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.

Alcorn School

Governance	CHARTER	Report Type	Elementarymiddle
Address	3200 Dickinson St. Philadelphia, Pa 19146	Enrollment	607
		Grade Range	'00-08'
Phone/Fax	215-952-6219 / N/A	Admissions Category	Neighborhood
Website	Www.Universalcompanies.Org/Education/Alcorn-Charter-Elementary-School/	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	**48.06%**	**$15,826,679**	**$32,932,558**
Building	47.66 %	$15,063,688	$31,606,235
Grounds	57.53 %	$762,990	$1,326,323

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	06.83 %	$40,692	$595,665
Exterior Walls (Shows condition of the structural condition of the exterior facade)	03.47 %	$80,724	$2,325,330
Windows (Shows functionality of exterior windows)	126.02 %	$1,429,846	$1,134,630
Exterior Doors (Shows condition of exterior doors)	139.58 %	$127,502	$91,350
Interior Doors (Classroom doors)	215.74 %	$477,059	$221,130
Interior Walls (Paint and Finishes)	01.92 %	$20,322	$1,057,770
Plumbing Fixtures	00.00 %	$0	$851,760
Boilers	00.00 %	$0	$1,176,210
Chillers/Cooling Towers	65.60 %	$1,011,742	$1,542,240
Radiators/Unit Ventilators/HVAC	145.98 %	$3,953,687	$2,708,370
Heating/Cooling Controls	158.90 %	$1,351,482	$850,500
Electrical Service and Distribution	129.66 %	$792,358	$611,100
Lighting	22.23 %	$485,734	$2,184,840
Communications and Security (Cameras, Pa System and Fire Alarm)	50.57 %	$413,885	$818,370

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

S220001;Alcorn

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):	63,000
Year Built:	1932
Last Renovation:	
Replacement Value:	$32,932,558
Repair Cost:	$15,826,678.60
Total FCI:	48.06 %
Total RSLI:	51.14 %

Description:

Facility Assessment

August 2015

School District of Philadelphia

James Alcorn School

3200 Dickinson St.

Philadelphia, PA 19146

63,000 SF / 775 Students / LN 01

GENERAL

The Universal Alcorn Charter School is one of the older schools in service to the Philadelphia communities. The school is currently

being run by the Universal Charter system and is identified as B220001 and was originally designated as the James Alcorn School. Universal assumed the facility in the fall of 2011. This facility is located at 3200 Dickinson St., Philadelphia, PA. The late Gothic Revival design of the rectangular-shaped, concrete and steel-framed building includes brick facades with a concrete foundation.

According to the National Resister for Historic Buildings "James Alcorn School is a historic school building located in the Grays Ferry neighborhood of Philadelphia, Pennsylvania. It was designed by Irwin T. Catharine and built in 1931-1932. It is a three-story, nine bay, yellow brick building on a raised basement in the Late Gothic Revival-style. It features two projecting entrances with stone surrounds, a central entrance with arched opening, a two-story projecting bay window, and a crenellated parapet. It was added to the National Register of Historic Places in 1988."

The main entrance faces the Eastern exterior facing South Thirty Second St. drop off area. General parking is south of the school facing Tasker Street. This School serves students in grades K to 6 consisting of a total gross square footage of 63,000 GSF.

This school has several classrooms, a library, kitchen and student commons, Gym, Auditorium and cafeteria, with supporting administrative spaces.

The information for this report was collected during a site visit on August 26, 2015.

Mr. Ron Smith, Building Engineer, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history.

ARCHITECTURAL / STURCTURAL SYSTEMS

Foundations are cast in place reinforced concrete and appear to be in very good condition considering the age of the facility. Basement walls are concrete and masonry constructed and appear to be in very good condition.

The built up roof was installed within the past ten years as reported by the school. The roof is in very good condition with few exceptions. Currently there is an active leak over the western most roof section that if not repaired soon will start to deteriorate the insulation and the integrity of the classroom finishes. This deficiency provides a budgetary consideration for built up roof repair for this section.

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

The wood and metal-framed, double hung windows with standard single pane glass have been replaced in the last twenty years. Several of the windows are leaking into the interior finishes as indicated in the photos and others do not operate correctly. It is recommended that the exterior window systems be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

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, store front and service doors are recommended for upgrade.

Special consideration for those that may be physically challenged was a main not factor in the last re-construction effort for this school. There is no exterior ADA ramp to support 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, limited hand rails and guard rails. However, the building has received limited upgrades and does not fully support a path of travel for those that may be physically challenged. Included in this report are modification that allow for considerations to enhance the upgrades required to support the physically challenged.

This building has adequate exit pathways and no egress obstructions were noted during our building walk through. However the corridor doors on all floors are not fire rated and should be upgraded. Install new fire rated flush wood doors on all floor corridors. If the recommended lever hardware and room signage has not been implemented then these features should be incorporated into the work scope.

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.

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 solid wooden glass pane doors with original wooden pane frames, hollow metal in hollow metal frames at some of the stairwells and gym access point, and folding closet doors. Doors are generally in fair condition and is a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. The deficiency provides a budgetary consideration to correct the hallway, transoms, wooden doors and frames with consideration for the exit stair doors and construction.

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

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.

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

There are several minor areas of wall damage that ranges from serious to minor. Although the school is on a cyclical program of renewal and each painted surface is renewed at years end this system is at the point in which repairs are necessary. Remove damaged wall finishes and repair areas then apply primer and paint finish.

This schools interior wall finish is a mix of marble and painted plaster. The marble finish is in very good condition and has aged well with the high traffic use of the school. There are no recommendations for the marble finish at this time.

The basement levels interior wall finish is mostly an interior brick finish. The finish is in good condition and there were no issues that surfaced during the time of the inspection therefore no projects or recommendations are required at this time.

The floor finish for this school is a combination of carpet in the library area, tile in the kitchen and service line areas, wooden classrooms with concrete hallways and stirs finishes and a vinyl tile finish. The vinyl tile finish is a 9 x 9 application and is suspect to contain asbestos. 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 classrooms and auditorium in this school have a wooden floor finish that appears to be from original construction. The system is showing signs of age such as the effects of sanding and refinishing with yearly cleaning and waxing with some repairs. The floor finish is in fair condition however, the finish is beyond its expected life cycle. It is recommended that the wooden floor finish be removed and replaced with an in kind finish.

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

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.

The athletic, recreational equipment appears to be from the original construction of the school. The equipment is well maintained however showing signs of age related to a high level of usage. This project provides a budgetary consideration for a universal upgrade to these systems.

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

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. Lavatories have dual wheel handle faucets and urinals and water closets have manual lever flush valves. There are dual level stainless steel water coolers with integral refrigeration. There is a seventy gallon State gas water heater in the basement mechanical room with a small inline circulating pump installed in 1999. A single five hp end suction pump boosts building water pressure.

Water piping has been replaced since the original installation with insulated rigid copper pipe. Sanitary, waste, vent and rainwater piping is original installation hub and spigot cast iron. Water service is a three inch line and meter from S. 32nd St. into the mechanical room and includes a backflow preventer. Gas service is from S. 32nd St. and the meter assembly is exterior to the building in the parking lot, enclosed with fencing. Gas piping is black steel with welded or screwed fittings.

Plumbing fixtures including water coolers have been replaced but age is unknown. Appearance and function indicate remaining service life of fifteen to twenty years. The water heater should be serviceable for ten or more years. The cast iron piping has exceeded the anticipated service life. Rainwater and vent piping should continue functioning, but the sanitary and waste piping should be inspected to determine condition and replace damaged portions. The domestic water piping may have lead solder based on age and should be replaced.

HVAC-Heating is generated by two HB Smith one hundred fifty hp sectional cast iron low pressure steam gas/oil fired boilers in the basement mechanical room. The boiler models are Mills 450 with Powerflame burners and separate oil pumps. Boilers were installed in 2006, along with a Skidmore triplex pump condensate return and boiler feed unit. There is a shot feed and automatic chemical feed system. After building warm-up one boiler will heat the facility. Combustion air flows through a louver and motorized damper. Forced draft fans at each boiler are connected to a factory fabricated boiler vent system and stack to a roof cap. An inline fan ventilates the mechanical room. A six thousand gallon underground oil tank was installed in 2006 and an older duplex fuel oil pump system in the mechanical room provides circulation.

Spaces are heated by steam radiators with control valves and F&T traps. Valves and traps are reported to be mostly inoperable. Two house fan systems in the basement provided heat and ventilation through a central duct system, but are no longer functional. There is no functional air compressor and no central control system. Oil piping is black steel with screwed fittings, and steam and condensate piping is insulated welded black steel.

There is no central air conditioning. There are some window air conditioners but not enough for all classrooms. Two Mitsubishi ductless split systems cool electronic equipment rooms. There is no cooking or kitchen hood. Two centrifugal roof ventilators provide toilet exhaust.

The boilers should remain serviceable twenty five more years. The steam piping and radiators are from original construction and should be replaced based on age and condition. The condensate return/ boiler feed unit is from 2006 and should have remaining service of about twenty years.

FIRE PROTECTION-There are no sprinklers in this building. There are dry standpipes with hose valves and exterior fire department

connections in the stairwells.

ELECTRICAL SYSTEMS

Electrical Service--The building is served by PECO Energy Company from a utility-owned 300 kVA pad-mount transformer located at the northwest corner of the site. Underground service is routed to an Eaton Cutler-Hammer 2000A, 208/120V, 3 phase, 4 wire switchboard in the Main Electrical Room located adjacent to the Boiler Room. The switchboard has a 2000A main circuit breaker section and one circuit breaker distribution system with power meter and surge protective device that feeds existing 120/240V, 1 phase panelboards in the school, Panel IMC, and a 150 kVA, 208-120/240V, phase converter transformer that feeds a three section, 400A Panelboard (Panels A, B and C) in the Boiler Room. The switchboard and phase converter transformer were installed in 2006 and have more than 20 years of useful life remaining. Panel IMC was installed in 2010.

There are two 120/240V, 1 phase, 3 wire recessed panelboards on each floor, one located at each of the north and south stairwells, which feed lighting and receptacles. These panelboards have reached the end of their useful life and need to be replaced with new 208/120V, 3 phase, 4 wire panelboards and feeders. The three section 400A Boiler Room Panelboard also needs to be replaced due to its age and condition.

The service entrance switchboard does not have capacity to serve central air conditioning equipment, an elevator addition, and a fire pump (if required). Another 1600A, 208/120V, 3 phase, 4 wire service distribution switchboard with associated feeder circuit breakers and feeders would be required.

Receptacles-- Most of the classrooms have only a few duplex receptacles, which are not adequate. The Main Office also needs additional receptacles to avoid the use of extension cords running along the floor. Additional receptacles were added in only a few classrooms on the front and rear walls using surface metal raceways. It is recommended that all remaining (24) classrooms be provided with additional receptacles using surface metal raceways. It was observed that some of the wiring devices in classrooms were 2 wire, non-grounding type receptacles. It is further recommended that all existing receptacles in classrooms be replaced with new devices.

Lighting-- Fixtures in classrooms are typically stem mounted 1x4, 2 lamp, T12, wraparound fluorescent with acrylic prismatic lenses. These fixtures with T12 lamps are obsolete and have reached the end of their useful life. They should be replaced with fixtures using T8 or T5 lamps.

Fixtures in the Basement corridors and restrooms are 1x4, surface mounted fluorescent wraparounds with T8 lamps and are in good condition. Lighting in the corridors on Floors 1 through 3, Principal's Office, and stairwells are surface mounted 2x4, 4 lamp, T8, modular fluorescent, and are in good condition with at least 10 years of useful life remaining.

The IMC has 2x4, 4 lamp, T8, recessed lensed fluorescent troffers in good condition. Lighting control is by switches and occupancy sensors.

Lighting in classrooms is controlled by two switches, one for each row of fixtures. Most other rooms also have multiple switches for controlling lighting.

