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.

Camelot Academy (Boone) School

Governance	CONTRACTED	Report Type	Middlehigh
Address	1435 N. 26Th St. Philadelphia, Pa 19121	Enrollment	182
		Grade Range	'06-12'
Phone/Fax	215-684-5080 / 215-684-8961	Admissions Category	Alternative
Website	Www.Cameloteducation.Org/Camelot-Academy-Of-Philadelphia/	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**42.62%**	**$14,026,762**	**$32,914,101**
Building	42.33 %	$13,653,608	$32,258,817
Grounds	56.95 %	$373,154	$655,284

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	02.89 %	$24,415	$843,719
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.57 %	$10,033	$1,756,593
Windows (Shows functionality of exterior windows)	116.91 %	$896,554	$766,892
Exterior Doors (Shows condition of exterior doors)	43.08 %	$40,480	$93,963
Interior Doors (Classroom doors)	151.97 %	$321,492	$211,556
Interior Walls (Paint and Finishes)	00.00 %	$0	$1,106,732
Plumbing Fixtures	16.07 %	$285,570	$1,776,849
Boilers	00.00 %	$0	$1,050,468
Chillers/Cooling Towers	63.58 %	$875,775	$1,377,367
Radiators/Unit Ventilators/HVAC	232.99 %	$5,635,581	$2,418,832
Heating/Cooling Controls	158.90 %	$1,207,002	$759,578
Electrical Service and Distribution	101.00 %	$551,203	$545,771
Lighting	33.98 %	$663,027	$1,951,270
Communications and Security (Cameras, Pa System and Fire Alarm)	61.42 %	$448,938	$730,882

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

S231001;Boone

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):	56,265
Year Built:	1963
Last Renovation:	
Replacement Value:	$32,914,101
Repair Cost:	$14,026,761.69
Total FCI:	42.62 %
Total RSLI:	70.96 %

Description:

Facility Condition Assessment
September 2015

School District of Philadelphia
Boone – Camelot Academy
1435 N 26th St
Philadelphia, PA 19121

56,265 SF / LN 04

General

The Boone School is divided into two charter schools: Camelot Academy and Excel Academy. This alternative education school building is located at 1435 N 26th St in Philadelphia, PA. The three story with basement, approximately 56,000 square foot building was originally constructed in 1962.
The Facility Area Coordinator was not able to accompany the Parsons assessment team on this site visit. Mr. Preston Lynn, the Building Engineer, accompanied us on our tour of the school and provided us with detailed information on the building systems and recent maintenance history.

Architectural / Structural Systems

The original building typically rests on concrete foundations and concrete bearing walls that are not showing signs of settlement. Slab on grade partially cracked with moisture seepage during heavy rains. There are no signs of moisture penetration through basement walls.

The main structure consists typically of cast-in-place concrete columns, beams and ribbed concrete slabs (1-way). Long spans (gym and auditorium) are supported by load bearing walls and concrete columns and beams. The superstructure is in good condition.

The building envelope is typically face brick masonry with CMU backup. In general, masonry is in fair condition. Water penetration through walls has not been reported, however, some missing mortar and sealant along face brick has been observed, especially at the top of wall just below roof slab reveals. Precast concrete roof panels over Portable Units.

The building windows are extruded aluminum, double hung with integral sectional screens. All windows are generally in fair to poor condition with some difficult to operate and some inoperable. The leaks around the windows perimeters have been reported due to deteriorated or missing gaskets on operable units. All windows are double glazed.

The exterior doors are typically hollow metal doors and frames, painted. The doors are generally in poor condition; no weather-stripping is installed.

Roofing system is a built-up system installed approximately in 2005 and in fair condition. Roof access door is blocked from fully opening as it bumps into the cover of a roof exhaust fan unit.

The building partition wall types include painted CMU and glazed borrowed light partitions and drywall partitions; generally in good condition.

Interior doors are generally solid core wood doors, some glazed, with hollow metal frames. Most doors have deteriorated finish and some are missing hardware, they are beyond service life. The doors leading to exits stairways are hollow metal doors and frames in good condition.

Fittings include toilet accessories and toilet partitions, generally in good condition, installed approximately in 2005, no accessible compartments; chalkboards are mostly original in fair condition. Handrails and ornamental metals are generally in good condition. Built-in metal lockers are in good condition, installed in mid-2000. Interior identifying signage is typically directly painted on wall or door surfaces generally in fair condition.

The interior wall finishes in the building are generally painted CMU. Main lobby on the ground floor and basement are painted CMU. Interiors were painted in mid-2000 and are in good condition.

Most ceilings in classrooms are 2x2 or 2x4 suspended acoustical panels installed in mid-2000. Ceilings in most corridors and gym are exposed painted concrete of underside of structural slab and is in fair condition.

Flooring is typically a mix of VCT, VAT (mostly in corridors), wood flooring in gym and ceramic tile in restrooms. Flooring in the kitchen is quarry tile in good condition. Most flooring is in fair to good condition. Portion of Auditorium and Library spaces have VCT installed in the mid-2000.

Stair construction is generally steel with concrete filled steel pan treads cast iron non-slip treads and VCT landings in good condition.

Institutional and Commercial equipment includes: A/V equipment in good condition; gym equipment – basketball backstops in good condition. Other equipment includes kitchen equipment, generally in good condition.

Furnishings include fixed steel lockers in classrooms, and other spaces are generally in good condition; window shades/blinds, generally in good condition; fixed seating in auditorium is in good condition.

The building has 1500 lb hydraulic elevator, original to the building. Cabin size does not conform to ADA requirement and its finishes are old and deteriorating.

The building does not have an accessible route per ADA requirements and upper floors are not accessible due to non-compliant elevator cabin. Toilets are not equipped with accessible fixtures and accessories, such as grab bars, and accessible partitions. Most of

the doors in the building do not have ADA required door handles.

Mechanical

Plumbing - Many of the original plumbing fixtures remain in service. Fixtures in the restrooms on each floor consist of wall mounted flush valve water closets, wall hung urinals, and lavatories with wheel handle faucets. Many of the fixtures were out of service during the site visit. The Building Engineer reported that the plumbing fixtures require frequent maintenance to stay in working order. The plumbing fixtures are well beyond their service life and should be replaced within the next 1-3 years.

Drinking fountains in the corridors and at the restrooms are a mixture of wall hung porcelain and stainless steel fountains. The porcelain fountains are well beyond their service life and should be replaced; most are NOT accessible type.

A mop basin is available in a janitor closet in the corridor on each floor for use by the janitorial staff.

The Kitchen has one (1) sink; a three-compartment stainless steel prep sink with lever operated faucets and integral grease trap. Chemicals are injected manually into the sanitizing basins.

Domestic Water Distribution - A 4" city water service enters the building in the boiler room from Stuart Street. The 3" meter and valves are located in the same room and a reduced pressure backflow preventer is installed. Duplex skid mounted 5 HP Armstrong domestic pressure booster pumps are installed on the domestic water line to ensure adequate pressure throughout the building. The pumps show signs of rust damage and should be replaced. The original domestic hot and cold water distribution piping was replaced with copper piping and sweat fittings. The maintenance staff reports no significant problems with scale build up in the domestic piping and the supply is adequate to the fixtures, but the piping has been in use for an unknown amount of time and should be inspected and repaired as necessary by a qualified contractor.

Two (2) Paloma instant hot water heaters, installed in 2001, with associated circulating pumps supply hot water for domestic use. The units are located in the boiler room and pump water into an insulated storage tank for distribution to the building. The units were operable during the site visit and the Building Engineer reported no serious issues; however they are beyond their service lives and should be replaced in the next 1-3 years. A water softener is installed on the hot water side.

Sanitary Waste - The original storm and sanitary sewer piping is heavy weight cast iron with hub and spigot fittings. Some repairs have been made with steel piping and no-hub fittings.

A sewage ejector pit located in the basement receives water from the basement area. It has two (2) 2HP Gorman Rupp pumps installed, both of which looked to be in good condition and within their service lives. A stream running under the building requires constant use of the sewage ejectors which are vital to the health and safety of the building as the basement floods if the pumps fail.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. However, the sewer piping has been in service for over 50 years and will require more frequent attention from the maintenance staff as time passes. The District should hire a qualified contractor to examine the sanitary waste piping using video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

Rain Water Drainage - Rain water drains from the roof are routed through mechanical chases in the building and appear to be original. Sections of the cast iron piping with hub and spigot fittings have been replaced with cast iron piping and no-hub fittings. The District should hire a qualified contractor to examine the rain water drainage piping using video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

Energy Supply - An 8" city gas service enters the building from Stuart Street. The gas meter is 4" and is located in the boiler room. A gas booster pump is installed to ensure adequate gas pressure to the boilers.

The reserve oil supply is stored in a 6,000 gallon underground storage tank (UST) located in the parking lot on the East side of the school. Duplex pumps located in the basement boiler room circulate oil through the system. Oil is used as a backup fuel and the District receives credit from the gas utility as an interruptible service. The storage tank should be inspected on a regular basis. USTs have an anticipated service life of 20 years. The actual condition of the fuel side is unknown.

Heat Generating Systems - Low pressure steam is generated at a maximum of 15 lbs. /sq. in., typically 3-5 lbs. /sq. in., by two (2) 100HP HB Smith model 3500A cast iron sectional boilers, installed in approximately 1999. Each boiler is equipped with a Power Flame burner designed to operate on natural gas or fuel oil. Combustion air makeup is supplied by louvers equipped with motorized dampers. Burner controls provide full modulation with electronic ignition and digital flame sensing. Burner oil pumps are not driven by the fan

motor. The gas train serving the boilers appears to have code required venting of the regulators and dual solenoid valves with venting of the chamber between. The boilers are equipped with dual fuel burners but natural gas is the main fuel source. Cast iron sectional boilers have an anticipated service life of 35 years or more; these units have been in service approximately 17 years. The District should provide reliable service for the next 15-20 years.

A boiler feed tank and pump assembly are installed in the basement boiler room. A condensate receiver is installed in a room off the Cafeteria and is equipped with two (2) pumps. The boiler feed tank provides treated make-up water to the boilers. The unit has three (3) 1/2HP pumps headered together and mounted on the tank. The unit is damaged from rust and should be replaced. The Building Engineer reported that some steam leaks into the system from failed steam traps.

Distribution Systems - Steam piping is black steel with welded fittings. The condensate piping is black steel with threaded fittings, some repairs have been made with copper piping and sweat fittings. Steam and condensate piping mains from the basement level run up through the building to the unit ventilators and fin tube radiators on all three floors. The distribution piping has been in use well beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes. The District should hire a qualified contractor to examine the steam and condensate piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years.

Unit ventilators and fin tube radiators provide heating for classrooms, offices, and to the hallways. The unit ventilators and fin tube radiators are original to the building and well beyond their service lives. Outdoor air for the building is supposed to be provided by wall openings in the unit ventilators, but the fan motors in the ventilators are not operational according to the Building Engineer. The existing unit ventilators should be removed and new units installed with hot and chilled water coils and integral heat exchangers to introduce sufficient outdoor air to the building. Supplemental heating is provided to the Cafeteria, Auditorium, and Gymnasium by three (3) Nesbitt air handling units (AHU) located in the basement mechanical room. The Building Engineer rarely runs these units as heating for the spaces is sufficient without running the AHUs. These units are original to the building, well beyond their service lives, and should be replaced. Ventilation should be provided for the Cafeteria by installing a constant volume air handling unit with distribution ductwork and registers. For the Gymnasium a fan coil air handling unit should be hung from the structure with outdoor air ducted to the unit from louvers in the window openings. Similar units should be installed for the administration offices. Ventilation should be provided for the Auditorium by installing a constant volume air handling unit with distribution ductwork and registers. These units would be equipped with hot water heating coils and chilled water cooling coils. Steam converters would be installed in the existing boiler room with circulating pumps, distribution piping and controls to provide heating hot water for the new coils.

The building no longer has mechanical ventilation as the motors on the unit ventilators are not functional and they act as radiators only. Exhaust for the restrooms, Kitchen, and Cafeteria is provided by eight (8) roof mounted exhaust fans, but the existing roof mounted exhaust fans are no longer operational according to the Building Engineer. The exhaust fans should be replaced. Seven (7) roof mounted power ventilators provide relief air for the corridors and are in good condition. The District should provide reliable service for the next 5-10 years.

Terminal & Package Units - Several of the classrooms in the school building have window air conditioning units that have an anticipated service life of only 10 years. Installing a 150 ton air-cooled chiller, with pumps located in a mechanical room, and chilled water distribution piping would supply more reliable air conditioning for the building with a much longer service life.

A Mitsubishi split system air conditioning system provides cooling to the LAN room located on the first floor off of the Main Office. The installation date of this unit is unknown; the anticipated service life of a split system air conditioner is 15 years. The district should budget to replace this unit within the next 7-10 years.

