$1,058,915	\$1,488,261	\$0	\$2,547,176
Plumbing	\$2,542,413	\$0	\$0	\$2,542,413
Electrical	\$761,210	\$367,921	\$2,039,256	\$3,168,387
<b>TOTALS</b>	<b>\$4,478,129</b>	<b>\$3,320,581</b>	<b>\$4,427,185</b>	<b>\$12,225,895</b>

# Siebert Elementary School: Overall Cost Review

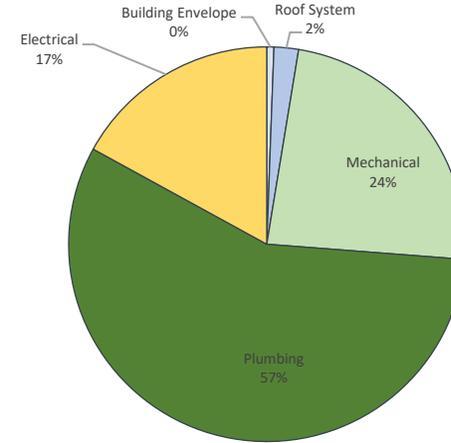


# Siebert Elementary School: Overall Cost Review

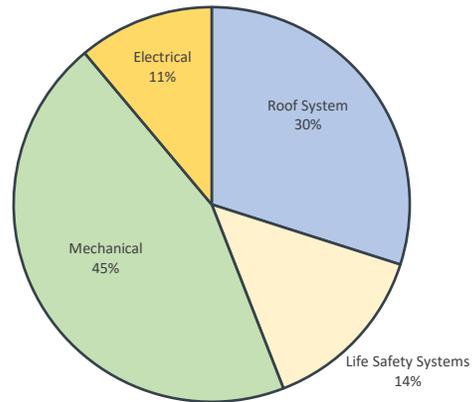
TOTAL NEED BY ASSESSMENT CATEGORY



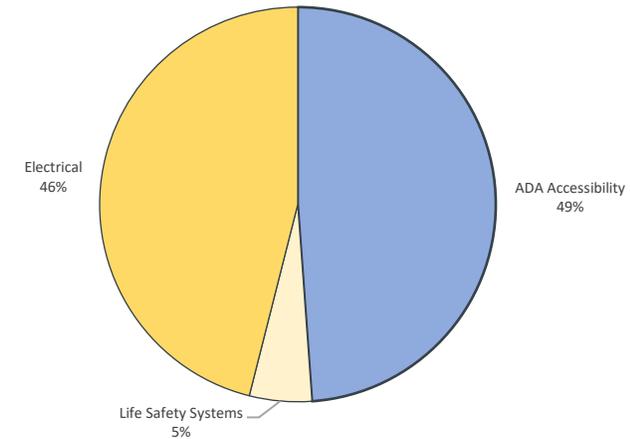
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



# Siebert Elementary School: Architectural Summary

Siebert Elementary School reflects multiple eras of construction, including a recent gymnasium and cafeteria addition completed as part of a recent bond. The building envelope is generally in good condition, with masonry performing well for its age and only minor repairs recommended, such as tuckpointing, localized masonry crack repair, and joint sealant replacement. Windows, doors, and storefront systems are serviceable, and newer addition spaces are in excellent condition. Interior finishes in original areas are functional but aging, and while they remain usable, future renovations would help address consistency, accessibility, and modernization across the building.



Existing Classroom



Existing Drinking Fountain  
Extending into Corridor



Existing Lintel



Existing Corridor



Existing Vestibule



Existing Casework

# Siebert Elementary School: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick/Masonry	Brick in fill area. 6'x8' budget to stain to match adjacent brick	x				\$4,560	\$4,788		
Brick/Masonry	Split face block observed in good condition but some efflorescent staining present. Observed 5' of expansion joint caulk missing in one control joint. budget with tuck pointing				x	\$0			
Brick/Masonry	Observed Vertical cracks in brick on the upper walls of the old gymnasium. budget brick repair	x				\$19,000	\$19,950		
Brick/Masonry	Observed masonry joints that have been repaired with caulk. Budget tuck pointing	x				\$1,360	\$1,428		
General Comment	The brick is good condition for the age of the building. Minor repairs needed are common for brick with out control joints.				x	\$0			
Store Front	Aluminum storefront windows observed in good condition.				x	\$0			
Control Joints / Joint Sealants	Joint sealants observed in good condition.				x	\$0			
Metal Panel	Observed in good condition.				x	\$0			
<b>Exterior / Vestibule Doors</b>									
Aluminum Frames	Aluminum Frames in good condition				x	\$0			
FRP Doors	Newer FRP doors observed in good condition.				x	\$0			
Exterior Door Hardware	Observed in good condition.				x	\$0			
<b>Windows</b>									
Aluminum Windows	Observed in good condition.				x	\$0			
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$24,920</b>	<b>\$26,166</b>	<b>\$0</b>	<b>\$0</b>

# Siebert Elementary School: Roof Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
Roof Areas 1	Replaced 2018. Warranty 2038				x	\$0			
Roof Areas 2	EPDM roofing Replaced 2003. Warranty expired 2018. Budget to replace	x				\$315,000			
Roof Area 3	EPDM roofing Replaced 2008. Warranty expired 2023. Budget to replace		x			\$776,295		\$993,658	
<b>Drainage Components</b>									
Primary Roof Drains	Observed. Adequate				x	\$0			
Secondary Roof Drains	Budget to add secondary roof drains required by today's code standards concurrent with future reroofing projects.	x				\$0	\$0		
<b>Perimeter / Fascia / Soffit</b>									
Metal Coping	Observed. Good condition				x	\$0			
Metal Soffit	Observed. Good Condition				x	\$0			
Plaster soffits	Appear to be original to the old part of the building and end of repairable life cycle. Budget to replace with metal panel or EFIS	x				\$79,844	\$83,836		
Metal Coping	Plan for metal fascias and copings to be replaced concurrent with reroofing projects. <u>Cost included in reroofing.</u>	x				\$0	\$0		
Metal Soffit Court Yard	Observed. Paint is peeling. Budget to scrape and paint	x				\$5,323	\$5,589		
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$1,176,462</b>	<b>\$89,425</b>	<b>\$993,658</b>	<b>\$0</b>

# Siebert Elementary School: ADA Accessibility

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
General Comment	In general ADA accessibility is adequate.				x	\$0			
Parking Lot Signage	Observed in good condition				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed with annual maintenance required.				x	\$0			
Curb Cuts	Observed adequate but recommend adding ADA dub down sidewalk and tactile warning at main entry concurrent with future paving projects.			x		\$26,463			\$39,165
Tactile Warning Strips	Observed adequate.				x	\$0			
Exterior/Exits	Observed. Additional ADA actuators and auto operators are recommended at a few entrances.				x	\$0			
<b>Interior Accessibility (General)</b>									
General Comment	Generally goo, but recommend adding a few auto operators at interior visible at the main office.			x		\$11,406			\$16,881
Interior Building Signage (general)	Observed adequate.				x	\$0			
Corridor Clearances	Observed adequate.				x	\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	There are several drinking fountains that protrude into path of travel for the visually impaired. Recommend adding wing walls with future renovations.			x		\$54,750			\$81,030
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Observed. in compliance				x	\$0			
Pull/Push Side Clearances	Many classrooms don't meet today's code for side clearance. Recommend budgeting for improvements with future renovations. This is an expensive undertaking involving widening masonry openings, Recessing openings so door swings do not obstruct corridors, structural elements, new doors, frames, and hardware.			x		\$1,364,199			\$2,019,015

# Siebert Elementary School: ADA Accessibility

### Classroom Accessibility

Classroom Restroom Accessibility (Turning Clearance/Plumbing Fixtures/Accessories)	Turning clearances deficient. Budget for future renovations.				x	\$0			
Classroom Sinks	Sinks deficient for ADA access. Budget for future renovations				x	\$0			

### Group Restroom Accessibility

General Comment 1	New addition bathroom meets ADA accessibility standards.				x	\$0			
General Comment 2	Older area of building is has non accessible bathrooms. Consider refreshing and ADA accessibility improvements with future renovations.				x	\$0			
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Lever handles observed.				x	\$0			
Pull/Push Side Clearance	Deficient at classroom bathrooms.				x	\$0			
Turning Clearances	Deficiencies observed at older section of building.				x	\$0			
Plumbing Fixtures (water closets	Observed.				x	\$0			
urinals	Observed.				x	\$0			
Sinks	Observed.				x	\$0			
Accessories	Missing vertical grab bars at required by today's code.			x		\$4,563			\$6,753

### Elevators, Lifts and Interior Ramps

Appropriate Guards/Rails Provided at Ramps					x	\$0			
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<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$1,461,381</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,162,844</b>
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# Siebert Elementary School: Interior Finishes

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				

## 7.0 Interior Finishes Assessment

### Offices / Auxiliary Offices / Support Areas

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
General Comment	Recently renovated office area observed in good condition.				x	\$0			
Flooring	Newer carpet tile and SVT observed in good condition.				x	\$0			
Base Material	Rubber base.				x	\$0			
Signage	Observed.				x	\$0			
Casework	Observed. Good condition				x	\$0			
Countertops	Observed. Good condition				x	\$0			
Furniture/Furnishings	Observed in good condition.				x	\$0			
Walls	Painted drywall observed in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings observed.				x	\$0			

### Corridors

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
General Comment	Observed in good condition.				x	\$0			
Walls	Exposed (brick)				x	\$0			
Ceiling	Suspended (acoustical ceiling tile).				x	\$0			
Flooring	SVT flooring. Observed in good condition. Mid life cycle			x		\$0			\$0
Signage	Observed in good condition.				x	\$0			
Lockers	Observed in good condition.				x	\$0			

### Restrooms

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
General Comment 1	Student group restrooms have been refreshed recently and are in fair condition. Some ADA deficiencies observed.				x	\$0			
Walls	Ceramic tile. Observed in good condition				x	\$0			
Ceiling	Plaster. Observed in good condition				x	\$0			
Flooring	Epoxy. Observed in good condition				x	\$0			
Toilet Partitions	Partitions observed in good condition.				x	\$0			
Restroom Accessories	Observed but noting ADA deficiencies.				x	\$0			
General Comment 2	New addition bathrooms. Observed in good condition. ADA standards good				x	\$0			

# Siebert Elementary School: Interior Finishes

### Classrooms

General Comment	Recently refreshed and in good condition.				x	\$0			
Walls	Painted masonry and drywall in good condtion.				x	\$0			
Ceiling	Direct applied acoustical tile and suspended ceilings in good condition.				x	\$0			
Flooring	Carpet tile in good condition. Observed minor stains on carpet tiles. typical usage, replace with attic stock				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			
Casework	Observed in good condition. Recently updated in the last bond. ADA deficiencies with sinks				x	\$0			
Lockers	Wooden locker cubbies in good condition.				x	\$0			
Furniture/Furnishings	Observed in good condition.				x	\$0			

### Cafeteria

General Comment	Observed with new finishes throughout.				x	\$0			
Walls	Painted masonry in good condition.				x	\$0			
Ceiling	Exposed painted structure in good condition.				x	\$0			
Flooring	SVT tile in good condition.				x	\$0			
Base Material	rubber base in good condition.				x	\$0			

### Media Center

General Comment	Recently renovated and observed in good condition.				x	\$0			
Walls	Painted drywall walls.				x	\$0			
Ceiling	Suspended acoustical ceilings.				x	\$0			
Flooring	Carpet tile floor.				x	\$0			
Base Material	Rubber base.				x	\$0			

<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						\$0	\$0	\$0	\$0
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# Siebert Elementary School: Indoor Athletic Facilities

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>8.0 Indoor Athletic Facilities Assessment</b>									
<b>Competition Gymnasium</b>									
General Comment	New addition built in approximately 2019.				x	\$0			
Court Surface	LVP tile flooring observed.				x	\$0			
Doors	New wood doors and hardware.				x	\$0			
Paint	Painted masonry walls.				x	\$0			
Ceilings	Exposed painted structure and acoustical deck.				x	\$0			
Retractable Goals	Observed in good condition.				x	\$0			
Fixed Goals	Observed in good condition.				x	\$0			
<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Siebert Elementary School: Life Safety Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Emergency Plan Available	Observed adequate.				x	\$0			
Adequate Corridor Widths	Observed adequate.				x	\$0			
Emergency/Automatic Shut-offs (Food Service/Kilns/Science Labs/Shop Equipment)	Observed adequate.				x	\$0			
Clear/Defined Egress Paths	Observed adequate.				x	\$0			
Knox Box	Unknown.				x	\$0			
Clear Lines of Site at Building Perimeter	Poor line of site from office to main entrance. Consider improvement concurrent with office remodel. See interior finishes for cost.				x	\$0			
AED/Location	Observed at main office vestibule area and gym.				x	\$0			
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Fire protection is recommended for life-safety considerations; building is not currently sprinkled. Estimated system cost shown here for district planning purposes; building can also be portioned and separated to meet fire codes as it currently is.					\$465,256			
Fire Extinguishers/Cabinets	Observed with adequate coverage.				x	\$0			
<b>Emergency Lighting / Power</b>									
Emergency Lighting/Power Source	Integral fixture battery packs for emergency lighting, evaluate with future lighting replacements or addition of generator (whole building square footage)			x		\$0			\$0

# Siebert Elementary School: Life Safety Systems

### Emergency Alarm Systems

Fire Alarm Control Panel	National Time & Signal 902 Series, annunciator in Reception area. Upgrading to a panel with voice communication will be required in the future.		x			\$251,453		\$321,860	
Horns/Strobes	Coverage appeared to be adequate, upgrade to speaker/strobes will be required in the future. (Building sqft)		x			\$116,314		\$148,882	
Remote Monitoring						\$0			

### Access Control / Intrusion Detection

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

### Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$152,084			\$225,084
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$985,107</b>	<b>\$0</b>	<b>\$470,742</b>	<b>\$225,084</b>
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# Siebert Elementary School: Food Service

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>10.0 Food Service Assessment</b>									
<b>Food Service Equipment</b>									
General Comment	Newer kitchen observed in good condition.				x	\$0			
Freestanding Cooler/Refrigerator					x	\$0			
Milk Cooler					x	\$0			
Freestanding Freezer					x	\$0			
Ice Maker					x	\$0			
Oven					x	\$0			
Range					x	\$0			
Work Tables					x	\$0			
<b>Food Service Plumbing Fixtures</b>									
General Comment	Newer kitchen observed in good condition.				x	\$0			
3-Compartment Sink (with Air Gaps)					x	\$0			
Hand Wash Sink					x	\$0			
Grease Trap					x	\$0			
Floor Drains					x	\$0			
<b>Food Service Point-of-Purchase</b>									
General Comment	Service lines and point of purchase observed in good condition.				x	\$0			
Cash Register Stand on Wheels					x	\$0			
Serving Counters					x	\$0			
Delivery Carts					x	\$0			
Sneeze Guards					x	\$0			

# Siebert Elementary School: Food Service

### Food Service Life Safety

General Comment	Observed compliant with todays code requirements.				x	\$0			
Gas Shutoff(s) Hood Suppression System(s)					x	\$0			
Fire Suppression System					x	\$0			

### Food Service Storage

General Comment	Observed functional and adequate for needs.				x	\$0			
Cooler.					x	\$0			
Freezer.					x	\$0			
Dry Goods Storage/Shelving					x	\$0			
Food Preparation Storage					x	\$0			

<b>10.0 Food Service Assessment SUBTOTAL</b>						\$0	\$0	\$0	\$0
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# Siebert Elementary School: Mechanical Summary

Mechanical and plumbing systems at Siebert include a combination of newer systems serving recent additions and original piping systems serving older portions of the building. HVAC equipment associated with newer construction is in good condition, including boilers, air handling equipment, and unit ventilators, while original hydronic, domestic, storm and sanitary piping systems are original to building construction and approaching the end of their typical service life. Fixtures throughout the building have been selectively upgraded and are generally in fair to good condition. Primary recommendations focus on replacement of aging piping systems and selective equipment replacements for terminal heating equipment and exhaust fans.



Existing Boilers



Existing Condensing Units



Existing Unit Heater



Existing HHW Pumps



Existing Water Heater



Existing Plumbing Fixtures



Existing Tunnels

# Siebert Elementary School: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Boilers replaced in 2018 with Aerco condensing boilers, equipment is in good condition.				X	\$0			
Boiler Plant Accessories	Boiler plant accessories including primary pumps, air/dirt separator, and expansion tank all replaced in 2018 along with boilers. Equipment is in good condition.				X	\$0			
<b>Building Cooling Equipment</b>									
Refrigerant Condensers	New condensing units installed in 2019 to accompany interior unit ventilators; in good condition. Tonnages (12.5 tons) (30 tons).				x	\$0			
Refrigerant Condensers	New condensing units installed in 2019 to accompany interior unit ventilators; in good condition. Tonnages (approx. 3.5 tons ea).				X	\$0			
<b>Heating / Cooling Piping</b>									
Hydronic Piping	Piping original to year of building construction (1957, 1965, 1970, 2018); piping installed primarily in tunnels with good access. Life expectancy of piping like this is 50-75 years if maintained, provisions should be made for replacement. New piping serving addition is in good condition.		X			\$1,162,704		\$1,488,261	
Insulation	Portions of piping observed in mechanical rooms are uninsulated, would recommend adding insulation to all piping.	X				\$415,666	\$436,449		

## Siebert Elementary School: Mechanical Systems

### Building HVAC Air Distribution System / Equipment

Air Handling Units	New air handling units serving gym/cafeteria addition installed in 2018 during recent bond work are in good condition. Zone temperature control is limited due to single zone units serving multiple spaces (stage, kitchen, cafeteria). (3000 CFM) (6000 CFM).				X	\$0			
VUV/HUV Units	New Daikin unit ventilators (some self-contained cooling, some split DX) installed during recent bond work in 2018 and are in good condition. Anticipated useful life of 20-25 years.				X	\$0			
Rooftop Units	Cooling only Daikin rooftop units coupled with duct-mounted heating coils serve art room, maker space, media center, and front office. Units were installed in 2018 and are in good condition, anticipated useful life of 15-20 years.				X	\$0			
Rooftop Exhaust Fans	Exhaust fans installed in 2018 bond renovations are in good condition.				X	\$0			
Rooftop Exhaust Fans	Several exhaust fans are still original to the date of building construction, 1950s-1970s. Units are in fair condition but past useful life and in need of replacement.	X				\$81,216	\$85,277		

## Siebert Elementary School: Mechanical Systems

### Terminal Heating / Cooling Equipment

Finned Tube Heaters	Misc. finned tube elements are still installed from original building construction (1957, 1965, 1970) for perimeter heat. Equipment is in fair to poor condition and should be replaced.	X				\$85,164	\$89,422		
Convectors	Misc. convectors are still installed from original building construction (1957, 1965, 1970) on walls for perimeter heat. Equipment is in fair to poor condition and should be replaced.	X				\$72,394	\$76,014		
Cabinet Unit Heaters	Misc. cabinet unit heaters are still installed from original building construction (1957, 1965, 1970s) on walls and in vestibules. Equipment is in fair condition and should be replaced.	X				\$105,392	\$110,662		
Unit Heaters	One unit heater is still installed from original building construction (1957) and is in poor condition; needs replacement.	X				\$15,056	\$15,809		
Radiant Panel	Ceiling radiant panel installed for supplementary corridor heating in 2018 bond renovations is in good condition.				X	\$0			
Cabinet Unit Heaters	Cabinet unit heater installed to support corridor and entrance in 2018 gym addition is in good condition.				X	\$0			
Unit Heaters	Unit heaters installed to support perimeter heating in 2018 gym addition are in good condition.				X	\$0			
Finned Tube Heaters	Finned tube elements installed to support perimeter heating in 2018 gym addition and original building renovations are in good condition.				X	\$0			
Split Systems	Split system installed to serve kitchen is less than 5 years old and is in good condition. Anticipated useful life of 15-20 years.				X	\$0			
Split Systems	Heat pumps serving interior offices are in good condition, installed in 2018 during bond renovations.				X	\$0			

# Siebert Elementary School: Mechanical Systems

## Terminal Heating / Cooling Equipment

Finned Tube Heaters	Misc. finned tube elements are still installed from original building construction (1957, 1965, 1970) for perimeter heat. Equipment is in fair to poor condition and should be replaced.	X				\$85,164	\$89,422		
Convectors	Misc. convectors are still installed from original building construction (1957, 1965, 1970) on walls for perimeter heat. Equipment is in fair to poor condition and should be replaced.	X				\$72,394	\$76,014		
Cabinet Unit Heaters	Misc. cabinet unit heaters are still installed from original building construction (1957, 1965, 1970s) on walls and in vestibules. Equipment is in fair condition and should be replaced.	X				\$105,392	\$110,662		
Unit Heaters	One unit heater is still installed from original building construction (1957) and is in poor condition; needs replacement.	X				\$15,056	\$15,809		
Radiant Panel	Ceiling radiant panel installed for supplementary corridor heating in 2018 bond renovations is in good condition.				X	\$0			
Cabinet Unit Heaters	Cabinet unit heater installed to support corridor and entrance in 2018 gym addition is in good condition.				X	\$0			
Unit Heaters	Unit heaters installed to support perimeter heating in 2018 gym addition are in good condition.				X	\$0			
Finned Tube Heaters	Finned tube elements installed to support perimeter heating in 2018 gym addition and original building renovations are in good condition.				X	\$0			
Split Systems	Split system installed to serve kitchen is less than 5 years old and is in good condition. Anticipated useful life of 15-20 years.				X	\$0			
Split Systems	Heat pumps serving interior offices are in good condition, installed in 2018 during bond renovations.				X	\$0			

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	Temperature controls upgraded with building equipment replacement in recent bond work; Automated Logic system throughout the building with new control devices. System is in good condition.				X	\$0			
Decentralized HVAC Equipment	No space conditioning or ventilation air provided to corridors; would recommend installation of new HVAC equipment for comfort and to meet current codes.	X				\$233,602	\$245,282		

<b>11.0 Mechanical Assessment SUBTOTAL</b>						<b>\$2,171,194</b>	<b>\$1,058,915</b>	<b>\$1,488,261</b>	<b>\$0</b>
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# Siebert Elementary School: Plumbing Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Gas fired atmospheric water heater, 40 MBH, was installed in 2019. Unit is in decent condition. Life expectancy of this style of unit is 15-20 years.				X	\$0			
Domestic Water Heater	New Bock domestic water heater added in recent bond renovations (2018) to serve addition; equipment is in good condition. Electric heating, 37 kW.				X	\$0			
Domestic Water Piping	Generally original to year of construction (1957, 1965, 1970 or recent 2018 addition); much of the old piping is routed in tunnels with good access. Original building piping has significant portions of galvanized piping that are corroding and breaking down, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained. Original systems are in need of replacement; new systems in addition are in good condition.	X				\$1,162,704	\$1,220,839		
Domestic Water Supply	Domestic water meter is located in tunnels underneath building; would recommend coordinating with local utility and relocating to a more accessible location near the building exterior such as the boiler room.	X				\$15,208	\$15,968		
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Generally original to year of construction (1957, 1965, 1970). General life expectancy of sanitary piping is 50-75 years if well maintained; would recommend replacing in the near future. Building currently has issues with clogs and other sanitary piping failures	X				\$465,256	\$488,519		
Air-Admittance Valves	Air admittance valves observed in interior art room sinks; while allowable by code these typically result in sanitary gas issues over time and can fail frequently.	X				\$3,042	\$3,194		

# Siebert Elementary School: Plumbing Systems

## Storm Drainage System / Equipment

Storm Drainage Piping	Generally original to year of construction (1957, 1965, 1970). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. System in main building does not have overflow drains; if any roof work additional overflow drains will be required to bring system up to code.	X				\$775,136	\$813,893		
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement.	X				\$0	\$0		

## Plumbing Fixtures

Water Closets & Urinals	Water closet and urinals flush valves were replaced during recent bond renovations with sensored valves and some urinals have been replaced; original fixtures are in fair to good condition.				X	\$0			
Lavatories & Sinks	Sinks in classrooms were replaced in recent bond work (2018) and are in good condition. Group toilet rooms lavatories are in good condition and were replaced during recent bond renovations.				X	\$0			
Electric Water Coolers & Drinking Fountains	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district. New units are in good condition.				X	\$0			

## Miscellaneous Plumbing Systems / Equipment

Specialty Classrooms	Art Room - Classrooms sinks recently replaced include solids interceptors in decent condition.				X	\$0			
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<b>12.0 Plumbing Assessment SUBTOTAL</b>						<b>\$2,421,346</b>	<b>\$2,542,413</b>	<b>\$0</b>	<b>\$0</b>
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# Siebert Elementary School: Electrical Summary

Electrical systems at Siebert Elementary are a mix of modernized components and aging legacy infrastructure. Site and exterior lighting were upgraded recently and are in good condition, and much of the building has been retrofitted with LED interior lighting, though lighting controls do not fully meet current energy code requirements outside of recent bond work. Power distribution includes newer switchboards and panels alongside a substantial number of original panelboards that lack modern features such as surge protection and metering and are beyond their useful life. All of this points to the need for long-term replacement planning. Classroom power distribution is limited, with insufficient receptacle coverage for modern instructional needs. No standby generator is currently provided, and future consideration should be given to adding generator capacity for life safety, emergency systems, and telecommunications. Communications and technology infrastructure is generally functional, with structured cabling and network equipment in place, though some systems—such as clocks, AV systems, and wireless access points approaching end of life—will require future upgrades to maintain reliability and instructional support.



Existing Electrical Gear



Existing Panel Board



Existing Technology



Existing Phone/IT



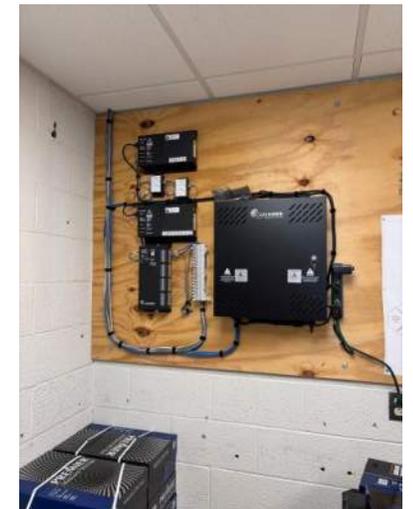
Existing Fire Alarm



Existing Clock



Existing Surface Mounted Lights



Existing IT

# Siebert Elementary School: Electrical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	2017 Site Lighting				x	\$0			
Building Exterior Lighting	New in 2017				x	\$0			
Building Exterior Lighting	Pre-2017 LED Retrofit				x	\$0			
<b>Power Distribution &amp; Control Equipment</b>									
Exterior Transformers	2017 Consumers Energy, utility metering on xfmr				x	\$0			
Switchboards	Exterior 2017 Eaton 2000A 208V, No surge suppression or integral metering				x	\$0			
Distribution Panelboards	2008 600A 208V Distribution SQD I-line			x		\$23,117			\$34,213
Panelboards	2017 SQD NQ Branch Panels				x	\$0			
Panelboards	2008 SQD NQ Branch Panels			x		\$162,426			\$240,390
Panelboards	1960s SQD NQ Branch Panels	x				\$162,426	\$170,547		
Electrical Receptacles & Devices	Classrooms are lacking receptacles. There are some via surface raceway at teacher station and back of room, but lacking perimeter coverage for convenience use (classroom sqft)	x				\$166,958	\$175,306		
Generator	No Generator present, recommend exploring generator for life safety and standby systems	x				\$127,447	\$133,819		

## Siebert Elementary School: Electrical Systems

### Interior Lighting

Interior Lighting Fixtures	Everything outside the 2017 bond work has been retrofitted with LED lamps, light fixture replacements suggested to follow other renovation scope (entire building sqft, minus the 2017 bond work)			x		\$920,985			\$1,363,058
Interior Lighting Fixtures	2017 Bond Work				x	\$0			
Lighting Controls	Line voltage occupancy sensors in corridors and classrooms, classroom controls do not meet current energy codes, lighting controls scope suggested to follow other renovation scope (entire building sqft, minus the 2017 bond work); refer to line item above for interior lighting fixtures.			x		\$0			\$0
Lighting Controls	2017 Bond Work				x	\$0			
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in lighting fixture sqft)				x	\$0			
Emergency Lighting	refer to Life Safety Systems					\$0			

### Communications

Communications Room/Cooling	MDF and IDF has cooling			x		\$0			\$0
Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDFs			x		\$12,167			\$18,007
Structured Cabling	CAT6 observed (entire building sqft)			x		\$193,784			\$286,800

### Telephone, Paging, Signaling & Clock Systems

Clock System	National Time & Signal, many rooms not functioning	x				\$147,358	\$154,726		
Public Address/Intercom System	Carehawk CH1000, RingCentral Paging Adapter		x						

# Siebert Elementary School: Electrical Systems

## Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$53,228		\$68,132	
Wireless Access Points	Ruckus (primarily R720) EOL 2028	x				\$54,768	\$57,506		
Classroom Audio System	Lightspeed 955 (per classroom)		x						
Classroom Video System	Direct HDMI to Epson Projector & manual pull down screen (per classroom)		x			\$234,210		\$299,789	
Maker Space AV System	2017 Crestron AV system not functioning	x				\$53,230	\$55,892		
Media Center AV System	2017: Currently similar to classroom setup (projector and Lightspeed) with additional standalone monitors			x		\$53,230			\$78,780
Gym AV System	No AV system in gym from 2017 bond	x				\$12,775	\$13,414		
Add telecomm rooms to generator standby	Part of generator addition, add standby system and include telecomm rooms	x				\$0	\$0		
<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$2,390,276</b>	<b>\$761,210</b>	<b>\$367,921</b>	<b>\$2,039,256</b>

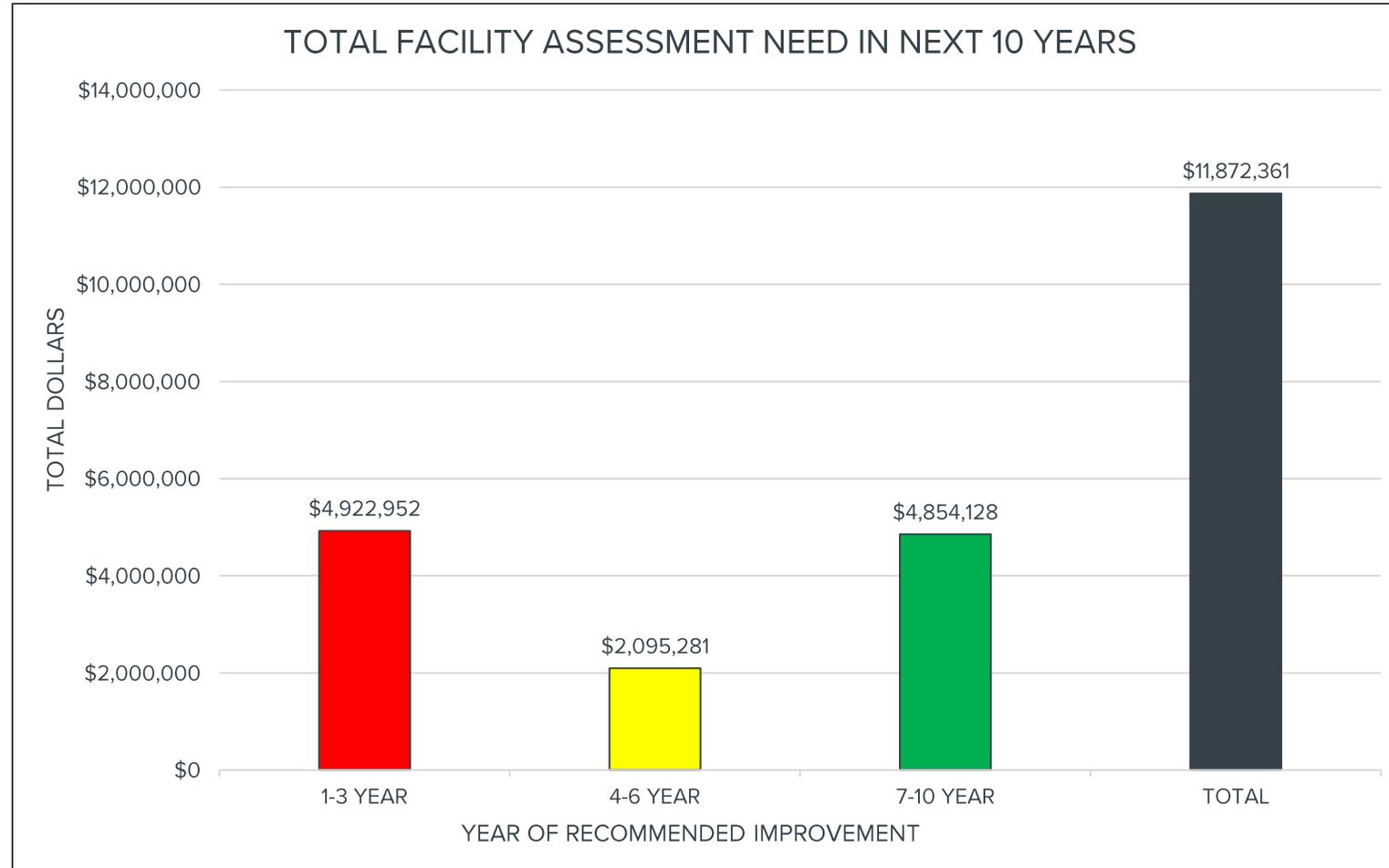


# WOODCREST ELEMENTARY SCHOOL

## Woodcrest Elementary School: Overall Cost Review

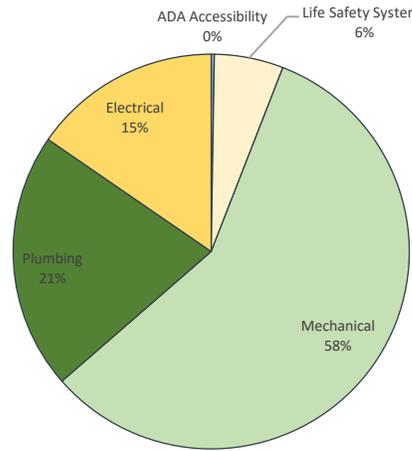
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$0	\$0	\$0	\$0
Roof System	\$0	\$0	\$0	\$0
ADA Accessibility	\$30,660	\$0	\$0	\$30,660
Interior Finishes	\$0	\$0	\$0	\$0
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$0	\$466,689	\$202,576	\$669,266
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$3,929,243	\$1,143,480	\$1,776,610	\$6,849,333
Plumbing	\$0	\$37,376	\$2,458,671	\$2,496,047
Electrical	\$963,050	\$447,735	\$416,271	\$1,827,055
<b>TOTALS</b>	<b>\$4,922,952</b>	<b>\$2,095,281</b>	<b>\$4,854,128</b>	<b>\$11,872,361</b>

## Woodcrest Elementary School: Overall Cost Review

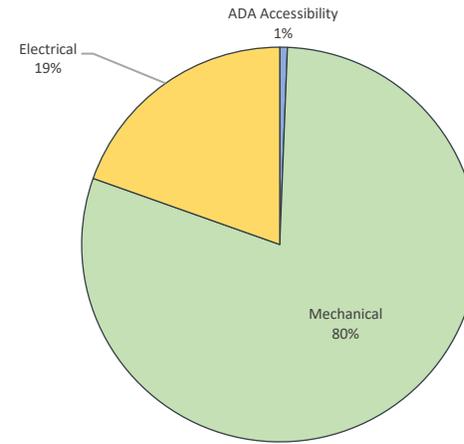


# Woodcrest Elementary School: Overall Cost Review

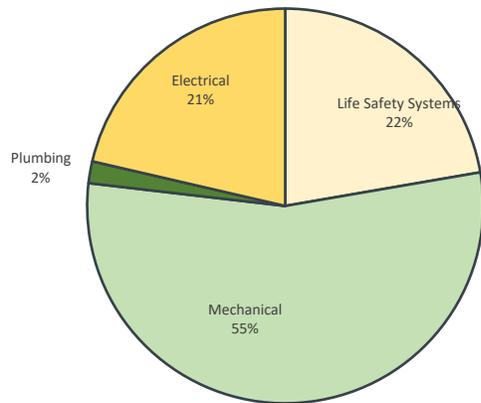
TOTAL NEED BY ASSESSMENT CATEGORY



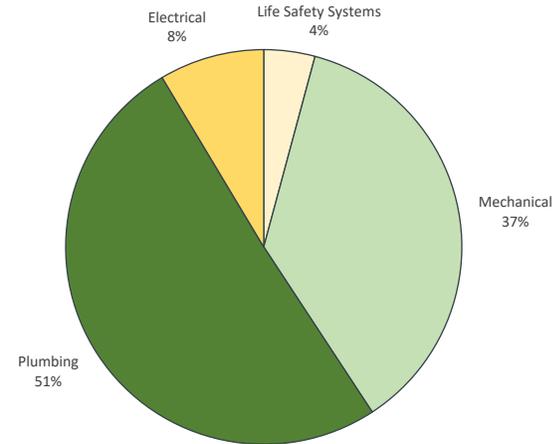
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



# Woodcrest Elementary School: Architectural Summary

Woodcrest Elementary School is generally in good architectural condition, with exterior masonry, windows, doors, and roofing systems performing well and showing no immediate replacement needs. The EPDM roof system and exterior envelope elements are intact, while interior finishes are functional but dated in several areas. ADA accessibility deficiencies were noted, particularly related to door hardware, drinking fountain recesses, and restroom compliance. While the building remains serviceable, future interior renovations would improve accessibility, consistency of finishes, and overall learning environment quality.



Existing Brick Exterior



Existing Doors and Signage



Existing Drinking Fountain  
Extending into Corridor



Existing Corridor



Existing Individual Toilet Room



Existing Group Toilet Room

# Woodcrest Elementary School: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick/Masonry	Good condition				x	\$0			
Corrugated Metal Siding	This is located at the Gym/Cafeteria addition				x	\$0			
<b>Exterior / Vestibule Doors</b>									
FRP Doors	Replaced recently				x	\$0			
<b>Windows</b>									
Aluminum Windows	All double pane and in great condition				x	\$0			
Storefront					x	\$0			
<b>Joint Sealants</b>									
Control Joint Sealants	Appear to be in good condition				x	\$0			
Window/Door Sealants	Appear to be in good condition				x	\$0			
<b>Perimeter Maintenance Strip</b>									
General Comment	Mostly hardscape.					\$0			
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Woodcrest Elementary School: Roof Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
EPDM (Non-Ballasted)					x	\$0			
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Woodcrest Elementary School: ADA Accessibility

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
Exterior Ramps						\$0			
<b>Interior Accessibility (General)</b>									
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	Drinking fountains are not recessed and protrude into path of travel	x				\$18,250	\$19,163		
Corridor Clearances					x	\$0			
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Only a few knobsets remaining. Should update so all are leversets. Note that this will include doors as the knobsets are a 5" backset.	x				\$10,950	\$11,498		
<b>Classroom Accessibility</b>									
Doors & Hardware (knobs/levers/panic hardware/closers (general))					x	\$0			
<b>Group Restroom Accessibility</b>									
General Commetn	One group restroom is ADA compliant					\$0			
<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$29,200</b>	<b>\$30,660</b>	<b>\$0</b>	<b>\$0</b>

# Woodcrest Elementary School: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>7.0 Interior Finishes Assessment</b>									
<b>Offices / Auxiliary Offices / Support Areas</b>									
Walls					x	\$0			
Ceiling					x	\$0			
Flooring					x	\$0			
Base Material					x	\$0			
Wayfinding					x	\$0			
Signage					x	\$0			
Casework					x	\$0			
Countertops					x	\$0			
<b>Corridors</b>									
Walls	Exposed (brick)				x	\$0			
Ceiling	Suspended (acoustical ceiling tile)				x	\$0			
Flooring	LVT (luxury vinyl tile)				x	\$0			
Exterior doors	FRP with panic hardware				x	\$0			
<b>Restrooms</b>									
Walls	Painted (concrete block)				x	\$0			
Flooring	Tile or Resinous				x	\$0			
Ceiling	Ceiling tile				x	\$0			
Toilet Partitions	HDPE				x	\$0			

# Woodcrest Elementary School: Interior Finishes

### Classrooms

Walls	Painted (concrete block)				x	\$0			
Ceiling	Suspended (acoustical ceiling tile)				x	\$0			
Flooring	Carpet tile with rubber base				x	\$0			
Casework	Coat cubbies are smaller than all other elementaries				x	\$0			
Doors/Hardware					x	\$0			
Storefront Window					x	\$0			

### Cafeteria/Kitchen/Gymnasium

General Comment	All new				x	\$0			
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### Media Center

Ceiling	Exposed painted with Suspended acousic clouds				x	\$0			
Walls	Painted exposed masonry block				x	\$0			
Flooring	Carpet tile				x	\$0			

<b>7.0 Interior Finishes Assessment SUBTOTAL</b>							\$0	\$0	\$0	\$0
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# Woodcrest Elementary School: Indoor Athletic Facilities

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years	Value	Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>8.0 Indoor Athletic Facilities Assessment</b>									
Gymnasium / Cafeteria	Separated by operable partition								
General Comment	This was build in the most recent bond and is all newer in great condition				x	\$0			
<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Woodcrest Elementary School: Life Safety Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Emergency Plan Available					x	\$0			
Adequate Corridor Widths					x	\$0			
Clear/Defined Egress Paths					x	\$0			
Knox Box						\$0			
Clear Lines of Site at Building Perimeter					x	\$0			
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Fire protection is recommended for life-safety considerations; building is not currently sprinkled. Estimated system cost shown here for district planning purposes; building can also be portioned and separated to meet fire codes as it currently is.					\$407,384			
<b>Emergency Lighting / Power</b>									
Emergency Lighting/Power Source	Integral fixture battery packs for emergency lighting, evaluate with future lighting replacements or addition of generator (whole building square footage); <u>refer to generator line item in Electrical Section</u>			x		\$0			\$0
<b>Emergency Alarm Systems</b>									
Fire Alarm Control Panel	National Time & Signal 902 Series, annunciator in Reception area. Upgrading to a panel with voice communication will be required in the future.		x			\$262,755		\$336,326	
Horns/Strobes	Coverage appeared to be adequate, upgrade to speaker/strobes will be required in the future. (Building sqft)		x			\$101,846		\$130,363	
Remote Monitoring						\$0			

# Woodcrest Elementary School: Life Safety Systems

**Access Control / Intrusion Detection**

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

**Video Surveillance System / Equipment**

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$136,876			\$202,576
Security Camera Monitoring	Threat detection system			x		\$0			\$0

<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$908,861</b>	<b>\$0</b>	<b>\$466,689</b>	<b>\$202,576</b>
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# Woodcrest Elementary School: Food Service

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>10.0 Food Service Assessment</b>									
<b>Food Service Equipment</b>									
General Comment	Newer kitchen observed in good condition.				x	\$0			
Freestanding Cooler/Refrigerator					x	\$0			
Milk Cooler					x	\$0			
Freestanding Freezer					x	\$0			
Ice Maker					x	\$0			
Oven					x	\$0			
Range					x	\$0			
Work Tables					x	\$0			
<b>Food Service Plumbing Fixtures</b>									
General Comment	Newer kitchen observed in good condition.				x	\$0			
3-Compartment Sink (with Air Gaps)					x	\$0			
Hand Wash Sink					x	\$0			
Grease Trap					x	\$0			
Floor Drains					x	\$0			
<b>Food Service Point-of-Purchase</b>									
General Comment	Service lines and point of purchase observed in good condition.				x	\$0			
Cash Register Stand on Wheels					x	\$0			
Serving Counters					x	\$0			
Delivery Carts					x	\$0			
Sneeze Guards					x	\$0			

## Woodcrest Elementary School: Food Service

### Food Service Life Safety

General Comment	Observed compliant with todays code requirements.				x	\$0			
Gas Shutoff(s) Hood Suppression System(s)					x	\$0			
Fire Suppression System					x	\$0			

### Food Service Storage

General Comment	Observed functional and adequate for needs.				x	\$0			
Cooler.					x	\$0			
Freezer.					x	\$0			
Dry Goods Storage/Shelving					x	\$0			
Food Preparation Storage					x	\$0			

<b>10.0 Food Service Assessment SUBTOTAL</b>						\$0	\$0	\$0	\$0
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## Woodcrest Elementary School: Mechanical Summary

Mechanical systems at Woodcrest include equipment and piping of various ages, with newer unit ventilators and rooftop units installed alongside aging equipment that is either original to building construction or approaching the end of its useful life. Several systems, including air handling units, fans, ductwork, piping, and chilled water plant equipment, are in need of replacement. Plumbing systems, including domestic, storm and sanitary piping, are largely original and nearing typical life expectancy. Overall building planning should focus on upgrades to major and minor equipment as well as infrastructure (piping and ductwork) to optimize building performance.



Existing CHW Pumps



Existing Air-Cooled Chiller



Existing AHU



Existing Water Heater



Existing Water Heater



Existing Unit Ventilator



Existing AHU

# Woodcrest Elementary School: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	New condensing Aerco boilers installed in 2017. Equipment is in good condition.				X	\$0			
Boiler Plant Accessories	Boiler plant accessories replaced along with boilers in 2017 including primary pumps, air dirt separator, and expansion tank. Equipment is in good condition.				X	\$0			
<b>Building Cooling Equipment</b>									
Chillers	Air-cooled chiller installed on roof is approximately 15-20 years old and approaching the end of expected life. Unit is in fair to poor condition and utilizes old refrigerants that are more difficult to obtain given recent refrigerant code updates.		X			\$463,553		\$593,348	
Cooling Plant Accessories	Cooling plant accessories including pumps are in fair to poor condition, pumps appear to be 20+ years old; would recommend replacement at time of chiller. This would include two new pumps, new expansion tank, air separator, and side stream filter w/ pump.		X			\$196,189		\$251,122	

## Woodcrest Elementary School: Mechanical Systems

### Heating / Cooling Piping

Hydronic Piping	Building hydronic piping is installed in a 2-pipe configuration, with seasonal changeover taking place through a series of valves that constrain all coils to be in heating or cooling only. 2-pipe systems limit building flexibility during shoulder seasons when loads within the building can be both heating and cooling, but economizing mode is not available or sufficient to handle cooling alone. A 4-pipe system is recommended for better building and zone temperature control.	X				\$1,222,152	\$1,283,260		
Hydronic Piping	Hydronic piping is general original to the date of building construction (1969); life expectancy of piping like this is 50-75 years if well maintained, provisions should be made for future replacement.			X		\$1,200,412			\$1,776,610
Insulation	Portions of piping observed in boiler room uninsulated, would recommend adding insulation.	X				\$16,425	\$17,246		

# Woodcrest Elementary School: Mechanical Systems

## Building HVAC Air Distribution System / Equipment

Air Handling Units	Several original air handling units are still installed and operational in the building, installed in 1969/1970. These units are in poor condition and replacement is recommended, they are well beyond their expected life of 25-30 years. Units are single-zone, which is particularly problematic for the unit that serves the front offices. Approximate unit sizes as originally designed are (4500 CFM) (4800 CFM) (4800 CFM) (1400 CFM) (800 CFM). New VAV boxes for zone control at the front office would be recommend, approximately (4) boxes associated with the (1400 CFM) unit.	X				\$627,350	\$658,718		
Air Handling Units	New air handling units serving gym/cafeteria addition installed in 2017 during recent bond work are in good condition. Zone temperature control is limited due to single zone units serving multiple spaces (stage, kitchen, cafeteria). (3000 CFM) (6000 CFM).				X	\$0			
VUV/HUV Units	New Daikin unit ventilators (chilled water) installed during recent bond work in 2017 and are in good condition. Interior units utilize roof hoods for outside air intake. Anticipated useful life of 20-25 years.				X	\$0			
Rooftop Units	New Daikin rooftop unit with packaged cooling was installed in 2018 to serve maker space; interior heating coil is hooked up to heating hot water loop. Unit is in good condition with an anticipated life of 15-20 years.				X	\$0			
Fan Coil Units	Original fan coil units are still installed in several locations including teachers lounge & work room, installed in 1969, are in poor condition; would recommend replacement.	X				\$128,968	\$135,416		
Exhaust Fans	Some original fans are still installed with selective replacement over the years. Fans are in fair to poor condition, would recommend replacement.	X				\$24,030	\$25,232		
Exhaust Fans	Newer exhaust fans serving renovation work during recent bond are in good condition, installed 2019.				X	\$0			
HVAC Ducts	Supply/return/exhaust air ductwork is largely original to the building (now 60+ years old); life expectancy is typically 25-30 years but can reach 50 years if well maintained. At this age, issues with duct sealing and insulation decay decrease efficiency and potential water or corrosion issues start to occur. Would recommend installation of new ductwork for all original air handling systems	X				\$1,564,127	\$1,642,333		

# Woodcrest Elementary School: Mechanical Systems

## Terminal Heating / Cooling Equipment

Split Systems	Split system installed to serve kitchen is less than 5 years old and is in good condition. Anticipated useful life of 15-20 years.				X	\$0			
Cabinet Unit Heaters	Misc. cabinet unit heaters are still installed from original building construction (1969) on walls and in vestibules. Equipment is in fair to poor condition and should be replaced.	X				\$60,224	\$63,235		
Finned Tube Heaters	Misc. finned tube elements are still installed from original building construction (1969) for perimeter heat. Equipment is in fair to poor condition and should be replaced.	X				\$79,849	\$83,841		
Cabinet Unit Heaters	Cabinet unit heater installed to support perimeter heating in 2018 Maker Space addition are in good condition.				X	\$0			
Finned Tube Heaters	Finned tube installed to support perimeter heating in 2018 Maker Space addition are in good condition.				X	\$0			
Cabinet Unit Heaters	Cabinet unit heaters installed to support corridor and vestibule heating in 2017 gym addition are in good condition.				X	\$0			
Unit Heaters	Unit heaters installed to support perimeter heating in 2017 gym addition are in good condition.				X	\$0			

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	Temperature controls upgraded with building equipment replacement in 2017; Automated Logic system throughout the building with new control devices. System is in good condition.				X	\$0			
Kiln Hoods	Kiln in side storage room does not have hood; would recommend installation.	X				\$19,011	\$19,962		
Decentralized HVAC Equipment	No space conditioning or ventilation air provided to corridors; would recommend installation of new HVAC equipment for comfort and to meet current codes.		X			\$233,602		\$299,011	

<b>11.0 Mechanical Assessment SUBTOTAL</b>							<b>\$5,835,892</b>	<b>\$3,929,243</b>	<b>\$1,143,480</b>	<b>\$1,776,610</b>
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# Woodcrest Elementary School: Plumbing Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Gas fired atmospheric water heater, 199 MBH, was installed in 2012. Unit is in fair condition. Life expectancy of this style of unit is 15-20 years, would recommend replacement.		X			\$29,200		\$37,376	
Domestic Water Heater	New Lochinvar Shield domestic water heater, 150 MBH, added in recent bond renovations (2017) to serve addition; equipment is in good condition. Anticipated Life of 15-20 years if well maintained.			X		\$29,200			\$43,216
Domestic Water Piping	Generally original to year of construction (1969 or recent 2019 addition). Original building piping has significant portions of galvanized piping that are corroding and breaking down, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained. Original systems are in need of replacement; new systems in addition are in good condition.			X		\$646,819			\$957,292
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Generally original to year of construction (1969). General life expectancy of a sanitary piping system is 50-70 years if well maintained; would plan for replacement. Building currently has issues with clogs and other sanitary piping failures.			X		\$646,819			\$957,292

# Woodcrest Elementary School: Plumbing Systems

## Storm Drainage System / Equipment

Storm Drainage Piping	Generally original to year of construction (1969). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. System in main building (1960s) does not have overflow drains; if any roof work additional overflow drains will be required to bring system up to code.			X		\$338,426			\$500,870
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement.			X		\$0			\$0

## Plumbing Fixtures

Water Closets & Urinals	Water closet and urinals flush valves are a mixture of sensed and lever-actuated; fixtures are in decent condition. Would recommend upgrading all remaining flush valves to be sensed - approximately 15-20 remain in building.				X	\$0			
Lavatories & Sinks	Several classrooms had sinks replaced in recent bond work (2017) and are in good condition. Group toilet rooms lavatories are in good condition and appear to have been replaced recently.				X	\$0			
Electric Water Coolers & Drinking Fountains	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district. New units are in good condition.				X	\$0			

## Miscellaneous Plumbing Systems / Equipment

Specialty Classrooms	Art Room - Classrooms sinks recently replaced include solids interceptors in decent condition.				X	\$0			
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<b>12.0 Plumbing Assessment SUBTOTAL</b>						<b>\$1,690,464</b>	<b>\$0</b>	<b>\$37,376</b>	<b>\$2,458,671</b>
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## Woodcrest Elementary School: Electrical Summary

Electrical systems at Woodcrest Elementary are a mix of modernized components and aging legacy infrastructure. Site and exterior lighting were upgraded recently and are in good condition, and much of the building lighting has been replaced with LED interior lighting. Power distribution includes the original service and mostly original panels alongside some new panelboards. All of this points to the need for long-term replacement planning, including an electrical service upgrade. Classroom power distribution is limited, with insufficient receptacle coverage for modern instructional needs. No standby generator is currently provided, and future consideration should be given to adding generator capacity for life safety, emergency systems, and telecommunications. Communications and technology infrastructure is generally functional, with structured cabling and network equipment in place, though some systems—such as clocks, AV systems, and wireless access points approaching end of life—will require future upgrades to maintain reliability and instructional support.



