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.

Howe School

Governance	DISTRICT	Report Type	Elementary
Address	5800 N. 13Th St.	Enrollment	254
	Philadelphia, Pa 19141	Grade Range	'00-05'
Phone/Fax	215-276-5270 / 215-276-5380	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Howe	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	**38.50%**	**$9,459,894**	**$24,573,868**
Building	38.96 %	$9,185,367	$23,573,598
Grounds	27.45 %	$274,526	$1,000,270

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$595,051
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$1,264,410
Windows (Shows functionality of exterior windows)	00.00 %	$0	$552,015
Exterior Doors (Shows condition of exterior doors)	119.70 %	$80,961	$67,635
Interior Doors (Classroom doors)	20.10 %	$30,611	$152,280
Interior Walls (Paint and Finishes)	00.00 %	$0	$641,520
Plumbing Fixtures	02.13 %	$27,264	$1,278,990
Boilers	46.81 %	$353,929	$756,135
Chillers/Cooling Towers	65.65 %	$650,841	$991,440
Radiators/Unit Ventilators/HVAC	147.80 %	$2,573,281	$1,741,095
Heating/Cooling Controls	158.90 %	$868,810	$546,750
Electrical Service and Distribution	171.34 %	$673,097	$392,850
Lighting	32.96 %	$462,939	$1,404,540
Communications and Security (Cameras, Pa System and Fire Alarm)	67.22 %	$353,627	$526,095

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

S732001;Howe

Final

Site Assessment Report

January 31, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	40,500
Year Built:	1913
Last Renovation:	
Replacement Value:	$24,573,868
Repair Cost:	$9,459,893.85
Total FCI:	38.50 %
Total RSLI:	68.72 %

Description:

Facility Assessment
October 2015

School District of Philadelphia
Howe Elementary School
5800 N 13th St
Philadelphia, PA 19141

40,500 SF / 437 Students / LN 04

GENERAL

The Howe School building is located at 5800 N 13th St in Philadelphia, PA. The 3 story, 40,500 square foot building was originally constructed in 1913. Approximately in 1970 a 1 story portable addition was constructed on the north side of the main building and used as a cafeteria. The addition is a precast concrete structure. The original building has a basement partially above ground and 3 penthouses on the roof.

The Facility Area Coordinator was not able to accompany the Parsons Assessment team on this site visit. Mr. Darryll Hicks, 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

The building typically rests on concrete foundations and bearing walls that are not showing signs of settlement. Foundation walls do not show signs of deterioration. The basement slab does not show signs of heaving or cracking. No signs of water penetration through walls have been observed or reported.

The main structure consists typically of masonry load bearing walls supporting a combination of one-way concrete slabs with ceramic block fillers and heavy timber framing in the original building. Gymnasium ceiling is supported by a cast concrete slab resting on masonry bearing walls.

The building envelope is typically face brick masonry with decorative stone water table and window sills. In general, masonry is in good condition. Extensive masonry restoration was performed in approximately 2010.

The original windows were replaced in 1980's with extruded aluminum double hung windows, single acrylic glazed. Basement and first floor windows are fitted with security screens attached to adjacent masonry. All windows and screens are generally in fair condition. Exterior doors and frames are typically hollow metal in fair to poor condition. They were installed in early 1980's, have no weather stripping and are difficult to operate.

Roofing is typically built-up. All roofing and flashing is typically in good condition; but localized areas are missing flashing or have gaps between flashing sections.

INTERIORS:

Partition wall types include plastered ceramic hollow blocks painted CMU and hollow metal framed glazed store front partitions. Partitions between some classrooms are original, movable partitions in poor condition and inoperable. The interior wall finishes are generally painted plaster, CMU or drywall.

Generally, paint is in fair condition with some deterioration in stairways, around window's perimeters and toilets.

Most ceilings are 2x4 suspended acoustical panels, 1x1 adhered to ceiling and exposed painted. The suspension system and tile are old and approaching the end of their useful life. Paint on exposed ceilings is in fair to poor condition.