One (1) kitchen hood with an integral Ansul fire suppression system is installed above the gas range. An automatic gas shutoff system is NOT installed with the kitchen equipment; the kitchen hood is beyond its service life and should be replaced. A make-up air unit is not installed but should be.

Controls & Instrumentation - The original pneumatic systems no longer provide basic control functions. Pneumatic room thermostats are intended to control the steam radiator control valves. In reality the radiator control valves have been replaced with manual valves and heating control is achieved via the boilers. The pneumatic systems are beyond their service life, no longer functional, and require too much attention from the maintenance staff. These controls should be converted to DDC.

A new building automation system (BAS) with modern DDC modules and communications network should be installed to serve the HVAC systems in this building to improve reliability and energy efficiency. An interface should be provided with the preferred system in use throughout the District.

Sprinklers - The school building is NOT covered by an automatic sprinkler system. Installing a sprinkler system with quick response type heads should reduce insurance costs by providing protection for the property investment. A fire pump may be required depending on the available city water pressure.

The school does not have fire stand pipes installed.

Portable Classroom - A portable classroom located on the East side of the main school building houses one (1) classroom. The portable has independent building systems from the main building. A packaged rooftop unit provides heating and cooling to the classroom. The roof of the portable was not accessible during the site visit and further information on the packaged unit is not available.

Electrical

Site electrical service - The primary power is at 13.2KV from the power poles feeding a pole-top transformer. The secondary power is brought down on the face of the pole and goes underground to feed a new 600A 120V, 3 phase switchboard. The switchboard is in a good condition. The PECO meter is also located inside the new electrical room.

Distribution system - The electrical distribution is accomplished with a new switchboard, 600A, 120V/208V, 3 phase distribution switchboard, located in the electrical room, feeding several panels throughout the building. These panels are old and not in good condition. They have reached the end of their service life.

Receptacles - The receptacles in classrooms, computer rooms, libraries, and other areas are not adequate. The walls in classrooms and the computer rooms require minimum two receptacles.

Lighting - Interior building is illuminated by various types of fixtures. They include fluorescent lighting (mostly with T-12 lamps and T-8 lamps) in majority of the areas, including; classrooms, corridors, offices, Library, cafeteria and the Kitchen. Surface or pendant mounted industrial fluorescent fixtures are used in mechanical and electrical rooms. Auditorium has decorative incandescent down lights. Gymnasium has HID type fixtures. Although about 30% of the school lighting was upgraded, the majority of the building (70%) lacks adequate illumination level. The majority of interior lighting fixtures are in a poor condition and have reached the end of their service life.

Fire alarm - The present Fire Alarm system is old and not automatic/addressable, and is not in compliance with safety code. There are some manual pulls stations throughout the building. There is not sufficient number of horn/strobes in the classrooms, corridors, offices and other areas in the school.

Telephone/LAN - The school telephone and data systems are working properly. A main distribution frame (MDF) along with a telephone PBX system are providing the communication system function for the building. School is also equipped with Wi -Fi system.

Public address - A separate PA system does not exist. School uses the telephone systems for public announcement. The present System is functioning properly. Each class room is provided with an intercom telephone service. This system allows paging and intercom communication between main office to each classroom. However, between it does not allow communication from classrooms to the main office, and between classrooms to classrooms.

Clock and Program system - Clock and program systems are not working adequately. Some of the classrooms are provided with 12-inch wall mounted, round clock, however, the clocks are not controlled properly by central master control panel.

Television System - Television system is not provided for the school. There are no smart board in the school either. Typically smart boards have the ability to connect to computer and internet.

Security Systems, access control, and video surveillance - The school is not provided with video surveillance system. Typically cameras should be installed at exit doors, corridors, exterior, and other critical areas. These cameras should be controlled by a Closed Circuit Television system (CCTV).

Emergency Power System - School has fairly new emergency generator (30 KW). The generator is located in the new electrical room inside the basement.

Emergency lighting and exit lights - there are insufficient number of emergency lights/exit lights in the corridors and other exit ways. The present exit lights/ emergency lights are old and have reached the end of their useful service.

Lightning Protection System - There is adequate lightning protection system installed in the school. Roof has several lightning rods that are properly connected to the ground using stranded aluminum cables.

Grounding - The present grounding system is adequate. All equipment are properly bonded to the ground.

Site Lighting - The school has exterior lighting and a few pole-mounted lights that provide adequate lighting for the grounds.

Site Paging – The school has adequate exterior speakers for proper communication with students playing outside.

Elevators – school has a an elevator (Traction Control, 12.5 HP, 240V)

Grounds (Site)

Parking takes place on the perimeter of the paved play area between Jefferson Street and Steward Street. Pavement is in very poor condition, striping is deteriorated with no accessible stalls or signage and portions of the paving is cracked and deteriorated; there is no playground equipment. Perimeter of the site is comprised of chain linked fencing.

The landscaping around the playground and property line consists of a few mature and semi-mature trees and shrubs, generally well maintained.

RECOMMENDATIONS:

- Repair leaks at window sills with sealant / mortar. 500LF
- Repair roof leaks.
- Replace exterior egress and service doors.
- Replace exterior windows.
- Replace interior doors (70%) and doors hardware for ADA accessibility.
- Replace all VAT flooring.
- Repair wood flooring in gym.
- Install new signage throughout.
- Refurbish 20% auditorium seating.
- Replace existing elevator with an ADA compliant 2500 lb elevator serving all floors.
- Replace pavement of existing parking.
- Stripe spaces including accessible spaces, provide ADA signage.
- Replace twenty (20) wall hung water closets in the restrooms, which are well beyond their service lives, with new code compliant fixtures.
- Replace fifteen (15) wall hung urinals in the restrooms, which are well beyond their service lives, with new low flow fixtures.
- Replace eight (8) porcelain wall hung drinking fountains in the corridors. These units are beyond their service lives and most are NOT accessible type.
- Hire a qualified contractor to perform a detailed inspection of the domestic water piping, in use for an unknown amount of time, and replace any damaged piping.
- Replace the duplex 5HP domestic water booster pumps, expansion tank, and isolation valves on incoming domestic water line with a new skid mounted pressure booster system.
- Replace the two (2) existing Paloma instant hot water heaters, which are beyond their service lives.
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Hire a qualified contractor to examine the steam and condensate piping, in service for over 50 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.
- Replace the existing boiler feed tank pumps which are damaged from rust.
- Remove the existing unit ventilators and install units with hot and chilled water coils and integral heat exchangers to introduce outdoor air to the building.
- Replace the existing air handling unit which is beyond its service life and provide ventilation for the Cafeteria by installing a constant volume air handling unit with distribution ductwork and registers.
- Replace the existing air handling unit which is beyond its service life and provide ventilation for the Gymnasium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in the window openings.
- Replace the existing air handling unit which is beyond its service life and provide ventilation for the Auditorium by installing a

fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.
- Provide ventilation for the administration offices by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.
- Remove the window air conditioning units and install a 150 ton air-cooled chiller with chilled water distribution piping and pumps located in a mechanical room to supply more reliable air conditioning for the building with a much longer service life.
- Replace eight (8) roof mounted exhaust fans serving the restrooms, Kitchen, and Cafeteria which are no longer operational.
- Replace the existing Kitchen exhaust hood which is beyond its service life.
- Install a gas fired make-up air system for the Kitchen exhaust hood.
- Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.

- Install new distribution panels 4 in each floor plus two in the basement, and one in the kitchen (9 total).
- Install adequate (two on each wall minimum) surface-mounted receptacles in all classrooms and other areas within the building.
- Install new lighting system for 70% of the building.
- Install new automated FA system.
- Install new Clock System.
- Install new emergency exit signs & emergency lights.
- Install a new security system with cameras and CCTV
- Install additional pole-mounted lights for the grounds
- Install additional exterior speakers for the grounds

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 4 / Tm 4
Status:	Accepted by SDP	Team:	Tm 4
Site ID:	S231001		

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.

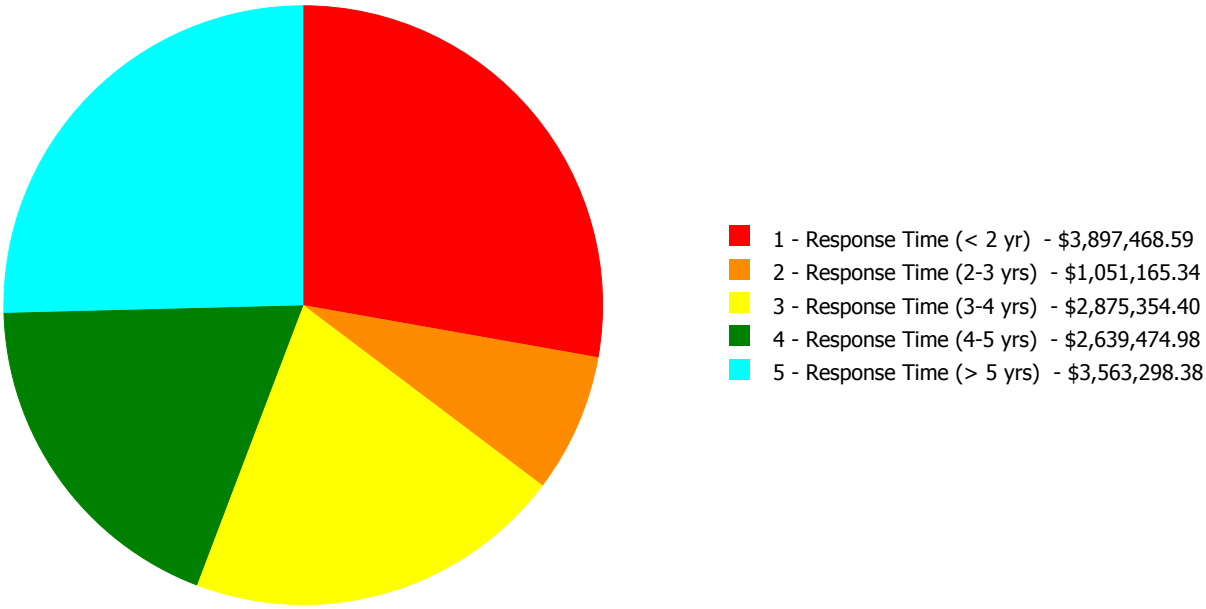
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	48.00 %	0.00 %	$0.00
A20 - Basement Construction	48.00 %	0.00 %	$0.00
B10 - Superstructure	48.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	66.85 %	36.18 %	$947,067.09
B30 - Roofing	110.00 %	2.89 %	$24,415.00
C10 - Interior Construction	67.69 %	27.69 %	$355,355.79
C20 - Stairs	48.00 %	0.00 %	$0.00
C30 - Interior Finishes	21.17 %	14.54 %	$441,750.51
D10 - Conveying	105.71 %	91.00 %	$192,517.57
D20 - Plumbing	83.93 %	52.25 %	$1,195,691.58
D30 - HVAC	88.41 %	123.32 %	$7,718,358.24
D40 - Fire Protection	94.10 %	158.77 %	$804,898.09
D50 - Electrical	161.71 %	56.14 %	$1,856,661.15
E10 - Equipment	14.29 %	9.81 %	$87,912.14
E20 - Furnishings	12.50 %	24.18 %	$28,980.98
G20 - Site Improvements	29.74 %	49.27 %	$258,540.90
G40 - Site Electrical Utilities	106.67 %	87.83 %	$114,612.65
Totals:	**70.96 %**	**42.62 %**	**$14,026,761.69**

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)
B231001;Boone	56,265	42.33	$3,897,468.59	$796,629.03	$2,775,489.57	$2,620,722.57	$3,563,298.38
G231001;Grounds	180,700	56.95	$0.00	$254,536.31	$99,864.83	$18,752.41	$0.00
Total:		**42.62**	**$3,897,468.59**	**$1,051,165.34**	**$2,875,354.40**	**$2,639,474.98**	**$3,563,298.38**

Deficiencies By Priority



Budget Estimate Total: $14,026,761.69

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:	Alternative Education
Gross Area (SF):	56,265
Year Built:	1963
Last Renovation:	
Replacement Value:	$32,258,817
Repair Cost:	$13,653,608.14
Total FCI:	42.33 %
Total RSLI:	71.49 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B231001
Sewage Ejector:	Yes	Status:	Accepted by SDP
Site ID:	S231001		

