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.

Cleveland School

Governance	CHARTER	Report Type	Elementarymiddle
Address	3701 N. 19Th St. Philadelphia, Pa 19140	Enrollment	766
		Grade Range	'00-08'
Phone/Fax	215-227-5042 / N/A	Admissions Category	Neighborhood
Website	Www.Masterycharter.Org/Schools/Elementary-Schools/Grover-Cleveland-Elementary/	Turnaround Model	Renaissance Charter

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	**51.40%**	**$21,131,026**	**$41,109,600**
Building	51.75 %	$20,799,488	$40,192,807
Grounds	36.16 %	$331,538	$916,793

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	89.59 %	$677,640	$756,400
Exterior Walls (Shows condition of the structural condition of the exterior facade)	26.72 %	$807,237	$3,020,751
Windows (Shows functionality of exterior windows)	86.15 %	$1,269,829	$1,473,956
Exterior Doors (Shows condition of exterior doors)	122.79 %	$145,717	$118,669
Interior Doors (Classroom doors)	132.86 %	$381,647	$287,262
Interior Walls (Paint and Finishes)	10.45 %	$135,478	$1,296,362
Plumbing Fixtures	00.00 %	$0	$1,106,490
Boilers	42.92 %	$655,797	$1,527,971
Chillers/Cooling Towers	65.60 %	$1,314,310	$2,003,468
Radiators/Unit Ventilators/HVAC	131.02 %	$4,609,577	$3,518,345
Heating/Cooling Controls	158.90 %	$1,755,659	$1,104,854
Electrical Service and Distribution	116.51 %	$924,954	$793,858
Lighting	37.36 %	$1,060,231	$2,838,246
Communications and Security (Cameras, Pa System and Fire Alarm)	12.24 %	$130,085	$1,063,115

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

S426001;Cleveland

Final

Site Assessment Report

February 1, 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):	81,841
Year Built:	1908
Last Renovation:	
Replacement Value:	$41,109,600
Repair Cost:	$21,131,025.68
Total FCI:	51.40 %
Total RSLI:	66.66 %

Description:

Facility Assessment
September 2015

School District of Philadelphia
Mastery Charter School Grover Cleveland Elementary

3735 N 19th St.
Philadelphia, PA 19140

81,841 SF / 835 Students / LN 04

The Mastery Charter School Grover Cleveland Elementary is a historic school building identified as B426001 and was originally constructed in 1908 as the Grover Cleveland Elementary School. This facility is located in the Upper North Philadelphia Nicetown-Tioga neighborhood at 3701 N 19th St., Philadelphia, PA. The design of the E-shaped, concrete and steel-framed building includes, Gothic Revival style brick facades with a concrete foundation, detailing, and ornamental molding. Although not listed in the National Register of Historic Places this school was designed by Irwin T. Catharine and the addition was built in the mid 1960's.

The main entrance faces the western exterior on North Nineteenth Street. This School serves students in grades K-8. This school was originally constructed in 1908 and consist of a Basement level and three additional stories with a total gross square footage of 81,841 GSF.

This school has several classrooms, cafeteria and student commons and auditorium, with supporting administrative spaces.

The information for this report was collected during a site visit on September 18, 2015.

Mr. Andrew Berry, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history. Ms. Charmaine Collins, Assistant Principal, Director of Operations, also participated in the interview and shared information about the school with the assessment team.

ARCHITECTURAL / STRUCTURAL SYSTEMS

Foundations are concrete and appear to be in good condition. Basement walls are concrete and appear to be in good condition.

The exterior brick surfaces are generally in fair to fair to poor condition for their age. In some locations, bricks have cracked or spalled and should be replaced. The repointing of deteriorated mortar joints is 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. Considering moisture is penetrating the masonry façade the application of sealant is also recommended. This effort is expected to be completed as part of an exterior universal upgrade and should be coordinated with other exterior recommended deficiencies in order not to duplicate work.

Most of the exterior windows have been upgraded from the original 1908 applications. A majority of the window system is estimated to have been installed in the 1990's. Several of the windows no longer work and will require attention prior to an overall effort. The windows facing the addition are currently leaking creating interior damage to the wall and floor finishes. Overall, the windows are in fair to poor condition based on the year of installation or last renovation. The entire exterior window system is recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features. This effort is expected to be completed as part of an exterior universal upgrade and should be coordinated with other exterior recommended deficiencies in order not to duplicate work.

The exterior doors are metal applications with metal frames. The exterior door system for this school is a very high traffic system. The doors are in fair condition but are aging at a faster rate than expected based on traffic and condition. The exterior door system and service doors are recommended for upgrade. The new doors are expected to retain their dimensions and profiles, but that incorporate updated energy-efficient features. This effort is expected to be completed as part of an exterior universal upgrade and should be coordinated with other exterior recommended deficiencies in order not to duplicate work.

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. Included in this report are modification that allow for considerations to enhance the upgrades required to support the physically challenged.

There are several transom lites and sidelights constructed into hallway wall systems. It is recommended that the lites and sidelights be removed and replaced with a fire rated wall construction. The deficiency provides a budgetary consideration to correct the hallway, transoms, lites and sidelights.

The built up roof was installed within the past ten years as reported by the school. The roof is in fair condition with few exceptions. Repairs have been completed on the main section of the roof near the addition however, several areas are reported to have active leaks. This active leak that if not repaired soon will further deteriorate the insulation and the integrity of the classroom finishes. This deficiency provides a budgetary consideration for built up roof system, universal upgrades are recommended.

Interior partitions include CMU, glazed block, plaster on brick/wood/metal framing/block, gypsum wallboard on wood or metal studs, moveable partitions, and glazed openings.

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 wood frames with transom lites, sidelights, wired glass glazing. Other interior doors include wooden glass pane doors with original wooden pane frames, hollow metal in hollow metal frames at stairwells and exit ways. The standard interior doors are generally in poor condition considering the age of the application. Several doors no longer have glass panels due to damage and have not been repaired. Universal upgrades are required for the interior door systems it is recommended that the interior doors system be removed and replaced with a new modern metal framed hollow metal door system with consideration for ADA compliance.

There are two stair systems for this school, the primary or original 1908 and the addition. 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 for the original 1908 stair application should include comprehensive stair railing removal and replacement upgrades. The additions railing system will require less comprehensive upgrades. Both systems are budgeted for in this deficiency.

Fittings include: chalkboards; marker boards; tack boards; interior signage; metal lockers; toilet accessories and wood/metal/marble toilet partitions; fixed storage shelving. 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.

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.

The corridor doors were compliant during the time of the construction of the school in 1908. However a large portion of the interior corridor, exit stair doors are not code compliant. Several doors are typically metal in metal frames with transom lites or sidelights, glass glazing. The older doors are generally in fair to poor condition considering the age of the application. To restore the door finishes, universal upgrades are required for the older door applications. Remove and replace original corridor door systems with new code compliant fire rated door system.

There are painted walls, trim, and some painted ceilings in this building. In the older sections of the building, some brick surfaces have been painted. The newer section has a painted CMU finish. The interior finishes in the older sections are in fair to poor condition and will require an almost continuous program of renewal of the applied finishes to maintain an acceptable appearance. The finishes in the new section are in excellent to good 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 leaking 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 recommended exterior, mechanical and electrical work in order to prevent overlapping efforts.

The floor finish for this school is a combination of carpet in the administrative area, tile in the kitchen and service line areas, wooden classrooms with concrete hallways and stirs finishes. There are isolated areas and classrooms that contain a 9x9 vinyl tile finish. Suspected asbestos containing materials (ACM) are believed to be limited to the original vinyl floor tile and mastic. While currently sound and manageable in place, future renovation efforts should include provision to test and abate any and all ACM.

The wooden floor finish in the classrooms has served this school from the first day of school. The systems maintenance has been a priority each year as part of a cyclical program to either, sand, clean and resurface or wax as needed. Considering the age and current condition of the classroom wooden floor finish, removal and replacement is recommended.

The ceiling finish is a mix of 12 x 12 ceiling grid, painted and 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and is in fair condition considering the active leaks and the age of the application. The ceiling finish is expected to require upgrades to support the recommended efforts in this report. 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.

There is no elevator that services this school. Goods, services, and amenities offered in public buildings are generally required to be available to all persons. To assist those that may be physically challenged and to meet current accessibility legislation to provide wheelchair access to the upper floors of this facility, the installation of a new hydraulic elevator has been recommended on the exterior elevation of the building or at another suitable location. The new installation should blend as much as possible with the overall appearance of this historic structure and include all required ADA features, such as audible jewels and gongs, an accessible

control panel, etc.

Institutional equipment includes: library equipment; stage equipment; instrumental equipment; A/V equipment; and playground equipment. Other equipment includes kitchen equipment; loading dock bumpers/levelers.

Furnishings include: fixed casework; window shades/blinds; and fixed auditorium seating. The fixed seating for this school is from the original construction. The systems are in fair condition considering the age and usage. This project provides a budgetary consideration for universal upgrades for the fixed seating and furnishing of this school. Ensure that ADA requirements are followed with the new seating layout.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories, urinals and water closets. Most lavatories have dual wheel handle faucets and urinals and water closets have recessed manual lever flush valves. Cast iron service sinks are located in corridors. There are some stainless steel counter top sinks. There are single level stainless steel water coolers with integral refrigeration and china drinking fountains with no refrigeration. The kitchen waste is piped through an above floor grease trap. Domestic water is heated by a fifty gallon Bradford White electric water heater in the basement mechanical room with a small inline circulating pump installed in 2005.There are two end suction pumps for domestic water pressure control.

Water piping has been replaced in the older building area since the original installation with copper, but may contain lead solder based on age. Sanitary, waste, vent and rainwater piping is older hub and spigot cast iron, with some hubless cast iron where additions or damage has occurred. There is a newer four inch water service line with backflow preventer and meter from N. Gratz St. located in the basement mechanical room. A six inch gas service line is also from N. Gratz St. Plumbing fixtures and the water heater are newer and should remain in service twenty five and fifteen more years respectively. The supply piping should be replaced and the cast iron piping should be inspected for damage and repaired or replaced as required.

HVAC-The building is heated by a hot water system generated by two Peerless gas fired cast iron sectional boilers. The boilers appear to be older but installation date and capacity could not be determined. Boilers are natural draft, connected to a common field fabricated insulated vent system routed through an existing chimney to a roof cap.

Classrooms, cafeteria and some other areas have 1966 Nesbitt unit ventilators with hot water coil, outside air damper, filter, blower and motor, control valve and controls. Hot water radiation and fan coils are located at entrances and other areas requiring heat.

There is a heating and ventilating unit for the auditorium and one for the gymnasium that are inoperable, located in a single mechanical room. Each corridor has large interior grills for relief air from the unit ventilators. Four roof exhaust fans provide toilet exhaust.

There is no central air conditioning. The building has several window air conditioners, but not one for each classroom.

Heating water piping is insulated welded black steel. Two Armstrong 7 1/2 hp end suction pumps from 2015 located in the mechanical room circulate hot water. Expansion tanks, a chemical shot feeder and an air separator are part of the hot water system. Ductwork is uninsulated sheet metal since systems were heating only and condensation was not an issue.

There is a newer duplex control air compressor, and older pneumatic control components. There is no central control or building automation system.

The unit ventilators, boilers, hot water piping system, and two heating and ventilating units are beyond service life and should be replaced.

FIRE PROTECTION-There is no fire protection system in the building.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by PECO Energy Company from a utility-owned 500 kVA, 4.17 kV – 208/120V, 3 phase 4 wire pad-mounted transformer located on the west side of the connector bridge between the 1908 building and 1966 building. Secondary service enters the Main Electrical Room in the southwest corner of the 1908 building to Switchboard MDP, rated 2500A, 208/120V, 3 phase, 4 wire, manufactured by Eaton, and installed in 2013. Switchboard MDP feeds 1200A Panel A, which was the main distribution panelboard before the switchboard was installed. Panel A feeds 10 panelboards, which are located in the 1908 building, and 600A Distribution Panelboard DP-I located in the 1966 building. Panel A and eight (8) panelboards in the 1908 building have exceeded the

end of their useful life and need to be replaced. Distribution Panelboard DP-I and eight (8) panelboards in the 1966 building also need to be replaced due to their age.

Switchboard MDP does not have adequate capacity to serve added central air conditioning equipment, an elevator addition, and a fire pump (if required). Another 1200A, 208/120V, 3 phase, 4 wire service distribution switchboard with associated feeder circuit breakers and feeders would be required.

Receptacles-- Many of the classrooms do not have an adequate number of receptacles. It is recommended that an additional 5 or 6 duplex receptacles be provided in each classroom using a surface metal raceway system. Ground-fault circuit-interrupting (GFCI) type receptacles were observed in all locations where required by code.

Lighting-- The kitchen, cafeteria, restrooms and most classrooms of the 1908 building are provided stem mounted 1x4 modular fluorescent fixtures with acrylic prismatic lenses and T12 lamps. All of these fixtures have reached the end of their useful life. Lighting fixtures in 11 classrooms in the 1908 building have been upgraded with cable-suspended, direct/indirect fluorescent fixtures with T8 lamps. Lighting in the corridors in the 1908 building has been upgraded with 2x4 recessed, direct/indirect fluorescent grid fixtures with center basket shielding and T8 lamps. The fire tower in the 1908 building has surface mounted 4 foot fluorescent acrylic lensed fixtures with T12 lamps that need to be replaced.