The auditorium has eight (8) period type pendant mounted incandescent fixtures that have been re-lamped with compact fluorescent lamps for energy efficiency, extended lamp life and increased illumination level. The fixtures are in good condition, except one fixture is broken and the replacement will need to be custom made to match the existing fixtures. There are also (12) incandescent A-lamp, wall sconces with up/down lighting on the side and back walls of the auditorium. It is recommended that the pendant and sconce fixtures be re-lamped with LED lamps for energy efficiency and extended lamp life. There are no theatrical lighting fixtures on the platform; there are only two incandescent worklights for the platform.

The gymnasium, which is also used as the cafeteria, has (24) surface mounted 4 lamp fluorescent wraparound fixtures with T8 lamps controlled by (8) light switches. Most of the storage rooms are provided with fluorescent fixtures with T12 lamps and should be replaced.

Industrial fluorescent lighting fixtures are provided in the Boiler Room and Main Electrical Room. There are seven (7) 4 foot industrial fixtures in the Boiler Room with T12 lamps that need to be replaced.

Wall mounted lighting fixtures are located above the doors at exit discharges and high intensity discharge (HID) lighting fixtures provide area illumination of the site.

Fire Alarm System-- The Thorn Autocall fire alarm system has reached the end of its useful life and needs to be replaced. The fire alarm control panel (FACP) is located at the south end of the Boiler Room. Notification appliances are provided in corridors, restrooms, Boiler Room, gymnasium, auditorium and IMC. There are no notification appliances in classrooms. The entire fire alarm system needs to be replaced to meet current NFPA codes and ADA.

Telephone/LAN-- A telephone and data outlet is provided in each classroom. Wireless access points are provided in classrooms, corridors, auditorium, gymnasium and IMC for Wi-Fi service throughout the entire school. The Main Distribution Frame Room is located on Floor 1 in the room adjacent to stage left in the auditorium. There is also a data hub located in the IMC.

Intercom/Paging Systems-- An Aiphone audible/visual intercom system is provided at the main entrance. The paging system is accessed through the telephone system. Each classroom has a paging speaker. There are also wall mounted paging speakers in corridors. This system is estimated to have 15 years of useful life remaining.

Clock and Program System-- The program system uses the paging system for class changes. The original speakers in classrooms are obsolete and have been replaced with wall speakers. The obsolete wall mounted speakers in classrooms and corridors have been abandoned in place. The master time controller is a 120 volt system located in the Main Office. Clocks are provided in classrooms, gymnasium, auditorium and IMC, but the clock system was reported by the Building Engineer as not operational. It is recommended a new wireless clock system be provided.

Television System-- There is no television system in this school.

Video Surveillance and Security Systems-- There are no interior video surveillance cameras in the building and five (5) exterior video surveillance cameras that provide coverage of the parking lot, site and entrances. Surveillance cameras are monitored in the Main Office on Floor 1. It is recommended that at least 17 interior cameras be provided for surveillance coverage in corridors, gymnasium, auditorium and IMC.

The exterior doors in the auditorium are provided with magnetic door contacts. On Floor 1, the magnetic door contacts are missing on the doors at Exit 1 (south stairwell) and damaged at the door at Exit 2 (north stairwell). Magnetic door contacts on both doors need to be replaced.

Emergency Power System-- There is a Katolight standby generator set (capacity not available) with sub-base fuel oil storage tank that is located on the northwest corner of the site in a weatherproof enclosure. The generator feeds 400A Panelboard EGD in the Main Electrical Room, which supplies two ASCO automatic transfer switches, one for emergency circuits and one for standby power. The Emergency Lighting Panelboard in the Boiler Room is a 60A, 120/240V, 1 phase Penn Panel & Box Company panel that has reached the end of its useful life and should be replaced.

Emergency Lighting System / Exit Lighting-- Emergency egress and exit lighting is served by the standby generator. Exit signs in the gymnasium and auditorium were not illuminated, and should be verified if operational or if maintenance is required. It is recommended that the six (6) exit signs in the auditorium and four (4) exit signs in the gymnasium be replaced.

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

Conveying Systems-- The building did not have an elevator. Provide feeder circuits and safety switches for elevator addition.

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 sidewalk system is original to the buildings construction. There are a several areas of cracking concrete but no tripping hazards. The sidewalk system is expected to expire in the near future. Removal of the entire system is recommended. Universal upgrades are required and should include all aspects of current ADA legislation.

The 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 safety of the students and the general public. Construction of a secure lockable dumpster area is recommended.

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

The remaining sections of the site has a picket fence that extends from the parking area to the delivery entrance. This fence is in good condition and there were no issues that surfaced during the time of the inspection. No recommendations are required at this time.

Site Lighting-- Site lighting is provided by wall mounted HID lighting fixtures on the building along the roof line that are aimed to illuminate the site. There are no pole mounted lighting fixtures on the site.

Site video surveillance system -- There are five (5) exterior video surveillance cameras that provide coverage of the parking lot, site and entrances. The exterior cameras have reached the end of their useful life and need to be replaced.

RECOMMENDATIONS

- Repair cracks in masonry
- Remove and replace aluminum windows
- Remove and replace exterior doors
- Roof Repairs
- Fire Door Installations
- Restore fire rated walls
- Remove folding partition
- Replace interior doors
- Replace Tack Boards
- Replace Chalk Boards
- Upgrade Signage
- Stair Rail Upgrades
- Repair and Repaint interior finish
- Upgrade wooden floors
- Ceiling Upgrade
- Install Elevator
- Upgrade basketball area
- Stage curtain upgrade
- Upgrade auditorium seating
- Upgrade parking play lot
- Upgrade sidewalks
- Build dumpster secure zone
- Upgrade site fence
- Provide a four pipe fan coil system with roof mounted outside air system ducted to each fan coil unit. Provide a fan coil unit for each classroom and separate area. Include new heat exchanger and pump for hot water, piping, control valves and controls, to replace steam heating system.
- Provide a one hundred sixty ton air cooled package chiller on the roof with pumps, piping and controls in the mechanical room. Connect to new fan coil units and air handling units.
- Install NFPA wet pipe automatic sprinkler system in entire building, including fire service, piping sprinkler heads, standpipes and fire pump if required.
- Inspect old cast iron sanitary piping including camera observation and replace damaged sections.
- Replace domestic hot and cold water pipe, fittings, valves, hangers and insulation.
- 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.
- Provide a new central station air handling unit for the cafeteria/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.
- Install a new duplex domestic water booster pump system with pumps, controls, and pressure tank. Locate in mechanical room and connect to main water distribution. Include electrical connection, starters and disconnects.
- Provide a 1600A, 208/120V, 3 phase, 4 wire service distribution switchboard with associated feeder circuit breakers and feeders to serve added central air conditioning equipment, an elevator addition, and a fire pump (if required).
- Replace 120/240V, 1 phase panelboards in corridors on all floors and 400A Panelboard A, B, C in the Boiler Room, and

Emergency Lighting Panel with 208/120V, 3 phase panelboards. Total of 12 panelboards.

- Add surface metal raceway system with additional duplex receptacles in 24 classrooms, and replace approximately 35 non-grounding type receptacles with 3-wire grounding type. Add additional receptacles in the Main Office.
- Replace fluorescent lighting fixtures and branch wiring in 24 classrooms (Approximately 16,050 SF).
- Replace fluorescent lighting fixtures and branch wiring in storage rooms, toilet rooms, faculty lounge and prep kitchen that have obsolete fixtures with T12 lamps (Approximately 2,375 SF).
- Replace (1) damaged lighting fixture in the auditorium and re-lamp (8) pendant mounted fixtures and (12) wall sconces with LED lamps.
- Replace (7) 4 foot industrial fluorescent T12 lighting fixtures in the Boiler Room with T8 lighting fixtures.
- Replace fire alarm system with an addressable type system, including pull stations, smoke and heat detectors, and audible and visual notification appliances.
- Replace clock system with a wireless GPS system.
- Add (17) interior video surveillance cameras, equipment rack, DVR's, monitors and associated equipment.
- Replace a total of (10) exit signs in the auditorium and gymnasium with LED type.
- Provide elevator, feeders and safety switches for elevator machine and cab power.
- Replace (5) exterior video surveillance cameras.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 2 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S220001		

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.

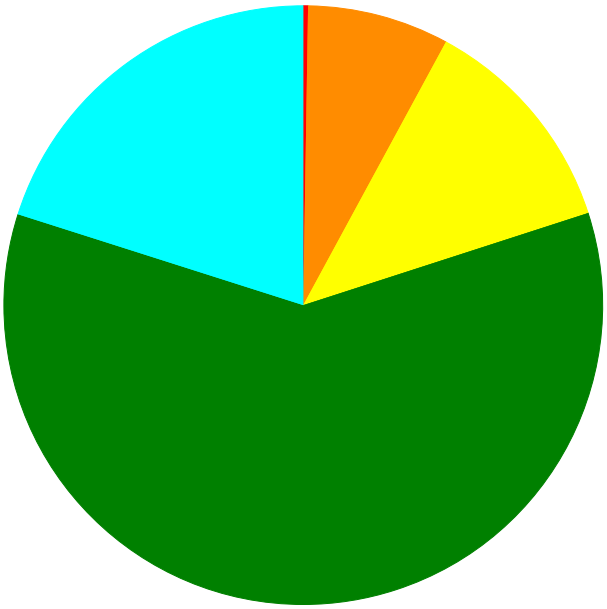
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	17.00 %	0.00 %	$0.00
A20 - Basement Construction	17.00 %	0.00 %	$0.00
B10 - Superstructure	17.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	21.95 %	46.13 %	$1,638,072.32
B30 - Roofing	60.00 %	6.83 %	$40,691.67
C10 - Interior Construction	20.51 %	56.42 %	$872,283.15
C20 - Stairs	12.00 %	17.53 %	$15,569.46
C30 - Interior Finishes	55.09 %	55.45 %	$1,865,535.02
D10 - Conveying	105.71 %	287.02 %	$1,012,601.25
D20 - Plumbing	77.19 %	30.32 %	$390,000.33
D30 - HVAC	97.29 %	90.14 %	$6,316,910.84
D40 - Fire Protection	105.71 %	177.49 %	$901,243.13
D50 - Electrical	63.37 %	45.92 %	$1,700,455.49
E10 - Equipment	34.29 %	3.02 %	$30,273.46
E20 - Furnishings	30.00 %	208.70 %	$280,052.17
G20 - Site Improvements	39.13 %	74.36 %	$710,203.84
G40 - Site Electrical Utilities	70.00 %	14.22 %	$52,786.47
Totals:	**51.14 %**	**48.06 %**	**$15,826,678.60**

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)
B220001;Alcorn	63,000	47.66	$40,691.67	$1,148,688.98	$1,864,707.59	$8,829,597.21	$3,180,002.84
G220001;Grounds	63,900	57.53	$0.00	$62,001.07	$52,786.47	$648,202.77	$0.00
Total:		**48.06**	**$40,691.67**	**$1,210,690.05**	**$1,917,494.06**	**$9,477,799.98**	**$3,180,002.84**

Deficiencies By Priority



- 1 - Response Time (< 2 yr) - $40,691.67
- 2 - Response Time (2-3 yrs) - $1,210,690.05
- 3 - Response Time (3-4 yrs) - $1,917,494.06
- 4 - Response Time (4-5 yrs) - $9,477,799.98
- 5 - Response Time (> 5 yrs) - $3,180,002.84

Budget Estimate Total: $15,826,678.60

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):	63,000
Year Built:	1932
Last Renovation:	
Replacement Value:	$31,606,235
Repair Cost:	$15,063,688.29
Total FCI:	47.66 %
Total RSLI:	51.28 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B220001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S220001		

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	17.00 %	0.00 %	$0.00
A20 - Basement Construction	17.00 %	0.00 %	$0.00
B10 - Superstructure	17.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	21.95 %	46.13 %	$1,638,072.32
B30 - Roofing	60.00 %	6.83 %	$40,691.67
C10 - Interior Construction	20.51 %	56.42 %	$872,283.15
C20 - Stairs	12.00 %	17.53 %	$15,569.46
C30 - Interior Finishes	55.09 %	55.45 %	$1,865,535.02
D10 - Conveying	105.71 %	287.02 %	$1,012,601.25
D20 - Plumbing	77.19 %	30.32 %	$390,000.33
D30 - HVAC	97.29 %	90.14 %	$6,316,910.84
D40 - Fire Protection	105.71 %	177.49 %	$901,243.13
D50 - Electrical	63.37 %	45.92 %	$1,700,455.49
E10 - Equipment	34.29 %	3.02 %	$30,273.46
E20 - Furnishings	30.00 %	208.70 %	$280,052.17
Totals:	**51.28 %**	**47.66 %**	**$15,063,688.29**