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	48.00 %	0.00 %	$0.00
A20 - Basement Construction	48.00 %	0.00 %	$0.00
B10 - Superstructure	48.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	66.85 %	36.18 %	$947,067.09
B30 - Roofing	110.00 %	2.89 %	$24,415.00
C10 - Interior Construction	67.69 %	27.69 %	$355,355.79
C20 - Stairs	48.00 %	0.00 %	$0.00
C30 - Interior Finishes	21.17 %	14.54 %	$441,750.51
D10 - Conveying	105.71 %	91.00 %	$192,517.57
D20 - Plumbing	83.93 %	52.25 %	$1,195,691.58
D30 - HVAC	88.41 %	123.32 %	$7,718,358.24
D40 - Fire Protection	94.10 %	158.77 %	$804,898.09
D50 - Electrical	161.71 %	56.14 %	$1,856,661.15
E10 - Equipment	14.29 %	9.81 %	$87,912.14
E20 - Furnishings	12.50 %	24.18 %	$28,980.98
Totals:	**71.49 %**	**42.33 %**	**$13,653,608.14**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$24.32	S.F.	56,265	100	1963	2063		48.00 %	0.00 %	48			$1,368,365
A1030	Slab on Grade	$15.51	S.F.	56,265	100	1963	2063		48.00 %	0.00 %	48			$872,670
A2010	Basement Excavation	$13.07	S.F.	56,265	100	1963	2063		48.00 %	0.00 %	48			$735,384
A2020	Basement Walls	$23.02	S.F.	56,265	100	1963	2063		48.00 %	0.00 %	48			$1,295,220
B1010	Floor Construction	$92.20	S.F.	56,265	100	1963	2063		48.00 %	0.00 %	48			$5,187,633
B1020	Roof Construction	$24.11	S.F.	56,265	100	1963	2063		48.00 %	0.00 %	48			$1,356,549
B2010	Exterior Walls	$31.22	S.F.	56,265	100	1963	2063		48.00 %	0.57 %	48		$10,033.01	$1,756,593
B2020	Exterior Windows	$13.63	S.F.	56,265	40	1963	2003	2057	105.00 %	116.91 %	42		$896,553.68	$766,892
B2030	Exterior Doors	$1.67	S.F.	56,265	25	1963	1988	2042	108.00 %	43.08 %	27		$40,480.40	$93,963
B3010105	Built-Up	$37.76	S.F.	21,949	20	1990	2010	2037	110.00 %	2.95 %	22		$24,415.00	$828,794
B3010120	Single Ply Membrane	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.		30				0.00 %	0.00 %				$0
B3010140	Shingle & Tile	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.68	S.F.	21,949	20	1963	1983	2037	110.00 %	0.00 %	22			$14,925
C1010	Partitions	$14.93	S.F.	56,265	100	1963	2063		48.00 %	0.00 %	48			$840,036
C1020	Interior Doors	$3.76	S.F.	56,265	40	1963	2003	2057	105.00 %	151.97 %	42		$321,491.73	$211,556
C1030	Fittings	$4.12	S.F.	56,265	40	1963	2003	2057	105.00 %	14.61 %	42		$33,864.06	$231,812
C2010	Stair Construction	$1.28	S.F.	56,265	100	1963	2063		48.00 %	0.00 %	48			$72,019

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$17.31	S.F.	56,265	10	2010	2020		50.00 %	0.00 %	5			$973,947
C3010231	Vinyl Wall Covering	$0.00	S.F.	0	15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.36	S.F.	56,265	30	1990	2020		16.67 %	0.00 %	5			$132,785
C3020411	Carpet	$7.30	S.F.	1,500	10	2010	2020		50.00 %	0.00 %	5			$10,950
C3020412	Terrazzo & Tile	$75.52	S.F.		50				0.00 %	0.00 %				$0
C3020413	Vinyl Flooring	$9.68	S.F.	44,800	20	2000	2020		25.00 %	101.86 %	5		$441,750.51	$433,664
C3020414	Wood Flooring	$22.27	S.F.	4,261	25	1963	1988	2020	20.00 %	0.00 %	5			$94,892
C3020415	Concrete Floor Finishes	$0.97	S.F.	11,200	50	1963	2013	2020	10.00 %	0.00 %	5			$10,864
C3030	Ceiling Finishes	$24.54	S.F.	56,265	0				0.00 %	0.00 %				$1,380,743
D1010	Elevators and Lifts	$3.76	S.F.	56,265	35	1963	1998	2052	105.71 %	91.00 %	37		$192,517.57	$211,556
D2010	Plumbing Fixtures	$31.58	S.F.	56,265	35	1963	1998	2042	77.14 %	16.07 %	27		$285,570.49	$1,776,849
D2020	Domestic Water Distribution	$2.90	S.F.	56,265	25	1963	1988	2042	108.00 %	235.70 %	27		$384,595.91	$163,169
D2030	Sanitary Waste	$2.90	S.F.	56,265	25	1963	1988	2042	108.00 %	169.16 %	27		$276,021.95	$163,169
D2040	Rain Water Drainage	$3.29	S.F.	56,265	30	1963	1993	2047	106.67 %	134.79 %	32		$249,503.23	$185,112
D3020	Heat Generating Systems	$18.67	S.F.	56,265	35	1999	2034		54.29 %	0.00 %	19			$1,050,468
D3030	Cooling Generating Systems	$24.48	S.F.	56,265	20			2037	110.00 %	63.58 %	22		$875,775.13	$1,377,367
D3040	Distribution Systems	$42.99	S.F.	56,265	25	1963	1988	2042	108.00 %	232.99 %	27		$5,635,581.27	$2,418,832
D3050	Terminal & Package Units	$11.60	S.F.	56,265	20				0.00 %	0.00 %				$652,674
D3060	Controls & Instrumentation	$13.50	S.F.	56,265	20	1963	1983	2037	110.00 %	158.90 %	22		$1,207,001.84	$759,578
D4010	Sprinklers	$8.02	S.F.	56,265	35			2052	105.71 %	178.37 %	37		$804,898.09	$451,245
D4020	Standpipes	$0.99	S.F.	56,265	35				0.00 %	0.00 %				$55,702
D5010	Electrical Service/Distribution	$9.70	S.F.	56,265	30	1963	1993	2047	106.67 %	101.00 %	32		$551,202.86	$545,771
D5020	Lighting and Branch Wiring	$34.68	S.F.	56,265	20	1963	1983	2047	160.00 %	33.98 %	32		$663,027.31	$1,951,270
D5030	Communications and Security	$12.99	S.F.	56,265	15	1963	1978	2047	213.33 %	61.42 %	32		$448,937.84	$730,882
D5090	Other Electrical Systems	$1.41	S.F.	56,265	30	1963	1993	2047	106.67 %	243.90 %	32		$193,493.14	$79,334
E1020	Institutional Equipment	$4.82	S.F.	56,265	35	1985	2020		14.29 %	0.00 %	5			$271,197
E1090	Other Equipment	$11.10	S.F.	56,265	35	1985	2020		14.29 %	14.08 %	5		$87,912.14	$624,542
E2010	Fixed Furnishings	$2.13	S.F.	56,265	40	1963	2003	2020	12.50 %	24.18 %	5		$28,980.98	$119,844
								Total	**71.49 %**	**42.33 %**			**$13,653,608.14**	**$32,258,817**

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: 88% - Paint & Coverings
12% - Wall Tile

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:	**$13,653,608**	**$0**	**$0**	**$0**	**$0**	**$3,408,214**	**$0**	**$0**	**$0**	**$0**	**$0**	**$17,061,822**
*** 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	$10,033	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$10,033**
B2020 - Exterior Windows	$896,554	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$896,554**
B2030 - Exterior Doors	$40,480	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$40,480**
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	$24,415	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$24,415**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

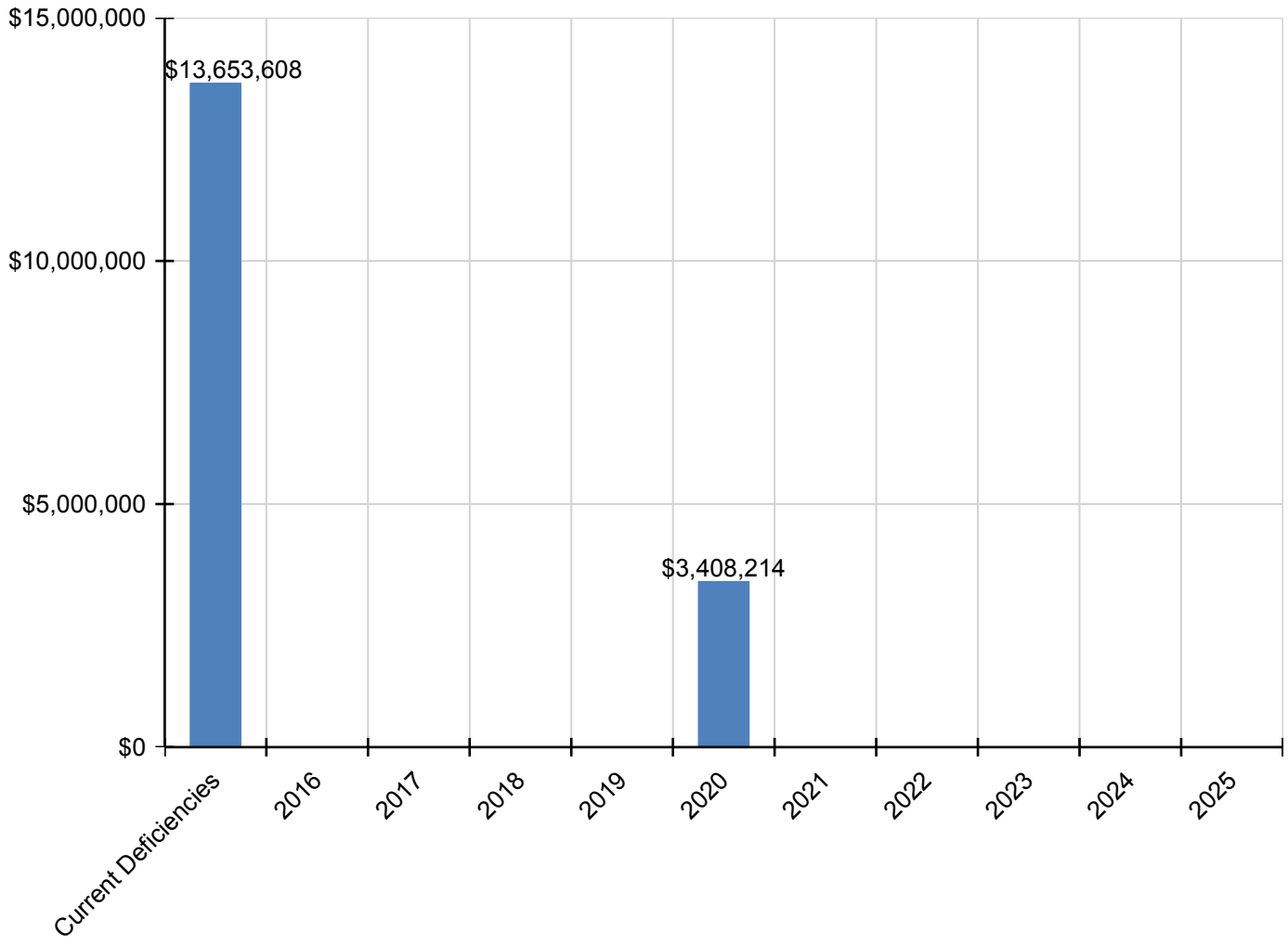
C1020 - Interior Doors	$321,492	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$321,492**
C1030 - Fittings	$33,864	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$33,864**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$1,241,979	$0	$0	$0	$0	$0	**$1,241,979**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$169,328	$0	$0	$0	$0	$0	**$169,328**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$13,963	$0	$0	$0	$0	$0	**$13,963**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$441,751	$0	$0	$0	$0	$553,009	$0	$0	$0	$0	$0	**$994,759**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$121,007	$0	$0	$0	$0	$0	**$121,007**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$13,853	$0	$0	$0	$0	$0	**$13,853**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$192,518	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$192,518**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$285,570	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$285,570**
D2020 - Domestic Water Distribution	$384,596	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$384,596**
D2030 - Sanitary Waste	$276,022	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$276,022**
D2040 - Rain Water Drainage	$249,503	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$249,503**
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	$875,775	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$875,775**
D3040 - Distribution Systems	$5,635,581	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$5,635,581**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,207,002	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,207,002**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$804,898	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$804,898**
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	$551,203	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$551,203**
D5020 - Lighting and Branch Wiring	$663,027	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$663,027**
D5030 - Communications and Security	$448,938	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$448,938**
D5090 - Other Electrical Systems	$193,493	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$193,493**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$345,831	$0	$0	$0	$0	$0	**$345,831**
E1090 - Other Equipment	$87,912	$0	$0	$0	$0	$796,417	$0	$0	$0	$0	$0	**$884,329**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$28,981	$0	$0	$0	$0	$152,826	$0	$0	$0	$0	$0	**$181,807**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

