Facility Condition Assessment Summary Report

This report provides a summary of the Facility Condition Index (FCI) value of a school facility and select major building systems. The FCI calculation represents the cost of needed repairs divided by the replacement value. The FCI is a numerical value of condition and helps to identify the need for renewal or replacement of specific parts of the facility. The FCI is particularly useful when comparing similar facilities within the same portfolio.

Webster School

Governance	DISTRICT	Report Type	Elementary
Address	3400 Frankford Ave.	Enrollment	851
	Philadelphia, Pa 19134	Grade Range	'00-05'
Phone/Fax	215-537-2525 / 215-537-2517	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Webster	Turnaround Model	N/A

Building/System FCI Tiers

Facility Condition Index (FCI) = Cost of Assessed Deficiencies / Replacement Value

< 15%	15 to 25%	25 to 45%	45 to 60%	> 60%
Buildings				
Minimal Current Capital Funding Required	Refurbish Systems in building	Replace Systems in building.	Building should be considered for major renovation.	Building should be considered for closing/replacement.
Systems				
Perform routine maintenance on system	System requires minor repairs	System should be studied to determine repair vs. replacement.	System is nearing end of its life expectancy and should be considered for replacement	System should be replaced as part of the Capital Program

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**28.33%**	**$18,470,586**	**$65,206,193**
Building	36.22 %	$18,258,210	$50,415,444
Grounds	14.32 %	$201,134	$1,404,726

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	88.14 %	$1,456,926	$1,652,920
Exterior Walls (Shows condition of the structural condition of the exterior facade)	07.44 %	$214,232	$2,880,826
Windows (Shows functionality of exterior windows)	43.00 %	$540,833	$1,257,708
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$154,099
Interior Doors (Classroom doors)	27.50 %	$95,412	$346,954
Interior Walls (Paint and Finishes)	18.54 %	$270,955	$1,461,636
Plumbing Fixtures	00.00 %	$0	$2,914,045
Boilers	00.00 %	$0	$1,722,774
Chillers/Cooling Towers	00.00 %	$0	$2,258,892
Radiators/Unit Ventilators/HVAC	140.33 %	$5,566,583	$3,966,902
Heating/Cooling Controls	146.67 %	$1,827,090	$1,245,713
Electrical Service and Distribution	295.44 %	$2,644,413	$895,068
Lighting	04.50 %	$143,951	$3,200,097
Communications and Security (Cameras, Pa System and Fire Alarm)	48.14 %	$576,986	$1,198,652

Please note that some FCIs may be over 100% because there are times when replacing a building system requires that other building systems be upgraded to complete the installation. A FCI of 0.0% represents that there are no current deficiencies with the associated system.

Facility Condition Assessment Summary Report

This report provides a summary of the Facility Condition Index (FCI) value of a school facility and select major building systems. The FCI calculation represents the cost of needed repairs divided by the replacement value. The FCI is a numerical value of condition and helps to identify the need for renewal or replacement of specific parts of the facility. The FCI is particularly useful when comparing similar facilities within the same portfolio.

Webster LSH School

Governance	DISTRICT	Report Type	Elementary
Address	3400 Frankford Ave.	Enrollment	
	Philadelphia, Pa 19134	Grade Range	'00-05'
Phone/Fax	215-537-2525 / 215-537-2517	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Webster	Turnaround Model	N/A

Building/System FCI Tiers

Facility Condition Index (FCI) = Cost of Assessed Deficiencies / Replacement Value

< 15%	15 to 25%	25 to 45%	45 to 60%	> 60%
Buildings				
Minimal Current Capital Funding Required	Refurbish Systems in building	Replace Systems in building.	Building should be considered for major renovation.	Building should be considered for closing/replacement.
Systems				
Perform routine maintenance on system	System requires minor repairs	System should be studied to determine repair vs. replacement.	System is nearing end of its life expectancy and should be considered for replacement	System should be replaced as part of the Capital Program

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**28.33%**	**$18,470,586**	**$65,206,193**
Building	00.08 %	$11,242	$13,386,023
Grounds	14.32 %	$201,134	$1,404,726

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$984,828
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.85 %	$6,458	$761,144
Windows (Shows functionality of exterior windows)	00.00 %	$0	$332,299
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$40,715
Interior Doors (Classroom doors)	00.00 %	$0	$91,669
Interior Walls (Paint and Finishes)	00.00 %	$0	$322,060
Plumbing Fixtures	00.00 %	$0	$769,920
Boilers	00.00 %	$0	$455,175
Chillers/Cooling Towers	00.00 %	$0	$596,822
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$1,048,096
Heating/Cooling Controls	00.00 %	$0	$329,130
Electrical Service and Distribution	00.00 %	$0	$236,486
Lighting	00.00 %	$0	$845,498
Communications and Security (Cameras, Pa System and Fire Alarm)	00.00 %	$0	$316,696

Please note that some FCIs may be over 100% because there are times when replacing a building system requires that other building systems be upgraded to complete the installation. A FCI of 0.0% represents that there are no current deficiencies with the associated system.

School District of Philadelphia

S559001;Webster

Final

Site Assessment Report

January 31, 2017

PARSONS

Table of Contents

Site Executive Summary

The organization of this report, as displayed in the Table of Contents, follows the structure of the associated eCOMET database. The overall node for each school campus begins with the letter "S", which indicates the "Site" label. Each Site is comprised of separate "Building" and "Grounds" nodes; their asset names begin with the letters "B" and "G" respectively. Information rolls up to the Site node from the Building and Grounds nodes. This Site report combines facility information with subsections for the Buildings And Grounds nodes.

The basis for the evaluation of condition is the functional systems and elements of a building and grounds organized according to the UNIFORMAT II Elemental Classification. The grouping of these systems and elements and applying a current replacement value to them develops a representative building cost model. Cost Models are typically developed for similar building types and functions. Evaluation of systems and their elements takes into account their current replacement values, life cycles, installation dates and next renewal dates. Systems and their elements that are within their useful lives are further evaluated to identify current deficient conditions that may have a significant impact on a system's or element's remaining service life, and to determine if they are beyond their predicted expected life. The system's or element's current replacement value is based on RS Means Commercial Cost Data.

Following are the cost model's system details for this facility. The Replacement Value is the amount needed to replace the property of the same present value. The Current Repair Amount, also known as Condition Needs, represents the budgeted contractor installed costs plus owner's soft costs for the repair, replacement or renewal for a component or system level deficiency. It excludes contributing costs for other components or systems that might also be associated with the corrective actions due to packaging the work. Facility Condition Index (FCI) is an industry-standard measurement calculated as the ratio of the repair costs to correct a facility's deficiencies to the facility's Current Replacement Value. Condition Index (CI) for a system is calculated as the sum of a the deficiencies divided by the sum of a system's Replacement Value (both values include soft-cost) expressed as a percentage ranging from 0% 100%.

Gross Area (SF):	92,275
Year Built:	1968
Last Renovation:	
Replacement Value:	$65,206,193
Repair Cost:	$18,470,585.90
Total FCI:	28.33 %
Total RSLI:	60.51 %

Description:

See Building nodes for Narratives.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 3 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S559001		

Site Condition Summary

The Table below shows the CI and FCI for each major system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	59.90 %	0.00 %	$0.00
A20 - Basement Construction	53.00 %	0.00 %	$0.00
B10 - Superstructure	62.40 %	0.00 %	$0.00
B20 - Exterior Enclosure	54.33 %	14.03 %	$761,522.61
B30 - Roofing	48.80 %	55.23 %	$1,456,926.47
C10 - Interior Construction	52.10 %	14.81 %	$394,081.12
C20 - Stairs	53.00 %	225.56 %	$266,412.05
C30 - Interior Finishes	62.72 %	36.98 %	$2,142,520.36
D10 - Conveying	105.71 %	173.09 %	$399,304.65
D20 - Plumbing	55.58 %	8.37 %	$391,855.60
D30 - HVAC	70.92 %	62.10 %	$7,393,673.73
D40 - Fire Protection	97.01 %	128.54 %	$1,320,034.36
D50 - Electrical	69.27 %	54.37 %	$3,727,839.02
E10 - Equipment	39.66 %	0.00 %	$0.00
E20 - Furnishings	37.31 %	6.15 %	$15,281.89
G20 - Site Improvements	0.00 %	16.88 %	$183,357.12
G40 - Site Electrical Utilities	0.00 %	5.59 %	$17,776.92
Totals:	**60.51 %**	**28.33 %**	**$18,470,585.90**

Condition Deficiency Priority

Facility Name	Gross Area (S.F.)	FCI %	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)
B559001;Webster	92,275	36.22	$0.00	$1,476,404.33	$4,695,186.92	$10,584,300.46	$1,502,318.49
B559002;Webster LSH	24,380	0.08	$0.00	$6,457.90	$4,783.76	$0.00	$0.00
G559001;Grounds	77,709	14.32	$0.00	$47,211.90	$52,894.93	$101,027.21	$0.00
Total:		**28.33**	**$0.00**	**$1,530,074.13**	**$4,752,865.61**	**$10,685,327.67**	**$1,502,318.49**

Deficiencies By Priority

1 - Response Time (< 2 yr)
2 - Response Time (2-3 yrs) - $1,530,074.13
3 - Response Time (3-4 yrs) - $4,752,865.61
4 - Response Time (4-5 yrs) - $10,685,327.67
5 - Response Time (> 5 yrs) - $1,502,318.49

Budget Estimate Total: $18,470,585.90

Executive Summary

Building condition is evaluated based on the functional systems and elements of a building and organized according to the UNIFORMAT II Elemental Classification. The grouping of these systems and elements and applying a current replacement value to them develops a representative building cost model. Cost Models are developed for similar building types and functions. Systems and their elements are evaluated based on their current replacement values, life cycles, installation dates and next renewal dates. Systems and their elements that are within their useful lives are further evaluated to identify current deficient conditions that may have a significant impact on a system's or element's remaining service life, and to determine if they are beyond their predicted expected life. The system's or element's current replacement value is based on RS Means Commercial Cost Data.

Following are the cost model's system details for this facility. The Replacement Value is the amount needed to replace the property of the same present value. The Current Repair Amount, also known as Condition Needs, represents the budgeted contractor installed costs plus owner's soft costs for the repair, replacement or renewal for a component or system level deficiency. It excludes contributing costs for other components or systems that might also be associated with the corrective actions due to packaging the work. Facility Condition Index (FCI) FCI is an industry-standard measurement of facility condition calculated as the ratio of the costs to correct a facility's deficiencies to the facility's Current Replacement Value. It ranges from 0% (new) to 100% (very poor). Condition Index (CI) is calculated as the sum of a renewable system's Remaining Service Life (RSL) divided by the sum of a system's Replacement Value (both values exclude soft-cost to simplify calculation updates) expressed as a percentage ranging from 100% (new) to 0% (expired).

Function:	Elementary School
Gross Area (SF):	92,275
Year Built:	1968
Last Renovation:	
Replacement Value:	$50,415,444
Repair Cost:	$18,258,210.20
Total FCI:	36.22 %
Total RSLI:	61.61 %

Description:

Facility Assessment
September 2015

School District of Philadelphia
John H. Webster School
3400 Frankford Ave
Philadelphia, PA 19134

92,275 SF / 716 Students / LN 05

The John H. Webster School was added to the Philadelphia public school system in 1968. Serving the local community this school was dedicated and has a plaque to the name sake John H Webster in the main lobby. The school is identified as B559001 and is located at 3400 Frankford Ave, Philadelphia, PA. The creative rounded exterior walls and rectangular-shaped, concrete and steel-framed building includes brick facades with a concrete foundation.

The main entrance faces the Southwestern exterior facing East Ontario Street. General parking is southeast of the school with access from Frankford Avenue. This School serves students in grades K to 5 and has a basement with three stories consisting of a total gross square footage of 92,275 GSF.

This school has several classrooms, a library, kitchen and student commons, Gym, Music, Auditorium/cafeteria, with supporting

administrative spaces.

Special note to the existing oil painting in the main lobby dedicated John H Webster. Other wall paintings are depicted to the stories and authors of young books.

Although not included in this report The Webster Little School House is on the same site. This school will be included in a different report and is identified as B559002.

The information for this report was collected during a site visit on September 30, 2015.

Mr. Bill Smith, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Ms. Charlotte Buonassisi, Acting Principal, also shared information about the school with the assessment team.

Architectural / Structural Systems

Foundations are concrete and appear to be in good condition. The superstructure is concrete and steel framed system in good condition. Basement walls are concrete and appear to be in good condition.

There is significant cracking starting on the roof with a section of concrete finish leading to the next floor. This cracking is exhibiting moisture penetration, such displacement is normally cause for a more detailed destructive structural analysis. A physical analysis of the load-bearing structural scheme is advised. An unqualified allocation for correction of the unspecified problem is included in this deficiency cost estimate to repair and research this issue.

The exterior brick surfaces are generally in fair to good condition for their age. In some locations, bricks have cracked or spalled and should be replaced. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

The exterior concrete repair and brick point and tuck are expected to be completed as part of an overall effort.

The exterior windows are industrial metal framed single pane applications. Some of the windows are operable while others no longer function. The window system was reported to have been upgraded in the early 1990s and some selective upgrades based on damage. It is recommended that the exterior window system be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

The exterior door system is an industrial grade metal door with metal frame system that was reported to have been upgraded in the early 2000's. The door system is in good condition and there were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

Special consideration for those that may be physically challenged was not a main not factor in the construction effort for this school. There is no dedicated option for the physically challenged to enter the school. The path of travel is not very clear from the main entrance of the school. The interior path of travel is partially supported by some door hardware, restrooms, hand rails and guard rails and a single passenger elevator. Included in this report are modification that allow for considerations to enhance the upgrades required to support the physically challenged.

The existing built up roofing system has clear signs of ponding and there reportedly has been an increase of roofing maintenance on this single ply roofing system. It is recommended that a new built-up roofing system be installed within the next ten years.

The interior partitions include CMU and gypsum wallboard finishes. There are several movable partitions that remain in classrooms. These wall systems are no longer used and in most cases cannot be used due to damage or wall modifications to support classroom needs. This deficiency provides a budgetary consideration to remove and replace the wall systems with universal removal of the existing movable partitions and upgrades to a permeate wall systems.

Interior doors are typically wood in metal frames with some glass glazing. Other interior doors include metal glass pane doors with hollow metal frames. Doors are generally in good condition considering the age of the application. There are a select few doors that are very high traffic and are showing signs of age such as damaged locksets, warn hinges and finish issues. Selective upgrades are required for the interior door systems, it is recommended that the damaged interior doors system be removed and replaced with a

new modern metal framed wooden door system with consideration for ADA compliance.

The hollow metal doors installed at the stairwells and exit ways are in very good condition. The doors appear to be properly rated for the application however, the identification tags have been removed thus this could not be verified. Care should be taken to ensure that the doors are properly rated and tags replaced as required.

Several of the egress paths for this school are partially blocked with either janitorial equipment or desk. Care should be taken to remove this material and provide a clear and clean egress path.

Fittings include: chalkboards; marker boards; tack boards; interior signage; toilet accessories and metal toilet partitions with some fixed storage.

There is no directional signage and room signage is a custom design in places and scarce or painted with no consistency in others. Accessibility signage criteria have been established for the physically challenged. These include mounting heights, contrast and finish, raised and Braille characters and pictograms, and character proportions and heights. It is recommended that compliant signage be installed throughout the building.

Some of the classroom chalk boards are original to the buildings construction. This system is damaged and beyond its expected life, universal upgrades are warranted. Remove and upgrade damaged chalk boards to new marker board systems.

There are several tack boards in the hallways for student displays. The systems are damaged and beyond the expected service life for this application. Remove and replace tack boards is recommended.

There were no issues with the toilet accessories and metal partitions during the time of the inspection therefore no recommendations are required at this time.

Stair construction is concrete and steel framed system with steel and concrete treads and concrete landings.

Current requirements for stairs indicate that they have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread/riser angle). Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they are deficient in handrail and guardrail design relative to current standards. Future efforts should include comprehensive stair railing removal and replacement upgrades.

There are painted walls, trim, and some painted ceilings in this building. The interior finishes are in fair condition. Cyclical painting should be considered for a standard approach to maintaining the quality of the interior finishes. It is recommended that all previously painted surfaces be repainted according to established cycles for this occupancy and use type. Minor repairs should be completed before work begins. The abandoned section of the building is expected to require major repairs and additional efforts to restore the finishes. This effort is expected to be coordinated with other mechanical electrical efforts in order to prevent overlapping efforts.

Special note: several of the hallway sections in each pod has a pictorial of a book character that is embolden into the wall finish. This finish is custom and although not issues surfaced during the time of the inspection care should be taken to protect the finishes during the recommended interior upgrade efforts recommended in this report.

The vinyl floor finish in most of this school is in very good condition and appears to have part of an isolated upgrade. Some of the original flooring that was not a part of that effort consist of a 9x9 finish. This finish is suspect to contain asbestos and is recommended for upgrade. Remove and replace with a 12x12 vinyl tile application.

The remaining interior floor finishes consist of Terrazzo, concrete and ceramic tile. There were no issues that surfaced during the time of the inspection therefor no recommendations are required at this time.

The stage this school have a wood floor finish that appears to be from original construction. The system is showing signs of age such as the effects of sanding and refinishing with yearly cleaning and waxing with some repairs. The floor finish is in fair condition however, the finish is beyond its expected life cycle. It is recommended that the wooden floor finish be removed and replaced with an in kind finish.

The ceiling finish is a mix of painted, exposed and 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and is in good condition considering the age of the application and the current condition of the school. The ceiling finish is expected to require upgrades to support the recommended efforts in this report prior to re-opening. This deficiency provides a budgetary consideration

for removal and replacement of the current ceiling finish to a new acoustical tile finish. Considering the recommended mechanical and electrical upgrades this effort should be completed as part of an overall renewal program for the school. No work should be considered until after the recommended exterior efforts are complete.

This school has a single passenger elevator that serves all floors at this school.

Institutional equipment includes: library equipment; stage equipment; instrumental equipment; A/V equipment; gym equipment – basketball backstops, scoreboards, etc. Other equipment includes kitchen equipment; loading dock bumpers/levelers.

The school stage has a stage curtain assembly that appears to be from the original construction. Modern applications are typically fire -proof applications with adjustable tracks and electric support for operation. The curtains are torn in a few section and the track is not functioning properly, overall the system is in fair condition. It is recommended that the curtain and track system be upgraded to a new system. Special care should be considered in regards to modern fire proofing for the new installation.

Furnishings include: fixed casework; window shades and blinds. There were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories, urinals and water closets. Lavatories have dual lever handle faucets and urinals and water closets have recessed manual flush valves with lever operators. Water coolers are stainless steel or recessed china and custodial closets have cast iron service sinks. There are a few counter top stainless steel sinks. Fixtures have been replaced since the original construction and are in good condition.

Hot water is provided by three Paloma gas fired water heaters in the mechanical room. A duplex sewage ejector sump pump is in the mechanical room, and kitchen waste is piped through an above floor grease trap. The supply system includes a water softener.

Sanitary, waste and vent piping is hub and spigot cast iron with some hubless piping with banded couplings. Domestic hot and cold water is insulated rigid copper piping. There is a four inch water service with three inch meter from Braddock St. with a backflow preventer. The roof has drains piped to horizontal and vertical rainwater piping. Gas piping is either welded or screwed fitting black steel, depending on size, and is not connected to the utility service.

The plumbing piping system is from the 1968 construction. The cast iron piping should be inspected and repaired or replaced as required. Fixtures and water heaters should have remaining service life of twenty years.

HVAC- The building is heated by hot water generated by three Buderhus Model 605 cast iron sectional gas/oil boilers in the mechanical room. The boilers are one hundred five hp with Industrial Combustion burners and separate oil pumps, installed in 2010. One pump was open for maintenance during this survey. Hot water is circulated to the dual temperature heating/ cooling system and cabinet radiation units throughout the building by two Paco 10 hp end suction pumps.

There is a 12,000 gallon underground oil storage tank, condition unknown, with a tank level monitor. Boilers are piped for gas and oil firing, but are operated only on oil since the gas service was not connected to the utility. Boilers and water heaters are connected to a stainless steel double wall factory manufactured vent system to a roof cap.

There is a central water cooled chilled water system with a Mcquay 334 ton dual compressor chiller located in a roof mechanical room and an Imeco induced draft cooling tower on the roof. The chiller was installed in 1999 and the cooling tower in 2008. A 20 hp Paco end suction condenser water pump is in the chiller mechanical room. The chilled and hot water are piped to a dual temperature system feeding unit ventilators and air handling units. There are two Paco 15 hp dual temperature water pumps and one 10 hp chilled water pump in the boiler room. A refrigerant monitoring system is installed in the chiller room.

Classrooms have older Nesbitt unit ventilators with water coils, filters, blowers and motors, valves and controls. Six horizontal air handling units are located in a mezzanine mechanical room. The units are single zone serving the cafeteria, gymnasium, teachers dining, music area, kitchen and office area. The units are all missing belt guards. Ductwork is sheet metal connected to ceiling diffusers and sidewall grills. Four inline centrifugal exhaust fans in the chiller room provide toilet exhaust, kitchen and dining room exhaust and other building area exhaust. The roof mechanical room has a wall mounted centrifugal ventilator. Several gravity roof ventilators provide relief air from the unit ventilators. There is a kitchen hood with fire suppression system. There are combustion air louvers with motorized dampers in the mechanical room and a wall mounted propeller fan.

Chilled, condenser, heating, and dual temperature water piping is welded black steel with insulation on all except condenser water. Oil

piping is black steel with screwed fittings. Two expansion tanks, an air separator, and chemical feed unit are part of the piping system.

There is a newer duplex control air compressor and controls for heating and cooling plant, from 1999. The controls for air handling units and unit ventilators are original and there is no central building automation system.

The air handling units, unit ventilators, distribution piping, and air distribution are from the original 1968 installation and have exceeded service life and should be replaced. The cooling tower, chiller, pumps and boilers are newer and should have remaining service life of fifteen to twenty years.

FIRE PROTECTION-The building does not have a sprinkler or standpipe system.

ELECTRICAL SYSTEMS

Electrical Service-- Electrical service to the building is provided by PECO Energy Company. A 13.2 kV service is routed underground to a Penn Panel and Box Company unit substation located in the Boiler Room in the Basement. The unit substation has two 600A air interrupter switches, metering section, 500 kVA, 13.2 kV-208/120V, 3 phase, 4 wire dry type transformer and two distribution sections, with one section having a 1600A main circuit breaker. The second air interrupter switch is for the service disconnecting means for the 13.2 kv-480V dry type transformer that serves the chiller located in the Fourth Floor Mechanical Room.