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.	63,000	100	1932	2032		17.00 %	0.00 %	17			$1,159,200
A1030	Slab on Grade	$7.73	S.F.	63,000	100	1932	2032		17.00 %	0.00 %	17			$486,990
A2010	Basement Excavation	$6.55	S.F.	63,000	100	1932	2032		17.00 %	0.00 %	17			$412,650
A2020	Basement Walls	$12.70	S.F.	63,000	100	1932	2032		17.00 %	0.00 %	17			$800,100
B1010	Floor Construction	$75.10	S.F.	63,000	100	1932	2032		17.00 %	0.00 %	17			$4,731,300
B1020	Roof Construction	$13.88	S.F.	63,000	100	1932	2032		17.00 %	0.00 %	17			$874,440
B2010	Exterior Walls	$36.91	S.F.	63,000	100	1932	2032		17.00 %	3.47 %	17		$80,723.68	$2,325,330
B2020	Exterior Windows	$18.01	S.F.	63,000	40	1932	1972	2027	30.00 %	126.02 %	12		$1,429,846.15	$1,134,630
B2030	Exterior Doors	$1.45	S.F.	63,000	25	1932	1957	2027	48.00 %	139.58 %	12		$127,502.49	$91,350
B3010105	Built-Up	$37.76	S.F.	15,750	20	2005	2025	2027	60.00 %	6.84 %	12		$40,691.67	$594,720
B3020	Roof Openings	$0.06	S.F.	15,750	20	2005	2025	2027	60.00 %	0.00 %	12			$945
C1010	Partitions	$17.91	S.F.	63,000	100	1932	2032		17.00 %	25.86 %	17		$291,820.75	$1,128,330
C1020	Interior Doors	$3.51	S.F.	63,000	40	1932	1972	2027	30.00 %	215.74 %	12		$477,058.71	$221,130
C1030	Fittings	$3.12	S.F.	63,000	40	1932	1972	2027	30.00 %	52.61 %	12		$103,403.69	$196,560
C2010	Stair Construction	$1.41	S.F.	63,000	100	1932	2032	2027	12.00 %	17.53 %	12		$15,569.46	$88,830
C3010230	Paint & Covering	$6.04	S.F.	63,000	10	1990	2000	2027	120.00 %	5.34 %	12		$20,321.63	$380,520
C3010232	Wall Tile	$10.75	S.F.	63,000	30	1932	1962	2027	40.00 %	0.00 %	12			$677,250
C3020411	Carpet	$7.30	S.F.	5,000	10	2014	2024		90.00 %	0.00 %	9			$36,500

Site Assessment Report - B220001;Alcorn

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3020413	Vinyl Flooring	$9.68	S.F.	5,000	20	1932	1952	2027	60.00 %	156.68 %	12		$75,833.34	$48,400
C3020414	Wood Flooring	$22.27	S.F.	40,000	25	1932	1957	2027	48.00 %	130.90 %	12		$1,166,082.84	$890,800
C3020415	Concrete Floor Finishes	$0.97	S.F.	10,000	50	1932	1982	2027	24.00 %	0.00 %	12			$9,700
C3030	Ceiling Finishes	$20.97	S.F.	63,000	25	1932	1957	2027	48.00 %	45.67 %	12		$603,297.21	$1,321,110
D1010	Elevators and Lifts	$5.60	S.F.	63,000	35			2052	105.71 %	287.02 %	37		$1,012,601.25	$352,800
D2010	Plumbing Fixtures	$13.52	S.F.	63,000	35	2006	2041		74.29 %	0.00 %	26			$851,760
D2020	Domestic Water Distribution	$1.68	S.F.	63,000	25			2042	108.00 %	76.47 %	27		$80,938.05	$105,840
D2030	Sanitary Waste	$2.90	S.F.	63,000	25			2042	108.00 %	169.16 %	27		$309,062.28	$182,700
D2040	Rain Water Drainage	$2.32	S.F.	63,000	30	1932	1962	2025	33.33 %	0.00 %	10			$146,160
D3020	Heat Generating Systems	$18.67	S.F.	63,000	35	2006	2041		74.29 %	0.00 %	26			$1,176,210
D3030	Cooling Generating Systems	$24.48	S.F.	63,000	30			2047	106.67 %	65.60 %	32		$1,011,741.80	$1,542,240
D3040	Distribution Systems	$42.99	S.F.	63,000	25	1932	1957	2042	108.00 %	145.98 %	27		$3,953,687.28	$2,708,370
D3050	Terminal & Package Units	$11.60	S.F.	63,000	20	1932	1952	2027	60.00 %	0.00 %	12			$730,800
D3060	Controls & Instrumentation	$13.50	S.F.	63,000	20			2037	110.00 %	158.90 %	22		$1,351,481.76	$850,500
D4010	Sprinklers	$7.05	S.F.	63,000	35			2052	105.71 %	202.91 %	37		$901,243.13	$444,150
D4020	Standpipes	$1.01	S.F.	63,000	35			2052	105.71 %	0.00 %	37			$63,630
D5010	Electrical Service/Distribution	$9.70	S.F.	63,000	30	2006	2036		70.00 %	129.66 %	21		$792,358.03	$611,100
D5020	Lighting and Branch Wiring	$34.68	S.F.	63,000	20	2009	2029		70.00 %	22.23 %	14		$485,734.44	$2,184,840
D5030	Communications and Security	$12.99	S.F.	63,000	15	2006	2021		40.00 %	50.57 %	6		$413,884.83	$818,370
D5090	Other Electrical Systems	$1.41	S.F.	63,000	30	2006	2036		70.00 %	9.54 %	21		$8,478.19	$88,830
E1020	Institutional Equipment	$4.82	S.F.	63,000	35	1932	1967	2027	34.29 %	9.97 %	12		$30,273.46	$303,660
E1090	Other Equipment	$11.10	S.F.	63,000	35	1932	1967	2027	34.29 %	0.00 %	12			$699,300
E2010	Fixed Furnishings	$2.13	S.F.	63,000	40	1932	1972	2027	30.00 %	208.70 %	12		$280,052.17	$134,190
								Total	**51.28 %**	**47.66 %**			**$15,063,688.29**	**$31,606,235**

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 Plaster 36%
Brick/Marble 64%

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

Note: Carpet 7%
Tile 4%
Vinyl 7%
Wood 63%
Concrete 19%

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

Note: There is no existing elevator.

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

Note: There is one (1) 300 kVA, 13.2 kV-208/2120V service transformer and one (1) 150 kVA, 208-120/240V, 2 phase changer transformer.

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:	**$15,063,688**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,074,894**	**$0**	**$0**	**$52,387**	**$216,069**	**$16,407,039**
*** 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	$80,724	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$80,724**
B2020 - Exterior Windows	$1,429,846	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,429,846**
B2030 - Exterior Doors	$127,502	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$127,502**
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	$40,692	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$40,692**
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	$291,821	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$291,821**
C1020 - Interior Doors	$477,059	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$477,059**
C1030 - Fittings	$103,404	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$103,404**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

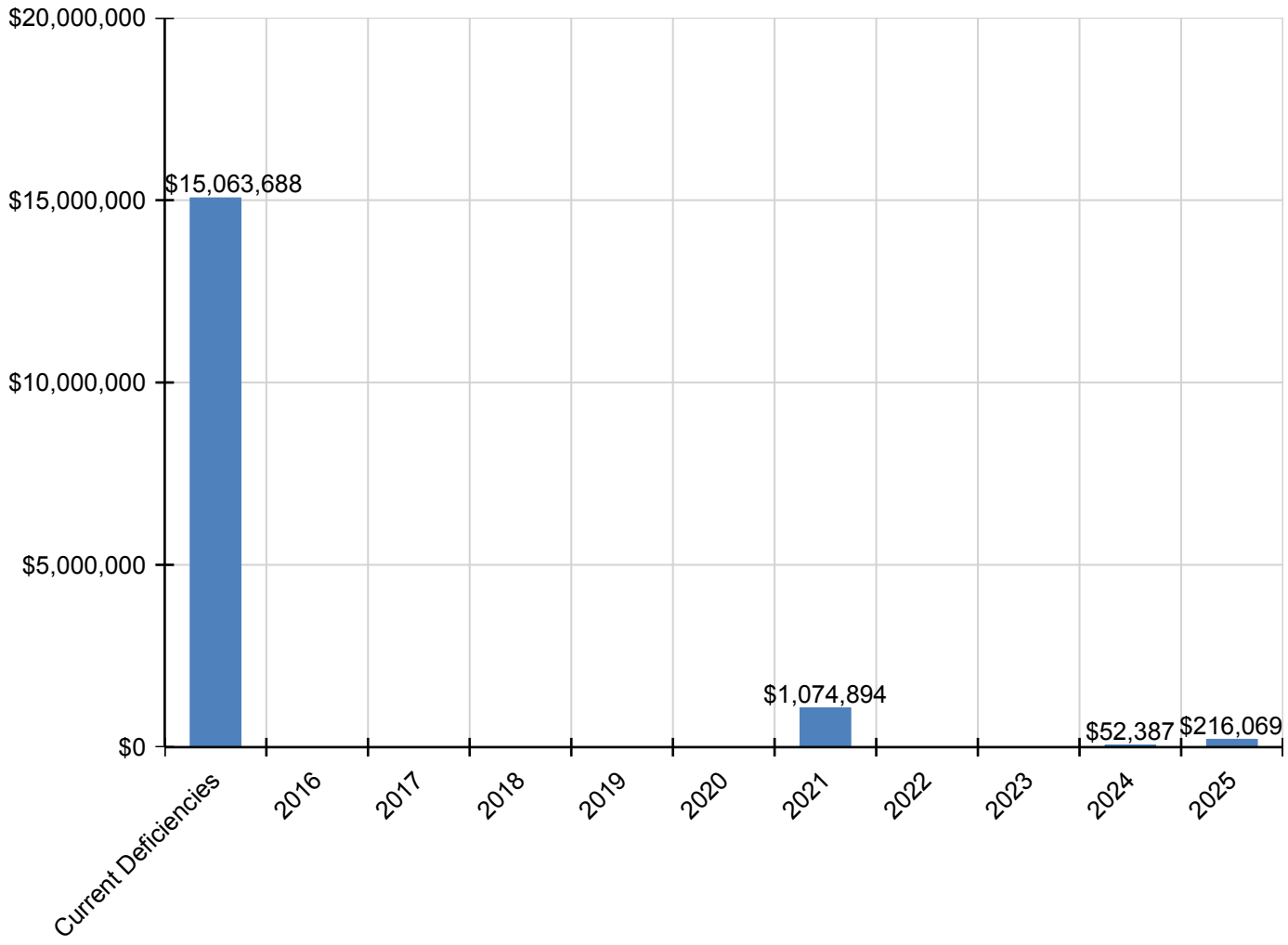
C2010 - Stair Construction	$15,569	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$15,569**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$20,322	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$20,322**
C3010232 - Wall Tile	$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	$52,387	$0	**$52,387**
C3020413 - Vinyl Flooring	$75,833	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$75,833**
C3020414 - Wood Flooring	$1,166,083	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,166,083**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$603,297	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$603,297**
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	$80,938	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$80,938**
D2030 - Sanitary Waste	$309,062	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$309,062**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$216,069	**$216,069**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$1,011,742	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,011,742**
D3040 - Distribution Systems	$3,953,687	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,953,687**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,351,482	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,351,482**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$901,243	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$901,243**
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	$792,358	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$792,358**
D5020 - Lighting and Branch Wiring	$485,734	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$485,734**
D5030 - Communications and Security	$413,885	$0	$0	$0	$0	$0	$1,074,894	$0	$0	$0	$0	**$1,488,779**
D5090 - Other Electrical Systems	$8,478	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$8,478**