Classrooms in the 1966 building are provided with surface mounted 1x4 modular fluorescent fixtures. There are 4x4 surface mounted modular fluorescent fixtures in corridors. Many of the fixtures show signs of age and some are damaged. Offices are illuminated with 2x4 modular fluorescent fixtures with acrylic prismatic lenses. All fluorescent fixtures in the 1966 building should be replaced due to their age and appearance. Classrooms in both buildings have only one light switch for controlling lighting.

Lighting fixtures in the auditorium are stem mounted, indirect "hockey puck" style fixtures with incandescent lamps. These fixtures are outdated, energy inefficient and have reached the end of their useful life. Replacement with pendant mounted, indirect, LED fixtures is recommended. The platform is illuminated with shallow dome fixtures with LED lamps and two rows of electrics for theatrical lighting. There are also (9) ceiling mounted, bullet-style incandescent spotlights that illuminate the platform. The spotlights should be replaced with LED spotlighting fixtures.

Stem mounted industrial style, metal halide fixtures are provided in the gymnasium. Fixtures appear to be nearing end of their useful life and should be replaced within the next three (3) years with LED fixtures.

Exterior lighting is provided by LED fixtures mounted above the main entrance and south egress doors and under the connector bridge to the 1908 building. Fixtures appear to have several years of useful life remaining.

Fire Alarm System-- The fire alarm system was replaced in 2013 with an addressable system that is maintained by Keystone Fire Protection Company. The fire alarm control panel (FACP) is a Notifier NFW2-100 by Honeywell that is located in the Main Electrical Room. A remote annunciator panel is located in the vestibule at the main entrance. The system consists of pull stations, smoke detectors, and audible and visual notification appliances. Notification appliances are provided in all classrooms, restrooms and multi-occupant rooms. The fire alarm system complies with current NFPA codes and ADA guidelines, and has a remaining useful life that extends beyond this report. No deficiencies were observed.

Telephone/LAN-- A data outlet and telephone is provided in each classroom. Wireless access points are located to provide Wi-Fi service throughout the school. The Main Distribution Frame and Telecommunications Room is located on the Second Floor in the 1966 building.

Public Address/Paging/Sound Systems-- The paging system is accessed through the telephone system. Wall mounted speakers are provided in classrooms, corridors, cafeteria, auditorium, gymnasium and throughout the building. The paging system is in good condition with an estimated remaining useful life of 16 years.

There is a portable sound system for the Auditorium. The main entrance has an Aiphone intercom station that communicates with the Main Office.

Clock and Program System-- There is a Simplex Time Control Center in the Main Office. Staff reports that the clock system is obsolete and not functioning. It is recommended all clocks be removed and a wireless GPS clock system with battery-operated clocks be provided to replace the system. Classrooms use the paging speakers for announcements and program system.

Video Surveillance and Security Systems-- Interior video surveillance cameras provide coverage of corridors, auditorium, gymnasium, cafeteria and stairwells. Exterior cameras are building mounted and provide coverage of the site, entrances and paved parking/play

areas. Staff reported that there are a total of 28 video surveillance cameras, of which 8 cameras are old and need to be replaced, and 20 cameras have been installed within the last 4 years. The Director of Operations has recently received a quote from a vendor to upgrade the 28 existing analog cameras to IP cameras and to add 4 IP cameras, which is recorded in this report as a deficiency.

Magnetic door contacts are provided on some doors.

Emergency Power System--There is an Onan 15 kW, 208/120V, 3 phase, 4 wire natural gas fueled standby generator in the Basement of the 1908 building. The generator serves only emergency lighting loads in the 1908 building from a 100A plug-in fuse panel via an Onan 70A automatic transfer switch (ATS). The generator and ATS were installed in 1977 and have exceeded their useful life. There is no standby generator that serves the 1966 building.

It is recommended that the standby generator and ATS serving the 1908 building be replaced with a larger generator sized to include serving emergency lighting loads in the 1966 building and an elevator addition.

Emergency Lighting System / Exit Lighting-- The standby generator serves emergency egress and exit lighting in the 1908 building only. Emergency egress and exit lighting in the 1966 building is provided by battery powered LED emergency lighting units (ELUs) and exit signs. Emergency lighting is provided in corridors, auditorium, cafeteria and gymnasium, but not in classrooms.

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

Conveying System--There is no existing elevator in this school.

GROUNDS

The parking play area has no assigned parking and limited markers for approved activity areas. No curb cuts for access to the sidewalks that lead to the ADA main entrance. The parking play lot is in fair condition, the harsh environmental conditions associated with snow removal have taken its toll on the asphalt surface. Also, there is no marked path of ingress to the main entrance. This project provides a budgetary consideration for a play, parking lot renewal program that includes all aspects of the current ADA legislation. Asphalt removal and replacement is recommended.

The existing sidewalk system is a mix of the original sidewalks installed during the construction of the school and sections that have been replaced over the years. There are a several areas of cracking concrete but no tripping hazards. Sections of the sidewalk system is expected to expire in the near future. Removal of the damaged sections is recommended. Upgrades are required and should include all aspects of current ADA legislation.

The trash dumpster is located in the parking lot open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area is necessary for the

The exterior stairs leading from the exit doors and from the emergency exit stairs are from the original construction. 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.

Site Lighting-- Site lighting for the south paved parking lot and play area on the east side of the school is provided from building mounted LED floodlighting fixtures. There are no pole mounted lighting fixtures in the parking lot and play areas. Fixtures are in good condition with several years of useful life remaining.

Site video surveillance-- there are approximately (8) cameras on the exterior of the building to provide video surveillance of building entrances, parking lot, play area and site. Cameras were reported by staff to have been installed within the last four years.

RECOMMENDATIONS

- Upgrade fixed seating in Auditorium
- Remove and replace ceiling finish
- Repair cracks in masonry - replace missing mortar and repoint
- Remove and replace exterior window application
- Remove and replace exterior doors

- Remove folding wood partitions; replace with metal studs and gypsum board painted
- Upgrade stair fire doors
- Upgrade interior door system
- Upgrade signage
- Upgrade tack boards
- Repair and Repaint interior wall finishes
- Vinyl floor tile removal and replacement
- Built up roof replacement
- Install new elevator
- Replace wood floors
- Remove and replace asphalt
- Remove and replace concrete pavers
- Upgrade exterior railing
- Create dumpster area
- 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 piping systems and building automation control system.
- Remove the existing window air conditioning units and install a 210 ton air-cooled chiller on the roof with chilled water distribution piping, two pumps, chemical treatment and controls located in a mechanical room on the basement level.
- Install complete NFPA wet pipe automatic sprinkler system and standpipes. If required provide fire pump and jockey pump with controller.
- Provide a new central station air handling unit for the gymnasium 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.
- Provide a new central station air handling unit for the auditorium 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 and building automation system with remote computer control capability and graphics package.
- Inspect old cast iron sanitary piping including camera observation and replace damaged sections.
- Replace domestic hot and cold water piping including valves, fittings, hangars and insulation.
- Replace older boilers with two new ninety five hp cast iron sectional gas fired hot water boilers.
- Replace 1200A Distribution Panelboard A, 600A Distribution Panelboard DP-I and (8) panelboards in the 1966 building, and (8) panelboards in the 1908 building that have reached the end of their useful life.
- Provide a 1200A, 208/120V, 3 phase, 4 wire underground service from the PECO pad-mounted utility transformer to a 1200A Switchboard to serve central air conditioning equipment, elevator and fire pump (if required).
- Provide surface metal raceway system with 6 to 8 duplex receptacles in each of 39 classrooms.
- Replace lighting system in kitchen, cafeteria, restrooms, boiler room, mechanical rooms in the 1908 building (approximately 8,420 SF).
- Replace lighting system in 14 classrooms in the 1908 building (approximately 13,620 SF).
- Replace lighting system in corridors, offices, restrooms, mechanical rooms in the 1966 building (approximately 6,700 SF).
- Replace lighting system in 15 classrooms in the 1966 building (approximately 12,385 SF).
- Replace stem mounted incandescent lighting fixtures in the auditorium and 9 spotlighting fixtures with LED fixtures.
- Replace 20 metal halide industrial fixtures in the gymnasium with LED fixtures.
- Replace all clocks with a wireless GPS clock system with battery operated clocks.
- Upgrade the 28 existing analog cameras to IP cameras and to add 4 IP cameras.
- Replace existing 15 kW standby generator, 70A automatic transfers switch and 100A plug-in fuse panel with equipment sized to serve all emergency egress and exit lighting, elevator addition, and fire pump, if required.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 3 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S426001		

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.

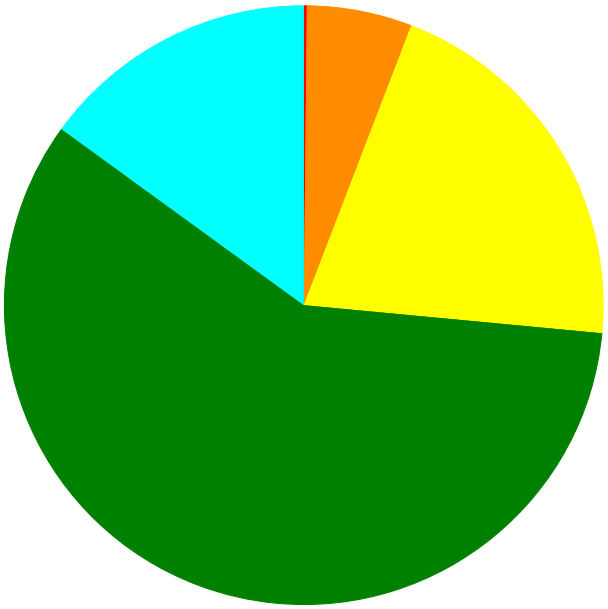
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	0.00 %	$0.00
B10 - Superstructure	37.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	37.44 %	48.18 %	$2,222,782.82
B30 - Roofing	60.00 %	89.59 %	$677,640.22
C10 - Interior Construction	35.11 %	28.51 %	$572,516.66
C20 - Stairs	37.00 %	16.19 %	$18,683.35
C30 - Interior Finishes	64.84 %	69.65 %	$3,167,450.75
D10 - Conveying	105.71 %	347.55 %	$1,012,601.25
D20 - Plumbing	75.30 %	45.61 %	$762,264.17
D30 - HVAC	102.56 %	91.56 %	$8,335,343.43
D40 - Fire Protection	105.71 %	177.49 %	$1,170,771.30
D50 - Electrical	109.31 %	51.94 %	$2,498,671.59
E10 - Equipment	34.29 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	206.95 %	$360,762.20
G20 - Site Improvements	35.70 %	49.24 %	$331,537.94
G40 - Site Electrical Utilities	71.67 %	0.00 %	$0.00
Totals:	**66.66 %**	**51.40 %**	**$21,131,025.68**

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)
B426001;Cleveland	81,841	51.75	$34,416.87	$1,180,395.10	$4,288,266.69	$12,127,019.72	$3,169,389.36
G426001;Grounds	41,900	36.16	$0.00	$18,852.52	$76,941.02	$235,744.40	$0.00
Total:		**51.40**	**$34,416.87**	**$1,199,247.62**	**$4,365,207.71**	**$12,362,764.12**	**$3,169,389.36**

Deficiencies By Priority



- 1 - Response Time (< 2 yr) - $34,416.87
- 2 - Response Time (2-3 yrs) - $1,199,247.62
- 3 - Response Time (3-4 yrs) - $4,365,207.71
- 4 - Response Time (4-5 yrs) - $12,362,764.12
- 5 - Response Time (> 5 yrs) - $3,169,389.36

Budget Estimate Total: $21,131,025.68

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):	81,841
Year Built:	1908
Last Renovation:	
Replacement Value:	$40,192,807
Repair Cost:	$20,799,487.74
Total FCI:	51.75 %
Total RSLI:	67.14 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B426001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S426001		

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	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	0.00 %	$0.00
B10 - Superstructure	37.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	37.44 %	48.18 %	$2,222,782.82
B30 - Roofing	60.00 %	89.59 %	$677,640.22
C10 - Interior Construction	35.11 %	28.51 %	$572,516.66
C20 - Stairs	37.00 %	16.19 %	$18,683.35
C30 - Interior Finishes	64.84 %	69.65 %	$3,167,450.75
D10 - Conveying	105.71 %	347.55 %	$1,012,601.25
D20 - Plumbing	75.30 %	45.61 %	$762,264.17
D30 - HVAC	102.56 %	91.56 %	$8,335,343.43
D40 - Fire Protection	105.71 %	177.49 %	$1,170,771.30
D50 - Electrical	109.31 %	51.94 %	$2,498,671.59
E10 - Equipment	34.29 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	206.95 %	$360,762.20
Totals:	**67.14 %**	**51.75 %**	**$20,799,487.74**