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

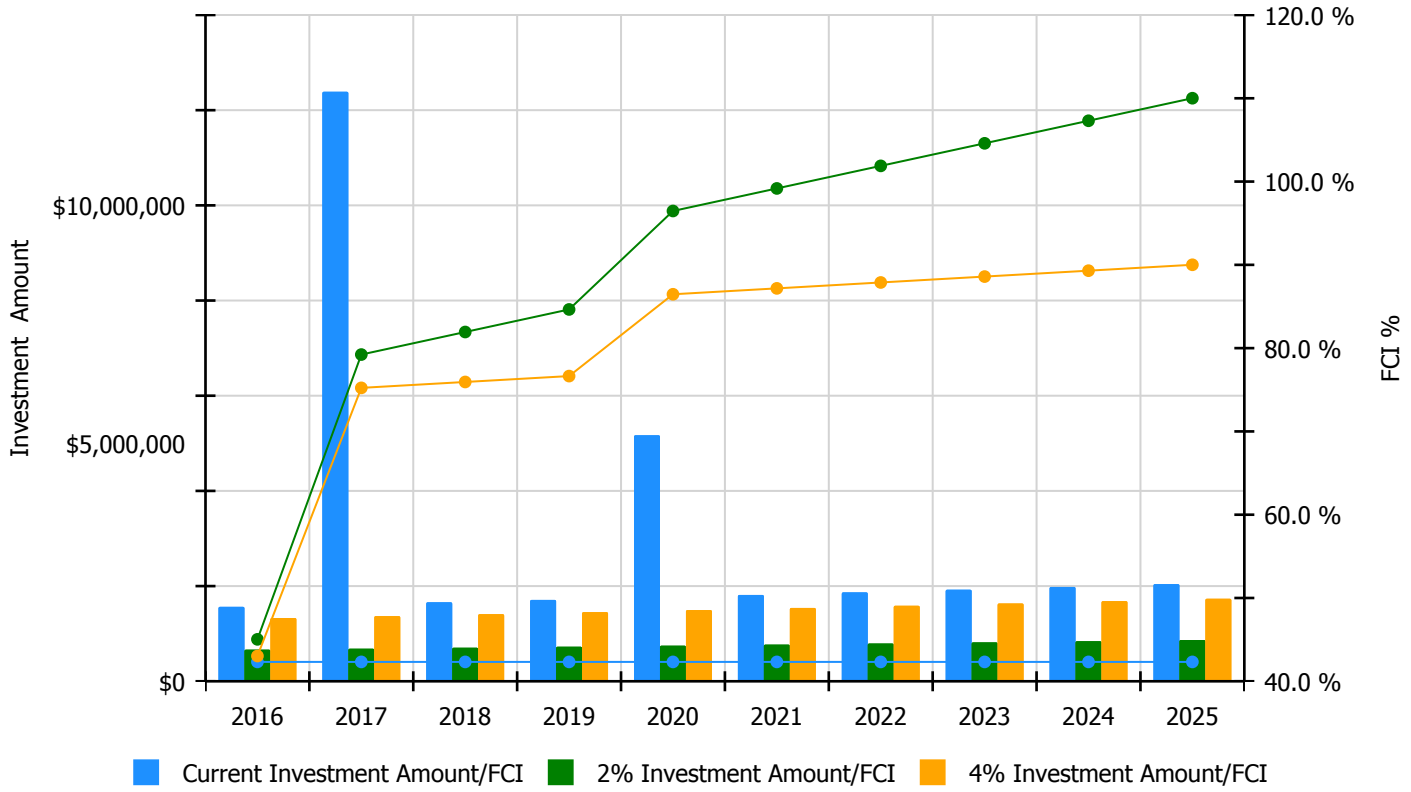


10 Year FCI Forecast by Investment Scenario

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

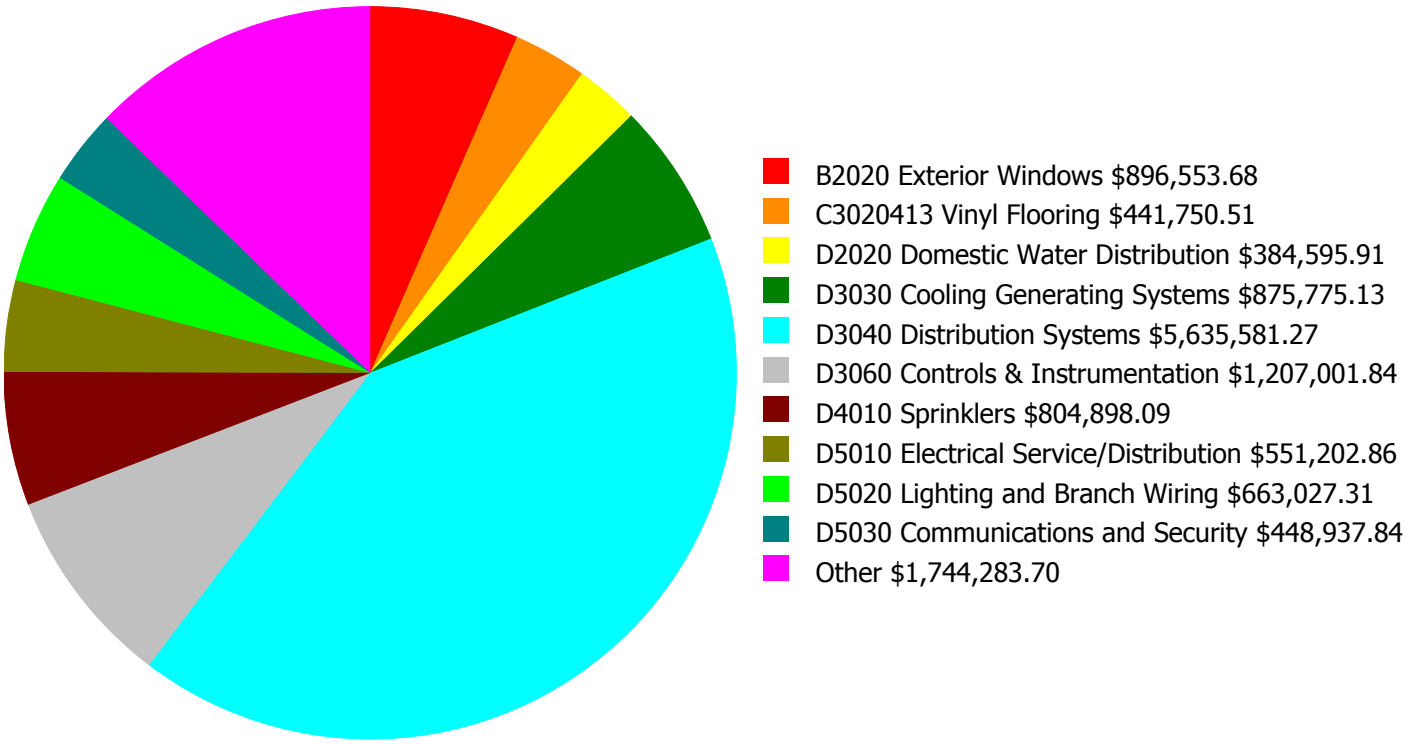
Facility Investment vs. FCI Forecast



Year	Investment Amount Current FCI - 42.33%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$1,564,382	$664,532.00	45.03 %	$1,329,063.00	43.03 %
2017	$12,387,249	$684,468.00	79.23 %	$1,368,935.00	75.23 %
2018	$1,659,652	$705,002.00	81.94 %	$1,410,003.00	75.94 %
2019	$1,709,442	$726,152.00	84.65 %	$1,452,303.00	76.65 %
2020	$5,168,939	$747,936.00	96.47 %	$1,495,872.00	86.47 %
2021	$1,813,547	$770,374.00	99.18 %	$1,540,749.00	87.18 %
2022	$1,867,953	$793,486.00	101.88 %	$1,586,971.00	87.88 %
2023	$1,923,992	$817,290.00	104.59 %	$1,634,580.00	88.59 %
2024	$1,981,712	$841,809.00	107.30 %	$1,683,618.00	89.30 %
2025	$2,041,163	$867,063.00	110.01 %	$1,734,126.00	90.01 %
Total:	**$32,118,030**	**$7,618,112.00**		**$15,236,220.00**	

Deficiency Summary by System

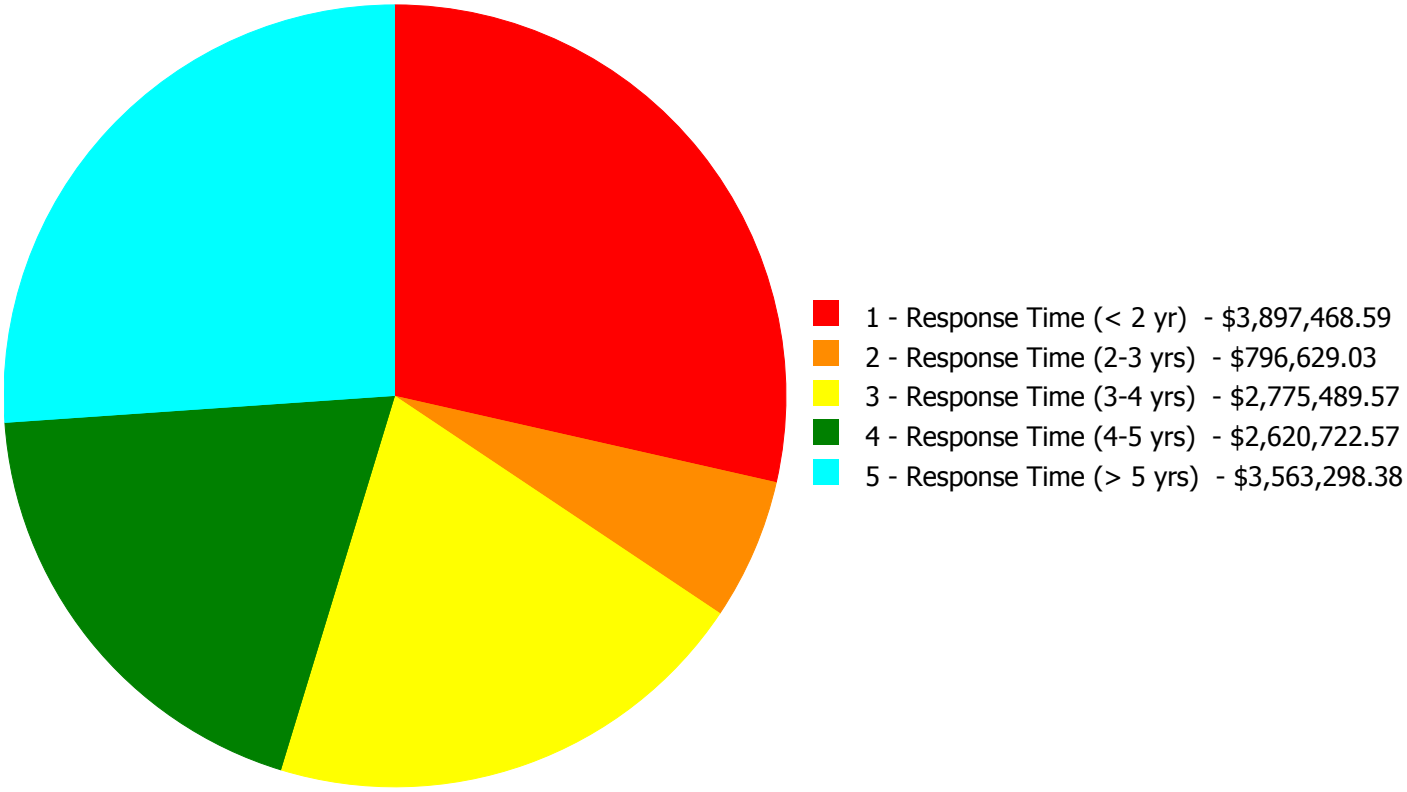
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $13,653,608.14