Existing Electrical Gear



Existing Transformer



Existing Fire Alarm



Existing Clock System



Existing Clock



Existing Lighting Control



Existing Technology



Existing IT

# Woodcrest Elementary School: Electrical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	2017 Site Lighting				x	\$0			
Building Exterior Lighting	Replaced in 2017				x	\$0			
Building Exterior Lighting	Wall packs or remote heads at egress doors		x			\$27,375		\$35,040	
<b>Power Distribution &amp; Control Equipment</b>									
Exterior Transformers	unkown age, Consumers Energy, (2) services, one 480V, one 208V, recommend consolidating with interior service equipment upgrade	x				\$119,386	\$125,355		
Interior Transformers	2017 112.5 kVA xfmr				x	\$0			
Distribution Panelboards	1960s 480V SQD QMB, 400A	x				\$12,775	\$13,414		
Switchboards	1960s SQD Switchboard, 600A	x				\$34,979	\$36,728		
Panelboards	2017 or newer SQD NQ Branch Panels				x	\$0			
Panelboards	1960s SQD NQ Branch Panels	x				\$114,975	\$120,724		
Electrical Receptacles & Devices	Classrooms are lacking receptacles. There are some via surface raceway at teacher station and back of room, but lacking perimeter coverage for convenience use (classroom sqft)	x				\$197,314	\$207,180		
Generator	No Generator present, recommend exploring generator for life safety and standby systems	x				\$127,447	\$133,819		
<b>Interior Lighting</b>									
Interior Lighting Fixtures	2017 Bond work replaced lighting throughout building				x	\$0			
Lighting Controls	2017 Bond work replaced lighting controls				x	\$0			
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in lighting fixture sqft)				x	\$0			

# Woodcrest Elementary School: Electrical Systems

## Communications

Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDFs			x		\$12,167			\$18,007
Structured Cabling	CAT6 observed (entire building sqft)			x		\$203,700			\$301,476

## Telephone, Paging, Signaling & Clock Systems

Clock System	National Time & Signal, many rooms not functioning	x				\$154,892	\$162,637		
Public Address/Intercom System	Carehawk CH1000, RingCentral Paging Adapter (included in line item above)								

## Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$45,624		\$58,399	
Wireless Access Points	Ruckus (primarily R720) EOL 2028	x				\$83,942	\$88,139		
Classroom Audio System	Lightspeed 955 (per classroom)		x						
Classroom Video System	Current: Direct HDMI to Epson Projector & manual pull down screen (per classroom) Replacement is in line item above					\$276,794		\$354,296	
Maker Space AV System	2017 Crestron AV system not functioning	x				\$53,230	\$55,892		
Media Center AV System	2017: Currently similar to classroom setup (projector and Lightspeed) with additional standalone monitors			x		\$53,230			\$78,780
Gym AV System	No AV system in gym from 2017 bond	x				\$18,250	\$19,163		
Add telecomm rooms to generator standby	Part of generator addition, add standby system and include telecomm rooms	x				\$0	\$0		

<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$1,548,247</b>	<b>\$963,050</b>	<b>\$447,735</b>	<b>\$416,271</b>
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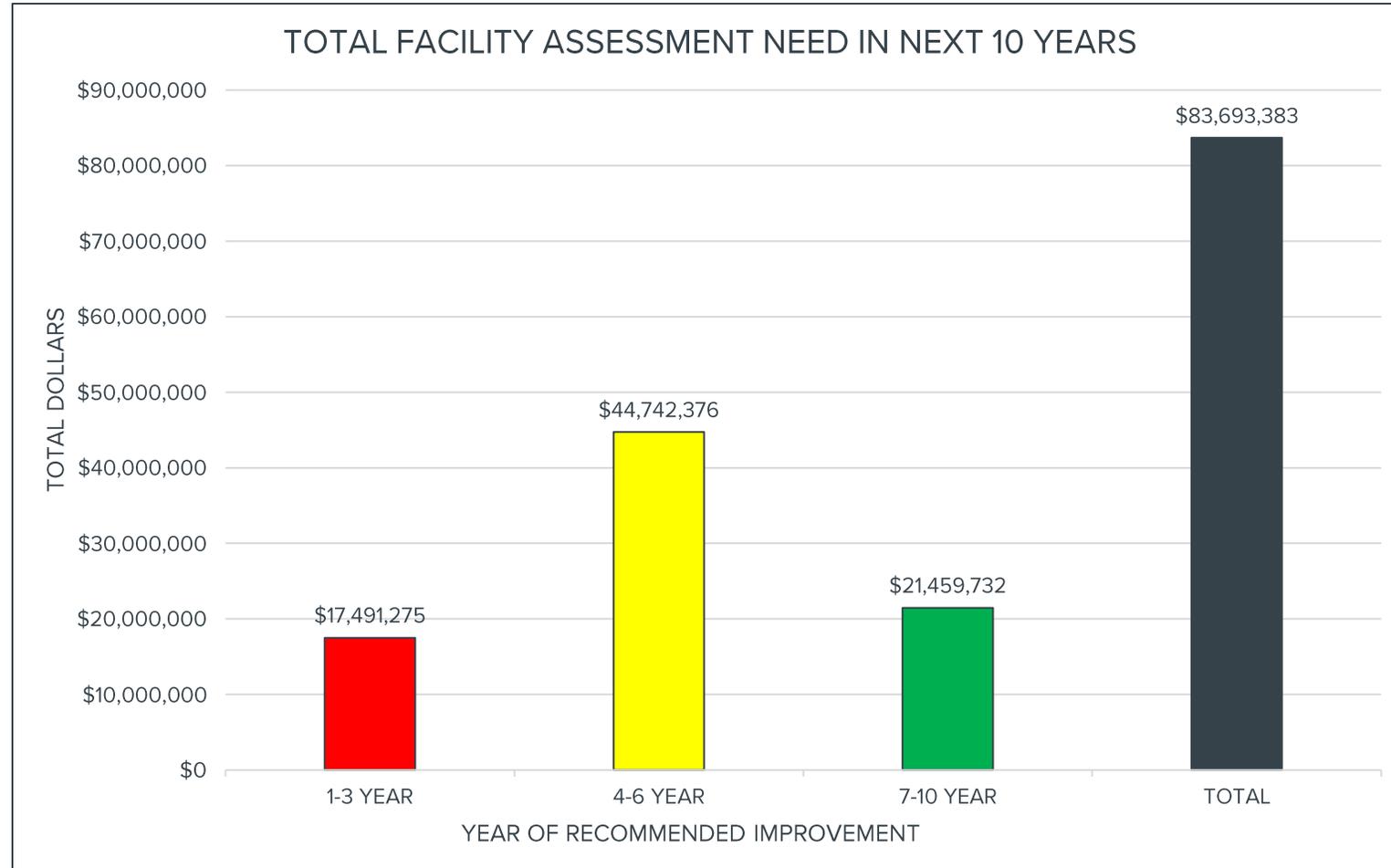


# JEFFERSON MIDDLE SCHOOL

## Jefferson Middle School: Overall Cost Review

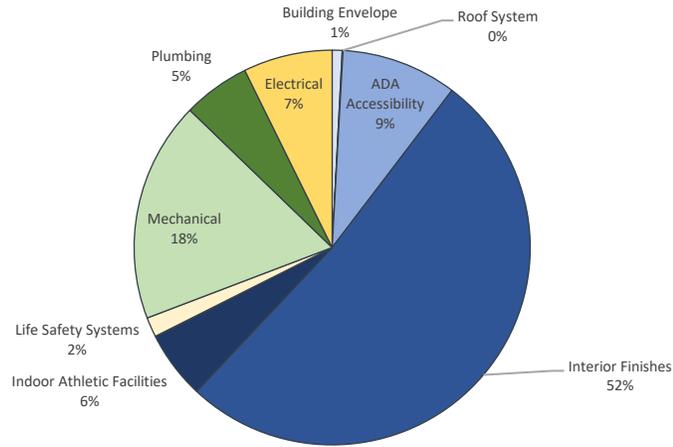
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$295,370	\$321,202	\$65,838	\$682,410
Roof System	\$51,260	\$0	\$0	\$51,260
ADA Accessibility	\$734,326	\$0	\$7,187,472	\$7,921,798
Interior Finishes	\$287,280	\$39,950,739	\$2,993,629	\$43,231,648
Indoor Athletic Facilities	\$0	\$97,334	\$4,567,872	\$4,665,206
Life Safety Systems	\$0	\$981,805	\$371,391	\$1,353,196
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$12,622,958	\$1,172,291	\$1,320,573	\$15,115,822
Plumbing	\$2,989,090	\$192,060	\$1,406,259	\$4,587,409
Electrical	\$510,991	\$2,026,945	\$3,546,699	\$6,084,635
<b>TOTALS</b>	<b>\$17,491,275</b>	<b>\$44,742,376</b>	<b>\$21,459,732</b>	<b>\$83,693,383</b>

# Jefferson Middle School: Overall Cost Review

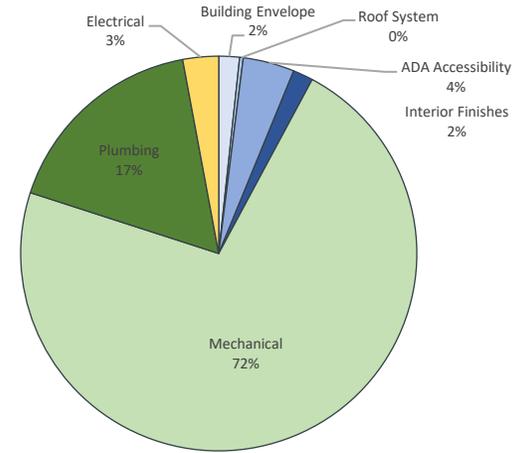


# Jefferson Middle School: Overall Cost Review

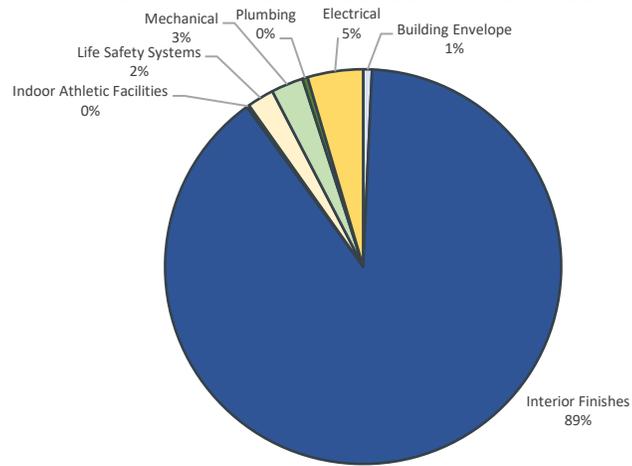
TOTAL NEED BY ASSESSMENT CATEGORY



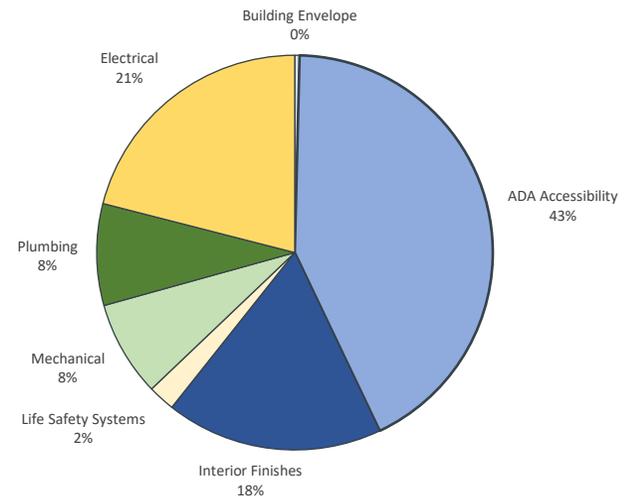
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



# Jefferson Middle School: Architectural Summary

Jefferson Middle School is a large, facility with architectural systems that reflect its age and incremental renovations rather than comprehensive modernization. Exterior envelope components, including masonry walls, windows, and exterior doors, are generally serviceable but show signs of age-related deterioration and are approaching recommended replacement timelines. Roofing systems across the building vary by area, with several sections identified in the assessment tables for near- to mid-term replacement due to age and condition. Interior finishes throughout classrooms, corridors, locker rooms, and support spaces are significantly dated, with worn flooring, ceilings, and wall finishes noted across much of the building. Spatial layouts in older portions of the school do not align with current instructional models, limiting flexibility and adaptability. Accessibility deficiencies were identified in restrooms, entries, and vertical circulation, and life-safety upgrades are constrained by the building's original configuration. Collectively, the architectural findings indicate a facility that remains usable but requires substantial reinvestment to address aging systems and functional limitations.



Existing Drinking Fountain  
Extending into Corridor



Existing Toilet Room/Finishes



Existing Staff Lounge



Existing Locker Rooms



Existing Entry



Existing Lockers

# Jefferson Middle School: Building Envelope

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick / Masonry	Generally observed in good condition.				x	\$0			
Brick / Tuck Pointing	Generally observed in good condition but with a few areas needing tuck pointing repairs to maintain integrity of brick.		x			\$114,063		\$146,001	
Brick / Crack Repairs	Cracking observed in three areas (NE overhead door & N auxiliary gym) where rusting lintels have swollen and cracked the wall diagonally. Recommend budgeting to remove and replace lintels and tuck pointing brick concurrent with replacement.		x			\$106,459		\$136,268	
Limestone Sills	Observed in good condition but needing caulking replacement.	x				\$91,200	\$95,760		
Control Joints / Joint Sealants	Observed in poor condition. Torn caulking and exposed backer rod. Recommend budgeting to remove and replace caulking.	x				\$190,105	\$199,610		
Metal Panel	Observed in good condition.				x	\$0			
Metal Soffits	Observed in good condition.				x	\$0			
Overhead Doors	Old 8x10 overhead door with rotten wood trim. The door is showing signs of rust and has reached the end of it's useful life cycle. Recommend replacement.		x			\$30,417		\$38,934	
<b>Exterior / Vestibule Doors</b>									
Aluminum Doors	Aluminum door frames with FRP doors observed in good condition.				x	\$0			
FRP Doors	Observed in good condition.				x	\$0			
Exterior Door Hardware	Observed in good condition.				x	\$0			

# Jefferson Middle School: Building Envelope

**Windows**

Aluminum Windows	Aluminum framed windows observed in good condition. Some caulking deficiencies observed. (cost included with caulking above)	<table border="1"> <tr> <td></td> <td></td> <td></td> <td>x</td> </tr> </table>				x	\$0			
			x							

**Perimeter Maintenance Strip**

General Comment	No maintenance strip present. Recommend adding maintenance strip to the perimeter of the building.	<table border="1"> <tr> <td></td> <td></td> <td>x</td> <td></td> </tr> </table>			x		\$44,485			\$65,838
		x								

<b>4.0 Building Envelope Assessment SUBTOTAL</b>			\$576,729	\$295,370	\$321,202	\$65,838
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# Jefferson Middle School: Roof Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
General Comments	White EPDM roofing observed at the end of its useful life cycle. Some repairs observed throughout the roof system. Some loose areas of membrane observed. Secondary roof drains not present and not meeting current code requirements.	x				\$0			
EPDM (Non-Ballasted)	Recommend budgeting for replacement and addressing code deficiencies.	x				\$5,331,621			
<b>Drainage Components</b>									
Primary Roof Drains	observed				x	\$0			
Secondary Roof Drains	Not present - Plan for necessary code upgrades concurrent with roofing replacement. (Cost included in roofing number above)	x				\$0	\$0		
Gutters & Downspouts	Observed at NE storage area. Budget for replacement concurrent with reroofing efforts.	x				\$3,194	\$3,354		
<b>Perimeter / Fascia / Soffit</b>									
Metal Coping	Plan for replacement concurrent with reroofing efforts. (Cost included in roofing number above).	x				\$0	\$0		
<b>Miscellaneous Rooftop Equipment</b>									
Ladders	Additional ladders recommend to provide access to different roof elevations. And to meet current code requirements. Budget and plan to add these concurrent with reroofing efforts.	x				\$45,625	\$47,906		
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$5,380,440</b>	<b>\$51,260</b>	<b>\$0</b>	<b>\$0</b>

# Jefferson Middle School: ADA Accessibility

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
Parking Lot Signage	Observed in fair condition.				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed in good condition.				x	\$0			
Curb Cuts	Minimal curb cuts observed. Consider adding curb cuts and improving ADA accessibility at main entrance area.	x				\$5,703	\$5,988		
Curb Cut (associated sidewalk replacement)	Remove and replace sidewalks to accommodate ADA curb cuts and grade.	x				\$24,333	\$25,550		
Tactile Warning Strips	There were several locations observed that need tactile warning strips added where sidewalk pathways meet drive lanes.	x				\$7,756	\$8,144		
Exterior/Exits	Recommend adding auto openers at a couple entrances for improved ADA.			x		\$0			\$0

# Jefferson Middle School: ADA Accessibility

**Interior Accessibility (General)** Building has a limited fire protection system serving the core areas of the building (media center, theater, kitchen, cafeteria, and some adjacent classrooms... estimated 45,000 SF).

Interior Building Signage (general)	Signs observed and generally compliant with ADA code. There were a few locations where signs were mounted on the wrong side of the door (non latch side) or five feet away in the corridor rather than mounted on the window adjacent to the latch. This is a grandfathered condition, but consider signage improvements with future projects.				x	\$0			
Corridor Clearances	Observed compliant with code.					\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	There were several drinking fountains that project into path of travel and do not meet code requirements for visually impaired. Recommend adding wing walls to the floor to meet code requirements.	x				\$146,000	\$153,300		
Doors & Hardware (knobs/levers/panic hardware/closers (general))	There is a mix of lever handle and knob handle hardware throughout the building. This condition is grandfathered, but we recommend replacing knob hardware to meet current ADA code standards.	x				\$91,251	\$95,814		
Pull/Push Side Clearances	There are many rooms without side clearance required to meet ADA Accessibility. This condition is grandfathered, but future renovations will require reconstructing entrances to meet accessibility requirements.	x				\$355,877	\$373,671		

## Classroom Accessibility

Classroom ADA Signage	See comments above.				x	\$0			
Doors & Hardware (knobs/levers/panic hardware/closers (general))	See comments above.	x				\$0	\$0		
Pull/Push Side Clearance	See comments above.	x				\$0	\$0		

# Jefferson Middle School: ADA Accessibility

## Group Restroom Accessibility

General Comment 1	ADA deficiencies (grandfathered) observed throughout the group restrooms. (Turning radius, grab bar, insulation shield, door hardware, signage, etc.) Recommend planning for group restroom renovations with future bond to refresh space and address ADA Deficiencies.			x		\$1,231,200			\$1,822,176
General Comment 2	ADA Deficiencies observed at the pool restrooms and locker rooms. Recommend renovations to bring area up to today's code standards.			x		\$3,625,200			\$5,365,296
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Knob hardware observed at some of the restrooms. This should be replaced with hardware that meets today's ADA requirements. (cost included in door hardware comment above)			x		\$0			\$0
Pull/Push Side Clearance	Deficient side clearance observed. (cost included in General Comment line above)			x		\$0			\$0
Turning Clearances	Non sufficient turning clearance observed in some areas.			x		\$0			\$0
Plumbing Fixtures (water closets	Mixed conditions observed. Some newer fixtures and some older fixtures observed.			x		\$0			\$0
urinals	Observed.			x		\$0			\$0
Sinks	Common deficiencies include missing insulation shields.			x		\$0			\$0
Lavatory Insulation/Shields	Missing in several restrooms.			x		\$0			\$0
Accessories	Missing vertical grab bars and non compliant stalls observed.			x		\$0			\$0

## Elevators, Lifts and Interior Ramps

Elevators/Lifts Present Where Needed	Non functioning and non compliant lift observed at former pool area. Approximately 4' of elevation change.	x				\$68,438	\$71,860		
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<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$5,555,758</b>	<b>\$734,326</b>	<b>\$0</b>	<b>\$7,187,472</b>
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# Jefferson Middle School: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	QTY	Unit	Unit Price	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>7.0 Interior Finishes Assessment</b>												
<b>Offices / Auxiliary Offices / Support Areas</b>												
General Comment:	Functional office observed in fair condition. The office feels small and could benefit from renovations addressing refreshing finishes, abatement, storage, bathroom renovation, conference room renovation, and secure entry improvements.			x		3800	SF	\$532	\$2,022,722			\$2,993,629
Walls	Painted drywall walls observed in good condition. Exposed brick in good condition.								\$0			
Ceiling	Suspended ceiling observed at midlife.								\$0			
Flooring	Newer carpet tiles observed in good condition. ACT tile observed at conference room.								\$0			
Base Material	Rubber base in good condition.								\$0			
Wayfinding	Minimal. Consider adding with future renovations.								\$0			
Signage	Observed.								\$0			
Casework	Plastic laminate reception desk observed at midlife. Older casework and countertops at support areas approaching end of life.								\$0			
Countertops	Plastic laminate reception desk observed at midlife.								\$0			
Furniture/Furnishings	Observed.								\$0			

## Jefferson Middle School: Interior Finishes

### Corridors

General Comment:	Recently refreshed corridors in good condition.				x					\$8	\$0			
Walls	Exposed brick and painted plaster in good condition.				x						\$0			
Ceiling	Suspended acoustical ceilings in good condition.				x						\$0			
Flooring	Newer LVP flooring in good condition.				x						\$0			
Wayfinding	Minimal wayfinding observed.				x						\$0			
Signage	Observed. Some signage is non compliant with ADA standards and code.				x						\$0			
Lockers	Older lockers approaching end of useful life cycle. Recommend budgeting for replacement.		x				1,100	EA		\$722	\$794,641		\$1,017,140	
Wall Mounted Visual Display Units	Display cases observed in good condition.				x						\$0			

### Restrooms

General Comment 1	Student group restrooms have been refreshed recently and are in fair condition. Some ADA deficiencies observed. See ADA for costs.				x					\$722	\$0			\$0
General Comment 2	Staff restrooms observed in older condition with finishes and fixtures approaching end of useful life cycles. Recommend planning to remodel and refresh these spaces addressing aesthetic		x				400	SF		\$684	\$273,600		\$287,280	
Walls	Painted block walls in good condition								x		\$0			
Ceiling	Plaster or drywall ceilings observed in good condition.								x		\$0			
Flooring	Painted resinous floor in fair condition.				x						\$0			\$0
Base Material	Painted resinous floor in fair condition.				x						\$0			\$0
Countertops	Solid surface countertops with integral bowls in fair condition.				x						\$0			\$0
Toilet Partitions	Mixed partition materials observed.								x		\$0			
Restroom Accessories	Observed but noting ADA deficiencies.				x						\$0			\$0

# Jefferson Middle School: Interior Finishes

## Classrooms

General Comment 1	Generally observed in good condition. Some materials are aesthetically at end of life cycle and functionally wearing as they age. Consider light refresh of classrooms within a ten year period.		x			80,000	SF	\$380	\$30,416,874		\$38,933,599	
General Comment 2	ACT tile abatement needed throughout most of the classrooms.		x						\$0		\$0	
Walls	Painted walls in good condition.		x						\$0		\$0	
Ceiling	Acoustical grid ceiling in fair condition.		x						\$0		\$0	
Flooring	ACT tile in fair condition but aesthetically dated.		x						\$0		\$0	
Base Material	Rubber base in fair condition.		x						\$0		\$0	
Signage	Observed with some ADA deficiencies noted.		x						\$0		\$0	
Casework & Countertops	Older, but mixed condition. Some areas are good and some bad.		x						\$0		\$0	
Furniture/Furnishings	Mix of furniture throughout, but building would benefit from a classroom furniture refresh within a ten year period.		x						\$0		\$0	

## Cafeteria

General Comment	Recently refreshed and observed in good condition.				x				\$0			
Walls	Exposed brick				x				\$0			
Ceiling	Suspended acoustical ceiling				x				\$0			
Flooring	LVP tiles in good condition.				x				\$0			
Base Material	Brick				x				\$0			

## Media Center

General Comment:	Recently refreshed and observed in good condition.				x				\$0			
Walls	Exposed brick and painted drywall in good condition.				x				\$0			
Ceiling	Acoustical grid ceiling in good condition.				x				\$0			
Flooring	Carpet tiles in good condition				x				\$0			

# Jefferson Middle School: Interior Finishes

## Auditorium

General Comment	Small auditorium observed in good condition.				x					\$0			
Walls	Exposed Brick				x					\$0			
Ceiling	Painted plaster				x					\$0			
Flooring	Carpet Tiles				x					\$0			
Seats	Observed in good condition				x					\$0			
Stage Flooring	Minor paint delamination and maintenance required.				x					\$0			
Stage Curtains	Observed in good condition				x					\$0			

## Band / Orchestra / Choir

General Comment	Observed in fair condition. Older casework and ACT flooring.		x							\$0		\$0	
Walls	Painted masonry.		x							\$0		\$0	
Ceiling	Acoustical ceilings.		x							\$0		\$0	
Flooring	ACT tile. Recommend replacement. Cost included in classrooms general comment 1 above.		x							\$0		\$0	
Storage Cabinets	Older built in plywood cabinets observed in functional condition.		x							\$0		\$0	

## Industrial Tech & Shop Area

General Comment:	Shop area observed in functional condition.		x							\$0		\$0	
Walls	Painted masonry.		x							\$0		\$0	
Ceiling	Exposed steel and tectum deck.		x							\$0		\$0	
Flooring	Epoxy flooring in poor condition.		x							\$0		\$0	
Other	Cost included in classrooms general comment 1 above.		x							\$0		\$0	

**7.0 Interior Finishes Assessment SUBTOTAL**

**\$33,507,837    \$287,280    \$39,950,739    \$2,993,629**

# Jefferson Middle School: Indoor Athletic Facilities

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>8.0 Indoor Athletic Facilities Assessment</b>									
<b>Competition Gymnasium</b>									
General Comment:	Older gymnasium observed in good condition and well maintained.				x	\$0			
Court Surface	Wood sports flooring observed in good condition.				x	\$0			
Walls	Painted walls observed in good condition.				x	\$0			
Ceilings	Exposed structure and tectum deck observed in good condition.				x	\$0			
Bleachers	Newer bleachers observed in good condition.				x	\$0			
Scoreboards	Older scoreboard in functional condition.				x	\$0			
Retractable Goals	Observed in good condition.				x	\$0			
Fixed Goals	Observed in good condition.				x	\$0			
Other Athletic Equipment	Some structural cracking observed that needs remediation.		x			\$76,042		\$97,334	
<b>Auxiliary Gymnasium</b>									
General Comment:	Observed in good condition				x	\$0			
<b>Pool</b>									
General Comment:	The pool has been infilled and room converted into a flex space for wrestling, cheer, or other purposes.				x	\$0			
Walls	Ceramic tile walls observed in good condition.				x	\$0			
Ceiling	Suspended acoustical ceiling observed in good condition.				x	\$0			
Flooring	Concrete floor with roll out padding.				x	\$0			

## Jefferson Middle School: Indoor Athletic Facilities

### Locker Rooms

General Comment:	Observed in functional condition but could benefit from light renovations addressing ADA deficiencies, shower deficiencies, and aesthetic improvement.			x		\$3,086,400			\$4,567,872
Walls	Painted block walls in fair condition.			x		\$0			\$0
Ceilings	Suspended acoustical ceiling in good condition.			x		\$0			\$0
Flooring	Quarry tile observed in fair condition.			x		\$0			\$0
Lockers	Older lockers in fair condition.			x		\$0			\$0
Benches	Wood benches observed in fair condition.			x		\$0			\$0
Restroom Fixtures	Restroom renovation needed. Missing fixtures and missing partitions observed.	x				\$0	\$0		
Restroom Partitions	Missing or removed.	x				\$0	\$0		
Other Comment	Showers are non compliant and need renovation or repurpose.	x				\$0	\$0		
<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$3,162,442</b>	<b>\$0</b>	<b>\$97,334</b>	<b>\$4,567,872</b>

# Jefferson Middle School: Life Safety Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Emergency Plan Available	Observed adequate.				x	\$0			
Adequate Corridor Widths	Observed adequate.				x	\$0			
Emergency/Automatic Shut-offs (Food Service/Kilns/Science Labs/Shop Equipment)	Observed adequate.				x	\$0			
Clear/Defined Egress Paths	Observed adequate.				x	\$0			
Knox Box	Observed adequate.					\$0			
Clear Lines of Site at Building Perimeter	Poor line of site from office to main entrance. Consider improvement concurrent with office remodel. See interior finishes for cost.			x		\$0			\$0
AED/Location	Unknown			x		\$22,813			\$33,763
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Building has a limited fire protection system serving the core areas of the building (media center, theater, kitchen, cafeteria, and some adjacent classrooms... estimated 45,000 SF). Riser is located in side room near boilers. Piping is original to building construction and at end of useful life. Fire protection is recommended for life-safety considerations throughout the whole building. Estimated system cost shown here for district planning purposes; building can also be portioned and separated to meet fire codes as it currently is.					\$897,968			
Fire Extinguishers/Cabinets	Observed adequate.				x	\$0			

# Jefferson Middle School: Life Safety Systems

## Emergency Lighting / Power

Emergency Generator (what areas are covered?)	Emergency Lighting (interior & exterior) is powered by the generator on a dedicated NEC 700 distribution system. Recommend adding optional standby NEC 703 distribution system for telecom, HVAC, food service, and other building loads			x		\$0			\$0
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## Emergency Alarm Systems

Fire Alarm Control Panel	National Time & Signal 902 Series located in Principal office, annunciator in Reception area. Upgrading to a panel with voice communication will be required in the future.		x			\$542,543		\$694,455	
Horns/Strobes	Coverage appeared to be adequate, upgrade to speaker/strobes will be required in the future. (Building sqft)		x			\$224,492		\$287,350	
Remote Monitoring						\$0			

## Access Control / Intrusion Detection

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			
Visitor Management Systems (badging)	Observed				x	\$0			
Electronic Locking Devices	Lock / unlock buttons observed at main office.				x	\$0			
Egress Management/Panic Button	Panic button observed at main office that locks main entrance.				x	\$0			

## Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$228,127			\$337,628
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$1,915,943</b>	<b>\$0</b>	<b>\$981,805</b>	<b>\$371,391</b>
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# Jefferson Middle School: Food Service

Survey Item	Survey Notes	1-3	4-6	7-10	10+	QTY	Unit	Unit Price	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years					Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>10.0 Food Service Assessment</b>												
<b>Food Service Equipment</b>												
General Comment	Newer kitchen observed in good condition.				x				\$0			
Freestanding Cooler/Refrigerator					x				\$0			
Milk Cooler					x				\$0			
Freestanding Freezer					x				\$0			
Ice Maker					x				\$0			
Oven					x				\$0			
Range					x				\$0			
Work Tables					x				\$0			
<b>Food Service Plumbing Fixtures</b>												
General Comment	Newer kitchen observed in good condition.				x				\$0			
3-Compartment Sink (with Air Gaps)					x				\$0			
Hand Wash Sink					x				\$0			
Grease Trap					x				\$0			
Floor Drains					x				\$0			
<b>Food Service Point-of-Purchase</b>												
General Comment	Service lines and point of purchase observed in good condition.				x				\$0			
Cash Register Stand on Wheels					x				\$0			
Serving Counters					x				\$0			
Delivery Carts					x				\$0			
Sneeze Guards					x				\$0			

# Jefferson Middle School: Food Service

### Food Service Life Safety

General Comment	Observed compliant with todays code requirements.				x				\$0			
Gas Shutoff(s) Hood Suppression System(s)					x				\$0			
Fire Suppression System					x				\$0			

### Food Service Storage

General Comment	Observed functional and adequate for needs.				x				\$0			
Walk-in Coolers					x				\$0			
Walk-in Freezers					x				\$0			
Dry Goods Storage/Shelving					x				\$0			
Food Preparation Storage					x				\$0			

<b>10.0 Food Service Assessment SUBTOTAL</b>								\$0	\$0	\$0	\$0
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# Jefferson Middle School: Mechanical Summary

Mechanical and plumbing systems at Jefferson Middle School represent a significant portion of the facility's overall need. HVAC equipment includes a mix of aging air handling units, terminal units, and distribution systems that are approaching or exceeding typical service life. Upgrades have been made to the boiler system, but the vast majority of equipment, piping, and ductwork is still in need of replacement. While updating hydronic piping, a new four-pipe system is recommended. Plumbing systems include extensive original domestic, storm, and sanitary piping that is at end of life with concerns of failure. Plumbing equipment has had selective replacement, with the remaining hot water heaters and storage tank equipment recommended for upgrades. The comprehensive replacement of mechanical and plumbing systems will represent a large investment for future reliability and operation of this building.



Existing Boiler Plant



Existing HHW Pumps



Existing Exhaust Fan



Existing HVAC Equipment



Existing Controls



Existing Cooling Tower



Existing Dust Collector



Existing Life Skills Kitchenettes

# Jefferson Middle School: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 11.0 Mechanical Assessment

### Building Heating Equipment

Boilers	Boilers replaced in 2015 with condensing boilers, Aerco. Units are in good condition and expected useful life is 20 years. Original building heating equipment designed for high temperature hot water (above 200°F in peak conditions) so opportunities for condensing conditions are limited (requires return water temps of 135°F or lower to start capture efficiency increases)				X	\$0			
Boiler Plant Accessories	New building circulation pumps installed in recent bond work and are in good condition. Depending on zones, either (1) or (2) pumps are utilized so some zones (P-3) do not have redundancy built in if a pump were to fail. All three pumps have VFDs. Air and dirt separator and air separator are in good condition as well as existing expansion tanks. Air and dirt separator is only filtering sediments from one branch and not the full building flow.				X	\$0			

### Building Cooling Equipment

Chillers	Carrier water-cooled chiller appears to be installed in mid to late 200s. Fair condition, approaching useful life expectancy of 25-30 years if properly maintained.			X		\$632,671			\$936,353
Cooling Towers	Marley cooling tower, installed 2009. Fair condition, fouling is starting to take place and deposits are building up within fill media. Expected life expectancy of 20-25 years if properly maintained, unit is approaching end of useful life.			X		\$168,814			\$249,845
Chiller Plant Accessories	(1) chilled water pump serving tower / condenser is in fair condition and appears to be a similar age to the chiller. (1) primary pump for chilled water feed back to the 2-pipe system is in good condition. (2) expansion tanks are in good condition and insulated. A Shelco side stream filter was added to the system and is in good condition; the associated pump is in fair condition.			X		\$90,794			\$134,375

## Jefferson Middle School: Mechanical Systems

### Heating / Cooling Piping

Hydronic Piping	Building hydronic piping is installed in a 2-pipe configuration, with seasonal changeover taking place through a series of valves that constrain all coils to be in heating or cooling only. 2-pipe systems limit building flexibility during shoulder seasons when loads within the building can be both heating and cooling, but economizing mode is not available or sufficient to handle cooling alone. A 4-pipe system is recommended for better building and zone temperature control.	X				\$2,645,984	\$2,778,283		
Hydronic Piping	Hydronic piping is generally original to the date of building construction (1960s); primary mains are routed in plenum / attic spaces adjacent to building loft. Selective piping in loft has been replaced as required. Life expectancy of piping like this is 50-75 years if well maintained, piping is at end of useful life and should be replaced.	X				\$0	\$0		
Hydronic Pumps	All air handling units are equipped with pumped coils. Pumps have been replaced on an as-needed basis as they have failed over the years and are in a variety of conditions. Would recommend replacing along with equipment.					\$479,066			
Gas Piping	Gas riser and meter is installed inside building in riser room; would recommend relocation to building exterior in coordination with local gas utility.		X			\$30,417		\$38,934	

## Jefferson Middle School: Mechanical Systems

### Building HVAC Air Distribution System / Equipment

Air Handling Units	Original heating and cooling (HAC) air handling units are still installed in building loft. Units are in poor condition and limited on energy-saving measures such as variable speed fans. Some HAC units are 100% ventilation / outside air but do not meet current code requirements as they do not have energy recovery. There are several multizone units as well; current codes restrict the use of multizone units for anything other than direct replacement only. Approximate sum of all unit airflows is 85,000 CFM.	X				\$2,815,386	\$2,956,155		
Air Handling Units	Original heating and ventilation units (HV) are still installed in building loft. Units are in poor condition and limited on energy-saving measures such as variable speed fans. Most HV units are 100% ventilation / outside air but do not meet current code requirements as they do not have energy recovery. Units need to be replaced. Approximate sum of all unit airflows is 52,000 CFM.	X				\$1,638,253	\$1,720,166		
Exhaust Fans	Vast majority of exhaust fans are original to building and are in need of replacement. Fair condition, some repair work was done to replace belts and sheaves.	X				\$444,543	\$466,770		
Rooftop Units	Trane SZ rooftop unit, 3 tons, serving front office area installed in 2003; unit is in fair condition and past expected useful life of 15-20 years.	X				\$77,411	\$81,282		
Rooftop Units	(2) Carrier single zone rooftop units installed serving classroom / CTE space on north side of building. Age estimated to be late 2000s, and units are in good condition. Units not accessible during walkthrough but are estimated at 6 tons.		X			\$197,406		\$252,680	
Air Handling Units	One HAC unit was replace during recent bond renovations with a new Daikin air handling unit; serves kitchen.				X	\$0			
Air Plenums & Chases	Louvers are installed throughout the loft area for ventilation air to and from units and fans. Numerous leaks were observed and edges of louvers are poorly sealed, would recommend repair.	X				\$60,834	\$63,876		

## Jefferson Middle School: Mechanical Systems

Rooftop Exhaust Fans	Three exhaust fans replaced during recent bond renovations serving kitchen area and adjacent spaces; fans are in good condition.				X	\$0			
Insulation	Supply air ductwork observed in loft is not insulated; only outside air ductwork is with an older blanket-style insulation. Recommend insulating all supply air ductwork.	X				\$853,543	\$896,220		
HVAC Ducts	Supply/return/exhaust air ductwork is largely original to the building (now 60+ years old); life expectancy is typically 25-30 years but can reach 50 years if well maintained. At this age, issues with duct sealing and insulation decay decrease efficiency and potential water or corrosion issues start to occur. Would recommend installation of new ductwork for all associated air handling systems (AHU, RTU, & EF systems).	X				\$2,591,046	\$2,720,598		

### Terminal Heating / Cooling Equipment

Convectors	Convectors are original to building construction in 1962 and are in fair condition; would recommend replacement given age and for increased efficiencies for lower water temperatures.	X				\$636,473	\$668,297		
Cabinet Unit Heaters	Cabinet unit heaters are original to building construction in 1962 and are in fair condition; would recommend replacement given age and for increased efficiencies for lower water temperatures and newer fans.	X				\$75,282	\$79,046		
Unit Heaters	(1) Qmark electric unit heater installed in the water entry/fire protection room is in good condition.				X	\$0			

# Jefferson Middle School: Mechanical Systems

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	Building controls upgraded from pneumatic to DDC in recent bond renovations - Automated Logic system throughout the building with new control devices. System is in good condition.				X	\$0			
Air Compressors	Compressor was installed in 2016; unit is in good condition.				X	\$0			
Specialty Classrooms	Art room is currently not ventilated to meet current code. Kiln hood and exhaust system is original to the building and is in poor condition, would recommend replacement.		X			\$13,383		\$17,130	
Specialty Classrooms	Orchestra room currently equipped with several portable humidifiers, would recommend adding humidification to central air handling system to ensure consistent humidity levels for instrument storage.		X			\$108,892		\$139,382	
Specialty Classrooms	Life skills classroom range hoods are not provided with exhaust hoods and don't meet current codes.	X				\$26,463	\$27,786		
Specialty Classrooms	Exhaust systems (fans, filters, and hoods) serving wood shop are original to building construction (1960s) and in poor condition. Would recommend replacement; verify program and use.	X				\$0	\$0		
Decentralized HVAC Equipment	No space conditioning or ventilation air provided to corridors; would recommend installation of new HVAC equipment for comfort and to meet current codes.		X			\$565,754		\$724,165	
Dust Collectors	Dust collector is original to building construction and does not appear to be operational. Unit is in poor condition. Would recommend replacement; verify program and use.	X				\$151,324	\$158,890		
Specialty Classrooms	Life skills laundry machine is not vented to the exterior and does not meet code. Would recommend additional venting to meet current building codes.	X				\$5,323	\$5,589		
<b>11.0 Mechanical Assessment SUBTOTAL</b>									
						<b>\$14,309,062</b>	<b>\$12,622,958</b>	<b>\$1,172,291</b>	<b>\$1,320,573</b>

# Jefferson Middle School: Plumbing Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	QTY	Unit	Unit Price	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>12.0 Plumbing Assessment</b>												
<b>Domestic Water System / Equipment</b>												
Domestic Water Piping	Generally original to year of construction (early 1960s). Original building piping has significant portions of galvanized piping that are corroding and breaking down, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained. System is in need of complete replacement.	X				112246	SF	\$16	\$1,792,441	\$1,882,063		
Domestic Water Heater	New Laars domestic water heater with separated combustion installed in 2015 bond work is in good condition.			X		1	EA	\$69,350	\$69,350			\$102,638
Domestic Water Heater	A.O. Smith atmospheric water heater from 2009 installed and in fair condition, anticipated useful life for this type of equipment is 15-20 years.		X			1	EA	\$50,492	\$50,492		\$64,630	
Domestic Storage Tank	Original water storage tank from 1960s is still installed and in use, 2000 gallons. Tank is in poor condition and past its maximum anticipated life of 50 years, would recommend replacement.	X				1	EA	\$57,792	\$57,792	\$60,682		
Domestic Water Supply	Mixing valves are located in nearby janitor closets for temperature control to locker rooms and shower groups.				X	2	EA		\$0			
<b>Sanitary Sewer System / Equipment</b>												
Sanitary Waste & Vent Piping	Generally original to year of construction (early 1960s) general life expectancy of a sanitary piping system is 50-75 years if well maintained; would recommend replacing in near future. Building currently has issues with clogs and other sanitary piping failures.	X				112,246	SF	\$8	\$897,968	\$942,866		

## Jefferson Middle School: Plumbing Systems

### Storm Drainage System / Equipment

Storm Drainage Piping	Generally original to year of construction (early 1960s). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. System does not have overflow drains; if any roof work is done additional overflow drains will be required to bring system up to code.		X		112,246	SF	\$8	\$880,825			\$1,303,621
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement.		X		112,246	SF		\$0			\$0

### Plumbing Fixtures

Water Closets & Urinals	Water closets and urinals are generally original to the time of building construction and in fair condition. Select units have had flush valve replacements, particularly in group toilet rooms. Would recommend replacement of all water closets and urinals with new low flow fixtures and sensed flush valves.		X		1	LS	\$39,268	\$39,268		\$50,263	
Lavatories & Sinks	Select lavatories have been replaced in group restrooms in recent bond work. Single-occupant toilet room lavatories and classrooms sinks are generally original to the building. Would recommend replacement of remaining lavatories with new low-flow faucets.		X		1	LS	\$25,003	\$25,003		\$32,004	
Electric Water Coolers & Drinking Fountains	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district. New units are in good condition.			X	1	LS		\$0			
Emergency Eye Wash Stations	Emergency eye wash station(s) in renovated science rooms are in good condition.			X	1	LS		\$0			

# Jefferson Middle School: Plumbing Systems

### Pool Plumbing Systems

Swimming Pool Water Treatment Equipment	Pool has been infilled and equipment abandoned.								\$0			
Swimming Pool Piping	Pool has been infilled and piping abandoned.								\$0			

### Miscellaneous Plumbing Systems / Equipment

Specialty Classrooms	Art room sinks do not include solids interceptors, would recommend to meet current codes and best design practices.		X			8	EA	\$4,411	\$35,284		\$45,164	
Specialty Classrooms	Drum traps installed on science room sinks do not meet current codes. Qty. estimated based on field investigation, no existing documentation.	X				24	LS	\$4,106	\$98,551	\$103,479		

<b>12.0 Plumbing Assessment SUBTOTAL</b>									<b>\$3,946,974</b>	<b>\$2,989,090</b>	<b>\$192,060</b>	<b>\$1,406,259</b>
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# Jefferson Middle School: Electrical Summary

Electrical systems at Jefferson Middle School are functional but increasingly constrained by age and capacity. Power distribution equipment and panelboards span multiple vintages, with several identified for replacement due to age and limited capacity for modern instructional and technology loads. Interior lighting systems are predominantly older fixtures with retrofit LED lamps with limited or no automatic lighting controls, falling short of current energy code requirements. Emergency lighting and life-safety systems remain operational but are approaching replacement age. Technology infrastructure, including data, audiovisual, and instructional power, is insufficient in many classrooms but specialty spaces AV systems require replacement. The assessment identifies electrical upgrades as a necessary component of future renovations to improve safety, energy performance, and instructional flexibility.