The unit substation has exceeded its useful life expectancy and needs to be replaced. It is also located in the Boiler Room and does not have code required working clearance in front of the substation, nor adequate work working space above the substation. The substation will need to be relocated to a space that provides code required working space both above and in front of the equipment, so as to comply with NFPA 70, National Electrical Code Article 110. The Building Engineer identified the Faculty Lunch Room, located on the south side of the auditorium/cafeteria, as a possible location for the replacement substation, since the lunch room is not currently used by faculty.

Since the existing service entrance switchboard does not have capacity to serve an elevator and fire pump (if required), it is recommended that the replacement unit substation be rated at 480/277V, 3 phase, 4 wire and sized for the chiller, elevator and fire pump (if required). A step-down, 500 kVA would be provided to serve existing 120V and 208V loads.

Motor Control Centers MCP-1, located in the Boiler Room, and MCP-2, located in the Mezzanine Mechanical Penthouse, are both rated at 400A, 208/120V, 3 phase, 4 wire, and have served beyond their useful life and need to be replaced. The motor controllers located in the Fourth Floor Mechanical Room and all of the panelboards located in the Boiler Room and on each floor are also at end of life and need to be replaced.

In general, the entire electrical distribution system, including the service entrance equipment, motor control centers and all panelboards and feeder conductors need to be replaced.

Receptacles-- Classrooms are typically supplied with only 2 to 4 duplex receptacles, which is inadequate for today's classrooms. It is recommended 4 to 6 additional duplex receptacles be provided in each classroom using a surface metal raceway system.

There are three (3) duplex receptacles in the workroom in the Main Office area that are damaged or in poor condition with missing device plates that need to be replaced.

There are some classrooms that have sinks. It was observed that receptacles located within 6 feet of the sinks need to be replaced with ground-fault circuit-interrupting (GFCI) type receptacles to comply with NFPA 70, NEC Article 210.8 (B). Also, there are approximately five (5) duplex receptacles in the kitchen that need to be replaced with GFCI type devices. An allowance for replacement of ten (10) duplex receptacles with GFCI type is included in this report.

Lighting-- Most of the lighting fixtures are either 1x4 or 2x4 recessed grid, surface mounted modular or wraparound fluorescent type with acrylic prismatic lenses and T8 lamps. Fixtures in classrooms are mainly 2x4 fluorescent grid troffers. Classrooms in the northwest wing on the First Floor have 1x4 fluorescent wraparound fixtures, some of which are missing lenses. The corridors, and some classrooms and offices, have surface mounted 2x4 modular fluorescent fixtures. Fluorescent wraparound fixtures are provided in stairwells. Surface mounted 4 foot fluorescent vapor-tight fixtures are used in restrooms. There are only a few areas that still have T12 lamps, such as the corridor on the First Floor that exits to the parking lot, and the Fourth Floor Mechanical Room. An allowance for replacement of 25 lighting fixtures is included in this report.

The gymnasium has 20 stem mounted metal halide lighting fixtures with wire guards. The auditorium is also illuminated with 20 stem mounted metal halide fixtures. The lighting fixtures in both rooms are in good condition with an estimated remaining useful life of 10

to 12 years. At the next lighting system renewal, it is recommended that the metal halide fixtures be replaced with LED type fixtures to reduce energy and maintenance costs and also allow them to be used for emergency lighting, thereby eliminating the need for the separate emergency lighting fixtures.

The platform in the auditorium is illuminated with ceiling mounted adjustable spotlighting fixtures. There are also 9 shallow dome incandescent worklights and two rows of theatrical electrics above the platform. Replacement of lamps in the spotlighting fixtures and worklights with LED type is recommended, and considered as an operational expense, not a capital project.

Lighting control in classrooms and offices is by multiple light switches. Most classrooms have at least two switches for controlling lighting. Lighting fixtures in the corridors are controlled by circuit breakers in the lighting panelboards. It is recommended that lighting branch circuits be wired through lighting contactors and be controlled by a single switch on each floor.

Fire Alarm System-- The fire alarm system control panel (FACP) is a Simplex 4010 that is located in the Basement Boiler Room. The system consists of manual fire alarm pull stations and bell notification appliances. The system is more than 12 years old and the building does not have any audible/visual notification appliances or smoke detectors for elevator recall. The fire alarm system does not meet current NFPA codes and ADA. Replacement with an addressable fire alarm system is necessary.

Telephone/LAN-- A telephone and data outlet is provided in each classroom. Wireless access points are located to provide Wi-Fi service throughout the building. The telephone system demarcation point is located in the Basement Boiler Room, opposite the Main Switchboard.

Paging/Sound/Intercom Systems-- The paging system is accessed through the telephone system. Each classroom has a ceiling speaker for announcements and class changes. There are also ceiling recessed paging speakers in the corridors. Wall mounted speakers are located in the auditorium/cafeteria and gymnasium.

Clock and Program System-- The clock/speaker assemblies in the classrooms are not functional and have been abandoned in place. The Building Engineer reported that the clock system is not operational and the Standard Electric Time Company Master Time Programmer 1400 in the Main Office uses the ceiling speakers in classrooms for announcements and program. A wireless GPS synchronous clock system with battery operated clocks is recommended to replace the existing clock system.

Television System-- There is no television system in this school. Most of the classrooms have smart boards.

Video Surveillance and Security Systems-- Video surveillance cameras are located on each floor in the corridor near the stairwells and on the First Floor to cover corridors, entrances and the auditorium/cafeteria in the Basement. The video surveillance system is monitored in the Main Office. Additional cameras should be provided at the stairwell on the Third Floor, in the gymnasium and in stairwells. An allowance for the addition of ten (10) interior cameras is included in this report.

Emergency Power System-- An Onan 45 kW/56.3 kVA, 208/120V, 3 phase, 4 wire standby generator with natural gas supply serves mainly emergency egress and exit lighting loads. The generator has over 1096 hours of operation at the time of this assessment. The generator feeds fusible type Panelboard LE via an ASCO automatic transfer switch (ATS). The generator, ATS and Panelboard LE have exceeded the end of their useful life and need to be replaced.

The standby generator would need to be replaced with a larger size to supply the elevator and an electric fire pump, if required.

Emergency Lighting System / Exit Lighting-- Emergency egress and exit lighting is powered from the standby generator. There are no emergency lighting fixtures in classrooms. The corridor between the north and south classroom pods on Floors 1, 2 and 3 requires an exit sign at each end of the corridor so that exit signage is visible when looking down the path of egress. A double sided exit sign needs to be provided at each location to comply with Chapter 7 of NFPA 101, Life Safety Code.

Lightning Protection System – Except for the roof stack, which is provided with air terminals, there is no lightning protection system for this facility.

Conveying Systems-- There is one electric traction passenger elevator, manufactured by Eastern Elevator Company, which serves the four floors. The elevator controller uses electrical-mechanical type relays and is in poor condition; it has exceeded its useful life. Complete replacement of elevator controller and motor, hall stations, lanterns and position indicators is recommended. Elevator cab and machine room also need to be upgraded to meet the current elevator code.

GROUNDS

Most of the sidewalk system is original to the buildings construction. As indicated in the photos several sections were replaced in 2001. However, there are a several areas of cracking concrete but no tripping hazards. The sidewalk system is expected to expire in the near future. Removal of the entire system is recommended. Universal upgrades are required and should include all aspects of current ADA legislation.

The parking lot was resurfaced in recent years and overall is in good condition. However, there are sections that are showing signs of the harsh environment associated with snow removal. Before this issue takes hold of the finish it is recommended that new crack sealant be applied to ensure that the finish does not break down.

The loading dock is located just off the parking area between the dumpsters and the access point for students entering the school. The existing recommendation to enclose and move the dumpsters to a new location is related to this effort. After the dumpster correction is complete it is recommended that the loading dock area be clearly marked and safety barriers be placed to protect pedestrian traffic and mitigate possible issues related to loading and unloading materials and supplies.

The picket fence mounted exterior brick wall on the southwestern exterior is enclosed as a small playground area. This wall is damaged and several areas of brick are lose or have been removed. This presents a safety issue as the wall is breaking down while students have to use this entrance. This deficiency provides a budgetary consideration for the repair of the wall.

The trash dumpster is located near the southeastern fence open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area are recommended.

This school has a perimeter fence surrounding the parking / playground area. The fence has several areas of repairs and the mounting post are damaged in several areas, overall the fence is in fair condition. This fence system is recommended to be removed and replaced with a new system within the next few years.

Site Lighting-- The paved play area on the east side of the school is illuminated from one building mounted HID floodlighting fixture. Building mounted lighting fixtures on the Little School House contributes to lighting the play area. The paved parking lot on the south side of the school is illuminated by eight (8) shoebox style HID luminaires mounted on six (6) light poles. The light poles are in good condition with an estimated remaining useful life of 12 years.

Site Video Surveillance—there are three (3) exterior cameras on the exterior of the building, one on the each of the west, south and east sides. It is recommended that an additional camera be provided for the parking lot on the south side and an additional camera on the east side for adequate coverage of the paved play area.

RECOMMENDATIONS

- Concrete repair
- Brick point and tuck
- Exterior window replacement
- Remove and replace built up roofing system
- Remove and replace movable partitions
- Upgrade signage
- Upgrade chalkboards
- Guard and hand rail upgrade
- Selective painting
- Vinyl flooring upgrade
- Upgrade wood floor
- Upgrade ceiling finish
- Replace stage curtain
- Reseal Parking Lot
- Selective sidewalk upgrades
- Add safety barriers to loading dock
- Repair brick retaining wall
- Secure dumpster area
- Upgrade fence
- Install NFPA wet pipe automatic sprinkler system in entire building, including fire service, piping sprinkler heads, standpipes and fire pump if required.
- Inspect old cast iron sanitary piping including camera observation and replace damaged sections.
- Replace six existing air handling units in the mezzanine mechanical room with new single zone units with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water

systems.
- Install new direct digital control system components for the air handling units and unit ventilators and building automation system with remote computer control capability and graphics package.
- Replace the existing unit ventilators with new units designed for quiet operation and equipped with hot water and chilled water coils, hydronic control valves with digital controls and integral heat exchangers to provide code required fresh air quantities. Connect to new chilled and hot water distribution piping systems and building automation control system.
- Replace existing dual temperature water piping system with new insulated black steel hot and chilled water piping systems.
- Replace the existing load center unit substation with a 480/277V, 3 phase, 4 wire substation, sized to include the addition of the chiller, elevator and, if required, a fire pump. Relocate substation to a location that allows code required working space above and in front of the equipment. Provide a 208/120V step-down transformer and switchboard to serve existing building loads.
- Replace Motor Control Centers MCP-1 and MCP-2 and motor control rack in Fourth Floor Mechanical Room. Replace all (23) panelboards and their feeder conductors.
- Provide surface metal raceway system with 4 to 6 duplex receptacles in each of 28 classrooms.
- Replace three (3) duplex receptacles in the workroom in the Main Office area that are in poor condition/damaged. Provide an allowance for replacement of ten (10) duplex receptacles that are located within 6 feet of the sinks in classrooms and in the kitchen with ground-fault circuit-interrupting (GFCI) type receptacles to comply with NFPA 70, NEC Article 210.8 (B).
- Provide an allowance for replacement of 25 industrial or wraparound fluorescent lighting fixtures that have T12 lamps with new fixtures using T8 lamps.
- Provide lighting contactors on each floor for controlling corridor lighting fixtures from a single light switch located on each floor, rather than switching lighting from panelboard circuit breakers.
- Replace fire alarm system with an addressable system.
- Replace clocks with wireless GPS synchronous clock system in all classrooms, auditorium/cafeteria, gymnasium, IMC, offices and similar occupied rooms.
- Provide allowance for the addition of ten (10) interior cameras to be provided in corridors and stairwells.
- Replace standby generator, automatic transfer switch and Panelboard LE. Standby generator and distribution system should be sized to include the elevator and, if needed, a fire pump.
- Provide a double-sided exit sign at each end of the corridor between the classroom pods on each floor for Floors 1, 2 and 3, for a total of six (6) exit signs. Existing exit signage is not visible when looking down the path of egress. Additional exit signs are required to comply with Chapter 7 of NFPA 101, Life Safety Code.
- Replace elevator controller and motor, hall stations, lanterns and position indicators. Upgrade and modernize elevator cab and machine room to comply with current elevator code.
- Provide two (2) additional exterior video surveillance cameras, one to provide coverage for the parking lot on the south side and one on the east side for increased coverage of the paved play area.

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B559001
Sewage Ejector:	Yes	Status:	Accepted by SDP
Site ID:	S559001		

Condition Summary

The Table below shows the CI and FCI for each major building system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
A10 - Foundations	53.00 %	0.00 %	$0.00
A20 - Basement Construction	53.00 %	0.00 %	$0.00
B10 - Superstructure	55.39 %	0.00 %	$0.00
B20 - Exterior Enclosure	47.99 %	17.59 %	$755,064.71
B30 - Roofing	60.00 %	88.14 %	$1,456,926.47
C10 - Interior Construction	45.05 %	18.72 %	$394,081.12
C20 - Stairs	53.00 %	225.56 %	$266,412.05
C30 - Interior Finishes	66.69 %	46.59 %	$2,142,520.36
D10 - Conveying	105.71 %	173.09 %	$399,304.65
D20 - Plumbing	55.12 %	10.44 %	$391,855.60
D30 - HVAC	78.40 %	80.42 %	$7,393,673.73
D40 - Fire Protection	105.71 %	158.77 %	$1,320,034.36
D50 - Electrical	73.24 %	68.64 %	$3,723,055.26
E10 - Equipment	34.29 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	7.78 %	$15,281.89
Totals:	**61.61 %**	**36.22 %**	**$18,258,210.20**

Condition Detail

This section of the report contains results of the Facility Condition Assessment. The building is separated into system components based on UNIFORMAT II classification. The columns in the System Listing table below represent the following:

1. System Code: A code that identifies the system.
2. System Description: A brief description of a system present in the building.
3. Unit Price $: The unit price of the system.
4. UoM: The unit of measure for of the system.
5. Qty: The quantity for the system
6. Life: anticipated service life for thesystem based on Building Owners and Managers Association (BOMA) recommendations.
7. Year Installed: The date of system installation.
8. Calc Next Renewal Year: The date of system expiration based on the life, NR stands for non renewable.
9. Next Renewal Year: The suggested system expiration date by the assessor based on visual inspection.
10. CI: The Condition Index of the system.
11. FCI: The Facility Condition Index of the system.
12. RSL: Remaining Service Life.
13. eCR: eCOMET Condition Rating (not used).
14. Deficiency $: The financial investment to repair/replace system.

System Listing

The System Listing table below lists each of the systems organized by their UNIFORMAT II classification. The assessment team was tasked with recording the most recent replacement year of each system, determining the remaining service life based on the theoretical life, and evaluating the condition to confirm the forecast next replacement year. The system listing is the basis for all data contained in the Building Assessment Report.

Additionally, a condition rating (eCR) based on the following guidelines is provided as observed at the time of the assessment.

- Excellent (E) - No noticeable distress or damage. The entire system is free from observable defect.
- Very Good (VG) - Overall no serviceability reduction for the entire system. No degradation of critical components and minor distress and defect noticeable for some but not non critical components within the system.
- Good (G) - Slight or no serviceability reduction for the entire system. There may be noticeable defects for some non critical components and slight noticeable degradation of the critical components.
- Fair (F) - Overall serviceability is degraded but adequate. There may be moderate deterioration for very few of the critical components and few of the non critical components may have severe degradation.
- Marginal (MA) - Overall serviceability and reliability loss. Most if not all of the non critical components suffer from severe degradation and a few of the critical component may have severe degradation.
- Moderate (MO) - Overall a significant serviceability loss. Most if not all the components have severe degradation with the reminder of the component showing visible distress.
- Very Poor (VP) - Overall the system is barely functional. All of the components are severely degraded.
- Non-Functional (NF) - Overall the system does not function with all the components having no serviceability and suffer from severe degradation.

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$24.32	S.F.	92,275	100	1968	2068		53.00 %	0.00 %	53			$2,244,128
A1030	Slab on Grade	$15.51	S.F.	92,275	100	1968	2068		53.00 %	0.00 %	53			$1,431,185
A2010	Basement Excavation	$13.07	S.F.	92,275	100	1968	2068		53.00 %	0.00 %	53			$1,206,034
A2020	Basement Walls	$23.02	S.F.	92,275	100	1968	2068		53.00 %	0.00 %	53			$2,124,171
B1010	Floor Construction	$92.20	S.F.	92,275	100	1968	2068		53.00 %	0.00 %	53			$8,507,755
B1020	Roof Construction	$24.11	S.F.	43,000	100	1990	2090		75.00 %	0.00 %	75			$1,036,730
B2010	Exterior Walls	$31.22	S.F.	92,275	100	1968	2068		53.00 %	7.44 %	53		$214,232.21	$2,880,826
B2020	Exterior Windows	$13.63	S.F.	92,275	40	1990	2030		37.50 %	43.00 %	15		$540,832.50	$1,257,708
B2030	Exterior Doors	$1.67	S.F.	92,275	25	2000	2025		40.00 %	0.00 %	10			$154,099
B3010105	Built-Up	$37.76	S.F.	43,000	20	1990	2010	2027	60.00 %	89.73 %	12		$1,456,926.47	$1,623,680
B3020	Roof Openings	$0.68	S.F.	43,000	20	1990	2010	2027	60.00 %	0.00 %	12			$29,240
C1010	Partitions	$14.93	S.F.	92,275	100	1968	2068		53.00 %	16.17 %	53		$222,794.98	$1,377,666
C1020	Interior Doors	$3.76	S.F.	92,275	40	1968	2008	2027	30.00 %	27.50 %	12		$95,411.74	$346,954
C1030	Fittings	$4.12	S.F.	92,275	40	1968	2008	2027	30.00 %	19.96 %	12		$75,874.40	$380,173
C2010	Stair Construction	$1.28	S.F.	92,275	100	1968	2068		53.00 %	225.56 %	53		$266,412.05	$118,112
C3010230	Paint & Covering	$13.21	S.F.	92,275	10	2000	2010	2027	120.00 %	22.23 %	12		$270,955.08	$1,218,953
C3010232	Wall Tile	$2.63	S.F.	92,275	30	1968	1998	2027	40.00 %	0.00 %	12			$242,683
C3020412	Terrazzo & Tile	$75.52	S.F.	5,000	50	1968	2018	2027	24.00 %	0.00 %	12			$377,600

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3020413	Vinyl Flooring	$9.68	S.F.	80,000	20	1968	1988	2027	60.00 %	78.34 %	12		$606,666.72	$774,400
C3020414	Wood Flooring	$22.27	S.F.	2,000	25	1968	1993	2027	48.00 %	130.90 %	12		$58,304.14	$44,540
C3020415	Concrete Floor Finishes	$0.97	S.F.	5,275	50	1968	2018	2027	24.00 %	0.00 %	12			$5,117
C3030	Ceiling Finishes	$20.97	S.F.	92,275	25	1980	2005	2027	48.00 %	62.36 %	12		$1,206,594.42	$1,935,007
D1010	Elevators and Lifts	$2.50	S.F.	92,275	35	1968	2003	2052	105.71 %	173.09 %	37		$399,304.65	$230,688
D2010	Plumbing Fixtures	$31.58	S.F.	92,275	35	1999	2034		54.29 %	0.00 %	19			$2,914,045
D2020	Domestic Water Distribution	$2.90	S.F.	92,275	25	1999	2024		36.00 %	0.00 %	9			$267,598
D2030	Sanitary Waste	$2.90	S.F.	92,275	25	1968	1993	2042	108.00 %	146.43 %	27		$391,855.60	$267,598
D2040	Rain Water Drainage	$3.29	S.F.	92,275	30	1968	1998	2025	33.33 %	0.00 %	10			$303,585
D3020	Heat Generating Systems	$18.67	S.F.	92,275	35	1999	2034		54.29 %	0.00 %	19			$1,722,774
D3030	Cooling Generating Systems	$24.48	S.F.	92,275	30	1999	2029		46.67 %	0.00 %	14			$2,258,892
D3040	Distribution Systems	$42.99	S.F.	92,275	25	1968	1993	2042	108.00 %	140.33 %	27		$5,566,583.44	$3,966,902
D3050	Terminal & Package Units	$11.60	S.F.		20				0.00 %	0.00 %				$0
D3060	Controls & Instrumentation	$13.50	S.F.	92,275	20	1999	2019	2030	75.00 %	146.67 %	15		$1,827,090.29	$1,245,713
D4010	Sprinklers	$8.02	S.F.	92,275	35			2052	105.71 %	178.37 %	37		$1,320,034.36	$740,046
D4020	Standpipes	$0.99	S.F.	92,275	35			2052	105.71 %	0.00 %	37			$91,352
D5010	Electrical Service/Distribution	$9.70	S.F.	92,275	30	1968	1998	2047	106.67 %	295.44 %	32		$2,644,412.71	$895,068
D5020	Lighting and Branch Wiring	$34.68	S.F.	92,275	20	1968	1988	2027	60.00 %	4.50 %	12		$143,950.99	$3,200,097
D5030	Communications and Security	$12.99	S.F.	92,275	15	1968	1983	2027	80.00 %	48.14 %	12		$576,985.52	$1,198,652
D5090	Other Electrical Systems	$1.41	S.F.	92,275	30	1968	1998	2047	106.67 %	274.93 %	32		$357,706.04	$130,108
E1020	Institutional Equipment	$4.82	S.F.	92,275	35	1968	2003	2027	34.29 %	0.00 %	12			$444,766
E1090	Other Equipment	$11.10	S.F.	92,275	35	1968	2003	2027	34.29 %	0.00 %	12			$1,024,253
E2010	Fixed Furnishings	$2.13	S.F.	92,275	40	1968	2008	2027	30.00 %	7.78 %	12		$15,281.89	$196,546
								Total	**61.61 %**	**36.22 %**			**$18,258,210.20**	**$50,415,444**

System Notes

The facility description in the site executive summary contains an overview of each system. The notes listed below provide additional information on select systems found within the facility.

System: C3010 - Wall Finishes — This system contains no images

Note: Painted wall finish 90%
No finish 10%

System: C3020 - Floor Finishes — This system contains no images

Note: Terrazzo Tile 6%
Vinyl 87%
Wood 1%
Concrete 6%

System: D5010 - Electrical Service/Distribution — This system contains no images

Note: There is one (1) 500 kVA, 13.2 kV-208/120V, 3 phase, 4 wire substation transformer and one (1) 500 kVA (estimated size), 13.2 kVA-480V, 3 phase transformer (transformer was not accessible) that serves the chiller.

Renewal Schedule

eCOMET forecasts future Capital Renewal funding needed to address expiring systems based on the Next Renewal year found in the Cost Models. A 3% annual inflation factor is applied to the costs for systems expiring in future years. The table below reflects recommended Capital Renewal funding needs over the next 10 years. Note: Cells with a zero value indicate systems for which renewal is not scheduled in that year.