Flooring in classrooms is generally hardwood and VCT; and patterned concrete in corridors. Toilet floors are finished with ceramic tile. Most flooring is original and in fair condition; cove base is typically in fair condition. Some areas have VCT, generally in good condition, installed in 2012. However, tiles in the rooms on the northeast of the main corridor on the first floor are VAT (containing asbestos), in fair condition.

Interior doors are wood rail and stile wood glazed doors with transoms, generally in various stages of deterioration. Most doors are fitted with door knobs and are not ADA compliant. Doors leading to exit stairways are retrofitted with hollow metal doors and frames in good condition. Doors in 1970 addition are mostly solid core in hollow metal frames, generally in poor condition.

Fittings include original chalk boards, generally in poor condition; toilet accessories in fair condition; toilet partitions, generally in good condition; not all restrooms are ADA compliant; handrails and ornamental metals, generally in good condition. Interior identifying signage is typically directly painted on wall or door surfaces generally in poor condition. Some doors have no signage.

Stair construction is generally concrete with cast iron non-slip treads in good condition.

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

Furnishings include fixed casework in classrooms (built-in cabinets), in poor condition; there is no auditorium.

CONVEYING SYSTEMS:

The building has no elevators.

MECHANICAL

Plumbing Fixtures

The plumbing fixtures were replaced in 2005, according to the Building Engineer, and are in good condition. Fixtures in the restrooms on each floor consist of both wall and floor mounted flush valve water closets, wall hung urinals, and lavatories with wheel handle faucets. The Building Engineer did not report any issues with the plumbing fixtures.

Drinking fountains in the corridors consist of wall hung stainless steel fixtures which are in good condition and operational according to the Building Engineer. The fixtures are estimated to be within their service lives and reliable service should be provided for the next 5-10 years.

A sink is available in the corridor on each floor for use by the janitorial staff. These sinks are beyond their service lives, insufficient, and should be replaced with new service sinks.

The Kitchen, located in a "portable" on the North side of the building, does not any sinks in it.

Domestic Water Distribution

A 4" city water service enters the basement from North 13th Street on the Northeast side of the building. The 4" meter and valves are located in the boiler room in the basement. Duplex reduced pressure backflow preventers are installed in parallel. Duplex skid mounted 5HP pressure booster pumps are installed on the domestic water line to ensure adequate pressure throughout the building. The booster pumps leak, have significant rust damage, and should be replaced. The original domestic hot and cold water distribution piping was replaced with copper piping and sweat fittings. A water softener is installed in the boiler room. 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.

One (1) Bradford White natural gas, 50 gallon, vertical hot water heater with circulating pump supplies hot water for domestic use. The unit is located in the boiler room on the basement level and has an installation date of 2013. The hot water heater is equipped with a T&P relief valve. The domestic hot water heater is well within its service life and should provide reliable service for the next 7-10 years.

Sanitary Waste

The original sanitary sewer piping is still in use and is a mixture of cast iron piping with hub and spigot fittings and galvanized piping with threaded fittings. Some repairs have been made with cast iron piping and no-hub fittings.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. The original sewer piping has been in service for over 100 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.

The building does not have a sewage ejector or sump pump.

Rain Water Drainage

Rain water drains from the roof are routed through mechanical chases in the building and appear to be original. The piping is cast iron piping with hub and spigot fittings and has been in use well beyond its service life. 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

A 6" city gas service enters the basement on the North side of the building. The gas meter is 4" and is located in the room adjacent to the boiler room. A gas booster pump is installed to ensure adequate gas pressure to the boiler.