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	$18.40	S.F.	81,841	100	1908	2008	2052	37.00 %	0.00 %	37			$1,505,874
A1030	Slab on Grade	$7.73	S.F.	81,841	100	1908	2008	2052	37.00 %	0.00 %	37			$632,631
A2010	Basement Excavation	$6.55	S.F.	81,841	100	1908	2008	2052	37.00 %	0.00 %	37			$536,059
A2020	Basement Walls	$12.70	S.F.	81,841	100	1908	2008	2052	37.00 %	0.00 %	37			$1,039,381
B1010	Floor Construction	$75.10	S.F.	81,841	100	1908	2008	2052	37.00 %	0.00 %	37			$6,146,259
B1020	Roof Construction	$13.88	S.F.	20,000	100	1908	2008	2052	37.00 %	0.00 %	37			$277,600
B2010	Exterior Walls	$36.91	S.F.	81,841	100	1908	2008	2052	37.00 %	26.72 %	37		$807,236.80	$3,020,751
B2020	Exterior Windows	$18.01	S.F.	81,841	40	1990	2030		37.50 %	86.15 %	15		$1,269,828.89	$1,473,956
B2030	Exterior Doors	$1.45	S.F.	81,841	25	1990	2015	2027	48.00 %	122.79 %	12		$145,717.13	$118,669
B3010105	Built-Up	$37.76	S.F.	20,000	20	1985	2005	2027	60.00 %	89.73 %	12		$677,640.22	$755,200
B3020	Roof Openings	$0.06	S.F.	20,000	20	1985	2005	2027	60.00 %	0.00 %	12			$1,200
C1010	Partitions	$17.91	S.F.	81,841	100	1908	2008	2052	37.00 %	10.63 %	37		$155,851.18	$1,465,772
C1020	Interior Doors	$3.51	S.F.	81,841	40	1908	1948	2027	30.00 %	132.86 %	12		$381,646.97	$287,262
C1030	Fittings	$3.12	S.F.	81,841	40	1908	1948	2027	30.00 %	13.71 %	12		$35,018.51	$255,344
C2010	Stair Construction	$1.41	S.F.	81,841	100	1908	2008	2052	37.00 %	16.19 %	37		$18,683.35	$115,396
C3010230	Paint & Covering	$13.21	S.F.	81,841	10	2000	2010	2027	120.00 %	12.53 %	12		$135,477.54	$1,081,120
C3010232	Wall Tile	$2.63	S.F.	81,841	30	1908	1938	2027	40.00 %	0.00 %	12			$215,242
C3020411	Carpet	$7.30	S.F.	2,500	10	2010	2020	2027	120.00 %	0.00 %	12			$18,250

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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 $
C3020412	Terrazzo & Tile	$75.52	S.F.	1,000	50	1908	1958	2027	24.00 %	0.00 %	12			$75,520
C3020413	Vinyl Flooring	$9.68	S.F.	10,000	20	1908	1928	2027	60.00 %	156.68 %	12		$151,666.68	$96,800
C3020414	Wood Flooring	$22.27	S.F.	60,000	25	1908	1933	2027	48.00 %	130.90 %	12		$1,749,124.26	$1,336,200
C3020415	Concrete Floor Finishes	$0.97	S.F.	8,341	50	1908	1958	2027	24.00 %	0.00 %	12			$8,091
C3030	Ceiling Finishes	$20.97	S.F.	81,841	25	1908	1933	2027	48.00 %	65.91 %	12		$1,131,182.27	$1,716,206
D1010	Elevators and Lifts	$3.56	S.F.	81,841	35	1908	1943	2052	105.71 %	347.55 %	37		$1,012,601.25	$291,354
D2010	Plumbing Fixtures	$13.52	S.F.	81,841	35	2005	2040		71.43 %	0.00 %	25			$1,106,490
D2020	Domestic Water Distribution	$1.68	S.F.	81,841	25	1966	1991	2042	108.00 %	301.63 %	27		$414,717.51	$137,493
D2030	Sanitary Waste	$2.90	S.F.	81,841	25	1908	1933	2042	108.00 %	146.43 %	27		$347,546.66	$237,339
D2040	Rain Water Drainage	$2.32	S.F.	81,841	30	1908	1938	2025	33.33 %	0.00 %	10			$189,871
D3020	Heat Generating Systems	$18.67	S.F.	81,841	35	1966	2001	2052	105.71 %	42.92 %	37		$655,796.88	$1,527,971
D3030	Cooling Generating Systems	$24.48	S.F.	81,841	30			2047	106.67 %	65.60 %	32		$1,314,310.39	$2,003,468
D3040	Distribution Systems	$42.99	S.F.	81,841	25	1966	1991	2042	108.00 %	131.02 %	27		$4,609,576.83	$3,518,345
D3050	Terminal & Package Units	$11.60	S.F.	81,841	20	1966	1986	2027	60.00 %	0.00 %	12			$949,356
D3060	Controls & Instrumentation	$13.50	S.F.	81,841	20	1966	1986	2037	110.00 %	158.90 %	22		$1,755,659.33	$1,104,854
D4010	Sprinklers	$7.05	S.F.	81,841	35			2052	105.71 %	202.91 %	37		$1,170,771.30	$576,979
D4020	Standpipes	$1.01	S.F.	81,841	35			2052	105.71 %	0.00 %	37			$82,659
D5010	Electrical Service/Distribution	$9.70	S.F.	81,841	30	1908	1938	2047	106.67 %	116.51 %	32		$924,954.37	$793,858
D5020	Lighting and Branch Wiring	$34.68	S.F.	81,841	20	1908	1928	2037	110.00 %	37.36 %	22		$1,060,230.99	$2,838,246
D5030	Communications and Security	$12.99	S.F.	81,841	15	1908	1923	2032	113.33 %	12.24 %	17		$130,085.22	$1,063,115
D5090	Other Electrical Systems	$1.41	S.F.	81,841	30	1908	1938	2037	73.33 %	332.25 %	22		$383,401.01	$115,396
E1020	Institutional Equipment	$4.82	S.F.	81,841	35	1908	1943	2027	34.29 %	0.00 %	12			$394,474
E1090	Other Equipment	$11.10	S.F.	81,841	35	1908	1943	2027	34.29 %	0.00 %	12			$908,435
E2010	Fixed Furnishings	$2.13	S.F.	81,841	40	1908	1948	2027	30.00 %	206.95 %	12		$360,762.20	$174,321
								Total	**67.14 %**	**51.75 %**			**$20,799,487.74**	**$40,192,807**

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%
Brick inter wall finish 10%

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

Note: Carpet 2500 3%
Terrazzo 1000 1%
Vinyl 10000 13%
wood 60000 73%
Concrete 8341 10%

System: D1010 - Elevators and Lifts — This system contains no images

Note: There is no existing elevator in this school.

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

Note: There are no secondary transformers in this school.

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:	**$20,799,488**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$280,688**	**$21,080,175**
*** 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	$807,237	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$807,237**
B2020 - Exterior Windows	$1,269,829	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,269,829**
B2030 - Exterior Doors	$145,717	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$145,717**
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	$677,640	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$677,640**
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	$155,851	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$155,851**
C1020 - Interior Doors	$381,647	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$381,647**
C1030 - Fittings	$35,019	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$35,019**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

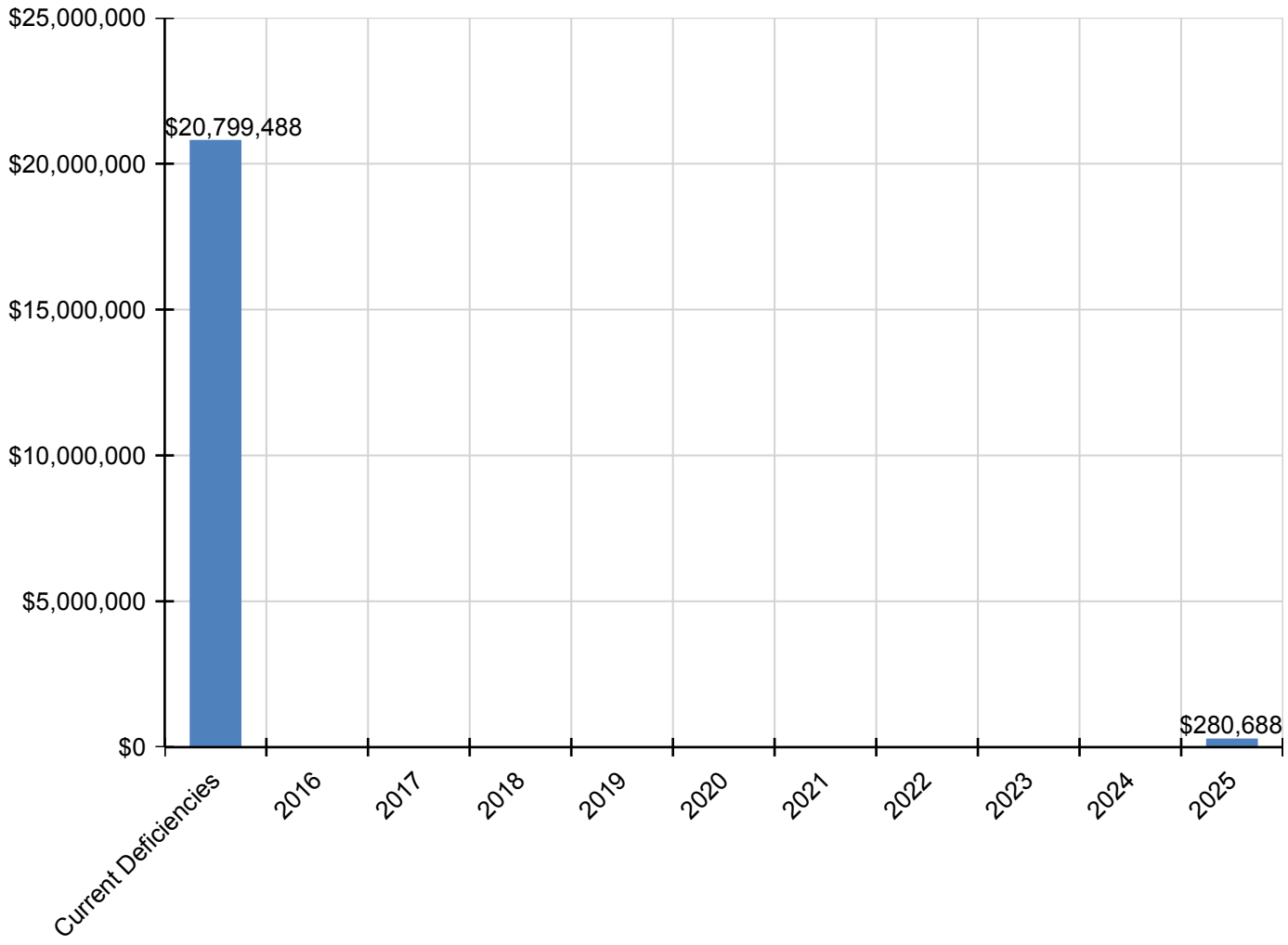
C2010 - Stair Construction	$18,683	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$18,683**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$135,478	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$135,478**
C3010232 - Wall Tile	$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**
C3020411 - Carpet	$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	$151,667	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$151,667**
C3020414 - Wood Flooring	$1,749,124	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,749,124**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$1,131,182	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,131,182**
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	$1,012,601	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,012,601**
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	$414,718	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$414,718**
D2030 - Sanitary Waste	$347,547	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$347,547**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$280,688	**$280,688**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$655,797	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$655,797**
D3030 - Cooling Generating Systems	$1,314,310	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,314,310**
D3040 - Distribution Systems	$4,609,577	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,609,577**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,755,659	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,755,659**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,170,771	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,170,771**
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	$924,954	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$924,954**
D5020 - Lighting and Branch Wiring	$1,060,231	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,060,231**
D5030 - Communications and Security	$130,085	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$130,085**

D5090 - Other Electrical Systems	$383,401	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$383,401**
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	$360,762	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$360,762**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

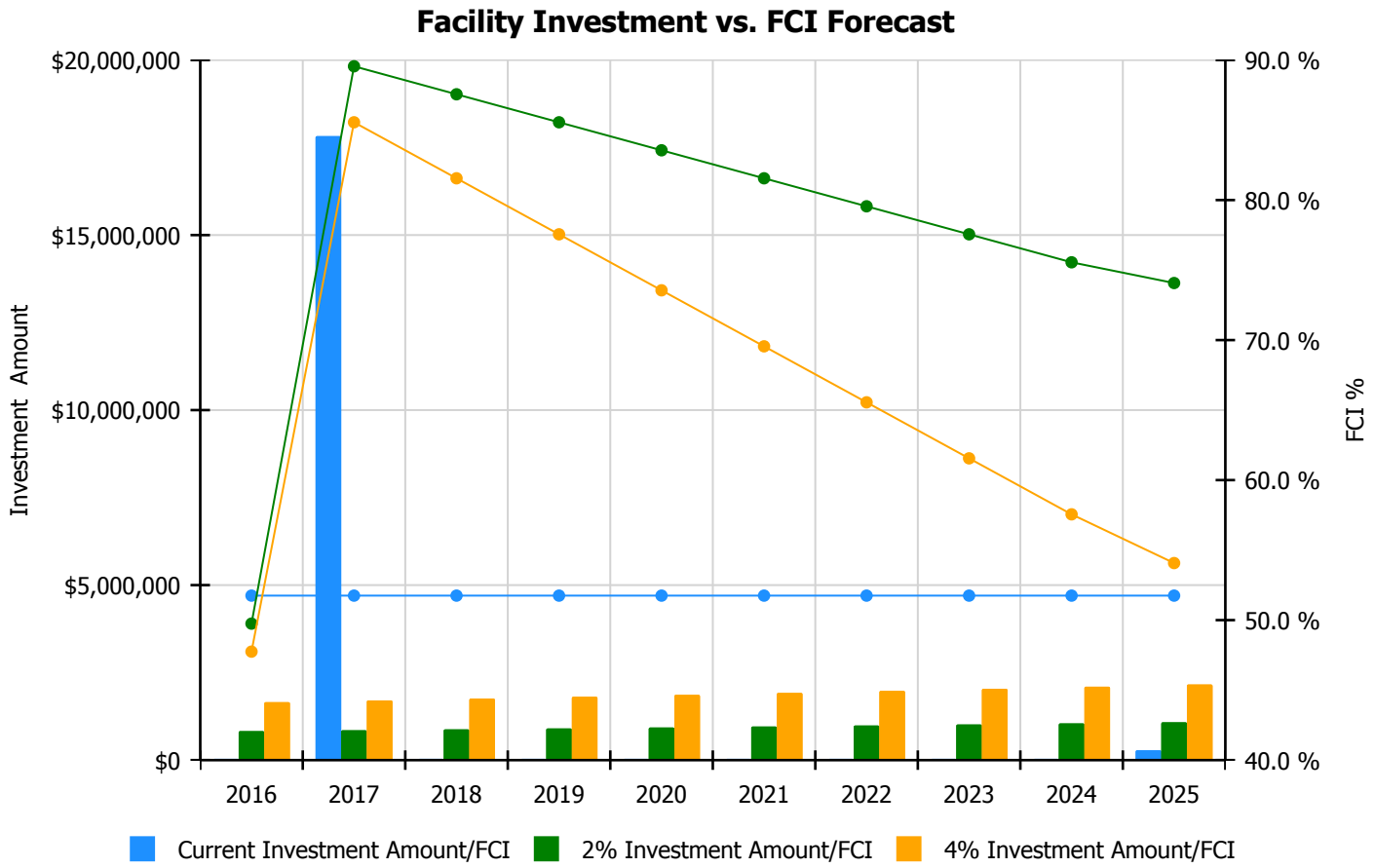
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