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: $13,653,608.14

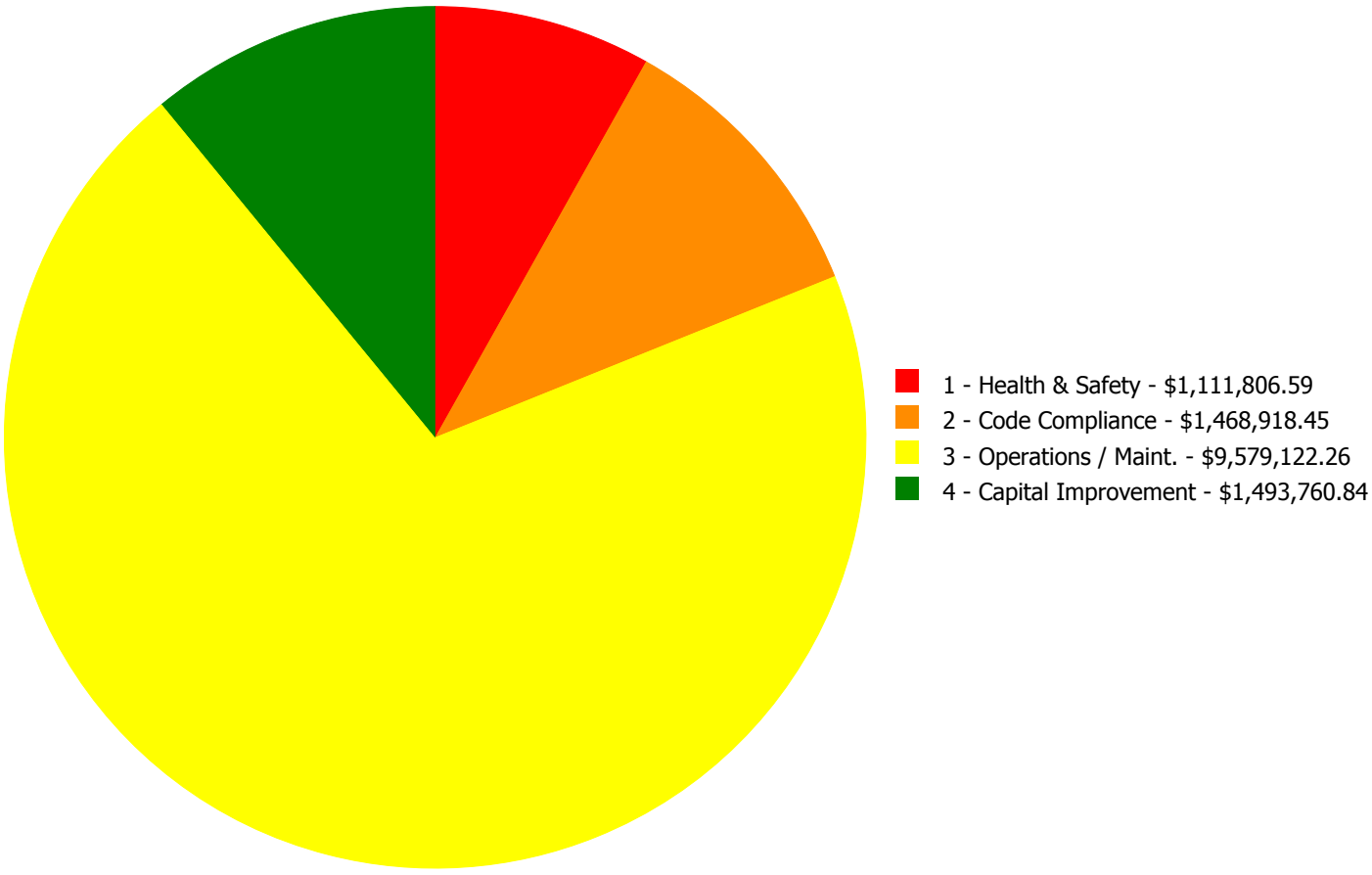
Deficiency By Priority Investment Table

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	$10,033.01	$0.00	$0.00	$0.00	$10,033.01
B2020	Exterior Windows	$0.00	$0.00	$0.00	$896,553.68	$0.00	$896,553.68
B2030	Exterior Doors	$0.00	$0.00	$0.00	$40,480.40	$0.00	$40,480.40
B3010105	Built-Up	$0.00	$24,415.00	$0.00	$0.00	$0.00	$24,415.00
C1020	Interior Doors	$0.00	$0.00	$0.00	$321,491.73	$0.00	$321,491.73
C1030	Fittings	$0.00	$0.00	$0.00	$33,864.06	$0.00	$33,864.06
C3020413	Vinyl Flooring	$0.00	$0.00	$0.00	$441,750.51	$0.00	$441,750.51
D1010	Elevators and Lifts	$0.00	$192,517.57	$0.00	$0.00	$0.00	$192,517.57
D2010	Plumbing Fixtures	$0.00	$285,570.49	$0.00	$0.00	$0.00	$285,570.49
D2020	Domestic Water Distribution	$0.00	$99,480.95	$0.00	$0.00	$285,114.96	$384,595.91
D2030	Sanitary Waste	$0.00	$0.00	$276,021.95	$0.00	$0.00	$276,021.95
D2040	Rain Water Drainage	$0.00	$0.00	$249,503.23	$0.00	$0.00	$249,503.23
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$875,775.13	$875,775.13
D3040	Distribution Systems	$3,092,570.50	$184,612.01	$1,162,992.31	$0.00	$1,195,406.45	$5,635,581.27
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$0.00	$1,207,001.84	$1,207,001.84
D4010	Sprinklers	$804,898.09	$0.00	$0.00	$0.00	$0.00	$804,898.09
D5010	Electrical Service/Distribution	$0.00	$0.00	$0.00	$551,202.86	$0.00	$551,202.86
D5020	Lighting and Branch Wiring	$0.00	$0.00	$663,027.31	$0.00	$0.00	$663,027.31
D5030	Communications and Security	$0.00	$0.00	$230,451.63	$218,486.21	$0.00	$448,937.84
D5090	Other Electrical Systems	$0.00	$0.00	$193,493.14	$0.00	$0.00	$193,493.14
E1090	Other Equipment	$0.00	$0.00	$0.00	$87,912.14	$0.00	$87,912.14
E2010	Fixed Furnishings	$0.00	$0.00	$0.00	$28,980.98	$0.00	$28,980.98
	Total:	$3,897,468.59	$796,629.03	$2,775,489.57	$2,620,722.57	$3,563,298.38	$13,653,608.14

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: $13,653,608.14

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: D3040 - Distribution Systems

Location: Throughout building

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 56,265.00

Unit of Measure: S.F.

Estimate: $2,714,177.78

Assessor Name: System

Date Created: 12/30/2015

Notes: Remove the existing unit ventilators and install units with hot and chilled water coils and integral heat exchangers to introduce outdoor air to the building.

System: D3040 - Distribution Systems

Location: Roof

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace utility set exhaust fan (5 HP)

Qty: 8.00

Unit of Measure: Ea.

Estimate: $378,392.72

Assessor Name: System

Date Created: 12/30/2015

Notes: Replace eight (8) roof mounted exhaust fans serving the restrooms, Kitchen, and Cafeteria which are no longer operational

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System: D4010 - Sprinklers

Location: Throughout building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Install a fire protection sprinkler system

Qty: 56,265.00

Unit of Measure: S.F.

Estimate: $804,898.09

Assessor Name: System

Date Created: 12/30/2015

Notes: Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.

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

System: B2010 - Exterior Walls

Location: Rear of building facing gym roof

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

Correction: Re-caulk exterior control joints and other caulk joints

Qty: 500.00

Unit of Measure: L.F.

Estimate: $10,033.01

Assessor Name: System

Date Created: 02/15/2016

Notes: Repair leaks at window sills with sealant / mortar. 500LF

System: B3010105 - Built-Up

Location: Upper, lower and portable unit roof areas

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

Correction: Blister or membrane repair - partial areas

Qty: 1,200.00

Unit of Measure: S.F.

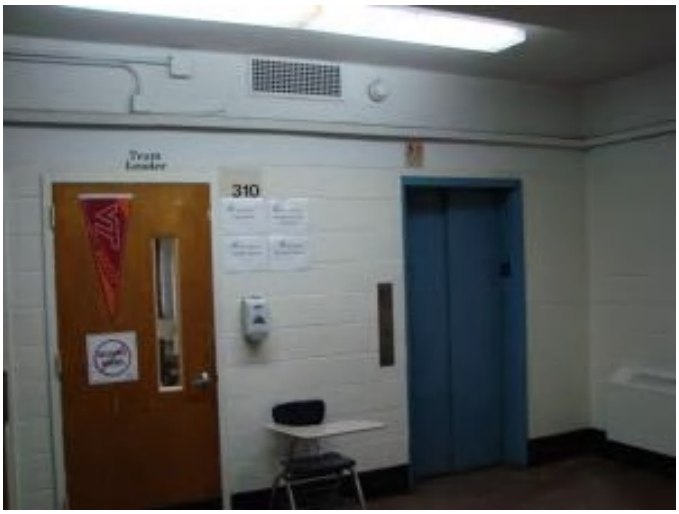
Estimate: $24,415.00

Assessor Name: System

Date Created: 02/15/2016

Notes: Repair roof leaks.

System: D1010 - Elevators and Lifts



Location: Main lobby area

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace elevator - 2 stop hydraulic

Qty: 1.00

Unit of Measure: Ea.

Estimate: $192,517.57

Assessor Name: System

Date Created: 02/15/2016

Notes: Replace existing elevator with an ADA compliant 2500 lb elevator serving all floors

System: D2010 - Plumbing Fixtures

Location: Restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace water closet - quantify additional units

Qty: 20.00

Unit of Measure: Ea.

Estimate: $149,242.96

Assessor Name: System

Date Created: 12/30/2015

Notes: Replace twenty (20) wall hung water closets in the restrooms, which are well beyond their service lives, with new code compliant fixtures.

System: D2010 - Plumbing Fixtures

Location: Restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 15.00

Unit of Measure: Ea.

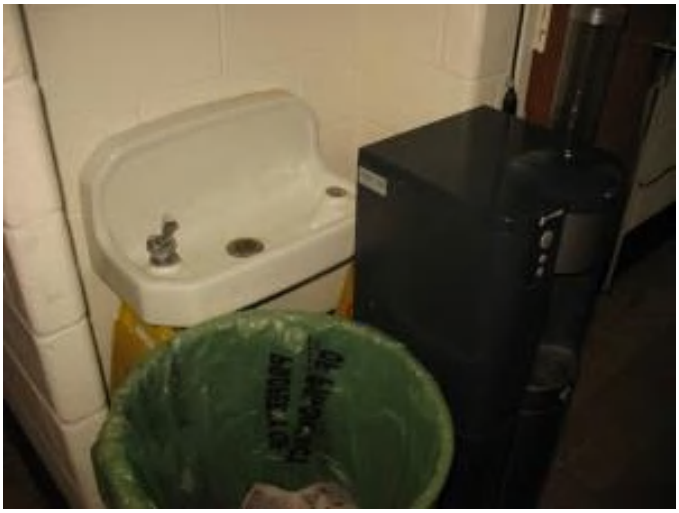
Estimate: $75,694.01

Assessor Name: System

Date Created: 12/30/2015

Notes: Replace fifteen (15) wall hung urinals in the restrooms, which are well beyond their service lives, with new low flow fixtures.

System: D2010 - Plumbing Fixtures



Location: Corridors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Water Fountains - without ADA new recessed alcove

Qty: 8.00

Unit of Measure: Ea.

Estimate: $60,633.52

Assessor Name: System

Date Created: 12/30/2015

Notes: Replace eight (8) porcelain wall hung drinking fountains in the corridors. These units are beyond their service lives and most are NOT accessible type.

System: D2020 - Domestic Water Distribution

Location: Boiler room

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 2 - Response Time (2-3 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: 12/30/2015

Notes: Replace the duplex 5HP domestic water booster pumps, expansion tank, and isolation valves on incoming domestic water line with a new skid mounted pressure booster system.

System: D2020 - Domestic Water Distribution

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace instantaneous water heater

Qty: 2.00

Unit of Measure: Ea.

Estimate: $48,947.09

Assessor Name: System

Date Created: 12/30/2015

Notes: Replace the two (2) existing Paloma instant hot water heaters, which are beyond their service lives.

System: D3040 - Distribution Systems

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Conduct a steam trap survey and replace failed units.

Qty: 56,265.00

Unit of Measure: S.F.

Estimate: $184,612.01

Assessor Name: System

Date Created: 12/30/2015

Notes: Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.

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

System: D2030 - Sanitary Waste

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Inspect sanitary waste piping and replace damaged sections. (+50KSF)

Qty: 56,265.00

Unit of Measure: S.F.

Estimate: $276,021.95

Assessor Name: System

Date Created: 12/30/2015

Notes: Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D2040 - Rain Water Drainage

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Inspect internal rain water drainage piping and replace pipe - based on SF of multi-story building - insert SF of building

Qty: 56,265.00

Unit of Measure: S.F.

Estimate: $249,503.23

Assessor Name: System

Date Created: 12/30/2015

Notes: Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D3040 - Distribution Systems

Location: Auditorium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 350.00

Unit of Measure: Seat

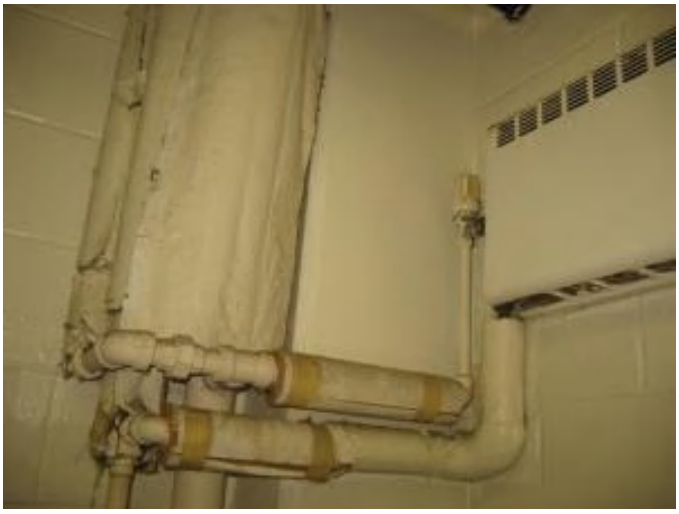
Estimate: $582,913.34

Assessor Name: System

Date Created: 12/30/2015

Notes: Replace the existing air handling unit which is beyond its service life and provide provide ventilation for the Auditorium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.