The reserve oil supply is stored in a 10,000 gallon underground storage tank (UST) located on the West side of the school. Duplex pumps located in the basement 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 current supply has been in storage for some time and should be tested for quality on a

regular schedule. 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 at 4 lbs. /sq. in., by two (2) 138HP HB Smith model 4500A cast iron sectional boilers, estimated to have been installed in 1994. One (1) boiler can handle the load in normal winter weather conditions; two (2) units are required on very cold days. Each boiler is equipped with a Power Flame burner designed to operate on natural gas or fuel oil. The burners are estimated to be original to the boilers, beyond their anticipated service lives of 18 years and should be replaced. Combustion air makeup is supplied by louvers equipped with motorized dampers. Burner oil pumps are loose and not driven by the fan motor. The gas train serving the boilers does appear to have code required venting of the regulators and dual solenoid valves with venting of the chamber between. The Building Engineer reports the system loses a significant amount of condensate due to failed traps, which is made up with chemically treated city water. Cast iron sectional boilers have an anticipated service life of 35 years or more; these units have been in service approximately 22 years. The District should provide reliable service for the next 10 to 15 years.

The boiler feed tank assembly with three (3) 1/2HP pumps headered together is installed in the boiler room. A serious problem was reported with steam leaking into the system from failed steam traps and of the feed tank system leaking. The boiler feed tank and pumps should be replaced. A water chemical treatment system is connected to the feed tank.

Distribution Systems

Steam piping is black steel with welded fittings. The condensate piping is black steel with threaded fittings. Steam and condensate piping mains from the basement level run up through the building to the 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.

Two pipe fin tube radiators and the house fan provide heating for the building. The house fan is original to the building and well beyond its service life. The house fan is located in a mechanical room in the basement and has been refurbished in the recent past, but the Building Engineer did not know when. The fan is run by a 20HP motor and is not equipped with the OSHA required belt guard. Ventilation for the building is only provided by the house fan when it is in use, which does not meet current codes for outdoor air ventilation. The house fan only runs during the heating season, thus the building is without mechanical ventilation much of the year. The Gymnasium currently does not have an independent ventilation source. Ventilation should be provided for the Gymnasium by installing a constant volume air handling unit with distribution ductwork and registers. A new heating system should be installed to meet ventilation requirements and achieve more efficient operation. The new units should be designed for quiet operation and equipped with hot water coils, chilled water coils, and integral heat exchangers, where applicable, to introduce outdoor air to the building.

Ventilation for the restrooms is provided by one (1) exhaust fan located on the roof. The fan was operational during the site visit and the Building Engineer did not report any issues. Roof mounted gravity ventilators allow relief air to escape from the building when the house fan is run. The ventilators were recently refurbished and appear to be in good condition.

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 110 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.

The Kitchen does not have any cooking equipment as only premade meals are served, thus no exhaust system is installed.

Controls & Instrumentation

The original pneumatic systems provide no control functions. Pneumatic room thermostats are intended to control the steam radiator control valves. In reality the radiator control valves are wide open and heating control is achieved via the boilers and house fan. Pneumatic control air is no longer supplied as the air compressor has been removed. The pneumatic systems are beyond their service life and are no longer functional. The original control valves and pneumatic actuators are beyond their service life and should be rebuilt or replaced. 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 building is NOT equipped with fire standpipes, but a second domestic line connected to firehoses in the basement corridor is supposed to supply a way to fight a fire.

Portable Classroom

A portable classroom located on the North side of the main school building houses the Kitchen/Cafeteria. The portable has an independent conditioning system from the main building. A packaged rooftop unit provides heating and cooling to the Kitchen/Cafeteria. According to the Building Engineer the packaged unit was installed in approximately 2009. The roof of the portable was not accessible during the site visit and further information on the packaged unit is not available. The District should provide reliable service to the rooftop unit for the next 5-10 years.

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 into the school building overhead and down on the exterior of the building into in the electrical room. It feeds an old 400A, 120V/240 V, 2 phase switchboard. The PECO (PECO 9U-4216273) meter is also located inside the new electrical room (basement). The switchboard is in a poor condition and has reached the end of its useful service life.

Distribution system - The electrical distribution is accomplished by using the 400A switchboard distribution panel (located in the electrical room) and feeding several 120V lighting and receptacle panels throughout the building. These panels are in poor condition. They have reached the end of their useful service life.