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	$30,273	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$30,273**
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	$280,052	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$280,052**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

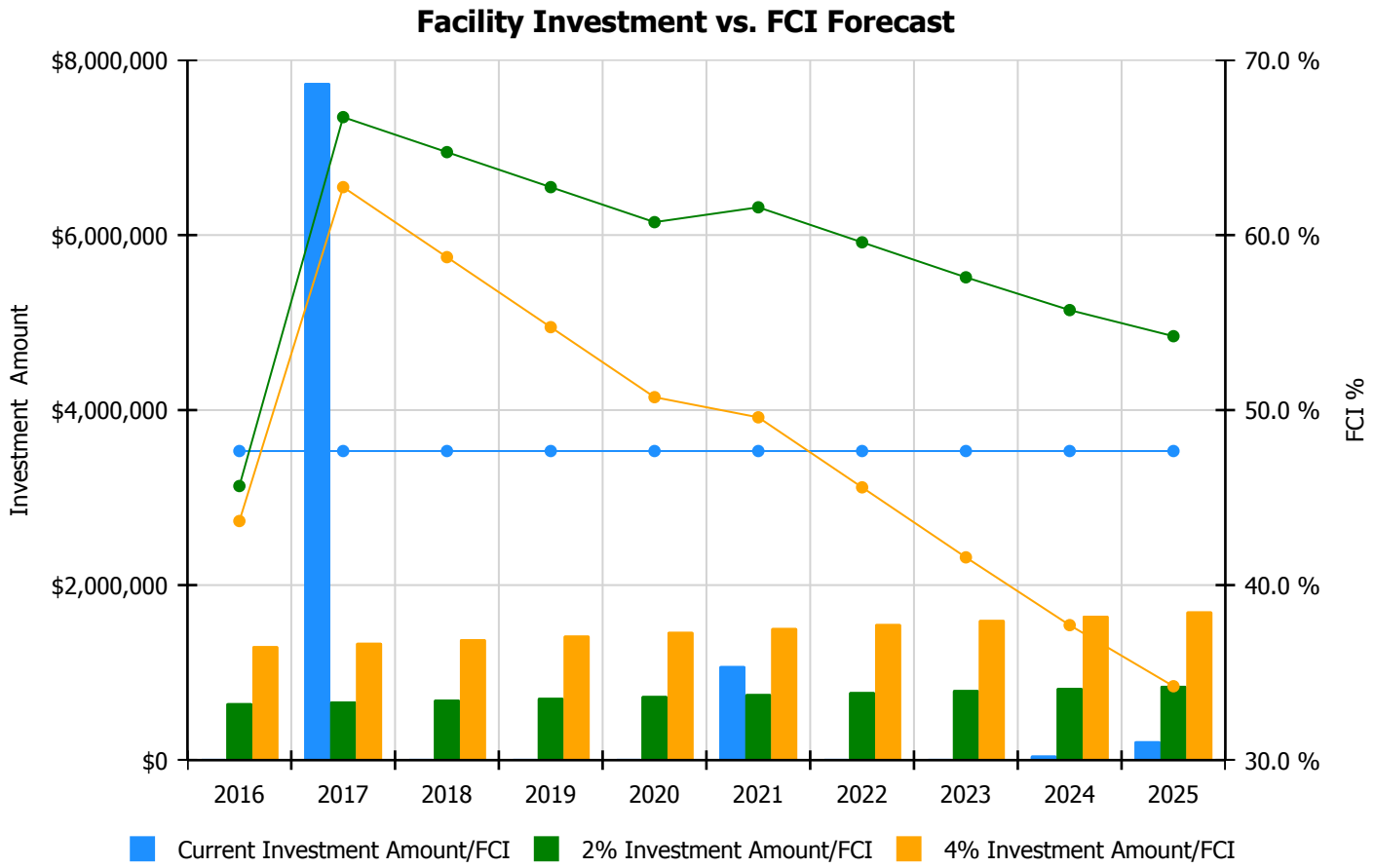
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

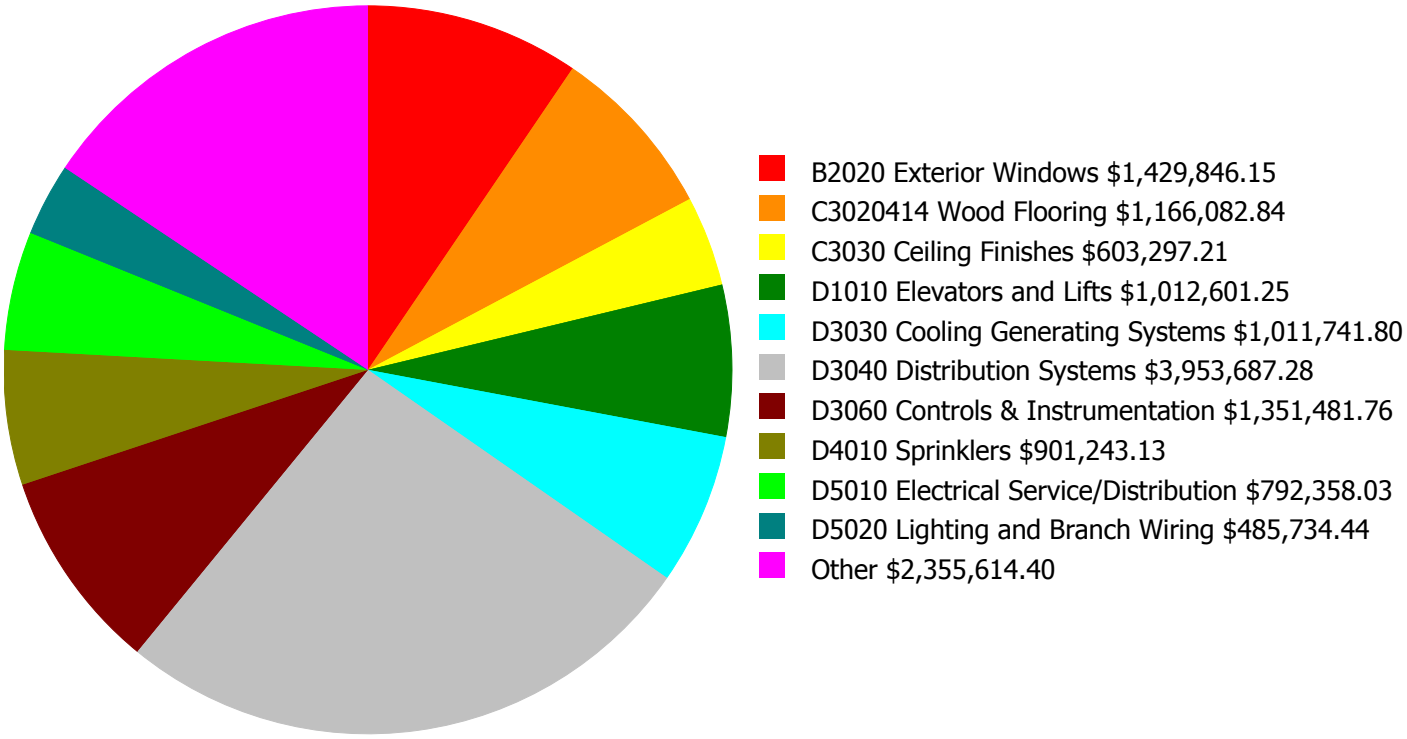
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 47.66%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$651,088.00	45.66 %	$1,302,177.00	43.66 %
2017	$7,738,019	$670,621.00	66.74 %	$1,341,242.00	62.74 %
2018	$0	$690,740.00	64.74 %	$1,381,479.00	58.74 %
2019	$0	$711,462.00	62.74 %	$1,422,924.00	54.74 %
2020	$0	$732,806.00	60.74 %	$1,465,612.00	50.74 %
2021	$1,074,894	$754,790.00	61.59 %	$1,509,580.00	49.59 %
2022	$0	$777,434.00	59.59 %	$1,554,867.00	45.59 %
2023	$0	$800,757.00	57.59 %	$1,601,513.00	41.59 %
2024	$52,387	$824,779.00	55.71 %	$1,649,559.00	37.71 %
2025	$216,069	$849,523.00	54.22 %	$1,699,045.00	34.22 %
Total:	**$9,081,369**	**$7,464,000.00**		**$14,927,998.00**	

Deficiency Summary by System

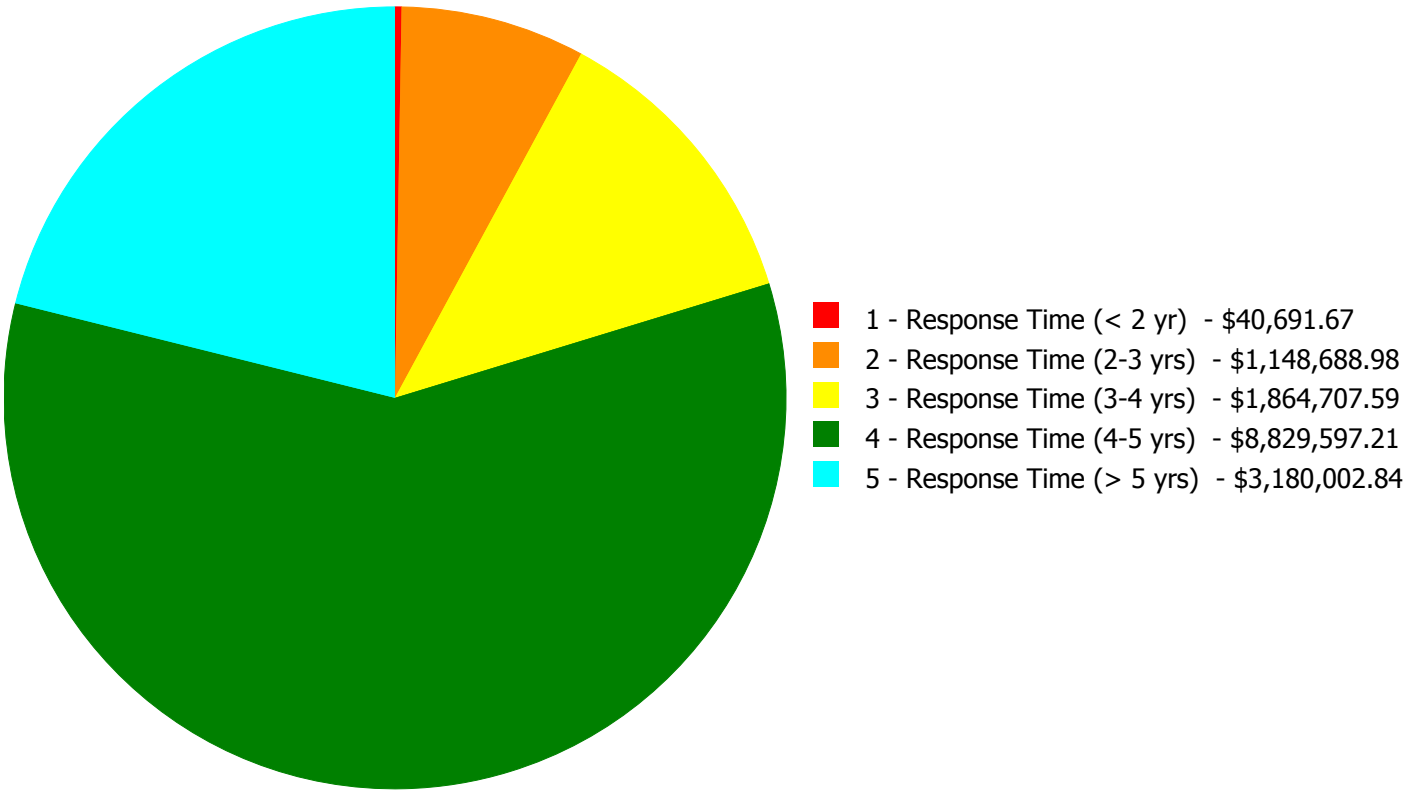
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $15,063,688.29