System: D3040 - Distribution Systems



Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Perform testing to identify and replace damaged steam and condensate piping.

Qty: 56,265.00

Unit of Measure: S.F.

Estimate: $532,287.87

Assessor Name: System

Date Created: 12/30/2015

Notes: Hire a qualified contractor to examine the steam and condensate piping, in service for over 50 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D3040 - Distribution Systems

Location: Boiler room

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace Condensate Receiver Pump Set

Qty: 1.00

Unit of Measure: Ea.

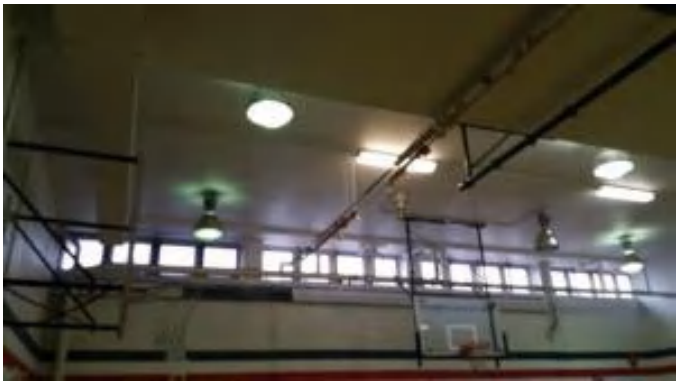
Estimate: $47,791.10

Assessor Name: System

Date Created: 12/30/2015

Notes: Replace the existing boiler feed tank pumps which are damaged from rust.

System: D5020 - Lighting and Branch Wiring



Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 0.00

Unit of Measure: S.F.

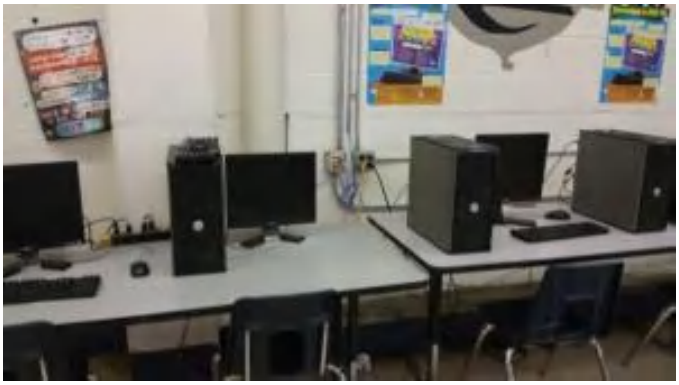
Estimate: $354,442.94

Assessor Name: System

Date Created: 02/03/2016

Notes: Install new lighting system for 70% of the building.
Effective SF = 70% x 56,265SF = 39,386 SF

System: D5020 - Lighting and Branch Wiring



Location: throughout the building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace Wiring Devices (SF) - surface mounted conduit and boxes

Qty: 0.00

Unit of Measure: S.F.

Estimate: $308,584.37

Assessor Name: System

Date Created: 02/03/2016

Notes: Install adequate (two on each wall minimum) surface-mounted receptacles in all classrooms and other areas within the building.

System: D5030 - Communications and Security

Location: throughout the building

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $230,451.63

Assessor Name: System

Date Created: 02/03/2016

Notes: Install new automated FA system.

System: D5090 - Other Electrical Systems

Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Emergency/Exit Lighting

Qty: 1.00

Unit of Measure: Ea.

Estimate: $193,493.14

Assessor Name: System

Date Created: 02/03/2016

Notes: Install new emergency exit signs emergency lights.

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

System: B2020 - Exterior Windows

Location: All exterior elevations

Distress: Beyond Service Life

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: 1.00

Unit of Measure: Ea.

Estimate: $896,553.68

Assessor Name: System

Date Created: 02/15/2016

Notes: Replace exterior windows.

System: B2030 - Exterior Doors

Location: South elevation egress exit doors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 5.00

Unit of Measure: Ea.

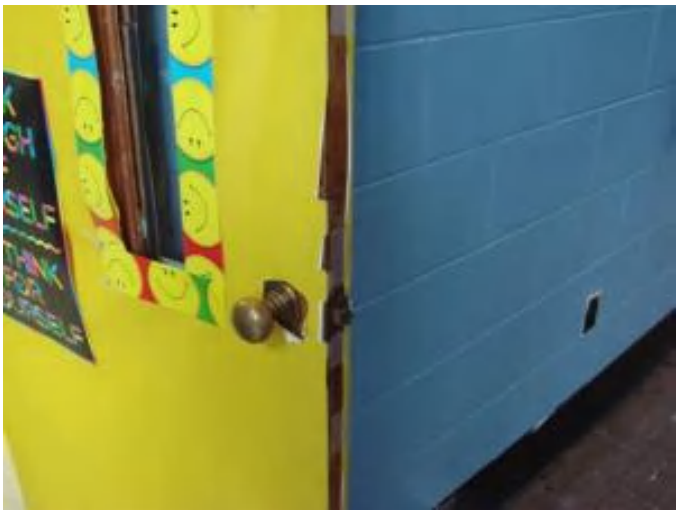
Estimate: $40,480.40

Assessor Name: System

Date Created: 02/15/2016

Notes: Replace exterior egress and service doors.

System: C1020 - Interior Doors



Location: Interior doors; corridors, classrooms, restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace interior doors - wood doors with wood frame - per leaf

Qty: 70.00

Unit of Measure: Ea.

Estimate: $321,491.73

Assessor Name: System

Date Created: 02/15/2016

Notes: Replace interior doors (70%)

System: C1030 - Fittings

Location: Offices and classrooms

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 125.00

Unit of Measure: Ea.

Estimate: $33,864.06

Assessor Name: System

Date Created: 02/15/2016

Notes: Install new signage throughout

System: C3020413 - Vinyl Flooring

Location: Corridors, classrooms and storage areas

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 39,000.00

Unit of Measure: S.F.

Estimate: $441,750.51

Assessor Name: System

Date Created: 02/15/2016

Notes: Replace all VAT flooring - 39k

System: D5010 - Electrical Service/Distribution

Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard - 225A

Qty: 0.00

Unit of Measure: Ea.

Estimate: $551,202.86

Assessor Name: System

Date Created: 02/03/2016

Notes: Install new distribution panels 4 in each floor plus two in the basement, and one in the kitchen (9 total).

System: D5030 - Communications and Security

Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Clock System or Components

Qty: 0.00

Unit of Measure: Ea.

Estimate: $142,029.34

Assessor Name: System

Date Created: 02/03/2016

Notes: Install new Clock System.
Note: A multiplier of 1.2 is used (instead of 1.0) to cover the additional cost of potential other related construction (conduit wire, demolition, patching, etc.)

System: D5030 - Communications and Security

This deficiency has no image.

Location: throughout the building

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Add/Replace Video Surveillance System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $76,456.87

Assessor Name: System

Date Created: 02/03/2016

Notes: Add video surveillance system with cameras CCTV Monitoring.
Note: There is no picture attached since presently school has no cameras and CCTV

System: E1090 - Other Equipment

Location: Kitchen
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Replace kitchen exhaust hood (10 ft)
Qty: 1.00
Unit of Measure: Ea.
Estimate: $87,912.14
Assessor Name: System
Date Created: 12/30/2015

Notes: Replace the existing Kitchen exhaust hood which is beyond its service life.

System: E2010 - Fixed Furnishings

Location: Auditorium
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Refinish auditorium seating
Qty: 45.00
Unit of Measure: Ea.
Estimate: $28,980.98
Assessor Name: System
Date Created: 02/15/2016

Notes: Refurbish 20% auditorium seating

Priority 5 - Response Time (> 5 yrs):

System: D2020 - Domestic Water Distribution

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace domestic water piping (75 KSF)

Qty: 56,265.00

Unit of Measure: S.F.

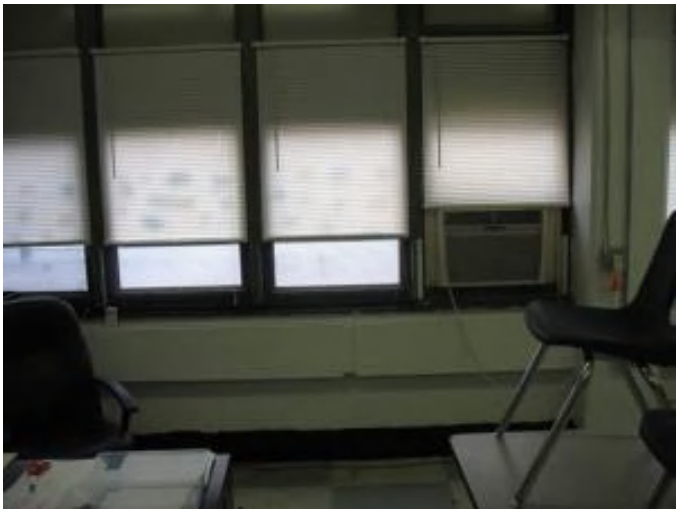
Estimate: $285,114.96

Assessor Name: System

Date Created: 12/30/2015

Notes: Hire a qualified contractor to perform a detailed inspection of the domestic water piping, in use for an unknown amount of time, and replace any damaged piping.

System: D3030 - Cooling Generating Systems



Location: Throughout building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 56,265.00

Unit of Measure: S.F.

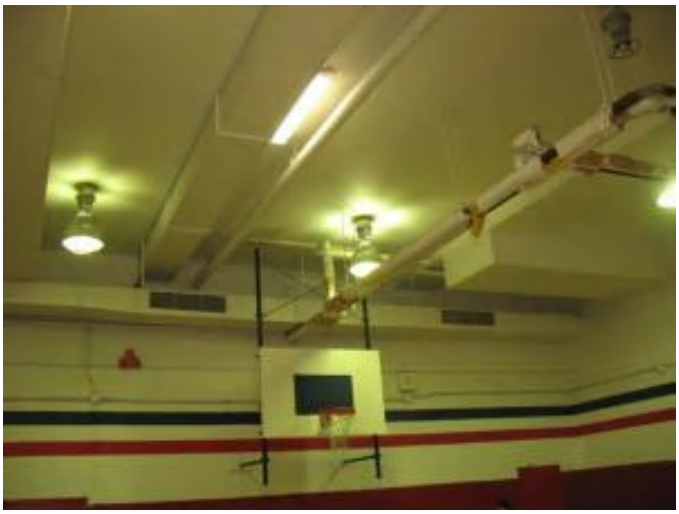
Estimate: $875,775.13

Assessor Name: System

Date Created: 12/30/2015

Notes: Remove the window air conditioning units and install a 150 ton air-cooled chiller with chilled water distribution piping and pumps located in a mechanical room to supply more reliable air conditioning for the building with a much longer service life.

System: D3040 - Distribution Systems



Location: Gymnasium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $379,256.22

Assessor Name: System

Date Created: 12/30/2015

Notes: Replace the existing air handling unit which is beyond its service life and provide ventilation for the Gymnasium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in the window openings.

System: D3040 - Distribution Systems

This deficiency has no image.

Location: Kitchen

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Install GF makeup air unit for kitchen exhaust hood (single 10 ft hood).

Qty: 1.00

Unit of Measure: Ea.

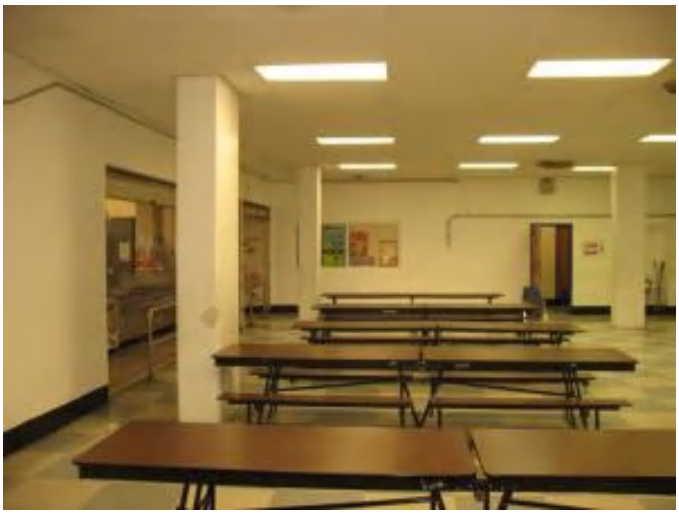
Estimate: $309,401.34

Assessor Name: System

Date Created: 12/30/2015

Notes: Install a gas fired make-up air system for the Kitchen exhaust hood.