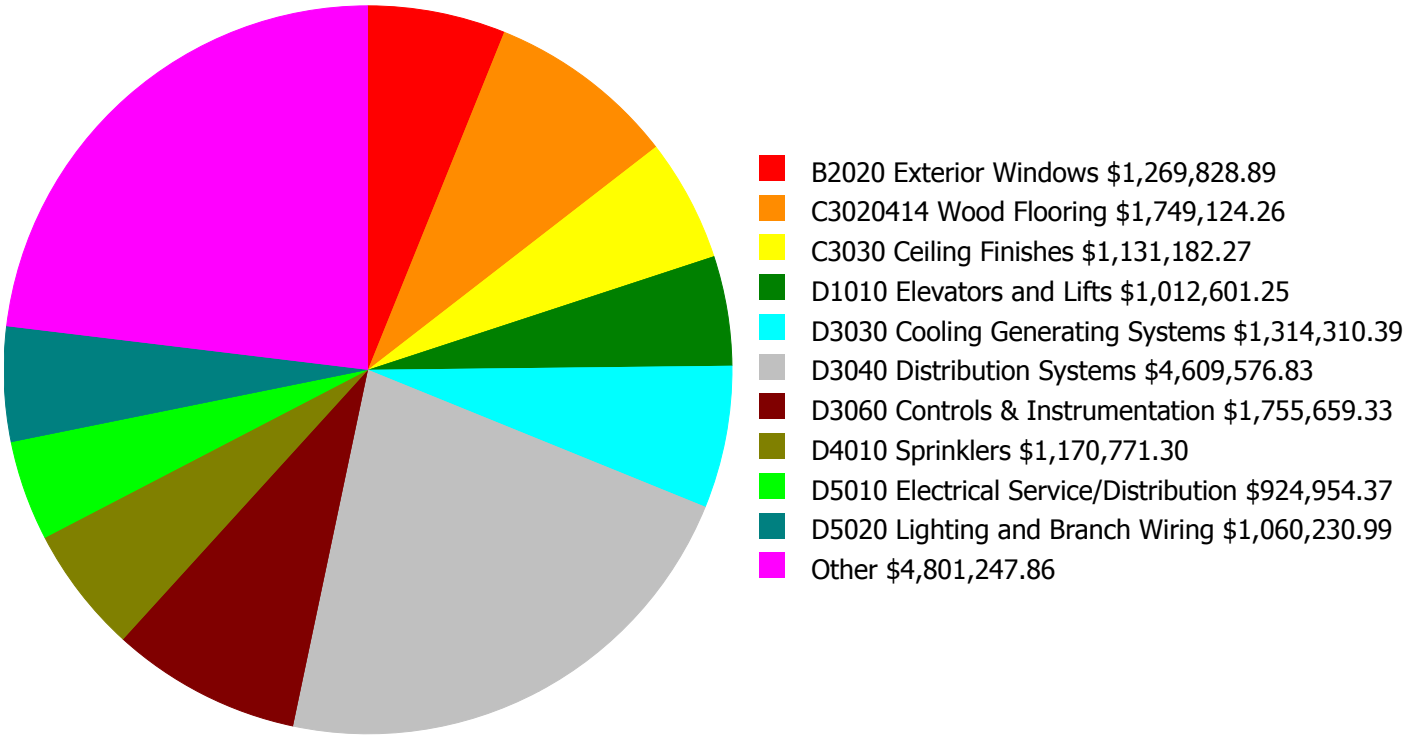
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 51.75%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$827,972.00	49.75 %	$1,655,944.00	47.75 %
2017	$17,825,828	$852,811.00	89.55 %	$1,705,622.00	85.55 %
2018	$0	$878,395.00	87.55 %	$1,756,791.00	81.55 %
2019	$0	$904,747.00	85.55 %	$1,809,494.00	77.55 %
2020	$0	$931,890.00	83.55 %	$1,863,779.00	73.55 %
2021	$0	$959,846.00	81.55 %	$1,919,693.00	69.55 %
2022	$0	$988,642.00	79.55 %	$1,977,283.00	65.55 %
2023	$0	$1,018,301.00	77.55 %	$2,036,602.00	61.55 %
2024	$0	$1,048,850.00	75.55 %	$2,097,700.00	57.55 %
2025	$280,688	$1,080,315.00	74.07 %	$2,160,631.00	54.07 %
Total:	**$18,106,516**	**$9,491,769.00**		**$18,983,539.00**	

Deficiency Summary by System

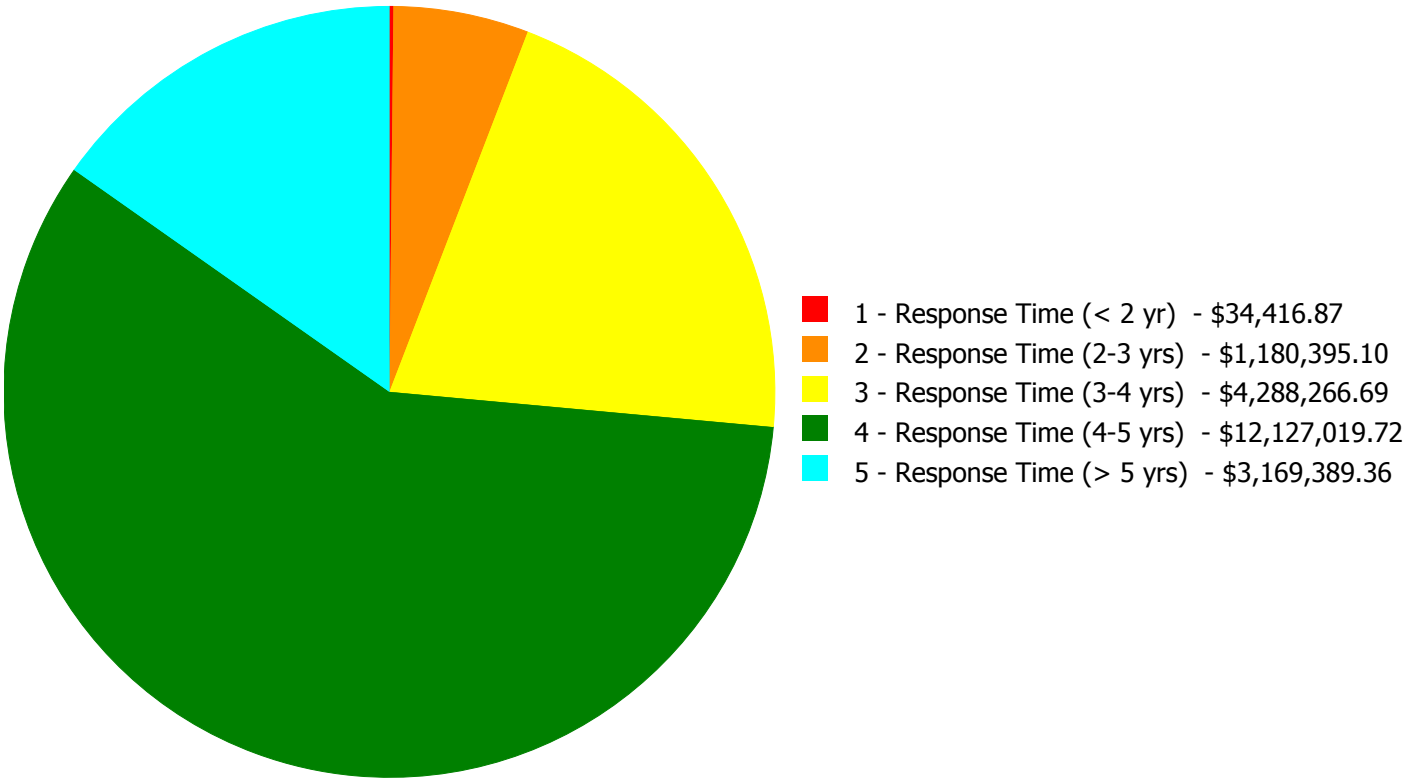
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $20,799,487.74