Existing Transformer



Existing Electrical Gear



Existing Panel Board



Existing Fire Alarm



Existing Generator



Existing Classroom Outlets



Existing Clock System



Existing IT

# Jefferson Middle School: Electrical Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	QTY	Unit	Unit Price	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years					Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>13.0 Electrical Assessment</b>												
<b>Site Lighting</b>												
Parking Lot Lighting	Pole mounted fixtures are LED				x	17	EA		\$0			
Building Exterior Lighting	Soffit lighting at building entrances, with wall packs added recently				x	20	EA		\$0			
<b>Power Distribution &amp; Control Equipment</b>												
Exterior Transformers	Appears very old and beyond expected lifespan, no visible nameplates. Confirm MPS Ownership. Concerns regarding required clearances.	x				1	EA	\$145,241	\$145,241	\$152,503		
Service Entrance	2000A Busway				x	1	EA		\$0			
Switchboards	2010 Eaton Pow-R-Line , 2000A, with surge protection and power meter (demand not available)				X	1	EA		\$0			
Panelboards	SQD I-Line Distribution, 1960s		x			5	EA	\$16,729	\$83,646		\$107,067	
Panelboards	1960s SQD NQ		x			27	EA	\$13,536	\$365,459		\$467,788	
Panelboards	2010 and newer SQD NQ panelboards				x	4	EA		\$0			
Automatic Transfer Switch	2025 ATS Life Safety, 100A				x	1	EA		\$0			
Automatic Transfer Switch	2010 ATS Optional Standby, 100A			x		1	EA	\$17,794	\$17,794			\$26,335
Generator	2010 Cummins 60kW Natural Gas, indoors			x		1	EA	\$117,105	\$117,105			\$173,315
Electrical Receptacles & Devices	Classrooms have surface raceway front and back for receptacles, classrooms appear to all have ample receptacles, science rooms have ample power in lab tables (classroom sqft)			x		1	LS	\$67,160	\$67,160			\$99,397

# Jefferson Middle School: Electrical Systems

Interior Lighting											
Interior Lighting Fixtures	All spaces have been retrofitted with LED lamps, light fixture replacements suggested to follow other renovation scope (entire building sqft)		x		112246	SF	\$19	\$2,133,858			\$3,158,110
Lighting Controls	Line voltage occupancy sensors in corridors and classrooms, classroom controls do not meet current energy codes, lighting controls scope suggested to follow other renovation scope (entire building sqft)		x			SF		\$0			\$0
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in lighting fixture sqft)			x		SF		\$0			
Emergency Lighting	refer to Life Safety Systems							\$0			
Theatrical Lighting	Strand Lighting CD80 rack	x			1	LS	\$288,127	\$288,127		\$368,803	

Communications											
Communications Room/Cooling	MDF has cooling, IDFs located in loft/mezz		x					\$0			\$0
Communications Cabinets/Racks/Enclosures	MDF		x		1	EA	\$12,167	\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDFs (located in loft/mezz)		x		2	EA	\$24,167	\$48,334			\$71,534
Structured Cabling	CAT6 observed (entire building sqft)		x			SF		\$0			\$0

Telephone, Paging, Signaling & Clock Systems											
Clock System	National Time & Signal, many rooms not functioning	x			112,246	SF	\$3	\$341,417	\$358,488		
Public Address/Intercom System	Carehawk CH1000 with JBL amplifiers, RingCentral Paging Adapter		x			SF					

# Jefferson Middle School: Electrical Systems

## Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			16	EA	\$7,604	\$121,667		\$155,734	
Wireless Access Points	Ruckus (primarily R720)		x			70	EA	\$1,825	\$127,751		\$163,521	
Classroom Audio System	Lightspeed 955 (per classroom)		x									
Classroom Video System	Direct HDMI to Epson Projector & manual pull down screen (per classroom)		x			48	EA	\$10,646	\$511,003		\$654,084	
Media Center AV System	Crestron based system w/ large format projection screen and supplemental monitors		x			1	LS	\$53,230	\$53,230		\$68,134	
Gym AV System	Audio System, Large TV with direct HDMI connection		x			1	LS	\$32,668	\$32,668		\$41,815	
Add telecomm rooms to generator standby	Add circuits from existing generator standby system to telecomm rooms; refer to generator item.	x					LS		\$0	\$0		
<b>13.0 Electrical Assessment SUBTOTAL</b>									<b>\$4,466,627</b>	<b>\$510,991</b>	<b>\$2,026,945</b>	<b>\$3,546,699</b>

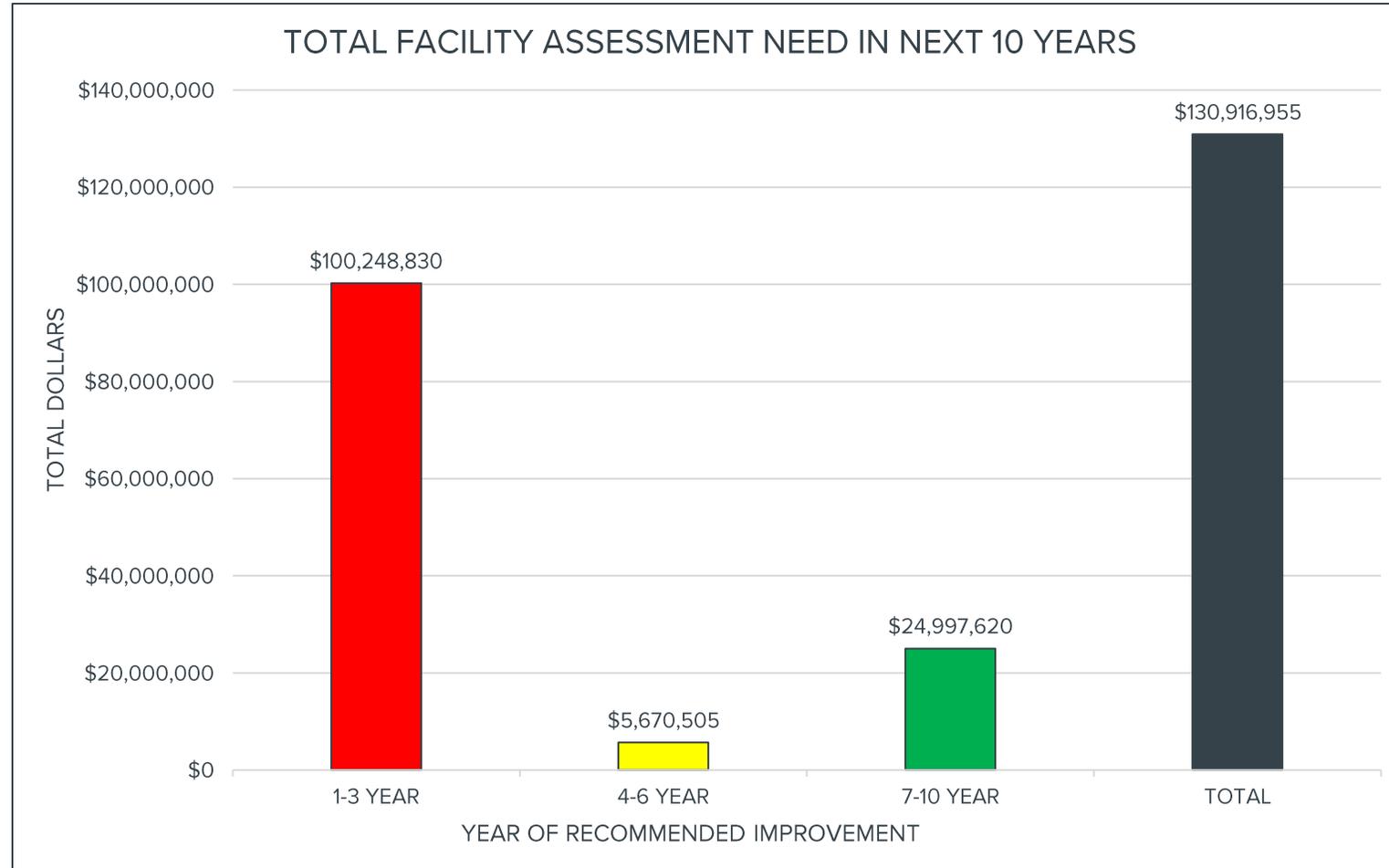


# NORTHEAST MIDDLE SCHOOL

## Northeast Middle School: Overall Cost Review

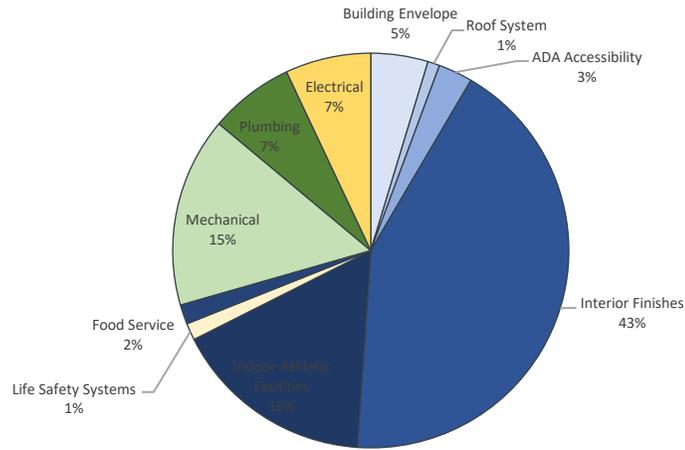
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$6,113,827	\$0	\$0	\$6,113,827
Roof System	\$351,475	\$917,665	\$0	\$1,269,140
ADA Accessibility	\$3,668,845	\$0	\$0	\$3,668,845
Interior Finishes	\$47,966,886	\$0	\$7,873,600	\$55,840,486
Indoor Athletic Facilities	\$10,907,085	\$0	\$10,645,936	\$21,553,021
Life Safety Systems	\$216,774	\$1,264,054	\$337,628	\$1,818,455
Food Service	\$2,026,605	\$64,000	\$0	\$2,090,605
Mechanical	\$19,085,999	\$311,080	\$967,865	\$20,364,944
Plumbing	\$8,932,165	\$94,589	\$24,309	\$9,051,064
Electrical	\$979,169	\$3,019,117	\$5,148,282	\$9,146,568
<b>TOTALS</b>	<b>\$100,248,830</b>	<b>\$5,670,505</b>	<b>\$24,997,620</b>	<b>\$130,916,955</b>

## Northeast Middle School: Overall Cost Review

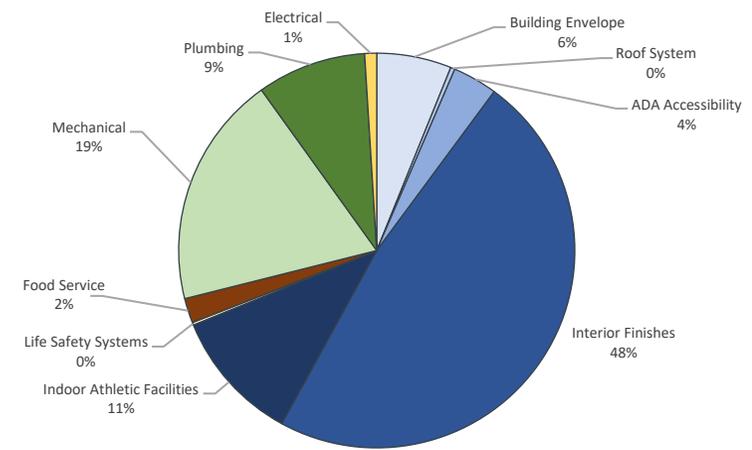


# Northeast Middle School: Overall Cost Review

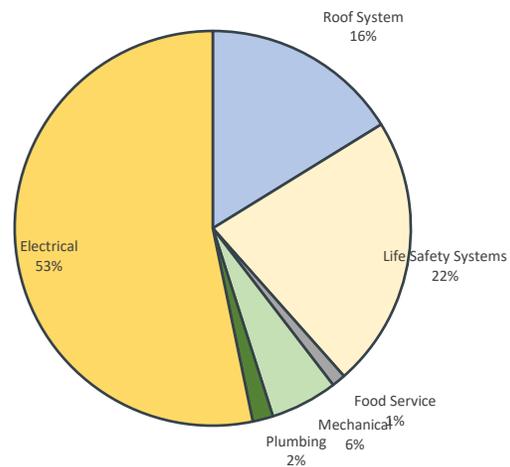
TOTAL NEED BY ASSESSMENT CATEGORY



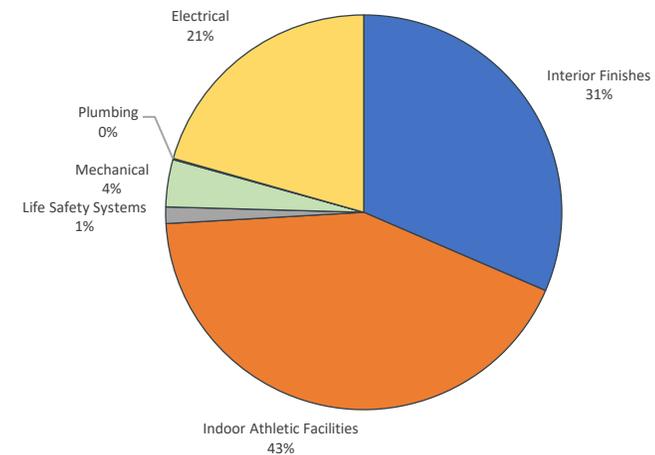
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



# Northeast Middle School: Architectural Summary

Northeast Middle School is one of the oldest and most challenged facilities in the district and has been identified as beyond its useful life, as it sits in its current condition. Architectural systems throughout the building exhibit widespread deterioration tied directly to age. The building envelope includes aging masonry, failing windows, and exterior doors that no longer provide adequate thermal performance. Roofing systems across multiple areas are identified in the tables as being at or beyond end-of-life, with a heightened risk of leakage. Interior spaces are severely outdated, with worn finishes, inefficient layouts, low ceiling heights, and limited adaptability for modern middle school programming. Accessibility deficiencies are extensive and systemic, affecting restrooms, entrances, circulation, and egress. Life-safety improvements are heavily constrained by the original design. The assessment clearly indicates that the scale of architectural deficiencies exceeds what would reasonably be addressed through renovation.



Existing Roof



Existing Cracking Window Sill



Existing Cracking Brick Facade



Existing Deflecting Brick Facade



Existing Locker Room Shower



Existing Sink



Existing Cracking Window Sill



Existing Exterior Wall in Band Room



Existing Brick Repairs



Existing CMU cracking in Gym



Existing Structure in Pool Mezz.



Existing Office Finishes

# Northeast Middle School: Building Envelope

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick/Masonry	<p>Visual inspection indicates the building is exhibiting conditions commonly associated with the later stages of its servicable life. Several areas of cracking, differential settlement, wall bowing, lateral displacement at masonry expansion joints, and longitudinal cracking of exterior masonry walls were observed, suggesting progressive movement within the building.</p> <p>The visible cracking and wall displacement patterns are consistent with potential subsurface conditions related to foundation performance, structural connections, and masonry substructure components. While no immediate life-safety concerns were identified at the time of observation, the extent and distribution of these conditions indicate a continued progression of these conditions that will likely continue without corrective intervention. These factors should be considered in evaluating long-term repair strategies and capital planning priorities.</p>	x				\$5,207,369	\$5,467,737		
General Comment 1	There are several areas in need of tuckpointing repairs and full brick replacement. Note: replacing exterior masonry brick may not be the solution to preserve the building relative to potential unforeseen underlying issues.	x				\$0	\$0		
General Comment 2	There are several areas of deteriorating brick needing replacement	x				\$0	\$0		
General Comment 3	Areas of deteriorating concrete sills/caps need replacement	x				\$0	\$0		
General Comment 4	There are several areas where brick weeps have been covered by landscap material or soil. There are no weeps above openings	x				\$0	\$0		
General Comment 5	There are 2 masonry chimneys/stacks with extensive cracking. End of Life Cycle	x							

## Northeast Middle School: Building Envelope

EIFS	There are sections of the building with aged deteriorating plaster façade and soffit. End of life cycle	x				\$0	\$0		
Exterior Grilles	There are several exterior grilles in need of replacement. End of life cycle	x				\$0	\$0		
Wood/Aluminum/Vinyl/Cement Board Siding	Sections of the building with deteriorating wood fascia and blocking. End of life cycle.	x				\$0	\$0		
Wood/Aluminum/Vinyl/Cement Board Siding	Sections of the building have steel fascia that is deteriorating and in need of replacement (Teachers lounge). End of life cycle	x				\$0	\$0		
Metal Panel	Two entries to the building have been refreshed				x	\$0			

### Exterior / Vestibule Doors

Wood Exterior Doors	In poor condition, failing finishes, outdated hardware. Existing glazing does not appear to be tempered or have safety film. End of life cycle	x				\$72,240	\$75,852		
FRP Doors	fairly new in good condition. (3 entrances)				x	\$0			
Hollow Metal Doors	In poor condition, rust, failing paint finishes. End of life cycle	x				\$76,042	\$79,844		
Door Hardware (Panic Hardware/Closer Strength)	Panic Hardware Non existent except for two entrances that have been updated	x				\$68,438	\$71,860		
Exterior Door Hardware	Majority of exterior doors old outdated hardware. End of usefule life budget within door replacement	x				\$0	\$0		
Aluminum Doors	Poor condition. Failing hardware. No security	x				\$27,375	\$28,744		
General Comment 1	There are 3 entries that have been updated. The rest of the school doors are in need of replacement and updating to current security and code standards.					\$0			

### Windows

Glass Block	Glass block windows poor condition. End of life cycle. Flashing above Glassblock deteriorated/end of life cycle. Openings 1.5' x 5.5'	x				\$12,319	\$12,935		
Aluminum Windows	windows are in good condition with double panes. Mid life cycle				x	\$0			
Wood/Wood Clad Windows	Poor condition. Failing hardware. No security. Recommend Replacement	x				\$146,000	\$153,300		
Exposed Steel Lintels	Failing finishes. Rust. Original building lintels at end of life cycle.	x				\$106,459	\$111,782		

# Northeast Middle School: Building Envelope

### Joint Sealants

Control Joint Sealants	Control joints missing caulk, Cracking, deteriorating.	x				\$0	\$0		
Window/Door Sealants	Lintels missing caulk around the newest addition	x				\$0	\$0		
Window/Door Sealants	Caulk is deteriorating, cracking, missing, falling out.	x				\$0	\$0		
Miscellaneous Penetrations	Brick is cracked/failing, caulk failing/deteriorating, missing (Grilles and penetrations)	x				\$0	\$0		

### Exterior Grilles / Louvers

Painted Metal Louvers	Failing finishes. Rust. Bent/deformed. End of life cycle	x				\$106,450	\$111,773		
Aluminum Louvers	Nearing end of life cycle.	x				\$0	\$0		
(Select Drop-down or Overwrite)						\$0			

### Perimeter Maintenance Strip

Maintenance Strip	Other than a very small portion in front of the building, there is no maintenance strip.	x				\$0	\$0		
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<b>4.0 Building Envelope Assessment SUBTOTAL</b>							<b>\$5,822,692</b>	<b>\$6,113,827</b>	<b>\$0</b>	<b>\$0</b>
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# Northeast Middle School: Roof Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
Roof Area 1 (1949 & 1956)	Roof Area is beyond its useful life cycle. Potential underlying issues roof substructure related to moisture penetration. Consistent areas of visible water pooling. Fluid applied Alumination 301 sealant in 2019. 12 year warranty	x				\$2,367,954			
Roof Area 2 (1966 Addition)	Relaced year 2000. Out of warranty.		x			\$437,243		\$559,671	
Roof Area 3 (library)	Replaced year 2000. Out of warranty.		x			\$279,683		\$357,994	
Roof Area 4 (1949)	Replaced 2022. Warranty in good standing				x	\$0			
Roof Area 4 Comment	Roof Area has an area that traps water due drain failure. Recommend adding new drain	x				\$38,021	\$39,922		
Roof Area 5 (1996) Addition	Replaced 2006. Warranty expires 2 years. Near end of lifecycle	x				\$296,717	\$311,553		
<b>Drainage Components</b>									
Primary Roof Drains roof area 1	End of life cycle. No secondary drains. This will need to be brought up to code along with rebuilding equipment curbs	x				\$0	\$0		
Primary Roof Drains	Roof area 4. standing water. existing drain clogged and capped	x				\$0	\$0		
<b>Roof Membrane Protection</b>									
Adhered Rubber Pads	Observed no membrane protection	x				\$0	\$0		
<b>Perimeter / Fascia / Soffit</b>									
General Comment	replace with new roof. Replace with exterior brick replacement	x				\$0	\$0		
<b>Rooftop Penetrations</b>									
Roof Access Hatch	Replaxce. Bring up to code	x				\$0	\$0		
General Comment	Replace curbs as necessary with roof replacement	x				\$0	\$0		
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$3,419,618</b>	<b>\$351,475</b>	<b>\$917,665</b>	<b>\$0</b>

# Northeast Middle School: ADA Accessibility

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>6.0 ADA Accessibility Assessment</b>									
<b>Interior Accessibility (General)</b>									
Interior Building Signage (general)	Update throughout entire building to ADA code standards	x				\$186,303	\$195,618		
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	Drinking fountains obstructions throughout	x				\$182,501	\$191,626		
<b>Classroom Accessibility</b>									
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Missing at several doorways throughout	x				\$91,251	\$95,814		
Pull/Push Side Clearance	All classrooms do not meet side clearance ADA requirements	x				\$2,965,645	\$3,113,927		
Genral comment	Casework/sinks ADA accesibility requirements budget within classroom refresh	x				\$0	\$0		
<b>Group Restroom Accessibility</b>									
Group Restroom ADA Signage	Update throughout entire building to ADA code standards					\$0			
General Comment	Bathrooms throughout the building have ADA compliance issues. Grab bars, clearances, accessories, signage, plumbing fixtures. Budget ADA compliance within the renovations	x				\$0	\$0		
<b>Elevators, Lifts and Interior Ramps</b>									
Elevators/Lifts Present Where Needed	Observed one elevator serving the building. The elevator is not centrally located (South East service hall). Poor wayfinding. Observed cab in poor condition. Observed 5'7" wheelchair turning radius may not be compliant. Missing Handrails on two sides. The location of the elevator is accross from a stairwell that does not meet Code requirements for handrails at the perimeter of the stairwell itself.	x				\$68,438	\$71,860		
<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$3,494,138</b>	<b>\$3,668,845</b>	<b>\$0</b>	<b>\$0</b>

# Northeast Middle School: Interior Finishes

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>7.0 Interior Finishes Assessment</b>									
<b>Offices / Auxiliary Offices / Support Areas</b>									
Walls	Mixture of brick, plaster, & drywall. Observed damage in need repair, replacement and painting	x				\$0	\$0		
Ceiling	Repalce during remodel	x				\$0	\$0		
Flooring	Areas have original 9x9 flooring tiles. Carpeted areas covering original flooring. Carpet flooring is near end of life cycle. Original flooring and adhesives may be classified as hazardous (ACM's).	x				\$0	\$0		
Base Material	Replace concurrent with flooring projects	x				\$0	\$0		
Signage	Replace signage to meet current ADA standards throught building	x				\$0	\$0		
Casework	At end of lifecycle. Observed worn with damage present	x				\$0	\$0		
Countertops	At end of lifecycle. Observed worn with damage present	x				\$0	\$0		
Built-in (benches/display cases)	Display cases end of life cycle. Some in need of safety glass.	x				\$0	\$0		
Furniture/Furnishings	inefficient work spaces, dated, cluttered. Recommend replacement	x				\$0	\$0		
Doors and hardware	Some doors have been replaced (main office). Majority of doors & hardware are at end of life cycle.	x				\$0	\$0		
Staff Lounge/break room	Recommend full Demo and remodel	x				\$0	\$0		
		x				\$0	\$0		

## Northeast Middle School: Interior Finishes

### Corridors

Walls	Corridor walls do not extend to the deck. Classroom doors and walls do not meet Code requirements. Mixture of plaster and Vinyl tack board material. Recommend extending walls to the deck with fire rated assemblies. Replacing all Classroom doors (end of life cycle, do not meet code requirements). Demo portions of corridor walls to expand classroom entries to meet code requirements.	x				\$456,253	\$479,066		
Flooring	Flooring has been placed over original flooring (potentail ACM flooring). Flooring is at the end of life cycle	x				\$0	\$0		
Base Material	Replace with new flooring work	x				\$0	\$0		
Ceiling	Ceilings will need to be replaced during demolition and updating aged infrastructure (Mechanical, plumbing, electrical, Life Safety)	x				\$0	\$0		
Lockers	In good condition			x		\$0			\$0
Signage	Update to ADA standards	x				\$0	\$0		
Stairwells	No slip-resistant material on treads. Some missing handrails. Handrails do not meet current code requirements (extend handrails). East Service Hall Stairwell handrails, second floor rails are out of code compliance and are need of immediate attention.	x							

### Restrooms

Student Bathrooms	Student group restrooms are in fair condition with some recent upgrades to fixtures. Recommend full renovation to address ADA deficiencies and aging materials.	x				\$1,779,387	\$1,868,356		
Staff Bathrooms	Staff bathrooms in poor to fair condition. Fixtures at the end of usefull lifecycle. Observed ADA deficienies. Recommed budgeting for a full renovation	x				\$273,752	\$287,440		

## Northeast Middle School: Interior Finishes

### Classrooms

Walls	Walls are a blend of brick, drywall, plaster, block. In need of paint, repairs and resurfacing	x				\$0	\$0		
Flooring	Carpet had been placed over original flooring (potential ACM original flooring). Recommend removal to concrete and new flooring	x				\$0	\$0		
Ceiling	ACT suspended. Remove to accommodate mechanical, Electrical, and IT upgrades	x				\$0	\$0		
Base Material	Replace during new flooring. Existing tile base and rubber base	x				\$0	\$0		
Signage	Update to meet ADA standards	x				\$0	\$0		
Casework	Casework in the classrooms is at the end of its useful life cycle. Does not meet ADA requirements. Insufficient storage. Glass doors in labs. (40lf per classroom)	x				\$0	\$0		
Countertops	Recommend full replacement with new casework. End of useful life cycle (30 LF per classroom)	x				\$0	\$0		
Built-in (benches/display cases)	Built in storage is at the end of useful lifecycle and dated.	x				\$0	\$0		
General note: Clock system	School clock system is outdated. Recommend replace	x				\$0	\$0		
Furniture/Furnishings	Older desks and tables observed. approaching end of lifecycle.	x				\$0	\$0		
IT/Technology	Lacking updated technology consistent with todays standards	x				\$0	\$0		
Home economics classroom/Culinary	Casework, flooring, equipment end of useful lifecycle. Recommend full renovation concurrent with todays standards	x				\$821,256	\$862,319		
Art room	In need of full renovation. High windows/high roof deteriorating at end of useful lifecycle. Casework and millwork at end of useful lifecycle. Kiln lab at end of useful lifecycle.	x				\$912,506	\$958,131		

## Northeast Middle School: Interior Finishes

### Cafeteria

Walls	Brick walls in good condition. Original construction				x	\$0			
Ceiling	ACT suspended with Perimeter drywall soffit. Recommend replacing ceiling pads as necessary (stained or damaged)	x				\$11,406	\$11,976		
Flooring	Good Condition. Mid life cycle			x		\$0			\$0
Doors	double Entry doors are at the end of the lifecycle. Replace and bring up to code	x				\$12,319	\$12,935		
Windows	Replace Glass Block with security glass	x				\$0	\$0		
General Comment	Observed cafeteria was recently refreshed. Serving line for students and vending needs attention. The cafeteria would benefit with a new renovation/design that would expand serving line.			x		\$0			\$0

### Media Center

General Comment	Recently updated. Good condition			x		\$0			\$0
General Comment	Update entry double doors leading to corridor	x				\$12,319	\$12,935		

### Auditorium

Walls	original Brick, good condition.				x	\$0			
Ceiling	Plaster ceiling. In good condition			x		\$0			\$0
Flooring	Updated epoxy flooring				x	\$0			
Furniture/Furnishings	Seating in good condition				x	\$0			
Stage Curtains	In good condition			x		\$0			\$0
Theater Equipment	Lighting system needs to be updated. Control booth low ceilings no ADA accessibility.	x				\$357,500	\$375,375		
General Comment	Stage Flooring would benefit from refinishing	x				\$30,417	\$31,938		

### Band / Orchestra / Choir

Walls	Paint and repair after mechanical demolition and upgrades	x				\$60,834	\$63,876		
Ceiling	End of life cycle. Demo and replace	x				\$0	\$0		
Flooring	Currently updated to LVT. Will most likely not survive demolition of ceiling and mechanical upgrades. Recommend remove and replace	x				\$0	\$0		
Casework	Observed. In good condition			x		\$0			\$0

# Northeast Middle School: Interior Finishes

Industrial Tech & Shop Area									
General Comment	Industrial labs are need of full renovation. End of useful life cycle. Update equipment, shop safety requirements, work stations, equipumnt. Observed upgrades to existing electrical	x				\$5,335,200	\$5,601,960		
Flooring	Painted concrete. Peeling paint, staining.					\$0			
Ceiling	In need of painting					\$0			
Walls	In need of repairs and painting					\$0			
Casework	End of Life Cycle					\$0			
Equipment	End of life cycle					\$0			
Furniture/Furnishings	Work stations end of life cycle					\$0			
<b>General</b>									
General Comment (Building Composition)	Total building square footage = 146,000 sqft					\$0			
Office & Support (6%)	General refresh including flooring, paint, ceilings, lighting, casework, and countertops.	x				\$4,681,600	\$4,915,680		
Corridors, Stair wells, Vestibules, Lobbies (20%)	Light refresh including flooring, paint, and ceilings.	x				\$11,020,000	\$11,571,000		
Cafeteria & Kitchen (7%)	Generally in good condition. Observed recent refresh			x		\$5,320,000		\$7,873,600	
Bathrooms (3%)						\$0			
Classrooms (25%)	Classrooms are in need of refresh focusing on flooring, casework, ceilings and technology upgrades	x				\$19,418,000	\$20,388,900		
Mechanical room/Coal Bin	Observed structurally related deteriorating concrete in the coal bin storage rooms. Budget to remove the exterior concrete pad that forms the ceiling for the room. Block in existing openings, backfill, and restore exterior surfaces	x				\$500,000	\$525,000		
<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						<b>\$51,002,749</b>	<b>\$47,966,886</b>	<b>\$0</b>	<b>\$7,873,600</b>

# Northeast Middle School: Indoor Athletic Facilities

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>8.0 Indoor Athletic Facilities Assessment</b>									
<b>Competition Gymnasium</b>									
General Comment 1	Observed Gymnasium should be updated and renovated with items included below.			x		\$4,771,000			\$7,061,080
Court Surface	Flooring at its end of life cycle. Noticeable cupping and gaps	x				\$0	\$0		
Doors	Doors and hardware are at the end of their life cycle.	x				\$0	\$0		
Ceilings	Observed ceiling to be in good condition			x		\$0			\$0
Bleachers	Bleachers have been updated				x	\$0			
Scoreboards	Good condition			x		\$0			\$0
Retractable Goals	Observed in good condition			x		\$0			\$0
Other Athletic Equipment	PA system is dated. End of life cycle	x				\$0	\$0		
<b>General Comments</b>									
General Comment 2	Observed Gymnasium dividing curtain blocked by recently replaced bleachers.			x		\$0			\$0
General Comment 3	Structural cracking observed in Block walls. Vertical cracking is typically an indication of building settlement, which is common with buildings of this age that do not incorporate expansion joints found in todays construction. Budget lump sum for crack remediation	x				\$75,000	\$78,750		
<b>Auxiliary Gymnasium</b>									
General Comment 1	Observed Gymnasium should be updated and renovated with items included below.			x		\$2,422,200			\$3,584,856
Court Surface	Floor is showing signs of wear. Nearing end of life cycle.		x			\$0		\$0	
Doors	Doors good condition			x		\$0			\$0
Paint	Walls chipping paint, stains/dirty. Paint ceiling with walls. Budget to paint walls		x			\$0		\$0	
Fixed Goals	Good condition			x		\$0			\$0
General Comment	20' high ceilings					\$0			

# Northeast Middle School: Indoor Athletic Facilities

## Pool

General Comment	Renovation of Existing Natatorium	x				\$3,853,500	\$4,046,175		
Pool Deck Surface	Updated. Good condition				x	\$0			
Pool Shell Surface	Good condition				x	\$0			
Doors	Nearing end of useful life cycle.	x				\$0	\$0		
Paint	Walls. Peeling and chips in paint. Paint lower 8'	x				\$0	\$0		
Ceilings	ACT suspended ceiling in good condition				x	\$0			
Lane Markers	Good condition				x	\$0			
Starter Stations	Some rust present.			x		\$0			\$0
Pool benches	mismatched. Nearing end of lifecycle. Replace wall mounted benches	x				\$0	\$0		
General note	No ADA lift into the pool. Add in future renovation to meet ADA standards			x		\$0			\$0
General Comment	Filtration system Mid lifecycle. Address in future renovation			x		\$0			\$0

## Locker Rooms

<b>General Comment 1</b>	Square footage includes Boys and Girls: offices, storage, locker room, showers, toilets. Budget for full renovation of locker rooms	x				\$6,459,200	\$6,782,160		
Floor Surface	Terrazzo. Observed cracking and staining. End of useful lifecycle	x				\$0	\$0		
Walls	75% Ceramic Tile, 25% Plaster bulkheads above lockers (10' ceiling height)	x							
Doors	Wood doors and frames. End of useful lifecycle	x				\$0	\$0		
Paint	Plaster walls delaminating, cracks, peeling paint.	x				\$0	\$0		
Ceilings	ACT suspended. Fair condition	x				\$0	\$0		
Benches	mismatched, cracked, wood, painted. End of useful lifecycle	x				\$0	\$0		
Lockers	mismatched, minimal storage capacity, rust present, dents. Observed to be repainted	x				\$0	\$0		
Restroom Fixtures	End of lifecycle. Fixtures and partitions. Not ADA compliant	x				\$0	\$0		
Offices and storage	Minimal storage, offices potential ACM flooring. Full remodel	x				\$0	\$0		
Showers	Flooring, drains, no mixing valves, ADA non compliant. End of useful lifecycle	x				\$0	\$0		

<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$17,580,900</b>	<b>\$10,907,085</b>	<b>\$0</b>	<b>\$10,645,936</b>
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# Northeast Middle School: Life Safety Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
General Comment	Observed many entries in need of security access control.	x				\$114,063	\$119,766		
Clear Lines of Site at Building Perimeter	Some tree removal is necessary	x				\$5,700	\$5,985		
Clear Lines of Site at Building Perimeter	There is an area of the building where the addition from 1966 blocks clear lines of site	x				\$0	\$0		
General Note	Corridor doors leading into several rooms (cafeteria, Media center, Theater) are wedged open. Doors and frames are not fire rated. Recommend replacing doors to meet current fire code and add hardware (magnetic hold open, compliant door hardware)	x				\$86,688	\$91,022		
General Note	Observed corridor walls do not extend to deck/fire rated assembly	x				\$0	\$0		
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Fire protection is recommended for life-safety considerations; building is not currently sprinkled. Estimated system cost shown here for district planning purposes; building can also be portioned and separated to meet fire codes as it currently is.					\$1,166,776			
<b>Emergency Lighting / Power</b>									
Emergency Generator (what areas are covered?)	Emergency Lighting (interior & exterior) is powered by the generator on a dedicated NEC 700 distribution system. Recommend adding optional standy NEC 703 distribution system for telecomm, HVAC, food service, and other building loads	x				\$0	\$0		

# Northeast Middle School: Life Safety Systems

### Emergency Alarm Systems

Fire Alarm Control Panel	National Time & Signal 902 Series located in office, annunciator in Reception area. Upgrading to a panel with voice communication will be required in the future.		x			\$695,848		\$890,685	
Horns/Strobes	Coverage appeared to be adequate, upgrade to speaker/strobes will be required in the future.		x			\$291,694		\$373,368	

### Access Control / Intrusion Detection

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

### Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage.			x		\$228,127			\$337,628
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$2,588,896</b>	<b>\$216,774</b>	<b>\$1,264,054</b>	<b>\$337,628</b>
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# Northeast Middle School: Food Service

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 10.0 Food Service Assessment

### Food Service Equipment

General Comment	Observed very small kitchen with free standing equipment and food storage carts in the middle of work spaces. Minimal working space. Serving line is small. Kitchen incorporates serving line. Recommend renovation to open up serving line to cafeteria and expand the kitchen to fit the equipment and open up work space/functionality. Observed staff rolling out serving carts into cafeteria/daily setup required. Limited storage.	x				\$1,879,100	\$1,973,055		
Freestanding Cooler/Refrigerator	Observed functional condition		x			\$10,000		\$12,800	
Milk Cooler	Observed functional condition		x			\$5,000		\$6,400	
Freestanding Freezer	Observed functional condition		x			\$5,000		\$6,400	
Oven	Observed functional condition		x			\$15,000		\$19,200	
Work Tables	No work tables. No room to accommodate.	x				\$0	\$0		
Steam Jacketed Kettles	Observed functional condition		x			\$15,000		\$19,200	
Kitchen and serving Area						\$0			

### Food Service Plumbing Fixtures

3-Compartment Sink (with Air Gaps)	Observed function condition			x		\$0			\$0
Hand Wash Sink	Doubles as eye wash. Recommend replace	x				\$0	\$0		
Grease Trap	Observed. Looks to be original from 1966. Recommend replace	x				\$0	\$0		
Floor Drains	Observed. Looks to be original from 1966. Recommend replace	x				\$0	\$0		

# Northeast Middle School: Food Service

### Food Service Point-of-Purchase

General Comment	Mixture of carts, tables and kitchen serving equipment. Space is cramped and not efficient for traffic flow. Equipment is rotated out into cafeteria during lunch service.	x				\$0	\$0		
Cash Register Stand on Wheels	Observed					\$0			
Serving Counters	Mixture of carts and tables.	x				\$0	\$0		
Sneeze Guards	Observed		x			\$0		\$0	

### Food Service Life Safety

Gas Shutoff(s) Hood Suppression System(s)	Observed. System exists could not visibly see suppression heads under the hood. No open flame equipment or fryers. Recommend updating hood and suppression system. Equipment is all electric no Gas shutoffs observed.	x				\$0	\$0		
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### Food Service Storage

Walk-in Freezers	Observed. Functional. Door swing issue noted by hand made sign.	x				\$50,000	\$52,500		
Dry Goods Storage/Shelving	Observed. No defined storage spot for storage/shelving.	x				\$500	\$525		
Food Preparation Storage	Food prep. Limited space to accommodate	x				\$500	\$525		

<b>10.0 Food Service Assessment SUBTOTAL</b>						<b>\$1,980,100</b>	<b>\$2,026,605</b>	<b>\$64,000</b>	<b>\$0</b>
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## Northeast Middle School: Mechanical Summary

Mechanical and plumbing systems at Northeast Middle School are predominantly original and in need of immediate replacement. Recent equipment replacement of steam boilers and selective rooftop units have been a temporary fix but the majority of systems remain in poor condition. Inefficiency and ventilation are concerns, along with piping and ductwork that is years past its useful life. Plumbing systems—including domestic water, sanitary, and storm piping—are original with concerns for failures, leaks, and blockages, especially in underground and tunnel piping. Pool equipment is also in poor condition and identified for immediate replacement. Restoring mechanical and plumbing systems to acceptable performance will require near total replacement throughout the building.



Existing Steam Boiler Plant



Existing Heat Exchanger



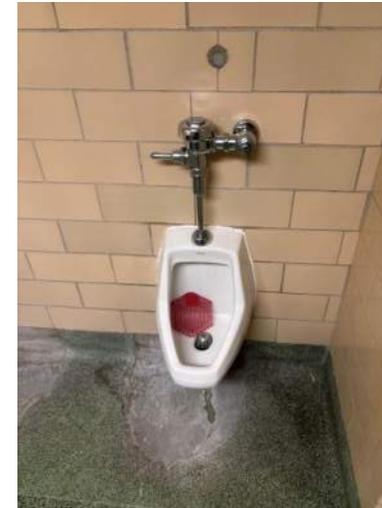
Existing Unit Ventilator



Existing Pool HVAC



Existing Cabinet Unit Heater



Existing Plumbing Fixtures



Existing Steam Heater

# Northeast Middle School: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	New steam boilers installed in 2015 and are in decent condition. <u>Existing building constraints/equipment designed for steam, but steam heating technology results in significantly lower efficiencies than new heating hot water systems with condensing boilers. Would recommend converting boiler plant and all equipment to heating hot water system.</u>				X	\$0			
Boiler Plant Accessories	New boiler plant accessories, including boiler feedwater unit and tanks, installed in 2015. Existing condensate receiver & pumps appear to be beyond useful life, age could not be verified in field but appear to be original. Recommend replacement of receiver & pumps only.	X				\$125,318	\$131,584		
Heat Exchangers	Small steam to hot water heat exchanger, expansion tank, pump, air separator added in 1997 to serve addition classrooms. Installed in tunnels and ambient temperature is very high due to inadequate insulation and air circulation. Would recommend component replacement as needed; with no moving parts the heat exchanger should have 10+ years of life left.				X	\$0			

## Northeast Middle School: Mechanical Systems

### Building Cooling Equipment

Chillers	All building cooling is handled through packaged DX, split DX, or mini-split systems. Given almost total replacement of equipment is recommended at this building, we would recommend a new chilled water plant. The district should be consulted on water-cooled or air-cooled solution, but given easy of maintenance, an air-cooled solution is intially recommended. Approximate plant size is 400 tons.	X				\$4,146,892	\$4,354,237		
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### Heating / Cooling Piping

Steam & Condensate Piping and Pumps	Piping is original to building construction (1950, 1956, 1966) and routed in tunnels below building. Piping is beyond expected useful life of 40-60 years (if well maintained) and replacement is recommended. Consideration should be given to providing new heating hot water piping in lieu of steam due to system inefficiencies, would recommend replacement.	X				\$4,512,252	\$4,737,865		
Gas Piping	Gas riser and meter is installed inside building in riser room; would recommend relocation to building exterior in coordination with local gas utility.		X			\$30,417		\$38,934	

## Northeast Middle School: Mechanical Systems

### Building HVAC Air Distribution System / Equipment

Air Handling Units	Fresh air units installed in 1949 are original to the building and in poor condition; well beyond expected useful life. New equipment would require energy recovery given outside air percentages. Sizes: (15,000 CFM) (2425 CFM) (1875 CFM) (3950 CFM).	X				\$801,713	\$841,799		
Air Handling Units	Multizone unit serving kitchen and cafeteria (recirculation no longer allowable by code) was installed in 1956 and is well beyond useful life. Separate kitchen conditioning system meeting ventilation codes would be required. Current system include steam heating, 11,700 CFM.	X				\$326,373	\$342,692		
Rooftop Units	Newer Daikin rooftop units installed in 2022 serving the media center and theater. Units are in good condition with a life expectancy of 15-20 years. Gas-fired heating with packaged cooling (R-410A refrigerant). Unit sizes: (5000 CFM) (2900 CFM) (2900 CFM)				X	\$0			
VUV/HUV Units	Steam unit ventilators serving first and second floor classrooms and other spaces were installed in 1949 and are integral with casework. Units have updated controls but are in poor condition and inefficient, would recommend replacement.	X				\$822,016	\$863,117		
VUV/HUV Units	Steam unit ventilators serving first and second floor classrooms and other spaces were installed in 1956 and are integral with casework. Units have updated controls but are in poor condition and inefficient, would recommend replacement.	X				\$607,577	\$637,956		
VUV/HUV Units	Heating hot water unit ventilators installed in 1997 serve the 1997 classroom addition; gravity relief provided through relief plenum/hoods. Units are in fair condition but beyond expected useful life of 20-25 years; would recommend replacement.		X			\$178,699		\$228,735	
Rooftop Exhaust Fans	The majority of exhaust fans are original to the building (1950s & 1960s) and well beyond their useful life; would recommend replacement.	X				\$257,175	\$270,034		

## Northeast Middle School: Mechanical Systems

Air Handling Units	Trane air handling units serving 1960s pool and auxiliary gym are in fair condition; equipment age is estimated to be 30+ years old. Units are at end of useful life. Original design of (4825 CFM) (6200 CFM). 6200 CFM unit serving pool should be replaced with a new dehumidification unit of a similar CFM for proper performance.		X			\$33,915		\$43,411	
HVAC Ducts	Supply/return/exhaust air ductwork is largely original to the building (now 60+ years old); life expectancy is typically 25-30 years but can reach 50 years if well maintained. At this age, issues with duct sealing and insulation decay decrease efficiency and potential water or corrosion issues start to occur. Would recommend installation of new ductwork for all associated air handling systems (AHU, RTU, & EF systems).	X				\$4,466,627	\$4,689,958		
VUV/HUV Units	Horizontal unit ventilator installed in 1966 to serve pool mechanical room is in poor condition and needs replacement.	X				\$33,915	\$35,611		
Rooftop Units	Renewaire energy recovery units on roof are in fair condition; units were installed in 2006 to serve renovated science rooms. Units are past useful life of 15-20 years and in need of replacement. (2400 CFM) each.	X				\$194,364	\$204,082		

### Terminal Heating / Cooling Equipment

Unit Heaters	Original steam unit heaters are ducted to exterior louver to provide heating and fresh air for wood and metal shop spaces. Units are in poor condition and beyond useful life. Would recommend replacement with dedicated air handling equipment; approximately (2) unit ventilators per room given space size (4 total).	X				\$31,025	\$32,576		
Fan Coil Units	Fan coils installed in 2006 for space conditioning of renovated 2nd floor science rooms; steam heating coil installed in duct and future chilled water coil installed in unit. Essentially functioning as a supply fan with pre-treated air from the ERV, the expected life of these is 25-30 years.			X		\$150,868			\$223,285

## Northeast Middle School: Mechanical Systems

Split Systems	Split system wall-mounted cassettes provide cooling in classrooms and were installed in 2021/2022. With steam control and ventilation air supplied from the unit ventilators, there are limitations on the hybrid heating/cooling systems in the classrooms that can affect comfort and potential fighting.				X	\$0			
Split Systems	Split system heat pumps mounted on exterior walls or roofs provide heat rejection for indoor wall-mounted cassettes. Cassettes are twinned to one condensing unit, limiting control for the two zones being served. Units are in good condition but comfort is affected by design condition. Refrigerant line insulation is already starting to fail and split, would recommend replacement.				X	\$0			
Finned Tube Heaters	Finned tube heating installed during original building construction (1950 & 1966). Would recommend replacement, equipment is beyond expected life and also limited to high temperature steam applications.	X				\$321,658	\$337,741		
Convectors	Convectors installed during original building construction (1950) and are integral with casework/unit ventilators on classroom exteriors. Would recommend replacement, equipment is beyond expected life and also limited to high temperature steam applications.	X				\$593,129	\$622,785		
Convectors	Convectors installed during original building construction (1950, 1955, & 1966). Would recommend replacement, equipment is beyond expected life and also limited to high temperature steam applications.	X				\$593,129	\$622,785		
Cabinet Unit Heaters	Cabinet unit heaters installed during original building additions (1956 & 1966). Would recommend replacement, equipment is beyond expected life and also limited to high temperature steam applications.	X				\$60,225	\$63,236		
Cabinet Unit Heaters	Hot water cabinet unit heaters installed in 1997 for addition. Would recommend replacement when improving finishes or replacing equipment in other portions of building.			X		\$30,113			\$44,567

## Northeast Middle School: Mechanical Systems

Heating Coils	Steam heating coils installed in 2006 are in fair condition, anticipated useful life is 25-30 years.			X		\$36,500			\$54,020
Split Systems	Fujitsu split system replaced in 2024 to serve IDF closet; unit is in good condition.				X	\$0			
Split Systems	Mitsubishi split system serving electrical closet is in fair condition; estimated installation of late 2000s. Unit is at end of anticipated life and needs to be replaced.	X				\$28,592	\$30,022		

### Miscellaneous HVAC Systems / Equipment

Decentralized HVAC Equipment	No space conditioning or ventilation air provided to corridors; would recommend installation of new HVAC equipment for comfort and to meet current codes.			X		\$436,482			\$645,993
Temperature Controls	Building controls upgraded from pneumatic to DDC in recent bond renovations - Automated Logic system throughout the building with new control devices. System is in good condition.				X	\$0			
Dust Collectors	Dust collector is original to building construction and in poor condition. Would recommend replacement of collector and ductwork; verify program and use.	X				\$75,282	\$79,046		
Specialty Classrooms	Wood shop & adjacent storage exhaust systems do not meet current codes; equipment is in poor condition and in need of replacement.	X				\$75,130	\$78,887		
Specialty Classrooms	Range hood and washer/dryer in teachers lounge area are not vented per code. Qty: (1) of each.	X				\$5,475	\$5,749		
Specialty Classrooms	(3) practice rooms and (1) music director's office do not appear to have ventilation; code would require outside air delivery to these occupied spaces.	X				\$50,000	\$52,500		
Specialty Classrooms	Life skills classroom ranges are not provided with exhaust hoods and don't meet current codes.	X				\$43,800	\$45,990		
Specialty Classrooms	Teachers lounge range is not provided with exhaust hood and doesn't meet current codes.	X				\$5,475	\$5,749		

<b>11.0 Mechanical Assessment SUBTOTAL</b>						<b>\$19,074,136</b>	<b>\$19,085,999</b>	<b>\$311,080</b>	<b>\$967,865</b>
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## Northeast Middle School: Mechanical Systems

### Terminal Heating / Cooling Equipment

Cabinet Unit Heaters	Cabinet Unit Heaters are in good condition, primarily utilized in vestibule/corridor spaces.				X	\$0			
Unit Heaters	Unit Heaters are in good condition, primarily utilized in storage and mechanical areas.				X	\$0			
Split Systems	Split systems serving head end room are in good condition, anticipated life of these systems is approximately 15-20 years. Units installed in 2016/2017 and will be approaching end of useful life in about 10 years.			X		\$54,142			\$80,130
Finned Tube Heaters	Finned tube elements/enclosures are in good condition, primarily utilized in small exterior rooms with replacement only.				X	\$0			
Fan Coil Units	Fan coil units installed for office spaces are in good condition.				X	\$0			
Radiant Panel	Radiant panels are in good condition, primarily utilized in exposed areas.				X	\$0			

### Miscellaneous HVAC Systems / Equipment

Temperature Controls	New temperature controls installed with new building construction and are in good condition, Automated Logic system.				X	\$0			
HVLS Fans	Macro Air HVLS are provided for comfort and destratification in spaces with high volume and are in good condition.				X	\$0			
Kiln Hoods	Kiln room provided with dedicated exhaust to meet current codes.				X	\$0			

<b>11.0 Mechanical Assessment SUBTOTAL</b>							\$54,142	\$0	\$0	\$80,130
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# Northeast Middle School: Plumbing Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	New Laars domestic hot water heaters with separated combustion were replaced in 2015 and are in good condition.				X	\$0			
Domestic Water Supply	Existing storage tank, 1150 gallons, from original building construction (1950s) used for domestic hot water storage. Tank is in poor condition and past its maximum anticipated life of 50 years, would recommend replacement.	X				\$44,104	\$46,309		
Domestic Water Supply	Building master mixing valve located in mezzanine appears to be in good condition.			X		\$16,425			\$24,309
Domestic Water Softener	Water softener system replaced in 2015 and in good condition.				X	\$0			
Domestic Water Piping	Generally original to year of construction (1950s-1960s). Original building piping has significant portions of galvanized piping that are corroding and breaking down, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained, and for copper systems (newer building additions) the life expectancy is 50-60 years. System is in need of complete replacement.	X				\$2,329,010	\$2,445,461		
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Generally original to year of construction (1950 & 1956). General life expectancy of a sanitary piping system is 50-75 years if well maintained; would recommend replacing. Building currently has issues with clogs and other sanitary piping failures.	X				\$2,329,010	\$2,445,461		
Sanitary Waste & Vent Piping	Drum traps installed on science room sinks do not meet current code.	X				\$82,126	\$86,232		
Sanitary Waste & Vent Piping	Duplex sewage ejector pump is original to the building with component replacement as required over the years. Unit is in poor condition, would recommend replacement.	X				\$19,771	\$20,760		

## Northeast Middle School: Plumbing Systems

### Storm Drainage System / Equipment

Storm Drainage Piping	Generally original to year of construction (1950s & 1960s). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. Systems do not have overflow drains; if any roof work additional overflow drains & associated piping and discharge downspouts will be required to bring system up to code.	X				\$1,200,303	\$1,260,318		
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement.	X				\$0	\$0		

### Plumbing Fixtures

Water Closets & Urinals	Water closets and urinals are generally original to the time of building construction and in fair condition. Select units have had flush valve replacements, particularly in group toilet rooms. Would recommend replacement of all water closets and urinals with new low flow fixtures and sensed flush valves.		X			\$48,895		\$62,586	
Lavatories & Sinks	Select lavatories have been replaced in group restrooms in recent bond work. Single-occupant toilet room lavatories and classrooms sinks are generally original to the building. Would recommend replacement of remaining lavatories with new low-flow faucets.		X			\$25,003		\$32,004	
Electric Water Coolers & Drinking Fountains	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district. New units are in good condition.				X	\$0			
Emergency Eye Wash Stations	Emergency eye wash station(s) in renovated science rooms are in good condition.				X	\$0			

# Northeast Middle School: Plumbing Systems

## Pool Plumbing Systems

Swimming Pool Piping	Selective piping has been replaced as needed throughout pool equipment areas. Above-ground tank and drain piping appears to be less than 30 years old. Large portions of original heating piping remain and are corroding and in poor condition, would recommend replacement throughout mechanical room.	X				\$715,000	\$750,750		
Swimming Pool Equipment & Pumps	Pool heater heat exchanger is in fair condition; tank and pump are aging and beyond useful life. Would recommend replacement of all pool mechanical equipment.	X				\$1,787,500	\$1,876,875		
<b>12.0 Plumbing Assessment SUBTOTAL</b>						<b>\$8,597,147</b>	<b>\$8,932,165</b>	<b>\$94,589</b>	<b>\$24,309</b>

## Northeast Middle School: Electrical Summary

Electrical infrastructure at Northeast Middle School is outdated, undersized, and identified for comprehensive replacement. Power distribution equipment, panelboards, and branch wiring are almost all beyond useful life expectancy. Interior lighting has been retrofitted with LED lamps, but remains less efficient than modern fixtures. Lighting controls do not meet current energy codes. Fire alarm and life-safety systems are aging and nearing end-of-life, with limited ability to integrate modern components. Technology, communications, and instructional power systems are severely constrained and not capable of supporting current educational needs. The extent of electrical deficiencies reinforces the assessment's conclusion—and the district's internal determination—that continued investment is not practical, supporting decommissioning of the facility.