System: D3040 - Distribution Systems



Location: Cafeteria

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 504.00

Unit of Measure: Pr.

Estimate: $288,605.77

Assessor Name: System

Date Created: 12/30/2015

Notes: Replace the existing air handling unit which is beyond its service life and provide ventilation for the Cafeteria by installing a constant volume air handling unit with distribution ductwork and registers.

System: D3040 - Distribution Systems

Location: Administration

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

Correction: Install HVAC unit for Administration (2000 students).

Qty: 504.00

Unit of Measure: Pr.

Estimate: $218,143.12

Assessor Name: System

Date Created: 12/30/2015

Notes: Provide ventilation for the administration offices by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.

System: D3060 - Controls & Instrumentation

Location: Throughout building

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 56,265.00

Unit of Measure: S.F.

Estimate: $1,207,001.84

Assessor Name: System

Date Created: 12/30/2015

Notes: Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D1010 Elevators and Lifts	Electric traction freight elevators, base unit, standard finish, 4000 lb, 200 fpm, 4 stop	1.00	Ea.	inside the building					35	1963	2047	$164,636.00	$181,099.60
D2020 Domestic Water Distribution	Pump, pressure booster system, 5 HP pump, includes diaphragm tank, control and pressure switch	1.00	Ea.	Boiler Room	Armstrong				25	1999	2024	$10,972.50	$12,069.75
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler Room	HB Smith	3500A-13			35	1999	2034	$75,956.00	$167,103.20
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler Room	HB Smith	3500A-13	MA2000-8		35	1999	2034	$75,956.00	$167,103.20
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 300 kVA & below w/CLF fuses, 4.8 kV, 600 amp, NEMA 1	1.00	Ea.	electrical room					30	2010	2040	$34,900.20	$38,390.22
D5010 Electrical Service/Distribution	Panelboards, 1 phase 3 wire, main lugs, 120/240 V, 225 amp, 24 circuits, NQOD, incl 20 A 1 pole plug-in breakers	4.00	Ea.	electrical room					30			$2,608.20	$11,476.08
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 600 amp, excl breakers	3.00	Ea.	electrical room					30			$3,819.15	$12,603.20
D5090 Other Electrical Systems	Generator set, diesel, 3 phase 4 wire, 277/480 V, 125 kW, incl battery, charger, muffler, & day tank, excl conduit, wiring, & concrete	1.00	Ea.	electrical room					30	2010	2040	$50,797.80	$55,877.58
												Total:	**$645,722.83**

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):	180,700
Year Built:	1963
Last Renovation:	
Replacement Value:	$655,284
Repair Cost:	$373,153.55
Total FCI:	56.95 %
Total RSLI:	45.06 %

Description:

Attributes:

General Attributes:

Bldg ID:	S231001	Site ID:	S231001

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	29.74 %	49.27 %	$258,540.90
G40 - Site Electrical Utilities	106.67 %	87.83 %	$114,612.65
Totals:	**45.06 %**	**56.95 %**	**$373,153.55**

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.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$7.65	S.F.	16,800	30	1963	1993	2047	106.67 %	201.17 %	32		$258,540.90	$128,520
G2030	Pedestrian Paving	$11.52	S.F.	13,200	40	1963	2003	2020	12.50 %	0.00 %	5			$152,064
G2040	Site Development	$4.36	S.F.	30,000	25				0.00 %	0.00 %				$130,800
G2050	Landscaping & Irrigation	$3.78	S.F.	30,000	15				0.00 %	0.00 %				$113,400
G4020	Site Lighting	$3.58	S.F.	30,000	30	1963	1993	2047	106.67 %	89.26 %	32		$95,860.24	$107,400
G4030	Site Communications & Security	$0.77	S.F.	30,000	30	1963	1993	2047	106.67 %	81.18 %	32		$18,752.41	$23,100
								Total	**45.06 %**	**56.95 %**			**$373,153.55**	**$655,284**

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.

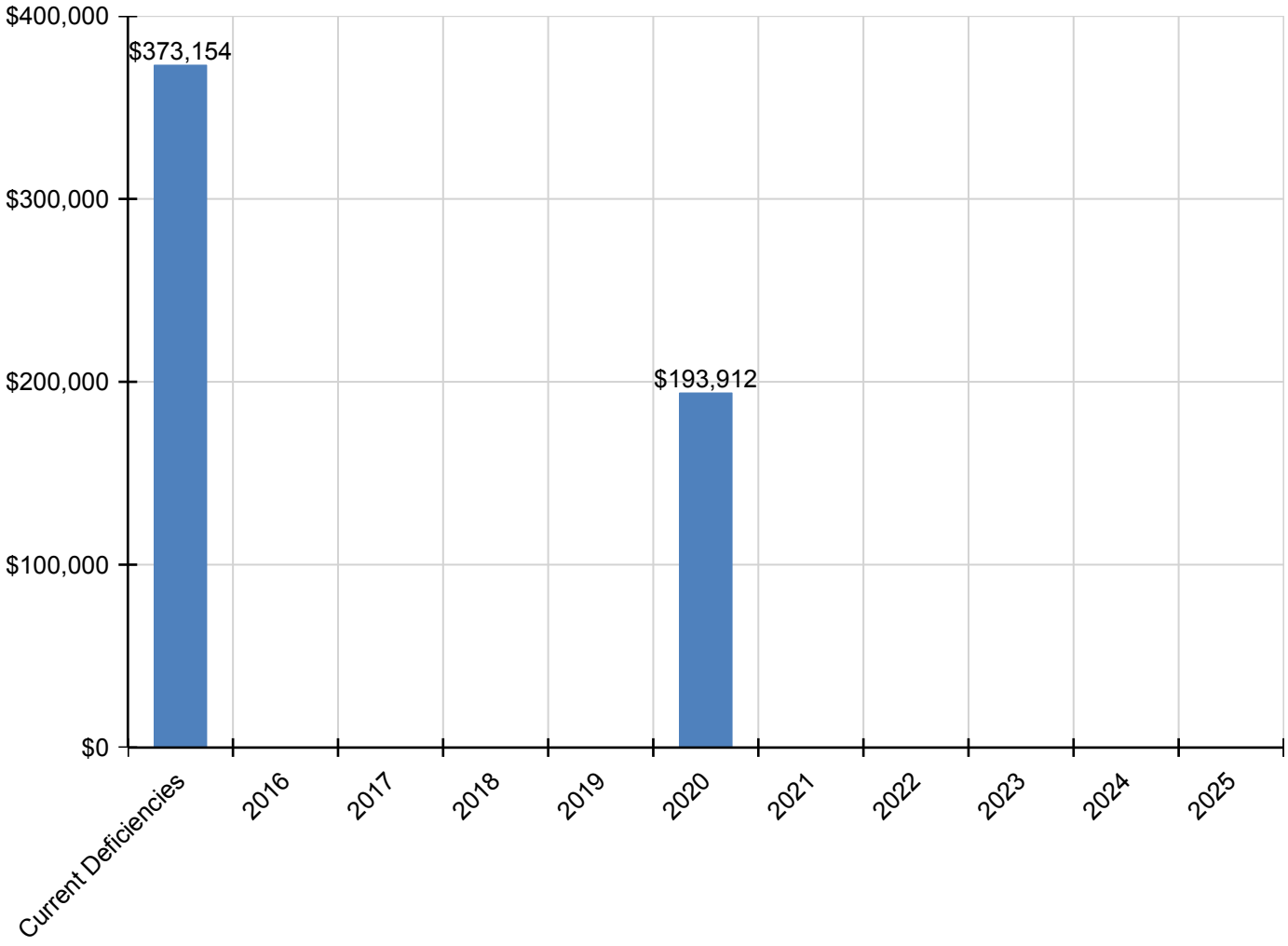
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$373,154**	**$0**	**$0**	**$0**	**$0**	**$193,912**	**$0**	**$0**	**$0**	**$0**	**$0**	**$567,065**
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	$258,541	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$258,541**
G2030 - Pedestrian Paving	$0	$0	$0	$0	$0	$193,912	$0	$0	$0	$0	$0	**$193,912**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$95,860	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$95,860**
G4030 - Site Communications & Security	$18,752	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$18,752**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

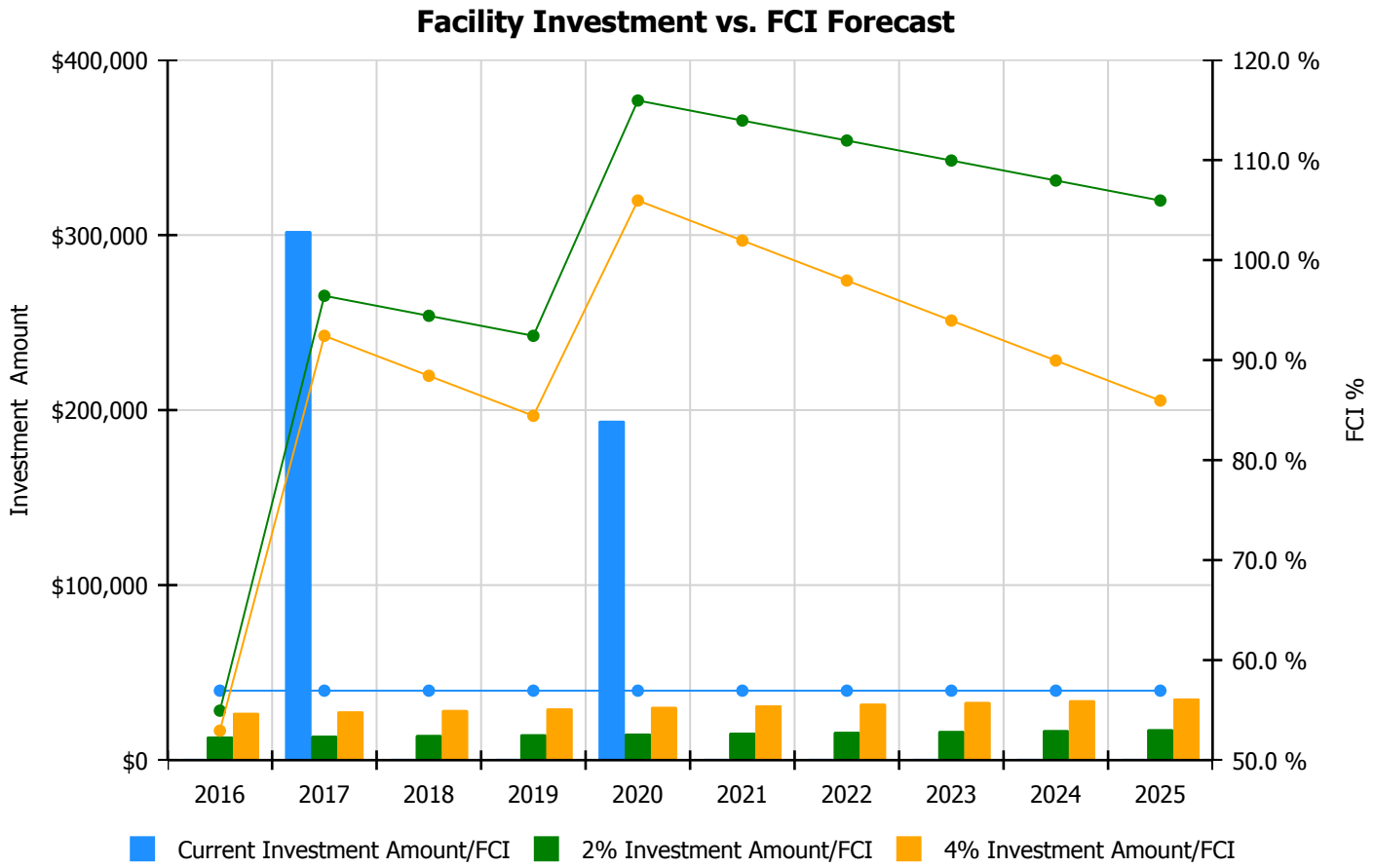
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