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: $20,799,487.74

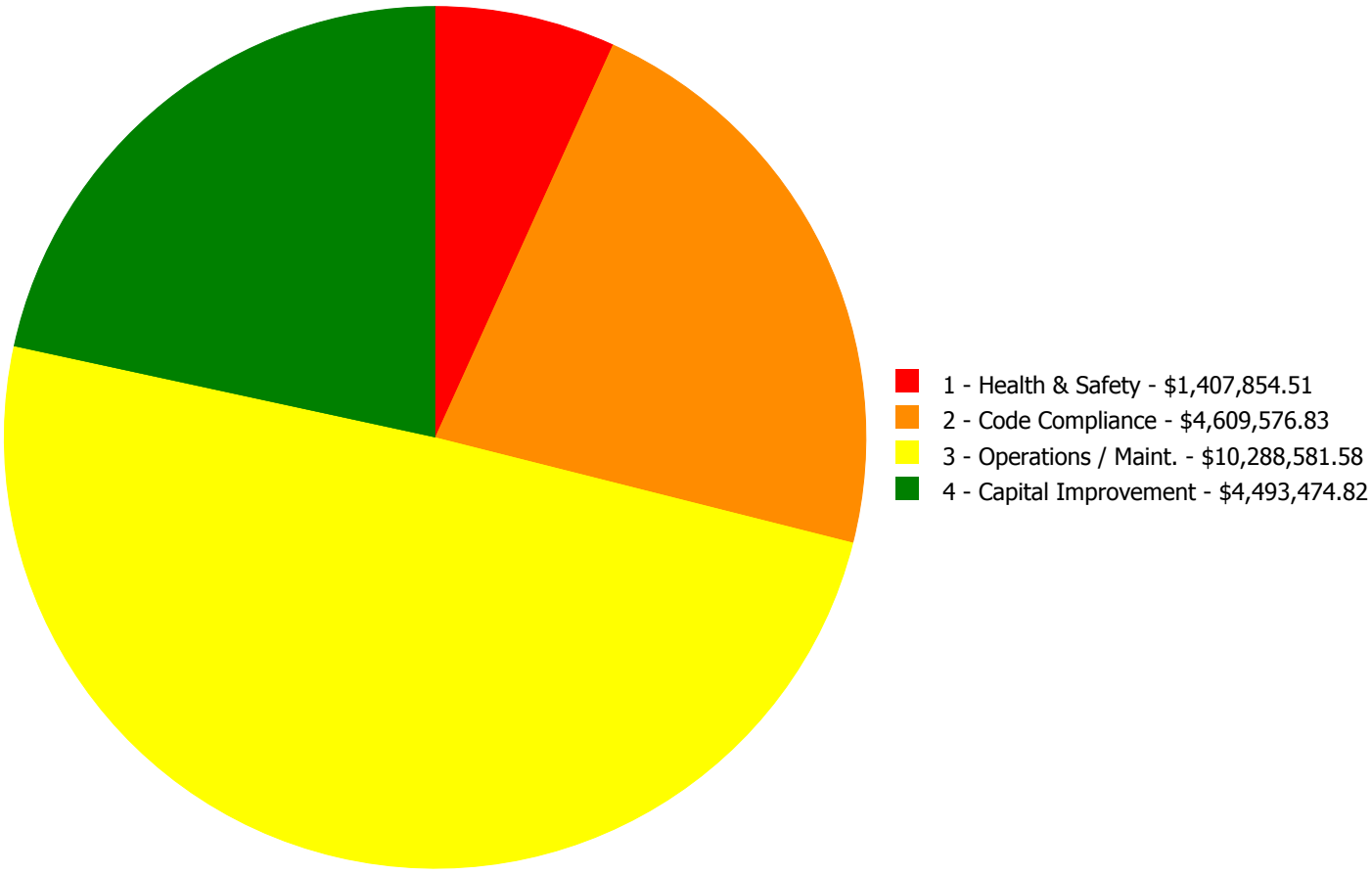
Deficiency By Priority Investment Table

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	$807,236.80	$0.00	$0.00	$807,236.80
B2020	Exterior Windows	$0.00	$0.00	$1,269,828.89	$0.00	$0.00	$1,269,828.89
B2030	Exterior Doors	$0.00	$0.00	$145,717.13	$0.00	$0.00	$145,717.13
B3010105	Built-Up	$0.00	$0.00	$0.00	$0.00	$677,640.22	$677,640.22
C1010	Partitions	$34,416.87	$32,316.31	$89,118.00	$0.00	$0.00	$155,851.18
C1020	Interior Doors	$0.00	$0.00	$0.00	$381,646.97	$0.00	$381,646.97
C1030	Fittings	$0.00	$0.00	$0.00	$35,018.51	$0.00	$35,018.51
C2010	Stair Construction	$0.00	$0.00	$18,683.35	$0.00	$0.00	$18,683.35
C3010230	Paint & Covering	$0.00	$135,477.54	$0.00	$0.00	$0.00	$135,477.54
C3020413	Vinyl Flooring	$0.00	$0.00	$0.00	$151,666.68	$0.00	$151,666.68
C3020414	Wood Flooring	$0.00	$0.00	$0.00	$1,749,124.26	$0.00	$1,749,124.26
C3030	Ceiling Finishes	$0.00	$0.00	$0.00	$0.00	$1,131,182.27	$1,131,182.27
D1010	Elevators and Lifts	$0.00	$1,012,601.25	$0.00	$0.00	$0.00	$1,012,601.25
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$414,717.51	$0.00	$414,717.51
D2030	Sanitary Waste	$0.00	$0.00	$0.00	$347,546.66	$0.00	$347,546.66
D3020	Heat Generating Systems	$0.00	$0.00	$0.00	$655,796.88	$0.00	$655,796.88
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,314,310.39	$1,314,310.39
D3040	Distribution Systems	$0.00	$0.00	$0.00	$4,609,576.83	$0.00	$4,609,576.83
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$1,755,659.33	$0.00	$1,755,659.33
D4010	Sprinklers	$0.00	$0.00	$0.00	$1,170,771.30	$0.00	$1,170,771.30
D5010	Electrical Service/Distribution	$0.00	$0.00	$720,908.23	$204,046.14	$0.00	$924,954.37
D5020	Lighting and Branch Wiring	$0.00	$0.00	$853,373.28	$160,601.23	$46,256.48	$1,060,230.99
D5030	Communications and Security	$0.00	$0.00	$0.00	$130,085.22	$0.00	$130,085.22
D5090	Other Electrical Systems	$0.00	$0.00	$383,401.01	$0.00	$0.00	$383,401.01
E2010	Fixed Furnishings	$0.00	$0.00	$0.00	$360,762.20	$0.00	$360,762.20
	Total:	$34,416.87	$1,180,395.10	$4,288,266.69	$12,127,019.72	$3,169,389.36	$20,799,487.74

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: $20,799,487.74

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: C1010 - Partitions

Location: Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Install fire rated walls and door where required - insert number of doors

Qty: 10.00

Unit of Measure: S.F.

Estimate: $34,416.87

Assessor Name: System

Date Created: 12/23/2015

Notes: The corridor doors were compliant during the time of the construction of the school in 1908. However a large portion of the interior corridor, exit stair doors are not code compliant. Several doors are typically metal in metal frames with transom lites or sidelights, glass glazing. The older doors are generally in fair to poor condition considering the age of the application. To restore the door finishes, universal upgrades are required for the older door applications. Remove and replace original corridor door systems with new code compliant fire rated door system.

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

System: C1010 - Partitions

Location: Classrooms

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install fire rated walls and door where required - insert number of doors

Qty: 1,400.00

Unit of Measure: S.F.

Estimate: $32,316.31

Assessor Name: System

Date Created: 12/23/2015

Notes: There are several transom lites and sidelights constructed into hallway wall systems. It is recommended that the lites and sidelights be removed and replaced with a fire rated wall construction. The deficiency provides a budgetary consideration to correct the hallway, transoms, lites and sidelights.

System: C3010230 - Paint & Covering

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 20,000.00

Unit of Measure: S.F.

Estimate: $135,477.54

Assessor Name: System

Date Created: 12/23/2015

Notes: There are painted walls, trim, and some painted ceilings in this building. In the older sections of the building, some brick surfaces have been painted. The newer section has a painted CMU finish. The interior finishes in the older sections are in fair to poor condition and will require an almost continuous program of renewal of the applied finishes to maintain an acceptable appearance. The finishes in the new section are in excellent to good 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 leaking 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 recommended exterior, mechanical and electrical work in order to prevent overlapping efforts.

System: D1010 - Elevators and Lifts

Location: Building Wide

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add external 4 stop elevator - adjust the electrical run lengths to hook up the elevator

Qty: 1.00

Unit of Measure: Ea.

Estimate: $1,012,601.25

Assessor Name: System

Date Created: 12/24/2015

Notes: There is no elevator that services this school. Goods, services, and amenities offered in public buildings are generally required to be available to all persons. To assist those that may be physically challenged and to meet current accessibility legislation to provide wheelchair access to the upper floors of this facility, the installation of a new hydraulic elevator has been recommended on the exterior elevation of the building or at another suitable location. The new installation should blend as much as possible with the overall appearance of this historic structure and include all required ADA features, such as audible jewels and gongs, an accessible control panel, etc.

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: 25,000.00

Unit of Measure: S.F.

Estimate: $807,236.80

Assessor Name: System

Date Created: 12/23/2015

Notes: The exterior brick surfaces are generally in fair to fair to poor condition for their age. In some locations, bricks have cracked or spalled and should be replaced. The repointing of deteriorated mortar joints is 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. Considering moisture is penetrating the masonry façade the application of sealant is also recommended. This effort is expected to be completed as part of an exterior universal upgrade and should be coordinated with other exterior recommended deficiencies in order not to duplicate work.

System: B2020 - Exterior Windows

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 200.00

Unit of Measure: Ea.

Estimate: $1,269,828.89

Assessor Name: System

Date Created: 12/23/2015

Notes: The exterior windows have been upgraded from the original 1908 applications. A majority of the window system is estimated to have been installed in the 1990's. Several of the windows no longer work and will require attention prior to an overall effort. The windows facing the addition are currently leaking creating interior damage to the wall and floor finishes. Overall, the windows are in fair to poor condition based on the year of installation or last renovation. The entire exterior window system is recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features. This effort is expected to be completed as part of an exterior universal upgrade and should be coordinated with other exterior recommended deficiencies in order not to duplicate work.

System: B2030 - Exterior Doors

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 16.00

Unit of Measure: Ea.

Estimate: $145,717.13

Assessor Name: System

Date Created: 12/23/2015

Notes: The exterior doors are metal applications with metal frames. The exterior door system for this school is a very high traffic system. The doors are in fair condition but are aging at a faster rate than expected based on traffic and condition. The exterior door system and service doors are recommended for upgrade. The new doors are expected to retain their dimensions and profiles, but that incorporate updated energy-efficient features. This effort is expected to be completed as part of an exterior universal upgrade and should be coordinated with other exterior recommended deficiencies in order not to duplicate work.

System: C1010 - Partitions

Location: Classroom

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 4,000.00

Unit of Measure: S.F.

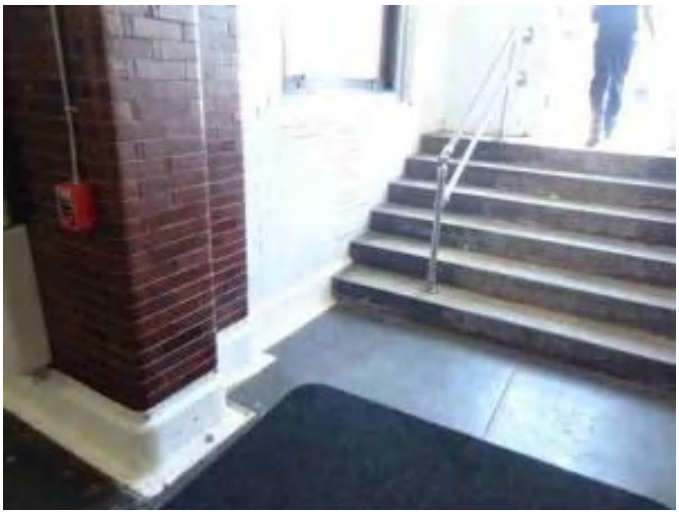
Estimate: $89,118.00

Assessor Name: System

Date Created: 12/23/2015

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: 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: 1,200.00

Unit of Measure: L.F.

Estimate: $18,683.35

Assessor Name: System

Date Created: 12/23/2015

Notes: There are two stair systems for this school, the primary or original 1908 and the addition. 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 for the original 1908 stair application should include comprehensive stair railing removal and replacement upgrades. The additions railing system will require less comprehensive upgrades. Both systems are budgeted for in this deficiency.

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 Panelboard

Qty: 18.00

Unit of Measure: Ea.

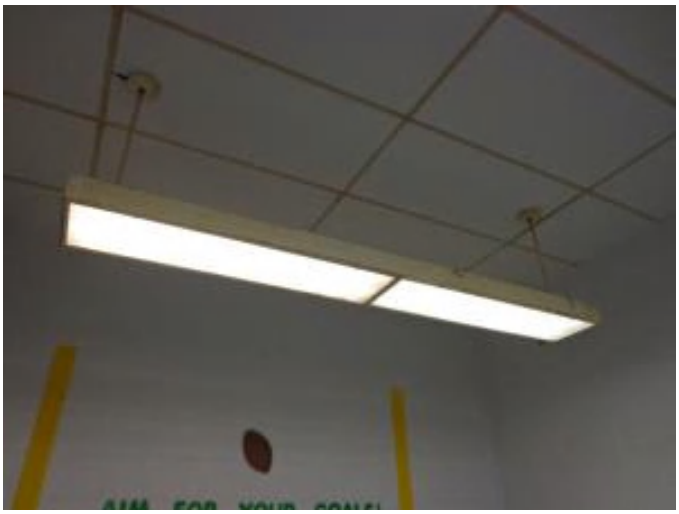
Estimate: $720,908.23

Assessor Name: System

Date Created: 12/15/2015

Notes: Replace 1200A Distribution Panelboard A, 600A Distribution Panelboard DP-I and (8) panelboards in the 1966 building, and (8) panelboards in the 1908 building that have reached the end of their useful life.

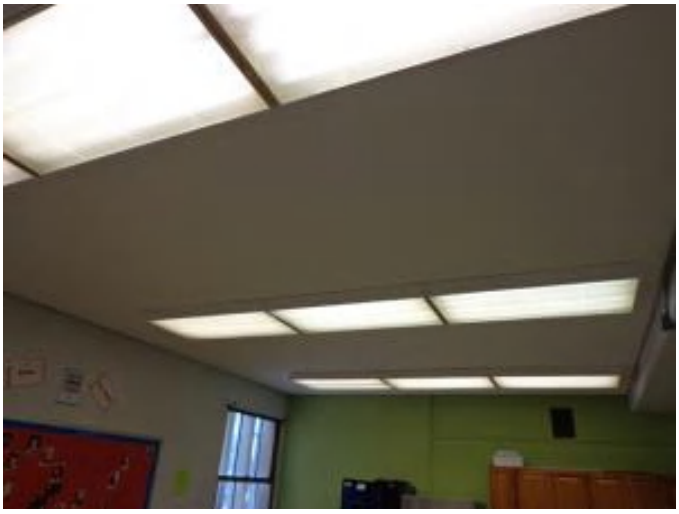
System: D5020 - Lighting and Branch Wiring



Location: Classroooms - 1908 Bldg.
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Lighting Fixtures (SF)
Qty: 13,620.00
Unit of Measure: S.F.
Estimate: $280,177.55
Assessor Name: System
Date Created: 12/16/2015

Notes: Replace lighting system in 14 classrooms in the 1908 building (approximately 13,620 SF).

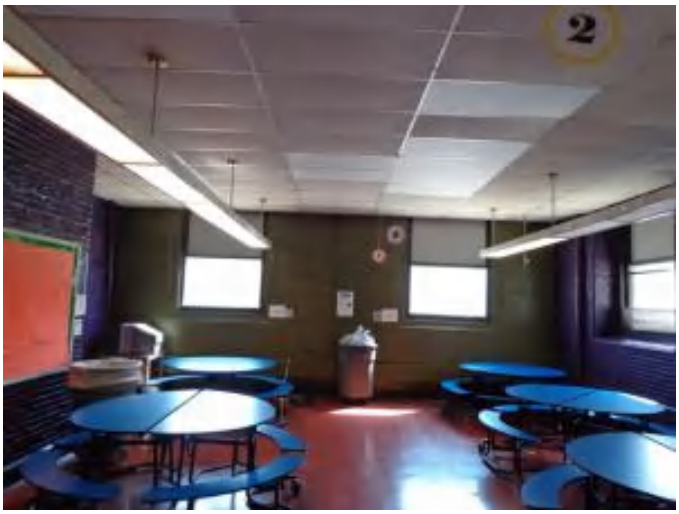
System: D5020 - Lighting and Branch Wiring



Location: Classrooms - 1966 Bldg.
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Lighting Fixtures (SF)
Qty: 12,385.00
Unit of Measure: S.F.
Estimate: $259,605.04
Assessor Name: System
Date Created: 12/16/2015

Notes: Replace lighting system in 15 classrooms in the 1966 building (approximately 12,385 SF).