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$18,258,210**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$384,069**	**$676,597**	**$19,318,877**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A10 - Foundations**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A20 - Basement Construction**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$214,232	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$214,232**
B2020 - Exterior Windows	$540,833	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$540,833**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$227,806	**$227,806**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$1,456,926	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,456,926**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$222,795	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$222,795**
C1020 - Interior Doors	$95,412	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$95,412**
C1030 - Fittings	$75,874	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$75,874**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

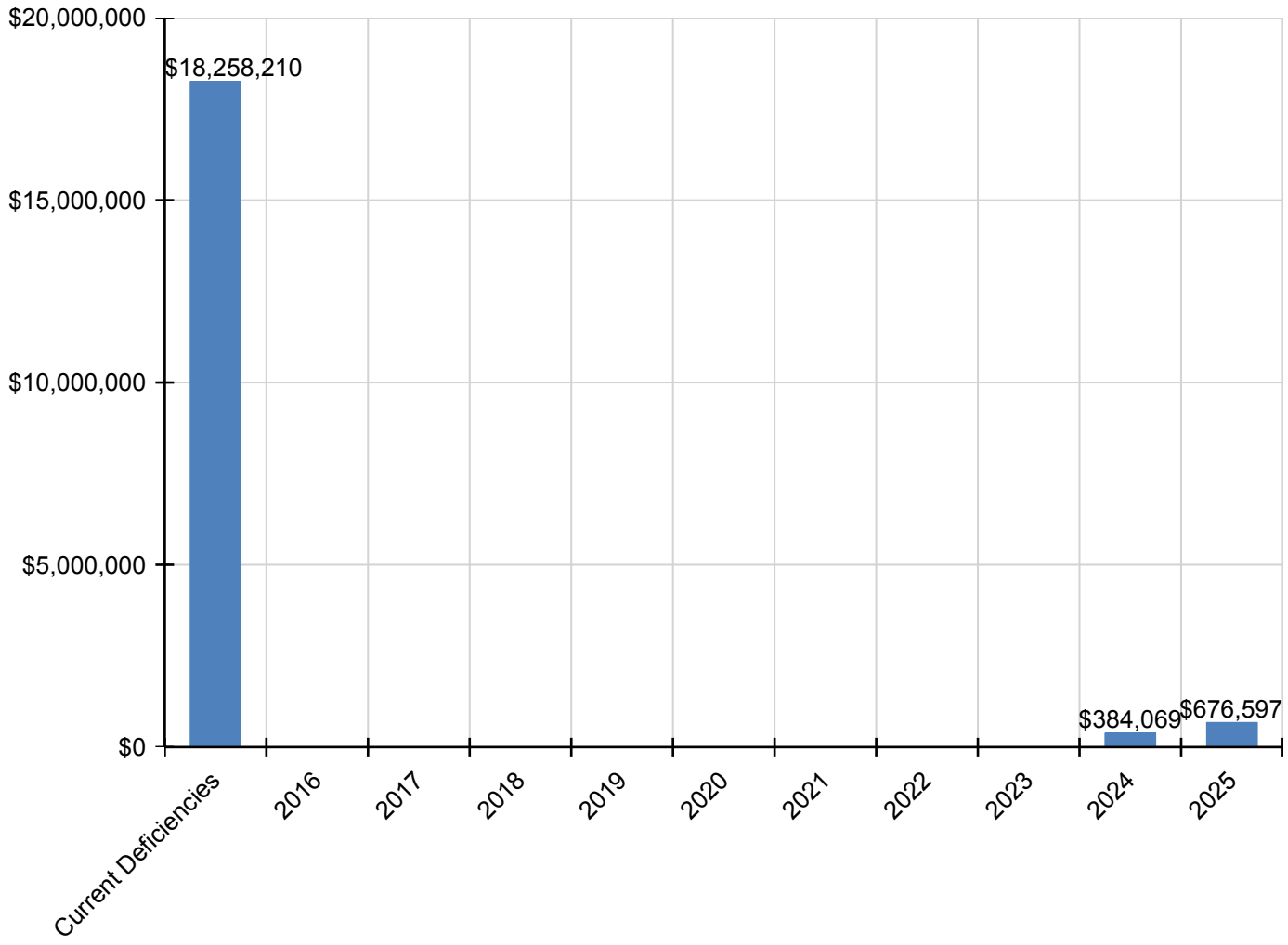
C2010 - Stair Construction	$266,412	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$266,412**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$270,955	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$270,955**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$606,667	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$606,667**
C3020414 - Wood Flooring	$58,304	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$58,304**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$1,206,594	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,206,594**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$399,305	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$399,305**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$384,069	$0	**$384,069**
D2030 - Sanitary Waste	$391,856	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$391,856**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$448,791	**$448,791**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$5,566,583	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$5,566,583**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,827,090	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,827,090**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,320,034	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,320,034**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$2,644,413	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,644,413**
D5020 - Lighting and Branch Wiring	$143,951	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$143,951**
D5030 - Communications and Security	$576,986	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$576,986**
D5090 - Other Electrical Systems	$357,706	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$357,706**

E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$15,282	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$15,282**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

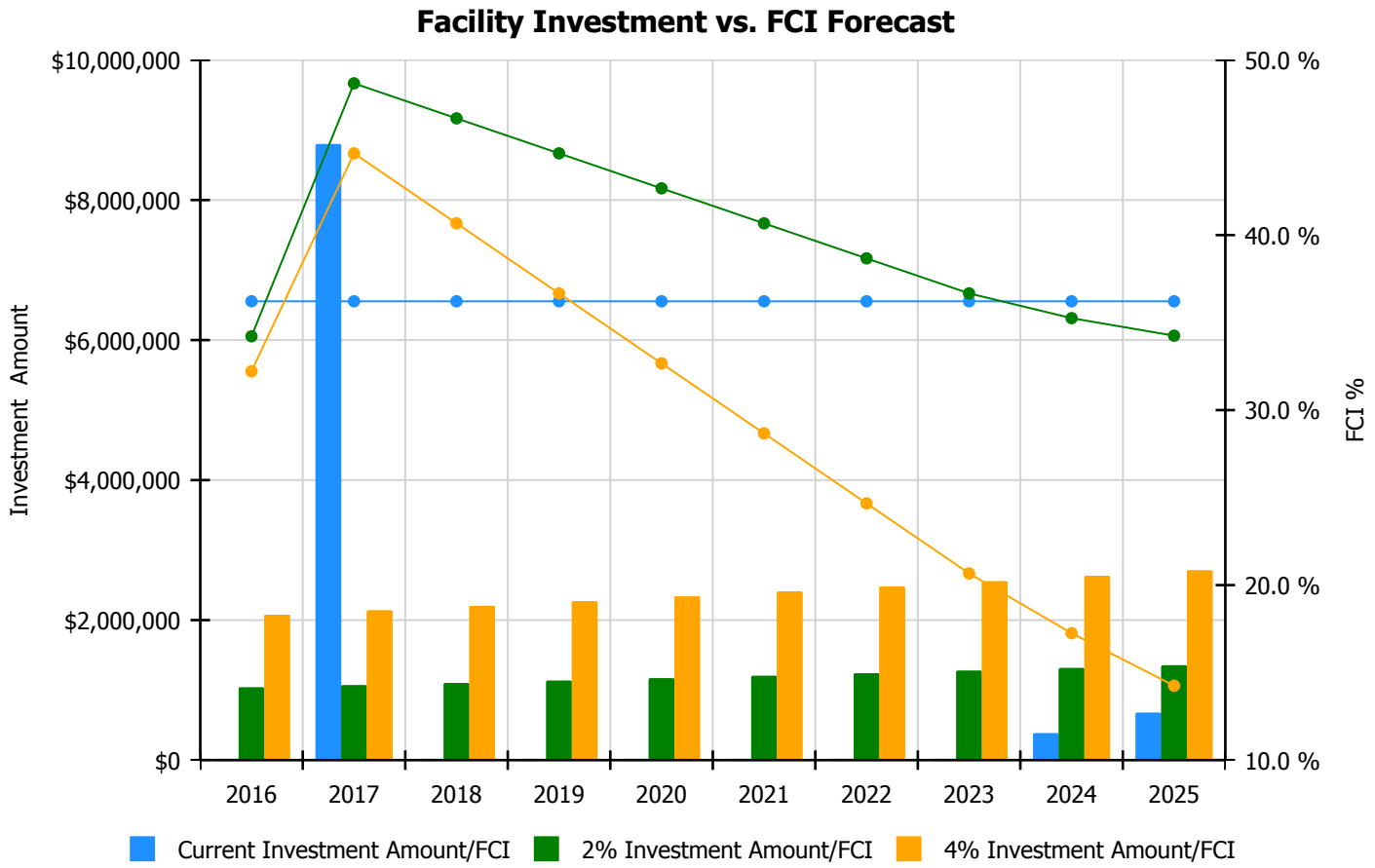
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

The chart below illustrates the effect of various investment levels on the building FCI for the next 10 years. The levels of investment shown below include:

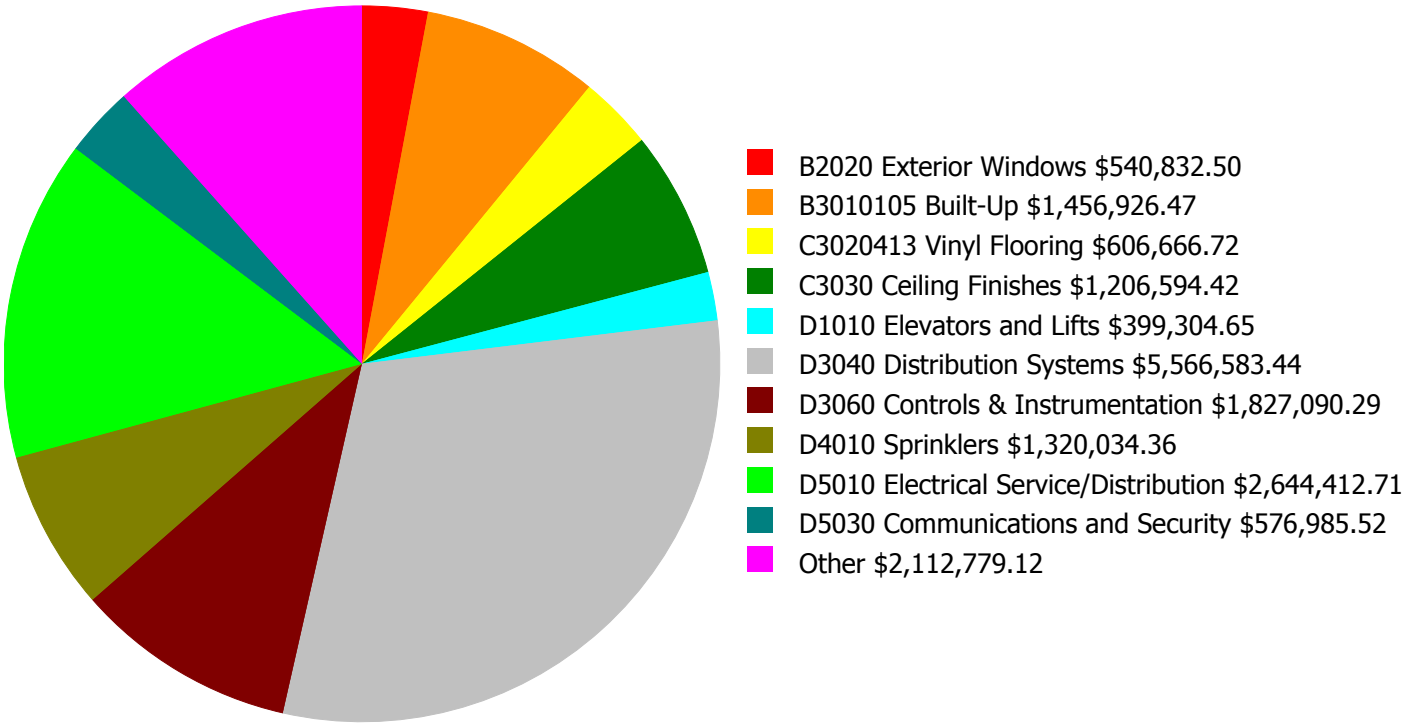
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value of the building, escalated for inflation



Year	Investment Amount Current FCI - 36.22%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,038,558.00	34.22 %	$2,077,116.00	32.22 %
2017	$8,799,935	$1,069,715.00	48.67 %	$2,139,430.00	44.67 %
2018	$0	$1,101,806.00	46.67 %	$2,203,613.00	40.67 %
2019	$0	$1,134,861.00	44.67 %	$2,269,721.00	36.67 %
2020	$0	$1,168,906.00	42.67 %	$2,337,813.00	32.67 %
2021	$0	$1,203,974.00	40.67 %	$2,407,947.00	28.67 %
2022	$0	$1,240,093.00	38.67 %	$2,480,185.00	24.67 %
2023	$0	$1,277,296.00	36.67 %	$2,554,591.00	20.67 %
2024	$384,069	$1,315,614.00	35.25 %	$2,631,229.00	17.25 %
2025	$676,597	$1,355,083.00	34.25 %	$2,710,166.00	14.25 %
Total:	**$9,860,602**	**$11,905,906.00**		**$23,811,811.00**	

Deficiency Summary by System

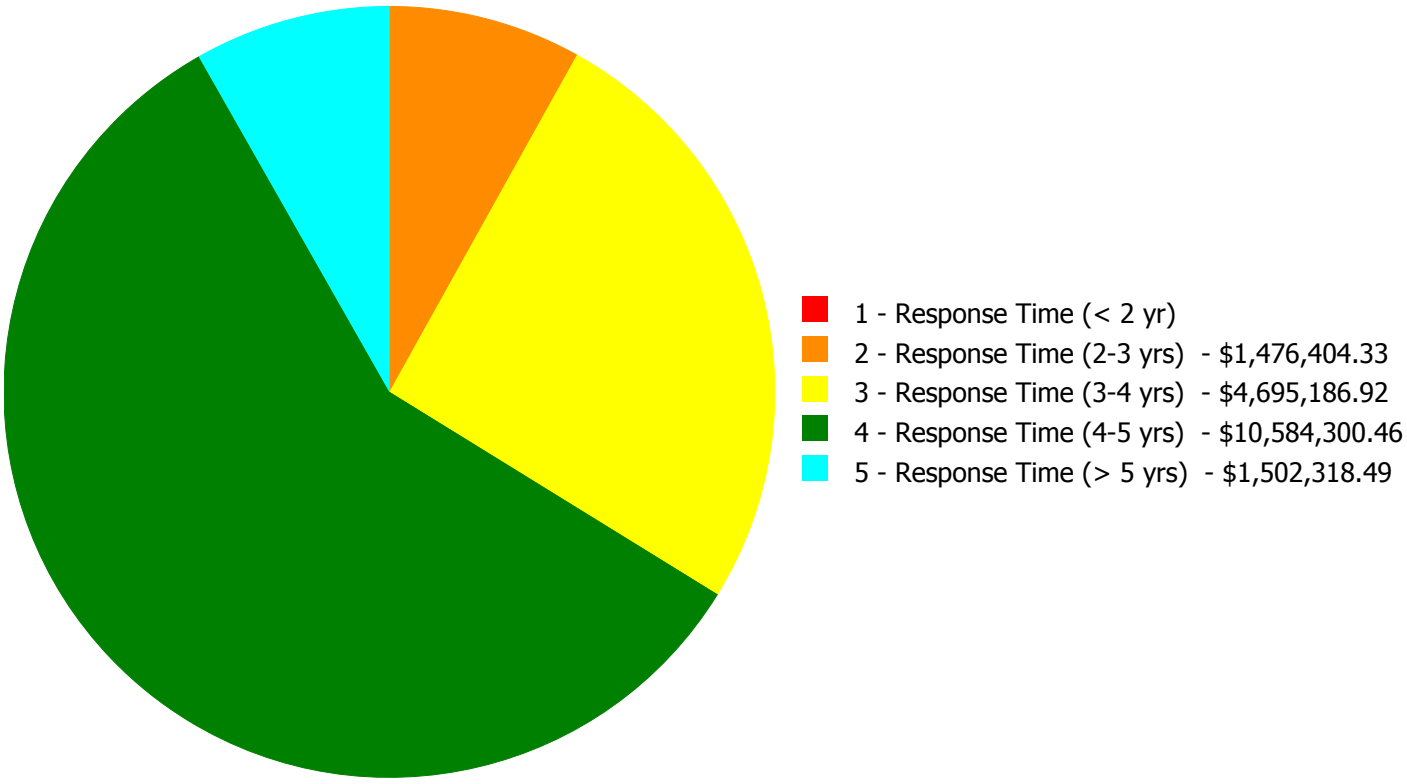
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart lists all current deficiencies associated with this facility.



Budget Estimate Total: $18,258,210.20

Deficiency Summary by Priority

The following chart shows the total repair costs broken down by priority. Assessors assigned deficiencies within eCOMET to one of the following priority categories:



Budget Estimate Total: $18,258,210.20

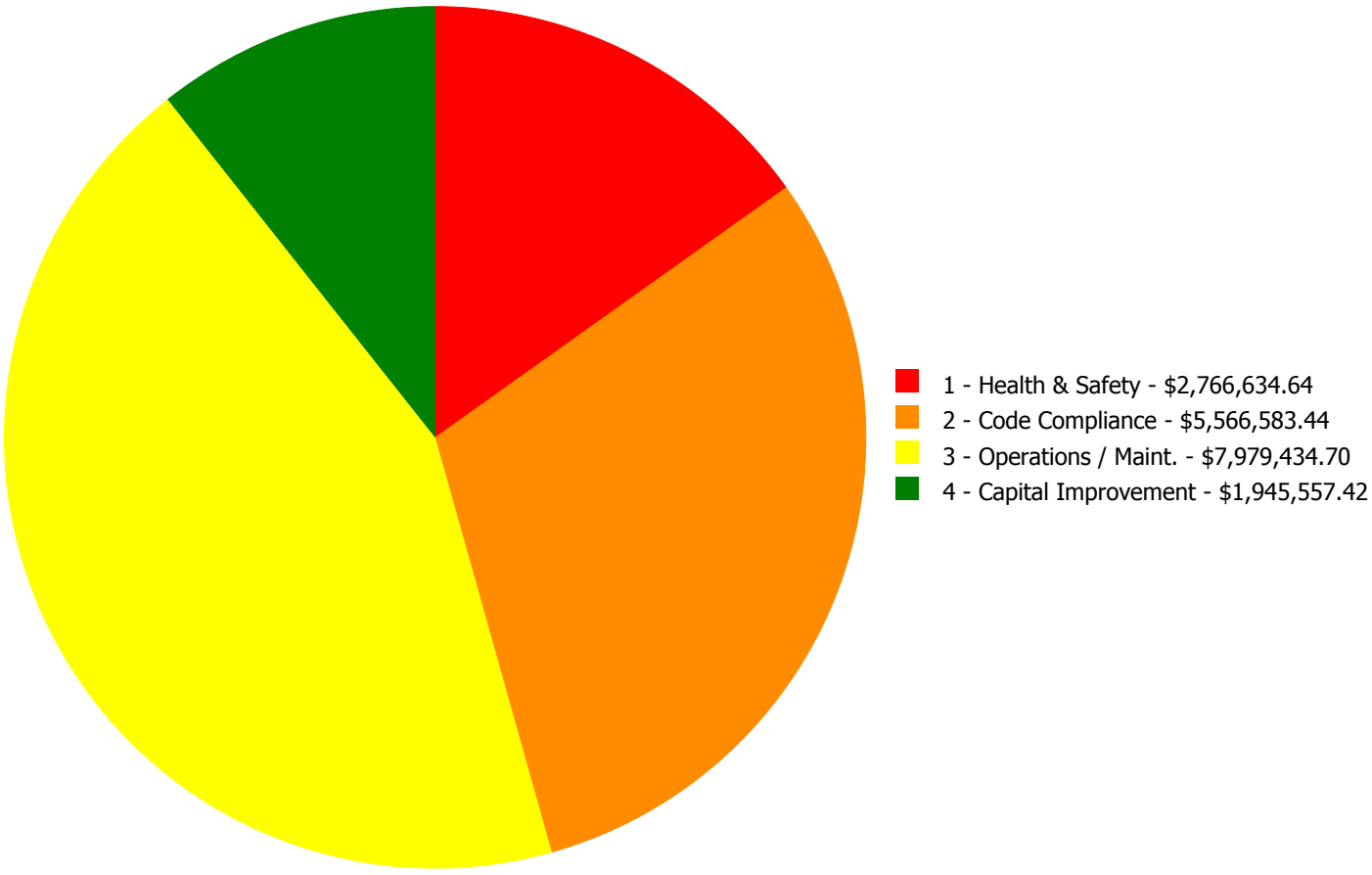
Deficiency By Priority Investment Table

The table below shows the current investment cost grouped by deficiency priority and building system.

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2010	Exterior Walls	$0.00	$0.00	$214,232.21	$0.00	$0.00	$214,232.21
B2020	Exterior Windows	$0.00	$0.00	$0.00	$540,832.50	$0.00	$540,832.50
B3010105	Built-Up	$0.00	$1,456,926.47	$0.00	$0.00	$0.00	$1,456,926.47
C1010	Partitions	$0.00	$0.00	$0.00	$222,794.98	$0.00	$222,794.98
C1020	Interior Doors	$0.00	$0.00	$95,411.74	$0.00	$0.00	$95,411.74
C1030	Fittings	$0.00	$0.00	$0.00	$62,109.76	$13,764.64	$75,874.40
C2010	Stair Construction	$0.00	$0.00	$266,412.05	$0.00	$0.00	$266,412.05
C3010230	Paint & Covering	$0.00	$0.00	$0.00	$0.00	$270,955.08	$270,955.08
C3020413	Vinyl Flooring	$0.00	$0.00	$606,666.72	$0.00	$0.00	$606,666.72
C3020414	Wood Flooring	$0.00	$0.00	$0.00	$58,304.14	$0.00	$58,304.14
C3030	Ceiling Finishes	$0.00	$0.00	$0.00	$0.00	$1,206,594.42	$1,206,594.42
D1010	Elevators and Lifts	$0.00	$0.00	$0.00	$399,304.65	$0.00	$399,304.65
D2030	Sanitary Waste	$0.00	$0.00	$0.00	$391,855.60	$0.00	$391,855.60
D3040	Distribution Systems	$0.00	$0.00	$0.00	$5,566,583.44	$0.00	$5,566,583.44
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$1,827,090.29	$0.00	$1,827,090.29
D4010	Sprinklers	$0.00	$0.00	$0.00	$1,320,034.36	$0.00	$1,320,034.36
D5010	Electrical Service/Distribution	$0.00	$0.00	$2,644,412.71	$0.00	$0.00	$2,644,412.71
D5020	Lighting and Branch Wiring	$0.00	$4,195.97	$21,287.89	$107,462.78	$11,004.35	$143,950.99
D5030	Communications and Security	$0.00	$0.00	$489,057.56	$87,927.96	$0.00	$576,985.52
D5090	Other Electrical Systems	$0.00	$0.00	$357,706.04	$0.00	$0.00	$357,706.04
E2010	Fixed Furnishings	$0.00	$15,281.89	$0.00	$0.00	$0.00	$15,281.89
	Total:	$0.00	$1,476,404.33	$4,695,186.92	$10,584,300.46	$1,502,318.49	$18,258,210.20

Deficiency Summary by Category

The following chart shows the total repair costs broken down by deficiency categories. Assessors assigned deficiencies to one of the following categories:



Budget Estimate Total: $18,258,210.20

Deficiency Details by Priority

The deficiency detail notes listed below provide additional information on identified deficiencies found within the facility.