Existing Transformer



Existing Electrical Gear



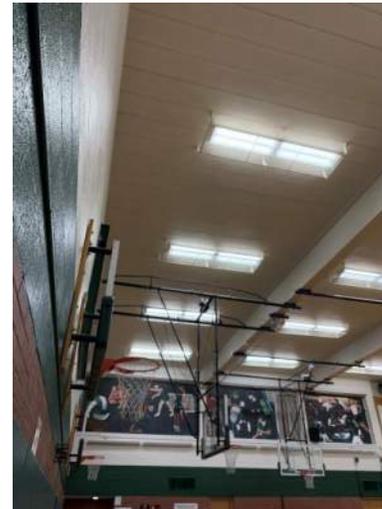
Existing Electrical Gear



Existing Panel Board



Existing Generator



Existing Lighting



Existing Technology/Lighting



Existing Clock/PA

# Northeast Middle School: Electrical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	Pole mounted fixtures are LED with sensors(?)				x	\$0			
Building Exterior Lighting	Original soffit lighting at canopies, some added wall packs		x			\$12,775		\$16,352	
<b>Power Distribution &amp; Control Equipment</b>									
Exterior Transformers	Appears very old and beyond expected lifespan, no visible nameplates. Confirm MPS ownership? Concerns regarding required clearances.	x				\$77,563	\$81,441		
Switchboards	c. 1996, 1200A, No surge protection or metering		x			\$152,084		\$194,668	
Panelboards	1980s or older	x				\$338,388	\$355,307		
Panelboards	Late 90's, early 2000's		x			\$1,353,560		\$1,732,557	
Panelboards	Newer than 2015				x	\$0			
Automatic Transfer Switch	Dayton, integral to generator	x				\$17,794	\$18,684		
Generator	Dayton 20 kW, indoors	x				\$56,271	\$59,085		
Electrical Receptacles & Devices	Classrooms have surface raceway front and back for receptacles, classrooms appear to all have ample receptacles, science rooms have ample power in lab tables (classroom sqft)			x		\$68,560			\$101,469

## Northeast Middle School: Electrical Systems

### Interior Lighting

Interior Lighting Fixtures	All spaces have been retrofitted with LED lamps, light fixture replacements suggested to follow other renovation scope (entire building sqft)			x		\$2,765,787			\$4,093,365
Lighting Controls	Line voltage occupancy sensors in corridors and classrooms, classroom controls do not meet current energy codes, lighting controls scope suggested to follow other renovation scope (entire building sqft); refer to lighting fixture line item above.			x		\$0			\$0
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in interior lighting sqft)				x	\$0			
Emergency Lighting	Refer to Life Safety Systems					\$0			
Theatrical Lighting	Discontinued Leviton DS12 dimming rack		x			\$228,127		\$292,003	

### Communications

Communications Room/Cooling	MDF has cooling, IDFs located in loft/mezz			x		\$0			\$0
Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDFs			x		\$48,667			\$72,027
Structured Cabling	CAT6 observed (entire building sqft)			x		\$583,388			\$863,414

### Telephone, Paging, Signaling & Clock Systems

Clock System	National Time & Signal, many rooms not functioning (entire building sqft)	x				\$442,526	\$464,652		
Public Address/Intercom System	Carehawk CH1000, RingCentral Paging Adapter (entire building sqft)		x						

# Northeast Middle School: Electrical Systems

## Technology

Network Switches	Ruckus ICX 7150-48PF (Each; qty to be confirmed)		x			\$7,604		\$9,733	
Wireless Access Points	Ruckus (Each; qty to be confirmed)		x			\$1,825		\$2,336	
Classroom Audio System	Lightspeed 955 (per classroom)		x						
Classroom Video System	Direct HDMI to Epson Projector & manual pull down screen (per classroom)		x			\$521,649		\$667,711	
Media Center AV System	Crestron based system w/ large format projection screen and supplemental monitors		x			\$53,230		\$68,134	
Gym AV System	Audio System		x			\$27,831		\$35,624	
Add telecomm rooms to generator standby	Part of generator replacement, add standby system and include telecomm rooms	x				\$0	\$0		
<b>13.0 Electrical Assessment SUBTOTAL</b>									
						<b>\$6,769,796</b>	<b>\$979,169</b>	<b>\$3,019,117</b>	<b>\$5,148,282</b>

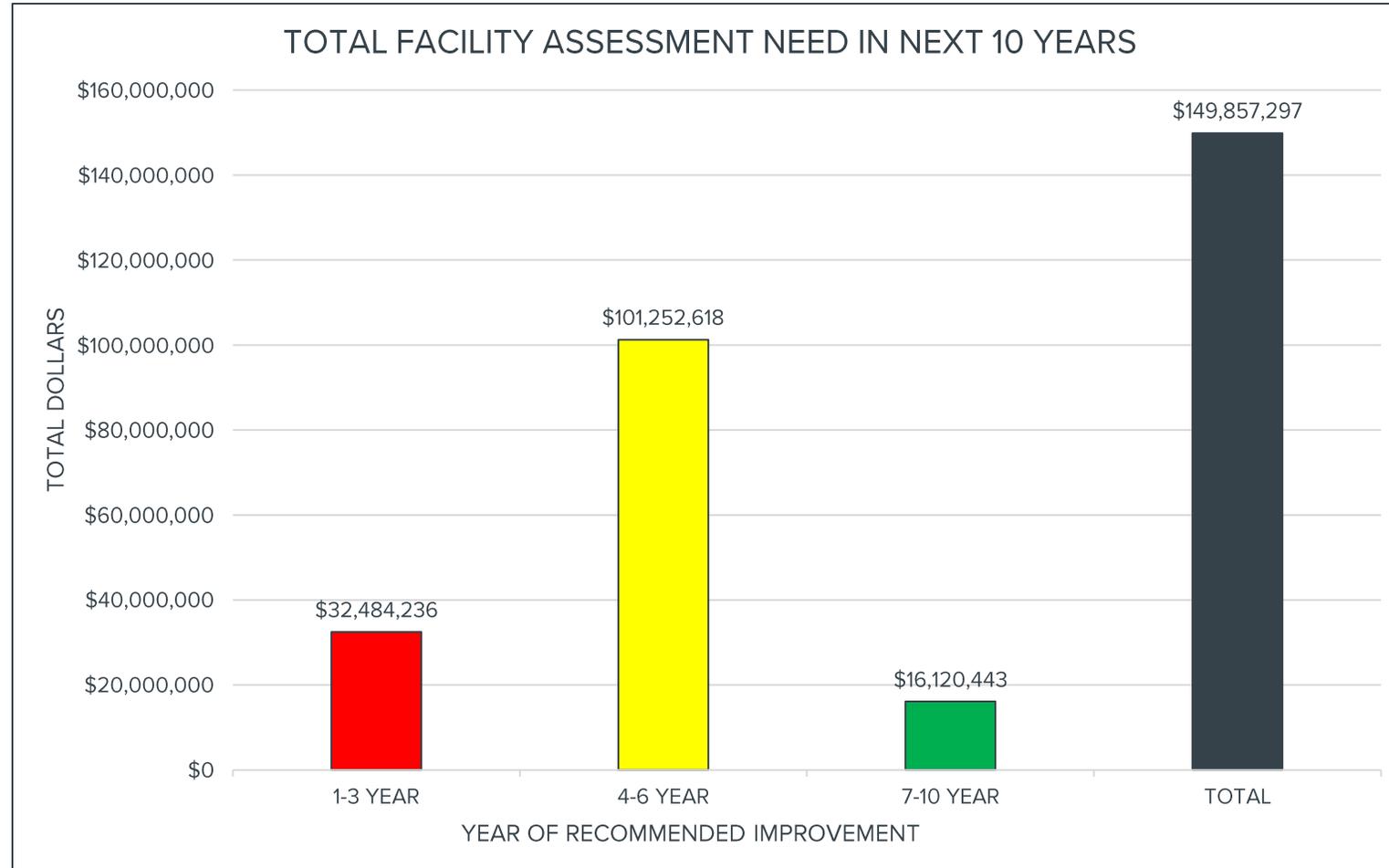


# H.H. DOW HIGH SCHOOL

## H.H. Dow High School: Overall Cost Review

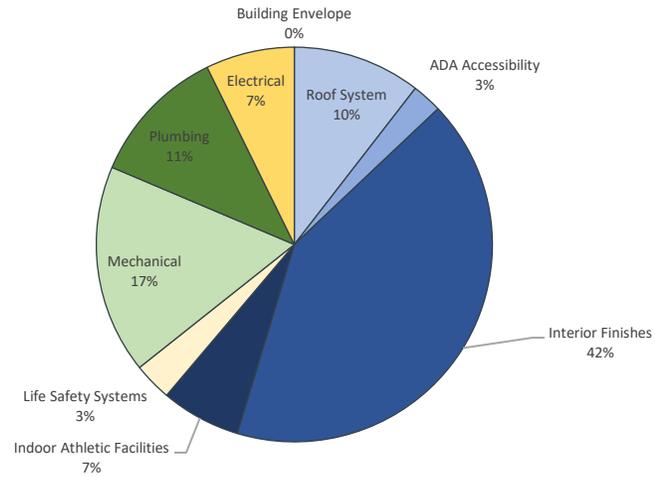
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$3,035	\$0	\$0	\$3,035
Roof System	\$217,350	\$15,461,366	\$0	\$15,678,716
ADA Accessibility	\$25,232	\$3,667,551	\$0	\$3,692,782
Interior Finishes	\$116,104	\$62,362,794	\$54,020	\$62,532,918
Indoor Athletic Facilities	\$788,351	\$8,954,728	\$0	\$9,743,078
Life Safety Systems	\$0	\$2,906,572	\$1,783,554	\$4,690,125
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$19,992,144	\$905,841	\$4,738,036	\$25,636,021
Plumbing	\$2,676,650	\$5,272,122	\$9,058,154	\$17,006,925
Electrical	\$8,665,373	\$1,721,646	\$486,679	\$10,873,698
<b>TOTALS</b>	<b>\$32,484,236</b>	<b>\$101,252,618</b>	<b>\$16,120,443</b>	<b>\$149,857,297</b>

## H.H. Dow High School: Overall Cost Review

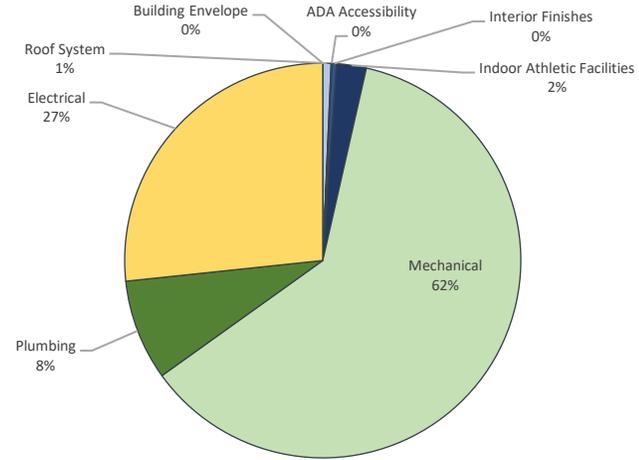


# H.H. Dow High School: Overall Cost Review

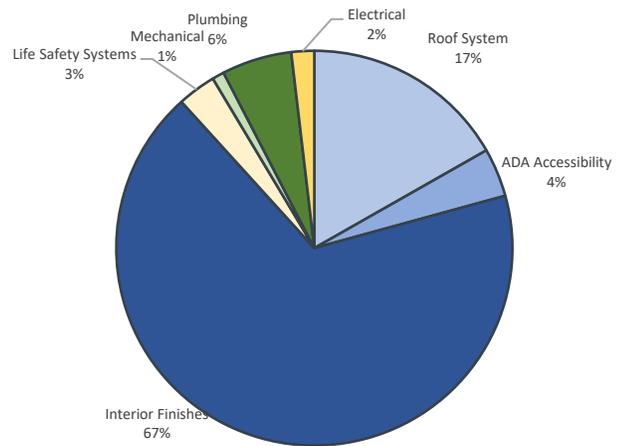
TOTAL NEED BY ASSESSMENT CATEGORY



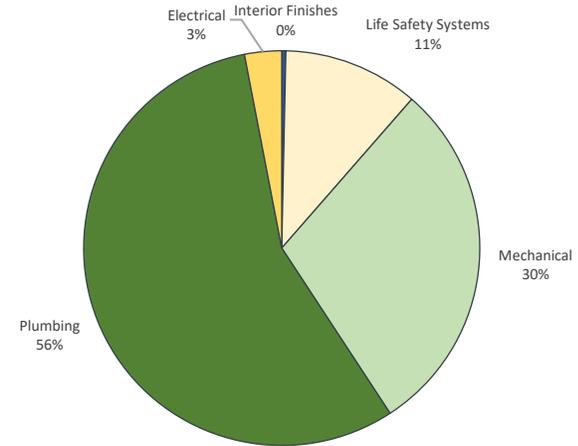
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY

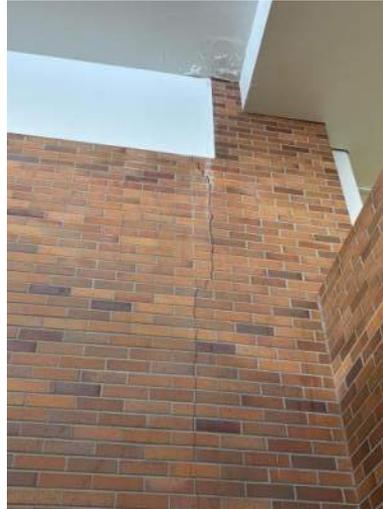


7-10 YEAR NEED BY ASSESSMENT CATEGORY



# H. H. Dow High School: Architectural Summary

Dow High School is a large, complex high school facility consisting of a wide range of architectural conditions. The building envelope is generally stable; however, roofing systems across older portions of the building are approaching replacement timelines, with several areas identified for near- to mid-term replacement. Exterior windows and doors in older sections are original or near-original and no longer meet current energy or security expectations. Interior finishes vary significantly, with some renovated spaces in good condition and many classrooms, corridors, locker rooms, and support areas exhibiting worn and outdated finishes. Accessibility deficiencies are present in older portions of the building, and circulation patterns reflect legacy design standards rather than modern educational needs. Architectural needs are driven by both age and scale, requiring coordinated planning rather than isolated repairs.



Existing Crack In Stair Up to Loft



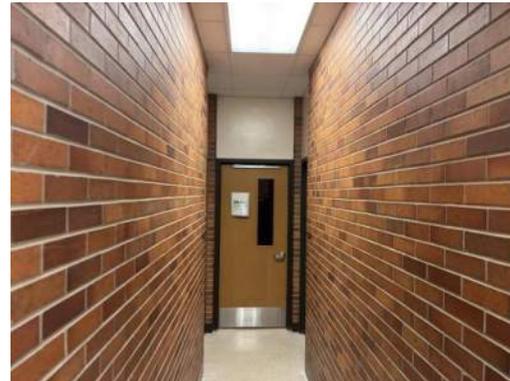
Existing Drinking Fountain/ADA Wing Wall Need



Existing Band Lockers



Existing Pool Surface



Existing Narrow Corridor



Existing Flooring in Auto Shop Class

# H. H. Dow High School: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
General Comment	General observation is that the building façade is aging but in good condition.				x	\$0			
Brick / Masonry	Observed in good condition. Some minor cracking at corners typical of brick not having control joints close enough to corners.				x	\$0			
Stucco Panels	Observed in good condition.				x	\$0			
Metal Panels	Observed in good condition.				x	\$0			
DEFS Soffits	Observed in good condition.				x	\$0			
EIFS Panels	Generally good condition, but one small area observed with holes from lacrosse balls. Budget for small repair.	x				\$1,369	\$1,437		
Control Joints / Joint Sealants	Control joints observed with weather checking and at mid life.				x	\$0			
<b>Exterior / Vestibule Doors</b>									
Aluminum Doors	Aluminum entrances with FRP doors and panels observed in good condition				x	\$0			
FRP Doors	Observed in good condition.				x	\$0			
Exterior Door Hardware	Observed in good condition.				x	\$0			
<b>Windows</b>									
Aluminum Windows	Observed in good condition.				x	\$0			

# H. H. Dow High School: Building Envelope

**Exterior Grilles / Louvers**

Aluminum Louvers	Observed in good condition.				x	\$0			
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**Other**

						\$0			
Overhead Doors	Observed in good condition.				x	\$0			
Open Control Joints	There were 2 vertical expansion / control joints that were never caulked at the gymnasium mechanical mezzanine are.	x				\$1,521	\$1,597		

<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$2,890</b>	<b>\$3,035</b>	<b>\$0</b>	<b>\$0</b>
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# H. H. Dow High School: Roof Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
General Comment 1	Refer to MPS Roof Survey that identifies 5 distinct areas of roofing.					\$0			
General Comment 2	Some roof leaks were apparent at the interior of the building.					\$0			
Roof Area 1	EPDM Warranty Expiration 2020 - Budget for replacement within 4-6 years.		x			\$313,598		\$401,405	
Roof Area 2	EPDM Warranty Expiration 2020 - Budget for replacement within 4-6 years.		x			\$911,594		\$1,166,840	
Roof Area 3	EPDM Warranty Expiration 2020 - Budget for replacement within 4-6 years.		x			\$234,000		\$299,520	
Roof Area 4	EPDM Warranty Expiration 2013 - Budget for replacement within 1-3 years.	x				\$207,000	\$217,350		
Roof Area 5	TPO Warranty Expiration 2021 - Budget for replacement within 4-6 years.		x			\$10,620,000		\$13,593,600	
General Comment 2	Plan for secondary roof drain improvements to meet current code requirements for each area of roofing. Cost included in number above.					\$0			
<b>Drainage Components</b>									
Primary Roof Drains	Adequate				x	\$0			
Secondary Roof Drains	Code Deficiency - see general comment 2 above.	x				\$0	\$0		
<b>Perimeter / Fascia / Soffit</b>									
Metal Coping	Plan to replace metal copings and flashings concurrent with reroofing efforts. Cost included in numbers above.		x			\$0		\$0	
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$12,286,192</b>	<b>\$217,350</b>	<b>\$15,461,366</b>	<b>\$0</b>

# H. H. Dow High School: ADA Accessibility

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
General Comment	In general ADA accessibility is adequate. There are a few improvements that could be made with future paving projects. For example there is an ADA path that lead to a head curb not allowing clear travel to parking areas.		x			\$22,813		\$29,201	
Parking Lot Signage	Observed aging in poor condition and some are ready for replacement.	x				\$0	\$0		
Parking Lot Pavement Markings & ADA Striping	Observed with annual maintenance required.				x	\$0			
Curb Cuts	Observed adequate.				x	\$0			
Tactile Warning Strips	Observed but there were a couple broken units that should be replaced.	x				\$19,467	\$20,440		
Exterior Ramps	Observed and adequate.				x	\$0			
Exterior/Exits	Observed. Additional ADA actuators and auto operators are recommended at a few entrances.		x			\$54,750		\$70,080	

## H. H. Dow High School: ADA Accessibility

### Interior Accessibility (General)

General Comment	Generally good, but recommend adding a few auto operators at interior vestibule and exterior vestibule doors.		x			\$22,813		\$29,201	
Interior Building Signage (general)	There are areas within the building where signage could be improved as current signage does not meet ADA code intent. This is a grandfathered deficiency.		x			\$136,876		\$175,201	
Corridor Clearances	Observed adequate.				x	\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	There are several drinking fountains that protrude into path of travel for the visually impaired. Recommend adding wing walls with future renovations.		x			\$255,502		\$327,043	
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Knob hardware observed within the building that does not meet today's code standards. Recommend replacement with future renovations. See interior finishes for cost.		x			\$0		\$0	
Pull/Push Side Clearances	Many classrooms don't meet today's code for side clearance. Recommend budgeting for improvements with future renovations. This is an expensive undertaking involving involve widening masonry openings, structural elements, new doors, frames, and hardware.		x			\$2,372,520		\$3,036,826	
Door hardware Comment	A broken panic bar was observed at the media center in need of replacement.	x				\$4,563	\$4,791		

### Classroom Accessibility

General Comment	There are several classrooms that don't meet side clearance and don't meet standards for sink accessibility. Recommend budgeting for improvements with future renovations.		x			\$0		\$0	
Classroom ADA Signage	A mixture of signage observed within the building. Future renovations will require sign replacement to meet standards. Cost included above.		x			\$0		\$0	
Doors & Hardware (knobs/levers/panic hardware/closers (general))	A mixture of lever and knob hardware observed throughout the building. Recommend hardware replacement concurrent with future renovations. Cost included in interior finishes.		x			\$0		\$0	
Pull/Push Side Clearance	Many classrooms don't have adequate side approach clearance required by code. Cost included above.		x			\$0		\$0	

# H. H. Dow High School: ADA Accessibility

### Group Restroom Accessibility

General Comment 1	Some group restrooms labeled as ADA do not meet today's code requirements. Recommend renovation to bring up to standard.		x			\$0		\$0	
General Comment 2	Cost included in renovations. See interior finishes.		x			\$0		\$0	
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Some knob hardware observed. Cost included in interior finishes.		x			\$0		\$0	
Pull/Push Side Clearance	Some bathrooms observed with side clearance deficiencies. Cost included above.		x			\$0		\$0	
Turning Clearances	Deficiencies observed. See interiors assessment for cost.		x			\$0		\$0	
Plumbing Fixtures (water closets)	Observed.		x			\$0		\$0	
urinals	Observed.		x			\$0		\$0	
Sinks	Observed.		x			\$0		\$0	
Lavatory Insulation/Shields	Missing insulation shields observed in several locations.		x			\$0		\$0	
Accessories	Missing vertical grab bars required by today's code.		x			\$0		\$0	

### Elevators, Lifts and Interior Ramps

Elevators/Lifts Present Where Needed	Observed adequate.				x	\$0			
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<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$2,889,304</b>	<b>\$25,232</b>	<b>\$3,667,551</b>	<b>\$0</b>
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# H. H. Dow High School: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 7.0 Interior Finishes Assessment

### Offices / Auxiliary Offices / Support Areas

General Comment	The office is functional and in good condition but aesthetically dated. Future renovations and updates should be considered.			x		\$0			\$0
Flooring	Inner offices have older carpeting approaching end of useful life cycle.			x		\$0			\$0
Flooring	VCT flooring observed at main office area.			x		\$0			\$0
Walls	Masonry walls and framed partition assemblies observed in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings observed.				x	\$0			
Base Material	Rubber base.				x	\$0			
Signage	Observed mounted above doors. See ADA.				x	\$0			
Casework	Old metal casework observed in functional condition but aesthetically dated.				x	\$0			
Countertops	Plastic laminate counters observed at work areas.				x	\$0			
Furniture/Furnishings	Older furniture observed throughout.			x		\$0			\$0

### Corridors

General Comment:	Observed in good condition.				x	\$0			
Walls	Exposed brick and painted plaster in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings in good condition.				x	\$0			
Flooring	Terrazzo flooring observed in good condition.				x	\$0			
Wayfinding	Minimal wayfinding observed. Consider adding visual wayfinding markers with future renovations.			x		\$0			\$0
Signage	Observed. Some signage is non compliant with ADA standards and code. See ADA for cost.		x			\$0		\$0	
Lockers	Older lockers approaching end of useful life cycle. Recommend budgeting for replacement.		x			\$0		\$0	
Wall Mounted Visual Display Units	Display cases observed in good condition.				x	\$0			

## H. H. Dow High School: Interior Finishes

### Restrooms

General Comment 1	Student group restrooms have been refreshed recently and are in fair condition. Some ADA deficiencies observed.		x			\$0		\$0	
General Comment 2	Staff restrooms observed in fair condition. Recommend budgeting for renovations within ten years and addressing ADA deficiencies.		x			\$0		\$0	
Walls	Painted block walls in good condition				x	\$0			
Ceiling	Plaster or drywall ceilings observed in good condition.				x	\$0			
Flooring	Terrazzo flooring in acceptable condition.				x	\$0			
Countertops	Solid surface countertops with integral bowls in fair condition.					\$0			
Countertops	Plastic laminate shelf countertops approaching end of life cycle.		x			\$0		\$0	
Toilet Partitions	Partitions observed in good condition.				x	\$0			
Restroom Accessories	Observed but noting ADA deficiencies.		x			\$0		\$0	

### Classrooms

General Comment 1	Generally in good condition. Recommend light renovation and refresh of 30% of classrooms where materials are aging and approaching end of life cycles.		x			\$0		\$0	
Walls	Painted block walls observed in good condition.		x			\$0		\$0	
Ceiling	Suspended acoustical ceilings in fair condition. Some roof leaks and staining present.		x			\$0		\$0	
Flooring	Older carpeting at end of useful life in 30% of classrooms.		x			\$0		\$0	
Base Material	Rubber base.		x			\$0		\$0	
Casework & Countertops	Metal casework with plastic laminate countertops observed functional but aesthetically dated.		x			\$0		\$0	
Folding partitions	Observed in poor condition with sound transmission between rooms.		x			\$0		\$0	
Furniture/Furnishings	Older desks observed approaching end of life cycle.		x			\$0		\$0	

## H. H. Dow High School: Interior Finishes

### Cafeteria

General Comment	Recently refreshed and observed in good condition.				x	\$0			
Walls	Exposed brick.				x	\$0			
Ceiling	Suspended acoustical ceiling.				x	\$0			
Flooring	LVP tiles in good condition. There are a few tiles that are coming loose and need repair.	x				\$750	\$788		
Base Material	Glazed block.				x	\$0			

### Media Center

General Comment:	Recently refreshed and observed in good condition.				x	\$0			
Walls	Exposed brick and painted drywall in good condition.				x	\$0			
Ceiling	Acoustical grid ceiling in good condition.				x	\$0			
Flooring	Carpet tiles in good condition				x	\$0			

### Auditorium

General Comment	Small auditorium observed in good condition.				x	\$0			
Walls	Exposed Brick				x	\$0			
Ceiling	Painted plaster				x	\$0			
Flooring	Broadloom carpeting approaching end of life.	x				\$38,325	\$40,241		
Seats	Observed in good condition				x	\$0			
Stage Flooring	Wood flooring in fair condition.				x	\$0			
Stage Curtains	Mechanical wall (30'wx20't) reported that is non functioning. Replacement needed.	x				\$0	\$0		
Walls	Observed in good condition.					\$0			

### Band / Orchestra / Choir

General Comment	Observed in good condition.				x	\$0			
Walls	Painted masonry with acoustical panels				x	\$0			
Ceiling	Acoustical ceilings.				x	\$0			
Flooring	VCT flooring in good condition.				x	\$0			
Storage Cabinets	Midlife locker cabinets observed in the hallway.				x	\$0			



# H. H. Dow High School: Indoor Athletic Facilities

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>8.0 Indoor Athletic Facilities Assessment</b>									
<b>Competition Gymnasium</b>									
General Comment	Competition gym observed in good condition.				x	\$0			
Court Surface					x	\$0			
Doors	Wood doors with newer hardware in good condition.				x	\$0			
Paint	Observed in good condition.				x	\$0			
Ceilings	Exposed painted tectum and structure in good condition.				x	\$0			
Bleachers	Newer bleachers observed in good condition.				x	\$0			
Scoreboards	Observed in good condition.				x	\$0			
Retractable Goals	Observed in good condition.				x	\$0			
Volleyball Stations & Equipment	Sleeves observed in flooring.				x	\$0			
<b>Auxiliary Gymnasium</b>									
General Comment	Observed in good condition.				x	\$0			
Court Surface	Observed in good condition.				x	\$0			
Doors	Observed in good condition.				x	\$0			
Paint	Partial refresh needed. Paint bottom 12' of gym surface. 12x500=6000	x				\$36,500	\$38,325		
Ceilings	Exposed structure and acoustical steel deck.				x	\$0			
Bleachers	Observed in good condition.				x	\$0			
Scoreboards	Observed in good condition.				x	\$0			
Retractable Goals	Observed in good condition.				x	\$0			
Acoustical Panels	There are a few 1" tectum acoustical panels showing damage at corners. Recommend replacement or a new solution to prevent future damage.	x				\$152,084	\$159,688		
Volleyball Stations & Equipment	Sleeves observed in the flooring.				x	\$0			

## H. H. Dow High School: Indoor Athletic Facilities

### Pool

General Comment	Older small pool in fair condition. Mechanical equipment is due for replacement. Doors, hardware, and fixtures should be replaced as they are at end of life cycle. Pool surface delamination observed.	x				\$0	\$0		
Pool Surfacing Repairs	Pool surface and tile delamination observed under water.	x				\$429,000	\$450,450		
Pool Fixtures	Ladders, diving boards, platforms, etc....	x				\$0	\$0		
Aluminum Doors & Hardware	Replace door hardware that is showing rust.	x				\$114,976	\$120,725		
Remedial Repair	Concrete rust and spall repairs needed at mechanical spaces. \$10k	x				\$14,600	\$15,330		
Tile Pool Deck	Observed in good condition.				x	\$0			
Acoustical Ceilings	Observed in good condition.				x	\$0			
Painted Walls	Observed in good condition.				x	\$0			
Aluminum Bleachers	Observed in good condition.				x	\$0			

### Wrestling Room

General Comment	Observed in good condition.				x	\$0			
General Comment 2	Mechanical fined tube covers are damaged throughout the room.					\$0			

### Weight Room

Floor Surface	Rubber flooring tiles observed in good condition.				x	\$0			
Doors	Observed in good condition.				x	\$0			
Paint	Observed in good condition.				x	\$0			
Ceilings	Exposed structure and acoustical deck in good condition.				x	\$0			
Other Athletic Equipment	4x8 Mirrors - There are a few broken mirrors that need replacement.	x				\$3,650	\$3,833		

### Locker Rooms

General Comment	Locker rooms need to be refreshed including flooring, paint, lighting, ceilings, etc. They also need to be renovated to meet today's DA standards. Costs included in interior assessment.		x			\$6,995,881		\$8,954,728	
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<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$7,746,691</b>	<b>\$788,351</b>	<b>\$8,954,728</b>	<b>\$0</b>
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## H. H. Dow High School: Life Safety Systems

### Emergency Alarm Systems

Fire Alarm Control Panel	National Time & Signal 902 Series located in office, annunciator in Reception area. Upgrading to a panel with voice communication will be required in the future.		x			\$1,155,975		\$1,479,648	
Horns/Strobes	Coverage appeared to be adequate, upgrade to speaker/strobes will be required in the future. (Building sqft)		x			\$1,114,784		\$1,426,924	

### Access Control / Intrusion Detection

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

### Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$1,205,104			\$1,783,554
Security Camera Monitoring	Threat detection system			x		\$0			\$0

<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>							<b>\$5,705,431</b>	<b>\$0</b>	<b>\$2,906,572</b>	<b>\$1,783,554</b>
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# H. H. Dow High School: Food Service

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>10.0 Food Service Assessment</b>									
<b>Food Service Equipment</b>									
General Comment	Newer kitchen observed in good condition.				x	\$0			
Freestanding Cooler/Refrigerator					x	\$0			
Milk Cooler					x	\$0			
Freestanding Freezer					x	\$0			
Ice Maker					x	\$0			
Oven					x	\$0			
Range					x	\$0			
Work Tables					x	\$0			
<b>Food Service Plumbing Fixtures</b>									
General Comment	Newer kitchen observed in good condition.				x	\$0			
3-Compartment Sink (with Air Gaps)					x	\$0			
Hand Wash Sink					x	\$0			
Grease Trap					x	\$0			
Floor Drains					x	\$0			
<b>Food Service Point-of-Purchase</b>									
General Comment	Service lines and point of purchase observed in good condition.				x	\$0			
Cash Register Stand on Wheels					x	\$0			
Serving Counters					x	\$0			
Delivery Carts					x	\$0			
Sneeze Guards					x	\$0			

# H. H. Dow High School: Food Service

### Food Service Life Safety

General Comment	Observed compliant with todays code requirements.				x	\$0			
Gas Shutoff(s) Hood Suppression System(s)					x	\$0			
Fire Suppression System					x	\$0			

### Food Service Storage

General Comment	Observed functional and adequate for needs.				x	\$0			
Walk-in Coolers					x	\$0			
Walk-in Freezers					x	\$0			
Dry Goods Storage/Shelving					x	\$0			
Food Preparation Storage					x	\$0			

<b>10.0 Food Service Assessment SUBTOTAL</b>						\$0	\$0	\$0	\$0
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## H. H. Dow High School: Mechanical Summary

Mechanical and plumbing systems at Dow High School are a mixture of recently updated systems and original piping and equipment. Newer boilers and air handling units were installed while chiller plant equipment, several air handling units, and a variety of terminal fans, unit ventilators, and perimeter heating equipment is at or beyond its useful life. Mechanical infrastructure needs such as piping and ductwork replacement are considerable. Several specialty space types such as the automotive shop or life skills classroom need to be updated for current standards. Plumbing systems include extensive original domestic, sanitary, and storm piping that is approaching or exceeding typical service life, and replacement of plumbing equipment is on the near horizon. Pool equipment is also in need of updating due to age and condition. Overall, while significantly improved in the last decade, there are still considerable needs to be addressed at Dow High School to maintain system efficiency and reliability.



Existing Boiler Plant



Existing Chiller



Existing Hydronic Pumps



Existing Heat Exchanger



Existing Plumbing Fixture



Existing Autoshop AHU

# H. H. Dow High School: Mechanical Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Boilers replaced in 2024 with new condensing Aerco Benchmark boilers and are in excellent condition with an expected useful life of 20-25 years. Original building heating equipment designed for high temperature hot water (above 200°F in peak conditions) so opportunities for condensing conditions are limited (requires return water temps of 135°F or lower to start capturing increased efficiency) until all equipment coils are designed for lower EWT.				X	\$0			
Boiler Plant Accessories	(3) new heating hot water pumps installed in 2024 as part of recent bond upgrades. (2) pumps for pool heater loop, expansion tanks, air/dirt separator, and other plant accessories are updated and appear to be installed in the late 2000s. Pumps have an anticipated useful life of 20-25 years so provisions should be made for replacement; remaining accessories will last 30+ years if well maintained.			X		\$155,126			\$229,586

## H. H. Dow High School: Mechanical Systems

### Building Cooling Equipment

Chillers	Air cooled chillers installed in 2007/2008 to replace original tower/water-cooled system. Units are 275 tons apiece, with R410A refrigerant. Units are in fair condition but approaching end of anticipated useful life of 20-25 years.			X		\$1,473,698			\$2,181,073
Cooling Plant Accessories	Main distribution pumps appear to be replaced in the mid to late 2000s, along with chilled water plant accessories such as expansion tanks, air separator, and side stream filter. The loop has a manual feed glycol system and is run at 30% E.G. System is a primary/secondary system with (3) pumps per loop; pumps are in good condition but starting to approach end of useful life. Remaining plant accessories should last 30+ years if well maintained.			X		\$511,003			\$756,284
Refrigerant Condensers	Condensing units installed in 1998 to serve Science Addition fan coil units; units are past useful life. Each unit is 3/4 ton cooling.	X				\$34,067	\$35,770		
Refrigerant Condensers	Condensing unit installed in mid 2000s to serve Music Suite Addition AHU; unit is in fair condition but fins are damaged and unit is approaching end of useful life. Will need replacement. Unit is approximately 12.5 tons.		X			\$31,329		\$40,101	

### Heating / Cooling Piping

Hydronic Piping	Hydronic piping is generally original to the building date of construction, including pipe mains routed adjacent to mechanical rooms and lofts that are original to the 1966 building. Selective branch piping has been replaced adjacent to new air handling units. Original 1966 piping is at end of useful life of 50-75 years (if well-maintained) and in fair to poor condition; provisions should be made for replacement.	X				\$6,569,722	\$6,898,208		
Hydronic Pumps	Vast majority of heating and cooling coils in the system are pumped coils; pumps have been replaced over the years as they have failed. Would recommend replacement with associated equipment.					\$0			

## H. H. Dow High School: Mechanical Systems

### Building HVAC Air Distribution System / Equipment

Rooftop Units	New Daikin rooftop unit serving dual duct terminal units installed in recent bond work (approximately 2020) and is in good condition. Expected useful life is 15-20 years. Dual duct systems don't meet current code requirements so upon updating system layout a new design will be required.				X	\$0			
Air Handling Units	Most air handling units were replaced in the recent bond work in 2019 with new Daikin air handling units; units are in good condition. There are several multizone units; current codes restrict the use of multizone units for anything other than direct replacement only.				X	\$0			
Air Handling Units	A handful of air handling units installed in 1966 are still original to the building; units are in poor condition and in need of replacement. All are located in lofts and mechanical rooms with the exception of the automotive lab and wood lab. Units are heating and ventilation only, with sizes as follows: (5600 CFM) (5400 CFM) (4050 CFM) (4600 CFM) (5350 CFM) (4275 CFM) (4600 CFM) (5100 CFM) (7250 CFM) (6250 CFM) (5700 CFM) (4040 CFM) (4050 CFM) (1980 CFM) (2515 CFM) (2000 CFM). Units would require energy recovery to meet current code requirements.	X				\$2,416,621	\$2,537,452		
Air Handling Units	Hot water / DX cooling air handling unit installed in mid 2000s and in good condition. Unit expected lifetime is 25-30 years if well maintained; recent refrigerant code updates will required replacement of full unit when condensing unit is installed with new A2L refrigerants. Unit is estimated at approximately (4000 CFM).		X			\$143,872		\$184,156	
Rooftop Exhaust Fans	Exhaust fans installed in 1966 are original to the building and in poor condition.	X				\$527,885	\$554,279		
Rooftop Exhaust Fans	Exhaust fans installed in 1997 are original to the date of construction and in fair condition.		X			\$40,607		\$51,977	
Rooftop Exhaust Fans	Exhaust fans installed in 1998 are original to the date of construction for the science addition and in fair condition.		X			\$20,304		\$25,989	

## H. H. Dow High School: Mechanical Systems

Air Handling Units	York air handling units serving weight room and auxiliary gym installed in late 1990s/early 2000s and are in fair condition. Expected useful life of this equipment is 25-30 years if well maintained and provisions should be made for replacement.			X		\$1,031,436			\$1,526,525
Air Handling Units	Air handling unit serving office spaces adjacent shop areas was installed in 1997 and serves a small dual-duct system with 8 boxes. Unit is in fair condition but approaching end of useful life (approximately 25-30 years if well maintained) and should be replaced. Unit is currently designed for (7500 CFM).		X			\$233,716		\$299,156	
VUV/HUV Units	Unit ventilators installed in 1998 to serve science addition are in fair condition but at end of anticipated useful life (20-25 years). Units are in need of replacement.		X			\$210,789		\$269,810	
VUV/HUV Units	Original unit ventilators installed in auto classroom and CAD lab are in poor condition and in need of replacement.	X				\$105,394	\$110,664		
VUV/HUV Units	Original unit ventilator installed in pool mechanical equipment room is in very poor condition and in need of replacement.	X				\$35,131	\$36,888		
HVAC Ducts	Underground ductwork installed during original building construction (1966) is a combination of Vit Tile (Supply Air) and Stainless (Exhaust Air); ductwork isolated to original chemistry lab design area (1 large classroom). Supply air ductwork of this kind is beyond it's useful life and has a high potential for failure given age and material.	X				\$158,168	\$166,076		
HVAC Ducts	Supply/return/exhaust air ductwork is largely original to the building (now 60+ years old); life expectancy is typically 25-30 years but can reach 50 years if well maintained. At this age, issues with duct sealing and insulation decay decrease efficiency and potential water or corrosion issues start to occur. Would recommend installation of new ductwork for all associated air handling systems (AHU, RTU, & EF systems).	X				\$7,442,887	\$7,815,031		
VAV Terminal Units	Dual duct boxes provide zone control for (2) air handling units (front office and offices adjacent to shop); units are original to dates of installation and at end of useful life and should be replaced.	X				\$279,455	\$293,428		

## H. H. Dow High School: Mechanical Systems

### Terminal Heating / Cooling Equipment

Finned Tube Heaters	Finned tube elements installed in 1966 during original building construction. Units are in poor condition.	X				\$326,221	\$342,532		
Convectors	Convectors installed in 1966 during original building construction. Units are in poor condition.	X				\$599,821	\$629,812		
Unit Heaters	Unit heaters installed in 1966 during original building construction. Units are in poor condition.	X				\$135,507	\$142,282		
Cabinet Unit Heaters	Cabinet unit heaters installed in 1966 during original building construction. Units are in poor condition.	X				\$90,338	\$94,855		
Unit Heaters	Unit heaters installed in 1998 during original building construction. Units are in poor condition.			X		\$30,113			\$44,567
Split Systems	Split system serving IT room is estimated at 5 years old or less and in good condition; expected useful life of 15-20 years if well maintained.				X	\$0			
Fan Coil Units	Ceiling fan coil unit cassettes with split DX cooling installed in 1998 are in fair condition but beyond expected useful life. Recommend replacement.	X				\$49,275	\$51,739		
Split Systems	Split system serving automotive is estimated to be 15 years old; expected useful life of 15-20 years.		X			\$27,071		\$34,651	

## H. H. Dow High School: Mechanical Systems

### Miscellaneous HVAC Systems / Equipment

Temperature Controls	Building controls upgraded from pneumatic to DDC in recent bond renovations in 2020 - Automated Logic system throughout the building with new control devices. System is in good condition.				X	\$0			
Specialty Classrooms	Electrical room below stairwell is very cold; louver is open to exterior with no means of control to prevent cold air from entering building. Blank-off and modification of dampers and actuators recommended.	X				\$15,056	\$15,809		
Dust Collectors	Dust collector replaced in last 2 years and is in excellent condition.				X	\$0			
Specialty Classrooms	Life skills classroom ranges are not provided with exhaust hoods and don't meet current codes.	X				\$32,850	\$34,493		
Specialty Classrooms	Automotive shop includes originally installed systems for heating, ventilation, and exhaust (1960s). Vehicle exhaust capture systems are not present and space gas monitoring not observed. System will need to be completed updated to meet current codes. (4) car bays observed though more overhead doors are available; each would need dedicated vehicle exhaust.	X				\$171,095	\$179,650		
Specialty Classrooms	Dust collection ductwork is largely original to the building and has been patched over the years; ductwork is beyond useful life - would recommend replacement.	X				\$38,021	\$39,922		
Specialty Classrooms	Art room kiln and hood systems are beyond anticipated useful life. Kiln hood is undersized for equipment, and existing kiln equipment in side storage room is in poor condition. Recommend replacement.	X				\$12,623	\$13,254		
<b>11.0 Mechanical Assessment SUBTOTAL</b>						<b>\$22,949,201</b>	<b>\$19,992,144</b>	<b>\$905,841</b>	<b>\$4,738,036</b>

# H. H. Dow High School: Plumbing Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Domestic hot water heat exchanger installed in mezzanine / platforms above boilers; unit is in fair condition.			X		\$12,167			\$18,007
Domestic Water Storage Tank	Domestic water storage tank is original to building construction (1960s) and still in use. Tank is in poor condition and past its maximum anticipated life of 50 years, would recommend replacement.	X				\$46,690	\$49,025		
Domestic Water Piping	Generally original to year of construction (1960s). Original building piping has significant portions of galvanized piping that are corroding and breaking down, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained, and for copper systems (newer building additions) the life expectancy is 50-60 years. System is in need of replacement.			X		\$3,891,547			\$5,759,490
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Generally original to year of construction (1960s). General life expectancy of a sanitary piping system is 50-75 years if well maintained; would recommend replacing in near future. Building currently has issues with clogs and other sanitary piping failures.		X			\$3,899,136		\$4,990,894	
Air-Admittance Valves	Several instances of air admittance valves observed throughout the building; while allowable by code these typically result in sanitary gas issues over time and can fail frequently.		X			\$2,000		\$2,560	

## H. H. Dow High School: Plumbing Systems

### Storm Drainage System / Equipment

Storm Drainage Piping	Generally original to year of construction (1960s). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. Original system does not have overflow drains; if any roof work is done additional overflow drains will be required to bring system up to code.			X		\$2,002,160			\$2,963,197
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement.			X		\$0			\$0

### Plumbing Fixtures

Water Closets & Urinals	Water closets and urinals are generally original to the time of building construction and in fair condition. Select units have had flush valve replacements, particularly in group toilet rooms. Would recommend replacement of all water closets and urinals with new low flow fixtures and sensed flush valves.		X			\$134,367		\$171,990	
Lavatories & Sinks	Select lavatories have been replaced in group restrooms in recent bond work. Single-occupant toilet room lavatories and classrooms sinks are generally original to the building. Would recommend replacement of remaining lavatories with new low-flow faucets.		X			\$83,342		\$106,678	
Electric Water Coolers & Drinking Fountains	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district. New units are in good condition.				X	\$0			
Emergency Eye Wash Stations	Emergency eye wash station(s) in renovated or new science rooms and automotive shop are in good condition.				X	\$0			

# H. H. Dow High School: Plumbing Systems

## Pool Plumbing Systems

Swimming Pool Piping	Selective piping has been replaced as needed throughout pool equipment areas. Above-ground tank and drain piping appears to be less than 30 years old. Large portions of original heating piping remain and are corroding and in poor condition, would recommend replacement throughout mechanical room.	X				\$715,000	\$750,750		
Swimming Pool Equipment & Pumps	Pool heater heat exchanger is in fair condition; tank and pump are aging and beyond useful life. Would recommend replacement of all pool mechanical equipment.	X				\$1,787,500	\$1,876,875		
Swimming Pool Water Treatment Equipment	Chemical treatment has been replaced recently and is in decent condition.			X		\$214,500			\$317,460
<b>12.0 Plumbing Assessment SUBTOTAL</b>									
						<b>\$12,788,409</b>	<b>\$2,676,650</b>	<b>\$5,272,122</b>	<b>\$9,058,154</b>

## H. H. Dow High School: Electrical Summary

Electrical systems at Dow High School are functional but increasingly strained by age, capacity, and evolving instructional demands. Power distribution equipment includes older switchgear, unit substations, and panelboards identified for replacement within the planning horizon. Interior lighting systems vary by area, with many older fixtures retrofitted with LED lamps and lacking modern controls and failing to meet current energy standards. Emergency and life-safety systems remain operational but are approaching replacement age. Technology infrastructure, including classroom power, data, and audiovisual systems, is inconsistent and insufficient in older portions of the building. Electrical upgrades are identified as a critical component of future modernization efforts.