System: D5020 - Lighting and Branch Wiring



Location: Kitchen, cafeteria, restrooms, mechanical rooms - 1908 Bldg.

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 8,420.00

Unit of Measure: S.F.

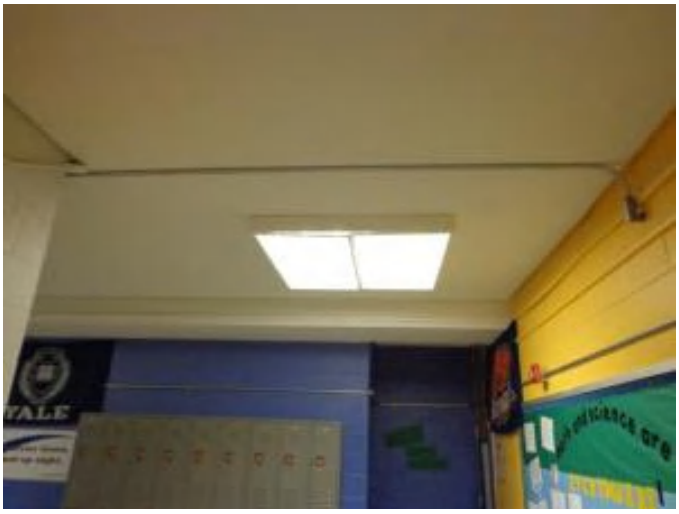
Estimate: $143,481.09

Assessor Name: System

Date Created: 12/16/2015

Notes: Replace lighting system in kitchen, cafeteria, restrooms, boiler room, mechanical rooms in the 1908 building (approximately 8,420 SF).

System: D5020 - Lighting and Branch Wiring



Location: Corridors, offices restrooms - 1966 Bldg.

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 6,700.00

Unit of Measure: S.F.

Estimate: $96,319.65

Assessor Name: System

Date Created: 12/16/2015

Notes: Replace lighting system in corridors, offices, restrooms, mechanical rooms in the 1966 building (approximately 6,700 SF).

System: D5020 - Lighting and Branch Wiring

Location: Gymnasium
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 20.00
Unit of Measure: Ea.
Estimate: $73,789.95
Assessor Name: System
Date Created: 12/16/2015

Notes: Replace 20 metal halide industrial fixtures in the gymnasium with LED fixtures.

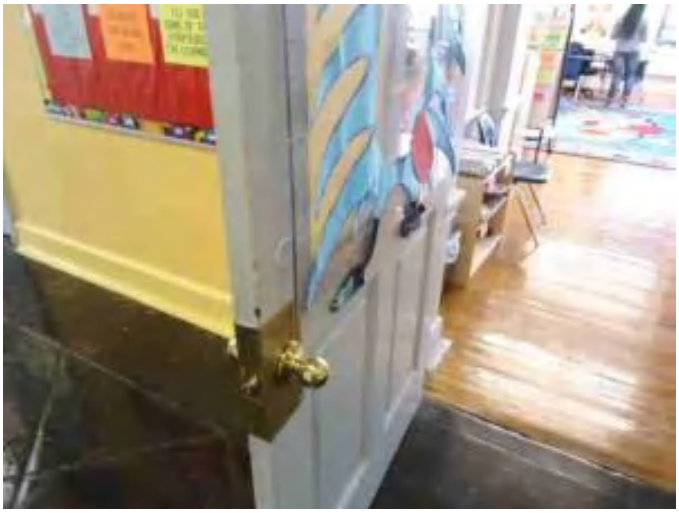
System: D5090 - Other Electrical Systems

Location: Boiler Room 009 - 1908 Bldg.
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: $383,401.01
Assessor Name: System
Date Created: 12/16/2015

Notes: Replace existing 15 kW standby generator, 70A automatic transfers switch and 100A plug-in fuse panel with equipment sized to serve all emergency egress and exit lighting, elevator addition, and fire pump, if required.

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

System: C1020 - Interior Doors



Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 80.00

Unit of Measure: Ea.

Estimate: $381,646.97

Assessor Name: System

Date Created: 12/23/2015

Notes: Interior doors are typically wood in wood frames with transom lites, sidelights, wired glass glazing. Other interior doors include wooden glass pane doors with original wooden pane frames, hollow metal in hollow metal frames at stairwells and exit ways. The standard interior doors are generally in poor condition considering the age of the application. Several doors no longer have glass panels due to damage and have not been repaired. Universal upgrades are required for the interior door systems it is recommended that the interior doors system be removed and replaced with a new modern metal framed hollow metal door system with consideration for ADA compliance.

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: 100.00

Unit of Measure: Ea.

Estimate: $27,091.25

Assessor Name: System

Date Created: 12/23/2015

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: Building Wide

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: System

Date Created: 12/23/2015

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: C3020413 - Vinyl Flooring

Location: Building Wide

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 10,000.00

Unit of Measure: S.F.

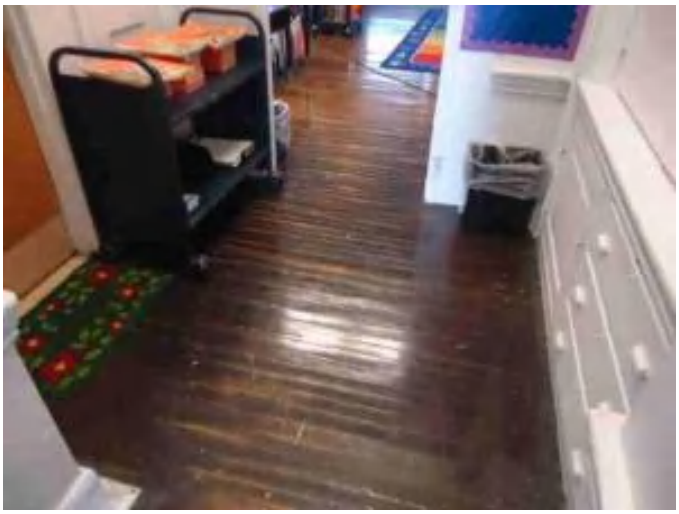
Estimate: $151,666.68

Assessor Name: System

Date Created: 12/23/2015

Notes: The floor finish for this school is a combination of carpet in the administrative area, tile in the kitchen and service line areas, wooden classrooms with concrete hallways and stirs finishes. There are isolated areas and classrooms that contain a 9x9 vinyl tile finish. Suspected asbestos containing materials (ACM) are believed to be limited to the original vinyl floor tile and mastic. While currently sound and manageable in place, future renovation efforts should include provision to test and abate any and all ACM.

System: C3020414 - Wood Flooring



Location: Classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace wood flooring

Qty: 60,000.00

Unit of Measure: S.F.

Estimate: $1,749,124.26

Assessor Name: System

Date Created: 12/23/2015

Notes: The wooden floor finish in the classrooms has served this school from the first day of school. The systems maintenance has been a priority each year as part of a cyclical program to either, sand, clean and resurface or wax as needed. Considering the age and current condition of the classroom wooden floor finish, removal and replacement is recommended.

System: D2020 - Domestic Water Distribution

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace domestic water piping (75 KSF)

Qty: 81,841.00

Unit of Measure: S.F.

Estimate: $414,717.51

Assessor Name: System

Date Created: 12/16/2015

Notes: Replace domestic hot and cold water piping including valves, fittings, hangars and insulation.

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: 81,841.00

Unit of Measure: S.F.

Estimate: $347,546.66

Assessor Name: System

Date Created: 12/16/2015

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

System: D3020 - Heat Generating Systems

Location: mechanical room
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Replace boiler, cast iron sectional (100 HP)
Qty: 1.00
Unit of Measure: Ea.
Estimate: $327,898.44
Assessor Name: System
Date Created: 12/16/2015

Notes: Replace older boilers with two new ninety five hp cast iron sectional gas fired hot water boilers.

System: D3020 - Heat Generating Systems

Location: mechanical room
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Replace boiler, cast iron sectional (100 HP)
Qty: 1.00
Unit of Measure: Ea.
Estimate: $327,898.44
Assessor Name: System
Date Created: 12/16/2015

Notes: Replace older boilers with two new ninety five hp cast iron sectional gas fired hot water boilers.

System: D3040 - Distribution Systems

Location: entire building

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: 81,841.00

Unit of Measure: S.F.

Estimate: $3,726,620.16

Assessor Name: System

Date Created: 12/16/2015

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 piping systems and building automation control system.

System: D3040 - Distribution Systems

Location: auditorium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Install HVAC unit for Auditorium (200 seat).

Qty: 380.00

Unit of Measure: Seat

Estimate: $541,662.27

Assessor Name: System

Date Created: 12/16/2015

Notes: Provide a new central station air handling unit for the auditorium 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.

System: D3040 - Distribution Systems

Location: gymnasium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Install HVAC unit for Gymnasium (single station).

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $341,294.40

Assessor Name: System

Date Created: 12/16/2015

Notes: Provide a new central station air handling unit for the gymnasium 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.

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: 81,841.00

Unit of Measure: S.F.

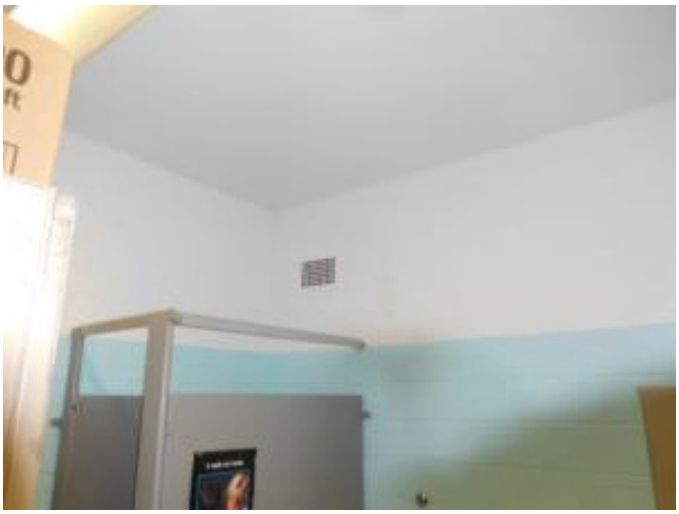
Estimate: $1,755,659.33

Assessor Name: System

Date Created: 12/16/2015

Notes: Install new direct digital control system 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: 81,841.00

Unit of Measure: S.F.

Estimate: $1,170,771.30

Assessor Name: System

Date Created: 12/16/2015

Notes: Install complete NFPA wet pipe automatic sprinkler system and standpipes. If required provide fire pump and jockey pump with controller.

System: D5010 - Electrical Service/Distribution

This deficiency has no image.

Location: Service entrance

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add service entrance switchboard

Qty: 1.00

Unit of Measure: Ea.

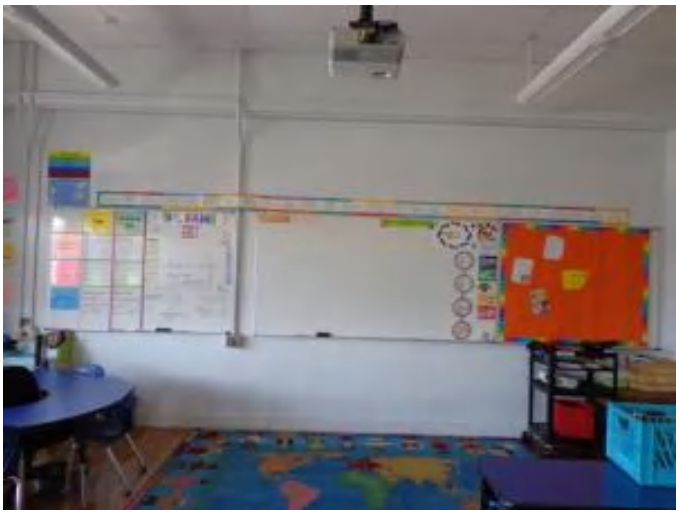
Estimate: $204,046.14

Assessor Name: System

Date Created: 12/15/2015

Notes: Provide a 1200A, 208/120V, 3 phase, 4 wire underground service from the PECO pad-mounted utility transformer to a 1200A Switchboard to serve central air conditioning equipment, elevator 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: 1,170.00

Unit of Measure: L.F.

Estimate: $160,601.23

Assessor Name: System

Date Created: 12/15/2015

Notes: Provide surface metal raceway system with 6 to 8 duplex receptacles in each of 39 classrooms.

System: D5030 - Communications and Security

Location: Building wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Video Surveillance System

Qty: 32.00

Unit of Measure: Ea.

Estimate: $97,096.94

Assessor Name: System

Date Created: 12/16/2015

Notes: Upgrade the 28 existing analog cameras to IP cameras and to add 4 IP cameras.

System: D5030 - Communications and Security

Location: Building wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Clock System or Components

Qty: 58.00

Unit of Measure: Ea.

Estimate: $32,988.28

Assessor Name: System

Date Created: 12/16/2015

Notes: Replace all clocks with a wireless GPS clock system with battery operated clocks.