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: $15,063,688.29

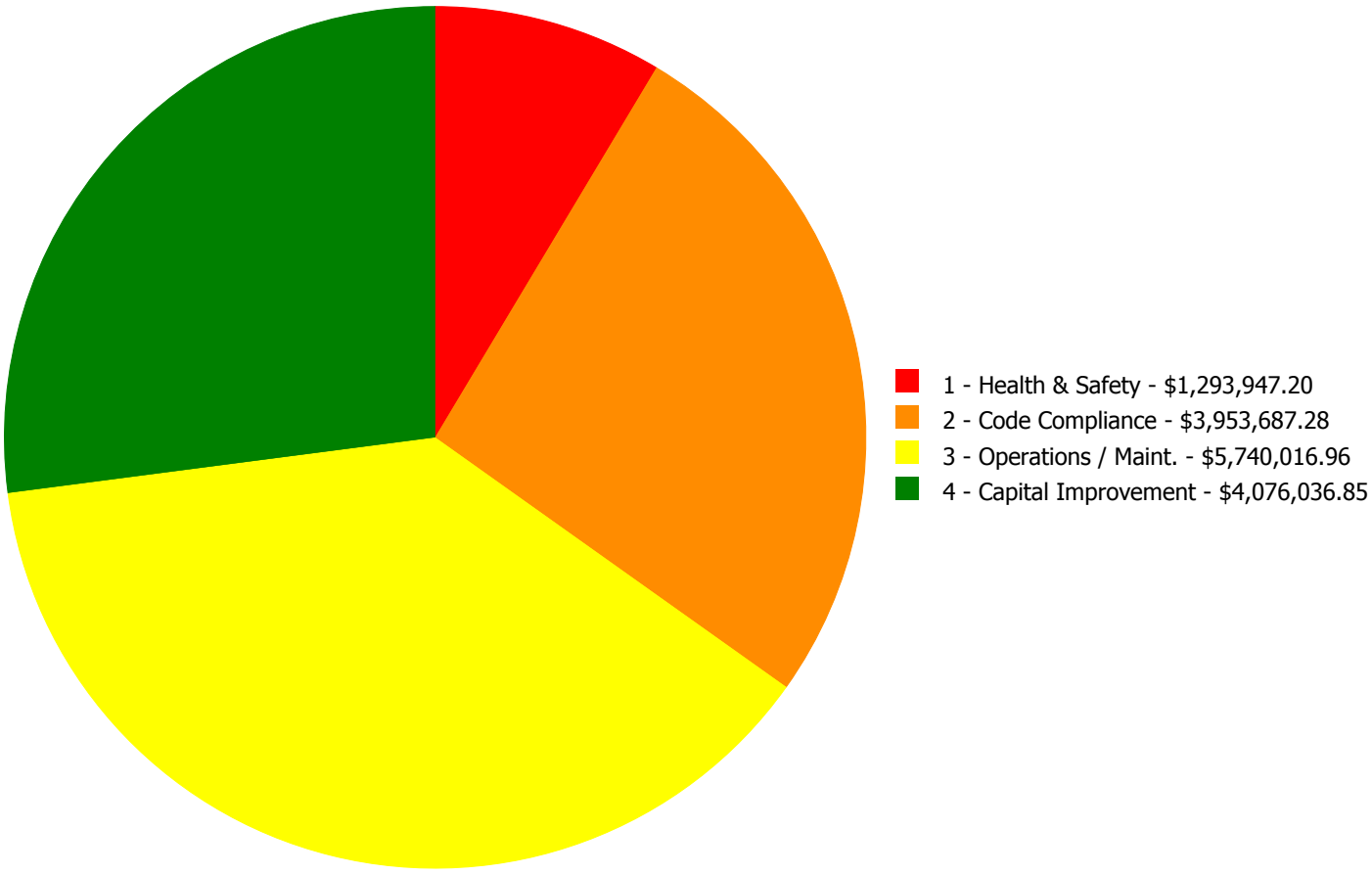
Deficiency By Priority Investment Table

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	$0.00	$80,723.68	$0.00	$80,723.68
B2020	Exterior Windows	$0.00	$0.00	$0.00	$1,429,846.15	$0.00	$1,429,846.15
B2030	Exterior Doors	$0.00	$0.00	$0.00	$127,502.49	$0.00	$127,502.49
B3010105	Built-Up	$40,691.67	$0.00	$0.00	$0.00	$0.00	$40,691.67
C1010	Partitions	$0.00	$136,087.73	$155,733.02	$0.00	$0.00	$291,820.75
C1020	Interior Doors	$0.00	$0.00	$477,058.71	$0.00	$0.00	$477,058.71
C1030	Fittings	$0.00	$0.00	$0.00	$0.00	$103,403.69	$103,403.69
C2010	Stair Construction	$0.00	$0.00	$0.00	$15,569.46	$0.00	$15,569.46
C3010230	Paint & Covering	$0.00	$0.00	$20,321.63	$0.00	$0.00	$20,321.63
C3020413	Vinyl Flooring	$0.00	$0.00	$75,833.34	$0.00	$0.00	$75,833.34
C3020414	Wood Flooring	$0.00	$0.00	$0.00	$0.00	$1,166,082.84	$1,166,082.84
C3030	Ceiling Finishes	$0.00	$0.00	$0.00	$0.00	$603,297.21	$603,297.21
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	$80,938.05	$0.00	$80,938.05
D2030	Sanitary Waste	$0.00	$0.00	$0.00	$309,062.28	$0.00	$309,062.28
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,011,741.80	$1,011,741.80
D3040	Distribution Systems	$0.00	$0.00	$0.00	$3,953,687.28	$0.00	$3,953,687.28
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$1,351,481.76	$0.00	$1,351,481.76
D4010	Sprinklers	$0.00	$0.00	$0.00	$901,243.13	$0.00	$901,243.13
D5010	Electrical Service/Distribution	$0.00	$0.00	$374,191.52	$418,166.51	$0.00	$792,358.03
D5020	Lighting and Branch Wiring	$0.00	$0.00	$369,745.57	$100,563.74	$15,425.13	$485,734.44
D5030	Communications and Security	$0.00	$0.00	$383,345.61	$30,539.22	$0.00	$413,884.83
D5090	Other Electrical Systems	$0.00	$0.00	$8,478.19	$0.00	$0.00	$8,478.19
E1020	Institutional Equipment	$0.00	$0.00	$0.00	$30,273.46	$0.00	$30,273.46
E2010	Fixed Furnishings	$0.00	$0.00	$0.00	$0.00	$280,052.17	$280,052.17
	Total:	$40,691.67	$1,148,688.98	$1,864,707.59	$8,829,597.21	$3,180,002.84	$15,063,688.29

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: $15,063,688.29

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: B3010105 - Built-Up

Location: Roof

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Blister or membrane repair - partial areas

Qty: 2,000.00

Unit of Measure: S.F.

Estimate: $40,691.67

Assessor Name: System

Date Created: 11/19/2015

Notes: The built up roof was installed within the past ten years as reported by the school. The roof is in very good condition with few exceptions. Currently there is an active leak over the western most roof section that if not repaired soon will start to deteriorate the insulation and the integrity of the classroom finishes. This deficiency provides a budgetary consideration for built up roof repair for this section.

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

System: C1010 - Partitions

Location: Building Wide

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: 3,000.00

Unit of Measure: S.F.

Estimate: $69,249.24

Assessor Name: System

Date Created: 11/19/2015

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: C1010 - Partitions

Location: Classrooms

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

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

Qty: 3,000.00

Unit of Measure: S.F.

Estimate: $66,838.49

Assessor Name: System

Date Created: 11/19/2015

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: 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: 11/19/2015

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: C1010 - Partitions

Location: Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

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

Qty: 16.00

Unit of Measure: S.F.

Estimate: $155,733.02

Assessor Name: System

Date Created: 11/19/2015

Notes: This building has adequate exit pathways and no egress obstructions were noted during our building walk through. However the corridor doors on all floors are not fire rated and should be upgraded. Install new fire rated flush wood doors on all floor corridors. If the recommended lever hardware and room signage has not been implemented then these features should be incorporated into the work scope.

System: C1020 - Interior Doors

Location: Classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 100.00

Unit of Measure: Ea.

Estimate: $477,058.71

Assessor Name: System

Date Created: 11/19/2015

Notes: Interior doors are typically wood in wood frames with transom lites, sidelights, wired glass glazing. Other interior doors include solid wooden glass pane doors with original wooden pane frames, hollow metal in hollow metal frames at some of the stairwells and gym access point, and folding closet doors. Doors are generally in fair condition and is a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. The deficiency provides a budgetary consideration to correct the hallway, transoms, wooden doors and frames with consideration for the exit stair doors and construction.

System: C3010230 - Paint & Covering

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 3,000.00

Unit of Measure: S.F.

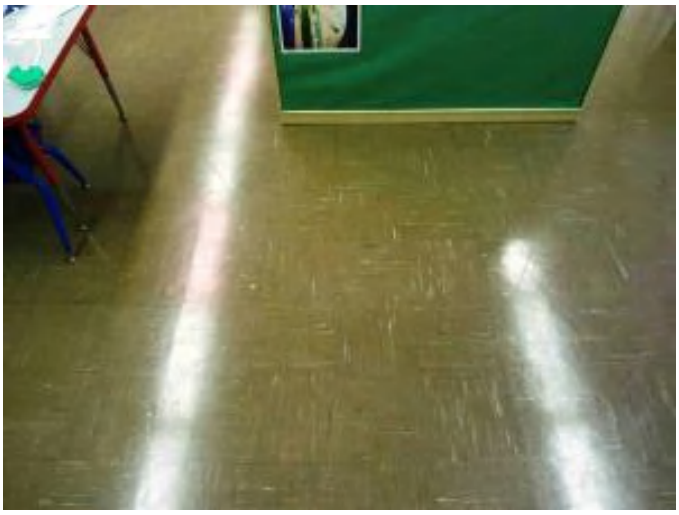
Estimate: $20,321.63

Assessor Name: System

Date Created: 11/19/2015

Notes: There are several minor areas of wall damage that ranges from serious to minor. Although the school is on a cyclical program of renewal and each painted surface is renewed at years end this system is at the point in which repairs are necessary. Remove damaged wall finishes and repair areas then apply primer and paint finish.

System: C3020413 - Vinyl Flooring



Location: Classrooms

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $75,833.34

Assessor Name: System

Date Created: 11/19/2015

Notes: The floor finish for this school is a combination of carpet in the library area, tile in the kitchen and service line areas, wooden classrooms with concrete hallways and stirs finishes and a vinyl tile finish. The vinyl tile finish is a 9 x 9 application and is suspect to contain asbestos. 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: D5010 - Electrical Service/Distribution

Location: Boiler Room and Corridors on all floors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard

Qty: 12.00

Unit of Measure: Ea.

Estimate: $374,191.52

Assessor Name: System

Date Created: 10/23/2015

Notes: Replace 120/240V, 1 phase panelboards in corridors on all floors and 400A Panelboard A, B, C in the Boiler Room, and Emergency Lighting Panel with 208/120V, 3 phase panelboards. Total of 12 panelboards.

System: D5020 - Lighting and Branch Wiring

Location: Classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 16,050.00

Unit of Measure: S.F.

Estimate: $332,044.88

Assessor Name: System

Date Created: 10/23/2015

Notes: Replace fluorescent lighting fixtures and branch wiring in 24 classrooms (Approximately 16,050 SF).

System: D5020 - Lighting and Branch Wiring

Location: Various rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 2,375.00

Unit of Measure: S.F.

Estimate: $33,769.46

Assessor Name: System

Date Created: 10/23/2015

Notes: Replace fluorescent lighting fixtures and branch wiring in storage rooms, toilet rooms, faculty lounge and prep kitchen that have obsolete fixtures with T12 lamps (Approximately 2,375 SF).

System: D5020 - Lighting and Branch Wiring

Location: Boiler Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace lighting fixtures

Qty: 7.00

Unit of Measure: Ea.