Priority 2 - Response Time (2-3 yrs):

System: B3010105 - Built-Up

Location: Roof

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 2 - Response Time (2-3 yrs)

Correction: Remove and Replace Built Up Roof

Qty: 43,000.00

Unit of Measure: S.F.

Estimate: $1,456,926.47

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: The existing built up roofing system has clear signs of ponding and there reportedly has been an increase of roofing maintenance on this single ply roofing system. It is recommended that a new built-up roofing system be installed within the next ten years.

System: D5020 - Lighting and Branch Wiring

Location: Main Office Workroom and receptacles at sinks

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 2 - Response Time (2-3 yrs)

Correction: Replace Wiring Device

Qty: 13.00

Unit of Measure: Ea.

Estimate: $4,195.97

Assessor Name: Ed Davis

Date Created: 12/17/2015

Notes: Replace three (3) duplex receptacles in the workroom in the Main Office area that are in poor condition/damaged. Provide an allowance for replacement of ten (10) duplex receptacles that are located within 6 feet of the sinks in classrooms and in the kitchen with ground-fault circuit-interrupting (GFCI) type receptacles to comply with NFPA 70, NEC Article 210.8 (B).

System: E2010 - Fixed Furnishings

Location: Stage

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 2 - Response Time (2-3 yrs)

Correction: Remove and replace stage curtain - insert the LF of track and SF of curtain

Qty: 1.00

Unit of Measure: Ea.

Estimate: $15,281.89

Assessor Name: Hayden Collins

Date Created: 12/29/2015

Notes: The school stage has a stage curtain assembly that appears to be from the original construction. Modern applications are typically fire-proof applications with adjustable tracks and electric support for operation. The curtains are torn in a few section and the track is not functioning properly, overall the system is in fair condition. It is recommended that the curtain and track system be upgraded to a new system. Special care should be considered in regards to modern fire proofing for the new installation.

Priority 3 - Response Time (3-4 yrs):

System: B2010 - Exterior Walls

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Repair cracks in masonry - replace missing mortar and repoint - SF of wall area

Qty: 4,000.00

Unit of Measure: S.F.

Estimate: $129,157.89

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes:

System: B2010 - Exterior Walls

Location: Roof

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Repair spalled concrete wall structure

Qty: 1,500.00

Unit of Measure: S.F.

Estimate: $85,074.32

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: There is significant cracking starting on the roof with a section of concrete finish leading to the next floor. This cracking is exhibiting moisture penetration, such displacement is normally cause for a more detailed destructive structural analysis. A physical analysis of the load-bearing structural scheme is advised. An unqualified allocation for correction of the unspecified problem is included in this deficiency cost estimate to repair and research this issue.

System: C1020 - Interior Doors

Location: Classroom

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Remove and replace interior doors - wood doors with hollow metal frames - per leaf

Qty: 20.00

Unit of Measure: Ea.

Estimate: $95,411.74

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: Interior doors are typically wood in metal frames with some glass glazing. Other interior doors include metal glass pane doors with hollow metal frames. Doors are generally in good condition considering the age of the application. There are a select few doors that are very high traffic and are showing signs of age such as damaged locksets, warn hinges and finish issues. Selective upgrades are required for the interior door systems, it is recommended that the damaged interior doors system be removed and replaced with a new modern metal framed wooden door system with consideration for ADA compliance.

System: C2010 - Stair Construction

Location: Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace inadequate or install proper stair railing - select appropriate material

Qty: 1,800.00

Unit of Measure: L.F.

Estimate: $266,412.05

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: Current requirements for stairs indicate that they have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread/riser angle). Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they are deficient in handrail and guardrail design relative to current standards. Future efforts should include comprehensive stair railing removal and replacement upgrades.

System: C3020413 - Vinyl Flooring

Location: Building Wide

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 3 - Response Time (3-4 yrs)

Correction: Remove VAT and replace with VCT - SF of area

Qty: 40,000.00

Unit of Measure: S.F.

Estimate: $606,666.72

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: The vinyl floor finish in most of this school is in very good condition and appears to have part of an isolated upgrade. Some of the original flooring that was not a part of that effort consist of a 9x9 finish. This finish is suspect to contain asbestos and is recommended for upgrade. Remove and replace with a 12x12 vinyl tile application.

System: D5010 - Electrical Service/Distribution

Location: Boiler Room 014B

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace Substation

Qty: 1.00

Unit of Measure: Ea.

Estimate: $1,678,176.03

Assessor Name: Ed Davis

Date Created: 12/16/2015

Notes: Replace the existing load center unit substation with a 480/277V, 3 phase, 4 wire substation, sized to include the addition of the chiller, elevator and, if required, a fire pump. Relocate substation to a location that allows code required working space above and in front of the equipment. Provide a 208/120V step-down transformer and switchboard to serve existing building loads.

System: D5010 - Electrical Service/Distribution

Location: Building wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace Electrical Distribution System (U)

Qty: 27.00

Unit of Measure: Ea.

Estimate: $966,236.68

Assessor Name: Ed Davis

Date Created: 12/16/2015

Notes: Replace Motor Control Centers MCP-1 and MCP-2 and motor control rack in Fourth Floor Mechanical Room. Replace all (23) panelboards and their feeder conductors.

System: D5020 - Lighting and Branch Wiring

Location: First Floor corridor, Fourth Floor Mechanical Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace lighting fixtures

Qty: 1.00

Unit of Measure: Ea.

Estimate: $21,287.89

Assessor Name: Ed Davis

Date Created: 12/17/2015

Notes: Provide an allowance for replacement of 25 industrial or wraparound fluorescent lighting fixtures that have T12 lamps with new fixtures using T8 lamps.

System: D5030 - Communications and Security

Location: Building wide
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace fire alarm system
Qty: 92,275.00
Unit of Measure: S.F.
Estimate: $489,057.56
Assessor Name: Ed Davis
Date Created: 12/17/2015

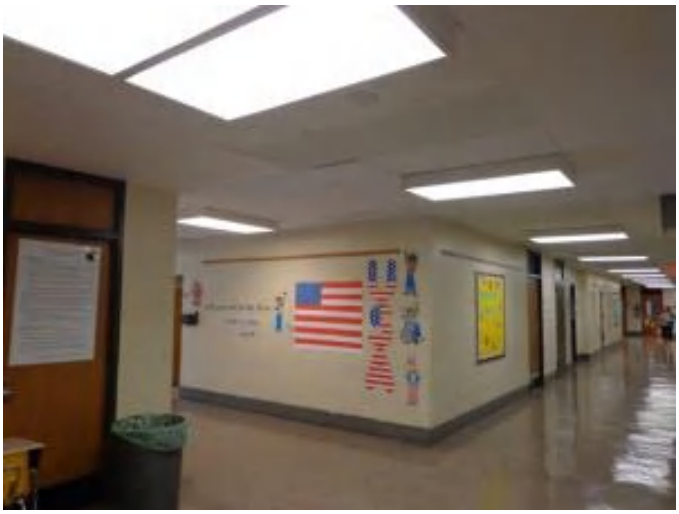
Notes: Replace fire alarm system with an addressable system.

System: D5090 - Other Electrical Systems

Location: Boiler Room
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace standby generator system
Qty: 1.00
Unit of Measure: Ea.
Estimate: $346,257.61
Assessor Name: Ed Davis
Date Created: 12/17/2015

Notes: Replace standby generator, automatic transfer switch and Panelboard LE. Standby generator and distribution system should be sized to include the elevator and, if needed, a fire pump.

System: D5090 - Other Electrical Systems



Location: Classroom Corridors

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 3 - Response Time (3-4 yrs)

Correction: Add Emergency/Exit Lighting

Qty: 6.00

Unit of Measure: Ea.

Estimate: $11,448.43

Assessor Name: Ed Davis

Date Created: 12/17/2015

Notes: Provide a double-sided exit sign at each end of the corridor between the classroom pods on each floor for Floors 1, 2 and 3, for a total of six (6) exit signs. Existing exit signage is not visible when looking down the path of egress. Additional exit signs are required to comply with Chapter 7 of NFPA 101, Life Safety Code.

Priority 4 - Response Time (4-5 yrs):

System: B2020 - Exterior Windows

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Remove and replace aluminum windows - pick the appropriate size and style and insert the number of units

Qty: 90.00

Unit of Measure: Ea.

Estimate: $540,832.50

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: The exterior windows are industrial metal framed single pane applications. Some of the windows are operable while others no longer function. The window system was reported to have been upgraded in the early 1990s and some selective upgrades based on damage. It is recommended that the exterior window system be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

System: C1010 - Partitions

Location: Classroom

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Remove folding wood partitions; replace with metal studs and gypsum board painted

Qty: 10,000.00

Unit of Measure: S.F.

Estimate: $222,794.98

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: There are several movable partitions that remain in classrooms. These wall systems are no longer used and in most cases cannot be used due to damage or wall modifications to support classroom needs. This deficiency provides a budgetary consideration to remove and replace the wall systems with universal removal of the existing movable partitions and upgrades to a permeate wall systems.

System: C1030 - Fittings

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace missing or damaged signage - insert the number of rooms

Qty: 200.00

Unit of Measure: Ea.

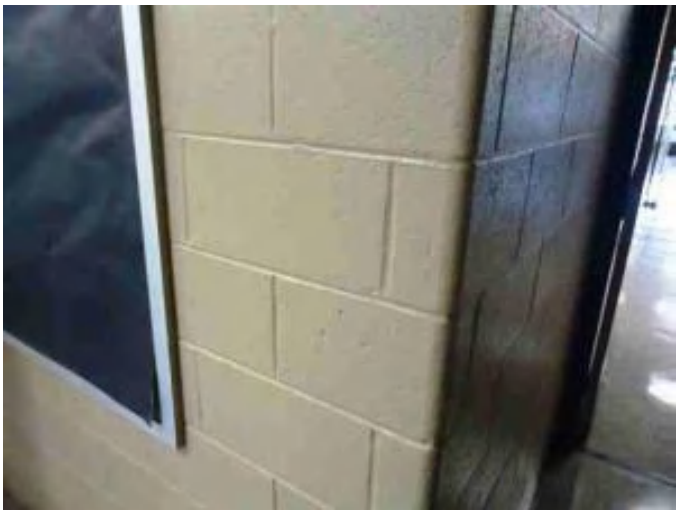
Estimate: $54,182.50

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: There is no directional signage and room signage is a custom design in places and scarce or painted with no consistency in others. Accessibility signage criteria have been established for the physically challenged. These include mounting heights, contrast and finish, raised and Braille characters and pictograms, and character proportions and heights. It is recommended that compliant signage be installed throughout the building.

System: C1030 - Fittings



Location: Hallway

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Remove and replace tackboards - select size

Qty: 10.00

Unit of Measure: Ea.

Estimate: $7,927.26

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: There are several tack boards in the hallways for student displays. The systems are damaged and beyond the expected service life for this application. Remove and replace tack boards is recommended.

System: C3020414 - Wood Flooring

Location: Stage

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Remove and replace wood flooring

Qty: 2,000.00

Unit of Measure: S.F.

Estimate: $58,304.14

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: The stage this school have a wood floor finish that appears to be from original construction. The system is showing signs of age such as the effects of sanding and refinishing with yearly cleaning and waxing with some repairs. The floor finish is in fair condition however, the finish is beyond its expected life cycle. It is recommended that the wooden floor finish be removed and replaced with an in kind finish.

System: D1010 - Elevators and Lifts

Location: Elevator Machine Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Update/Modernize Elevator Cab - select the scope of work and change the quantities to fit the need

Qty: 0.00

Unit of Measure: Ea.

Estimate: $399,304.65

Assessor Name: Ed Davis

Date Created: 12/17/2015

Notes: Replace elevator controller and motor, hall stations, lanterns and position indicators. Upgrade and modernize elevator cab and machine room to comply with current elevator code.

System: D2030 - Sanitary Waste

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Inspect sanitary waste piping and replace damaged sections. (+100KSF)

Qty: 92,275.00

Unit of Measure: S.F.

Estimate: $391,855.60

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: Inspect old cast iron sanitary piping including camera observation and replace damaged sections.

System: D3040 - Distribution Systems

Location: classrooms

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace the existing unit ventilators with new units designed to provide adequate ventilation per ASHRAE Std 62 - insert the SF of bldg. in the qty.

Qty: 92,275.00

Unit of Measure: S.F.

Estimate: $4,201,731.22

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: Replace the existing unit ventilators with new units designed for quiet operation and equipped with hot water and chilled water coils, hydronic control valves with digital controls and integral heat exchangers to provide code required fresh air quantities. Connect to new chilled and hot water distribution piping systems and building automation control system.

System: D3040 - Distribution Systems

Location: mezzanine mechanical room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace HVAC unit for Gymnasium (single station)

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $227,475.37

Assessor Name: Ed Davis

Date Created: 12/30/2015

Notes: Replace six existing air handling units in the mezzanine mechanical room with new single zone units with hot and chilled water coils, filters, outside and return air dampers, hydronic valves

System: D3040 - Distribution Systems

Location: mezzanine mechanical room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace HVAC unit for Gymnasium (single station)

Qty: 6,000.00

Unit of Measure: S.F.

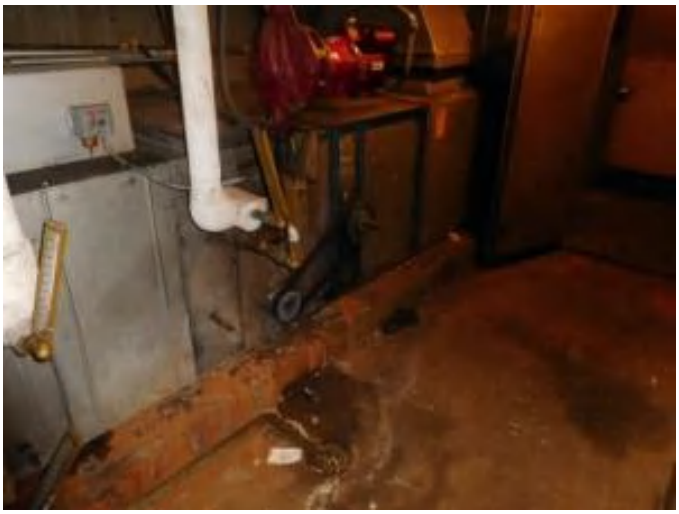
Estimate: $227,475.37

Assessor Name: Ed Davis

Date Created: 12/30/2015

Notes: Replace six existing air handling units in the mezzanine mechanical room with new single zone units with hot and chilled water coils, filters, outside and return air dampers, hydronic valves

System: D3040 - Distribution Systems



Location: mezzanine mechanical room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace HVAC unit for Gymnasium (single station)

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $227,475.37

Assessor Name: Ed Davis

Date Created: 12/30/2015

Notes: Replace six existing air handling units in the mezzanine mechanical room with new single zone units with hot and chilled water coils, filters, outside and return air dampers, hydronic valves

System: D3040 - Distribution Systems

Location: mezzanine mechanical room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace HVAC unit for Gymnasium (single station)

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $227,475.37

Assessor Name: Ed Davis

Date Created: 12/30/2015

Notes: Replace six existing air handling units in the mezzanine mechanical room with new single zone units with hot and chilled water coils, filters, outside and return air dampers, hydronic valves

System: D3040 - Distribution Systems

Location: mezzanine mechanical room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace HVAC unit for Gymnasium (single station)

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $227,475.37

Assessor Name: Ed Davis

Date Created: 12/30/2015

Notes: Replace six existing air handling units in the mezzanine mechanical room with new single zone units with hot and chilled water coils, filters, outside and return air dampers, hydronic valves

System: D3040 - Distribution Systems

Location: mezzanine mechanical room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace HVAC unit for Gymnasium (single station)

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $227,475.37

Assessor Name: Ed Davis

Date Created: 12/30/2015

Notes: Replace six existing air handling units in the mezzanine mechanical room with new single zone units with hot and chilled water coils, filters, outside and return air dampers, hydronic valves

System: D3060 - Controls & Instrumentation

Location: entire building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 92,275.00

Unit of Measure: S.F.

Estimate: $1,827,090.29

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: Install new direct digital control system components for the air handling units and unit ventilators and building automation system with remote computer control capability and graphics package.

System: D4010 - Sprinklers

Location: entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 4 - Response Time (4-5 yrs)

Correction: Install a fire protection sprinkler system

Qty: 92,275.00

Unit of Measure: S.F.

Estimate: $1,320,034.36

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: Install NFPA wet pipe automatic sprinkler system in entire building, including fire service, piping sprinkler heads, standpipes and fire pump if required.

System: D5020 - Lighting and Branch Wiring

Location: Classrooms

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 4 - Response Time (4-5 yrs)

Correction: Provide surface raceway system and wiring devices

Qty: 840.00

Unit of Measure: L.F.

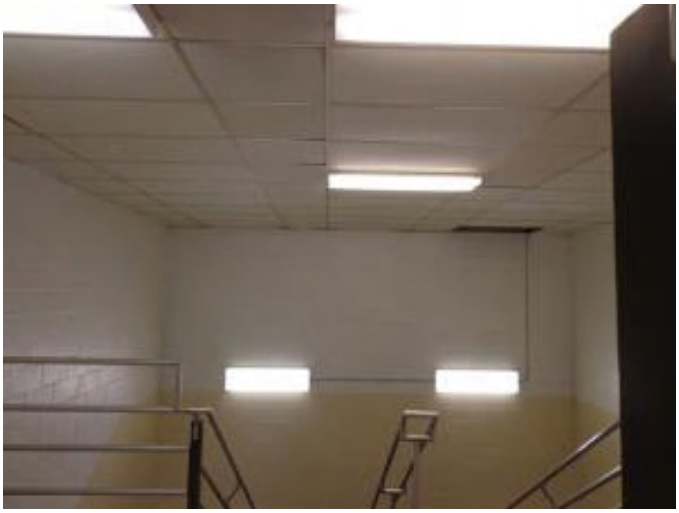
Estimate: $107,462.78

Assessor Name: Ed Davis

Date Created: 12/17/2015

Notes: Provide surface metal raceway system with 4 to 6 duplex receptacles in each of 28 classrooms.

System: D5030 - Communications and Security



Location: Building wide

Distress: Security Issue

Category: 1 - Health & Safety

Priority: 4 - Response Time (4-5 yrs)

Correction: Add/Replace Video Surveillance System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $53,537.66

Assessor Name: Ed Davis

Date Created: 12/17/2015

Notes: Provide allowance for the addition of ten (10) interior cameras to be provided in corridors and stairwells.

System: D5030 - Communications and Security

Location: Building wide

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Add/Replace Clock System or Components

Qty: 60.00

Unit of Measure: Ea.

Estimate: $34,390.30

Assessor Name: Ed Davis

Date Created: 12/17/2015

Notes: Replace clocks with wireless GPS synchronous clock system in all classrooms, auditorium/cafeteria, gymnasium, IMC, offices and similar occupied rooms.

Priority 5 - Response Time (> 5 yrs):

System: C1030 - Fittings

Location: Classroom

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace blackboards with marker boards - pick the appropriate size and insert the quantities

Qty: 20.00

Unit of Measure: Ea.

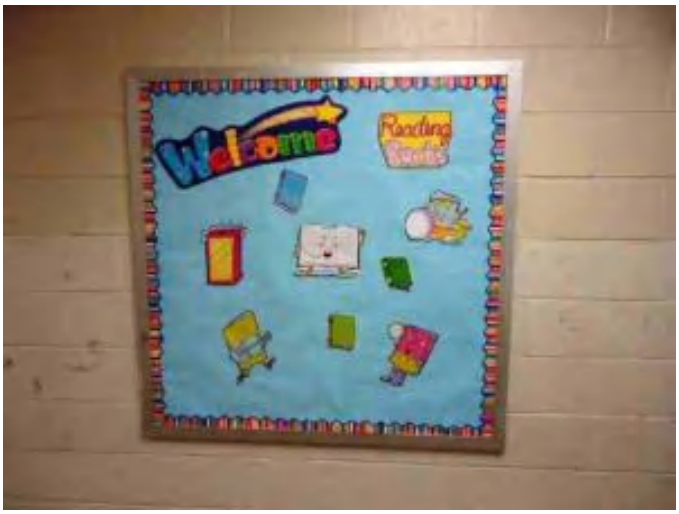
Estimate: $13,764.64

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: Some of the classroom chalk boards are original to the buildings construction. This system is damaged and beyond its expected life, universal upgrades are warranted. Remove and upgrade damaged chalk boards to new marker board systems.

System: C3010230 - Paint & Covering



Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Repair and repaint all interior walls - SF of wall surface

Qty: 40,000.00

Unit of Measure: S.F.

Estimate: $270,955.08

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: There are painted walls, trim, and some painted ceilings in this building. The interior finishes are in fair condition. Cyclical painting should be considered for a standard approach to maintaining the quality of the interior finishes. It is recommended that all previously painted surfaces be repainted according to established cycles for this occupancy and use type. Minor repairs should be completed before work begins. The abandoned section of the building is expected to require major repairs and additional efforts to restore the finishes. This effort is expected to be coordinated with other mechanical electrical efforts in order to prevent overlapping efforts.

System: C3030 - Ceiling Finishes

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace suspended acoustic ceilings - lighting not included

Qty: 80,000.00

Unit of Measure: S.F.

Estimate: $1,206,594.42

Assessor Name: Ed Davis

Date Created: 12/29/2015

Notes: The ceiling finish is a mix of painted, exposed and 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and is in good condition considering the age of the application and the current condition of the school. The ceiling finish is expected to require upgrades to support the recommended efforts in this report prior to re-opening. This deficiency provides a budgetary consideration for removal and replacement of the current ceiling finish to a new acoustical tile finish. Considering the recommended mechanical and electrical upgrades this effort should be completed as part of an overall renewal program for the school. No work should be considered until after the recommended exterior efforts are complete.

System: D5020 - Lighting and Branch Wiring

Location: Classroom Corridors

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Provide lighting control

Qty: 4.00

Unit of Measure: Ea.