System: E2010 - Fixed Furnishings

Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace auditorium seating - add tablet arms if required. Veneer seating is an option.

Qty: 400.00

Unit of Measure: Ea.

Estimate: $360,762.20

Assessor Name: System

Date Created: 12/25/2015

Notes: The fixed seating for this school is from the original construction. The systems are in fair condition considering the age and usage. This project provides a budgetary consideration for universal upgrades for the fixed seating and furnishing of this school. Ensure that ADA requirements are followed with the new seating layout.

Priority 5 - Response Time (> 5 yrs):

System: B3010105 - Built-Up

Location: Roof

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and Replace Built Up Roof

Qty: 20,000.00

Unit of Measure: S.F.

Estimate: $677,640.22

Assessor Name: System

Date Created: 12/23/2015

Notes: The built up roof was installed within the past ten years as reported by the school. The roof is in fair condition with few exceptions. Repairs have been completed on the main section of the roof near the addition however, several areas are reported to have active leaks. This active leak that if not repaired soon will further deteriorate the insulation and the integrity of the classroom finishes. This deficiency provides a budgetary consideration for built up roof system, universal upgrades are recommended.

System: C3030 - Ceiling Finishes

Location: Bulding Wide

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 75,000.00

Unit of Measure: S.F.

Estimate: $1,131,182.27

Assessor Name: System

Date Created: 12/23/2015

Notes: The ceiling finish is a mix of 12 x 12 ceiling grid, painted and 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and is in fair condition considering the active leaks and the age of the application. The ceiling finish is expected to require upgrades to support the recommended efforts in this report. 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: D3030 - Cooling Generating Systems

Location: roof, mechanical room

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Install chilled water system with distribution piping and pumps. (+75KSF)

Qty: 81,841.00

Unit of Measure: S.F.

Estimate: $1,314,310.39

Assessor Name: System

Date Created: 12/16/2015

Notes: Remove the existing window air conditioning units and install a 210 ton air-cooled chiller on the roof with chilled water distribution piping, two pumps, chemical treatment and controls located in a mechanical room on the basement level.

System: D5020 - Lighting and Branch Wiring

Location: Auditorium

Distress: Energy Efficiency

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace lamp

Qty: 29.00

Unit of Measure: Ea.

Estimate: $46,256.48

Assessor Name: System

Date Created: 12/16/2015

Notes: Replace stem mounted incandescent lighting fixtures in the auditorium and 9 spotlighting fixtures with LED fixtures.

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 fired, natural or propane, cast iron, hot water, gross output, 2000 MBH, includes standard controls and insulated jacket, packaged	2.00	Ea.	mechanical room	peerless				35			$38,201.40	$84,043.08
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 600 A, 1 stories, 25' horizontal	1.00	Ea.	Electrical Closet-Floor 1, 1966 Bldg.	NA	NA			30			$18,536.85	$20,390.54
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 1200 A	1.00	Ea.	Main Electrical Room	ITE	Type CDP	S.O. No. 72-90636-051		30			$27,696.60	$30,466.26
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 1600 A	1.00	Ea.	Main ELectrical Room	Eaton	Pow-R-Line	G.O. No. SPH0398220		30	2013	2043	$40,458.15	$44,503.97
												Total:	**$179,403.85**

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):	41,900
Year Built:	1908
Last Renovation:	
Replacement Value:	$916,793
Repair Cost:	$331,537.94
Total FCI:	36.16 %
Total RSLI:	45.25 %

Description:

Attributes:

General Attributes:

Bldg ID:	S426001	Site ID:	S426001

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	35.70 %	49.24 %	$331,537.94
G40 - Site Electrical Utilities	71.67 %	0.00 %	$0.00
Totals:	**45.25 %**	**36.16 %**	**$331,537.94**

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	$8.50	S.F.	6,500	30	1988	2018	2027	40.00 %	166.36 %	12		$91,915.90	$55,250
G2030	Pedestrian Paving	$12.30	S.F.	35,400	40	1940	1980	2027	30.00 %	33.03 %	12		$143,828.50	$435,420
G2040	Site Development	$4.36	S.F.	41,900	25	1980	2005	2027	48.00 %	52.44 %	12		$95,793.54	$182,684
G4020	Site Lighting	$4.84	S.F.	41,900	20			2029	70.00 %	0.00 %	14			$202,796
G4030	Site Communications & Security	$0.97	S.F.	41,900	30			2039	80.00 %	0.00 %	24			$40,643
								Total	**45.25 %**	**36.16 %**			**$331,537.94**	**$916,793**

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.

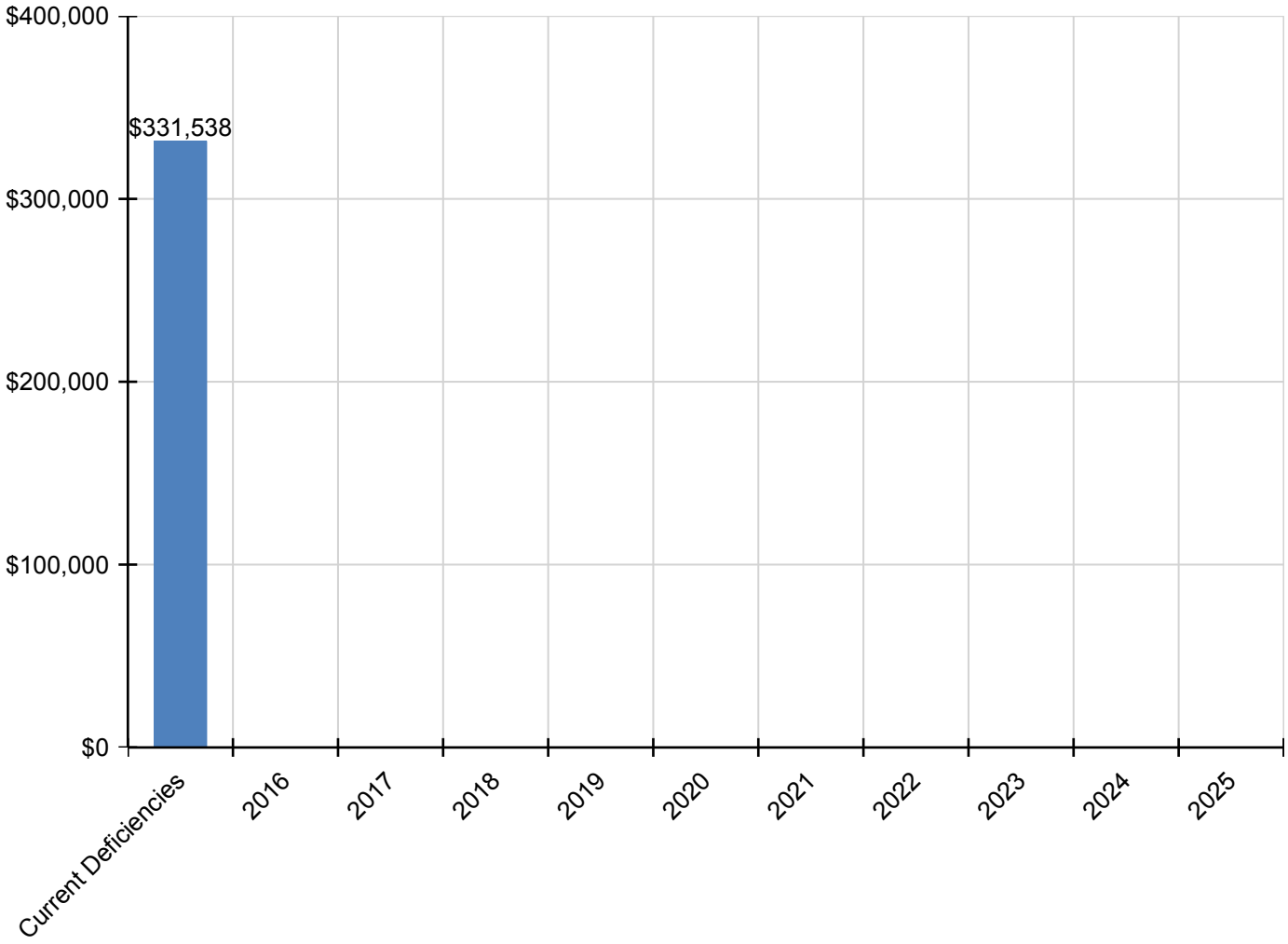
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$331,538**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$331,538**
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	$91,916	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$91,916**
G2030 - Pedestrian Paving	$143,829	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$143,829**
G2040 - Site Development	$95,794	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$95,794**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

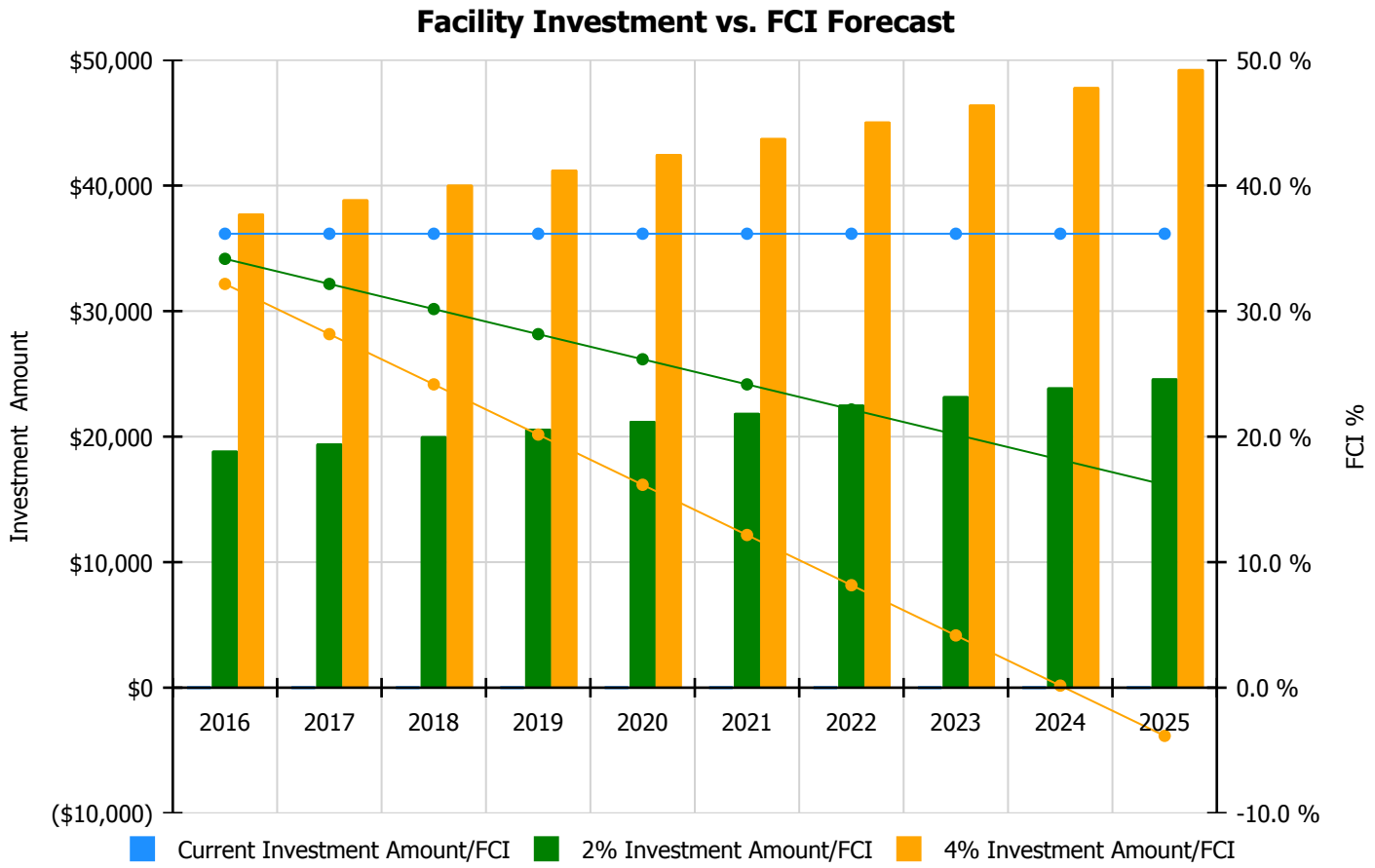
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