Receptacles - The receptacles in classrooms, computer rooms, libraries, and other areas are not adequate. The walls in classrooms and the computer rooms (70%) have insufficient number of receptacles (minimum of 2 on each wall).

Lighting - Interior building is illuminated by various types of fixtures. They include fluorescent lighting (mostly T-8 & T-12 lamps) in majority of the areas, including; classrooms, corridors, offices, Library, cafeteria, Kitchen, etc. Surface or pendant mounted industrial fluorescent fixtures are used in mechanical and electrical rooms. About 30% of the school lighting was upgraded, however the majority of the building (70%) lacks adequate illumination level. The majority of interior lighting fixtures are not in good condition and have reached the end of their useful service life.

Fire alarm - The present Fire Alarm system is not automatic/addressable, and is not in compliance with safety code. There are some manual pulls stations throughout the building. However, there are 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, and vice versa between each classroom and main office. Also, there is communication between classrooms to classrooms.

Clock and Program system – There are clocks in each classroom (12-inch round clocks), however the clocks are not controlled properly by the master clock control. The overall clock system has reached the end of its useful service life.

Television System - Television system is not provided for the school. There are smart boards in most of the classrooms capable of connecting to computers and internet.

Security Systems, access control, and video surveillance - The school is not provided with video surveillance system. 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 – There is a small 15 KW emergency generator in this building. However, it is not adequate size for this building to feed all emergency loads and a new elevator.

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

Lightning Protection System - There is adequate lightning protection system installed for this school on the roof. There are numerous lighting rods installed on the roof top, and they connected to the ground by using stranded aluminum cables from the roof top all the way to the ground floor. Some of these stranded cable are damaged or broken (20%).

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

Site Lighting - The school has some exterior lighting. However, a few pole-mounted lights are needed to provide adequate lighting for the grounds security and safety of people at night.

Site Paging – The school has some exterior speakers, however a few additional speakers are needed for proper communication with students playing outside.

Elevators – This school has a no elevator

GROUNDS (SITE):

There is a parking lot at the west side of the site. There are no accessible spaces, aisles or signage. The pavement is concrete in good condition;

Playground pavement adjacent to the building is in poor condition, paving is cracked and uneven.

There is no playground equipment; there is only painted concrete hop scotch grids and a list of numbers from one to twelve running parallel to the rear of the building.

Perimeter picket fence separating the playground from the street and parking is generally in fair condition.

The landscaping is limited to a small patch of grass north of the playground, completely fenced and unused. Grass is in poor condition.

ACCESSIBILITY:

Generally, the building has no accessible route per ADA requirements to the Gym. The original building is not accessible due to level separation between sidewalk and the original building and lack of elevator to basement, second and the third floors. Most toilets are equipped with accessible fixtures, and accessories, such as grab bars, and accessible partitions. Most of the doors in the building have ADA required door handles.

Parking does not have defined accessible stalls and signage.

RECOMMENDATIONS:

- Replace all exterior doors.
- Replace all suspended acoustical ceilings.
- Repair and repaint exposed ceilings.
- Repair & refinish hardwood flooring.
- Replace all VAT floor tiles.
- Install new signage throughout the building.
- Provide ADA compliant elevator serving basement and all floors (exterior).
- Provide ADA compliant hardware on interior doors.
- Replace original chalk boards.
- Provide ADA compliant ramp at main entrance