Estimate: $3,931.23

Assessor Name: System

Date Created: 10/23/2015

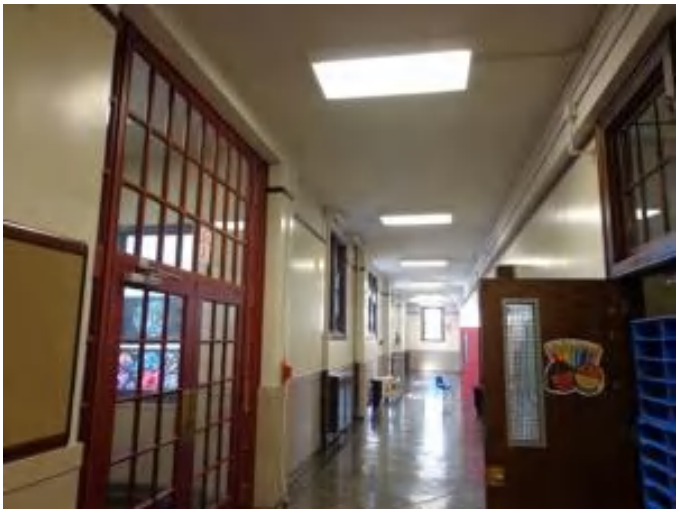
Notes: Replace (7) 4 foot industrial fluorescent T12 lighting fixtures in the Boiler Room with T8 lighting fixtures

System: D5030 - Communications and Security

Location: Building wide
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace fire alarm system
Qty: 1.00
Unit of Measure: S.F.
Estimate: $267,822.81
Assessor Name: System
Date Created: 10/23/2015

Notes: Replace fire alarm system with an addressable type system, including pull stations, smoke and heat detectors, and audible and visual notification appliances.

System: D5030 - Communications and Security



Location: Building interior
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 3 - Response Time (3-4 yrs)
Correction: Add/Replace Video Surveillance System
Qty: 17.00
Unit of Measure: Ea.
Estimate: $115,522.80
Assessor Name: System
Date Created: 10/23/2015

Notes: Add (17) interior video surveillance cameras, equipment rack, DVR's, monitors and associated equipment.

System: D5090 - Other Electrical Systems

Location: Auditorium and gymnasium

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace Emergency/Exit Lighting

Qty: 10.00

Unit of Measure: Ea.

Estimate: $8,478.19

Assessor Name: System

Date Created: 10/23/2015

Notes: Replace a total of (10) exit signs in the auditorium and gymnasium with LED type.

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

System: B2010 - Exterior Walls

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 2,500.00

Unit of Measure: S.F.

Estimate: $80,723.68

Assessor Name: System

Date Created: 11/19/2015

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

System: B2020 - Exterior Windows

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 260.00

Unit of Measure: Ea.

Estimate: $1,429,846.15

Assessor Name: System

Date Created: 11/19/2015

Notes: The wood and metal-framed, double hung windows with standard single pane glass have been replaced in the last twenty years. Several of the windows are leaking into the interior finishes as indicated in the photos and others do not operate correctly. It is recommended that the exterior window systems be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

System: B2030 - Exterior Doors

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 14.00

Unit of Measure: Ea.

Estimate: $127,502.49

Assessor Name: System

Date Created: 11/19/2015

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, store front and service doors are recommended for upgrade.

System: C2010 - Stair Construction

Location: Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

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

Qty: 1,000.00

Unit of Measure: L.F.

Estimate: $15,569.46

Assessor Name: System

Date Created: 11/19/2015

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

System: D2020 - Domestic Water Distribution

Location: mechanical room

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace duplex domestic booster pump set (5 HP)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $50,533.86

Assessor Name: System

Date Created: 10/24/2015

Notes: Install a new duplex domestic water booster pump system with pumps, controls, and pressure tank. Locate in mechanical room and connect to main water distribution. Include electrical connection, starters and disconnects.

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: 6,000.00

Unit of Measure: S.F.

Estimate: $30,404.19

Assessor Name: System

Date Created: 10/24/2015

Notes: Replace domestic hot and cold water pipe, fittings, valves, hangers 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. (+50KSF)

Qty: 63,000.00

Unit of Measure: S.F.

Estimate: $309,062.28

Assessor Name: System

Date Created: 10/24/2015

Notes:

System: D3040 - Distribution Systems

Location: entire building

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide classroom FC units and dedicated OA ventilation system. (20 clsrms)

Qty: 35.00

Unit of Measure: C

Estimate: $2,907,134.68

Assessor Name: System

Date Created: 10/24/2015

Notes: Provide a four pipe fan coil system with roof mounted outside air system ducted to each fan coil unit. Provide a fan coil unit for each classroom and separate area. Include new heat exchanger and pump for hot water, piping, control valves and controls, to replace steam heating 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: 480.00

Unit of Measure: Seat

Estimate: $684,204.94

Assessor Name: System

Date Created: 10/24/2015

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: cafeteria/gymnasium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Install HVAC unit for Cafeteria (850 students).

Qty: 775.00

Unit of Measure: Pr.

Estimate: $362,347.66

Assessor Name: System

Date Created: 10/24/2015

Notes: Provide a new central station air handling unit for the cafeteria/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: 63,000.00

Unit of Measure: S.F.

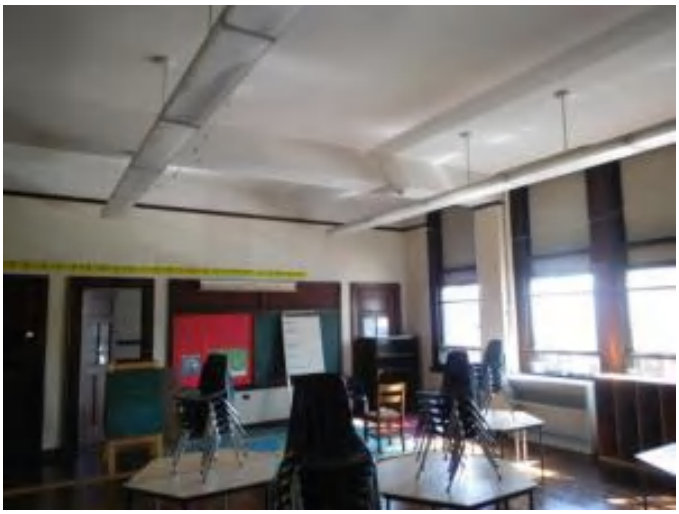
Estimate: $1,351,481.76

Assessor Name: System

Date Created: 10/24/2015

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: 63,000.00

Unit of Measure: S.F.

Estimate: $901,243.13

Assessor Name: System

Date Created: 10/24/2015

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

System: D5010 - Electrical Service/Distribution

Location: Main Electrical Room

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: $418,166.51

Assessor Name: System

Date Created: 10/23/2015

Notes: Provide a 1600A, 208/120V, 3 phase, 4 wire service distribution switchboard with associated feeder circuit breakers and feeders to serve added central air conditioning equipment, an elevator addition, and a 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: 720.00

Unit of Measure: L.F.

Estimate: $100,563.74

Assessor Name: System

Date Created: 10/23/2015

Notes: Add surface metal raceway system with additional duplex receptacles in 24 classrooms, and replace approximately 35 non-grounding type receptacles with 3-wire grounding type. Add additional receptacles in the Main Office.

System: D5030 - Communications and Security

Location: Building wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Clock System or Components

Qty: 48.00

Unit of Measure: Ea.

Estimate: $30,539.22

Assessor Name: System

Date Created: 10/23/2015

Notes: Replace clock system with a wireless GPS system.

System: E1020 - Institutional Equipment

Location: Gym

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or install basketball backstop and hoop - pick the appropriate style of backstop

Qty: 4.00

Unit of Measure: Ea.

Estimate: $30,273.46

Assessor Name: System

Date Created: 11/19/2015

Notes: The athletic, recreational equipment appears to be from the original construction of the school. The equipment is well maintained however showing signs of age related to a high level of usage. This project provides a budgetary consideration for a universal upgrade to these systems.

Priority 5 - Response Time (> 5 yrs):

System: C1030 - Fittings

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 200.00

Unit of Measure: Ea.

Estimate: $54,182.50

Assessor Name: System

Date Created: 11/19/2015

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: Classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 60.00

Unit of Measure: Ea.

Estimate: $41,293.93

Assessor Name: System

Date Created: 11/19/2015

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

System: C1030 - Fittings

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace tackboards - select size

Qty: 10.00

Unit of Measure: Ea.

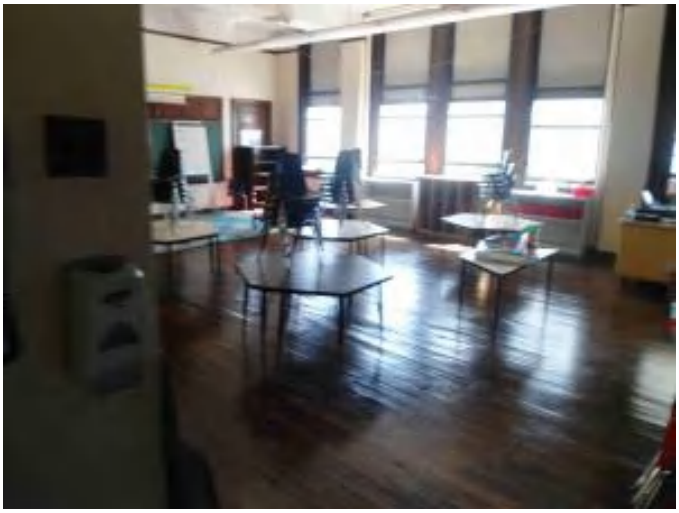
Estimate: $7,927.26

Assessor Name: System

Date Created: 11/19/2015

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

System: C3020414 - Wood Flooring



Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace wood flooring

Qty: 40,000.00

Unit of Measure: S.F.

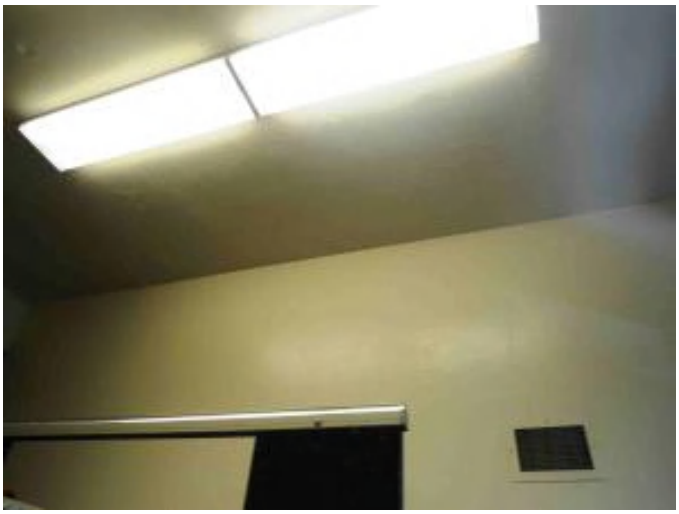
Estimate: $1,166,082.84

Assessor Name: System

Date Created: 11/19/2015

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

System: C3030 - Ceiling Finishes



Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 40,000.00

Unit of Measure: S.F.

Estimate: $603,297.21

Assessor Name: System

Date Created: 11/19/2015

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

System: 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: 63,000.00

Unit of Measure: S.F.

Estimate: $1,011,741.80

Assessor Name: System

Date Created: 10/24/2015

Notes: Provide a one hundred sixty ton air cooled package chiller on the roof with pumps, piping and controls in the mechanical room. Connect to new fan coil units and air handling units.

System: D5020 - Lighting and Branch Wiring

Location: Auditorium

Distress: Energy Efficiency

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Maintain Lighting Fixtures

Qty: 20.00

Unit of Measure: Ea.

Estimate: $15,425.13

Assessor Name: System

Date Created: 10/23/2015

Notes: Replace (1) damaged lighting fixture in the auditorium and re-lamp (8) pendant mounted fixtures and (12) wall sconces with LED lamps.

System: E2010 - Fixed Furnishings

Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 300.00

Unit of Measure: Ea.

Estimate: $270,571.65

Assessor Name: System

Date Created: 11/19/2015

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.