Estimate: $11,004.35

Assessor Name: Ed Davis

Date Created: 12/17/2015

Notes: Provide lighting contactors on each floor for controlling corridor lighting fixtures from a single light switch located on each floor, rather than switching lighting from panelboard circuit breakers.

Equipment Inventory

The following table represents the inventory details of the inventory found in the building, which fall under the following subsystems:

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D1010 Elevators and Lifts	Traction geared elevators, passenger, 2000 lb, 5 floors, 200 FPM	1.00	Ea.	Fourth Floor Elevator Machine Room	Eastern Elevator Co.	NA	328868		30			$175,350.00	$192,885.00
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3796 MBH, includes burners, controls and insulated jacket, packaged	3.00	Ea.	mechanical room	buderhus	605			35	1999	2034	$84,333.50	$278,300.55
D3030 Cooling Generating Systems	Cooling tower, galvanized steel, packaged unit, draw thru, 300 ton	1.00	Ea.	roof	imeco	ic1212280120	59520100		30	2008	2038	$75,868.80	$83,455.68
D3030 Cooling Generating Systems	Water chiller, centrifugal liquid chiller, packaged unit, water cooled, 300 ton, includes standard controls, excludes water tower	1.00	Ea.	roof mechanical room	mcquay	pfh 050			30	1999	2029	$126,852.00	$139,537.20
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 20 H.P., to 1350 GPM, 6" size	1.00	Ea.	roof mechanical room	paco	type l			25	1999	2024	$23,598.00	$25,957.80
D3040 Distribution Systems	Pump, circulating, cast iron, close coupled, end suction, bronze impeller, flanged joints, 15 HP, to 1000 GPM, 5" size	2.00	Ea.	mechanical room	paco	type l			25	1999	2024	$7,780.50	$17,117.10
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 400 kVA & above, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	2.00	Ea.	Basement Boiler Room	Penn Panel & Box Co.	NA	13-251		30			$42,849.00	$94,267.80
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 400 kVA & above, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	2.00	Ea.	Basement Boiler Room	Penn Panel & Box Co.	NA	13-250		30			$42,849.00	$94,267.80
D5010 Electrical Service/Distribution	Motor control center, starters, class 1, type B, combination MCP, FVNR, with control XFMR, size 1, 10 HP, 12" high, incl starters & structures	21.00	Ea.	Mezzanine Mechanical Penthouse	Cutler-Hammer	Cat. No. OVB304N355	5AF578039		30			$2,670.30	$61,683.93
D5010 Electrical Service/Distribution	Motor control center, starters, class 1, type B, combination MCP, FVNR, with control XFMR, size 1, 10 HP, 12" high, incl starters & structures	11.00	Ea.	Basement Boiler Room	Cutler-Hammer	Cat. No. OVB304N385	5AF578039		30			$2,670.30	$32,310.63
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 1600 A	2.00	Ea.	Basement Boiler Room	Penn Panel & Box Co.	NA	NA		30			$40,458.15	$89,007.93
D5010 Electrical Service/Distribution	Transformer, dry-type, 3 phase 15 kV primary 277/480 volt secondary, 750 kVA	1.00	Ea.	Basement Boiler Room	National Industri	NA	00434-1		30			$96,255.00	$105,880.50
												Total:	**$1,214,671.92**

Executive Summary

Building condition is evaluated based on the functional systems and elements of a building and organized according to the UNIFORMAT II Elemental Classification. The grouping of these systems and elements and applying a current replacement value to them develops a representative building cost model. Cost Models are developed for similar building types and functions. Systems and their elements are evaluated based on their current replacement values, life cycles, installation dates and next renewal dates. Systems and their elements that are within their useful lives are further evaluated to identify current deficient conditions that may have a significant impact on a system's or element's remaining service life, and to determine if they are beyond their predicted expected life. The system's or element's current replacement value is based on RS Means Commercial Cost Data.

Following are the cost model's system details for this facility. The Replacement Value is the amount needed to replace the property of the same present value. The Current Repair Amount, also known as Condition Needs, represents the budgeted contractor installed costs plus owner's soft costs for the repair, replacement or renewal for a component or system level deficiency. It excludes contributing costs for other components or systems that might also be associated with the corrective actions due to packaging the work. Facility Condition Index (FCI) FCI is an industry-standard measurement of facility condition calculated as the ratio of the costs to correct a facility's deficiencies to the facility's Current Replacement Value. It ranges from 0% (new) to 100% (very poor). Condition Index (CI) is calculated as the sum of a renewable system's Remaining Service Life (RSL) divided by the sum of a system's Replacement Value (both values exclude soft-cost to simplify calculation updates) expressed as a percentage ranging from 100% (new) to 0% (expired).

Function:	Little School House
Gross Area (SF):	24,380
Year Built:	2001
Last Renovation:	
Replacement Value:	$13,386,023
Repair Cost:	$11,241.66
Total FCI:	0.08 %
Total RSLI:	62.70 %

Description:

Facility Assessment
September 2015

School District of Philadelphia
John H. Webster Little School House
3404 Frankford Ave
Philadelphia, PA 19134

24,380 SF / 219 Students / LN 05

The John H Webster Little School House School is located at 3404 Frankford Ave. The main entrance faces southeastern exterior. The main building constructed in 2001 and is a single story school. The school is identified as B559002 and consist of 24,380 GSF.

The information for this report was collected during a site visit on September 30, 2015.

Mr. Bill Smith, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Mr. Scott Ovington, Facilities Area Coordinator, also met with assessment team at the site.

Architectural / Structural Systems

Foundations are concrete and appear to be in good condition. The steel framed superstructure is good condition. The slab on grade floor construction is in good condition and the pitched roofing system is in good condition.

The exterior brick surfaces are generally in very good condition for their age. However, the southern wall facing the playground area currently has an issue. The bricks have cracked or spalled and should be replaced. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

Exterior windows are double pane aluminum frame with operable and are in good condition. Exterior doors are typically metal doors and frames with glazing. Doors are in generally good condition and are ADA compliant. There is at least one handi-cap entrance.

Interior partitions include CMU, gypsum wallboard on metal studs. Interior partitions are in very good condition. Interior doors are typically wood in metal frames with some sidelights, wired glass glazing. Other interior doors include hollow metal in hollow metal frames at the mechanical spaces, exit ways, access doors. Doors are generally in very good condition and are ADA compliant and fire rated. Doors swing in the direction of exit and do not obstruct hallways. Fittings include: marker boards; tack boards; interior signage; wooden lockers; toilet accessories and toilet partitions; fixed storage shelving. The fittings are in very good condition and expected to have a normal life cycle that extends beyond the outlook of this report.

Special consideration for those that may be physically challenged was not a main factor in the design of The Little School House. The main entrance serves as the exterior ADA entrance complete with automated access controlled from the front desk. The path of travel is very clear from that entrance of the school and from the access points. The interior path of travel is suppoted by some ADA lever actuated door hardware and guard rails, signage, ADA restroom accommodations that meet the needs of the physically challenged. The building sets the example for construction efforts to support the ADA guidelines. There are no projects or recommendations required at this time.

Interior wall finishes are typically painted CMU. Other wall finishes include and ceramic tile at restrooms. Wall finishes are generally in very good condition. Interior floor finishes are typically VCT in classrooms and corridors. Other floor finishes include: carpet and sealed concrete and a tile floor finish in the kitchen area. Interior ceilings are typically 2 x 4 acoustical tile in metal grid. Other ceiling finishes include: exposed/painted structure with gypsum wallboard or exposed stained wood. There are no corrections required at this time.

Furnishings include: fixed casework and fixed benches with shelves all in like new condition. There were no issues that surfaced during the time of the inspection therefore no recommendations are required at this time.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories, urinals and water closets. Lavatories have dual handle faucets and urinals and water closets have manual flush valves with lever operators. Water coolers are stainless steel high/low type and custodial closets have mop basins. There are a few counter top stainless steel sinks.

Hot water is provided by two gas water heaters in the mechanical room, a PVI 125 gallon and a 75 gallon Bradford White. There is a pressurization tank adjacent to the water heaters. An emergency shower/eye wash is located in the mechanical room.

Sanitary, waste and vent piping is hubless cast iron with banded couplings. Domestic hot and cold water is insulated rigid copper piping. There is a three inch water service and meter in the mechanical room connected at Frankford Ave. The service includes a backflow preventer. The roof is sloped with no roof drains. Gas service is a three inch service located in the chiller enclosure, connected at Frankford Ave. gas piping is black steel with screwed fittings.

The plumbing system is from the original 2001installation and no significant alterations have been made. All components are in good condition and should have remaining service life from ten to twenty years.

HVAC- The building is heated by hot water generated by two HB Smith cast iron sectional gas/oil boilers in the mechanical room. The boilers are forty hp with Powerflame burners and separate oil pumps. Hot water is circulated to heating coils and cabinet radiation units throughout the building.

There are two 500 gallon steel double wall oil storage tanks in the mechanical room, with a small containment curb around the installation. Boilers and water heaters are connected to a stainless steel double wall factory manufactured vent system to a roof cap.

There is a central chilled water system with an eighty ton York air cooled chiller in an enclosure outside the mechanical room. The unit is elevated on an eight foot high steel frame. A glycol system with tank and pump prevents freezing. On the day of this survey there was investigation on the chiller regarding suspected electrical service issues.

Fan coil units are located above ceilings and in the mechanical room. The units are single zone package type with hot and chilled water coils, filters, blowers and motors. There are a total of thirteen units with one floor mounted in the mechanical room and the others above ceilings. The unit in the mechanical room serves the multipurpose room. Ductwork is sheet metal connected to ceiling diffusers and sidewall grills. Toilet exhaust is ducted to three centrifugal roof ventilators. There is a small exhaust only stainless steel kitchen hood connected to an upblast exhaust fan on the roof with stainless steel welded ductwork. There are only electric warming appliances and no fire suppression nor gas solenoid valve associated with the hood. There are combustion air louvers with motorized dampers in the mechanical room.

Chilled and heating water piping is insulated copper. Oil piping is black steel with screwed fittings. There are two chilled and two hot water floor mounted pumps in the mechanical room. All are five hp end suction type. Two small inline B&G pumps in the heating water piping circulate to hot water radiation units. An expansion tank, air separator and chemical feed unit are part of the piping system.

There is a digital building automation system with graphic display. The system is reportedly functioning properly.

All components of the HVAC system are from the original 2001 construction and no significant modifications have been made. The systems and equipment are in good condition and should have remaining service life from ten to twenty years.

FIRE PROTECTION-The building has a complete automatic sprinkler system. Piping is black steel with Victaulic couplings. There are exposed upright and recessed sprinkler heads with flush cover plates.

The fire service is a six inch line from Frankford Ave. There is no fire pump and no noted problems with the fire protection system.

There are no recommended corrections for the plumbing, HVAC or fire protection systems in this building.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by PECO Energy Company from a utility-owned pad-mount transformer located at the northeast corner of the site at the intersection of Braddock and E. Schiller Streets. Underground service is routed to a Square D 800A, 208/120V, 3 phase, 4 wire Main Distribution Panelboard (MDP) with 800A main circuit breaker that is located in a separate room off the Boiler Room. The MDP was installed in 2001 and serves the chiller, mechanical equipment and flush mounted panelboards located in the corridors and kitchen.

Receptacles—Classrooms are provided with an adequate number of receptacles. All receptacles located within six (6) feet of a sink are ground-fault circuit interrupting type, as required by code.

Lighting-- Fixtures in classrooms are typically (4) rows of (6) stem mounted, 4 foot wraparound fluorescent fixtures with two T8 lamps and acrylic prismatic lenses. Classroom lighting is controlled by two light switches. Corridors are provided with recessed 1x4, fluorescent grid troffers with (2) T8 lamps, and pendant fluorescent fixtures with parabolic louver at the three (3) skylights.

The Multi-Purpose Room has a combination of 2x4 fluorescent grid troffers and recessed incandescent downlights with A-lamps. The (15) downlights should be retrofitted with LED lamps to increase lamp life and improve energy efficiency.

The kitchen has 2x4, 4 lamp fluorescent grid troffers; restrooms are illuminated with 1x4, 2 lamp fluorescent flanged troffers. Mechanical and electrical rooms have 4 foot industrial fluorescent with (2) T8 lamps.

Surface mounted HPS fixtures are mounted to the canopy at the main entrance.

Fire Alarm System-- The fire alarm system is by Simplex, and consists of manual pull stations and audible and visual notification appliances that meet ADA requirements. Notification appliances are provided in all classroom and toilet rooms. The fire alarm control panel (FACP) is a Model 4005, located in the Main Office. There is a remote annunciator panel at the main entrance. The fire alarm system is expected to have a remaining useful life of 8 to 10 years.

Telephone/LAN-- The telephone service demarcation point is located in the Main IT Room that is located across the corridor from the Main Office. A telephone and data outlet is provided in each classroom. Wireless access points are provided in the classrooms and

Multi-Purpose Room for Wi-Fi service throughout the school.

Intercom/Paging Systems-- An Aiphone audible intercom system is provided between the main and entrance and the Main Office. The paging system is accessed through the telephone system. There are ceiling recessed speakers in corridors. This system is estimated to have 15 years of useful life remaining.

Clock and Program System-- There is a clock/speaker assembly in each classroom for the program system. The Simplex Time Control Center is located in the Main Office.

Television System-- There are no televisions outlets in the classrooms. Most of the classrooms have smart boards.

Video Surveillance and Security Systems-- There are Interior video surveillance cameras that provide coverage of corridors, entrances and Multi-Purpose Room. Exterior cameras are located at the exit discharges on the north and west sides of the building. Surveillance cameras are monitored in the Main Office. Exterior doors do not have magnetic door contacts. Motion sensors are located in the corridors to monitor ingress/egress.

Emergency Power System--There is no standby generator that serves this building.

Emergency Lighting System / Exit Lighting-- Emergency egress lighting is provided by battery powered, wall mounted emergency lighting units (ELU) in corridors, classrooms, kitchen, Multi-Purpose Room and Main Office. Remote emergency lighting heads are provided in the restrooms and at exit discharges. The Boiler Room and Chiller Rooms are not provided with emergency lighting units.

Exit signs are provided with battery backup.

Lightning Protection System --There is no lightning protection system for this facility.

Conveying Systems-- The building does not have an elevator.

GROUNDS

Site Lighting-- Site lighting is provided with wall mounted 150 watt high pressure sodium (HPS) lighting fixtures with wire guards around the perimeter of the building.

RECOMMENDATIONS

- Brick point and tuck
- Provide emergency lighting units in the Boiler Room and Chiller Room.

Attributes:

General Attributes:			
Active:	Open	Bldg ID:	B559002
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S559001		

Condition Summary

The Table below shows the CI and FCI for each major building system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
A10 - Foundations	86.00 %	0.00 %	$0.00
B10 - Superstructure	86.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	78.34 %	0.57 %	$6,457.90
B30 - Roofing	30.00 %	0.00 %	$0.00
C10 - Interior Construction	78.75 %	0.00 %	$0.00
C30 - Interior Finishes	47.48 %	0.00 %	$0.00
D20 - Plumbing	57.44 %	0.00 %	$0.00
D30 - HVAC	45.58 %	0.00 %	$0.00
D40 - Fire Protection	60.00 %	0.00 %	$0.00
D50 - Electrical	54.23 %	0.33 %	$4,783.76
E10 - Equipment	60.00 %	0.00 %	$0.00
E20 - Furnishings	65.00 %	0.00 %	$0.00
Totals:	**62.70 %**	**0.08 %**	**$11,241.66**

Condition Detail

This section of the report contains results of the Facility Condition Assessment. The building is separated into system components based on UNIFORMAT II classification. The columns in the System Listing table below represent the following:

1. System Code: A code that identifies the system.
2. System Description: A brief description of a system present in the building.
3. Unit Price $: The unit price of the system.
4. UoM: The unit of measure for of the system.
5. Qty: The quantity for the system
6. Life: anticipated service life for thesystem based on Building Owners and Managers Association (BOMA) recommendations.
7. Year Installed: The date of system installation.
8. Calc Next Renewal Year: The date of system expiration based on the life, NR stands for non renewable.
9. Next Renewal Year: The suggested system expiration date by the assessor based on visual inspection.
10. CI: The Condition Index of the system.
11. FCI: The Facility Condition Index of the system.
12. RSL: Remaining Service Life.
13. eCR: eCOMET Condition Rating (not used).
14. Deficiency $: The financial investment to repair/replace system.

System Listing

The System Listing table below lists each of the systems organized by their UNIFORMAT II classification. The assessment team was tasked with recording the most recent replacement year of each system, determining the remaining service life based on the theoretical life, and evaluating the condition to confirm the forecast next replacement year. The system listing is the basis for all data contained in the Building Assessment Report.

Additionally, a condition rating (eCR) based on the following guidelines is provided as observed at the time of the assessment.

- Excellent (E) - No noticeable distress or damage. The entire system is free from observable defect.
- Very Good (VG) - Overall no serviceability reduction for the entire system. No degradation of critical components and minor distress and defect noticeable for some but not non critical components within the system.
- Good (G) - Slight or no serviceability reduction for the entire system. There may be noticeable defects for some non critical components and slight noticeable degradation of the critical components.
- Fair (F) - Overall serviceability is degraded but adequate. There may be moderate deterioration for very few of the critical components and few of the non critical components may have severe degradation.
- Marginal (MA) - Overall serviceability and reliability loss. Most if not all of the non critical components suffer from severe degradation and a few of the critical component may have severe degradation.
- Moderate (MO) - Overall a significant serviceability loss. Most if not all the components have severe degradation with the reminder of the component showing visible distress.
- Very Poor (VP) - Overall the system is barely functional. All of the components are severely degraded.
- Non-Functional (NF) - Overall the system does not function with all the components having no serviceability and suffer from severe degradation.

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$24.32	S.F.	24,380	100	2001	2101		86.00 %	0.00 %	86			$592,922
A1030	Slab on Grade	$15.51	S.F.	24,380	100	2001	2101		86.00 %	0.00 %	86			$378,134
B1010	Floor Construction	$92.20	S.F.	24,380	100	2001	2101		86.00 %	0.00 %	86			$2,247,836
B1020	Roof Construction	$24.11	S.F.	24,380	100	2001	2101		86.00 %	0.00 %	86			$587,802
B2010	Exterior Walls	$31.22	S.F.	24,380	100	2001	2101		86.00 %	0.85 %	86		$6,457.90	$761,144
B2020	Exterior Windows	$13.63	S.F.	24,380	40	2001	2041		65.00 %	0.00 %	26			$332,299
B2030	Exterior Doors	$1.67	S.F.	24,380	25	2001	2026		44.00 %	0.00 %	11			$40,715
B3010140	Shingle & Tile	$38.73	S.F.	25,000	20	2001	2021		30.00 %	0.00 %	6			$968,250
B3020	Roof Openings	$0.68	S.F.	24,380	20	2001	2021		30.00 %	0.00 %	6			$16,578
C1010	Partitions	$14.93	S.F.	24,380	100	2001	2101		86.00 %	0.00 %	86			$363,993
C1020	Interior Doors	$3.76	S.F.	24,380	40	2001	2041		65.00 %	0.00 %	26			$91,669
C1030	Fittings	$4.12	S.F.	24,380	40	2001	2041		65.00 %	0.00 %	26			$100,446
C3010230	Paint & Covering	$13.21	S.F.	24,380	10	2010	2020		50.00 %	0.00 %	5			$322,060
C3020411	Carpet	$7.30	S.F.	3,000	10	2012	2022		70.00 %	0.00 %	7			$21,900
C3020412	Terrazzo & Tile	$75.52	S.F.	2,000	50	2001	2051		72.00 %	0.00 %	36			$151,040
C3020413	Vinyl Flooring	$9.68	S.F.	19,380	20	2001	2021		30.00 %	0.00 %	6			$187,598
C3020415	Concrete Floor Finishes	$0.97	S.F.	2,000	50	2001	2051		72.00 %	0.00 %	36			$1,940
C3030	Ceiling Finishes	$20.97	S.F.	24,380	25	2001	2026		44.00 %	0.00 %	11			$511,249
D2010	Plumbing Fixtures	$31.58	S.F.	24,380	35	2001	2036		60.00 %	0.00 %	21			$769,920
D2020	Domestic Water Distribution	$2.90	S.F.	24,380	25	2001	2026		44.00 %	0.00 %	11			$70,702
D2030	Sanitary Waste	$2.90	S.F.	24,380	25	2001	2026		44.00 %	0.00 %	11			$70,702
D2040	Rain Water Drainage	$3.29	S.F.	5,000	30	2001	2031		53.33 %	0.00 %	16			$16,450
D3020	Heat Generating Systems	$18.67	S.F.	24,380	35	2001	2036		60.00 %	0.00 %	21			$455,175
D3030	Cooling Generating Systems	$24.48	S.F.	24,380	30	2001	2031		53.33 %	0.00 %	16			$596,822
D3040	Distribution Systems	$42.99	S.F.	24,380	25	2001	2026		44.00 %	0.00 %	11			$1,048,096
D3050	Terminal & Package Units	$11.60	S.F.	24,380	20	2001	2021		30.00 %	0.00 %	6			$282,808
D3060	Controls & Instrumentation	$13.50	S.F.	24,380	20	2001	2021		30.00 %	0.00 %	6			$329,130
D4010	Sprinklers	$8.02	S.F.	24,380	35	2001	2036		60.00 %	0.00 %	21			$195,528
D4020	Standpipes	$0.99	S.F.		35				0.00 %	0.00 %				$0
D5010	Electrical Service/Distribution	$9.70	S.F.	24,380	30	2001	2031		53.33 %	0.00 %	16			$236,486
D5020	Lighting and Branch Wiring	$34.68	S.F.	24,380	20	2001	2021	2025	50.00 %	0.00 %	10			$845,498
D5030	Communications and Security	$12.99	S.F.	24,380	15	2001	2016	2025	66.67 %	0.00 %	10			$316,696
D5090	Other Electrical Systems	$1.41	S.F.	24,380	20	2001	2021	2025	50.00 %	13.92 %	10		$4,783.76	$34,376
E1020	Institutional Equipment	$4.82	S.F.	24,380	35	2001	2036		60.00 %	0.00 %	21			$117,512
E1090	Other Equipment	$11.10	S.F.	24,380	35	2001	2036		60.00 %	0.00 %	21			$270,618
E2010	Fixed Furnishings	$2.13	S.F.	24,380	40	2001	2041		65.00 %	0.00 %	26			$51,929
								Total	**62.70 %**	**0.08 %**			**$11,241.66**	**$13,386,023**

System Notes

The facility description in the site executive summary contains an overview of each system. The notes listed below provide additional information on select systems found within the facility.

System: C3010 - Wall Finishes — This system contains no images

Note: Painted CMU Finish 100%

System: C3020 - Floor Finishes — This system contains no images

Note: Carpet 12%
Tile 8%
Vinyl 72%
Concrete 8%

System: D5010 - Electrical Service/Distribution — This system contains no images

Note: There are no secondary transformers.