Existing Transformer



Existing Electrical Gear



Existing Panel Board



Existing Clock System



Existing Generator



Existing IT



Existing Fire Alarm



Existing Exterior Wall Pack

# H. H. Dow High School: Electrical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	Pole mounted fixtures are LED				x	\$0			
Building Exterior Lighting	Soffit lighting at building entrances with LED retrofits, various wall packs			x		\$0			
<b>Power Distribution &amp; Control Equipment</b>									
Exterior Transformers	2018 SQD transformers, chiller and substation (switchboard) #3				x	\$0			
Medium Voltage Distribution	2018 SQD HVL switches and S&C PMH-5 at substation #3				x	\$0			
Switchboards	Original 1960s Unit Substations	x				\$476,784	\$500,623		
Switchboards	2018 SQD , 1600A, with no surge protection nor power meter				X	\$0			
Panelboards	SQD I-Line Distribution, 1960s	x				\$1,003,453	\$1,053,626		
Panelboards	Mostly original 1960s SQD NQ panelboards, about 10% of branch panelboards are 2004 and newer.	x				\$5,734,000	\$6,020,700		
Automatic Transfer Switch	2012 ATS Life Safety			x		\$17,794			\$26,335
Generator	2011 Generac Natural Gas, indoors			x		\$147,522			\$218,333
Electrical Receptacles & Devices	Classrooms have surface raceway front and back for receptacles, classrooms appear to all have ample receptacles, science rooms have ample power in lab tables (classroom sqft)			x		\$78,354			\$115,964

## H. H. Dow High School: Electrical Systems

### Interior Lighting

Interior Lighting Fixtures	All spaces have been retrofitted with LED lamps, light fixture replacements suggested to follow other renovation scope (entire building sqft)			x		\$0			\$0
Lighting Controls	Line voltage occupancy sensors in corridors and classrooms, classroom controls do not meet current energy codes, lighting controls scope suggested to follow other renovation scope (entire building sqft); refer to lighting fixture line item.			x		\$0			\$0
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in lighting fixture sqft)				x	\$0			
Theatrical Lighting	Antiquated theatrical lighting in theater	x				\$288,127	\$302,533		

### Communications

Communications Room/Cooling	MDF has cooling, some IDFs have cooling			x		\$0			\$0
Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDFs			x		\$73,000			\$108,040
Structured Cabling	CAT6 observed (entire building sqft)			x		\$0			\$0

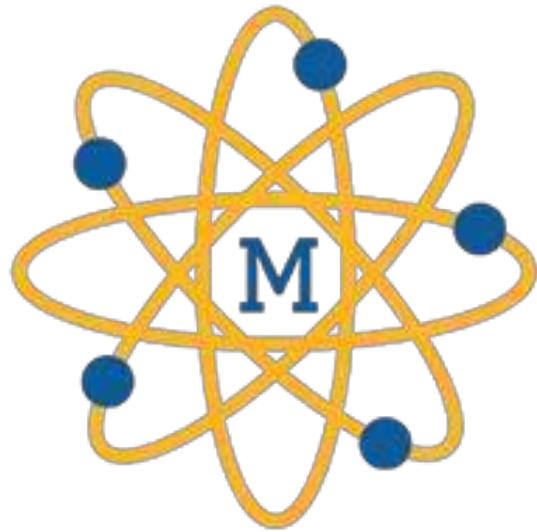
### Telephone, Paging, Signaling & Clock Systems

Clock System	National Time & Signal, some rooms not functioning	x				\$750,372	\$787,891		
Public Address/Intercom System	Carehawk, RingCentral Paging Adapter		x						

## H. H. Dow High School: Electrical Systems

### Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$304,169		\$389,336	
Wireless Access Points	Ruckus (primarily R720)		x			\$240,902		\$308,355	
Classroom Audio System	Lightspeed 955 (per classroom)		x						
Classroom Video System	Direct HDMI to Epson Projector & manual pull down screen (per classroom)		x			\$596,171		\$763,099	
Media Center AV System	Crestron based system w/ large format projection screen and supplemental monitors		x			\$53,230		\$68,134	
Gym AV System	Audio System, no video		x			\$48,363		\$61,905	
Aux Gym AV System	Audio System, no video		x			\$53,838		\$68,913	
Pool AV System	Audio System, large video board		x			\$48,363		\$61,905	
Band/Choir AV systems	Audio System		x			\$0		\$0	
Add telecomm rooms to generator standby	Included in Generator line item. Add circuits from existing generator standby system to telecomm rooms	x				\$0	\$0		
<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$9,926,609</b>	<b>\$8,665,373</b>	<b>\$1,721,646</b>	<b>\$486,679</b>

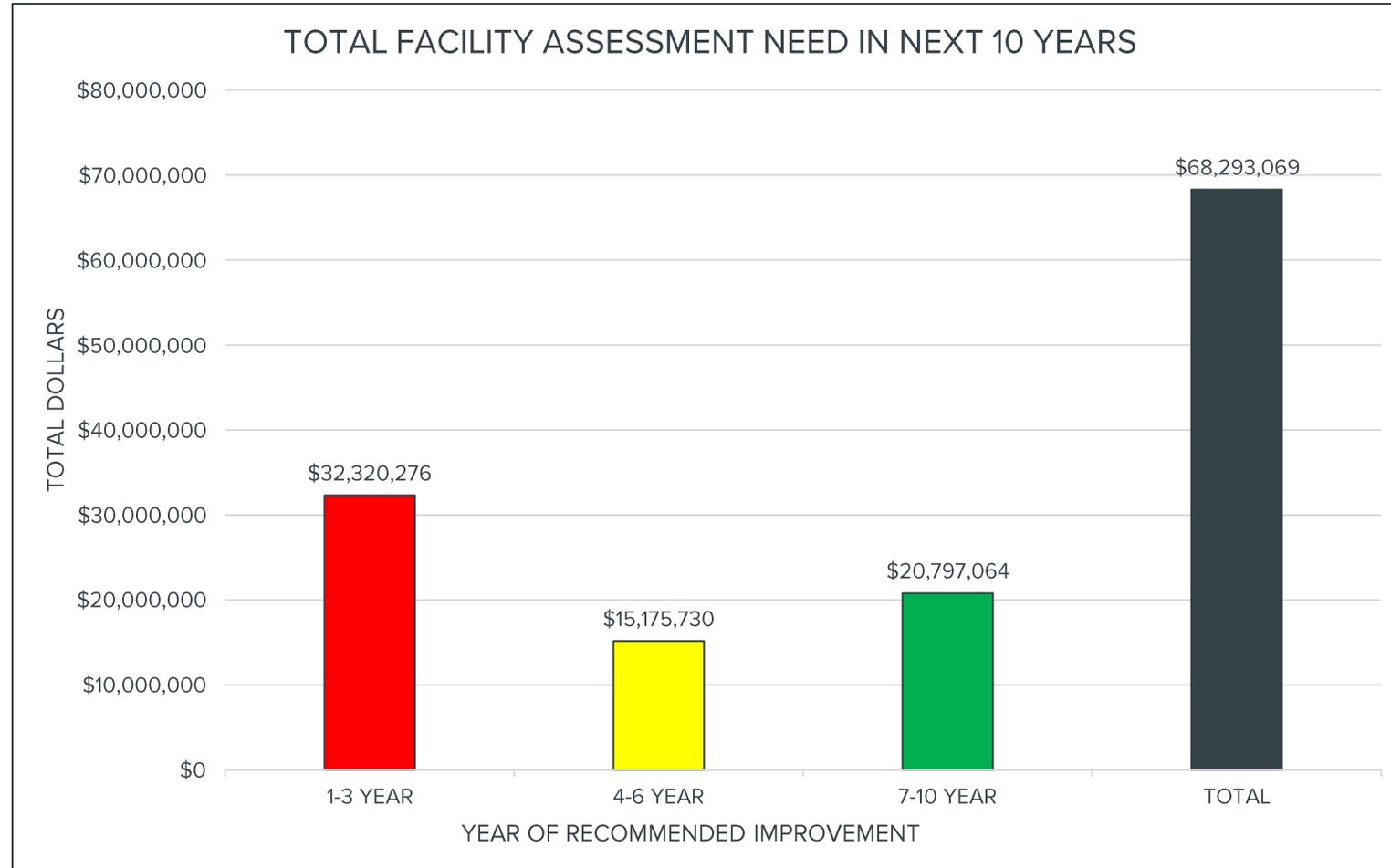


# MIDLAND HIGH SCHOOL

## Midland High School: Overall Cost Review

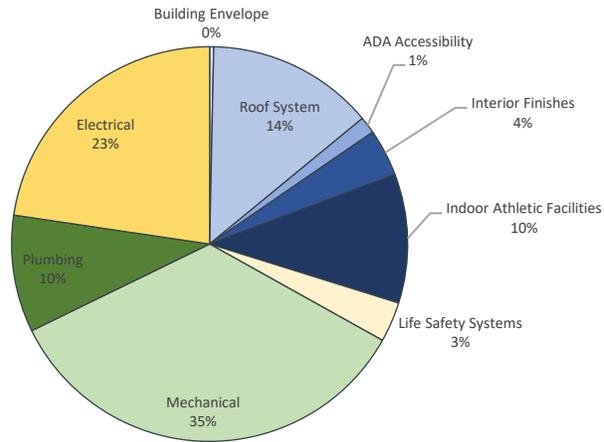
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$228,335	\$0	\$0	\$228,335
Roof System	\$0	\$9,342,893	\$0	\$9,342,893
ADA Accessibility	\$943,759	\$0	\$0	\$943,759
Interior Finishes	\$1,289,663	\$1,354,886	\$3,700	\$2,648,249
Indoor Athletic Facilities	\$7,210,177	\$0	\$0	\$7,210,177
Life Safety Systems	\$0	\$1,555,995	\$686,508	\$2,242,503
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$14,743,455	\$981,700	\$7,937,591	\$23,662,746
Plumbing	\$6,499,566	\$43,606	\$0	\$6,543,172
Electrical	\$1,405,321	\$1,896,650	\$12,169,264	\$15,471,236
<b>TOTALS</b>	<b>\$32,320,276</b>	<b>\$15,175,730</b>	<b>\$20,797,064</b>	<b>\$68,293,069</b>

# Midland High School: Overall Cost Review

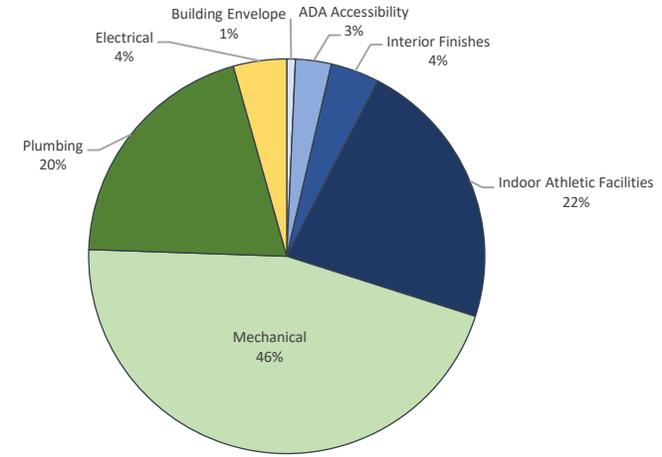


# Midland High School: Overall Cost Review

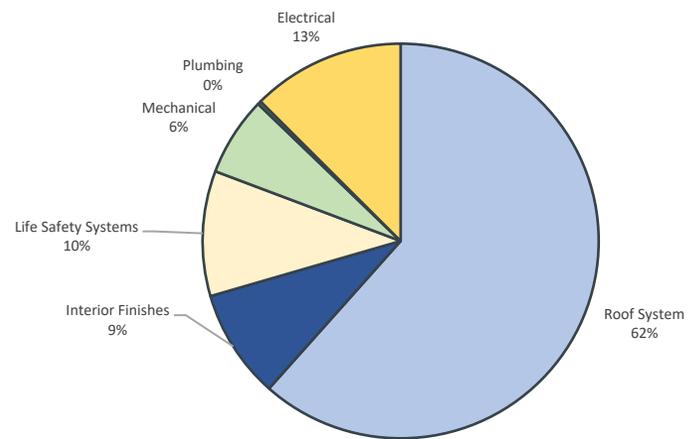
TOTAL NEED BY ASSESSMENT CATEGORY



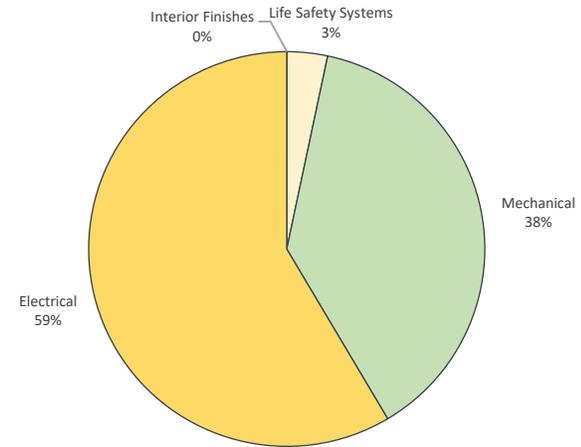
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



## Midland High School: Architectural Summary

Midland High School is one of the district's largest facilities and includes multiple additions and renovations over several decades. Architectural systems reflect this complexity, with newer areas in good condition and older sections approaching or exceeding recommended replacement timelines. Roofing systems vary widely across the building, with several roof areas identified in the assessment tables for near- to mid-term replacement. Exterior windows and doors in older portions are original or near-original and do not meet current performance expectations. Interior finishes in classrooms, locker rooms, and common spaces are significantly dated in many areas and approaching end-of-life. Accessibility improvements are needed in older portions of the building, and legacy layouts limit flexibility for modern instructional programming.



Existing Locker Room Shower



Existing Classroom and Storage



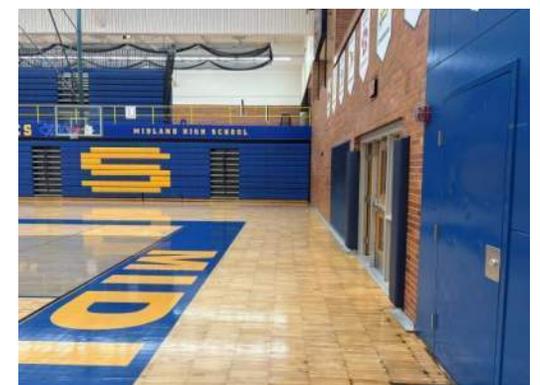
Existing Storage



Existing Casework and Sink



Existing Floor at Entry



Existing Gym

# Midland High School: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick/Masonry	Observed. Previous restoration in past bonds.				x	\$0			
General comment	Observed areas at the maintenance strip masonry weeps could not be found. Front of building					\$0			
General Comment	Areas of lateral movement are present. Observed corner vertical cracking on the portion of the building where brick has been painted (Gymnasium).		x						
General Comment	Observed areas in need of tuck pointing	x				\$38,021	\$39,922		
<b>Exterior / Vestibule Doors</b>									
Aluminum Doors	Observed. Doors in Good condition.				x	\$0			
Note: Aluminum Doors	Caulking needs attention around frames where the entrances are not covered	x				\$30,417	\$31,938		
Exterior Door Hardware	Observed. Good condition				x	\$0			
FRP Doors	Observed. Good condition				x	\$0			
Hollow Metal Doors	Observed. Good condition.			x		\$0			\$0
Exterior Door Hardware	Update hardware for knob hardware	x				\$22,813	\$23,954		
<b>Windows</b>									
Aluminum Windows	A few areas with single pane yet to be replaced	x				\$73,000	\$76,650		

# Midland High School: Building Envelope

### Joint Sealants

Control Joint Sealants	Observed. In need of repair and fill voids where missing	x				\$19,011	\$19,962		
Window/Door Sealants	Masonry joints and caulk needs attention at top and bottom of windows	x				\$15,200	\$15,960		
General Comment	Caulking needed between building and concrete sidewalks	x				\$19,000	\$19,950		

### Exterior Grilles / Louvers

Aluminum Louvers	Observed. Good Condition				x	\$0			
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### Perimeter Maintenance Strip

Wood Fiber Mulch	Removal, regrade, replacement recommended	x				\$0	\$0		
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<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$217,462</b>	<b>\$228,335</b>	<b>\$0</b>	<b>\$0</b>
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# Midland High School: Roof Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
EPDM (Non-Ballasted)	Entire Roof installed in 2005		x			\$7,299,135		\$9,342,893	
<b>Perimeter / Fascia / Soffit</b>									
Metal Coping	Observed in good condition			x		\$0			\$0
<b>Miscellaneous Rooftop Equipment</b>									
Mechanical penthouse	Observed. Needs attention. New door and updating of equipment					\$0			
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$7,299,135</b>	<b>\$0</b>	<b>\$9,342,893</b>	<b>\$0</b>

# Midland High School: ADA Accessibility

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>6.0 ADA Accessibility Assessment</b>									
<b>Interior Accessibility (General)</b>									
Corridor Clearances					x	\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	Wing walls required per code at recently replaced drinking fountains. Allowance per occurrence	x				\$18,250	\$19,163		
<b>Classroom Accessibility</b>									
Doors & Hardware (knobs/levers/panic hardware/closers (general))	some classroom doors and hardware have been recently replaced to update from knob to lever. Applies to door closer hardware as well. Update remaining doors.	x				\$36,500	\$38,325		
Pull/Push Side Clearance	Non-compliant to current ADA code requirements					\$0			
Casework	ADA casework was provided at Science Rooms. Typical classrooms were all original casework to the building					\$0			
<b>Group Restroom Accessibility</b>									
Turning Clearances	Only 1 toilet group room had an ADA accessible stall.					\$0			
Turning Clearances	Both staff bathrooms in the main office do not meet ADA accessible stall requirements					\$0			

# Midland High School: ADA Accessibility

### Elevators, Lifts and Interior Ramps

Elevators/Lifts Present Where Needed	Did not observe stage lift in theater	x				\$68,438	\$71,860		
Elevators/Lifts Sized Appropriately	Observed				x	\$0			
Elevator/Lift Controls Accessible	Observed				x	\$0			

### Subcategory / Area

Locker room Showers	No existing ADA locker room shower (See interior Renovation)	x				\$775,630	\$814,412		
<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$898,818</b>	<b>\$943,759</b>	<b>\$0</b>	<b>\$0</b>

# Midland High School: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 7.0 Interior Finishes Assessment

### Offices / Auxiliary Offices / Support Areas

Walls	Mixture of brick and Drywall.			x		\$0			\$0
Ceiling	Suspended (acoustical ceiling tile). Replace a few Pads)			x		\$2,500			\$3,700
Ceiling comment	Replace plaster & spline tile ceilings	x							
Flooring	Carpet Tiles.			x		\$0			\$0
Base Material	Rubber Base			x		\$0			\$0
Wayfinding	Add additional signage	x				\$9,125	\$9,581		
Signage	Update to ADA standards	x				\$45,625	\$47,906		
Casework	End of life Cycle.	x				\$55,891	\$58,686		
Countertops	End of life Cycle	x				\$21,292	\$22,357		
Built-in (benches/display cases	update	x				\$60,834	\$63,876		
Wall Mounted Visual Display Units	Update	x				\$30,417	\$31,938		
Furniture/Furnishings	Updated. Good condition			x		\$0			\$0
General Comment	Demolish main office Vault (8'x14')	x				\$22,813	\$23,954		
Furniture/Furnishings	Updated			x		\$0			\$0
Staff Bathrooms	In need of refresh (fixtures and ADA clearances/updates). Flooring	x				\$0	\$0		

### Corridors

Walls	Brick				x	\$0			
Ceiling	Suspended (acoustical ceiling tile)				x	\$0			
Flooring	LVT (luxury vinyl tile) Section by Band is poor condition, recommend to replace section with walk-off carpet	x				\$3,650	\$3,833		
Lockers	All new lockers throughout				x	\$0			
Wayfinding	Add signage	x				\$27,375	\$28,744		
Built-in (benches/display cases	Display cases are original to the building.					\$0			

# Midland High School: Interior Finishes

## Restrooms

Walls	Ceramic wall tile				x	\$0			
Flooring	Epoxy Resinous Flooring				x	\$0			
Base Material	Epoxy Resinous Flooring				x	\$0			
Ceiling	Plaster ceilings / Sections with paint peeling should be repaired	x				\$1,900	\$1,995		
Toilet Partitions	HDPE				x	\$0			

## Classrooms

Walls	Painted (concrete block)				x	\$0			
Ceiling	Suspended Acoustical Ceilings				x	\$0			
Flooring	VCT or LVT					\$0			
Casework	Majority of the casework is original. Working but definitely getting tired		x			\$766,505		\$981,126	
Countertops	Plastic Laminate		x			\$292,000		\$373,760	

## Cafeteria

Walls	Exposed (brick)				x	\$0			
Ceiling	Suspended Acoustic				x	\$0			
Flooring	Resinous Flooring				x	\$0			
Furniture/Furnishings	Freestanding furniture				x	\$0			
						\$0			
<b>Servery</b>						\$0			
Walls	Painted glazed block				x	\$0			
Flooring	Resinous				x	\$0			
Ceiling	Suspended Acoustical				x	\$0			
						\$0			
<b>Kitchen</b>						\$0			
Walls	Glazed block				x	\$0			
Ceiling	Suspended ceiling system				x	\$0			
Flooring	Quarry Tile				x	\$0			

# Midland High School: Interior Finishes

## Media Center

Walls	Exposed (brick)				x	\$0			
Ceiling	Suspended Acoustical Ceilings				x	\$0			
Flooring	Carpet tile				x	\$0			

## Theater

Walls	Brick				x	\$0			
Ceiling	Suspended Acoustical Ceilings				x	\$0			
Flooring	VCT. End of lifecycle. Refresh	x				\$51,709	\$54,294		
Furniture/Furnishings	Wood, falling apart. End of lifecycle	x				\$108,300	\$113,715		
ADA seating	No wheel chair platforms	x				\$0	\$0		
Stage sound/control room	Observed. Refresh. No ADA compliant access. Plywood floor, Suspended ceiling, plaster walls.	x				\$91,251	\$95,814		
Theater Equipment	Outdated.	x				\$0	\$0		
Stage Flooring	Refresh. Strip and refinish	x				\$33,459	\$35,132		
Scene Room	Observed. In need of remodel. Block walls exposed concrete ceilings, concrete floors. One 3 fixture sink. No millwork	x				\$399,221	\$419,182		
Drama Classroom	VCT Flooring, Block walls, Suspended Ceiling. Reresh needed	x				\$228,127	\$239,533		
<b>Home Economics</b>									
Walls					x	\$0			
Ceiling	Suspended Acoustical Ceilings				x	\$0			
Flooring	VCT				x	\$0			
Casework	Plastic Laminate				x	\$0			
Furniture/Furnishings	Freestanding tables. Very old and dated but solid					\$0			

# Midland High School: Interior Finishes

## Band / Orchestra / Choir

Walls	Painted (drywall)				x	\$0			
Ceiling	Suspended Acoustical Ceiling with sound diffusers				x	\$0			
Flooring	VCT				x	\$0			
Casework	Wood				x	\$0			
Countertops	Plastic Laminate				x	\$0			
Acoustic treatments	Frabric wrapped				x	\$0			
						\$0			
						\$0			
<b>Athletic Offices</b>						\$0			
Flooring	VCT				x	\$0			
Walls	Painted drywall				x	\$0			
Ceiling	Suspended Acoustical Ceilings				x	\$0			
Door hardware	Knob hardware	x				\$19,011	\$19,962		

## Industrial Tech & Shop Area

<b>Wood Shop</b>						\$0			
Walls	Painted masonry block - some movement noticed					\$0			
Ceiling	Painted exposed structure					\$0			
Flooring	Exposed concrete					\$0			
Windows	Single Pane	x				\$0	\$0		

## Vestibules

Flooring	Main entrance Ceramic tile flooring cracked at recent addition line. Budget to remove flooring and install isolation.	x				\$18,250	\$19,163		
Walls	Exposed (brick)				x	\$0			
Flooring	Ceramic Tile good condition (replace only area that is cracked at transition)				x	\$0			
Ceiling	Suspended (acoustical ceiling tile)				x	\$0			

<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						#REF!	\$1,289,663	\$1,354,886	\$3,700
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# Midland High School: Indoor Athletic Facilities

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>8.0 Indoor Athletic Facilities Assessment</b>									
<b>Competition Gymnasium</b>									
Court Surface	Wood. End of LifeCycle. Observed cupping and loose boards	x				\$703,950	\$739,148		
Doors	Observed. Good Condition				x	\$0			
Bleachers	Observed. Good Condition				x	\$0			
Ceilings	Observed. Good Condition				x	\$0			
Scoreboards	Observed. Good Condition				x	\$0			
Retractable Goals	Updated. Good Condition				x	\$0			
General Comment	Update Gym Lobby existing tile flooring	x				\$73,000	\$76,650		
<b>Auxiliary Gymnasium</b>									
Court Surface	Observed. Good condition recent addition				x	\$0			
Doors	Laminate cracking Replace Double Doors (doors only, frame good)	x				\$9,885	\$10,379		
<b>Gym Mezzanines/Wrestling</b>									
Flooring	Parquet wood flooring				x	\$0			
Walls	Exposed brick and painted masonry				x	\$0			
Ceiling	Painted exposed structure and longspan metal deck				x	\$0			
Bleachers	Reverse operable				x	\$0			
<b>Wiegth/Training room</b>									
General Comment	Observed. Good Condition. Recent Addition				x	\$0			

# Midland High School: Indoor Athletic Facilities

## Locker Rooms

Floor Surface	Epoxy over Existing tile in locker area				x	\$0			
Floor Surface	Showers and other areas. Need Demo and replace	x				\$0	\$0		
Doors & Hardware	Update doors and hardware. Budget within SF renovation cost	x				\$0	\$0		
Paint	Painted ceilings (plaster and exposed concrete)				x	\$0			
Benches	Locker benchers in good condition				x	\$0			
Lockers	Good condition (look to be replaced recently)				x	\$0			
Restroom Fixtures	End of life cycle	x				\$0	\$0		
Restroom Partitions	Good condition				x	\$0			
Walls	Ceramic tile. Could use a refresh. End					\$0			
General Note	Locker rooms (Note: Girls & boys) could use a complete refresh. Showers need to be brought up to ADA standards and current codes. Some Salvageable items above. Square foot area includes areas: Shower, store rooms, lockers, Team room, Basket room, Toilet, corridors	x				\$6,080,000	\$6,384,000		
<b>8.0 Indoor Athletic Facilities Assessment SUBTOTAL</b>						<b>\$6,866,835</b>	<b>\$7,210,177</b>	<b>\$0</b>	<b>\$0</b>

# Midland High School: Life Safety Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Adequate Corridor Widths					x	\$0			
Clear/Defined Egress Paths					x	\$0			
Clear Lines of Site at Building Perimeter					x	\$0			
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Fire protection is recommended for life-safety considerations; building is not currently sprinkled. Estimated system cost shown here for district planning purposes; building can also be portioned and separated to meet fire codes as it currently is.					\$2,354,544			
<b>Emergency Lighting / Power</b>									
Emergency Generator	Emergency Lighting (interior & exterior) is powered by the generator on a dedicated NEC 700 distribution system. Recommend adding optional standby NEC 703 distribution system for telecom, HVAC, food service, and other building loads			x		\$0			\$0
<b>Emergency Alarm Systems</b>									
Fire Alarm Control Panel	National Time & Signal 902 Series located in office, annunciator in Reception area. Upgrading to a panel with voice communication will be required in the future.		x			\$1,215,621		\$1,555,995	
Horns/Strobes	Coverage appeared to be adequate, upgrade to speaker/strobes will be required in the future. (Building sqft)		x			\$0		\$0	

# Midland High School: Life Safety Systems

### Access Control / Intrusion Detection

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

### Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$463,857			\$686,508
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$4,034,022</b>	<b>\$0</b>	<b>\$1,555,995</b>	<b>\$686,508</b>
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# Midland High School: Food Service

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>10.0 Food Service Assessment</b>									
<b>Food Service Equipment</b>									
General Comment	All appears to be newer in great condition				x	\$0			
<b>10.0 Food Service Assessment SUBTOTAL</b>						\$0	\$0	\$0	\$0

# Midland High School: Mechanical Summary

Mechanical and plumbing systems at Midland High School are varied in age and condition, with significant replacement or upgrades to be considered. The separate steam and hot water plants are both approaching end of life, and consideration should be given to consolidation into one heating hot water system with improved efficiencies and maintenance. Air handling equipment including unit ventilators and air handling units is approaching or past its useful life, creating an opportunity to start converting the building to modern hot water heating technologies. Some improvements have been made through replacement of select air handling units and rooftop equipment. Infrastructure needs center on replacement of aging piping and ductwork systems still in use in the building. Plumbing infrastructure needs are similar, with domestic, sanitary, and storm system piping at or past its useful life, while plumbing equipment is in generally acceptable condition. Similar to the remaining high schools and middle schools in the district, a considerable amount of plumbing and mechanical scope should be accounted for to create reliable and efficient modern systems.



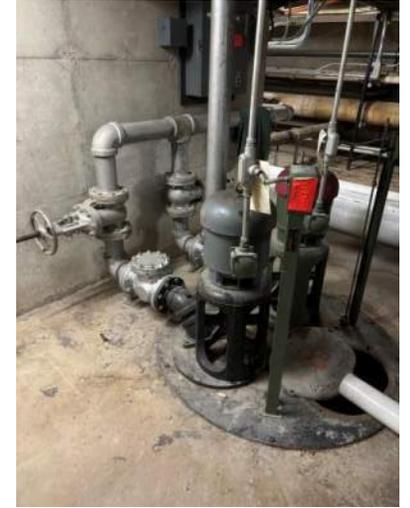
Existing Boiler Plant



Existing Chiller



Existing Piping



Existing Sump Pumps



Existing Woodshop Ventilation



Existing Unit Ventilator



Existing Plumbing Fixtures



Existing AHUs

# Midland High School: Mechanical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Smith high efficiency cast iron steam boilers installed in 2012. Boilers are in decent condition. Life expectancy for cast iron boilers can be 30+ years, though efficiencies from steam system and equipment are low. <u>Recommend replacing with full new condensing hot water boiler system.</u>			X		\$606,817			\$898,089
Boiler Plant Accessories	New boiler feedwater tank and pumps installed in 2012 and in decent condition. Existing condensate receiver pump updated/repared though tank appears to be original.			X		\$91,251			\$135,051
Boilers	(2) Aerco Benchmark condensing boilers installed in 2012 units are in decent condition. Anticipated life expectancy of these units is approximately 20 years. Heating hot water system serves small portions of renovated building including the music suite. System is a 2-pipe system with seasonal changeover.			X		\$378,690			\$560,461
Boiler Plant Accessories	Boiler plant accessories installed in 2012; air separator and expansion tank are in good condition, circulating pumps are in decent condition but will be due for replacement at a similar time as the boilers.			X		\$28,600			\$42,328
Heat Exchangers	Small heat exchanger system installed in 2005 to serve heating hot water to terminal reheat and perimeter heating equipment is in decent condition. Inline pumps (Qty. 2) will be approaching end of useful life in 5-10 years.			X		\$94,292			\$139,552

## Midland High School: Mechanical Systems

### Building Cooling Equipment

Chillers	450 ton centrifugal water-cooled chiller installed in adjacent service/storage space. Unit was installed in 2011 and is in good condition. Anticipated life if well maintained is 25-30 years.				X	\$0			
Cooling Towers	Marley crossflow cooling tower, open-circuit, installed in 2011, is in decent condition. Interior remote concrete sump basin installed in basement boiler room. Condenser/tower pump is installed in the same year and in fair condition. Anticipated life if well maintained is 15-25 years.			X		\$260,064			\$384,895
Cooling Plant Accessories	Plant accessories installed with creation of cooling plant in 2011, including expansion tank, air separator, and pumps. Accessories in good condition, though pump and motor condition is fair and approaching end of anticipated life. Only (1) distribution pump is installed, limiting redundancy.			X		\$144,480			\$213,830
Refrigerant Condensers	(40) ton air cooled condensing unit serving weight room air handling unit is in fair condition and was installed in 2005. Anticipated lifetime is 20-25 years, and indoor unit will need to be replaced at the same time due to refrigerant code updates.		X			\$90,642		\$116,022	
Refrigerant Condensers	Misc. split DX condensing units added in 2009 and 2012 for select unit ventilators; in decent condition but would recommend replacement with unit ventilators.			X		\$189,497			\$280,456
Refrigerant Condensers	(15) ton condensing unit installed in 2006 is failing at end of expected useful life of 20-25 years; needs replacement. Individual components have failed recently such as a compressor. Condensing unit replacement will require replacement of AHU per latest refrigerant code changes.	X				\$40,454	\$42,477		

# Midland High School: Mechanical Systems

## Heating / Cooling Piping

Steam & Condensate Piping and Pumps	Steam and condensate piping is original to the building with selective portions replaced as required. Building mains are routed in tunnels which have some limited ventilation. Some expansion fitting/joints/loops have been replaced while others are original and in poor condition. Life expectancy of piping like this is 40-60 years if well-maintained; current piping is in poor condition and in need of replacement.	X				\$8,015,424	\$8,416,195		
Hydronic Piping	Hydronic piping appears to be installed for building additions in the 2000s. Piping is in fair condition and can be expected to last 50-75 years if well maintained.				X	\$0			
Steam & Condensate Piping and Pumps	Condensate receiver tanks and pumps are scattered throughout the building, several are located in the tunnels. Units are in poor condition and in need of replacement.	X				\$76,042	\$79,844		

## Building HVAC Air Distribution System / Equipment

VUV/HUV Units	Majority of interior courtyard classroom unit ventilators installed in 2009 during Phase II renovations to the exterior façade. Units are in decent condition with an expected useful life of approximately 20-25 years.			X		\$1,089,076			\$1,611,832
VUV/HUV Units	Wall-hung vertical unit ventilators in wood shop are in poor condition and in need of replacement.	X				\$105,394	\$110,664		
Air Handling Units	Air handling unit located in woodshop serving adjacent classrooms is in poor condition and in need of replacement, original to 1965 installation. Unit is single zone but serving multiple classrooms.	X				\$110,033	\$115,535		
Air Handling Units	Air handling units in mezzanine work serving auxiliary gym and weight room were installed in 2005; split DX cooling for one unit. Units are in decent condition, anticipated life of 25-30 years. Weight room unit includes small VAV system with terminal reheat boxes (8 total) in good condition.			X		\$1,023,072			\$1,514,147

## Midland High School: Mechanical Systems

Air Handling Units	Heating-only ventilation units serve main gymnasium and lockers and are original to their 1960s installation. Units are well beyond useful life and in poor condition, needing replacement. Units originally designed for (21,200 CFM) each for gymnasium, 6 total units, and for (12,000 CFM) each for lockers, 2 total units.	X				\$3,748,576	\$3,936,005		
Rooftop Exhaust Fans	Penthouse relief / fresh air system installed to serve main gymnasium and associated air handling units; gym return fans are sized for 21,200 apiece. Would recommend modification or complete removal of this system when gym air handling units are replaced.	X				\$81,213	\$85,274		
Rooftop Units	Rooftop unit installed 2010 to serve second floor computer classroom; unit is in fair condition but approaching end of expected 15-20 year life.		X			\$87,144		\$111,544	
Rooftop Units	Rooftop unit installed 2001 serving classroom is beyond anticipated life of 15-20 years and in poor condition, would recommend replacement. Approximate unit size of 3 tons.	X				\$79,540	\$83,517		
VUV/HUV Units	Remaining classroom unit ventilators installed in 2012 during Phase III of renovations to the exterior façade. Units are in decent condition, expected useful life of approximately 20-25 years.			X		\$834,156			\$1,234,551
Rooftop Exhaust Fans	Greenheck fume hood exhaust fans are in excellent condition, installed in 2020 during recent bond renovations.				X	\$0			
VUV/HUV Units	Vertical unit ventilators replaced in 2011 during cooling renovations have hot water heating and chilled water coils; units are in decent condition, expected useful life of approximately 20 years. Outside air is ducted to roof.			X		\$245,920			\$363,962
VUV/HUV Units	Vertical unit ventilators installed in 1998 science technology addition are in fair condition but at end of useful life, would recommend replacement.	X				\$140,526	\$147,552		
VUV/HUV Units	Classroom unit ventilators installed in late 2000s during Phase I of renovations to the exterior façade. Units are in fair condition, expected useful life of approximately 20-25 years.		X			\$562,096		\$719,483	

## Midland High School: Mechanical Systems

Air Handling Units	York multi-zone air handling unit in basement, original to building construction (1972) and in poor condition, serving main office area. Split DX cooling. Would recommend replacement. (5500 CFM)	X				\$170,487	\$179,011		
Rooftop Units	Daikin rooftop units installed during the recent bond work serving the metal shop and welding areas are in good condition.				X	\$0			
Air Handling Units	SZVAV air handling units installed in 2005 to serve music suite addition are in decent condition. Expected useful life is 25-30+ years for this equipment if well maintained. Cooling is provided by split DX condensing units on roof. (5015 CFM) (4045 CFM)			X		\$296,717			\$439,141
Air Handling Units	Air handling units in basement replaced with new Daikin units in recent bond work and are in good condition. There are several multizone units; current codes restrict the use of multizone units for anything other than direct replacement only.				X	\$0			
Rooftop Exhaust Fans	Numerous exhaust fans are still original to the building, installed on roof and in poor condition. Approximate qty of original units for replacement listed here.	X				\$473,743	\$497,430		
HVAC Ducts	Supply/return/exhaust air ductwork is largely original to the building (now 60+ years old); life expectancy is typically 25-30 years but can reach 50 years if well maintained. At this age, issues with duct sealing and insulation decay decrease efficiency and potential water or corrosion issues start to occur. Would recommend installation of new ductwork for all associated air handling systems (AHU, RTU, & EF systems) in original building areas from 1950s and 1960s.	X				\$473,743	\$497,430		
Air Handling Units	Air handling unit in basement still original to building construction (1950s) and in poor condition, recommend replacement.	X				\$130,184	\$136,693		

## Midland High School: Mechanical Systems

### Terminal Heating / Cooling Equipment

Split Systems	Split system AC / CU installed to serve MDF room on second floor; unit is in fair condition but approaching end of life. Expected life of 15-20 years.		X			\$27,071		\$34,651	
Fan Coil Units	Ceiling fan coil unit cassettes with split DX cooling installed in 1998 are in fair condition but beyond expected useful life. Recommend replacement.	X				\$49,275	\$51,739		
Cabinet Unit Heaters	Unit heaters and cabinet unit heaters are original to the date of installation. Several newer units have been installed in 2000s additions and are in good condition. Many original unit and cabinet unit heaters remain, approximate qty. listed.	X				\$180,676	\$189,710		
Convectors	Original convectors still installed in building are at end of useful life, would recommend replacement with finish upgrades.	X				\$72,392	\$76,012		
Split Systems	Split systems added for cooling in classrooms on north building addition adjacent wood shop; wall cassettes are in good condition and twinned to one condensing unit.				X	\$0			
Finned Tube Heaters	Radiant ceiling panels installed in 2005 are in fair condition.			X		\$80,605			\$119,295

# Midland High School: Mechanical Systems

## Miscellaneous HVAC Systems / Equipment

Air Compressors	Air compressors in basement boiler room serve various lab spaces through the building with compressed air. Units are in poor condition and would recommend replacement.	X				\$57,792	\$60,682		
Dust Collectors	Brand new Donaldson dust collector, installed in 2025 for wood shop, is in excellent condition.				X	\$0			
Specialty Classrooms	Life Skills - Existing ranges do not have hoods, will be required to meet current code.	X				\$32,850	\$34,493		
Specialty Classrooms	Welding and metal shop areas have been recently renovated with new rooftop equipment and new source capture exhaust equipment / new exhaust fans. Equipment is in good condition.				X	\$0			
Specialty Classrooms	Dust collection ductwork recently updated and in good condition.				X	\$0			
Specialty Classrooms	Kitchen dryer machine is not vented to the exterior and does not meet code. Would recommend additional venting to meet current building codes.	X				\$3,042	\$3,194		
Air Compressors	Quincy air compressor installed in approximately 2018 is in good condition. Unknown service; located in gym air handling unit room.				X	\$0			
<b>11.0 Mechanical Assessment SUBTOTAL</b>						<b>\$20,171,576</b>	<b>\$14,743,455</b>	<b>\$981,700</b>	<b>\$7,937,591</b>

# Midland High School: Plumbing Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Aerco Benchmark condensing boiler installed 2012 utilized for domestic hot water heating; unit has storage tank and master mixing valve that has recently been replaced (would recommend insulating portions of exposed copper piping). System is in good condition.				X	\$0			
Domestic Water Piping	Generally original to year of construction (1950s-1960s). Original building piping has significant portions of galvanized piping that are corroding and breaking down, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained, and for copper systems (newer building additions) the life expectancy is 50-60 years. System is in need of replacement.	X				\$2,395,329	\$2,515,095		
Domestic Water Piping	Master mixing valves are located in walkable tunnels and have recently been replaced.				X	\$0			
Domestic Water Supply	Storage tank is in good condition and appears to be installed in 2012 with other equipment upgrades. Tank should have at least 30+ years if well maintained.				X	\$0			
Domestic Water Heater	Atmospheric domestic water heater installed in 2005 to serve aux gym/weight room addition is in fair condition but approaching end of useful life of 15-20 years; would recommend replacement.		X			\$34,067		\$43,606	

## Midland High School: Plumbing Systems

### Sanitary Sewer System / Equipment

Sanitary Waste & Vent Piping	Piping is original to year of building construction, with a large portion of the building built in the 1950s and early 1960s. Piping is beyond expected useful life of 50-75 years (if well maintained) and replacement is recommended. District has recently had issues with clogs and sanitary piping failures.	X				\$2,395,329	\$2,515,095		
Sanitary Waste & Vent Piping	Duplex sump/bilge pumps installed in basement appear to be original to building construction with repairs made as needed; units are in poor condition and would recommend replacement.	X				\$41,063	\$43,116		

### Storm Drainage System / Equipment

Storm Drainage Piping	Generally original to year of construction (1950s & 1960s). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. Systems do not have overflow drains; if any roof work additional overflow drains & associated piping and discharge downspouts will be required to bring system up to code.	X				\$1,140,633	\$1,197,665		
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement.					\$0			

# Midland High School: Plumbing Systems

## Plumbing Fixtures

Water Closets	Water closets and urinals are generally original to the time of building construction and in fair condition. Select units have had flush valve replacements, particularly in group toilet rooms. Would recommend replacement of all water closets and urinals with new low flow fixtures and sensed flush valves.	X				\$134,367	\$141,085		
Lavatories & Sinks	Select lavatories have been replaced in group restrooms in recent bond work. Single-occupant toilet room lavatories and classrooms sinks are generally original to the building. Would recommend replacement of remaining lavatories with new low-flow faucets.	X				\$83,342	\$87,509		
Electric Water Coolers & Drinking Fountains	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district. New units are in good condition.				X	\$0			
<b>12.0 Plumbing Assessment SUBTOTAL</b>						<b>\$6,224,130</b>	<b>\$6,499,566</b>	<b>\$43,606</b>	<b>\$0</b>

# Midland High School: Electrical Summary

Electrical systems at Midland High School are generally functional but aging across much of the building. Power distribution equipment includes older panelboards and feeders identified for replacement based on age and capacity limitations. Interior lighting systems are a mix of newer and older fixtures retrofitted with LED lamps, with many areas lacking modern lighting controls and falling short of current energy standards. Emergency lighting and life-safety systems are operational but nearing end-of-life. Technology infrastructure needs improvement, with much of the equipment approaching end of useful life and needing updating. Large spaces are in need of AV system updates. Electrical upgrades are identified as necessary to support safety, efficiency, and instructional requirements.



Existing Transformers



Existing Transformers



Existing Electrical Gear



Existing Generator



Existing IT



Existing Fire Alarm



Existing Technology



Existing PA

# Midland High School: Electrical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	Appear to be corn cob retrofits		x			\$0			
Building Exterior Lighting	Soffit lighting at building entrances with LED retrofits, various wall packs		x			\$0			
<b>Power Distribution &amp; Control Equipment</b>									
Interior Transformers	2004 Cutler Hammer (ABB) 1000KVA 8320 / 480 delta 2004 Cutler Hammer (ABB) 500KVA 8320 / 208Y120V			x		\$212,918			\$315,119
Medium Voltage Distribution	2004 Cutler Hammer Metal Clad Switchgear			x		\$302,169			\$447,210
Switchboards	2004 Eaton Cutler Hammer 1200A 480V 3W 2004 Eaton Cutler Hammer 1600A 208V 4W			x		\$339,909			\$503,065
Distribution Panelboards	1999-2005 SQD Iline			x		\$50,188			\$74,278
Interior Transformers	smaller dry type transformers			x		\$281,357			\$416,408
Panelboards	Older than 2003	x				\$230,864	\$242,407		
Panelboards	2003 or newer			x		\$671,605			\$993,975
Automatic Transfer Switch	Old Kohler ATS Life Safety	x				\$17,794	\$18,684		
Generator	Old Kohler 30kW Natural Gas, indoors	x				\$71,480	\$75,054		
Electrical Receptacles & Devices	Classrooms have surface raceway front and back for receptacles, classrooms appear to all have ample receptacles, science rooms have ample power in lab tables (classroom sqft)			x		\$289,569			\$428,562

# Midland High School: Electrical Systems

## Interior Lighting

Interior Lighting Fixtures	All spaces have been retrofitted with LED lamps, light fixture replacements suggested to follow other renovation scope (entire building sqft)			x		\$4,938,351			\$7,308,759
Lighting Controls	Line voltage occupancy sensors in corridors and classrooms, classroom controls do not meet current energy codes, lighting controls scope suggested to follow other renovation scope (entire building sqft)			x		\$0			\$0
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in lighting fixture sqft)				x	\$0			
Theatrical Lighting	Antiquated theatrical lighting in theater	x				\$228,127	\$239,533		

## Communications

Communications Room/Cooling	MDF has cooling, some IDFs have cooling			x		\$0			\$0
Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDFs			x		\$85,167			\$126,047
Structured Cabling	CAT6 observed (entire building sqft)			x		\$1,039,076			\$1,537,832

## Telephone, Paging, Signaling & Clock Systems

Clock System	National Time & Signal, some rooms not functioning	x				\$790,136	\$829,643		
Public Address/Intercom System	Carehawk, RingCentral Paging Adapter		x						

# Midland High School: Electrical Systems

## Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$288,960		\$369,869	
Wireless Access Points	Ruckus (primarily R720)		x			\$259,152		\$331,715	
Classroom Audio System	Lightspeed 955 (per classroom)		x						
Classroom Video System	Direct HDMI to Epson Projector & manual pull down screen (per classroom)		x			\$723,922		\$926,620	
Media Center AV System	Crestron based system w/ large format projection screen and supplemental monitors		x			\$53,230		\$68,134	
Gym AV System	Audio System, no video		x			\$54,750		\$70,080	
Aux Gym AV System	Audio System, no video		x			\$56,119		\$71,832	
Band/Choir AV systems	Audio System		x			\$45,625		\$58,400	
Add telecomm rooms to generator standby	Add circuits from existing generator standby system to telecomm rooms	x				\$0	\$0		
<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$11,042,635</b>	<b>\$1,405,321</b>	<b>\$1,896,650</b>	<b>\$12,169,264</b>



Midland Public Schools

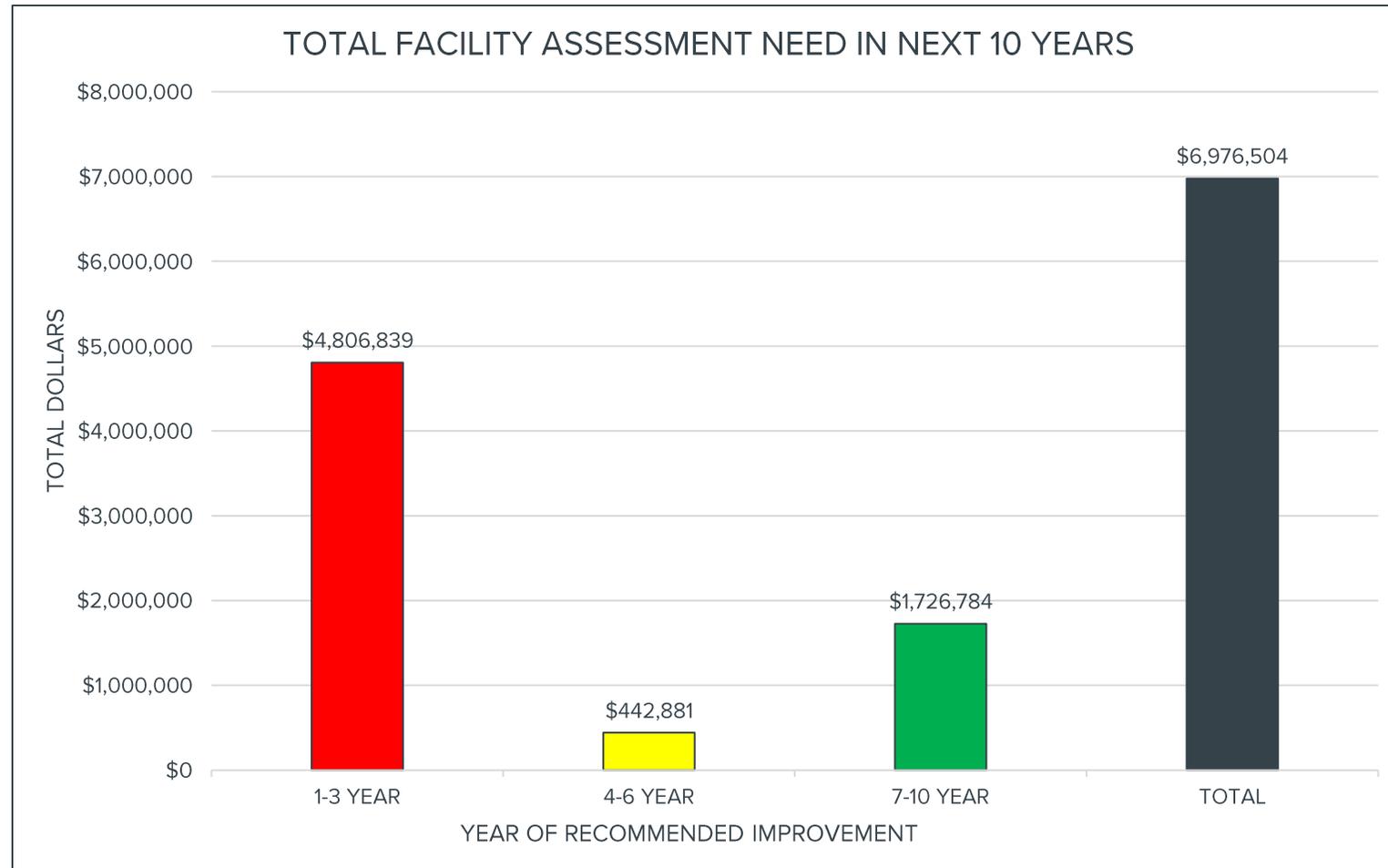
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CENTRAL AUDITORIUM

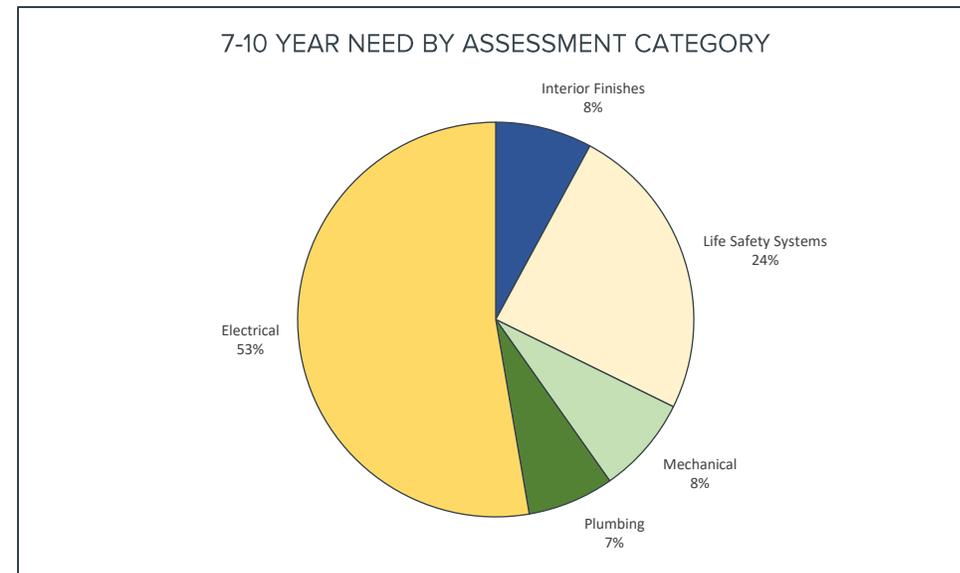
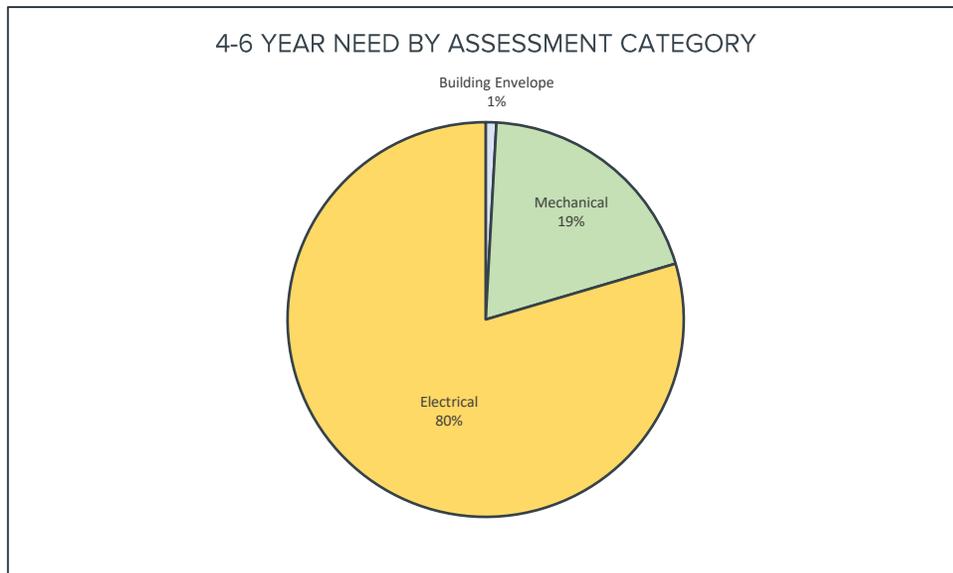
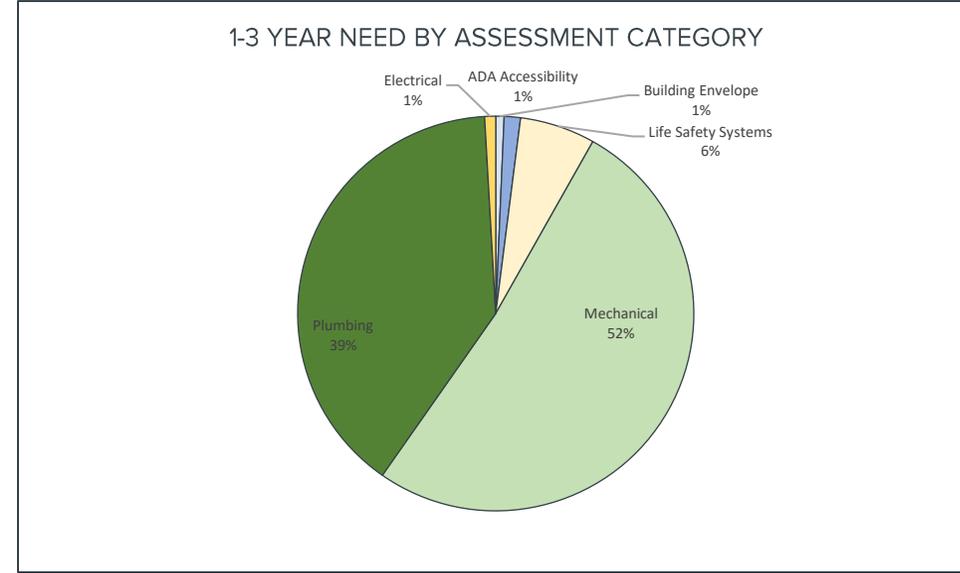
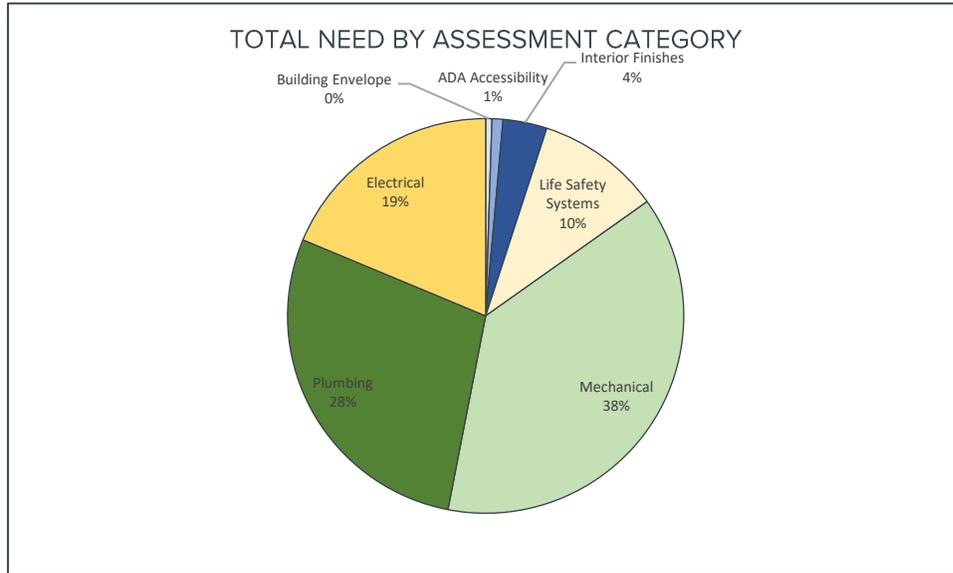
## Central Auditorium: Overall Cost Review

BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$31,937	\$3,854	\$0	\$35,791
Roof System	\$0	\$0	\$0	\$0
ADA Accessibility	\$62,279	\$0	\$0	\$62,279
Interior Finishes	\$114,177	\$0	\$136,176	\$250,353
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$288,698	\$0	\$421,338	\$710,036
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$2,418,860	\$86,630	\$137,301	\$2,642,791
Plumbing	\$1,848,732	\$0	\$121,794	\$1,970,525
Electrical	\$42,158	\$352,397	\$910,175	\$1,304,729
<b>TOTALS</b>	<b>\$4,806,839</b>	<b>\$442,881</b>	<b>\$1,726,784</b>	<b>\$6,976,504</b>

## Central Auditorium: Overall Cost Review



# Central Auditorium: Overall Cost Review



## Central Auditorium: Architectural Summary

The Central Park Auditorium is a specialized assembly space that remains structurally sound but exhibits some age related issues for a building of its vintage. Overall the building has been well maintained, however, there are some components which could better improve the facility quality – including roofs, brick repair and misc. updates throughout. Items that would benefit from replacement have been identified in the assessment which could improve functionality and patron experience. Accessibility deficiencies are noted in seating areas, entries, and support spaces, indicating a need for ADA-related upgrades.