System: E2010 - Fixed Furnishings

Location: Stage

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $9,480.52

Assessor Name: System

Date Created: 11/19/2015

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

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 5230 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	hb smirh	mills 450			35	2006	2041	$122,870.00	$135,157.00
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 5230 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	hb smirh	mills 450			35	2006	2041	$122,870.00	$135,157.00
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 1 stories, 25' horizontal	3.00	Ea.	Boiler Room	Not Identified	NA	NA		30			$12,109.50	$39,961.35
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 1 stories, 25' horizontal	1.00	Ea.	Main Electrical Room	Cutler-Hammer	PRL2A	NA		30	2005	2035	$12,109.50	$13,320.45
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 2000 A	3.00	Ea.	Main Electrical Room	Cutler-Hammer	Pow-R-Line	NA		30	2005	2035	$47,537.55	$156,873.92
												Total:	**$480,469.72**

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):	63,900
Year Built:	1932
Last Renovation:	
Replacement Value:	$1,326,323
Repair Cost:	$762,990.31
Total FCI:	57.53 %
Total RSLI:	47.77 %

Description:

Attributes:

General Attributes:

Bldg ID:	S220001	Site ID:	S220001

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	39.13 %	74.36 %	$710,203.84
G40 - Site Electrical Utilities	70.00 %	14.22 %	$52,786.47
Totals:	**47.77 %**	**57.53 %**	**$762,990.31**

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 $
G2010	Roadways	$11.52	S.F.	3,000	30	1990	2020	2027	40.00 %	0.00 %	12			$34,560
G2020	Parking Lots	$8.50	S.F.	30,600	30	1980	2010	2027	40.00 %	163.10 %	12		$424,227.18	$260,100
G2030	Pedestrian Paving	$12.30	S.F.	29,800	40	1950	1990	2027	30.00 %	11.77 %	12		$43,148.55	$366,540
G2040	Site Development	$4.36	S.F.	63,900	25	1976	2001	2027	48.00 %	87.16 %	12		$242,828.11	$278,604
G2050	Landscaping & Irrigation	$4.36	S.F.	3,500	15	1988	2003	2027	80.00 %	0.00 %	12			$15,260
G4020	Site Lighting	$4.84	S.F.	63,900	30	2006	2036		70.00 %	0.00 %	21			$309,276
G4030	Site Communications & Security	$0.97	S.F.	63,900	30	2006	2036		70.00 %	85.16 %	21		$52,786.47	$61,983
								Total	**47.77 %**	**57.53 %**			**$762,990.31**	**$1,326,323**

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.

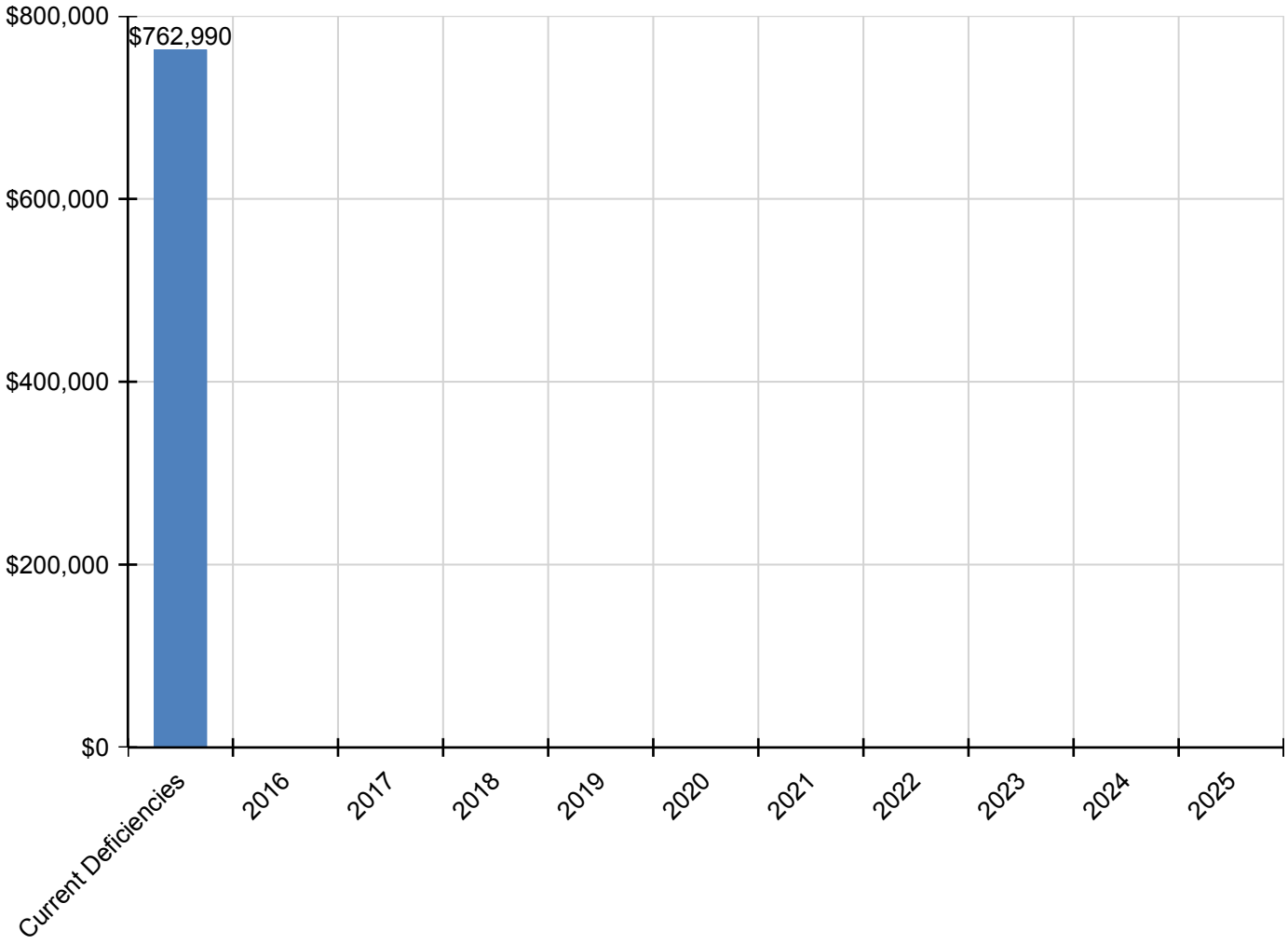
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$762,990**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$762,990**
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**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$424,227	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$424,227**
G2030 - Pedestrian Paving	$43,149	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$43,149**
G2040 - Site Development	$242,828	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$242,828**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$52,786	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$52,786**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

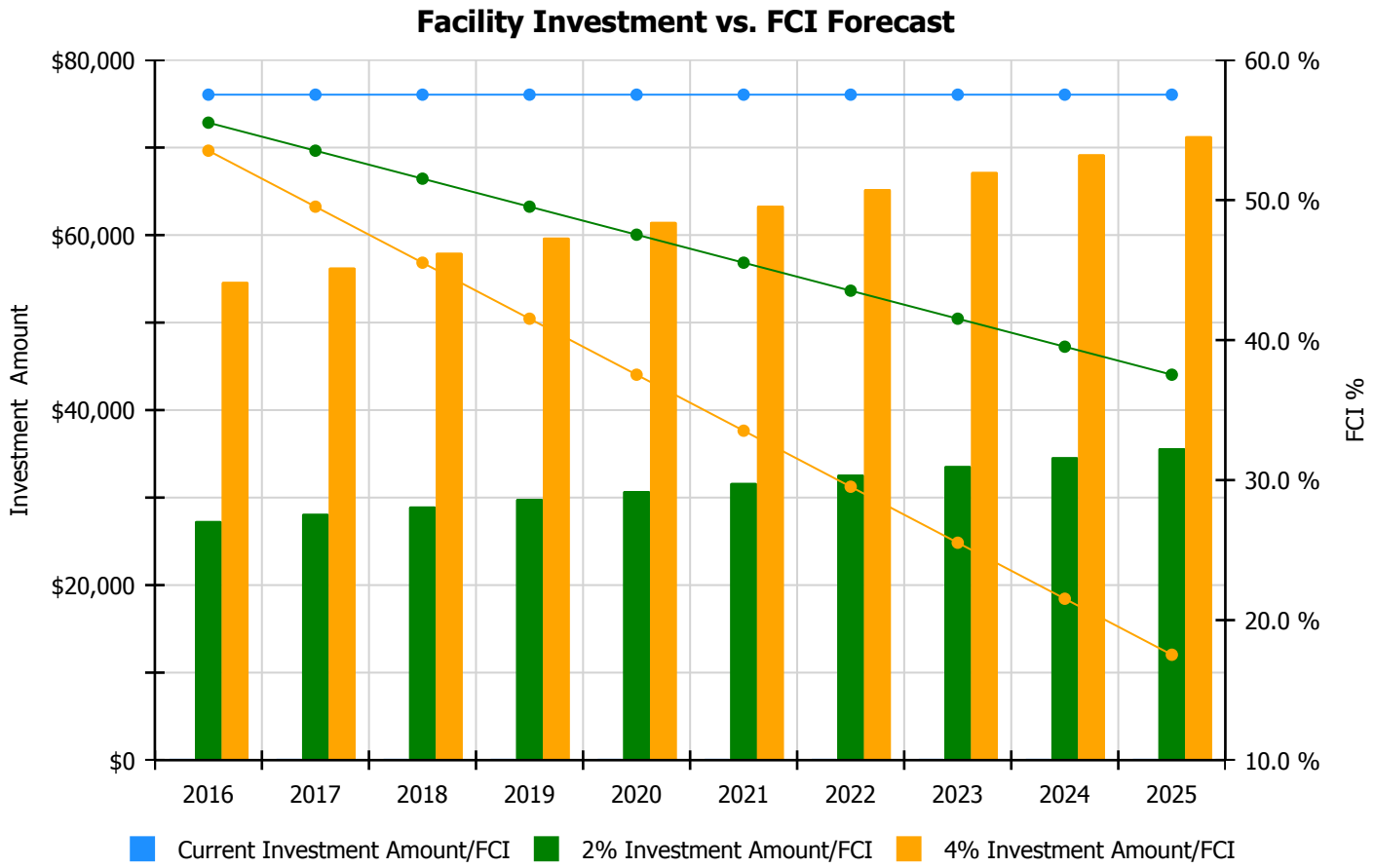
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