Renewal Schedule

eCOMET forecasts future Capital Renewal funding needed to address expiring systems based on the Next Renewal year found in the Cost Models. A 3% annual inflation factor is applied to the costs for systems expiring in future years. The table below reflects recommended Capital Renewal funding needs over the next 10 years. Note: Cells with a zero value indicate systems for which renewal is not scheduled in that year.

Inflation Rate: 3%

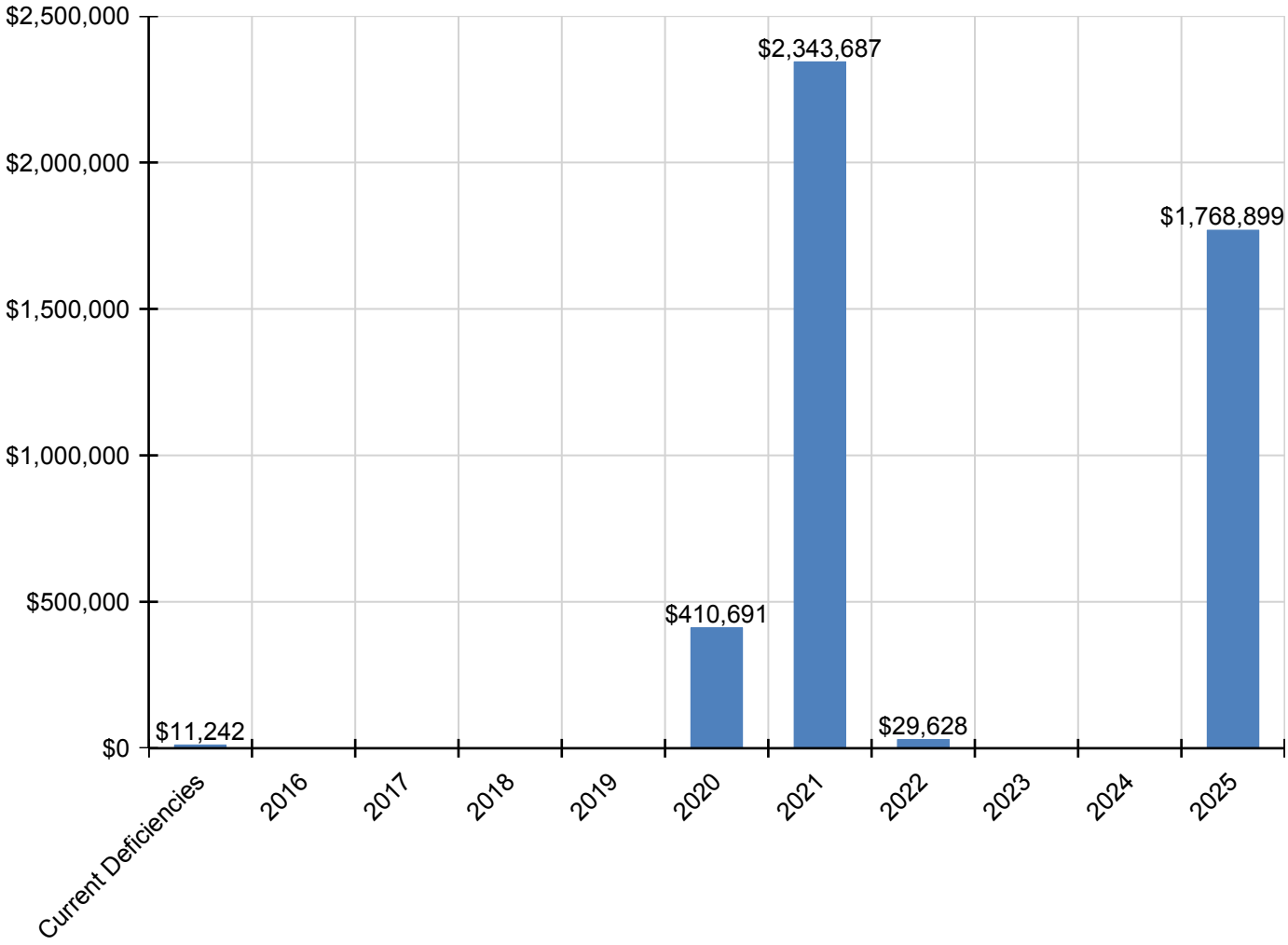
System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$11,242**	**$0**	**$0**	**$0**	**$0**	**$410,691**	**$2,343,687**	**$29,628**	**$0**	**$0**	**$1,768,899**	**$4,564,147**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A10 - Foundations**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$6,458	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$6,458**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$1,271,755	$0	$0	$0	$0	**$1,271,755**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$21,775	$0	$0	$0	$0	**$21,775**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1020 - Interior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$410,691	$0	$0	$0	$0	$0	**$410,691**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$29,628	$0	$0	$0	**$29,628**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$246,402	$0	$0	$0	$0	**$246,402**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$371,457	$0	$0	$0	$0	**$371,457**
D3060 - Controls & Instrumentation	$0	$0	$0	$0	$0	$0	$432,298	$0	$0	$0	$0	**$432,298**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5020 - Lighting and Branch Wiring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,249,907	**$1,249,907**
D5030 - Communications and Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$468,175	**$468,175**
D5090 - Other Electrical Systems	$4,784	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,818	**$55,601**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

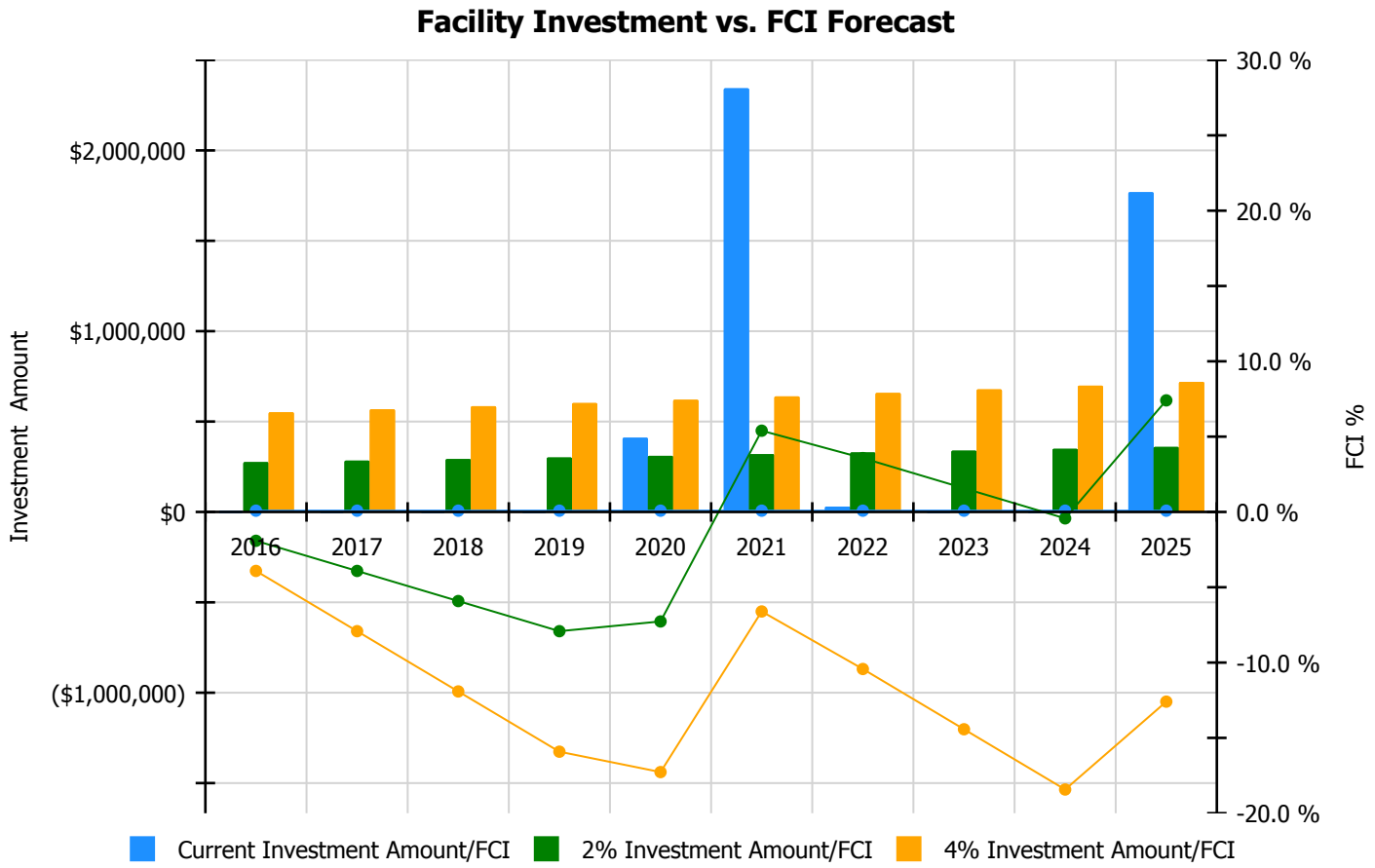
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

The chart below illustrates the effect of various investment levels on the building FCI for the next 10 years. The levels of investment shown below include:

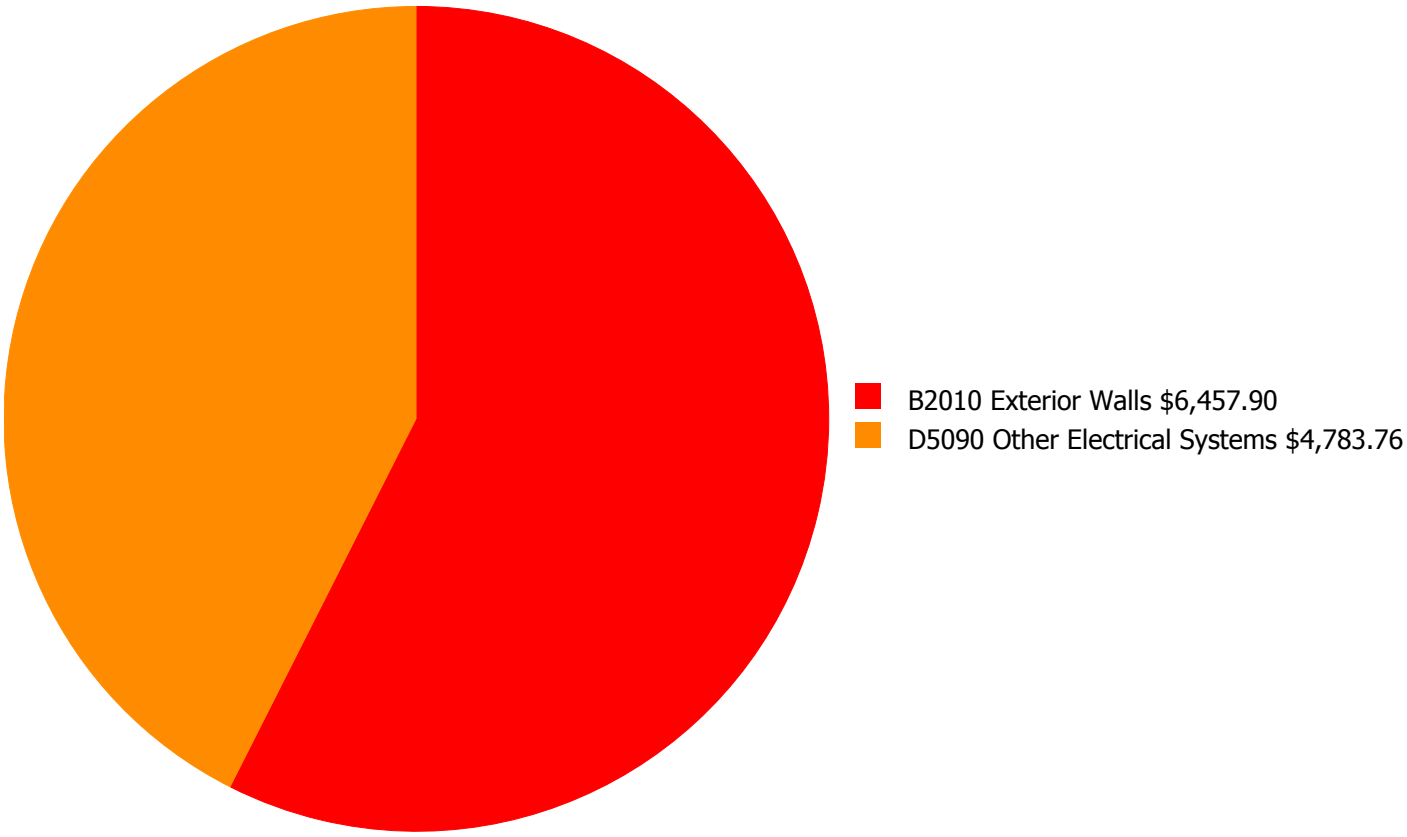
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value of the building, escalated for inflation



Year	Investment Amount Current FCI - 0.08%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$275,752.00	-1.92 %	$551,504.00	-3.92 %
2017	$0	$284,025.00	-3.92 %	$568,049.00	-7.92 %
2018	$0	$292,545.00	-5.92 %	$585,091.00	-11.92 %
2019	$0	$301,322.00	-7.92 %	$602,643.00	-15.92 %
2020	$410,691	$310,361.00	-7.27 %	$620,723.00	-17.27 %
2021	$2,343,687	$319,672.00	5.39 %	$639,344.00	-6.61 %
2022	$29,628	$329,262.00	3.57 %	$658,525.00	-10.43 %
2023	$0	$339,140.00	1.57 %	$678,281.00	-14.43 %
2024	$0	$349,314.00	-0.43 %	$698,629.00	-18.43 %
2025	$1,768,899	$359,794.00	7.41 %	$719,588.00	-12.59 %
Total:	**$4,552,905**	**$3,161,187.00**		**$6,322,377.00**	

Deficiency Summary by System

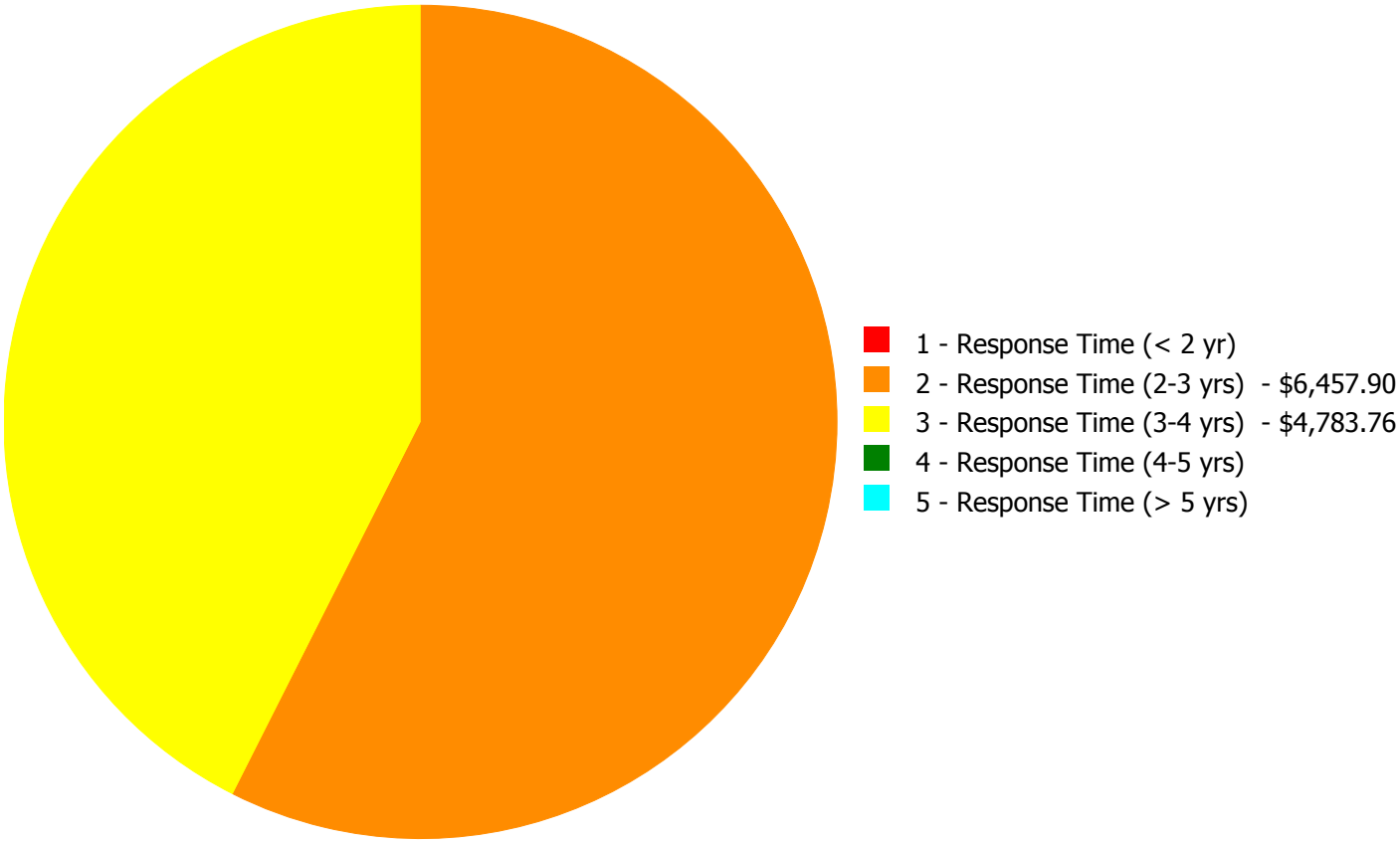
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart lists all current deficiencies associated with this facility.



Budget Estimate Total: $11,241.66

Deficiency Summary by Priority

The following chart shows the total repair costs broken down by priority. Assessors assigned deficiencies within eCOMET to one of the following priority categories:



Budget Estimate Total: $11,241.66

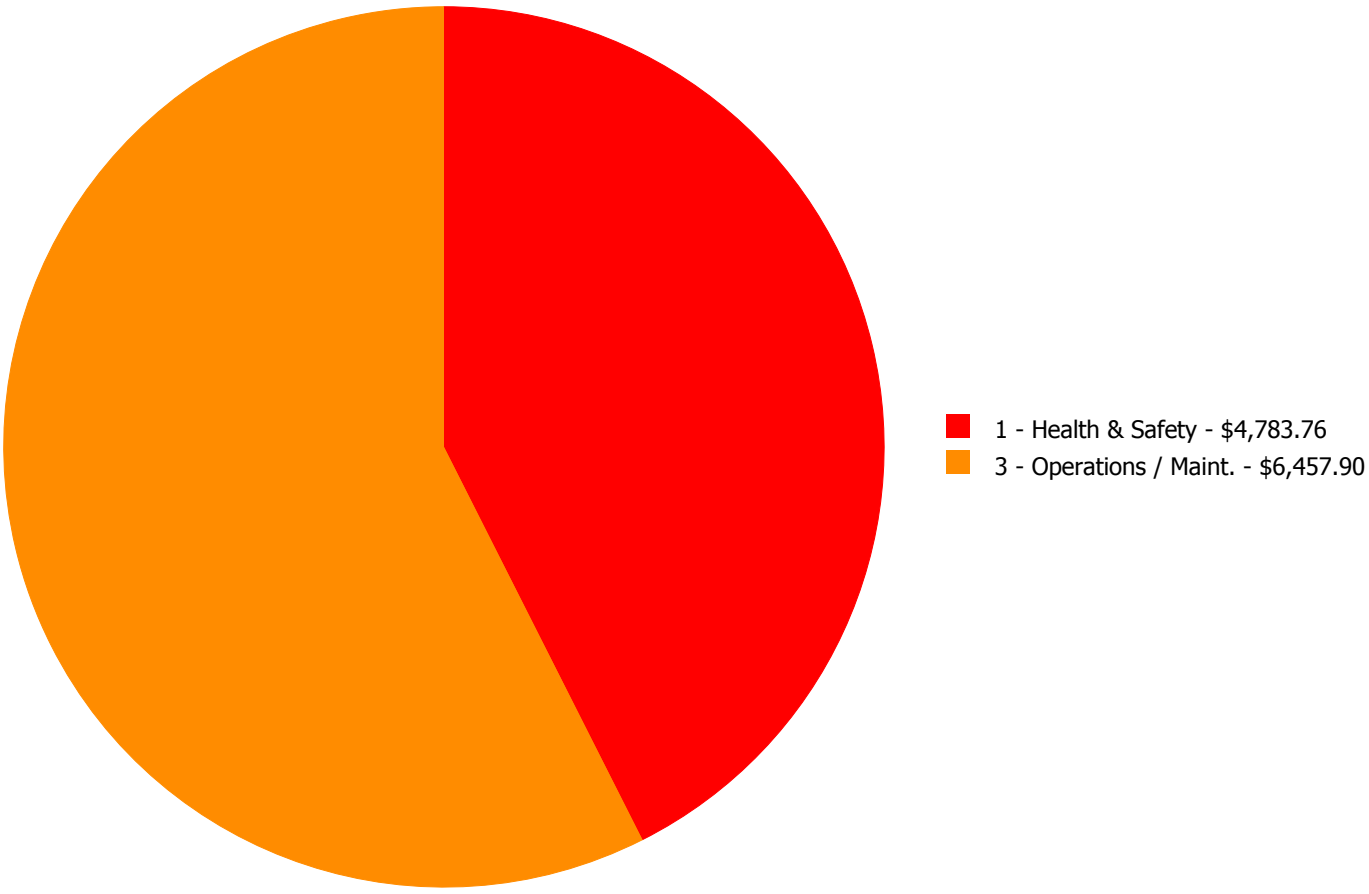
Deficiency By Priority Investment Table

The table below shows the current investment cost grouped by deficiency priority and building system.

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2010	Exterior Walls	$0.00	$6,457.90	$0.00	$0.00	$0.00	$6,457.90
D5090	Other Electrical Systems	$0.00	$0.00	$4,783.76	$0.00	$0.00	$4,783.76
	Total:	$0.00	$6,457.90	$4,783.76	$0.00	$0.00	$11,241.66

Deficiency Summary by Category

The following chart shows the total repair costs broken down by deficiency categories. Assessors assigned deficiencies to one of the following categories:



Budget Estimate Total: $11,241.66

Deficiency Details by Priority

The deficiency detail notes listed below provide additional information on identified deficiencies found within the facility.

Priority 2 - Response Time (2-3 yrs):

System: B2010 - Exterior Walls

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 2 - Response Time (2-3 yrs)

Correction: Repair cracks in masonry - replace missing mortar and repoint - SF of wall area

Qty: 200.00

Unit of Measure: S.F.