- Replace portion of parking paving (20% area)
- Provide parking striping with (2) accessible spaces and aisles.
- Replace four (4) service sinks in the corridors for use by the janitorial staff which are beyond their service lives.
- Replace the duplex 5HP domestic water booster pumps and isolation valves on the incoming domestic water line with a new skid mounted pressure booster system.
- 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.
- 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 piping, in service for over 100 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, which is estimated to be beyond its service life, and three (3) 1/2HP pumps in the boiler room.
- Replace the two (2) dual fuel boiler burners, which are beyond their service lives, with new more efficient burners within the next 0-2 years.
- Remove the existing fin tube steam radiators and install units with hot and chilled water coils and integral heat exchangers to introduce outdoor air to the building.
- Remove the window air conditioning units and install a 110 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.
- Provide ventilation for the Gymnasium by installing a constant volume air handling unit with distribution ductwork and registers.
- 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 a new and upgraded electrical service for this school to handle existing loads plus any additional mechanical loads.
- Install new 120V lighting and receptacle panels throughout the building (total of 10)
- Install new lighting system for 70% of the building.
- Install new receptacles for 70% of the building
- Install a new emergency generator.
- Install new emergency lights and exit lights
- Install a new clock system
- Install new Automated Fire alarm System.
- Install new lightning protection cables for the damaged cables.
- 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:	S732001		

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	52.00 %	0.00 %	$0.00
A20 - Basement Construction	52.00 %	0.00 %	$0.00
B10 - Superstructure	52.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	46.10 %	4.30 %	$80,960.80
B30 - Roofing	25.00 %	0.00 %	$0.00
C10 - Interior Construction	44.03 %	7.73 %	$71,373.56
C20 - Stairs	52.00 %	0.00 %	$0.00
C30 - Interior Finishes	62.10 %	24.93 %	$533,834.42
D10 - Conveying	105.71 %	130.43 %	$1,012,601.25
D20 - Plumbing	79.49 %	40.15 %	$661,303.64
D30 - HVAC	92.26 %	98.70 %	$4,446,861.18
D40 - Fire Protection	105.71 %	158.77 %	$579,370.59
D50 - Electrical	110.01 %	73.46 %	$1,799,061.97
E10 - Equipment	37.14 %	0.00 %	$0.00
E20 - Furnishings	0.00 %	0.00 %	$0.00
G20 - Site Improvements	35.56 %	20.79 %	$158,948.91
G40 - Site Electrical Utilities	106.67 %	49.00 %	$115,577.53
Totals:	**68.72 %**	**38.50 %**	**$9,459,893.85**

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)
B732001;Howe	40,500	38.96	$915,459.67	$977,219.27	$2,921,832.94	$1,662,763.05	$2,708,092.48
G732001;Grounds	40,600	27.45	$0.00	$53,717.37	$95,860.24	$124,948.83	$0.00
Total:		**38.50**	**$915,459.67**	**$1,030,936.64**	**$3,017,693.18**	**$1,787,711.88**	**$2,708,092.48**

Deficiencies By Priority

- 1 - Response Time (< 2 yr) - $915,459.67
- 2 - Response Time (2-3 yrs) - $1,030,936.64
- 3 - Response Time (3-4 yrs) - $3,017,693.18
- 4 - Response Time (4-5 yrs) - $1,787,711.88
- 5 - Response Time (> 5 yrs) - $2,708,092.48

Budget Estimate Total: $9,459,893.85

Executive Summary

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

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

Function:	Elementary School
Gross Area (SF):	40,500
Year Built:	1913
Last Renovation:	
Replacement Value:	$23,573,598
Repair Cost:	$9,185,367.41
Total FCI:	38.96 %
Total RSLI:	69.41 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B732001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S732001		

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	52.00 %	0.00 %	$0.00
A20 - Basement Construction	52.00 %	0.00 %	$0.00
B10 - Superstructure	52.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	46.10 %	4.30 %	$80,960.80
B30 - Roofing	25.00 %	0.00 %	$0.00
C10 - Interior Construction	44.03 %	7.73 %	$71,373.56
C20 - Stairs	52.00 %	0.00 %	$0.00
C30 - Interior Finishes	62.10 %	24.93 %	$533,834.42
D10 - Conveying	105.71 %	130.43 %	$1,012,601.25
D20 - Plumbing	79.49 %	40.15 %	$661,303.64
D30 - HVAC	92.26 %	98.70 %	$4,446,861.18
D40 - Fire Protection	105.71 %	158.77 %	$579,370.59
D50 - Electrical	110.01 %	73.46 %	$1,799,061.97
E10 - Equipment	37.14 %	0.00 %	$0.00
E20 - Furnishings	0.00 %	0.00 %	$0.00
Totals:	**69.41 %**	**38.96 %**	**$9,185,367.41**