Existing Entry



Existing Room



Existing Sills



Existing Exterior Brick, Lintels,  
and Lighting



Existing Interior Door

# Central Auditorium: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years <small>Escalation Factor = 1.05</small>	4-6 Years <small>Escalation Factor = 1.28</small>	7-10 Years <small>Escalation Factor = 1.48</small>
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick/Masonry	Brick has been stained. However, there are areas where water infiltration is ongoing, especially around Door #6.	x				\$7,604	\$7,984		
Metal Panel	Areas could be cleaned, although not required.				x	\$0			
DEIFS	Soffit at Door #5 is weathered and cracking		x			\$3,011		\$3,854	
Limestone sill (Select Drop-down or Overwrite)	Failed at outside corner window of the Mechanical Room	x				\$11,406	\$11,976		
						\$0			
<b>Exterior / Vestibule Doors</b>									
FRP Doors					x	\$0			
<b>Windows</b>									
Aluminum Windows					x	\$0			
<b>Joint Sealants</b>									
Control Joint Sealants	Some sealants are failing at control joints and should be removed, cleaned and new installed to help mitigate water infiltration.	x				\$11,406	\$11,976		
<b>Exterior Grilles / Louvers</b>									
Aluminum Louvers					x	\$0			
<b>Perimeter Maintenance Strip</b>									
No maintenance strip						\$0			
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$33,427</b>	<b>\$31,937</b>	<b>\$3,854</b>	<b>\$0</b>

# Central Auditorium: Roof Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
EPDM (Non-Ballasted)	Installed in 2005. 15 year warranty ended in 2020.	x				\$1,558,800			
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$1,558,800</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Central Auditorium: ADA Accessibility

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 6.0 ADA Accessibility Assessment

### Exterior Accessibility

General Comment	Generally good accessibility observed.				x	\$0			
Parking Lot Signage	Observed in good condition.				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed in good condition but requiring annual maintenance.				x	\$0			
Curb Cuts	Observed with poor transition from asphalt to sidewalks.				x	\$0			
Tactile Warning Strips	Observed.				x	\$0			
Exterior/Exits	Observed with good ADA accessibility but recommend adding ADA auto operators at main entrance.	x				\$45,625	\$47,906		

### Interior Accessibility (General)

General Comments	Generally good accessibility but door closers do not provide appropriate head clearances for the visually impaired. This is observed at the main entrance area with very old door hardware observed. Recommend removal and replacement of closers.	x				\$13,688	\$14,372		
Interior Building Signage (general)	Generally acceptable with grandfathered condition.				x	\$0			
Corridor Clearances	Good clearance observed throughout the building.				x	\$0			
Doors & Hardware (knobs/levers/panic hardware/closers (general))	A mix knob hardware observed throughout the building and some lever handles. Recommend replacing old hardware. See interiors.	x				\$0	\$0		
Pull/Push Side Clearances	There are several rooms that don't have appropriate side clearance at entrances. This condition is grandfathered but future renovations should budget for addressing code compliance.				x	\$0			

# Central Auditorium: ADA Accessibility

## Group Restroom Accessibility

General Comment	Newly renovated group restrooms meeting ADA standards. Some of the older bathrooms are non compliant.				x	\$0			
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Lever handles at newly renovated areas.				x	\$0			
Pull/Push Side Clearance	Adequate side clearance at newer bathrooms.				x	\$0			
Turning Clearances	Compliant.				x	\$0			
Plumbing Fixtures (water closets)	Observed in good condition.				x	\$0			
Lavatory Insulation/Shields	Observed in good condition.				x	\$0			
Accessories	Observed in good condition.				x	\$0			

## Elevators, Lifts and Interior Ramps

Elevators/Lifts Present Where Needed	Observed.				x	\$0			
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<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$59,313</b>	<b>\$62,279</b>	<b>\$0</b>	<b>\$0</b>
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## Central Auditorium: Interior Finishes

### Classrooms

Walls	Painted drywall and block observed in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings observed in good condition.				x	\$0			
Flooring	LVP or carpet tile observed in good condition.				x	\$0			

### Auditorium

General Comment	Older auditorium in good condition.				x	\$0			
Walls	Wood panels in good condition.				x	\$0			
Ceiling	Painted plaster in good condition.				x	\$0			
Flooring	Carpeting observed in good condition.				x	\$0			
Furniture/Furnishings	Theater seating observed in good condition.				x	\$0			
Stage Curtains	Observed in good condition.				x	\$0			

### Band / Orchestra / Choir

Walls	Painted block observed in good condition.				x	\$0			
Ceiling	Suspended acoustical ceilings observed in fair condition. Beginning to show signs of rusting and approaching end of useful life.			x		\$92,011			\$136,176
Flooring	LVP tile observed in good condition.				x	\$0			

### General

General Comment	Musty smell present at one of the larger collaboration rooms at the second level. Suspected water leak at the roof and water infiltration into walls and finishes. Budget to remediate this condition and repair.	x				\$76,042	\$79,844		
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<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						<b>\$200,751</b>	<b>\$114,177</b>	<b>\$0</b>	<b>\$136,176</b>
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# Central Auditorium: Life Safety Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Knox Box	Did not locate				x	\$0			
Clear Lines of Site at Building Perimeter	Observed to be adequate				x	\$0			
AED/Location	Observed at Main Entry				x	\$0			
Adequate Corridor Widths	Observed adequate. Recommend removing obstructions to allow for clear path of egress in some areas				x	\$0			
Adequate Corridor Widths	Observed adequate. Recommend removing obstructions to allow for clear path of egress in some areas				x	\$0			
Clear/Defined Egress Paths	Observed adequate. Recommend removing obstructions to allow for clear path of egress in some areas				x	\$0			
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Fire supply main located in scene shop with fire pump and riser located in mezzanine; equipment is in fair condition. Based on zones building appears to be partially sprinkled for selective areas. Provisions should be made for pump replacement based on equipment age.					\$652,089			
Fire Alarm Panels/Locations	Observed main panel located in lounge. Did not locate auxiliary annunciator panel at or near main entrance/Lobby/main office	x				\$274,950	\$288,698		
Smoke/Heat Detectors	Observed to be adequate				x	\$0			
Dry-system Monitoring	N/A					\$0			
Fire Extinguishers/Cabinets	Observed to be adequate				x	\$0			

# Central Auditorium: Life Safety Systems

### Emergency Lighting / Power

Emergency Generator (what areas are covered?)	Emergency Lighting (interior & exterior) is powered by the generator on a dedicated NEC 700 distribution system. Recommend adding optional standby NEC 703 distribution system for telecom			x		\$0			\$0
Emergency Lighting/Power Source	Observed Adequate				x	\$0			
Exit Signs/Power Source	Observed Adequate				x	\$0			

### Emergency Alarm Systems

Fire Alarm Control Panel	National Time & Signal 901 Series with Voice Evac				x	\$0			
Speaker Strobes	Coverage appears to be adequate				x	\$0			
Fire Alarm Pull Stations	Observed. Adequate. Access to pull stations recommend addressing obstructions blocking access in maintenance areas.				x	\$0			

### Access Control / Intrusion Detection

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

### Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$284,688			\$421,338
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$1,211,727</b>	<b>\$288,698</b>	<b>\$0</b>	<b>\$421,338</b>
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## Central Auditorium: Mechanical Summary

Central Park Auditorium has benefited from recent upgrades to the Central Park campus; most major equipment and infrastructure has been recently remodeled and is in good condition, with chilled and hot water fed from the adjacent elementary school. Some equipment remained during the renovations and is in need of replacement, including an air handling unit and VUVs serving support spaces along with various terminal heating equipment. Plumbing equipment was also replaced, though underground sanitary and storm piping have reached the end of their useful life.



Existing Indoor AHU



Existing Basement Equipment/Piping



Existing Piping and Pumps



Existing Unit Heater



Existing Pumps



Existing Indoor AHU



Existing RTU

# Central Auditorium: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Heating hot water is supplied to the building through 4" mains from the adjacent STEM / Central Park Elementary. Piping is direct buried and stubbed into existing auditorium tunnels. Please reference that assessment for more information.				X	\$0			
Boiler Plant Accessories	Small partial heating hot water plant located on 1998 mezzanine addition, with filter/AS/zone pumps. Equipment is in fair condition but approaching end of useful life; piping also is uninsulated and should be insulated. Existing documentation is limited.			X		\$92,771			\$137,301
<b>Building Cooling Equipment</b>									
Chillers	Chilled water is supplied to the building through 4" mains from the adjacent STEM / Central Park Elementary. Piping is direct buried and stubbed into existing auditorium tunnels. Please reference that assessment for more information.				X	\$0			
<b>Heating / Cooling Piping</b>									
Hydronic Piping	The majority of the heating and cooling hydronic piping was replaced throughout the building during recent bond work renovations; piping is in good condition.				X	\$0			

## Central Auditorium: Mechanical Systems

### Building HVAC Air Distribution System / Equipment

Air Handling Units	Daikin air handling units installed in basement were replaced during recent bond work and are in good condition, with VFD-driven fans. One unit includes a serves dual deck / multizone system and serves the rehearsal rooms, current codes restrict the use of multizone units for anything other than direct replacement only. The other serves the auditorium with heating coils for zone control. Units utilize plenum and tunnel returns which are difficult to balance.				X	\$0			
Air Handling Units	Daikin units installed on first floor to feed offices and classrooms; multizone VAV with terminal reheat boxes. Equipment was installed in 2016 and is in good condition.				X	\$0			
Air Handling Units	Trane air handling unit installed in mezzanine in 1998 is in fair to poor condition and at end of useful life. Unit has split DX cooling with 5 ton condensing unit out on roof. Would recommend replacement, useful life is 25-30 years.	X				\$126,534	\$132,861		
HVAC Ducts	Supply/return/exhaust air ductwork is largely original to the building (now 60+ years old); life expectancy is typically 25-30 years but can reach 50 years if well maintained. At this age, issues with duct sealing and insulation decay decrease efficiency and potential water or corrosion issues start to occur. Would recommend installation of new ductwork for all associated air handling systems (AHU & EF systems).	X				\$1,645,431	\$1,727,703		
Rooftop Units	Daikin rooftop unit installed in 2016 serves dressing rooms, unit is in decent condition. Unit has packaged cooling with duct-mounted heating coils for zone control to each dressing room. Anticipated lifetime of 15-20 years.				X	\$0			

## Central Auditorium: Mechanical Systems

VAV Terminal Units	Terminal reheat boxes provide zone control for classrooms and office spaces. Installed in 2016 and in good condition.				X	\$0			
Rooftop Exhaust Fans	Exhaust fans are generally original to the date of building construction (1969 renovations, 1998 additions) and are in fair to poor condition. Equipment is at or past anticipated useful life of 25-30 years.		X			\$67,680		\$86,630	
VUV/HUV Units	Ducted unit ventilators installed in 1998 are in poor condition and in need of replacement.	X				\$70,264	\$73,777		

### Terminal Heating / Cooling Equipment

Unit Heaters	(4) propeller unit heaters serve scene / repair shop and are original to 1969 installation. Units are in poor condition and do not provide adequate heating for the space.	X				\$60,224	\$63,235		
Split Systems	Split system serving closet adjacent scene shop is in poor condition and in need of replacement. Verify space use with owner.	X				\$27,071	\$28,425		
Unit Heaters	New unit heaters installed during recent 2016 bond renovations and are in good condition.				X	\$0			
Convectors	Misc. cabinet unit heaters are still installed from original building construction (1969) on walls and in stairwells. Equipment is in fair to poor condition and should be replaced.	X				\$195,734	\$205,521		
Cabinet Unit Heaters	Misc. cabinet unit heaters are original to dates of construction (1969, 1998) in vestibules and other locations. Equipment is in fair to poor condition and should be replaced.	X				\$167,772	\$176,161		
Cabinet Unit Heaters	Cabinet unit heaters installed in recent bond renovations in 2016 are in good condition.				X	\$0			

# Central Auditorium: Mechanical Systems

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	Temperature controls upgraded with building equipment replacement in recent bond work; Automated Logic system throughout the building with new control devices. System is in good condition.				X	\$0				
Specialty Classrooms	Laundry machine is not vented to the exterior and does not meet code. Would recommend additional venting to meet current building codes.	X				\$10,646	\$11,178			
<b>11.0 Mechanical Assessment SUBTOTAL</b>							<b>\$2,464,127</b>	<b>\$2,418,860</b>	<b>\$86,630</b>	<b>\$137,301</b>

# Central Auditorium: Plumbing Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Small electric water heater installed in 1998 to serve addition; unit appears to have been replaced within the last 10 years. Anticipated life of 15-20 years for this equipment, unit is in fair condition.			X		\$18,554			\$27,460
Domestic Water Heater	Gas-fired domestic water heater, tank-type, Lochinvar, installed in recent bond renovations (2016) is in good condition.				X	\$0			
Domestic Water Piping	The majority of the domestic water piping appears to be replaced throughout the building during recent bond work renovations; piping is in good condition.					\$0			
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Piping is generally original to year of building construction, with a large portion of the building built in the 1960s or earlier (limited documentation). Piping is beyond expected useful life of 50-75 years (if well maintained) and replacement is recommended. District has recently had issues with clogs and sanitary piping failures.	X				\$1,286,304	\$1,350,619		
Sanitary Waste & Vent Piping	Sump/bilge pumps installed in basement appear to be repaired ore replaced during recent bond renovations; units are in decent condition.				X	\$0			
Sanitary Waste & Vent Piping	Sewage ejector pump installed in basement appear to be original to building construction with repairs made as needed; unit is in poor condition and would recommend replacement.	x				\$45,625	\$47,906		

# Central Auditorium: Plumbing Systems

## Storm Drainage System / Equipment

Storm Drainage Piping	Generally original to year of construction (1960s or earlier, documentation is limited). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. Systems do not have overflow drains; if any roof work additional overflow drains & associated piping and discharge downspouts will be required to bring system up to code.	X				\$428,768	\$450,206		
Roof Drains	Original to year of construction; would recommend replacement at time of roof or storm piping replacement.	X				\$0	\$0		

## Plumbing Fixtures

Water Closets & Urinals	Group toilet rooms were recently renovated during bond work (2016) and are in good condition. A few individual toilet rooms and dressing rooms include original equipment and fixtures and should be replaced; approximate qty. of (9) water closets. Would recommend new sensed, low-flow fixtures.			X		\$22,174			\$32,818
Lavatories & Sinks	Group toilet rooms were recently renovated during bond work (2016) and are in good condition. A few individual toilet rooms and dressing rooms include original equipment and fixtures and should be replaced; approximate qty. of (9) lavatories. Would recommend new sensed, low-flow fixtures.			X		\$18,752			\$27,753
Lavatories & Sinks	Most electric water coolers & drinking fountains in the district have been retrofitted with electric water coolers from recent funding made available by the State of Michigan for recent Filter First legislation updates. The district is working to remove remaining fixtures in the district. New units are in good condition.				X	\$0			

## Miscellaneous Plumbing Systems / Equipment

Compressed air piping	Small compressed air system serves scene shop; equipment and piping is in fair condition.			X		\$22,813			\$33,763
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<b>12.0 Plumbing Assessment SUBTOTAL</b>						<b>\$1,842,990</b>	<b>\$1,848,732</b>	<b>\$0</b>	<b>\$121,794</b>
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## Central Auditorium: Electrical Summary

Electrical systems within the Central Park Auditorium reflect recent upgrades and are in comparatively good condition relative to other district facilities. Power distribution equipment, lighting systems, and controls are modernized and remain within their expected service life, with replacement timelines generally extending approximately five years or more. Theatrical and house lighting systems are functional and supported by upgraded infrastructure, allowing for flexible use of the space. Life-safety and emergency systems are operational and not identified as immediate concerns in the assessment. Electrical recommendations focus on long-term planning and future refresh rather than near-term replacement.



Existing Panel Board



Existing Lighting Panel



Existing IT



Existing Stage Lights



Existing Stage Lights



Existing Lighting



Existing Lighting

# Central Auditorium: Electrical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	Included in Central Park Elem					\$0			
Building Exterior Lighting	Some new from 2015 bond, other older leftover from before 2015			x		\$20,076			\$29,712
<b>Power Distribution &amp; Control Equipment</b>									
Panelboards	Distribution, 2000s and older		x			\$35,284		\$45,164	
Panelboards	Distribution, 2015				x	\$0			
Panelboards	Branch, 2000s and older		x			\$83,952		\$107,459	
Panelboards	Branch, 2015 Eaton				x	\$0			
Interior Transformers	2000s and older		x			\$23,757		\$30,409	
Interior Transformers	2015, Eaton				x	\$0			
Automatic Transfer Switch	2015, Cummins				x	\$0			
Generator	2015, Cummins				x	\$0			
Electrical Receptacles & Devices	various age depending on time of remodel in specific space, to be evaluated with future remodels (entire building sqft)			x		\$267,980			\$396,610

# Central Auditorium: Electrical Systems

## Interior Lighting

Interior Lighting Fixtures	All spaces have been retrofitted with LED lamps, light fixture replacements suggested to follow other renovation scope (entire building sqft)			x		\$100,376			\$148,556
Lighting Controls	Mix of line voltage controls and some automatic controls, replacements suggested to follow other renovation scope (entire building sqft); refer to line item above for inclusion			x		\$0			\$0
Theatrical Lighting	1999 lighting, dimmer rack (Johnson CD-3000), controls, with 2017 ETC Echo relay panel, 2017 seating lighting		x			\$0		\$0	
Exit Signs	Coverage appeared to be adequate, would be replaced along with other interior fixtures in future renovation scopes (included in lighting fixture sqft)				x	\$0			

## Communications

Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Structured Cabling	CAT6 observed (entire building sqft)			x		\$214,384			\$317,288

## Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$22,813		\$29,201	
Wireless Access Points	Ruckus (primarily R720) end of life 2028	x				\$40,150	\$42,158		
Classroom Audio System	Lightspeed 955 (per classroom)		x			\$66,920		\$85,658	
Large meeting room AV System	outdated AV systems for the large meeting rooms		x			\$42,584		\$54,508	
Theater Audio/Video Systems	new in 2017				x	\$0			
Add telecomm rooms to generator standby	Add circuits from existing generator standby system to telecomm rooms; would be part of generator replacement.	x				\$0	\$0		

<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$930,443</b>	<b>\$42,158</b>	<b>\$352,397</b>	<b>\$910,175</b>
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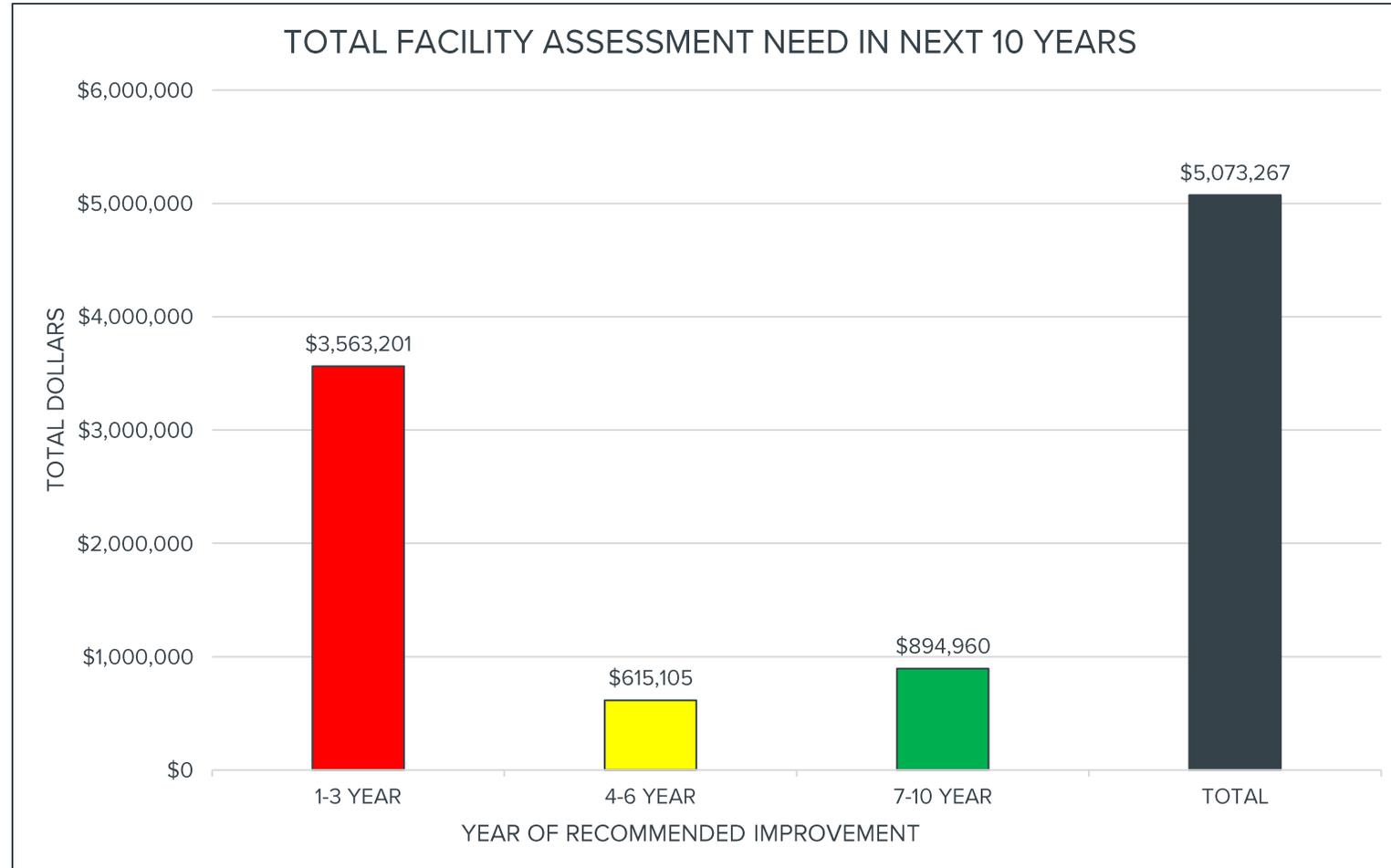


# MIDLAND COMMUNITY STADIUM

## Midland Community Stadium: Overall Cost Review

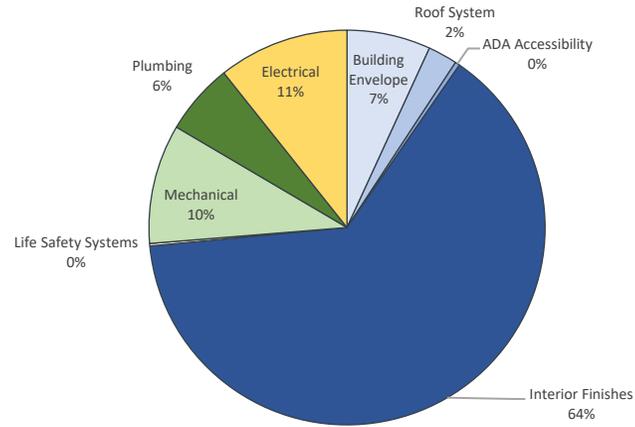
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$13,573	\$0	\$333,237	\$346,810
Roof System	\$121,433	\$0	\$0	\$121,433
ADA Accessibility	\$19,163	\$0	\$0	\$19,163
Interior Finishes	\$3,241,679	\$0	\$0	\$3,241,679
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$0	\$0	\$10,452	\$10,452
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$149,788	\$346,511	\$0	\$496,299
Plumbing	\$0	\$37,376	\$258,173	\$295,549
Electrical	\$17,567	\$231,218	\$293,099	\$541,884
<b>TOTALS</b>	<b>\$3,563,201</b>	<b>\$615,105</b>	<b>\$894,960</b>	<b>\$5,073,267</b>

## Midland Community Stadium: Overall Cost Review

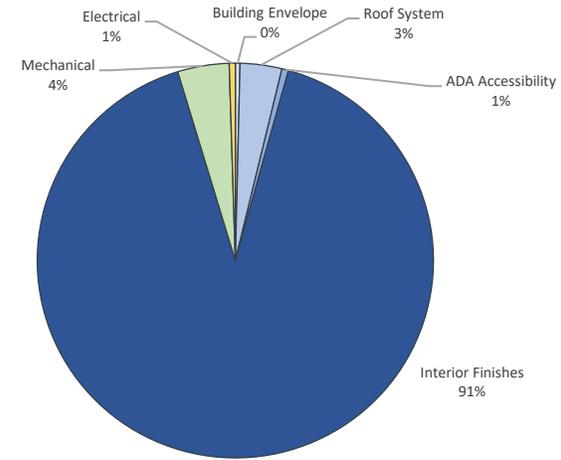


# Midland Community Stadium: Overall Cost Review

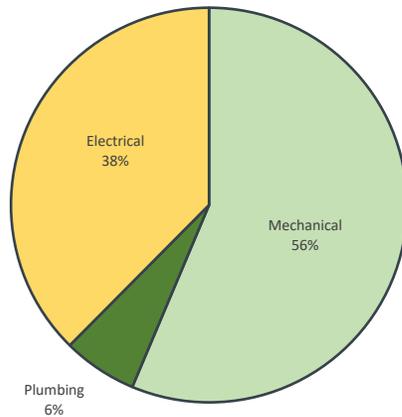
TOTAL NEED BY ASSESSMENT CATEGORY



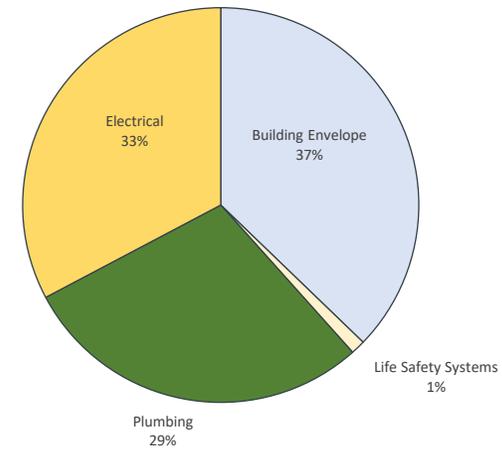
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



# Midland Community Stadium: Architectural Summary

The Midland Community Stadium includes a range of exterior and support facilities that remain functional but reflect long-term exposure and heavy use. Structural elements, walking surfaces, spectator areas, and guardrails show wear consistent with age and environmental conditions, with several architectural components identified for mid-term replacement or rehabilitation. Support spaces such as restrooms, concessions, and storage areas remain serviceable, though interior finishes and fixtures are approaching end-of-life and are identified for phased replacement. Accessibility improvements are noted throughout the facility to better align with current standards. Architectural recommendations focus on maintaining safety, usability, and code compliance through planned reinvestment rather than wholesale replacement.



Existing Brick Lintels



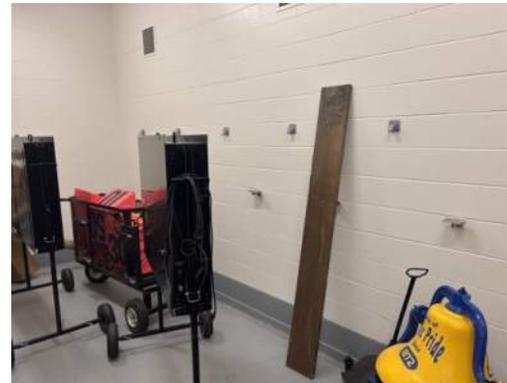
Existing Toilet Rooms



Existing Toilet Room/Storage



Existing Brick



Existing Showers



Existing Toilet Rooms

# Midland Community Stadium: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
<b>TEAM BUILDING</b>									
Block - painted	Cleaned and repainted			x		\$0			
HM exterior doors				x		\$91,251			\$135,051
Masonry joint sealants	Vertical and horizontal at steel lintels			x		\$35,131			\$51,994
Steel lintels	Rusting, needs cleaned and repainted to avoid further damage.	x				\$3,802	\$3,992		
DEFS	Repainting	x				\$1,521	\$1,597		
				x		\$1,825			\$2,701
<b>GROUP RESTROOM &amp; CONCESSIONS</b>									
Masonry block - painted	Clean and repaint			x		\$0			
HM Doors					x	\$79,844			\$118,169
Concrete ceiling/soffit - painted				x		\$0			
Roof edge metal					x	\$17,109			\$25,321
Wood swing counter doors	Uncertain of operation. However, appears to be in good working condition.					\$0			
						\$0			
						\$0			
<b>PRESS BOX</b>									
Brick/Masonry					x	\$0			
Aluminum windows					x	\$0			
Metal soffit/fascia					x	\$0			
Gutters/Downspouts	Downspout has some loose from the building. Needs secured	x				\$0			
Coiling Shutter					x	\$7,604	\$7,984		
FRP Doors					x	\$0			
						\$0			
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$238,087</b>	<b>\$13,573</b>	<b>\$0</b>	<b>\$333,237</b>

# Midland Community Stadium: Roof Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
<b>TEAM BUILDING</b>						\$0			
EPDM (Ballasted)	1986 installation with warranty expired in 2001	x				\$188,775			
<b>RESTROOMS &amp; CONCESSION BUILDING</b>						\$0			
EPDM (Non-Ballasted)	1997 install with warranty expired in 2012	x				\$115,650	\$121,433		
<b>PRESS BOX</b>						\$0			
Standing Seam Metal					x	\$0			
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$304,425</b>	<b>\$121,433</b>	<b>\$0</b>	<b>\$0</b>

# Midland Community Stadium: ADA Accessibility

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
General Comment	Exterior ADA accessibility is good.				x	\$0			
Parking Lot Signage	Observed in good condition.				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed in good condition but requiring annual maintenance.				x	\$0			
Curb Cuts	Observed with good transition from parking lot to sidewalk.				x	\$0			
Tactile Warning Strips	New tactile warning strips observed.				x	\$0			
Exterior/Exits	Observed with good ADA accessibility.				x	\$0			
<b>Interior Accessibility (General)</b>									
General Comment	Generally acceptable with grandfathered conditions. Missing vertical grab bars and missing insulation shields in some areas.				x	\$0			
Pull/Push Side Clearances	Observed adequate.				x	\$0			
<b>Group Restroom Accessibility</b>									
General Comment	Generally compliant with grandfathered deficiencies (vertical grab bars and insulation shields).				x	\$0			
Group Restroom ADA Signage	Missing and non compliant signage observed at exterior entrances.	x				\$4,258	\$4,471		
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Non compliant hardware (knobs) observed at Men's and Women's bathrooms.	x				\$7,300	\$7,665		
Turning Clearances	Observed with adequate clearance.				x	\$0			
Plumbing Fixtures (water closets)	Observed adequate.				x	\$0			
Lavatory Insulation/Shields	Missing at one of the restroom facilities.	x				\$4,563	\$4,791		
Accessories	Missing vertical grab bars at ADA toilet.	x				\$2,129	\$2,235		
<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$18,250</b>	<b>\$19,163</b>	<b>\$0</b>	<b>\$0</b>

# Midland Community Stadium: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>7.0 Interior Finishes Assessment</b>									
<b>Team Building</b>									
General Comments	Observed in fair condition. Rusty door frames, repainting doors, interior peeling paint, rusting steel lintels, rusting lockers, and missing or torn caulking observed. Non compliant showers observed. Recommend considering renovations to address code deficiencies and bring asset back to good condition.	x				\$2,942,833	\$3,089,975		
Walls	Peeling paint observed at exterior walls throughout the interior and also observed at the exterior of the building, but less prevalent.	x				\$0	\$0		
Ceiling	Painted finishes in fair condition.	x				\$0	\$0		
Flooring	Painted resinous flooring in fair condition. Covered with turf carpet at the locker rooms.	x				\$0	\$0		
Signage	Observed throughout but non compliant with ADA standards. See ADA for cost.	x				\$0	\$0		
Lockers	2-Tier rusting and approaching end of useful life cycle.	x				\$144,480	\$151,704		

# Midland Community Stadium: Interior Finishes

### Group Restrooms & Concessions Building

General Comments	In fair condition with newer finishes and furnishings.				x	\$0			
Walls	Painted walls in good condition.				x	\$0			
Ceiling	Painted ceilings in good condition.				x	\$0			
Flooring	Painted resinous flooring in good condition.				x	\$0			
Signage	Non compliant signage observed. See ADA.	x				\$0	\$0		

### Press Box Building

General Comments	New press box with new finishes.				x	\$0			
Walls	Painted block in good condition.				x	\$0			
Ceiling	Painted drywall in good condition.				x	\$0			
Flooring	Exposed concrete in good condition.				x	\$0			
Countertops	PLAM countertops observed in good condition.				x	\$0			

<b>7.0 Interior Finishes Assessment SUBTOTAL</b>							<b>\$3,087,313</b>	<b>\$3,241,679</b>	<b>\$0</b>	<b>\$0</b>
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# Midland Community Stadium: Life Safety Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
<b>Press Box</b>						\$0			
Emergency Plan Available	NA					\$0			
Clear Lines of Site at Building Perimeter	Observed Adequate				x	\$0			
AED/Location	Could not locate. May be located at another location. Refer to district	x				\$0	\$0		
<b>Lockers, Restrooms and Concession</b>						\$0			
Clear/Defined Egress Paths	Observed Adequate				x	\$0			
Clear Lines of Site at Building Perimeter	Observed Adequate				x	\$0			
AED/Location	Could not locate. May be located at another location. Refer to district	x				\$0	\$0		
<b>Fire Safety System / Equipment</b>									
<b>Press box</b>						\$0			
Fire Extinguishers/Cabinets	Observed Adequate				x	\$0			
<b>Lockers, Restrooms and Concession</b>						\$0			
Fire Extinguishers/Cabinets	Observed. Fire extinguisher in concessions				x	\$0			

# Midland Community Stadium: Life Safety Systems

## Emergency Lighting / Power

<b>Lockers and concession</b>					\$0			
Emergency Lighting/Power Source	battery, replace with lighting fixtures		x		\$18,250			
Exit Signs/Power Source	battery, replace with lighting fixtures		x		\$7,062			\$10,452

## Access Control / Intrusion Detection

Access Control System	no access controls, all keyed				\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire				\$0			

## Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage		x		\$0			\$0
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>					<b>\$25,312</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,452</b>
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# Midland Community Stadium: Mechanical Summary

Mechanical and plumbing systems serving various stadium support buildings are in mixed condition. Recent upgrades to the heating equipment and controls have taken place in the locker room building, while original fans and electric heating equipment remain and are past their useful life. Plumbing infrastructure, including domestic water piping and sanitary systems, still has several years of useful life left. Fixture upgrades are recommended for water efficiency and cosmetic upgrades, and water heater replacement will be needed in the near future. The stadium press box has no current heating equipment; this would be recommended for cold spring or fall months when the stadium is still in use.



Existing Plumbing Piping



Existing Restroom Heat



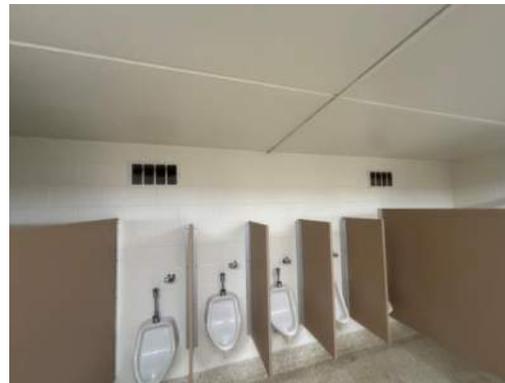
Existing Locker Ventilation Unit



Existing "Heat"



Existing Plumbing Fixtures



Existing Plumbing Fixtures + Exhaust



Existing Drinking Fountains



Existing Water Heater

# Midland Community Stadium: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 11.0 Mechanical Assessment

### Building Heating Equipment

Furnaces	Gas-fired duct heaters in main mechanical room provide heating and ventilation for the building. Units have a linked motorized damper for fresh air intake during building occupied hours. Units were replaced in 2024 Energy Bond renovations and are in good condition.				X	\$0			
Electric Heaters	Electric unit heaters for restroom building provide heat; unit age is estimated at 30+ years. Units are in fair condition but at end of useful life. Size and air distribution likely not sufficient for cold weather stadium use before building is winterized.	X				\$63,419	\$66,590		
Electric Heaters	No heat provided in press box building; portable electric heaters observed. Building gets very cold in late fall season / early spring when weather can still be extreme; would recommend adding permanent heating in building. Consideration could be given to cooling as well depending on space use and program.	X				\$0	\$0		

### Building HVAC Air Distribution System / Equipment

Rooftop Exhaust Fans	Exhaust fan serving restroom building appears to be original 1972 installation; unit is in fair condition but beyond expected useful life. Would recommend replacement.	X				\$67,678	\$71,062		
Rooftop Exhaust Fans	Exhaust fans serving locker room building appear to be original 1987 installation; fans are in fair condition but beyond expected useful life. Would recommend replacement.		X			\$270,712		\$346,511	
Through-wall Exhaust Fans	Magic Aire supply air fan serving locker room duct furnaces appears to be original to 1987 installation and is in poor condition; would recommend replacement.	X				\$11,558	\$12,136		

# Midland Community Stadium: Mechanical Systems

## Terminal Heating / Cooling Equipment

Unit Heaters	Gas unit heater in mechanical room at locker room building was replaced during recent energy bond renovations; unit is in good condition.	<table border="1"> <tr> <td></td> <td></td> <td></td> <td>X</td> </tr> </table>				X	\$0			
			X							

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	DDC controls added during recent 2024 Energy Bond renovations for locker room building, building is now controlled through Automated Logic district system. Domestic hot water system is standalone.	<table border="1"> <tr> <td></td> <td></td> <td></td> <td>X</td> </tr> </table>				X	\$0			
			X							

<b>11.0 Mechanical Assessment SUBTOTAL</b>			<b>\$413,367</b>	<b>\$149,788</b>	<b>\$346,511</b>	<b>\$0</b>
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# Midland Community Stadium: Plumbing Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Locker room building water heater (199 MBH) installed in 2003 and is in fair condition. 120-gallon storage tank and circulating pump is coupled with the water heater; tank is in fair condition and has an expected life of 30-40 years if well maintained. Setup also includes master mixing valve for temperature control to building fixtures and showers. Would recommend replacement of water heater only.		X			\$29,200		\$37,376	
Domestic Water Heater	Restroom building does not have hot water; building is winterized during the cold weather months.				X	\$0			
Domestic Water Piping	Domestic water piping is original to date of construction for each building (1972 for restroom building, 1987 for locker room building). Anticipated lifetime for piping if well maintained is 50-75 years; existing piping appears to be in fair condition and does not need replacement at this time.				X	\$0			
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Sanitary waste and vent piping is original to date of construction for each building (1972 for restroom building, 1987 for locker room building). Anticipated lifetime for piping if well maintained is 50-75 years and replacement is not recommended at this time.				X	\$0			
<b>Storm Drainage System / Equipment</b>									
Storm Drainage Piping	Storm piping is original to date of construction (1987) for locker room building. Anticipated lifetime for piping if well maintained is 50-75 years and replacement is not recommended at this time.				X	\$0			

# Midland Community Stadium: Plumbing Systems

## Plumbing Fixtures

Water Closets & Urinals	Fixtures are original to date of construction for each building (1972 for restroom building, 1987 for locker room building). Units are in fair condition, though would recommend replacing flush valves with newer sensed, low flow flushometers (which will require fixture replacement designed for lower flows).			X		\$63,298			\$93,681
Lavatories & Sinks	Fixtures are original to date of construction for each building (1972 for restroom building, 1987 for locker room building). Units are in fair condition, though would recommend replacing faucets with newer sensed, low flow faucet (which will require fixture replacement designed for lower flows).			X		\$60,955			\$90,213
Showers	Fixtures are original to date of construction for each building (1972 for restroom building, 1987 for locker room building). Units are in fair condition, though would recommend replacing heads with new low flow shower heads.			X		\$50,188			\$74,278
<b>12.0 Plumbing Assessment SUBTOTAL</b>									
						\$203,641	\$0	\$37,376	\$258,173

# Midland Community Stadium: Electrical Summary

Electrical systems at the Midland Community Stadium are largely functional and remain within their expected service life, with the majority of electrical infrastructure identified for mid- to long-term replacement planning. Power distribution equipment, panelboards, and wiring systems do not indicate widespread failure or immediate obsolescence. Field lighting and exterior lighting systems are generally serviceable, though select components are identified for near-term replacement due to condition or performance limitations. Field lighting has already been upgraded to LED. Longer-term electrical recommendations focus on future modernization, efficiency improvements, and capacity enhancements to support evolving event and technology needs, rather than addressing significantly deteriorated infrastructure.