Estimate: $6,457.90

Assessor Name: Craig Anding

Date Created: 12/29/2015

Notes: The exterior brick surfaces are generally in very good condition for their age. However, the southern wall facing the playground area currently has an issue. The bricks have cracked or spalled and should be replaced. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

Priority 3 - Response Time (3-4 yrs):

System: D5090 - Other Electrical Systems

Location: Boiler and Chiller Rooms

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 3 - Response Time (3-4 yrs)

Correction: Add Emergency/Exit Lighting

Qty: 3.00

Unit of Measure: Ea.

Estimate: $4,783.76

Assessor Name: Craig Anding

Date Created: 12/17/2015

Notes: Provide emergency lighting units in the Boiler Room and Chiller Room.

Equipment Inventory

The following table represents the inventory details of the inventory found in the building, which fall under the following subsystems:

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 1168 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	mechanical room	hb smith	19a	snfa2001285		35	2001	2036	$44,903.40	$98,787.48
D3030 Cooling Generating Systems	Chiller, reciprocating, air cooled, standard controls, 80 ton	1.00	Ea.	exterior grade	york				30	2001	2031	$90,207.10	$99,227.81
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 800 A	1.00	Ea.	Electrical Room in Mechanical Room	Square D	I-Line	Cat. No. HCW86TSD		30	2001	2031	$21,766.05	$23,942.66
												Total:	**$221,957.95**

Executive Summary

Building condition is evaluated based on the functional systems and elements of a building and organized according to the UNIFORMAT II Elemental Classification. The grouping of these systems and elements and applying a current replacement value to them develops a representative building cost model. Cost Models are developed for similar building types and functions. Systems and their elements are evaluated based on their current replacement values, life cycles, installation dates and next renewal dates. Systems and their elements that are within their useful lives are further evaluated to identify current deficient conditions that may have a significant impact on a system's or element's remaining service life, and to determine if they are beyond their predicted expected life. The system's or element's current replacement value is based on RS Means Commercial Cost Data.

Following are the cost model's system details for this facility. The Replacement Value is the amount needed to replace the property of the same present value. The Current Repair Amount, also known as Condition Needs, represents the budgeted contractor installed costs plus owner's soft costs for the repair, replacement or renewal for a component or system level deficiency. It excludes contributing costs for other components or systems that might also be associated with the corrective actions due to packaging the work. Facility Condition Index (FCI) FCI is an industry-standard measurement of facility condition calculated as the ratio of the costs to correct a facility's deficiencies to the facility's Current Replacement Value. It ranges from 0% (new) to 100% (very poor). Condition Index (CI) is calculated as the sum of a renewable system's Remaining Service Life (RSL) divided by the sum of a system's Replacement Value (both values exclude soft-cost to simplify calculation updates) expressed as a percentage ranging from 100% (new) to 0% (expired).

Function:	
Gross Area (SF):	77,709
Year Built:	1968
Last Renovation:	
Replacement Value:	$1,404,726
Repair Cost:	$201,134.04
Total FCI:	14.32 %
Total RSLI:	0.00 %

Description:

Attributes:

General Attributes:

Bldg ID:	S559001	Site ID:	S559001

Condition Summary

The Table below shows the CI and FCI for each major building system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
G20 - Site Improvements	0.00 %	16.88 %	$183,357.12
G40 - Site Electrical Utilities	0.00 %	5.59 %	$17,776.92
Totals:	**0.00 %**	**14.32 %**	**$201,134.04**

Condition Detail

This section of the report contains results of the Facility Condition Assessment. The building is separated into system components based on UNIFORMAT II classification. The columns in the System Listing table below represent the following:

1. System Code: A code that identifies the system.
2. System Description: A brief description of a system present in the building.
3. Unit Price $: The unit price of the system.
4. UoM: The unit of measure for of the system.
5. Qty: The quantity for the system
6. Life: anticipated service life for thesystem based on Building Owners and Managers Association (BOMA) recommendations.
7. Year Installed: The date of system installation.
8. Calc Next Renewal Year: The date of system expiration based on the life, NR stands for non renewable.
9. Next Renewal Year: The suggested system expiration date by the assessor based on visual inspection.
10. CI: The Condition Index of the system.
11. FCI: The Facility Condition Index of the system.
12. RSL: Remaining Service Life.
13. eCR: eCOMET Condition Rating (not used).
14. Deficiency $: The financial investment to repair/replace system.

System Listing

The System Listing table below lists each of the systems organized by their UNIFORMAT II classification. The assessment team was tasked with recording the most recent replacement year of each system, determining the remaining service life based on the theoretical life, and evaluating the condition to confirm the forecast next replacement year. The system listing is the basis for all data contained in the Building Assessment Report.

Additionally, a condition rating (eCR) based on the following guidelines is provided as observed at the time of the assessment.

- Excellent (E) - No noticeable distress or damage. The entire system is free from observable defect.
- Very Good (VG) - Overall no serviceability reduction for the entire system. No degradation of critical components and minor distress and defect noticeable for some but not non critical components within the system.
- Good (G) - Slight or no serviceability reduction for the entire system. There may be noticeable defects for some non critical components and slight noticeable degradation of the critical components.
- Fair (F) - Overall serviceability is degraded but adequate. There may be moderate deterioration for very few of the critical components and few of the non critical components may have severe degradation.
- Marginal (MA) - Overall serviceability and reliability loss. Most if not all of the non critical components suffer from severe degradation and a few of the critical component may have severe degradation.
- Moderate (MO) - Overall a significant serviceability loss. Most if not all the components have severe degradation with the reminder of the component showing visible distress.
- Very Poor (VP) - Overall the system is barely functional. All of the components are severely degraded.
- Non-Functional (NF) - Overall the system does not function with all the components having no serviceability and suffer from severe degradation.

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2020	Parking Lots	$7.65	S.F.	24,292	0	1968		2027	0.00 %	3.26 %	12		$6,060.24	$185,834
G2030	Pedestrian Paving	$11.52	S.F.	48,871	0	1968		2027	0.00 %	3.83 %	12		$21,574.28	$562,994
G2040	Site Development	$4.38	S.F.	73,163	0	1968		2027	0.00 %	48.59 %	12		$155,722.60	$320,454
G2050	Landscaping & Irrigation	$3.78	S.F.	4,546	0	1968		2027	0.00 %	0.00 %	12			$17,184
G4020	Site Lighting	$3.58	S.F.	73,163	0	1968		2030	0.00 %	0.00 %	15			$261,924
G4030	Site Communications & Security	$0.77	S.F.	73,163	0	1968		2030	0.00 %	31.56 %	15		$17,776.92	$56,336
								Total	**0.00 %**	**14.32 %**			**$201,134.04**	**$1,404,726**

System Notes

The facility description in the site executive summary contains an overview of each system. The notes listed below provide additional information on select systems found within the facility.

No data found for this asset

Renewal Schedule

eCOMET forecasts future Capital Renewal funding needed to address expiring systems based on the Next Renewal year found in the Cost Models. A 3% annual inflation factor is applied to the costs for systems expiring in future years. The table below reflects recommended Capital Renewal funding needs over the next 10 years. Note: Cells with a zero value indicate systems for which renewal is not scheduled in that year.

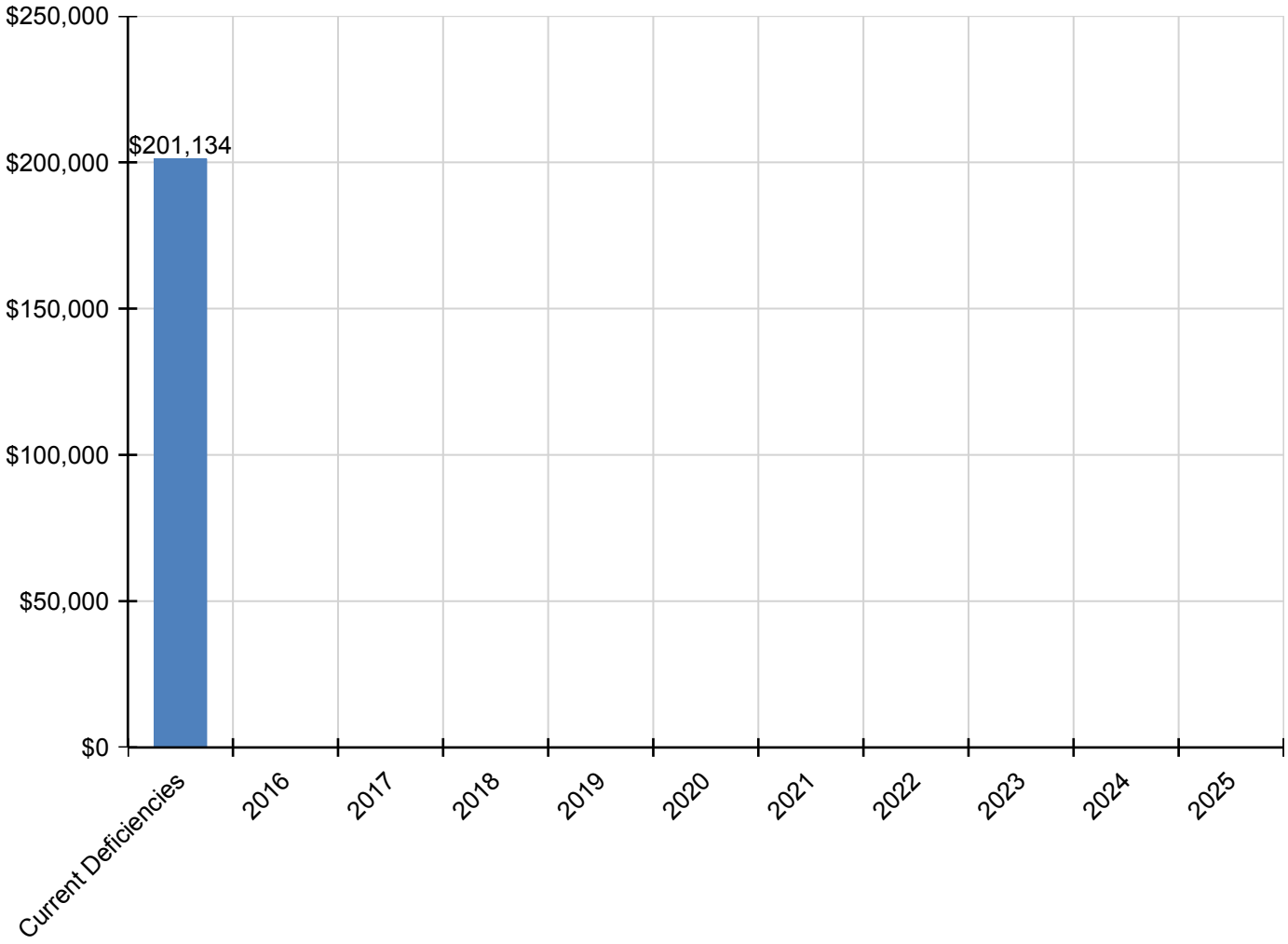
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$201,134**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$201,134**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$6,060	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$6,060**
G2030 - Pedestrian Paving	$21,574	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$21,574**
G2040 - Site Development	$155,723	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$155,723**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$17,777	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$17,777**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

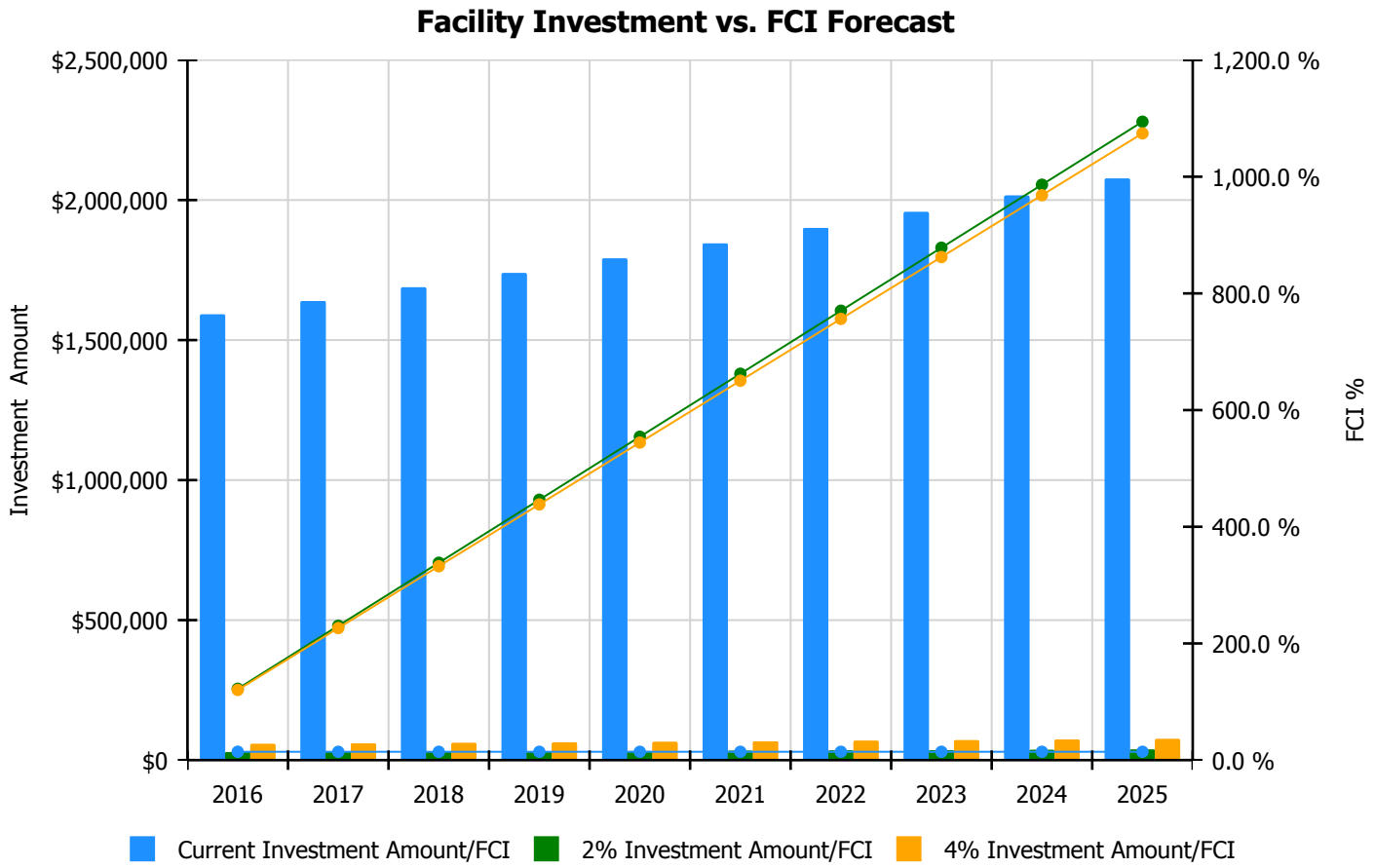
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

The chart below illustrates the effect of various investment levels on the building FCI for the next 10 years. The levels of investment shown below include:

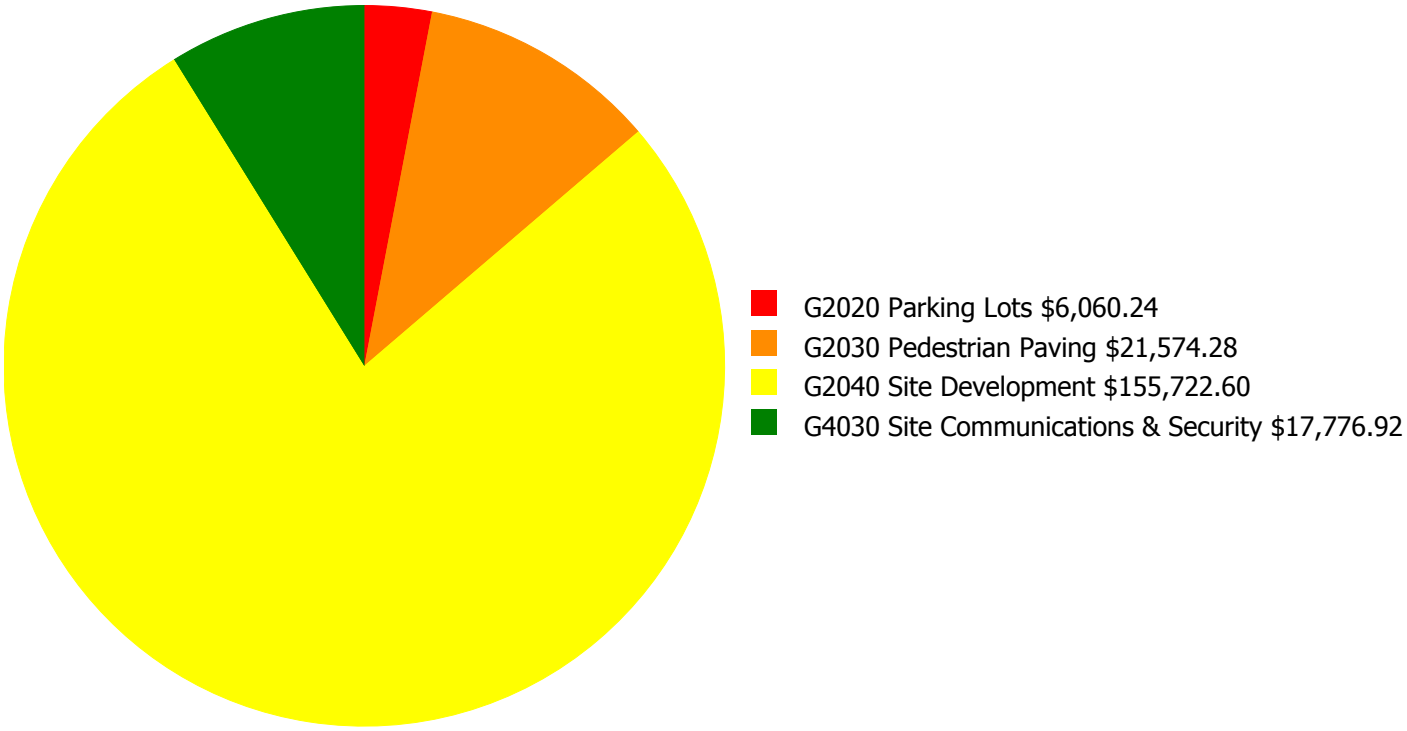
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value of the building, escalated for inflation



Year	Investment Amount Current FCI - 14.32%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$1,591,552	$28,937.00	122.32 %	$57,875.00	120.32 %
2017	$1,639,298	$29,805.00	230.32 %	$59,611.00	226.32 %
2018	$1,688,477	$30,700.00	338.32 %	$61,399.00	332.32 %
2019	$1,739,132	$31,621.00	446.32 %	$63,241.00	438.32 %
2020	$1,791,306	$32,569.00	554.32 %	$65,138.00	544.32 %
2021	$1,845,045	$33,546.00	662.32 %	$67,093.00	650.32 %
2022	$1,900,396	$34,553.00	770.32 %	$69,105.00	756.32 %
2023	$1,957,408	$35,589.00	878.32 %	$71,179.00	862.32 %
2024	$2,016,130	$36,657.00	986.32 %	$73,314.00	968.32 %
2025	$2,076,614	$37,757.00	1,094.32 %	$75,513.00	1,074.32 %
Total:	**$18,245,359**	**$331,734.00**		**$663,468.00**	

Deficiency Summary by System

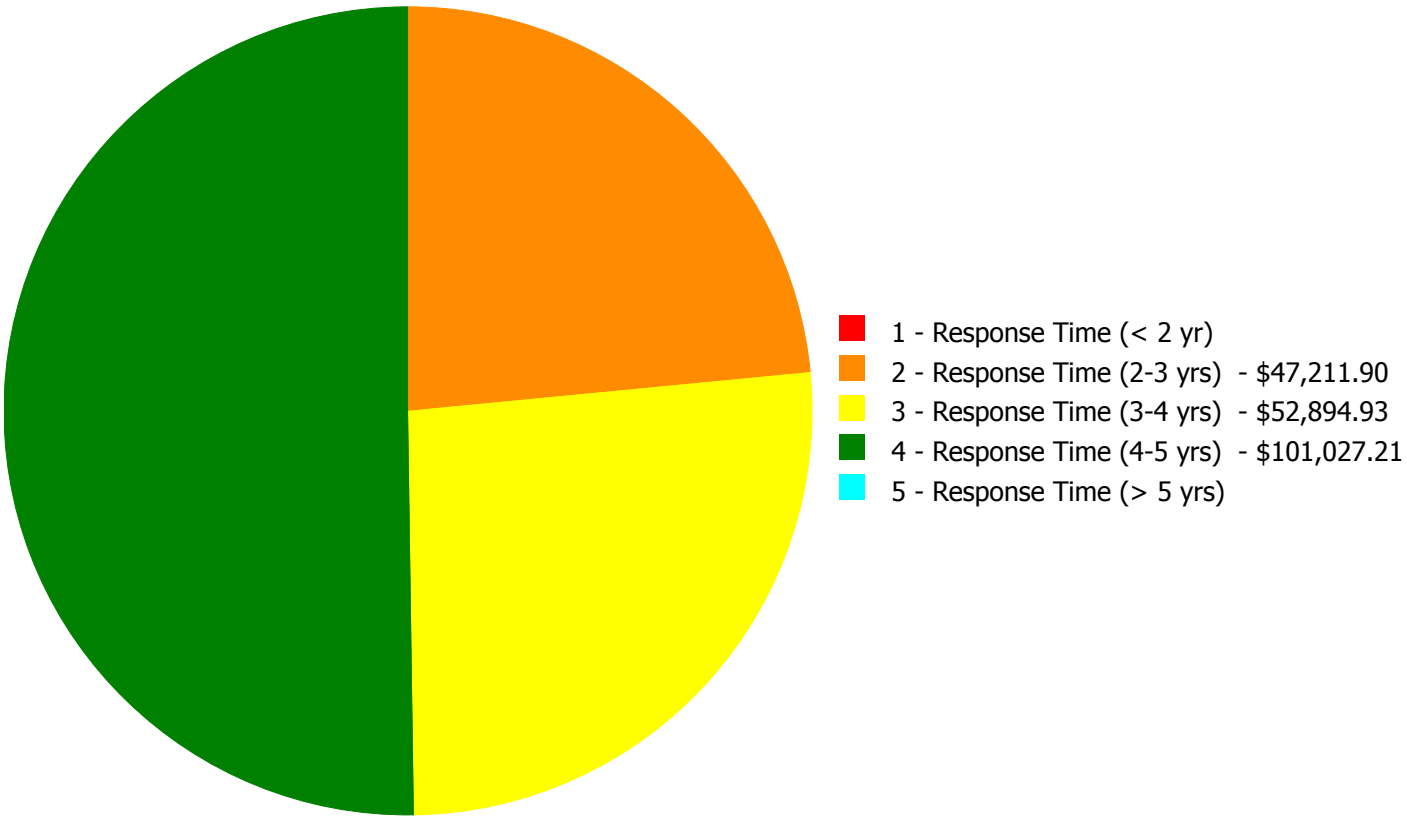
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart lists all current deficiencies associated with this facility.