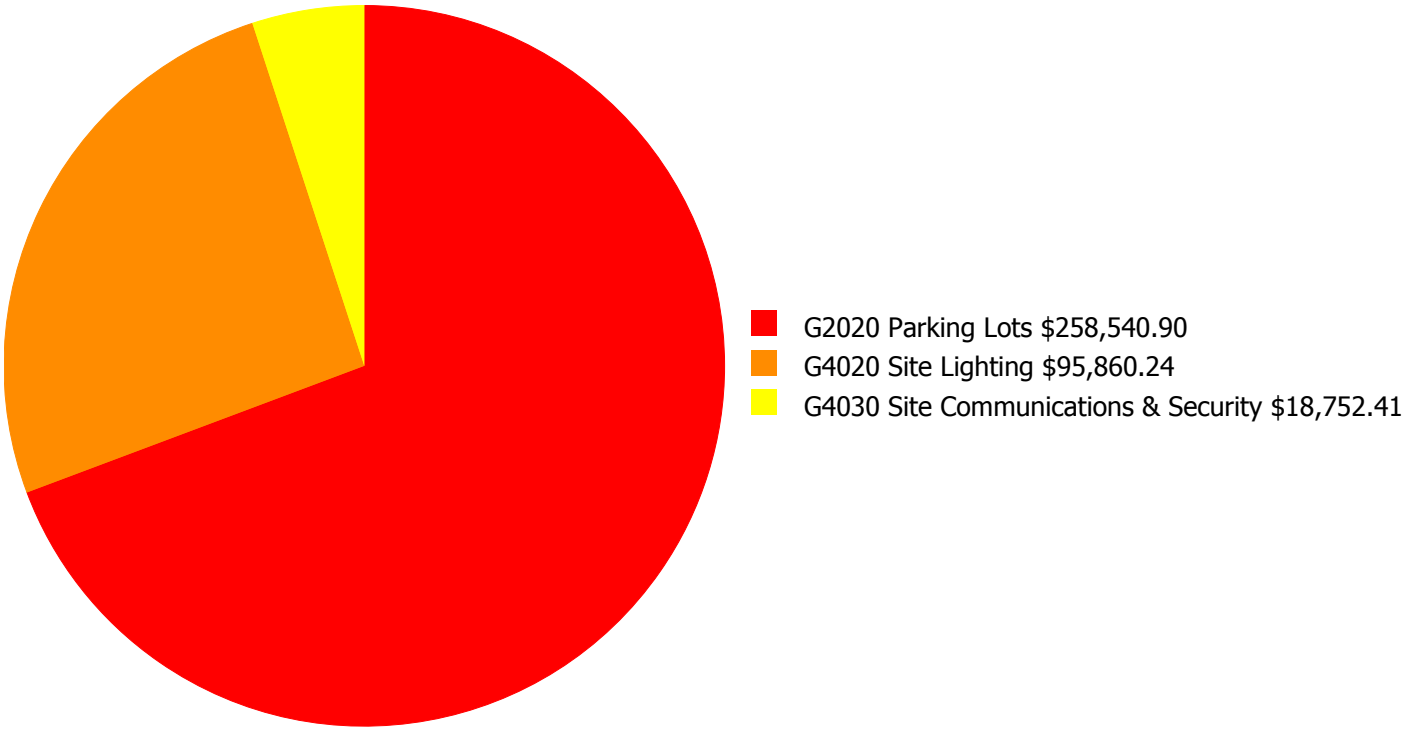
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 56.95%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$13,499.00	54.95 %	$26,998.00	52.95 %
2017	$302,274	$13,904.00	96.43 %	$27,808.00	92.43 %
2018	$0	$14,321.00	94.43 %	$28,642.00	88.43 %
2019	$0	$14,751.00	92.43 %	$29,501.00	84.43 %
2020	$193,912	$15,193.00	115.95 %	$30,386.00	105.95 %
2021	$0	$15,649.00	113.95 %	$31,298.00	101.95 %
2022	$0	$16,118.00	111.95 %	$32,237.00	97.95 %
2023	$0	$16,602.00	109.95 %	$33,204.00	93.95 %
2024	$0	$17,100.00	107.95 %	$34,200.00	89.95 %
2025	$0	$17,613.00	105.95 %	$35,226.00	85.95 %
Total:	**$496,186**	**$154,750.00**		**$309,500.00**	

Deficiency Summary by System

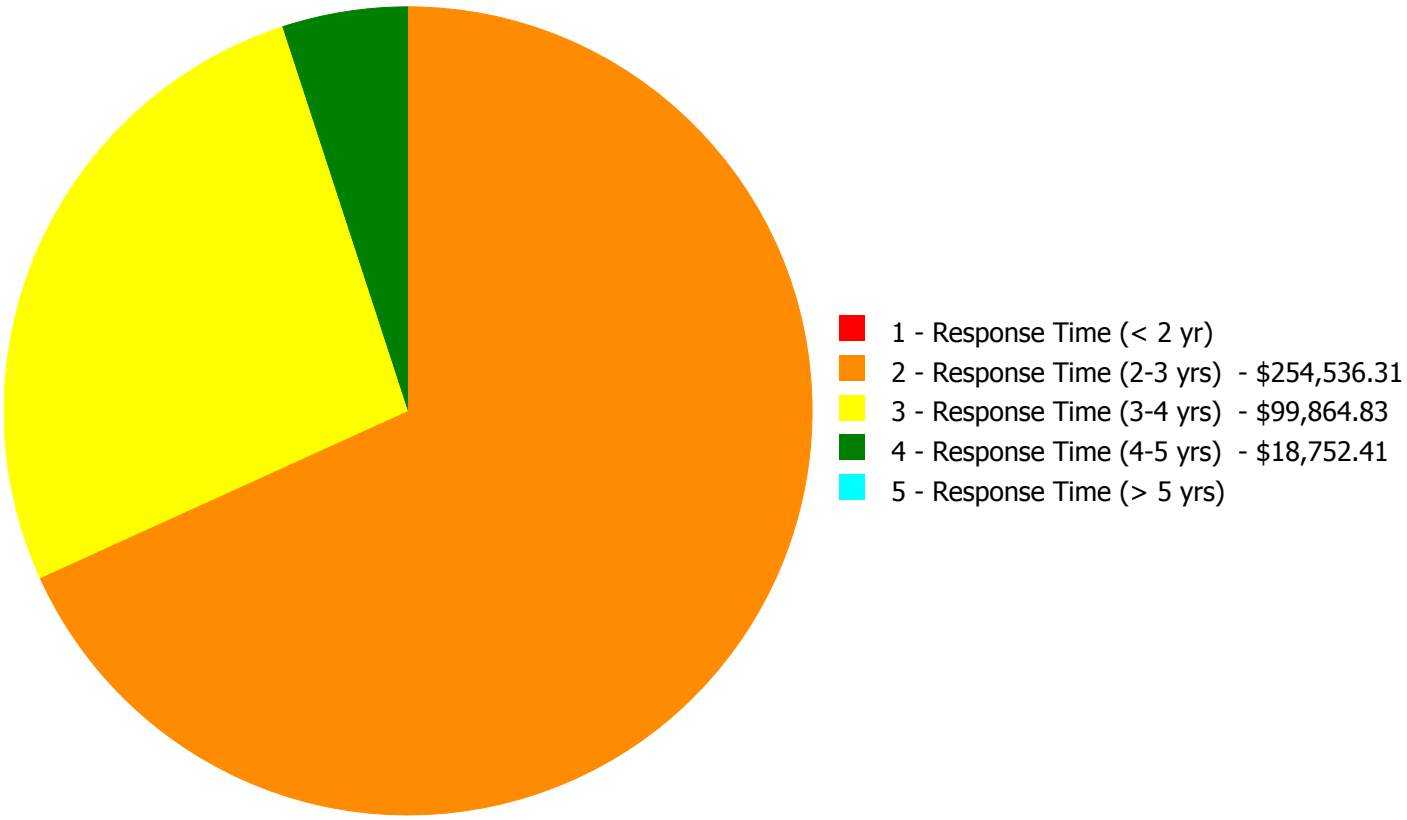
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $373,153.55

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: $373,153.55

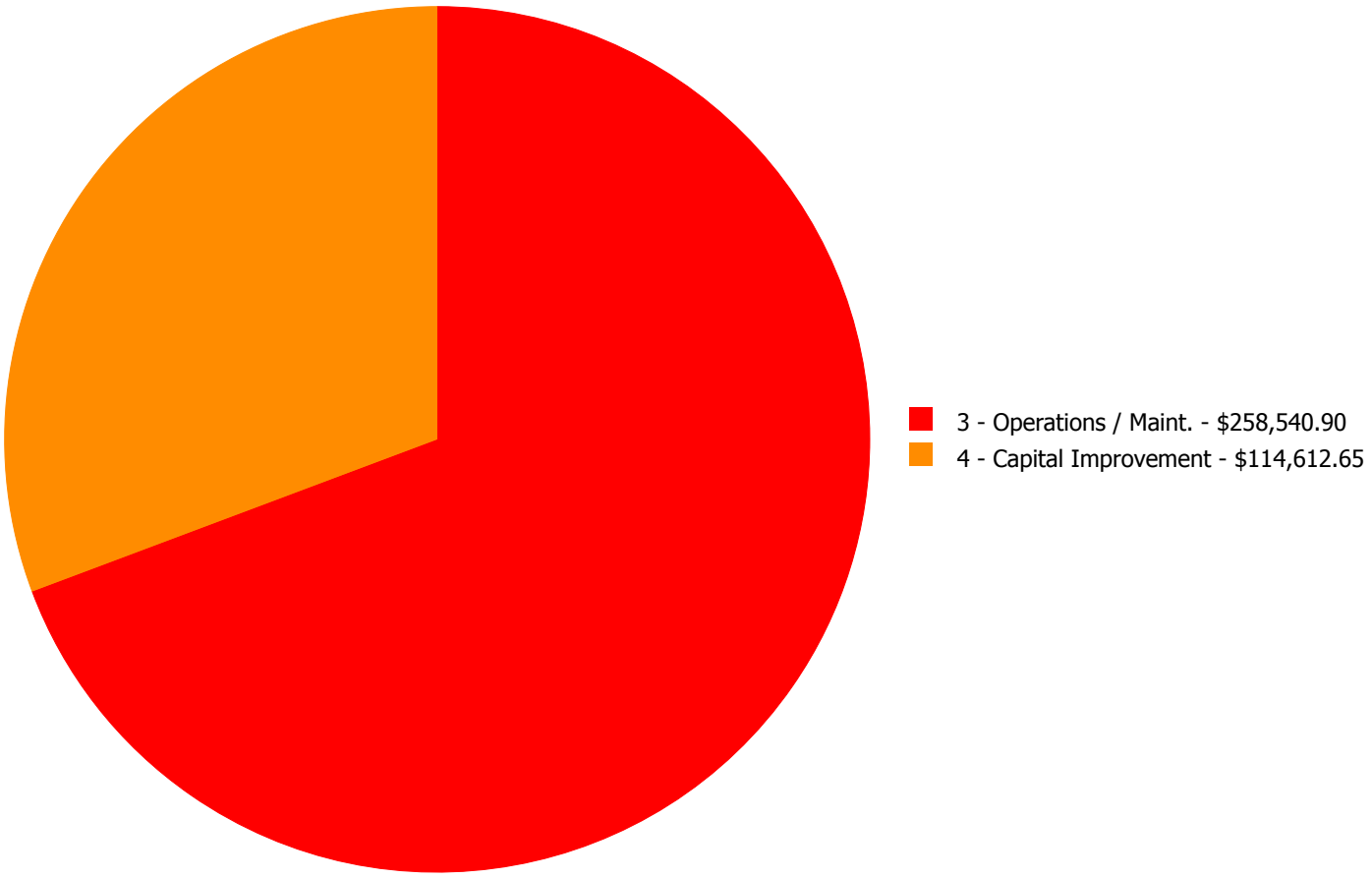
Deficiency By Priority Investment Table

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	$254,536.31	$4,004.59	$0.00	$0.00	$258,540.90
G4020	Site Lighting	$0.00	$0.00	$95,860.24	$0.00	$0.00	$95,860.24
G4030	Site Communications & Security	$0.00	$0.00	$0.00	$18,752.41	$0.00	$18,752.41
	Total:	$0.00	$254,536.31	$99,864.83	$18,752.41	$0.00	$373,153.55

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: $373,153.55

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: G2020 - Parking Lots

Location: South east corner of onsite parking area

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace AC paving parking lot

Qty: 18,000.00

Unit of Measure: S.F.

Estimate: $254,536.31

Assessor Name: Craig Anding

Date Created: 02/15/2016

Notes: Replace pavement of existing parking

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

System: G2020 - Parking Lots

Location: On site parking area

Distress: Accessibility

Category: 3 - Operations / Maint.

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

Correction: Stripe parking stalls, install parking bumpers, provide handicap symbol and handicap post mounted sign - insert proper quantities in estimate

Qty: 5.00

Unit of Measure: Ea.

Estimate: $4,004.59

Assessor Name: Christopher Finnican

Date Created: 02/15/2016

Notes: Stripe spaces including accessible spaces, provide ADA signage

System: G4020 - Site Lighting

Location: grounds

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Site Lighting - pole mounted - select the proper light and pole

Qty: 1.00

Unit of Measure: Ea.

Estimate: $95,860.24

Assessor Name: Christopher Finnican

Date Created: 02/03/2016

Notes: Add pole-mounted lighting for the grounds

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

System: G4030 - Site Communications & Security

Location: grounds

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Site Paging System

Qty: 0.00

Unit of Measure: Ea.

Estimate: $18,752.41

Assessor Name: Christopher Finnican

Date Created: 02/03/2016

Notes: Install additional exterior speakers for the communication with students on the ground

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