Existing Electrical Gear



Existing Panel Board



Existing IT



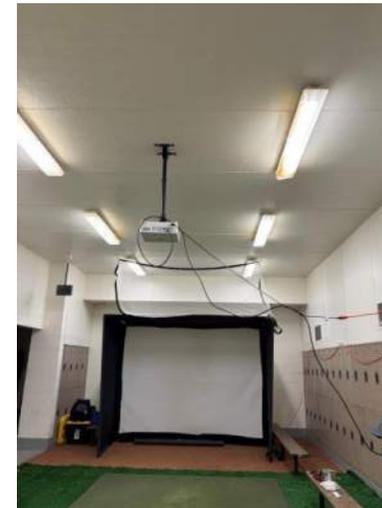
Existing Stadium Lighting



Existing Restroom Lighting



Existing Indoor Lighting



Existing Team Room Lighting



Existing Sound System

# Midland Community Stadium: Electrical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	2005			x		\$45,624			\$67,524
Building Exterior Lighting	newer lighting on press box doesn't need to be replaced, just team rooms and concessions and ticket	x				\$16,730	\$17,567		
Athletic Lighting	Musco lighting already upgraded to LED				x	\$0			
<b>Power Distribution &amp; Control Equipment</b>									
Panelboards	Distribution panel, 2005			x		\$40,302			\$59,647
Panelboards	branch panels, older than 2000s		x			\$27,072		\$34,652	
Panelboards	branch panels, 2019				x	\$0			
Interior Transformers	2005		x			\$23,725		\$30,368	
Interior Transformers	2019				x	\$0			
Electrical Receptacles & Devices	replace with any future remodels				x	\$0			
<b>Interior Lighting</b>									
Interior Lighting Fixtures	team room, ticket booth concessions, retrofit LED lamps		x			\$129,842		\$166,198	
Interior Lighting Fixtures	press box, 2019				x	\$0			
Lighting Controls	team room, ticket booth concessions, retrofit LED lamps; included in lighting fixture line item above.		x			\$0		\$0	
Lighting Controls	press box, 2019				x	\$0			
Exit Signs	included with interior lighting fixtures					\$0			

# Midland Community Stadium: Electrical Systems

## Communications

Communications Cabinets/Racks/Enclosures	MDF, point to point wireless from MHS			x		\$12,167			\$18,007
Structured Cabling	CAT6 observed (entire building sqft)			x		\$23,905			\$35,379

## Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$0		\$0	
Wireless Access Points	Ruckus (primarily R720) end of life 2028	x				\$0	\$0		
Stadium AV system	Replaced in 2019			x		\$76,042			\$112,542

<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$395,409</b>	<b>\$17,567</b>	<b>\$231,218</b>	<b>\$293,099</b>
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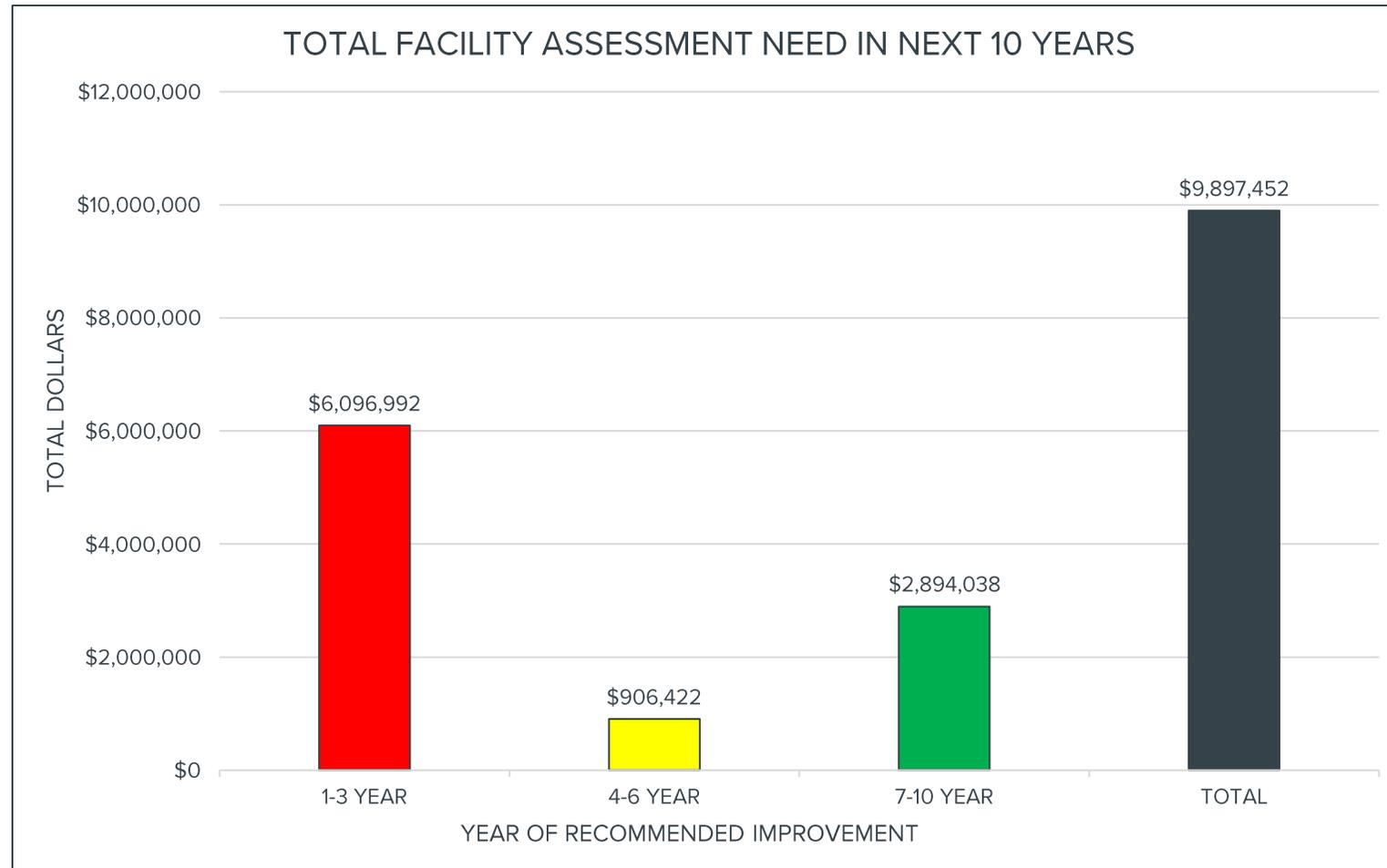


# TRANSPORTATION AND MAINTENANCE BUILDING

## Transportation and Maintenance Building: Overall Cost Review

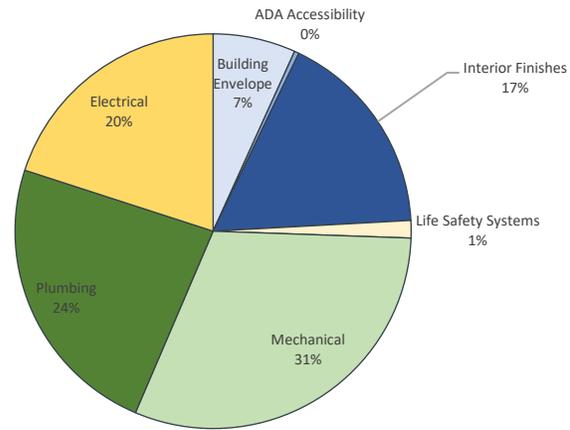
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$60,460	\$32,120	\$575,424	\$668,004
Roof System	\$0	\$0	\$0	\$0
ADA Accessibility	\$37,127	\$0	\$0	\$37,127
Interior Finishes	\$1,683,014	\$0	\$0	\$1,683,014
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$141,360	\$0	\$0	\$141,360
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$2,721,120	\$84,096	\$249,168	\$3,054,385
Plumbing	\$730,967	\$742,707	\$860,556	\$2,334,231
Electrical	\$722,944	\$47,498	\$1,208,889	\$1,979,331
<b>TOTALS</b>	<b>\$6,096,992</b>	<b>\$906,422</b>	<b>\$2,894,038</b>	<b>\$9,897,452</b>

## Transportation and Maintenance Building: Overall Cost Review

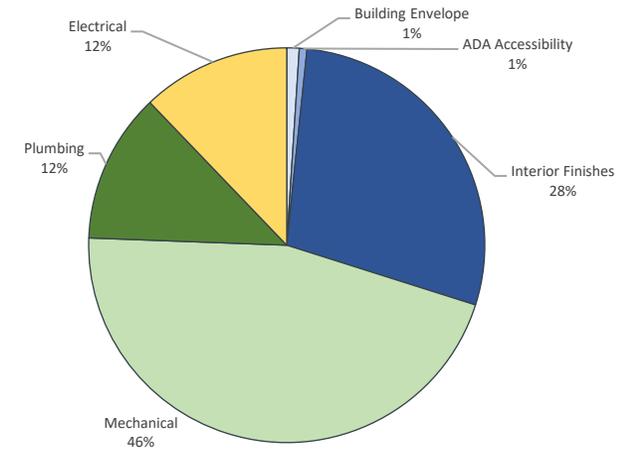


# Transportation and Maintenance Building: Overall Cost Review

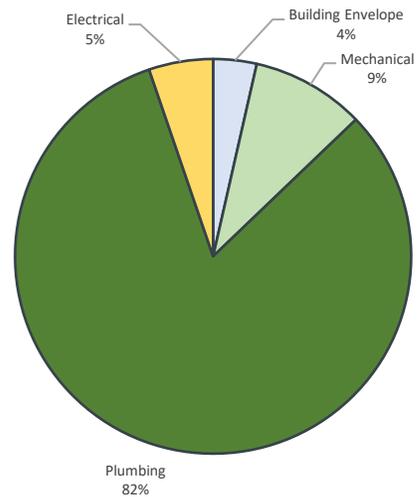
TOTAL NEED BY ASSESSMENT CATEGORY



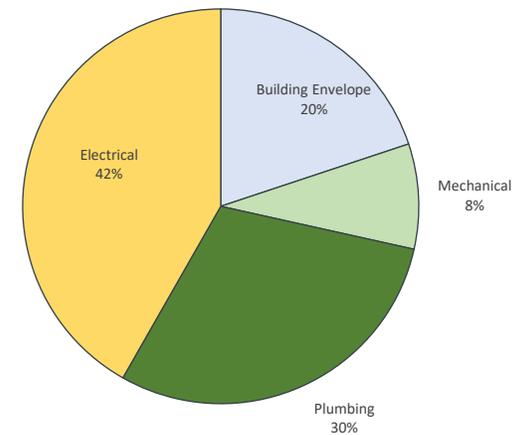
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



## Transportation and Maintenance Building: Architectural Summary

The Transportation and Maintenance Building is a utilitarian facility that remains functional and generally aligned with its intended use. Architectural systems, including exterior walls, doors, and roofing, reflect age and ongoing exposure but continue to perform adequately. Several envelope components are identified in the assessment for mid-term replacement based on age and condition rather than failure. Interior spaces are heavily used and show wear consistent with operational demands, with finishes and separation between work, storage, and support areas identified for future improvement. Architectural recommendations focus on durability, safety, and maintaining operational functionality rather than comprehensive reconstruction.



Existing Peeling Paint



Existing Staff Lounge



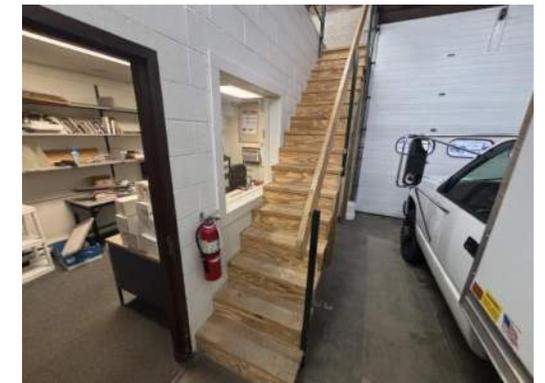
Existing Toilet Room



Existing Maintenance Garage



Existing Storage



Existing Office/Garage Space

# Transportation and Maintenance Building: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Painted Masonry Block	Some immediate repairs needed at the extreme north outside corner of the Transportation Building and the entire Science Service Center, especially the back. Total failure of the paint resulting in block face beginning to fail. (Note that the entire building needs painted, or skinned with different material not included in the immediate SF number.)	x				\$48,000	\$50,400		
Corrugated Metal Siding	Damaged along end where materials have been pushed into.		x			\$25,094		\$32,120	
Aluminum Soffit	Falling out along the SW side of the Science Service Center	x				\$4,258	\$4,471		
Painted Masonry Block	Balance of building			x		\$388,800			\$575,424
<b>Exterior / Vestibule Doors</b>									
Hollow Metal Doors					x	\$0			
Overhead Doors - Sectional					x	\$0			
<b>Windows</b>									
Aluminum Windows					x	\$0			
<b>Joint Sealants</b>									
Control Joint Sealants	Need removed, joints cleaned and new sealant installed.	x				\$5,323	\$5,589		
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$471,475</b>	<b>\$60,460</b>	<b>\$32,120</b>	<b>\$575,424</b>

# Transportation and Maintenance Building: Roof Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
EPDM (Non-Ballasted)	Installed in 2020				x	\$0			
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

# Transportation and Maintenance Building: ADA Accessibility

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
Parking Lot Signage	Observed in fair condition.				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed in good condition.				x	\$0			
Curb Cuts	Observed adequate.				x	\$0			
Tactile Warning Strips	Observed at city sidewalk.				x	\$0			
Exterior/Exits	Observed acceptable.				x	\$0			
<b>Interior Accessibility (General)</b>									
General Comment	Older building with knob hardware and non compliant restrooms. Consider improvements with future renovations to bring common areas up to todays code standards.					\$0			
Interior Building Signage (general)	Observed non compliant.	x				\$7,984	\$8,383		
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Knob hardware observed at the interior offices and bathrooms. Budget to replace with future renovations.	x				\$27,375	\$28,744		
<b>Group Restroom Accessibility</b>									
General Comment	Old non compliant bathrooms with aging finishes at end of useful life cycle. Budget for renovations and ADA improvements. See Interior Finishes for cost.	x				\$0	\$0		
Turning Clearances	Non compliant.	x				\$0	\$0		
Plumbing Fixtures (water closets)	Non compliant.	x				\$0	\$0		
Lavatory Insulation/Shields	None.	x				\$0	\$0		
Accessories	Non compliant.	x				\$0	\$0		
<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$35,359</b>	<b>\$37,127</b>	<b>\$0</b>	<b>\$0</b>

# Transportation and Maintenance Building: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 7.0 Interior Finishes Assessment

### Offices / Auxiliary Offices / Support Areas

General Comment	Old facility with finishes at end of life. Budget for renovation and refresh within a ten year period of office and break room spaces	x				\$1,218,280	\$1,279,194		
Walls	Paint peeling failure observed throughout much of the building.	x				\$0	\$0		
Ceiling	Old suspended ceiling at the end of its useful life cycle.	x				\$0	\$0		
Flooring	VCT & ACT flooring observed in some areas in poor condition.	x				\$0	\$0		
Base Material	Rubber base.	x				\$0	\$0		
Casework	Old casework showing wear and finish delamination. At end of life.	x				\$0	\$0		
Countertops	Old PLAM countertops delaminating and held together with duct tape.	x				\$0	\$0		
Lockers	Old lockers at end of life cycle.	x				\$0	\$0		
Furniture/Furnishings	A mix of furniture (old & new) observed throughout.	x				\$0	\$0		

### Restrooms

General Comment	Old finishes observed at end of life. Budget for refresh and improvements addressing ADA accessibility.	x				\$348,840	\$366,282		
Walls	Painted block and drywall with peeling paint present.	x				\$0	\$0		
Ceiling	Painted ceilings peeling and in need of refresh.	x				\$0	\$0		
Flooring	VCT & ACT flooring at end of life cycle.	x				\$0	\$0		
Base Material	Rubber base.	x				\$0	\$0		
Toilet Partitions	Old metal toilet partitions.	x				\$0	\$0		
Restroom Accessories	Non compliant.	x				\$0	\$0		

## Transportation and Maintenance Building: Interior Finishes

**General**

General Comment	There is a lot of stored items that are taking up space and limiting use of the building. The district would benefit from reorganization of some of the storage areas and purging old equipment and furniture.	x				\$35,750	\$37,538		
General Comment	Light Paint/Floor Refresh in shop space	x				\$0	\$0		
<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						<b>\$1,602,870</b>	<b>\$1,683,014</b>	<b>\$0</b>	<b>\$0</b>

# Transportation and Maintenance Building: Life Safety Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Emergency Plan Available	Observed.				x	\$0			
Clear/Defined Egress Paths	Building lacking illuminated exit signage. Additional signage recommended with future renovations.	x				\$22,813	\$23,954		
Knox Box	Did not locate	x				\$1,396	\$1,466		
AED/Location	Observed. Located in work garage				x	\$0			
General Comment	Welding and cutting gas storage. Address with district. deficient storage.	x				\$0	\$0		
Emergency/Automatic Shut-offs (Shop Equipment)	Deficient in shop areas. Budget in remodel	x				\$10,000	\$10,500		
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Limited fire suppression provided for paint room; system is original to building construction. Would recommend replacement of heads and piping as system is approaching end of useful life.					\$4,800			
Flow Switches	local monitoring only, no remote monitoring for fire suppression	x				\$0	\$0		
Smoke/Heat Detectors	None present.	x				\$0	\$0		
Fire Extinguishers/Cabinets	Observed. Difficult to locate. additional signage necessary	x				\$2,660	\$2,793		
<b>Emergency Lighting / Power</b>									
Emergency Lighting/Power Source	battery source, replace with light fixture upgrade; refer to lighting in Electrical Section			x		\$0			\$0
Exit Signs/Power Source	See General life Safety above	x				\$0	\$0		

# Transportation and Maintenance Building: Life Safety Systems

Fire Alarm Pull Stations	Deficient. did not locate. budget in remodel	x				\$48,880	\$51,324		
Horns/Strobes	Deficient. did not locate. budget in remodel	x				\$48,880	\$51,324		
<b>Access Control / Intrusion Detection</b>									
Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			
<b>Video Surveillance System / Equipment</b>									
Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$0			\$0
<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$139,429</b>	<b>\$141,360</b>	<b>\$0</b>	<b>\$0</b>

## Transportation and Maintenance Building: Mechanical Summary

Mechanical and plumbing systems serving the Transportation and Maintenance Building are operational but aging. While some controls were recently upgraded, the vast majority of building equipment should be slated for replacement given age and condition, including boiler plant equipment, heating equipment, and various fans and furnaces. Several specialty spaces are in need of equipment upgrades, including welding areas, paint booths, and vehicle maintenance, and various rooms in the building are lacking adequate ventilation and exhaust. Plumbing systems vary in age and condition, but fixture replacement, upgrades to specialty equipment and compressed air, and pipe insulation upgrades are all items to address.



Existing Hood



Existing Outdoor Air Unit



Existing Furnace



Existing Boiler



Existing Compressor



Existing Zone Pumps



Existing Heater



Existing Water Heater

# Transportation and Maintenance Building: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Aerco KC condensing boiler relocated to serve transportation building; unit is in fair condition and approximately 15 years old. Anticipated useful life of 20-25 years.			X		\$84,711			\$125,372
Boiler Plant Accessories	Boiler pumps are provided for zone control (qty. 5) and controlled by receptacle plugs, additional plant accessories such as ET are installed in boiler room. Equipment is in fair condition but pumps will need replacement at a similar time to the boiler. Recommend small filtration (such as air/dirt separator or side stream filter) and air separator.			X		\$45,625			\$67,525
<b>Heating / Cooling Piping</b>									
Hydronic Piping	Maintenance building hydronic piping is generally original to the date of building construction (1960s); life expectancy of piping like this is 50-75 years if well maintained, piping is at end of useful life and should be replaced.	X				\$230,400	\$241,920		
Insulation	Piping within boiler room is not insulated, resulting in heat loss and inefficiency. Would recommend insulating all piping in boiler room.	X				\$175,201	\$183,961		
Hydronic Piping	Several locations throughout maintenance building observed where heating hot water piping is not insulated, would recommend for efficiency.	X				\$0	\$0		

## Transportation and Maintenance Building: Mechanical Systems

### Building HVAC Air Distribution System / Equipment

Rooftop Units	New rooftop unit installed to serve office area in 2024 Energy Bond renovations. Unit is (1950 CFM) with DX cooling and modulating gas heating; unit is in good condition. Unit is single-zone and thus all offices/lounge areas served do not have individual zone temperature control apart from perimeter heat.				X	\$0			
VUV/HUV Units	Horizontal unit ventilator serving wood shop is original to 1969 construction and in poor condition.	X				\$35,131	\$36,888		
Air Handling Units	Air handling unit serving wood shop area is in poor condition and in need of replacement; unit may not be operational. Unit should be removed as alternative heat and ventilation is provided by newer systems.	X				\$159,080	\$167,034		
Rooftop Exhaust Fans	Rooftop exhaust fans are original to time of building construction; in fair to poor condition and beyond anticipated useful life.	X				\$338,390	\$355,310		
Furnaces	Furnace serving wash bay is in fair condition; anticipated life is 15-20 years if well maintained. Unit age estimated at 10-15 years.		X			\$65,700		\$84,096	
Fans	Ceiling exhaust fans provided for destratification and comfort mixing; fans are original to the building and in poor condition.	X				\$74,034	\$77,736		
Furnaces	Furnace serving transportation office spaces is in poor condition and approximately 30 years old; unit is well past useful life and in need of replacement.	X				\$65,700	\$68,985		
Air Handling Units	Reznor ducted furnace with fresh air installed recently in good condition serves storage/receiving areas of maintenance building.				X	\$0			
Ductwork	Supply/return/exhaust air ductwork is largely original to the building (approx. 50-60 years old); life expectancy is typically 25-30 years but can reach 50 years if well maintained. At this age, issues with duct sealing and insulation decay decrease efficiency and potential water or corrosion issues start to occur. Would recommend installation of new ductwork for all associated air handling systems (RTU, Furnaces, & EF systems).	X				\$299,606	\$314,586		
Through-Wall Air Conditioners	Through wall air-conditioners provide cooling in storage area office (north building). Unit is in good condition but not recommended for commercial spaces.		X			\$0		\$0	

## Transportation and Maintenance Building: Mechanical Systems

### Terminal Heating / Cooling Equipment

Cabinet Unit Heaters	Maintenance building cabinet unit heaters are in poor condition and in need of replacement, original to building construction.	X				\$30,114	\$31,620		
Finned Tube Heaters	Maintenance building finned tube radiation are in poor condition and in need of replacement, original to building construction.	X				\$46,385	\$48,704		
Convectors	Maintenance building convectors are in poor condition and in need of replacement, original to building construction.	X				\$10,342	\$10,859		
Infrared Heaters	Transportation building is heated by gas-fired infrared heaters; heaters are in fair to poor condition and appear original to building construction, with repairs made as needed. Would recommend replacement. Qty estimated based on site visit notes, lack of existing documentation available.	X				\$159,690	\$167,675		
Unit Heaters	Electric unit heater in storage is in fair condition but original to building construction and past useful life, would recommend replacement.	X				\$9,429	\$9,900		
Finned Tube Heaters	Hot water radiators original to building construction (1969) and in poor condition, would recommend replacement.	X				\$38,020	\$39,921		
Unit Heaters	Unit heaters in storage/receiving off maintenance building are in fair to poor condition, one is not operational. Recommend replacement.	X				\$30,114	\$31,620		
Unit Heaters	Gas unit heaters have largely been replaced in storage/receiving off maintenance building, (3) are in good condition but one is original to building construction and not operation.	X				\$15,057	\$15,810		
Finned Tube Heaters	Electric baseboard radiation in office is in poor condition.	X				\$9,277	\$9,741		

## Transportation and Maintenance Building: Mechanical Systems

### Miscellaneous HVAC Systems / Equipment

Temperature Controls	Maintenance building controls were updated to DDC controls as part of recent 2024 Energy Bond renovations, including new sensors, control valves, and controllers. System is connected to Automated Logic district-wide system and is in good condition.				X	\$0			
Temperature Controls	Transportation and storage/receiving areas of the building are largely on standalone controls; would recommend adding temperature controls and tying into campus-wide system. Vehicle exhaust monitoring should be added in main repair bays (6 total) to meet current codes, including CO and NO2 detection.	X				\$483,840	\$508,032		
Specialty Equipment	Range hood in break room does have an exhaust hood but hood does not meet current codes. Clarify range hood use or a Type I hood would be required.				X	\$0			
Welding Hoods	Repair shop welding equipment is in fair condition with slotted welding work benches and hoods; would recommend additional exhaust filtration prior to exhaust fan discharge.			X		\$38,021			\$56,271
Dust Collectors	Dust collection system appears to be in decent condition; age unknown but estimated at 10-15 years old. System should have an additional 10 years or more of life.				X	\$0			
Specialty Equipment	Maintenance paint room is ventilated through roof opening system, equipment is in poor condition and system is not currently meeting exhaust codes and recommended practice, would recommend localized exhaust and proper makeup air and pressurization. Fan appears original to 1969 construction, was relocated according to previous documents.	X				\$87,449	\$91,821		
Specialty Equipment	Transportation paint / spray booth system is original to time of construction and estimated at 40+ years old. System is in poor condition and in need of replacement, including ductwork and filters along with makeup air and exhaust.	X				\$125,470	\$131,744		

## Transportation and Maintenance Building: Mechanical Systems

Decentralized HVAC Equipment	Several storage rooms which store fluids or other chemicals were observed with ventilation and exhaust levels that were minimal or non-existent. Building needs additional exhaust and makeup air to meet current codes.	X				\$45,625	\$47,906		
Specialty Equipment	Vehicle exhaust hoses are direct connected to ductwork; one fan is provided for three hoses. Equipment is original to building and in poor condition, would recommend replacement with new fans and hose reels (current exhaust hoses are loosely draped around building), consider increasing fan qty. for the 6 bays for better control and energy savings.	X				\$118,626	\$124,557		
Specialty Equipment	Welding hood and fan is still original and in poor condition - would recommend replacement.	X				\$0	\$0		
Specialty Equipment	Oil heater installed in 2018 to recover waste oil for building heating purposes; unit is in good condition.				X	\$0			
Specialty Equipment	Dryer in storage/receiving is not vented to exterior; would recommend venting to meet current codes.	X				\$4,563	\$4,791		
<b>11.0 Mechanical Assessment SUBTOTAL</b>						<b>\$2,825,600</b>	<b>\$2,721,120</b>	<b>\$84,096</b>	<b>\$249,168</b>

# Transportation and Maintenance Building: Plumbing Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Lochinvar atmospheric water heater replaced in 2014 to serve transportation and maintenance building, equipment is in fair condition with an expected useful life of 15-20 years.		X			\$29,200		\$37,376	
Domestic Water Piping	Domestic water piping is generally original to year of construction (late 1960s-early 1980s). Observed piping was copper in the building. General life expectancy of a domestic water piping system is with this material is 50-60 years if well maintained.			X		\$551,040			\$815,539
Domestic Water Piping	Several instances of un-insulated piping observed throughout building, including storage room and laundry area on north side of storage/receiving.	X				\$551,040	\$578,592		
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Sanitary water piping is generally original to year of construction (late 1960s-early 1980s). General life expectancy of a sanitary waste system like this is 40-50 years if well maintained given space use. System will be in need of replacement soon.		X			\$551,040		\$705,331	
<b>Storm Drainage System / Equipment</b>									
Storm Drainage Piping	Generally original to year of construction (late 1960s-early 1980s). General life expectancy of storm drain piping is 50-75 years if well maintained; would recommend replacing in the near future. System does not have overflow drains; if any roof work is done additional overflow drains will be required to bring system up to code.				X	\$0			

## Transportation and Maintenance Building: Plumbing Systems

### Plumbing Fixtures

Water Closets & Urinals	Water closets and urinals are generally original to the time of building construction and in fair to poor condition. Would recommend replacement of all water closets and urinals with new low flow fixtures and sensed flush valves.	X				\$29,185	\$30,644		
Lavatories & Sinks	Lavatories and sinks are generally original to the time of building construction and in fair to poor condition. Would recommend replacement of all fixtures with new low-flow faucets.	X				\$17,079	\$17,933		
Electric Water Coolers & Drinking Fountains	Electric water coolers are original to the building and in fair to poor condition; would recommend replacement with new water coolers with bottle fillers.	X				\$0	\$0		
Emergency Eye Wash Stations	Emergency eye wash station in auto repair area is in good condition.				X	\$0			

### Miscellaneous Plumbing Systems / Equipment

Specialty Equipment	Gas power washer installed is in good condition, age of equipment estimated at 8-10 years.				X	\$0			
Specialty Equipment	Original oil interceptor is still installed and in fair to poor condition, with 2000 gallon waste oil tank. Equipment is approaching end of life and replacement will be required.	X				\$68,438	\$71,860		
Compressed air piping	Air compressor installed in storage room is in fair condition, age approximated at 15 years old. Unit will need replacement in 5-10 years.			X		\$30,417			\$45,017
Compressed air piping	Air compressor installed in maintenance / storage building is in fair to poor condition and beyond its useful life. Would recommend replacement; review program to confirm usage.	X				\$30,417	\$31,938		

<b>12.0 Plumbing Assessment SUBTOTAL</b>						<b>\$1,857,856</b>	<b>\$730,967</b>	<b>\$742,707</b>	<b>\$860,556</b>
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# Transportation and Maintenance Building: Electrical Summary

Electrical systems in the Transportation and Maintenance Building are functional but include aging infrastructure that warrants future upgrades. Power distribution equipment, panelboards, and electrical infrastructure are identified for replacement within the planning horizon based on age and capacity limitations. Lighting systems are generally serviceable and provide adequate illumination for maintenance activities, with lighting replacement driven more by fixture age and efficiency improvements than by immediate performance deficiencies. Electrical recommendations focus on improving reliability, capacity, and long-term serviceability rather than correcting widespread lighting failures.



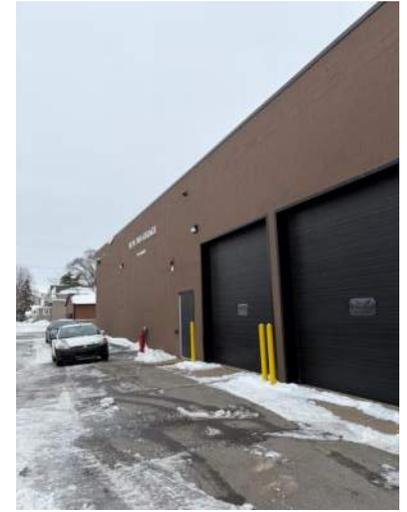
Existing Electrical Distribution



Existing Panel Board and Transformer



Existing Panel Board



Existing Exterior Wall Packs



Existing Generator



Existing Shop Lighting



Existing Shop Lighting



Existing Shop Lighting

# Transportation and Maintenance Building: Electrical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Building Exterior Lighting	Unclear if LED retrofitted		x			\$21,900		\$28,032	
<b>Power Distribution &amp; Control Equipment</b>									
Panelboards	Distribution panelboards, 1980s and older	x				\$80,604	\$84,634		
Panelboards	branch panelboards, 1980s and older	x				\$120,439	\$126,461		
Interior Transformers	1980s and older	x				\$142,350	\$149,468		
Interior Transformers	1980s and older	x				\$142,350	\$149,468		
Electrical Recepticals & Devices	1980s, recommend replacing with new receptacles and equipment connections with future renovations	x				\$190,000	\$199,500		
<b>Interior Lighting</b>									
Interior Lighting Fixtures	LED Retrofit lamps, replace with LED fixtures in future renovations			x		\$654,723			\$968,990
Lighting Controls	replace with new controls in future renovations; refer to lighting item above.			x					
Exit Signs	included in interior lighting fixtures			x					
<b>Communications</b>									
Communications Cabinets/Racks/Enclosures	IDF (fed from Admin)			x		\$24,334			\$36,014
Structured Cabling	CAT6 observed (entire building sqft)			x		\$137,760			\$203,885
<b>Technology</b>									
Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$15,208		\$19,466	
Wireless Access Points	Ruckus (primarily R720) end of life 2028	x				\$12,775	\$13,414		
<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$1,542,443</b>	<b>\$722,944</b>	<b>\$47,498</b>	<b>\$1,208,889</b>

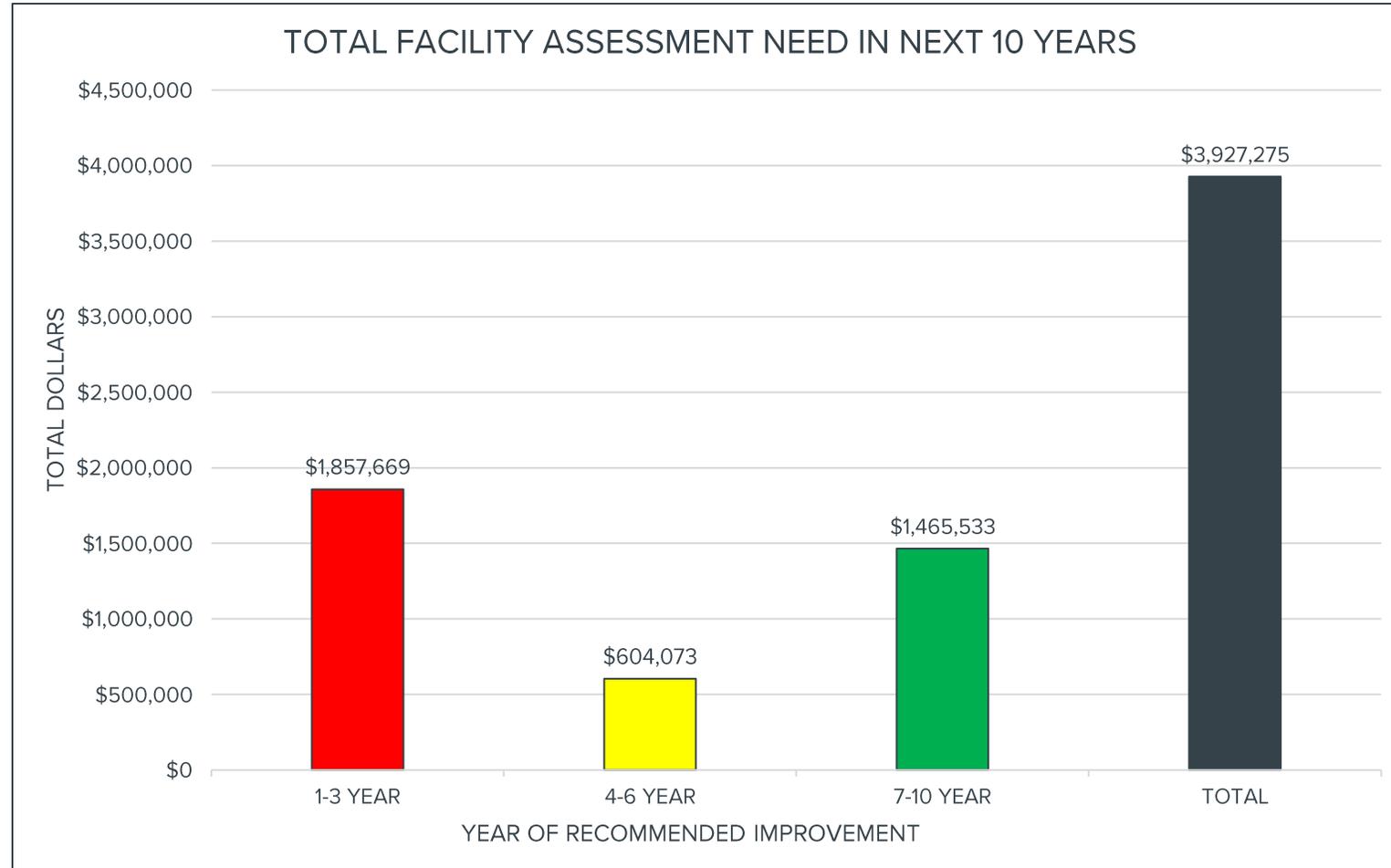


# GROUPS BUILDING

## Grounds Building: Overall Cost Review

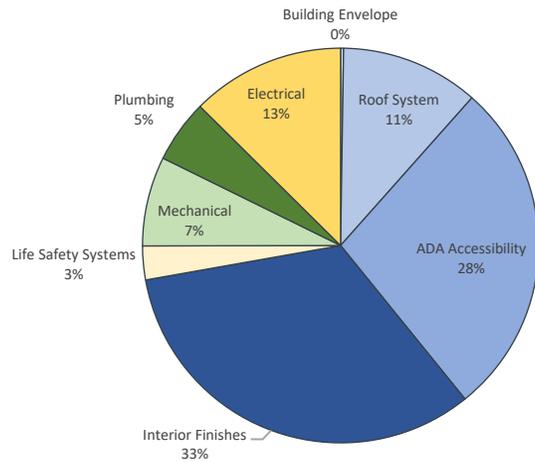
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$5,988	\$3,651	\$0	\$9,639
Roof System	\$0	\$443,520	\$0	\$443,520
ADA Accessibility	\$0	\$0	\$1,085,811	\$1,085,811
Interior Finishes	\$1,296,671	\$0	\$0	\$1,296,671
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$108,470	\$0	\$0	\$108,470
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$287,964	\$0	\$0	\$287,964
Plumbing	\$23,954	\$78,646	\$99,487	\$202,086
Electrical	\$134,623	\$78,257	\$280,235	\$493,114
<b>TOTALS</b>	<b>\$1,857,669</b>	<b>\$604,073</b>	<b>\$1,465,533</b>	<b>\$3,927,275</b>

## Grounds Building: Overall Cost Review

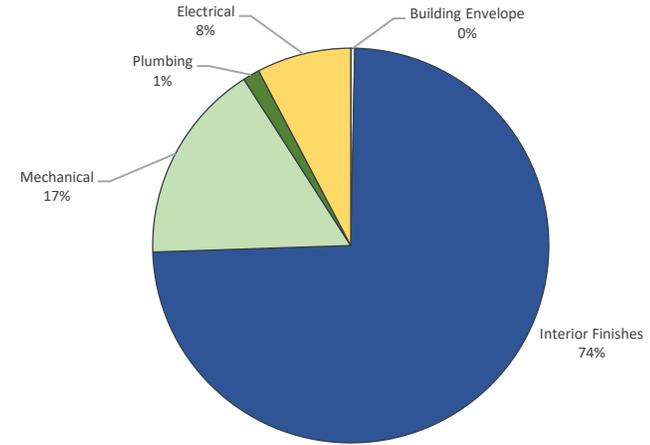


# Grounds Building: Overall Cost Review

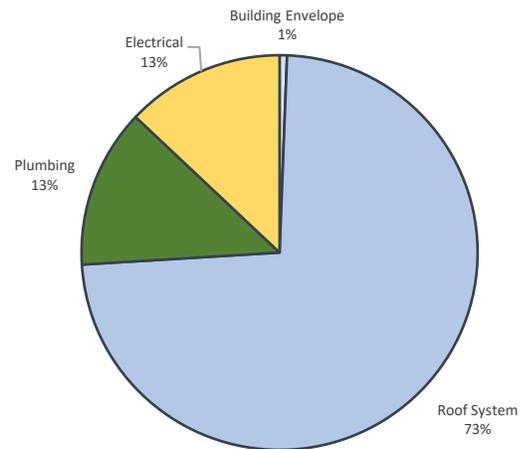
TOTAL NEED BY ASSESSMENT CATEGORY



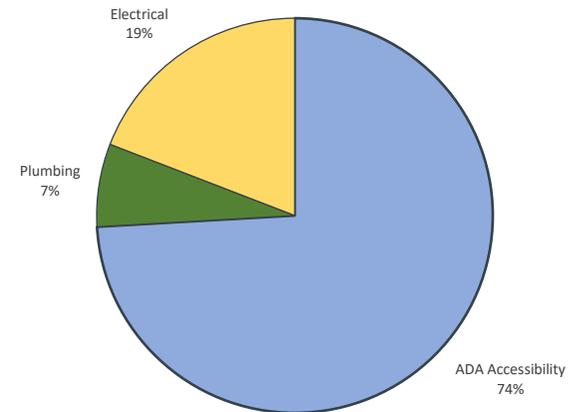
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



## Grounds Building: Architectural Summary

The Grounds Building serves as a basic operational support facility and remains functional despite aging architectural systems. Exterior envelope components, including walls, roofing, and doors, are approaching end-of-life and are identified in the assessment for future replacement based on age and exposure. Interior spaces are utilitarian, with finishes showing wear consistent with storage and equipment use. While no immediate architectural failures are noted, reinvestment is recommended to maintain weather protection, security, and suitability for continued operations.



Existing Toilet Room



Existing Brick



Existing Garage



Existing Lounge



Existing Brick/Exterior Door



Existing Structure

# Grounds Building: Building Envelope

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick/Masonry	Appears to be in good condition					\$0			
<b>Exterior / Vestibule Doors</b>									
Hollow Metal Doors					x	\$0			
Overhead Doors (rolling or coiling)					x	\$0			
Steel lintels at Overhead door openings	Non galvanized and primer red steel should be prepped and painted to avoid rusting and possible damage to brick veneer	x				\$5,703	\$5,988		
<b>Joint Sealants</b>									
Control Joint Sealants	A few joints should be removed, cleaned and new installed.		x			\$2,852		\$3,651	
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$8,555</b>	<b>\$5,988</b>	<b>\$3,651</b>	<b>\$0</b>

# Grounds Building: Roof Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
EPDM (Non-Ballasted)	Installed in 2012		x			\$346,500		\$443,520	
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$346,500</b>	<b>\$0</b>	<b>\$443,520</b>	<b>\$0</b>

# Grounds Building: ADA Accessibility

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
General Comment	Generally accessible building with compliant hardware.				x	\$0			
Parking Lot Signage	None				x	\$0			
Parking Lot Pavement Markings & ADA Striping	No ADA parking observed.				x	\$0			
Exterior/Exits	Observed acceptable.				x	\$0			
<b>Interior Accessibility (General)</b>									
General Comment	Older building and non compliant restrooms. Consider improvements with future renovations to bring common areas up to todays code standards.				x	\$0			
Interior Building Signage (general)	Observed non compliant.				x	\$0			
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Knob hardware observed at the interior offices. Budget to replace with future renovations.			x		\$5,475			\$8,103
Pull/Push Side Clearances	There is not adequate side clearance observed at entrance to bathrooms and some office areas. Future renovations may require this to be addressed.			x		\$177,939			\$263,350

# Grounds Building: ADA Accessibility

## Group Restroom Accessibility

General Comment	Non compliant bathrooms observed. Turning radius obstructions, front approach obstructions, and missing accessories. All conditions are grandfathered but future renovations should budget for improvements.			x		\$425,836			\$630,237
Group Restroom ADA Signage	Non compliant.			x		\$1,065			\$1,576
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Knob hardware observed.			x		\$3,650			\$5,402
Pull/Push Side Clearance	Non compliant.			x		\$118,626			\$175,566
Turning Clearances	Non compliant.			x		\$0			\$0
Lavatory Insulation/Shields	Missing shields and not enough approach clearance.			x		\$0			\$0
Accessories	Missing vertical grab bars.			x		\$1,065			\$1,576
<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$733,656</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,085,811</b>

# Grounds Building: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>7.0 Interior Finishes Assessment</b>									
<b>Offices / Auxiliary Offices / Support Areas</b>									
General Comment	Older building with finishes at end of useful life. Recommend refreshing office, bathrooms, break room, and support areas.	x				\$851,672	\$894,256		
Walls	Painted masonry walls in need of refresh.	x				\$0	\$0		
Ceiling	Acoustical ceilings at end of life cycle.	x				\$0	\$0		
Flooring	Broadloom carpet and VCT at end of life.	x				\$0	\$0		
Base Material	Rubber base.	x				\$0	\$0		
Casework	Old casework with broken elements.	x				\$0	\$0		
Countertops	Old PLAM countertops showing delamination and damage.	x				\$0	\$0		
Lockers	Old lockers.	x				\$0	\$0		
<b>Restrooms</b>									
General Comment	Old restrooms in need of refresh and ADA improvements.	x				\$273,752	\$287,440		
Walls	Painted walls in need of refresh.	x				\$0	\$0		
Ceiling	Painted ceilings in need of refresh.	x				\$0	\$0		
Flooring	VCT observed at end of useful life.	x				\$0	\$0		
Base Material	Rubber base.	x				\$0	\$0		
Toilet Partitions	Metal toilet partitions at mid life.	x				\$0	\$0		
Restroom Accessories	Missing ADA grab bars.	x				\$0	\$0		
Showers	Non compliant shower stall observed. Recommend improvements concurrent with renovations.	x				\$0	\$0		
<b>General</b>									
Repair Shop	Observed in fair condition. Paint peeling observed at ceilings and upper half of walls need refinishing. Bottom half has been repainted.	x				\$109,501	\$114,976		
<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						<b>\$1,234,925</b>	<b>\$1,296,671</b>	<b>\$0</b>	<b>\$0</b>

# Grounds Building: Life Safety Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
General Comment	Non illuminated exit signage observed. Budget for emergency lighting and adding a few illuminated exit signs concurrent with renovations.	x				\$68,855	\$72,298		
Clear/Defined Egress Paths	See above.	x				\$0	\$0		
Knox Box	Did not locate	x				\$1,369	\$1,437		
Emergency Plan Available	Observed. adequate				x	\$0			
Emergency/Automatic Shut-offs (Shop Equipment)	Did not locate. budget in remodel	x				\$0	\$0		
Clear Lines of Site at Building Perimeter	Observed. adequate				x	\$0			
AED/Location	Did not located	x				\$2,281	\$2,395		
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Building does not have a fire suppression system					\$0			
<b>Emergency Lighting / Power</b>									
Emergency Lighting/Power Source	battery source, replace with light fixture upgrade			x		\$0			\$0

# Grounds Building: Life Safety Systems

### Emergency Alarm Systems

Fire Alarm Pull Stations	Did not locate. budget in remodel	x				\$15,400	\$16,170		
Horns/Strobes	Did not locate. budget in remodel	x				\$15,400	\$16,170		

### Access Control / Intrusion Detection

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

### Video Surveillance System / Equipment

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$0			\$0
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$103,305</b>	<b>\$108,470</b>	<b>\$0</b>	<b>\$0</b>
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## Grounds Building: Mechanical Summary

Mechanical and plumbing systems within the Grounds Building are limited in scope and generally original to the building construction, with the exception of recent updates to the small boiler system and pumps. Original exhaust fans, ceiling fans, and heating equipment are all past their useful life and in need of replacement. Plumbing fixtures and compressed air systems are in need of an upgrade, while domestic, storm, and sanitary piping still has several years of life left. Aging equipment is the primary concern at this building rather than broader infrastructure needs.



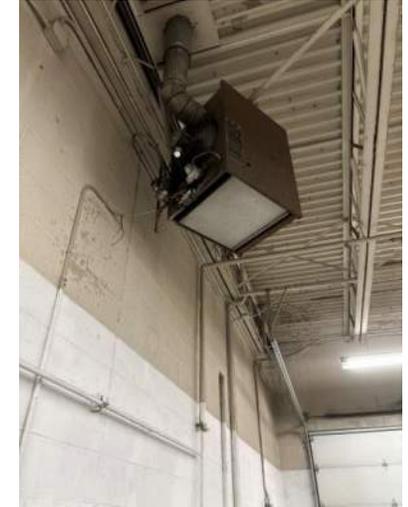
Existing A/C Window Shaker



Existing Hood



Existing Water Heater



Existing Gas Heater



Existing Finned Tube



Existing Radiant Heater



Existing Hotsy



Existing Drinking Fountain

# Grounds Building: Mechanical Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	Small boiler system installed with condensing boiler, boiler pump, and hydraulic separator updated in 2024. Includes small expansion tank (10 gallons), constant-volume circulation pump, and related accessories which are original to the building (1984). Control valves are wired directly to circulation pump to activate upon a call for heat.				X	\$0			
<b>Heating / Cooling Piping</b>									
Hydronic Piping and Pumps	Heating hot water supply and return piping is original to date of construction building (1984). Anticipated lifetime for piping if well maintained is 50-75 years; existing piping appears to be in fair condition and does not need replacement at this time.				X	\$0			
Insulation	Hydronic piping was not insulated during the recent boiler upgrades; significant heat loss is occurring. Would recommend addition of insulation to all hot water and domestic piping in the mechanical room.	X				\$4,605	\$4,835		
<b>Building HVAC Air Distribution System / Equipment</b>									
Through-wall Exhaust Fans	Exhaust fans originally installed in 1984; units are in poor condition and in need of replacement. New direct-drive ECM fans have increased efficiency and reduced maintenance over belt-driven fans.	X				\$34,068	\$35,771		
Fans	Ceiling fans provide destratification and comfort mixing; units are in poor condition and original to the building construction.	X				\$24,334	\$25,551		

## Grounds Building: Mechanical Systems

### Terminal Heating / Cooling Equipment

Unit Heaters	Gas unit heaters serve main bay area; units are in poor condition and in need of replacement. One or two have failed over the years and are no longer operational. Owner has noted significant challenge maintain adequate temperatures in the space during the heating system, additional heating equipment is recommended.	X				\$54,144	\$56,851		
Finned Tube Heaters	Finned tube radiation installed in restrooms and ancillary spaces; equipment is in poor condition and in need of replacement.	X				\$115,580	\$121,359		
Through-Wall Air Conditioners	Through wall air-conditioners provide cooling in office / break room spaces. Units are in poor condition and are not recommended for commercial spaces.	X				\$0	\$0		
Unit Heaters	Two radiant heaters near workspace area are in poor condition, one is currently not operation. In need of replacement.	X				\$30,114	\$31,620		

### Miscellaneous HVAC Systems / Equipment

Decentralized HVAC Equipment	Original welding hood still installed from 1984 construction. Hood is in poor condition and does not meet current design standards for tabletop welding and machine work; would recommend replacement.	X				\$11,406	\$11,976		
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<b>11.0 Mechanical Assessment SUBTOTAL</b>						<b>\$274,251</b>	<b>\$287,964</b>	<b>\$0</b>	<b>\$0</b>
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# Grounds Building: Plumbing Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Domestic water heater appears to be in fair condition, will require replacement in 5-10 years based on age and condition.			X		\$29,200			\$43,216
Domestic Water Piping	Domestic water piping is original to date of construction building (1984). Anticipated lifetime for piping if well maintained is 50-75 years; existing piping appears to be in fair condition and does not need replacement at this time.				X	\$0			
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Sanitary waste and vent piping is original to date of construction (1984). Anticipated lifetime for piping if well maintained is 50-75 years and replacement is not recommended at this time.				X	\$0			
Oil Interceptor	Original 1984 oil/volatiles interceptor is still installed with external 200 gallon tank. Equipment is approaching end of life and replacement will be required.			X		\$38,021			\$56,271
<b>Storm Drainage System / Equipment</b>									
Storm Drainage Piping	Storm drain piping and roof drains are original to date of construction (1984). Anticipated lifetime for piping if well maintained is 50-75 years and replacement is not recommended at this time. Storm system does not include overflow drains; if re-roofing is done overflow drains and downspouts would need to be added to meet building code.				X	\$0			

## Grounds Building: Plumbing Systems

### Plumbing Fixtures

Water Closets & Urinals	Fixtures are original to date of construction (1984). Units are in fair condition, though would recommend replacing flush valves with new low flow fixtures and sensed, low flow flushometers.		X			\$39,116		\$50,068	
Lavatories & Sinks	Fixtures are original to date of construction (1984). Units are in fair condition, though would recommend replacing faucets with newer sensed, low flow faucets.		X			\$16,060		\$20,557	
Electric Water Coolers & Drinking Fountains	Electric water cooler is original to the building; would recommend replacement with bottle filler.		X			\$6,266		\$8,020	

### Miscellaneous Plumbing Systems / Equipment

Compressed air piping	Air compressor was relocated and older than original building construction of 1984; unit is in poor condition and past useful life - would recommend replacement.	X				\$22,813	\$23,954		
Specialty Equipment	Gas power washer installed is in good condition, serial number indicates a manufacture date of 2018.			X		\$0			\$0

<b>12.0 Plumbing Assessment SUBTOTAL</b>						<b>\$151,476</b>	<b>\$23,954</b>	<b>\$78,646</b>	<b>\$99,487</b>
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## Grounds Building: Electrical Summary

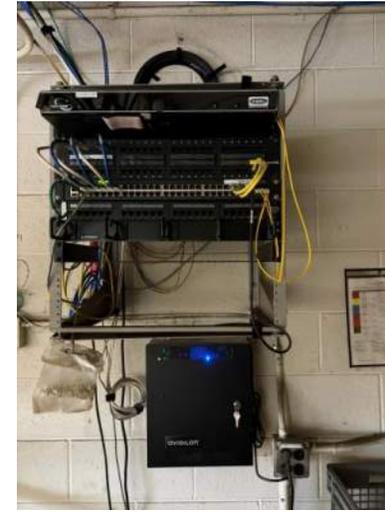
Electrical systems in the Grounds Building remain operational but include aging infrastructure components that are nearing replacement timelines. Power distribution equipment and electrical infrastructure are identified for upgrade to improve reliability and support operational needs. Lighting systems are functional and generally adequate for the building's use, with replacement recommendations driven primarily by infrastructure age and future efficiency goals rather than current lighting performance issues. Electrical improvements are focused on maintaining safe and reliable service over the long term.