Budget Estimate Total: $201,134.04

Deficiency Summary by Priority

The following chart shows the total repair costs broken down by priority. Assessors assigned deficiencies within eCOMET to one of the following priority categories:



Budget Estimate Total: $201,134.04

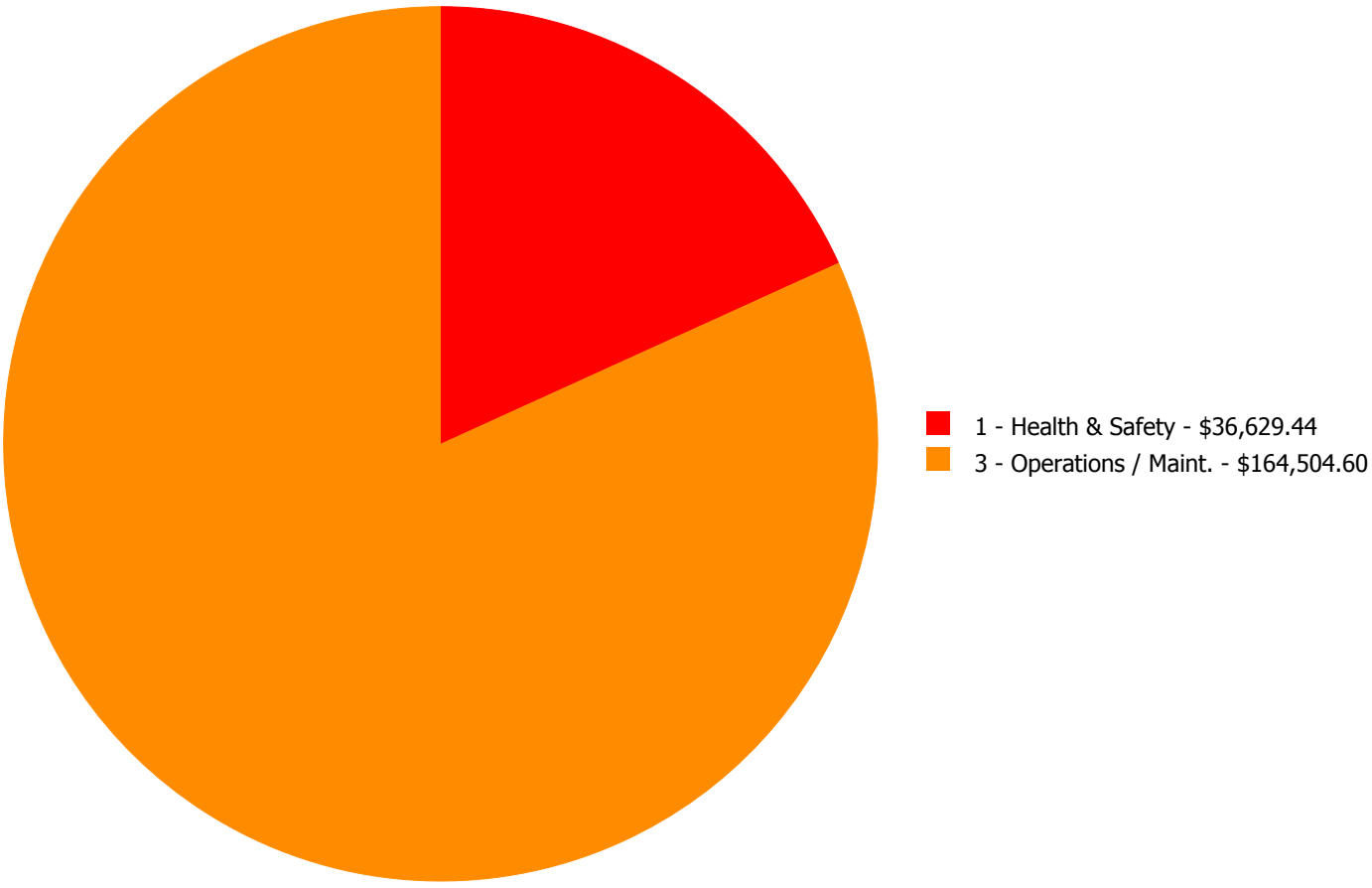
Deficiency By Priority Investment Table

The table below shows the current investment cost grouped by deficiency priority and building system.

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2020	Parking Lots	$0.00	$0.00	$6,060.24	$0.00	$0.00	$6,060.24
G2030	Pedestrian Paving	$0.00	$0.00	$21,574.28	$0.00	$0.00	$21,574.28
G2040	Site Development	$0.00	$47,211.90	$7,483.49	$101,027.21	$0.00	$155,722.60
G4030	Site Communications & Security	$0.00	$0.00	$17,776.92	$0.00	$0.00	$17,776.92
	Total:	$0.00	$47,211.90	$52,894.93	$101,027.21	$0.00	$201,134.04

Deficiency Summary by Category

The following chart shows the total repair costs broken down by deficiency categories. Assessors assigned deficiencies to one of the following categories:



Budget Estimate Total: $201,134.04

Deficiency Details by Priority

The deficiency detail notes listed below provide additional information on identified deficiencies found within the facility.

Priority 2 - Response Time (2-3 yrs):

System: G2040 - Site Development

Location: Site
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Repair exterior brick retaining wall - per LF of wall - up to 4' tall
Qty: 55.00
Unit of Measure: L.F.
Estimate: $28,359.38
Assessor Name: Hayden Collins
Date Created: 12/29/2015

Notes: The picket fence mounted exterior brick wall on the southwestern exterior is enclosed as a small playground area. This wall is damaged and several areas of brick are lose or have been removed. This presents a safety issue as the wall is breaking down while students have to use this entrance. This deficiency provides a budgetary consideration for the repair of the wall.

System: G2040 - Site Development

Location: Site
Distress: Health Hazard / Risk
Category: 1 - Health & Safety
Priority: 2 - Response Time (2-3 yrs)
Correction: Build secure trash dumpster enclosure
Qty: 1.00
Unit of Measure: Ea.
Estimate: $18,852.52
Assessor Name: Hayden Collins
Date Created: 12/29/2015

Notes: The trash dumpster is located near the southeastern fence open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area are recommended.

Priority 3 - Response Time (3-4 yrs):

System: G2020 - Parking Lots

Location: Parking Log

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Fill cracks in AC paving - by the LF - average size and depth of crack

Qty: 600.00

Unit of Measure: L.F.

Estimate: $6,060.24

Assessor Name: Hayden Collins

Date Created: 12/29/2015

Notes: The parking lot was resurfaced in recent years and overall is in good condition. However, there are sections that are showing signs of the harsh environment associated with snow removal. Before this issue takes hold of the finish it is recommended that new crack sealant be applied to ensure that the finish does not break down.

System: G2030 - Pedestrian Paving

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Remove and replace concrete sidewalk or concrete paving - 4" concrete thickness

Qty: 1,500.00

Unit of Measure: S.F.

Estimate: $21,574.28

Assessor Name: Hayden Collins

Date Created: 12/29/2015

Notes: Most of the sidewalk system is original to the buildings construction. As indicated in the photos several sections were replaced in 2001. However, there are a several areas of cracking concrete but no tripping hazards. The sidewalk system is expected to expire in the near future. Removal of the entire system is recommended. Universal upgrades are required and should include all aspects of current ADA legislation.

System: G2040 - Site Development

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Add safety barriers and guide lines at parking and loading dock areas

Qty: 1.00

Unit of Measure: Ea.

Estimate: $7,483.49

Assessor Name: Hayden Collins

Date Created: 12/29/2015

Notes: The loading dock is located just off the parking area between the dumpsters and the access point for students entering the school. The existing recommendation to enclose and move the dumpsters to a new location is related to this effort. After the dumpster correction is complete it is recommended that the loading dock area be clearly marked and safety barriers be placed to protect pedestrian traffic and mitigate possible issues related to loading and unloading materials and supplies.

System: G4030 - Site Communications & Security

Location: Parking lot and play area

Distress: Security Issue

Category: 1 - Health & Safety

Priority: 3 - Response Time (3-4 yrs)

Correction: Add Video Surveillance System

Qty: 2.00

Unit of Measure: Ea.

Estimate: $17,776.92

Assessor Name: Hayden Collins

Date Created: 12/17/2015

Notes: Provide two (2) additional exterior video surveillance cameras, one to provide coverage for the parking lot on the south side and one on the east side for increased coverage of the paved play area.

Priority 4 - Response Time (4-5 yrs):

System: G2040 - Site Development

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Remove and replace metal picket fence - input number of gates

Qty: 600.00

Unit of Measure: L.F.

Estimate: $101,027.21

Assessor Name: Hayden Collins

Date Created: 12/29/2015

Notes: This school has a perimeter fence surrounding the parking / playground area. The fence has several areas of repairs and the mounting post are damaged in several areas, overall the fence is in fair condition. This fence system is recommended to be removed and replaced with a new system within the next few years.

Equipment Inventory

The following table represents the inventory details of the inventory found in the building, which fall under the following subsystems:

No data found for this asset

Glossary

ABMA	American Boiler Manufacturers Association http://www.abma.com/
ACEEE	American Council for an Energy-Efficient Economy
ACGIH	American Council of Governmental and Industrial Hygienists
AEE	Association of Energy Engineers
AFD	Adjustable Frequency Drive
AFTC	After Tax Cash Flow
AGA	American Gas Association
AHU	Air Handling Unit
Amp	Ampere
ANSI	American National Standards Institute
ARI	Air Conditioning and Refrigeration Institute
ASD	Adjustable Speed Drive
ASHRAE	American Society of Heating Refrigerating and Air-Conditioning Engineers Inc.
ASME	American Society of Mechanical Engineers
Assessment	Visual survey of a facility to determine its condition. It involves looking at the age of systems reviewing information from local sources and visual evidence of potential problems to assign a condition rating. It does not include destructive testing of materials or testing of systems or equipment for functionality.
ATS	After Tax Savings
AW	Annual worth
BACNET	Building Automation Control Network
BAS	Building Automation System
BCR	Benefit Cost Ratio
BEP	Business Energy Professional (AEE)
BF	Ballast Factor
BHP	Boiler Horsepower (boilers)
BHP	Brake Horsepower (motors)
BLCC	Building Life Cycle Cost analysis program (FEMP)
BOCA	Building Officials and Code Administrators
BTCF	Before Tax Cash Flow

BTS	Before Tax Savings
Btu	British thermal unit
Building Addition	An area space or component of a building added to a building after the original building's year built date.
CAA	Clean Air Act
CAAA-90	Clean Air Act Amendments of 1990
CABO	Council of American Building Officials
CAC	Conventional Air Conditioning
CADDET	Center for the Analysis and Dissemination of Demonstrated Energy Technologies
Calculated Next Renewal	The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system.
Capital Renewal	Capital renewal is condition work (excluding suitability and energy audit work) that includes the replacement of building systems or elements (as they become obsolete or beyond their useful life) not normally included in an annual operating budget. Calculated next renewal The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system. Next renewal The assessor adjusted expected useful life of a system or element based on on-site inspection.
CDD	Cooling Degree Days
CDGP	Certified Distributed Generation Professional
CEC	California Energy Commission
CEM	Certified Energy Manager
CEP	Certified Energy Procurement Professional
CFC	Chlorofluorocarbon
CFD	Cash Flow Diagram
CFL	Compact Fluorescent Light
CFM cfm	Cubic Feet per Minute
CHP	Combined Heat and Power (a.k.a. cogeneration)
CHW	Chilled Water
Condition	Condition refers to the state of physical fitness or readiness of a facility system or system element for its intended use.
COP	Coefficient of Performance
Cp	Heat Capacity of Material
CPUC	California Public Utility Commission
CRI	Color Rendering Index
CRT	Cathode Ray Tube VDT HMI

CTC	Competitive Transition Charge
Cu	Coefficient of Utilization
Current Replacement Value (CRV)	CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition (excluding auxiliary facilities) under current codes and construction standards.
Cv	Value Coefficient
CWS	Chilled Water System
D d	Distance (usually feet)
DB	Dry Bulb
DCV	Demand Control Ventilation
DD	Degree Day
DDB	Double Declining Balance
DDC	Direct Digital Controls
Deferred maintenance	Deferred maintenance is condition work (excluding suitability and energy audit needs) deferred on a planned or unplanned basis to a future budget cycle or postponed until funds are available.
Deficiency	A deficiency is a repair item that is damaged missing inadequate or insufficient for an intended purpose.
Delta	Difference
Delta P	Pressure Difference
Delta T	Temperature Difference
DG	Distributed Generation
DOE	Department of Energy
DP	Dew Point
DR	Demand Response
DX	Direct Expansion Air Conditioner
EA	Energy Audit
EBITDA	Earnings before Interest Taxes Depreciation and Amortization
ECI	Energy Cost Index
ECM	Energy Conservation Measure
ECO	Energy Conservation Opportunity
ECPA	Energy Conservation and Production Act
ECR	Energy Conservation Recommendation
ECS	Energy Control System

EER	Energy Efficiency Ratio
EERE	Energy Efficiency and Renewable Energy division of US DOE
EIA	Energy Information Agency
EIS	Energy Information System
EMCS	Energy Management Computer System
EMO	Energy Management Opportunity
EMP	Energy Management Project
EMR	Energy Management Recommendation
EMS	Energy Management System
Energy Utilization Index (EUI)	EUI is the measure of total energy consumed in the cooling or heating of a building in a period expressed as British thermal unit (BTU) per (cooled or heated) gross square foot.
EO	Executive Order
EPA	Environmental Protection Agency
EPACT	Energy Policy Act of 1992
EPCA	Energy Production and Conservation Act of 1975
EPRI	Electric Power Research Institute
EREN	Efficiency and Renewable Energy (Division of USDOE)
ERV	Energy Recovery Ventilator
ESCO	Energy Service Company
ESPC	Energy Savings Performance Contract
EUI	Energy Use Index
EWG	Exempt Wholesale Generators
Extended Facility Condition Index (EFCI)	EFCI is calculated as the condition needs for the current year plus facility system renewal needs going out to a set time in the future divided by Current Replacement Value.
f	Frequency
F	Fahrenheit
Facility	A facility refers to site(s) building(s) or building addition(s) or combinations thereof that provide a particular service.
Facility Condition Assessment (FCA)	FCA is a process for evaluating the condition of buildings and facilities for programming and budgetary purposes through an on site inspection and evaluation process.
Facility Condition Index (FCI)	FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value of the facilities. The higher the FCI the poorer the condition of a facility. After an FCI is established for all buildings within a portfolio a building's condition can be ranked relative to other buildings. The FCI may also represent the condition of a portfolio based on the cumulative FCIs of the portfolio's facilities.

FC	Footcandle
FCA	Fuel Cost Adjustment
FEMIA	Federal Energy Management Improvement Act of 1988
FEMP	Federal Energy Management Program
FERC	Federal Energy Regulatory Commission
FESR	Fuel Energy Savings Ratio
FLA	Full Load Amps
FLF	Facility Load Factor (usually monthly)
FLRPM	Full Load Revolutions per Minute
FMS	Facility Management System
FPM fpm	Feet per Minute (velocity)
FSEC	Florida Solar Energy Center
Ft	Foot
GPM gpm	Gallons per Minute
GRI	Gas Research Institute
Gross Square Feet (GSF)	The size of the enclosed floor space of a building in square feet measured to the outside face of the enclosing wall.
GUI	Graphical User Interface
H h	Enthalpy Btu/lb
HCFC	Hydrochlorofluorocarbons
HDD	Heating Degree days
HFC	Hydrofluorocarbons
HHV	Higher Heating Value
HID	High Intensity Discharge (lamp)
HMI	Human Machine Interface
HMMI	Human Man Machine Interface
HO	High Output (lamp)
HP Hp hp	Horsepower
HPS	High Pressure Sodium (lamp)
HR	Humidity Ratio
Hr hr	Hour

HRU	Heat Recovery Unit
HVAC	Heating Ventilation and Air-Conditioning
Hz	Hertz
I	Intensity (lumen output of lamp)
I i	Interest rate or Discount rate
IAQ	Indoor Air Quality
ICA	International Cogeneration Alliance
ICBO	International Conference of Buildings Officials
ICC	International Code Council
ICP	Institutional Conservation Program
IECC	International Energy Conservation Code
IEEE	Institute of Electrical and Electronic Engineers
IESNA	Illuminating Engineering Society of North America
Install year	The year a building or system was built or the most recent major renovation date (where a minimum of 70 of the system?s Current Replacement Value (CRV) was replaced).
IRP	Integrated Resource Planning
IRR	Internal Rate of Return
ISO	Independent System Operator
ITA	Independent Tariff Administrator
k	Kilo multiple of thousands in SI system
K	Kelvins (color temperature of lamp)
K k	Thermal Conductivity of Material
KVA	Kilovolt Ampere
KVAR	Kilovolt Ampere Reactive
kW	kiloWatt
kWh	kiloWatt hour
L	Length (usually feet)
LCC	Life Cycle Costing
LDC	Local Distribution Company
LEED	Leadership in Energy and Environmental Design
LEED EB	LEED for Existing Buildings

LEED NC	LEED for new construction
LF	Load Factor
LHV	Lower Heating Value
Life cycle	The period of time that a building or site system or element can be expected to adequately serve its intended function.
LPS	Low Pressure Sodium (lamp)
Lu	Lumen Output of a Lamp or Fixture
M	Mega multiple of millions in SI system
M&V	Measurement and Verification
MACRS	Modified Accelerated Cost Recovery System
MARR	Minimum Attractive Rate of Return
Mbtu	Thousand Btu
MCF	Thousand Cubic Feet (usually of gas)
MEC	Model Energy Code
Mm	Multiple of Thousands in I/P System
MMBtu	Million Btu
MMCS	Maintenance Management Computer System
MMI	Man Machine Interface
MMS	Maintenance Management System
MSE 2000	Management System for Energy 2000 (ANSI Georgia Tech Univ)
MW	MegaWatt
MWH MWh	MegaWatt hour
NAAQS	National Ambient Air Quality Standards
NAESCO	National Association of Energy Service Companies
NAIMA	North American Insulation Manufacturers Association
NEA	National Energy Act of 1978
NECPA	National Energy Conservation Policy Act
NEMA	National Electrical Manufacturer's Association
NERC	North American Electric Reliability Council
Next Renewal	The Next Renewal date is an override of the 'Calculated Next Renewal' date and is based upon the assessor?s visual inspection.

NFPA	National Fire Protection Association
NGPA	National Gas Policy Act of 1978
NLRPM	No Load Revolutions per Minute (speed)
Nn	Equipment or Project lifetime in economic analysis
NOPR	Notice of Proposed Rule Making from FERC
NOx	Nitrogen Oxide Compounds
NPV	Net present value in economic analysis
NREL	National Renewable Energy Laboratory
NUG	Non-Utility Generator
O&M	Operation and Maintenance
OA	Outside Air
ODP	Ozone Depletion Potential
OPAC	Off-Peak Air Conditioning
P	Present value in economic analysis
PBR	Performance Based Rates
PEA	Preliminary Energy Audit
PF	Power Factor
PID	Proportional plus integral plus derivative (control system)
PM	Portfolio Manager in Energy Star rating system
PM	Preventive Maintenance
PoolCo	Power Pool Company or Organization
POU	Point of Use
PQ	Power Quality
PSC	Public Service Commission
PSIA psia	Pounds per square inch absolute (pressure)
PSIG psig	Pounds per square inch gauge (pressure)
PUC	Public Utility Commission
PUHCA	Public Utilities Holding Company Act of 1935
PURPA	Public Utilities Regulatory Policies of 1978
PV	Photovotaic system

PV	Present Value
PW	Present Worth
PX	Power Exchange
q	Rate of heat flow in Btu per hour
Q	Heat load due to conduction using degree days
QF	Qualifying Facility
R	Electrical resistance
R	Thermal Resistance
RC	Remote controller
RCR	Room Cavity Ratio
RCRA	Resource Conservation and Recovery Act
Remaining Service Life (RSL)	RSL is the number of years service remaining for a system or equipment item. It is automatically calculated based on the difference between the current year and the 'Calculated Next Renewal' date or the 'Next Renewal' date whichever one is the later date.
Remaining Service Life Index (RSLI)	RSLI is defined as a percentage ratio of the remaining service life of a system. It usually ranges from 0 to 100
REMR	Repair Evaluation Maintenance Rehabilitation (REMR) is a scale used to objectively rank systems based on their condition
Renewal Schedule	A timeline that provides the items that need repair the year in which the repair is needed and the estimated price of the renewal.
RH	Relative Humidity
RLA	Running Load Amps
RMS	Root Mean Square
RO	Reverse Osmosis
ROI	Return on Investment
RPM	Revolutions Per Minute
RTG	Regional Transmission Group
RTO	Regional Transmission Organization
RTP	Real Time Pricing
SBCCI	Southern Building Code Congress International
SC	Scheduling Coordinator
SC	Shading Coefficient
SCADA	Supervisory Control and Data Acquisition Systems

SEER	Seasonal Energy Efficiency Ratio
SHR	Sensible Heat Ratio
Site	The grounds and utilities roadways landscaping fencing and other typical land improvements needed to support the facility.
Soft Cost	An expense item that is not considered direct construction cost. Soft cost includes architectural engineering financing legal fees and other pre-and-post construction expenses.
SOx	Sulfur Oxide Compounds
SP	Static Pressure
SP SPB	Simple Payback
SPP	Simple Payback Period
SPP	Small Power Producers
STR	Stack Temperature Rise
SV	Specific Volume
System	System refers to building and related site work elements as described by ASTM Uniformat II Classification for Building Elements (E1557-97) a format for classifying major facility elements common to most buildings. Elements usually perform a given function regardless of the design specification construction method or materials used. See also Uniformat II.
T	Temperature
T	Tubular (lamps)
TAA	Technical Assistance Audit
TCP/IP	Transmission Control Protocol/Internet Protocol
TES	Thermal Energy Storage
THD	Total Harmonic Distortion
TOD	Time of Day
TOU	Time of Use
TQM	Total Quality Management
TransCo	Transmission Company
U	Thermal Conductance
UDC	Utility Distribution Company
UL	Underwriters Laboratories
UNIFORMAT II	The ASTM UNIFORMAT II Classification for Building Elements (E1557-97) a format for classifying major facility components common to most buildings.
USGBC	US Green Building Council
v	Specific Volume

V	Volts Voltage
V	Volume
VAV	Variable Air Volume
VDT	Video Display Terminal
VFD	Variable Frequency Drive
VHO	Very High Output
VSD	Variable Speed Drive
W	Watts
W	Width
WB	Wet bulb
WH Wh	Watt Hours
Year built	The year that a building or addition was originally built based on substantial completion or occupancy.
Z	Electrical Impedance