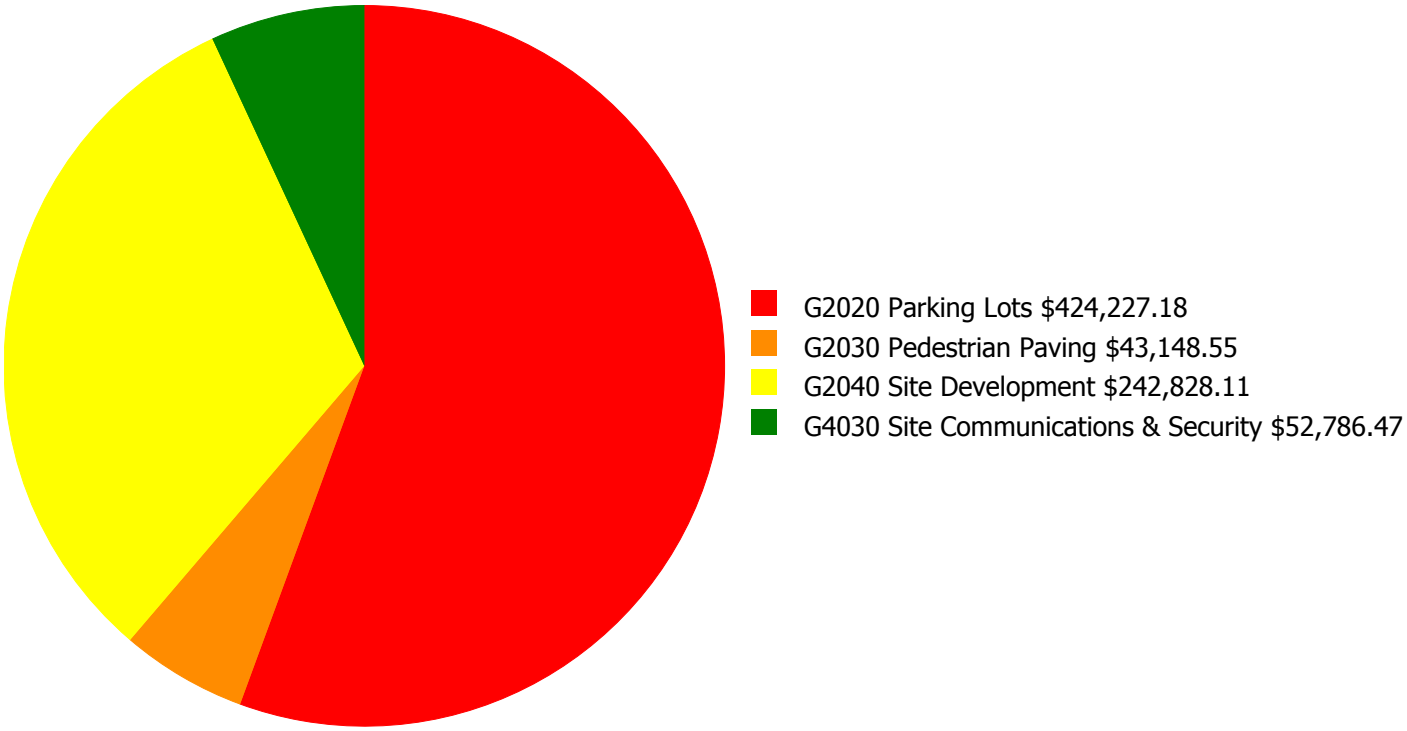
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 57.53%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$27,322.00	55.53 %	$54,645.00	53.53 %
2017	$0	$28,142.00	53.53 %	$56,284.00	49.53 %
2018	$0	$28,986.00	51.53 %	$57,972.00	45.53 %
2019	$0	$29,856.00	49.53 %	$59,712.00	41.53 %
2020	$0	$30,751.00	47.53 %	$61,503.00	37.53 %
2021	$0	$31,674.00	45.53 %	$63,348.00	33.53 %
2022	$0	$32,624.00	43.53 %	$65,248.00	29.53 %
2023	$0	$33,603.00	41.53 %	$67,206.00	25.53 %
2024	$0	$34,611.00	39.53 %	$69,222.00	21.53 %
2025	$0	$35,649.00	37.53 %	$71,299.00	17.53 %
Total:	**$0**	**$313,218.00**		**$626,439.00**	

Deficiency Summary by System

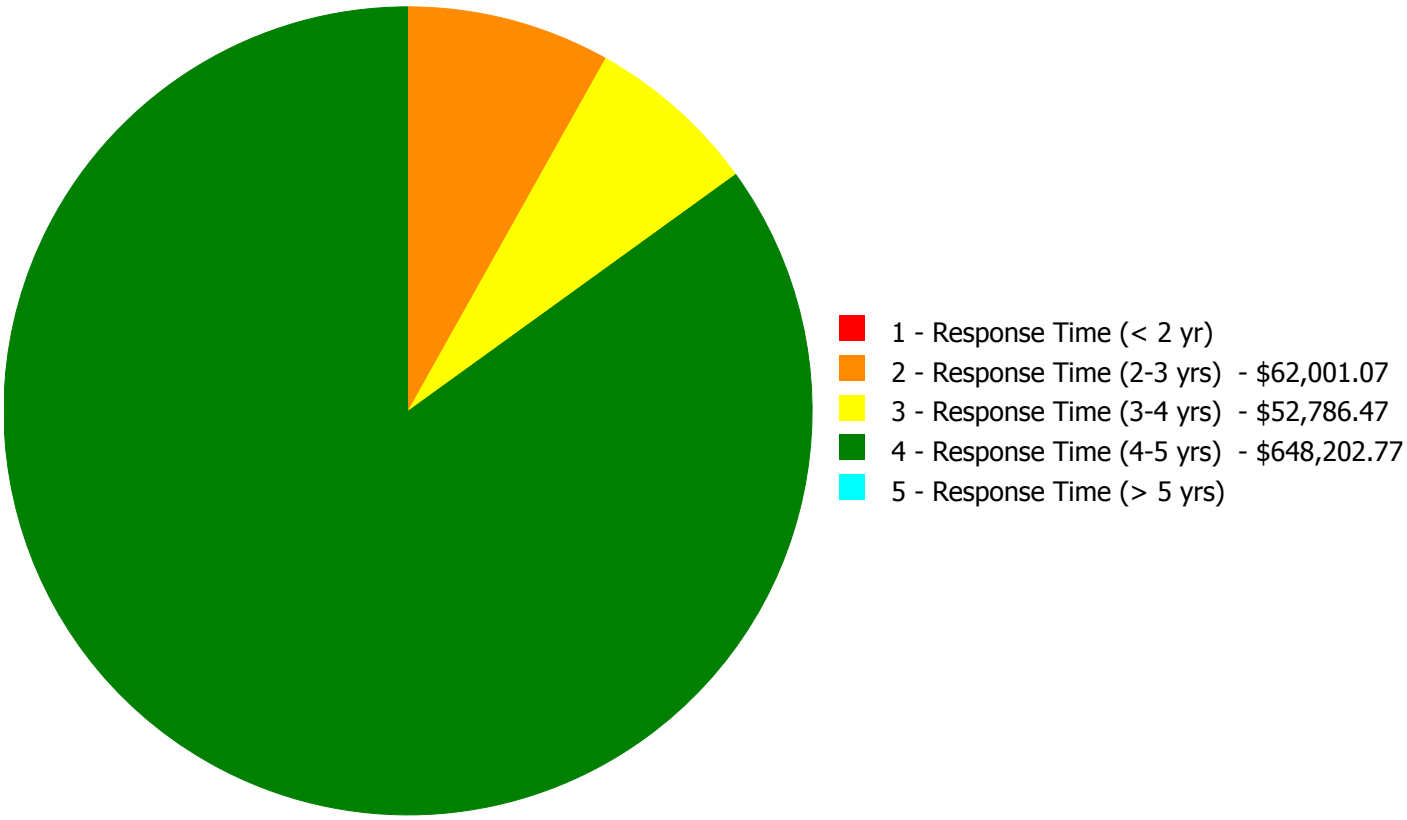
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $762,990.31

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: $762,990.31

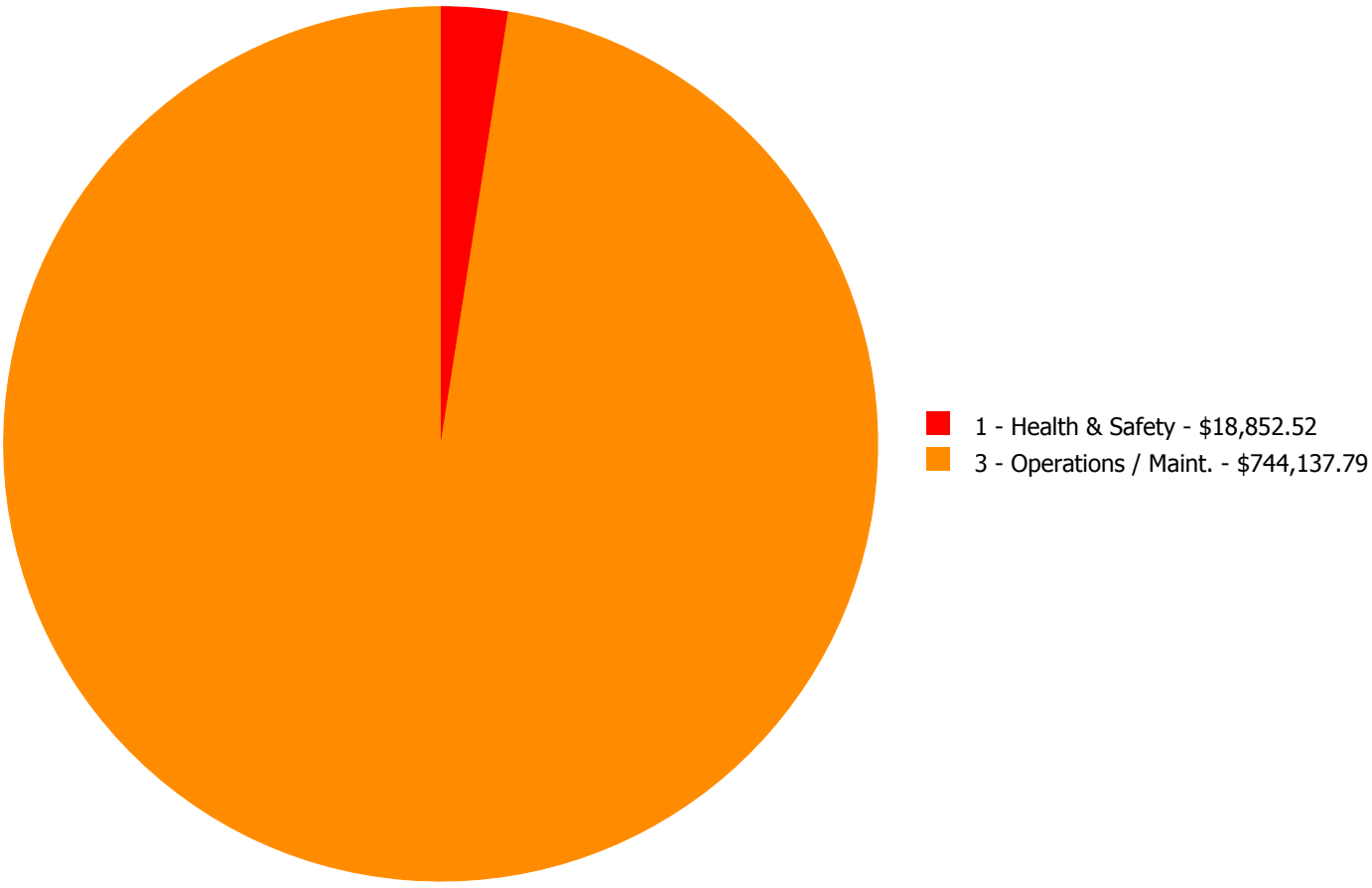
Deficiency By Priority Investment Table

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	$424,227.18	$0.00	$424,227.18
G2030	Pedestrian Paving	$0.00	$43,148.55	$0.00	$0.00	$0.00	$43,148.55
G2040	Site Development	$0.00	$18,852.52	$0.00	$223,975.59	$0.00	$242,828.11
G4030	Site Communications & Security	$0.00	$0.00	$52,786.47	$0.00	$0.00	$52,786.47
	Total:	$0.00	$62,001.07	$52,786.47	$648,202.77	$0.00	$762,990.31

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: $762,990.31

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: G2030 - Pedestrian Paving

Location: SIte
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace concrete sidewalk or concrete paving - 4" concrete thickness
Qty: 3,000.00
Unit of Measure: S.F.
Estimate: $43,148.55
Assessor Name: Ben Nixon
Date Created: 11/19/2015

Notes: The sidewalk system is original to the buildings construction. There are a several areas of cracking concrete but no tripping hazards. The sidewalk system is expected to expire in the near future. Removal of the entire system is recommended. Universal upgrades are required and should include all aspects of current ADA legislation.

System: G2040 - Site Development

Location: Site
Distress: 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: Ben Nixon
Date Created: 11/19/2015

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 safety of the students and the general public. Construction of a secure lockable dumpster area is recommended.

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

System: G4030 - Site Communications & Security

Location: Building exterior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace video surveillance camera

Qty: 5.00

Unit of Measure: Ea.

Estimate: $52,786.47

Assessor Name: Ben Nixon

Date Created: 10/23/2015

Notes: Replace (5) exterior video surveillance cameras.

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: 30,000.00

Unit of Measure: S.F.

Estimate: $424,227.18

Assessor Name: Ben Nixon

Date Created: 11/19/2015

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: G2040 - Site Development

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace chain link fence - 8' high

Qty: 2,000.00

Unit of Measure: L.F.

Estimate: $223,975.59

Assessor Name: Ben Nixon

Date Created: 11/19/2015

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

Equipment Inventory

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

No data found for this asset

Glossary

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

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

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

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

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

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

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

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

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

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

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