Existing Electrical Disconnects



Existing Transformer



Existing IT



Existing Exterior Wall Pack



Existing Lighting



Existing Lighting

# Grounds Building: Electrical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Building Exterior Lighting	non-LED wall packs, unclear if retrofitted		x			\$6,692		\$8,566	
<b>Power Distribution &amp; Control Equipment</b>									
Service Disconnects	Main service disconnect, disconnects for panels and equipment feeders, recommend replacing with panelboard to consolidate	x				\$36,504	\$38,329		
Panelboards	Branch, 1980s	x				\$40,608	\$42,638		
Interior Transformers	1980s	x				\$47,450	\$49,823		
Electrical Receptacles & Devices	1980s, upgrade receptacles and devices for equipment connection as needed		x			\$46,842		\$59,958	
<b>Interior Lighting</b>									
Interior Lighting Fixtures	LED retrofit of shop lights			x		\$146,381			\$216,644
Lighting Controls	manual controls; included in line item above.			x		\$0			\$0
Exit Signs	included in lighting sqft			x		\$0			\$0
<b>Communications</b>									
Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Structured Cabling	CAT6 observed (entire building sqft)			x		\$30,800			\$45,584
<b>Technology</b>									
Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$7,604		\$9,733	
Wireless Access Points	Ruckus (primarily R720) end of life 2028	x				\$3,650	\$3,833		
<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$378,698</b>	<b>\$134,623</b>	<b>\$78,257</b>	<b>\$280,235</b>

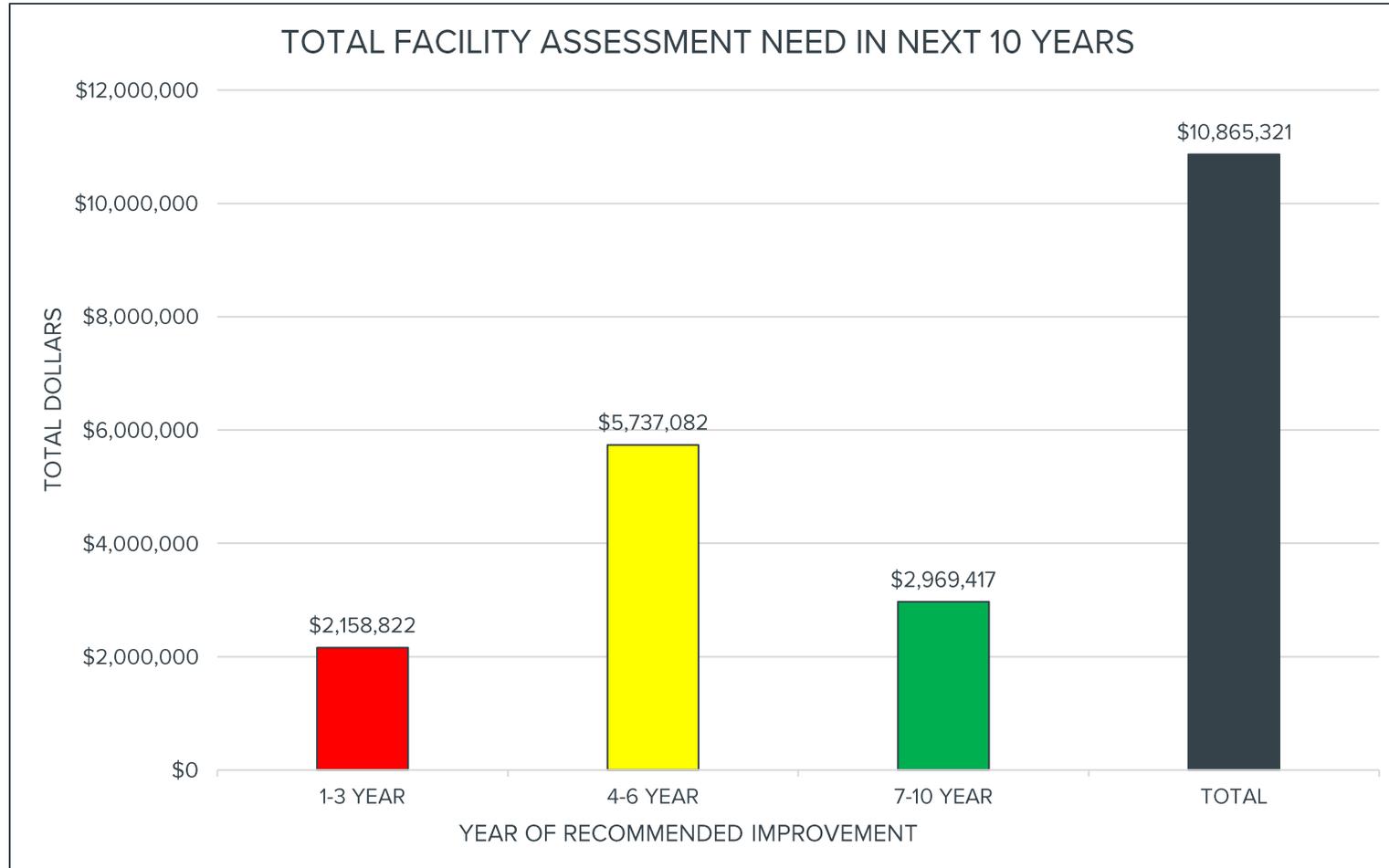


# MPS ADMINISTRATION BUILDING

## Administration Building: Overall Cost Review

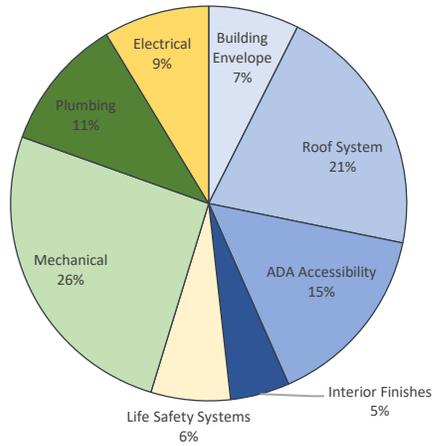
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$51,898	\$752,147	\$0	\$804,046
Roof System	\$0	\$1,934,208	\$326,287	\$2,260,495
ADA Accessibility	\$23,954	\$1,626,452	\$0	\$1,650,406
Interior Finishes	\$0	\$525,604	\$0	\$525,604
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$0	\$591,866	\$112,539	\$704,405
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$1,314,830	\$138,609	\$1,345,212	\$2,798,651
Plumbing	\$462,974	\$0	\$720,098	\$1,183,073
Electrical	\$305,166	\$168,196	\$465,281	\$938,642
<b>TOTALS</b>	<b>\$2,158,822</b>	<b>\$5,737,082</b>	<b>\$2,969,417</b>	<b>\$10,865,321</b>

## Administration Building: Overall Cost Review

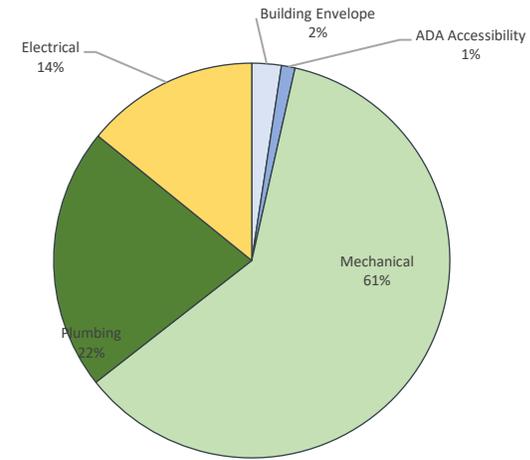


# Administration Building: Overall Cost Review

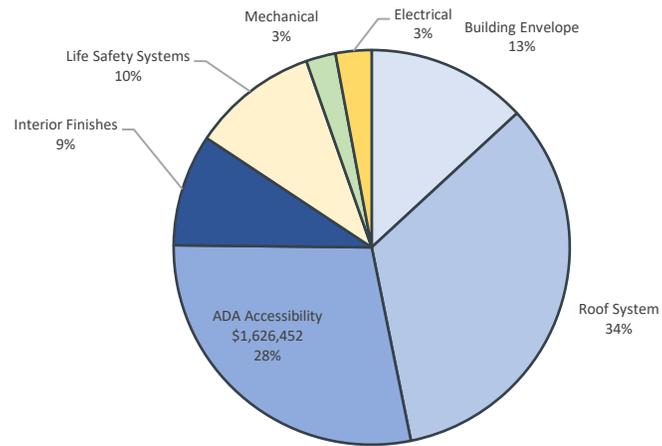
TOTAL NEED BY ASSESSMENT CATEGORY



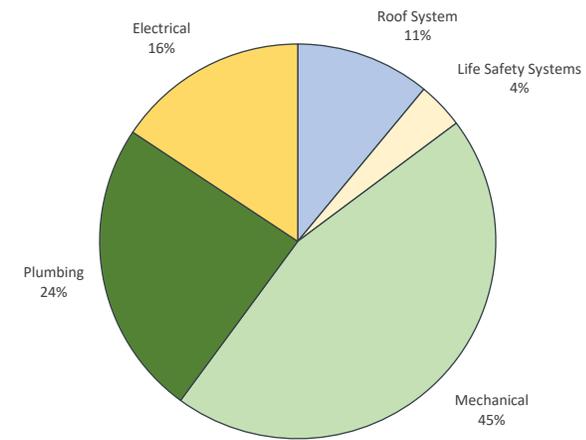
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



## Administration Building: Architectural Summary

The Administration Building remains functional and generally well maintained, with architectural systems that reflect their age but do not indicate immediate replacement needs. Exterior envelope components, including walls, windows, doors, and roofing systems, are performing adequately, with replacement timelines falling primarily in the mid-term planning window based on age and expected service life. Interior finishes throughout office and support areas show wear consistent with long-term use, with flooring, ceilings, and wall finishes identified for future replacement to support functionality and appearance rather than due to failure. Accessibility improvements are noted in the assessment as future considerations to align with evolving ADA standards. Overall, architectural systems support continued use, with reinvestment driven by lifecycle planning and modernization rather than near-term deficiencies.



Existing Toilet Room



Existing Entry



Existing Toilet



Existing Toilet Room



Existing Flooring



Existing Office Space

# Administration Building: Building Envelope

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick/Masonry	In good condition overall with some repairs needed at outside corner window sills.	x				\$15,208	\$15,968		
Metal Panel	Appears to be in good condition. Painting may be a good idea to prolong the life of the panels.					\$0			
Store Front	All exterior Storefront systems are single pane glazed. Replacement with thermal broke systems and double pane glass is highly recommended.		x			\$142,389		\$182,258	
Exposed Structural Steel	Cleaning and repainting to prolong the life would be recommended. Base of columns should be coated with asphaltic material to stop and prevent further rusting.		x			\$36,120		\$46,234	
ACMSoffit	Overall in great condition. However, there are a couple of small damaged areas. Patching may or may not be an option. Consider total replacement with new finished system.		x			\$365,002		\$467,203	
Soffit Venting	The screen venting system is deteriorated and failing allowing for insects and nesting birds to pass through.	x				\$34,219	\$35,930		
<b>Exterior / Vestibule Doors</b>									
Hollow Metal Doors	Doors and frames appear to be in fair to good condition with some rusting showing at the bottoms of the frames. Cleanning and painting recommended to prolong the life of the frames.		x			\$2,281		\$2,920	
<b>Windows</b>									
Aluminum Windows	Double pane with no visible concerns				x	\$0			

# Administration Building: Building Envelope

### Windows

Aluminum Windows	Double pane with no visible concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$0			
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### Joint Sealants

Window/Door Sealants	Silicone sealant has been installed over existing sealants. Recommend to remove all existing sealant, clean and install new flexible elastomeric sealant.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	\$41,823		\$53,533	
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### Perimeter Maintenance Strip

Stone	Regular maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$0			
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<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$637,042</b>	<b>\$51,898</b>	<b>\$752,147</b>	<b>\$0</b>
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# Administration Building: Roof Systems

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
EPDM (Non-Ballasted)	Installed 2011. Membrane over 2 layers of 2" Insulation.		x			\$1,511,100		\$1,934,208	
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$1,731,564</b>	<b>\$0</b>	<b>\$1,934,208</b>	<b>\$326,287</b>

# Administration Building: ADA Accessibility

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>6.0 ADA Accessibility Assessment</b>									
<b>Exterior Accessibility</b>									
General Comment	ADA Accessible throughout the back entrance with signage posted for public assistance.				x	\$0			
Parking Lot Signage	Observed in good condition.				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed in good condition but requiring annual maintenance.				x	\$0			
Curb Cuts	Observed at back of building.				x	\$0			
Tactile Warning Strips	Observed at back of building.				x	\$0			
Exterior/Exits	Observed with good ADA accessibility but recommend adding ADA auto operators.	x				\$22,813	\$23,954		
<b>Interior Accessibility (General)</b>									
General Comment	Generally acceptable with grandfathered conditions but deficiencies include path of travel and restroom compliance.		x			\$0		\$0	
Interior Building Signage (general)	Non compliant signage observed throughout the building.		x			\$47,907		\$61,321	
Corridor Clearances	Generally compliant with good clearance.				x	\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	Drinking fountains observed protruding into path of travel for the visually impaired. Recommend adding wing walls.		x			\$36,500		\$46,720	
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Non compliant knob hardware observed throughout the building. Recommend replacement with future renovations.		x			\$164,251		\$210,241	
Pull/Push Side Clearances	There are a few rooms within the building that are non compliant. Recommend fixing this condition with future renovations.		x			\$474,504		\$607,365	

# Administration Building: ADA Accessibility

## Group Restroom Accessibility

General Comment	Generally non compliant bathrooms observed throughout the building. Turning clearance, insulation shields, missing grab bars, etc. Recommend renovating bathrooms to address ADA deficiencies. Cost included in interior finishes.		x			\$547,504		\$700,805	
Group Restroom ADA Signage	Non compliant signage observed.		x			\$0		\$0	
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Push pull hardware observed.		x			\$0		\$0	
Turning Clearances	Non compliant conditions observed.		x			\$0		\$0	
Plumbing Fixtures (water closets)	Various conditions observed. Some older restroom faucets are non compliant.		x			\$0		\$0	
Lavatory Insulation/Shields	Missing at most bathrooms.		x			\$0		\$0	
Accessories	Non compliant conditions observed.		x			\$0		\$0	
<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$1,293,479</b>	<b>\$23,954</b>	<b>\$1,626,452</b>	<b>\$0</b>

# Administration Building: Interior Finishes

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 7.0 Interior Finishes Assessment

### Offices / Auxiliary Offices / Support Areas

General Comment	Generally observed in good condition. The bathrooms are dated and non compliant and should be refreshed soon.				x	\$0			
Walls	Painted drywall in good condition.				x	\$0			
Ceiling	Acoustical suspended ceilings in good condition.				x	\$0			
Flooring	Carpet tiles in good condition.				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			
Signage	Observed throughout but non compliant with ADA standards. See ADA for cost.		x			\$0		\$0	
Casework	Older casework observed in good condition.				x	\$0			
Countertops	PLAM countertops observed in fair condition.				x	\$0			
Furniture/Furnishings	Observed in fair condition.				x	\$0			

### Corridors

General Comment	Generally in good condition				x	\$0			
Walls	Painted drywall in good condition.				x	\$0			
Ceiling	Acoustical suspended ceilings in good condition.				x	\$0			
Flooring	Carpet tiles in good condition.				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			

## Administration Building: Interior Finishes

### Restrooms

General Comment	Mixed conditions observed throughout building. Older restrooms should be refreshed and remodeled providing more ADA accessibility.		x			\$410,628		\$525,604	
Walls	1x ceramic tiles.				x	\$0			
Flooring	1x ceramic tiles.				x	\$0			
Base Material	1x ceramic tiles.				x	\$0			
Countertops	Plastic laminate countertops approaching end of useful life.		x			\$0		\$0	
Toilet Partitions	Observed in good condition.				x	\$0			
Restroom Accessories	Observed non compliant with ADA.		x			\$0		\$0	

### General

General Comment	Board rooms and conference rooms are recently refreshed and in good condition.				x	\$0			
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<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						<b>\$410,628</b>	<b>\$0</b>	<b>\$525,604</b>	<b>\$0</b>
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# Administration Building: Life Safety Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Adequate Corridor Widths	Observed with good clearance.				x	\$0			
Clear/Defined Egress Paths	Observed with illuminated exit signage in good condition.				x	\$0			
Clear Lines of Site at Building Perimeter	Observed adequate.				x	\$0			
AED/Location	Staff lounge				x	\$0			
Emergency/Automatic Shut-offs (Food Service/Kilns/Science Labs/Shop Equipment)	Observed at boiler room.				x	\$0			
Knox Box	Did not locate		x			\$1,369		\$1,752	
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Fire protection is recommended for life-safety considerations; building is not currently sprinkled. Estimated system cost shown here for district planning purposes; building can also be portioned and separated to meet fire codes as it currently is.					\$220,464			
Fire Alarm Panels/Locations	Does not exist					\$0			
Smoke/Heat Detectors	Does not exist					\$0			
Fire Extinguishers/Cabinets	Did not locate					\$0			
<b>Emergency Lighting / Power</b>									
Emergency Lighting/Power Source	battery source, replace with light fixture upgrade				x	\$0			
Exit Signs/Power Source	battery source, replace with light fixture upgrade				x	\$0			
<b>Emergency Alarm Systems</b>									
General Comment	No fire alarm system. Recommend adding		x			\$461,026		\$590,113	

# Administration Building: Life Safety Systems

**Access Control / Intrusion Detection**

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

**Video Surveillance System / Equipment**

Security Cameras/Locations	Allegion cameras, (5) current NVRs. Existing NVR configuration has capacity for 30 days storage			x		\$76,040			\$112,539
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$758,899</b>	<b>\$0</b>	<b>\$591,866</b>	<b>\$112,539</b>
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# Administration Building: Mechanical Summary

Mechanical and plumbing systems serving the Administration Building are reliable and in good condition, with major equipment generally updated in recent renovations. Some infrastructure needs are present as piping and duct systems approach the end of or are past their useful life, and replacement of original building perimeter heating equipment is recommended. Select replacements of plumbing fixtures would improve water usage and help refresh the group toilet rooms.



Existing RTU



Existing Boilers



Existing Glycol Feed



Existing Zone Valves



Existing Finned Tube



Existing MDF Cooling



Existing Water Heater



Existing Plumbing Fixture

# Administration Building: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building Heating Equipment</b>									
Boilers	New boiler plant installed in recent 2024 renovations including new Raypak condensing boilers (399 MBH each). Boilers are in excellent condition.				X	\$0			
Boiler Plant Accessories	New boiler plant installed in recent 2024 renovations including new primary and secondary hot water pumps, expansion tank, glycol fill, etc. Equipment is in excellent condition.				X	\$0			
<b>Heating / Cooling Piping</b>									
Hydronic Piping	Hydronic piping is original to the building outside of some minor replacement during the recent renovations. Life expectancy of piping like this is 50-75 years if well maintained, piping is approaching end of useful life and replacement should be considered.			X		\$661,392			\$978,860

## Administration Building: Mechanical Systems

### Building HVAC Air Distribution System / Equipment

Rooftop Units	New Daikin rooftop units installed in 2024 are on excellent condition and serve a VAV system that provides zone control throughout the building. Units are gas-fired heating with packaged cooling, (14,000 CFM) each.				X	\$0			
VAV Terminal Units	New VAV terminal unites installed in 2024 during renovations; units are in excellent condition.				X	\$0			
Rooftop Exhaust Fans	Exhaust fans appear to be original to time of building construction (1969) and are in fair condition, would recommend replacement.		X			\$108,288		\$138,609	
HVAC Ducts	Supply/return/exhaust air ductwork is largely original to the building (now 50+ years old); life expectancy is typically 25-30 years but can reach 50 years if well maintained. At this age, issues with duct sealing and insulation decay decrease efficiency and potential water or corrosion issues start to occur. Would recommend installation of new ductwork for all associated air handling systems (RTU/VAV SA & RA, EF systems).	X				\$853,437	\$896,109		

# Administration Building: Mechanical Systems

## Terminal Heating / Cooling Equipment

Finned Tube Heaters	Hydronic baseboard heat is installed around the perimeter of the building in offices, conference rooms, etc. (8) Zones are created with valves located off a common header in the mechanical/server room. Baseboard heat itself is original to the date of building installation and should be replaced. Approximate qty. listed for replacement.	X				\$278,334	\$292,251		
Cabinet Unit Heaters	Electric cabinet heaters installed in vestibules are original to building construction (installed 1969) and are in poor condition; they are currently not utilized. Would recommend replacement with new units and tying in to the new boiler system.	X				\$120,448	\$126,470		
Split Systems	Mitsubishi split system relocated to server room during 2024 renovations but unit is several years older; serves as backup during emergency power situations. Unit is in decent condition but appears to be about 10 years old - anticipated useful life of 15-20 years.			X		\$27,071			\$40,065
Split Systems	Liebert split systems serving server room are in excellent condition.				X	\$0			

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	Temperature controls updated throughout building during recent renovations, tied in to Automated Logic system. Good condition.				X	\$0			
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<b>11.0 Mechanical Assessment SUBTOTAL</b>						<b>\$2,269,434</b>	<b>\$1,314,830</b>	<b>\$138,609</b>	<b>\$1,345,212</b>
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# Administration Building: Plumbing Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	New tank type domestic water heater, recirc pump, and accessories installed in recent 2024 renovations - in excellent condition.				X	\$0			
Domestic Water Piping	Majority of piping is original to the date of building construction (1969), with new piping installed in mechanical room during recent renovations. Original building piping has significant portions of galvanized piping that are corroding and breaking down, the district is experiencing issues. General life expectancy of a galvanized domestic water piping system is 30-50 years if well maintained. System is in need of replacement.	X				\$440,928	\$462,974		
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Generally original to year of construction (1969). General life expectancy of a sanitary piping system is 50-70 years if well maintained; will be in need of replacement in coming years.			X		\$220,464			\$326,287
<b>Storm Drainage System / Equipment</b>									
Storm Drainage Piping	Generally original to year of construction (early 1960s). General life expectancy of storm drain piping is 50-75 years if well maintained; will be in need of replacement in coming years. System does not appear to have overflow drains; if any roof work is done additional overflow drains will be required to bring system up to code.			X		\$220,464			\$326,287

# Administration Building: Plumbing Systems

## Plumbing Fixtures

Water Closets & Urinals	Water closets and urinals have been replaced in (1) of (4) toilet rooms; remaining fixtures are original to building construction and in fair condition. Would recommend replacement of all water closets and urinals with new low flow fixtures and sensed flush valves.			X		\$26,873			\$39,772
Lavatories & Sinks	Lavatories and sinks have been replaced in (1) of (4) toiler rooms, remaining fixtures are original to bilding construction and in fair condition. Would recommend replacement of remaining lavatories with new low-flow faucets.			X		\$18,752			\$27,753
Electric Water Coolers & Drinking Fountains	Electric drinking fountains have been recently replaced and are in good condition.				X	\$0			
<b>12.0 Plumbing Assessment SUBTOTAL</b>						<b>\$927,481</b>	<b>\$462,974</b>	<b>\$0</b>	<b>\$720,098</b>

# Administration Building: Electrical Summary

Electrical systems within the Administration Building are functional and adequately support current operations. Power distribution equipment, panelboards, and branch circuitry remain within their expected service life, with replacement identified as a future need rather than an immediate concern. It has been identified that the generator is undersized for the telecom needs at the districts' central servers and the cooling needs in that space. Interior lighting systems were replaced in 2020. Emergency and life-safety systems are operational and compliant, but it has been identified that the generator is undersized for the telecom needs at the districts' central servers and the cooling needs in that space. Electrical recommendations focus on modernization and lifecycle replacement rather than urgent corrective work, except for validating the standby power capacity of the generator.



Existing Electrical Gear



Existing Panel Board



Existing Lighting



Existing Cooling Equipment



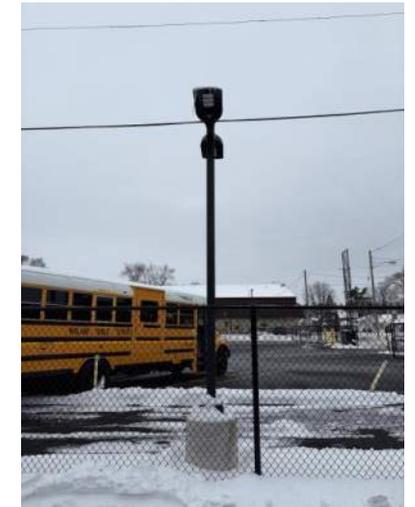
Existing AV/Technology



Existing MDF



Existing AV/Technology



Existing Site Lighting

# Administration Building: Electrical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	2021				x	\$0			
Building Exterior Lighting	unclear if retrofitted with LED lamps		x			\$40,152		\$51,395	
<b>Power Distribution &amp; Control Equipment</b>									
Exterior Transformers	1970s, 2 services (480V & 208V), primary metering	x				\$119,386	\$125,355		
Panelboards	Distrubution, 1970s	x				\$56,271	\$59,085		
Panelboards	branch panels, 1970s	x				\$83,952	\$88,150		
Panelboards	branch panels, 2021				x	\$0			
Automatic Transfer Switch	2021 Kohler				x	\$0			
Generator	2021 Kohler 25 kW evaluate size, IT department indicates it's undersized				x	\$0			
Electrical Receptacles & Devices	various age depending on time of remodel in specific space, to be evaluated with future remodels (entire building sqft)			x		\$167,646			\$248,116
<b>Interior Lighting</b>									
Interior Lighting Fixtures	replaced in 2020				x	\$0			
Lighting Controls	replaced in 2020				x	\$0			
Exit Signs	included in interior lighting fixtures				x	\$0			

# Administration Building: Electrical Systems

## Communications

Communications Cabinets/Racks/Enclosures	MDF			x		\$12,167			\$18,007
Communications Cabinets/Racks/Enclosures	IDF			x		\$24,334			\$36,014
Structured Cabling	CAT6 observed (entire building sqft)			x		\$110,232			\$163,143
Communications Cabinets/Racks/Enclosures	CENTRAL SERVERS					\$0			

## Technology

Network Switches	Ruckus ICX 7150-48(F)(PF)		x			\$91,251		\$116,801	
Wireless Access Points	Ruckus (primarily R720) end of life 2028	x				\$31,025	\$32,576		
Board Room AV	AV / streaming system, Crestron based, Blackmagic design broadcast equipment				x	\$0			

<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$736,416</b>	<b>\$305,166</b>	<b>\$168,196</b>	<b>\$465,281</b>
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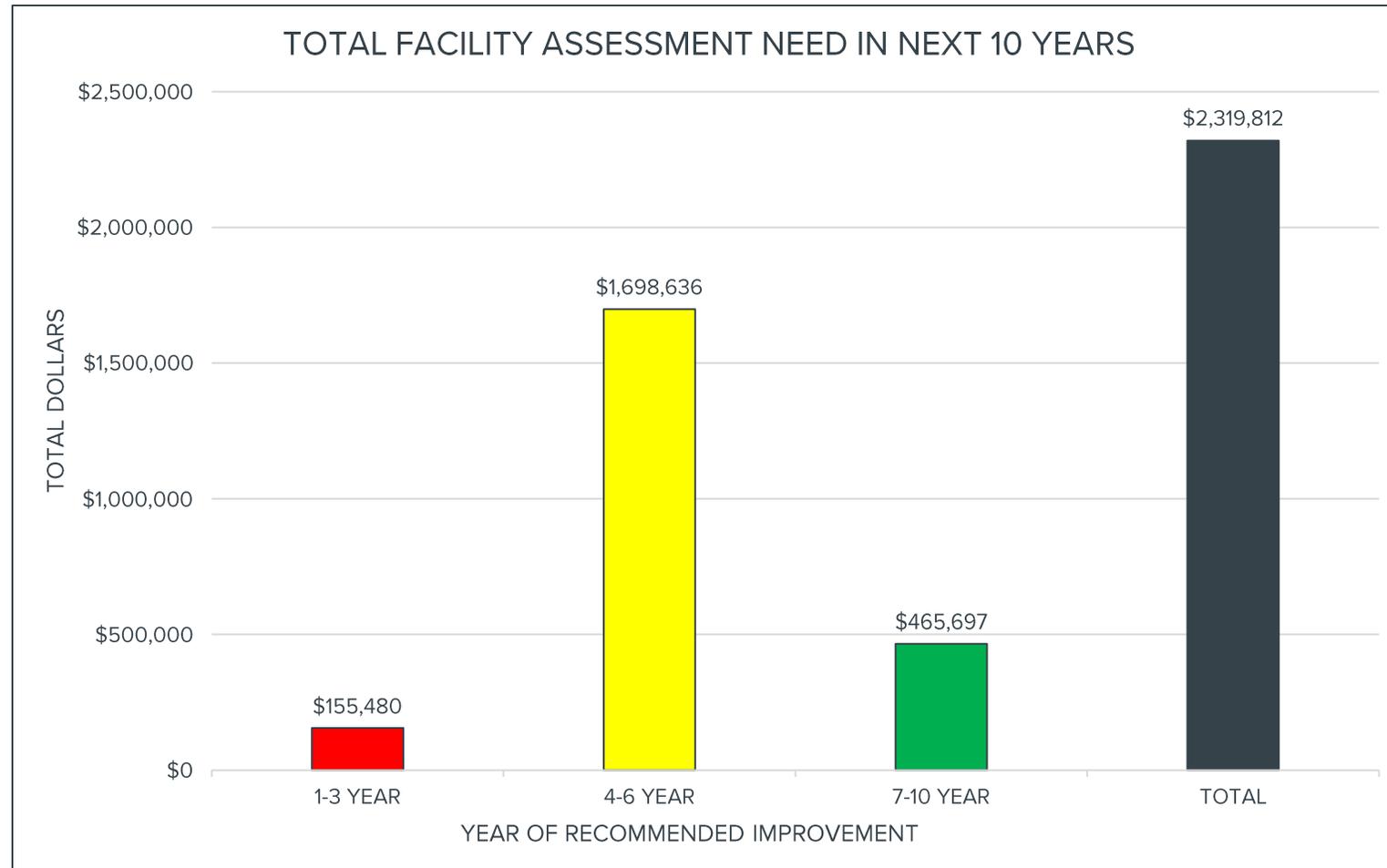


# FAST ICE DRIVE

## Fast Ice Drive: Overall Cost Review

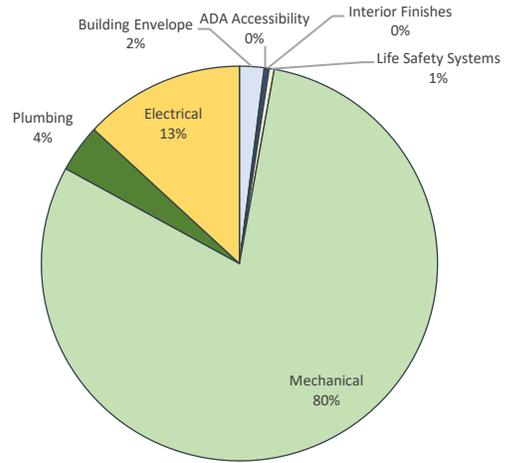
BUILDING SUMMARY	1-3 YEAR	4-6 YEAR	7-10 YEAR	TOTAL
Building Envelope	\$46,308	\$0	\$0	\$46,308
Roof System	\$10,500	\$0	\$0	\$10,500
ADA Accessibility	\$3,099	\$0	\$0	\$3,099
Interior Finishes	\$6,148	\$0	\$0	\$6,148
Indoor Athletic Facilities	\$0	\$0	\$0	\$0
Life Safety Systems	\$9,581	\$0	\$0	\$9,581
Food Service	\$0	\$0	\$0	\$0
Mechanical	\$79,844	\$1,608,836	\$162,516	\$1,851,196
Plumbing	\$0	\$89,800	\$0	\$89,800
Electrical	\$0	\$0	\$303,181	\$303,181
<b>TOTALS</b>	<b>\$155,480</b>	<b>\$1,698,636</b>	<b>\$465,697</b>	<b>\$2,319,812</b>

## Fast Ice Drive: Overall Cost Review

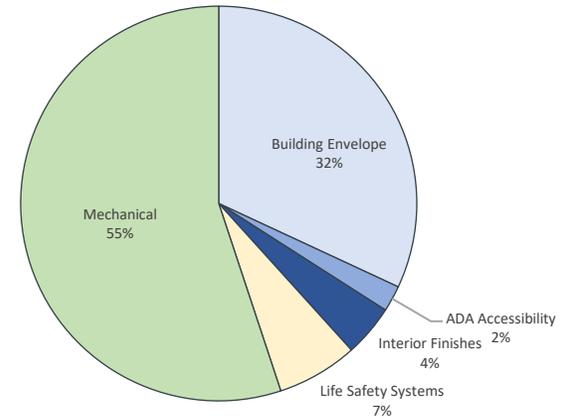


# Fast Ice Drive: Overall Cost Review

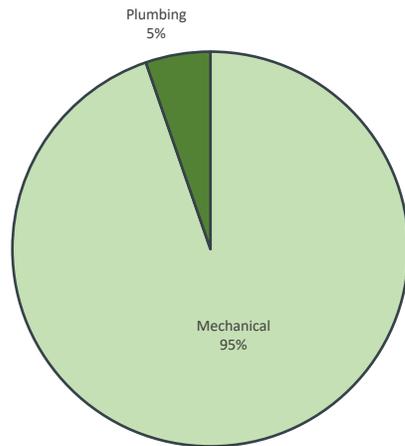
TOTAL NEED BY ASSESSMENT CATEGORY



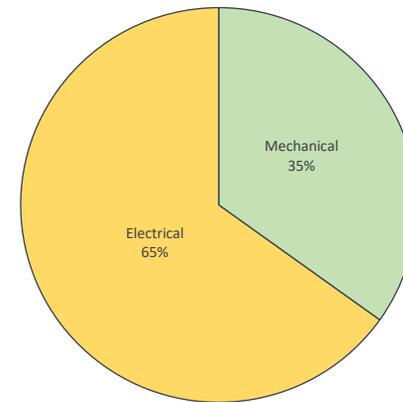
1-3 YEAR NEED BY ASSESSMENT CATEGORY



4-6 YEAR NEED BY ASSESSMENT CATEGORY



7-10 YEAR NEED BY ASSESSMENT CATEGORY



## Fast Ice Drive: Architectural Summary

The Fast Ice Drive facility is a relatively newer building and remains in generally good condition, with architectural systems performing as intended. Exterior envelope components, including roofing, walls, and openings, are within their expected service life and do not present widespread near-term replacement needs. Interior finishes and building components show minimal wear consistent with age and use. The assessment identifies only a limited number of isolated architectural items requiring near-term attention, while the majority of architectural systems fall within longer-term lifecycle planning horizons, generally approaching ten-year replacement windows. Overall, the architectural condition supports continued use with targeted maintenance rather than significant capital reinvestment.



Existing Entry



Existing Exterior at Roll-Up Door



Existing Toilet Room



Existing Exterior at Roof Edge



Existing Standing Seem Metal Roof

# Fast Ice Drive: Building Envelope

Survey Item	Survey Notes	1-3	4-6	7-10	10+	Net Present Value	1-3 Years	4-6 Years	7-10 Years
		Years	Years	Years	Years		Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48
<b>4.0 Building Envelope Assessment</b>									
<b>Exterior Finishes</b>									
Brick/Masonry	Masonry in good condition				x	\$0			
EIFS	Repairs needed at barrel roof intersections with the EIFS. Recommend to have the EIFS cleaned.	x				\$15,208	\$15,968		
Corrugated Metal Siding					x	\$0			
Store Front	Missing metal horizontal mullion cover at entrance	x				\$7,604	\$7,984		
<b>Exterior / Vestibule Doors</b>									
Overhead Doors (rolling or coiling)	Bottom of door jambs should be cleaned and painted to avoid further rusting.	x				\$7,604	\$7,984		
Hollow Metal Doors	Bottom of HM frames are rusting. Cleaned and repainting recommended, possible patching.	x				\$6,083	\$6,387		
<b>Windows</b>									
Aluminum Windows	One window noted that had a broken seal	x				\$3,802	\$3,992		
<b>Joint Sealants</b>									
Window/Door Sealants	Appear to be in good condition				x	\$0			
Control Joint Sealants	A few movement joints in masonry needs replaced	x				\$760	\$798		
Miscellaneous Penetrations	Pipes and conduit	x				\$3,042	\$3,194		
<b>Perimeter Maintenance Strip</b>									
No maintenance strip on majority of the building	Recommend to have some regrading completed to provide positive slope away from the building					\$7,604			
<b>4.0 Building Envelope Assessment SUBTOTAL</b>						<b>\$51,707</b>	<b>\$46,308</b>	<b>\$0</b>	<b>\$0</b>

# Fast Ice Drive: Roof Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>5.0 Roof System Assessment</b>									
<b>Roofing Membrane</b>									
Standing Seam Metal	Installed at barrel overhangs and entrances. Rib caps are pulling loose and need to be reinstalled and crimped.	x				\$10,000	\$10,500		
General Comment	Ice gaurds should be installed to prevent snow and ice from falling. Pricing is each.					\$0			
<b>Perimeter / Fascia / Soffit</b>									
Metal Coping	No visible concerns				x	\$0			
<b>5.0 Roof System Assessment SUBTOTAL</b>						<b>\$10,000</b>	<b>\$10,500</b>	<b>\$0</b>	<b>\$0</b>

# Fast Ice Drive: ADA Accessibility

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years	4-6 Years	7-10 Years
							Escalation Factor = 1.05	Escalation Factor = 1.28	Escalation Factor = 1.48

## 6.0 ADA Accessibility Assessment

### Exterior Accessibility

General Comments	The building has good ADA accessibility.				x	\$0			
Parking Lot Signage	Observed in good condition.				x	\$0			
Parking Lot Pavement Markings & ADA Striping	Observed in good condition but requiring annual maintenance.				x	\$0			
Curb Cuts	Observed with good transition from parking lot to sidewalks.				x	\$0			
Tactile Warning Strips	Not applicable				x	\$0			
Exterior/Exits	Observed with good accessibility. No ADA operators observed. Recommend adding ADA operators to improve accessibility.		x			\$0		\$0	

### Interior Accessibility (General)

General Comments	Generally good ADA accesibility with grandfathered conditions. Some of the sinks are not ADA compliant but the condition is grandfathered. Some of the bathrooms (not all) are missing vertical grab bars and insulation shields.				x	\$0			
Interior Building Signage (general)	Observed compliant.				x	\$0			
Corridor Clearances	Observed with good ADA accessibility.				x	\$0			
Corridor Path of Travel Obstructions (drinking fountains/lockers/wingwalls)	Observed compliant with ADA code.				x	\$0			
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Lever hardware observed throughout.				x	\$0			
Pull/Push Side Clearances	Observed compliant.				x	\$0			

# Fast Ice Drive: ADA Accessibility

## Group Restroom Accessibility

General Comments	Generally good, but missing vertical grab bars throughout and some bathrooms are missing insulation shields. The showers are also missing ADA benches.				x	\$0			
Group Restroom ADA Signage	Observed compliant.				x	\$0			
Doors & Hardware (knobs/levers/panic hardware/closers (general))	Push pull hardware observed.				x	\$0			
Pull/Push Side Clearance	Observed compliant.				x	\$0			
Turning Clearances	Observed compliant.				x	\$0			
Plumbing Fixtures (water closets	Observed compliant.				x	\$0			
urinals	Observed compliant.				x	\$0			
lavatories)	Observed compliant.				x	\$0			
Lavatory Insulation/Shields	Missing insulation shields in several bathrooms.	x				\$0	\$0		
Accessories	Missing vertical grab bars.	x				\$1,521	\$1,597		
Showers	Missing ADA compliant bench / seat	x				\$1,430	\$1,502		
<b>6.0 ADA Accessibility Assessment SUBTOTAL</b>						<b>\$2,951</b>	<b>\$3,099</b>	<b>\$0</b>	<b>\$0</b>

# Fast Ice Drive: Interior Finishes

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>7.0 Interior Finishes Assessment</b>									
<b>Offices / Auxiliary Offices / Support Areas</b>									
General Comment	Observed in good condition. Renovations in process.				x	\$0			
Walls	Painted drywall in good condition.				x	\$0			
Ceiling	Suspended ceiling tile observed in good condition.				x	\$0			
Flooring	Carpeting observed in good condition.				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			
Casework	PLAM casework in fair condition.				x	\$0			
Countertops	PLAM countertops with some minor damage that is assumed to be fixed with current renovation efforts.				x	\$0			
<b>Corridors</b>									
Walls	Painted drywall in good condition.				x	\$0			
Ceiling	Ceiling tile observed in good condition.				x	\$0			
Flooring	Carpeting observed in good condition.				x	\$0			
Base Material	Rubber base in good condition.				x	\$0			
<b>Restrooms</b>									
General Comments	Observed in good condition but having a few ADA non compliant items. See ADA.				x	\$0			
Walls	Painted block and drywall in good condition.				x	\$0			
Ceiling	Suspended ceiling tile observed in good condition.				x	\$0			
Flooring	Ceramic tile and VCT in fair condition.				x	\$0			
Base Material	Ceramic tile or rubber base in good condition.				x	\$0			
Toilet Partitions	Metal toilet partitions in good condition.				x	\$0			
Restroom Accessories	Observed in good condition.				x	\$0			

## Fast Ice Drive: Interior Finishes

### Classrooms

General Comment	Renovation in process.				x	\$0			
Walls	Painted block and drywall in good condition.				x	\$0			
Ceiling	Exposed painted structure and suspended ceiling tiles in good condition.				x	\$0			
Flooring	Carpet tiles or VCT in good condition.				x	\$0			
Base Material	rubber base in good condition.				x	\$0			
Casework	PLAM Casework observed in good condition.				x	\$0			
Countertops	Solid surface countertops observed in good condition.				x	\$0			
Built-In Elements	Observed in good condition.				x	\$0			

### General

General Comment	There was one wood door with heavy damage observed in poor condition that needs replacement.	x				\$5,855	\$6,148		
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<b>7.0 Interior Finishes Assessment SUBTOTAL</b>						<b>\$5,855</b>	<b>\$6,148</b>	<b>\$0</b>	<b>\$0</b>
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# Fast Ice Drive: Life Safety Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>9.0 Life Safety Systems Assessment</b>									
<b>General Life Safety</b>									
Adequate Corridor Widths	Observed				x	\$0			
Clear/Defined Egress Paths	Observed				x	\$0			
Knox Box	Observed				x	\$0			
Clear Lines of Site at Building Perimeter	Observed				x	\$0			
AED/Location	Did not locate	x				\$9,125	\$9,581		
<b>Fire Safety System / Equipment</b>									
Fire Suppression Heads/Piping	Fire suppression system is in good condition with sprinkling provided throughout the building. A fire pump in the riser room provides necessary pressure for the wet pipe system.				X	\$0			
Fire Extinguishers/Cabinets	Observed. Adequate				x	\$0			
<b>Emergency Lighting / Power</b>									
Emergency Lighting/Power Source	battery backup, 2009				x	\$0			
Exit Signs/Power Source	Observed adequate				x	\$0			
<b>Emergency Alarm Systems</b>									
Fire Alarm Control Panel	Edwards Edge FACP, 2025				x	\$0			
Speaker/Strobes	2025				x	\$0			

# Fast Ice Drive: Life Safety Systems

**Access Control / Intrusion Detection**

Access Control System	Allegion access controls			x		\$0			\$0
Building Intrusion Detection	Not present - depends on District's desire					\$0			

**Video Surveillance System / Equipment**

Security Cameras/Locations	MPS outfitting Fast Ice with cameras at time of study					\$0			\$0
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<b>9.0 Life Safety Systems Assessment SUBTOTAL</b>						<b>\$9,125</b>	<b>\$9,581</b>	<b>\$0</b>	<b>\$0</b>
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## Fast Ice Drive: Mechanical Summary

Mechanical and plumbing systems at Fast Ice Drive are relatively modern and remain reliable as the building itself is approximately 20 years old. Major HVAC equipment and distribution systems are generally in good condition, though rooftop units are approaching the end of their anticipated life cycle and showing signs of age. The district is in the process of installing new controls to allow for proper management of building equipment. Plumbing systems, including domestic water piping and fixtures, are newer or functional and not identified for immediate replacement, with most recommendations focused on long-term life cycle planning. Near-term needs are limited to select components rather than system-wide concerns, reinforcing the facility's overall good condition.



Existing RTU



Existing Toilet Room Fixtures



Existing Fire Suppression



Existing RTU Condensing Section



Existing Mini Split



Existing Flex Duct



Existing Sinks



Existing Temperature Controls

# Fast Ice Drive: Mechanical Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>11.0 Mechanical Assessment</b>									
<b>Building HVAC Air Distribution System / Equipment</b>									
Rooftop Units	Building is fed from several single zone rooftop units with packaged cooling and gas heating. Units have been recently evaluated upon purchase of the building and brought to an acceptable working condition. Anticipated life of this equipment is approximately 15-20 years; units were installed in 2006. Would recommend planning for replacement in the near future as equipment begins to fail. Units are in fair condition with high volume of damage to the condenser fins. Single zone units provide limited zone control; averaging temperatures are being installed by the district but depending on long term building use some form of zone control (such as VAV reheat boxes) is recommended. Original design airflows are as follows: (5000 CFM) (8000 CFM) (2000 CFM) (14000 CFM) (8070 CFM) (5000 CFM).		X			\$1,229,832		\$1,574,185	
Rooftop Exhaust Fans	Exhaust fans support various exhaust requirements throughout the building. Consideration should be made as building is repurposed to validate what space needs are for exhaust and ventilation. Units are in fair condition; new fan technologies with ECM motors would increase efficiencies over currently installed fans.			X		\$94,752			\$140,233
<b>Terminal Heating / Cooling Equipment</b>									
Split Systems	Fujitsu split system is in fair condition but approaching end of useful life of 15-20 years. Would recommend replacement.		X			\$27,071		\$34,651	
Unit Heaters	An electric unit heater serving the fire protection riser/pump room is in decent condition.			X		\$15,056			\$22,283

# Fast Ice Drive: Mechanical Systems

## Miscellaneous HVAC Systems / Equipment

Temperature Controls	The district is installing new Honeywell temperature controls for the building to provide limited averaging zone temperature control. This approach will be as good as possible with the equipment and current budget limitations, but would recommend long-term integration with campus system under Automated Logic and expanding control with more terminal equipment.				X	\$0				
Temperature Controls	Trane control panel still runs the emergency generator and cycles the AHU; would recommend transitioning on to campus system or Honeywell system to consolidate and for better remote access.	X				\$30,417	\$31,938			
Air Filtration / Cleaning Equipment	Building includes specialized filtration/clean room style equipment used in former pharmaceutical processes, including HEPA filters and hoods. Review programming needs for new building and consider replacing with traditional system for less maintenance and filter changes.		X			\$0		\$0		
Temperature Controls	Carbon monoxide monitoring provided in receiving bay to monitor harmful gases. System range and installation is not sufficient to meet codes for vehicles parked indoors. Evaluation should be made for program use.	X				\$45,625	\$47,906			
<b>11.0 Mechanical Assessment SUBTOTAL</b>							<b>\$1,442,753</b>	<b>\$79,844</b>	<b>\$1,608,836</b>	<b>\$162,516</b>

## Fast Ice Drive: Mechanical Systems

### Terminal Heating / Cooling Equipment

Cabinet Unit Heaters	Cabinet Unit Heaters are in good condition, primarily utilized in vestibule/corridor spaces.				X	\$0			
Unit Heaters	Unit Heaters are in good condition, primarily utilized in storage and mechanical areas.				X	\$0			
Split Systems	Split systems serving head end room are in good condition, anticipated life of these systems is approximately 15-20 years. Units installed in 2016/2017 and will be approaching end of useful life in about 10 years.			X		\$54,142			\$80,130
Finned Tube Heaters	Finned tube elements/enclosures are in good condition, primarily utilized in small exterior rooms with replacement only.				X	\$0			
Fan Coil Units	Fan coil units installed for office spaces are in good condition.				X	\$0			
Radiant Panel	Radiant panels are in good condition, primarily utilized in exposed areas.				X	\$0			

### Miscellaneous HVAC Systems / Equipment

Temperature Controls	New temperature controls installed with new building construction and are in good condition, Automated Logic system.				X	\$0			
HVLS Fans	Macro Air HVLS are provided for comfort and destratification in spaces with high volume and are in good condition.				X	\$0			
Kiln Hoods	Kiln room provided with dedicated exhaust to meet current codes.				X	\$0			

<b>11.0 Mechanical Assessment SUBTOTAL</b>							\$54,142	\$0	\$0	\$80,130
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# Fast Ice Drive: Plumbing Systems

Survey Item	Survey Notes	1-3 Years	4-6 Years	7-10 Years	10+ Years	Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
<b>12.0 Plumbing Assessment</b>									
<b>Domestic Water System / Equipment</b>									
Domestic Water Heater	Navian instantaneous-style gas water heaters installed in 2025 are in excellent condition. Would recommend insulating piping in mechanical room.				X	\$0			
Domestic Water Piping	Domestic water piping is original to the building and in good condition, installed in 2009. Systems like this if well maintained have an anticipated life of 50-75 years.				X	\$0			
<b>Sanitary Sewer System / Equipment</b>									
Sanitary Waste & Vent Piping	Sanitary waste and vent piping is original to the building and in good condition, installed in 2009. Systems like this if well maintained have an anticipated life of 50-75 years.				X	\$0			
Sanitary Waste & Vent Piping	Interior catch basin is installed in receiving.				X	\$0			
<b>Storm Drainage System / Equipment</b>									
Storm Drainage Piping	Storm drainage piping is original to the building and in good condition, installed in 2009. Systems like this if well maintained have an anticipated life of 50-75 years.				X	\$0			
Roof Drains	Roof drains are in good condition and original to building installation.				X	\$0			

# Fast Ice Drive: Plumbing Systems

**Plumbing Fixtures**

Water Closets & Urinals	Fixtures are original to time of building construction and in fair condition. Would recommend replacement of flush valves with low flow, sensed options for increased efficiency.		X			\$36,804		\$47,109			
Lavatories & Sinks	Fixtures are original to time of building construction and in fair condition. Would recommend replacement of faucets with low flow, sensed options for increased efficiency. Sinks are in worse condition than lavs and replacement would be recommended.		X			\$27,086		\$34,670			
Electric Water Coolers	Electric water coolers do not have bottle fillers, would recommend adding - review space programming needs.		X			\$6,266		\$8,020			
<b>12.0 Plumbing Assessment SUBTOTAL</b>								<b>\$70,156</b>	<b>\$0</b>	<b>\$89,800</b>	<b>\$0</b>

## Fast Ice Drive: Electrical Summary

Electrical systems serving Fast Ice Drive reflect the building's newer construction and are generally in good condition. Power distribution equipment, panelboards, and electrical infrastructure remain within their service life, with most replacement recommendations occurring closer to a ten-year timeline rather than immediate action. Lighting systems are functional and appropriate for the facility's use, and the district recently retrofitted fluorescent fixtures with LED lamps. Electrical recommendations focus on long-term planning and future refresh rather than corrective upgrades, with only a small number of isolated near-term items identified in the assessment.



Existing Generator



Existing Fire Alarm



Existing Egress, Occupancy,  
Fire Alarm



Existing Lighting

# Fast Ice Drive: Electrical Systems

Survey Item	Survey Notes					Net Present Value	1-3 Years Escalation Factor = 1.05	4-6 Years Escalation Factor = 1.28	7-10 Years Escalation Factor = 1.48
		1-3 Years	4-6 Years	7-10 Years	10+ Years				
<b>13.0 Electrical Assessment</b>									
<b>Site Lighting</b>									
Parking Lot Lighting	2010 metal halide			x		\$193,902			\$286,975
Building Exterior Lighting	2010 metal halide			x		\$10,950			\$16,206
<b>Power Distribution &amp; Control Equipment</b>									
Exterior Transformers	Utility transformer				x	\$0			
Panelboards	Distribution panels, 2009 SQD				x	\$0			
Panelboards	Branch panels 2009 SQD				x	\$0			
Interior Transformers	SQD 2009				x	\$0			
Automatic Transfer Switch	2009 Generac				x	\$0			
Generator	2009 Generac, entire building 600kW				x	\$0			
Electrical Receptacles & Devices	building new in 2009, devices in good condition, device replacement to be planned with any interior renovation			x		\$0			\$0
<b>Interior Lighting</b>									
Interior Lighting Fixtures	MPS retrofitted with LED lamps upon move in, fixtures replaced with future interior renovations				x	\$0			
Lighting Controls	Leviton Zmax LCP for open areas, corridors				x	\$0			
Exit Signs	included in interior lighting fixtures					\$0			

# Fast Ice Drive: Electrical Systems

## Communications

Communications Cabinets/Racks/Enclosures	MDF			x		\$0			\$0
Communications Cabinets/Racks/Enclosures	IDF			x		\$0			\$0
Structured Cabling	unknown cabling from 2009 build			x		\$0			\$0

## Technology

Network Switches	MPS outfitting Fast Ice with switches at time of study					\$0			
Wireless Access Points	MPS outfitting Fast Ice with APs at time of study					\$0			

<b>13.0 Electrical Assessment SUBTOTAL</b>						<b>\$204,852</b>	<b>\$0</b>	<b>\$0</b>	<b>\$303,181</b>
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