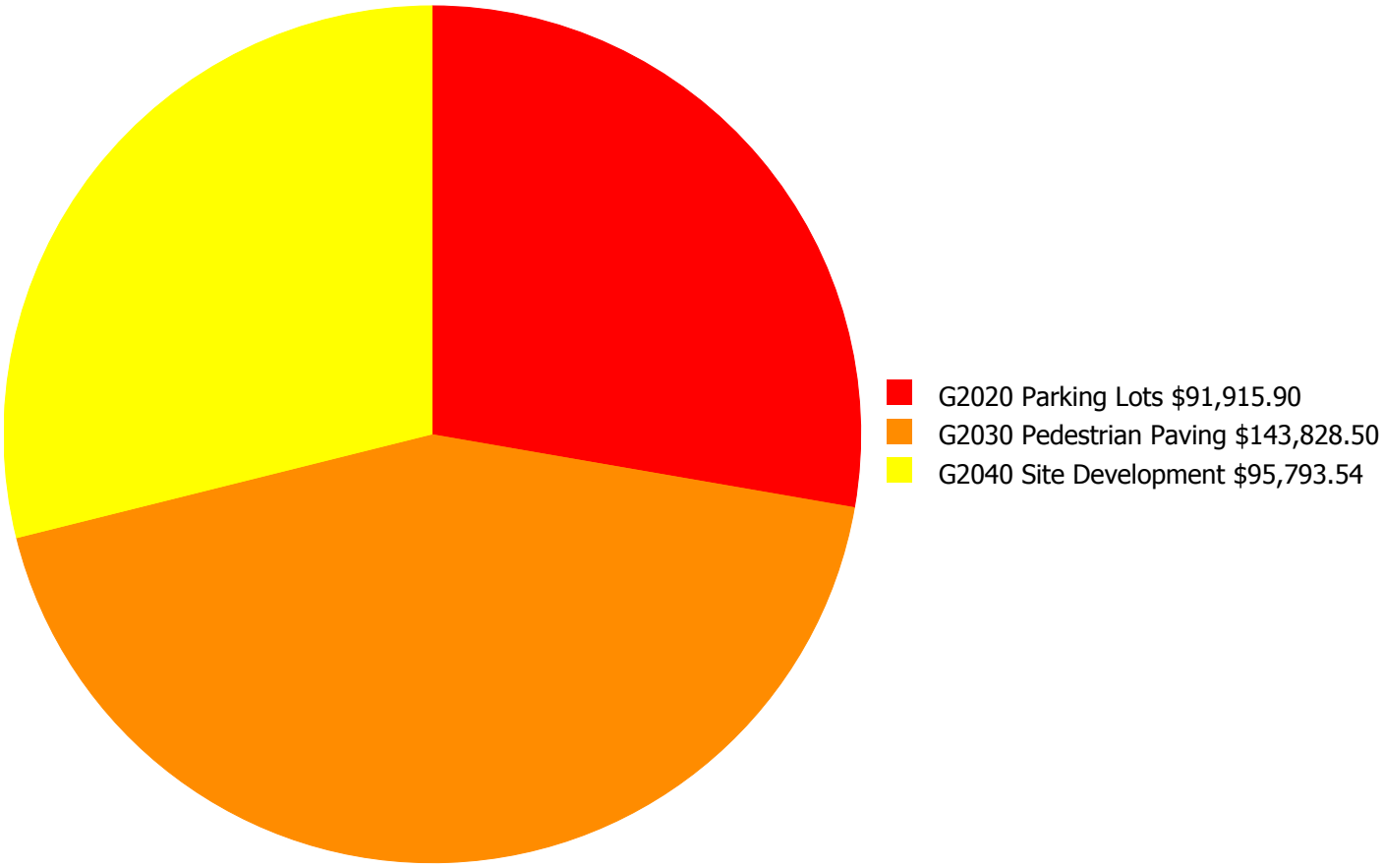
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 36.16%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$18,886.00	34.16 %	$37,772.00	32.16 %
2017	$0	$19,453.00	32.16 %	$38,905.00	28.16 %
2018	$0	$20,036.00	30.16 %	$40,072.00	24.16 %
2019	$0	$20,637.00	28.16 %	$41,274.00	20.16 %
2020	$0	$21,256.00	26.16 %	$42,513.00	16.16 %
2021	$0	$21,894.00	24.16 %	$43,788.00	12.16 %
2022	$0	$22,551.00	22.16 %	$45,102.00	8.16 %
2023	$0	$23,227.00	20.16 %	$46,455.00	4.16 %
2024	$0	$23,924.00	18.16 %	$47,848.00	0.16 %
2025	$0	$24,642.00	16.16 %	$49,284.00	-3.84 %
Total:	**$0**	**$216,506.00**		**$433,013.00**	

Deficiency Summary by System

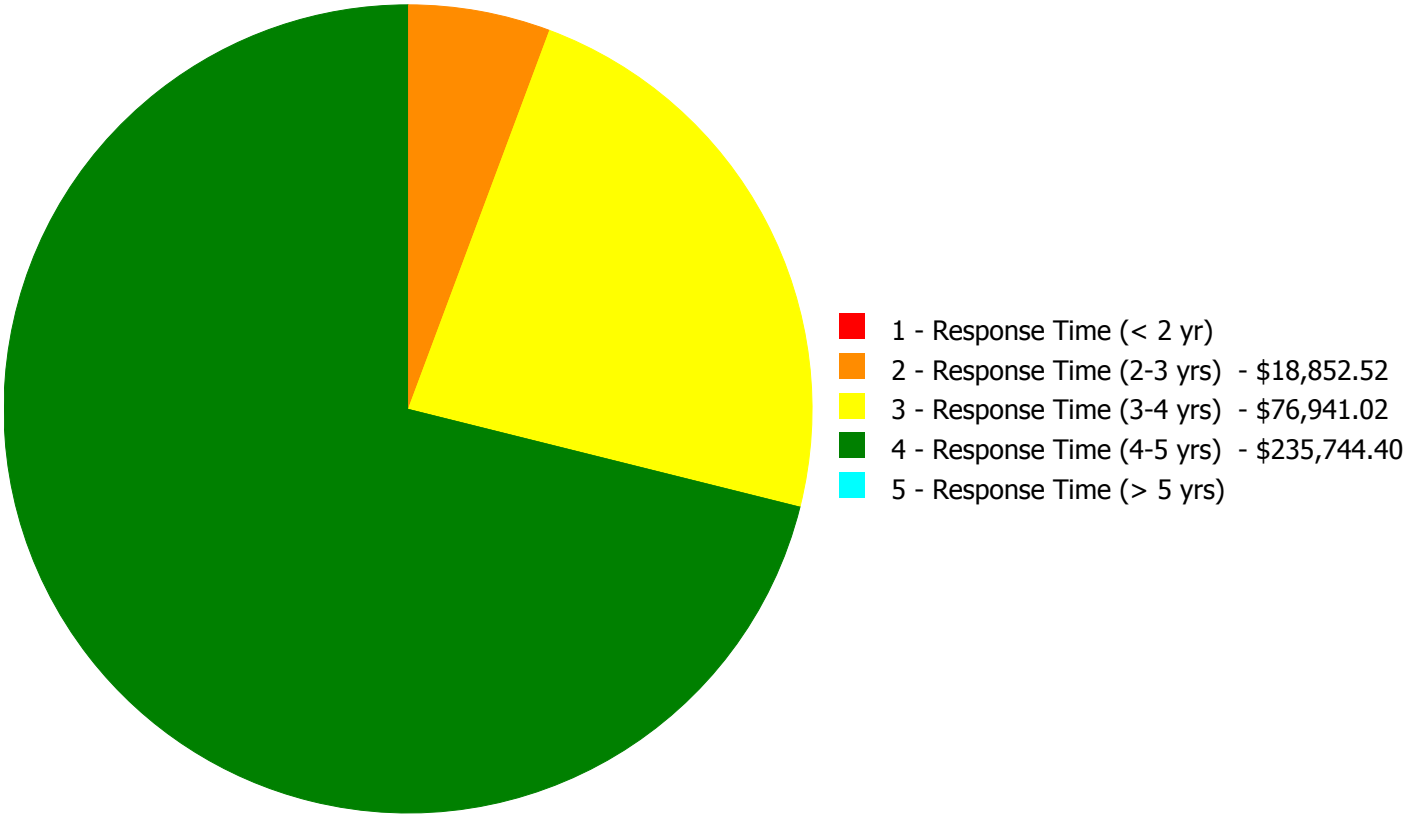
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $331,537.94

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: $331,537.94

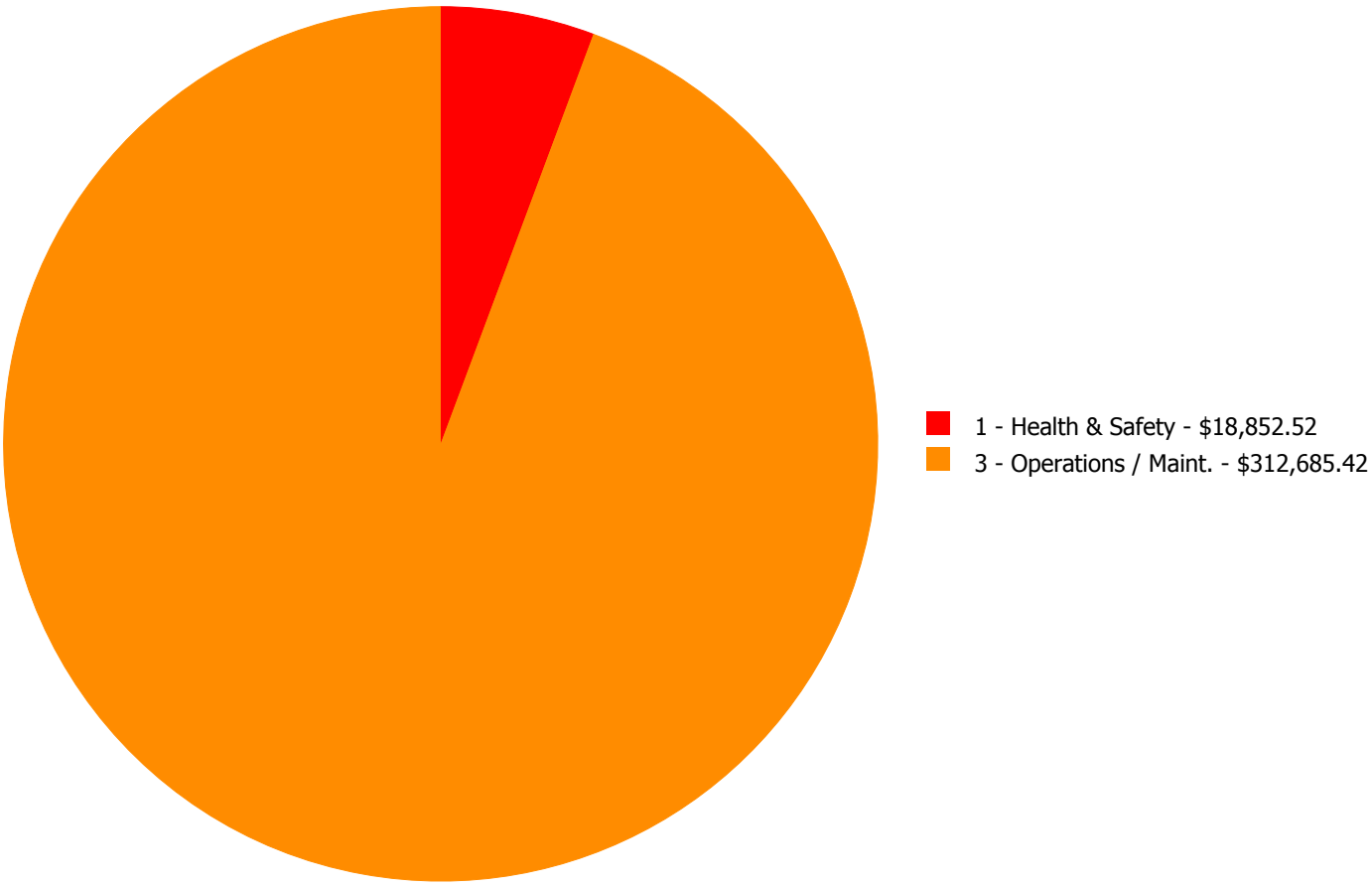
Deficiency By Priority Investment Table

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	$0.00	$91,915.90	$0.00	$91,915.90
G2030	Pedestrian Paving	$0.00	$0.00	$0.00	$143,828.50	$0.00	$143,828.50
G2040	Site Development	$0.00	$18,852.52	$76,941.02	$0.00	$0.00	$95,793.54
	Total:	$0.00	$18,852.52	$76,941.02	$235,744.40	$0.00	$331,537.94

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: $331,537.94

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: 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: 12/25/2015

Notes: The trash dumpster is located in the parking lot open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area is necessary for the

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

System: G2040 - Site Development

Location: Exterior Stairs

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace or install exterior guardrails

Qty: 400.00

Unit of Measure: L.F.

Estimate: $76,941.02

Assessor Name: Hayden Collins

Date Created: 12/25/2015

Notes: The exterior stairs leading from the exit doors and from the emergency exit stairs are from the original construction. 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.

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

System: G2020 - Parking Lots

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace AC paving parking lot

Qty: 6,500.00

Unit of Measure: S.F.

Estimate: $91,915.90

Assessor Name: Hayden Collins

Date Created: 12/25/2015

Notes: The parking play area has no assigned parking and limited markers for approved activity areas. No curb cuts for access to the sidewalks that lead to the ADA main entrance. The parking play lot is in fair condition, the harsh environmental conditions associated with snow removal have taken its toll on the asphalt surface. Also, there is no marked path of ingress to the main entrance. This project provides a budgetary consideration for a play, parking lot renewal program that includes all aspects of the current ADA legislation. Asphalt removal and replacement is recommended.

System: G2030 - Pedestrian Paving

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 10,000.00

Unit of Measure: S.F.

Estimate: $143,828.50

Assessor Name: Hayden Collins

Date Created: 12/25/2015

Notes: The existing sidewalk system is a mix of the original sidewalks installed during the construction of the school and sections that have been replaced over the years. There are a several areas of cracking concrete but no tripping hazards. Sections of the sidewalk system is expected to expire in the near future. Removal of the damaged sections is recommended. Upgrades are required and should include all aspects of current ADA legislation.

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