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.	40,500	100	1913	2013	2067	52.00 %	0.00 %	52			$984,960
A1030	Slab on Grade	$15.51	S.F.	40,500	100	1913	2013	2067	52.00 %	0.00 %	52			$628,155
A2010	Basement Excavation	$13.07	S.F.	40,500	100	1913	2013	2067	52.00 %	0.00 %	52			$529,335
A2020	Basement Walls	$23.02	S.F.	40,500	100	1913	2013	2067	52.00 %	0.00 %	52			$932,310
B1010	Floor Construction	$92.20	S.F.	40,500	100	1913	2013	2067	52.00 %	0.00 %	52			$3,734,100
B1020	Roof Construction	$24.11	S.F.	40,500	100	1913	2013	2067	52.00 %	0.00 %	52			$976,455
B2010	Exterior Walls	$31.22	S.F.	40,500	100	1913	2013	2067	52.00 %	0.00 %	52			$1,264,410
B2020	Exterior Windows	$13.63	S.F.	40,500	40	1985	2025		25.00 %	0.00 %	10			$552,015
B2030	Exterior Doors	$1.67	S.F.	40,500	25	1995	2020	2042	108.00 %	119.70 %	27		$80,960.80	$67,635
B3010105	Built-Up	$37.76	S.F.	15,480	20	2000	2020		25.00 %	0.00 %	5			$584,525
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.	15,480	20	2000	2020		25.00 %	0.00 %	5			$10,526
C1010	Partitions	$14.93	S.F.	40,500	100	1913	2013	2067	52.00 %	0.00 %	52			$604,665
C1020	Interior Doors	$3.76	S.F.	40,500	40	1913	1953	2025	25.00 %	20.10 %	10		$30,611.32	$152,280
C1030	Fittings	$4.12	S.F.	40,500	40	1913	1953	2028	32.50 %	24.43 %	13		$40,762.24	$166,860
C2010	Stair Construction	$1.28	S.F.	40,500	100	1913	2013	2067	52.00 %	0.00 %	52			$51,840

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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	$13.21	S.F.	40,500	10	2010	2020		50.00 %	0.00 %	5			$535,005
C3010231	Vinyl Wall Covering	$0.97	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.63	S.F.	40,500	30	1988	2018	2021	20.00 %	0.00 %	6			$106,515
C3020411	Carpet	$7.30	S.F.	800	10	1913	1923	2027	120.00 %	0.00 %	12			$5,840
C3020412	Terrazzo & Tile	$75.52	S.F.	2,100	50	1913	1963	2020	10.00 %	0.00 %	5			$158,592
C3020413	Vinyl Flooring	$9.68	S.F.	9,800	20	1913	1933	2020	25.00 %	12.79 %	5		$12,133.33	$94,864
C3020414	Wood Flooring	$22.27	S.F.	17,100	25	1913	1938	2020	20.00 %	15.55 %	5		$59,218.17	$380,817
C3020415	Concrete Floor Finishes	$0.97	S.F.	10,700	50	1913	1963	2020	10.00 %	0.00 %	5			$10,379
C3030	Ceiling Finishes	$20.97	S.F.	40,500	25	1913	1938	2042	108.00 %	54.46 %	27		$462,482.92	$849,285
D1010	Elevators and Lifts	$19.17	S.F.	40,500	35	1913	1948	2052	105.71 %	130.43 %	37		$1,012,601.25	$776,385
D2010	Plumbing Fixtures	$31.58	S.F.	40,500	35	2005	2040		71.43 %	2.13 %	25		$27,264.37	$1,278,990
D2020	Domestic Water Distribution	$2.90	S.F.	40,500	25	1913	1938	2042	108.00 %	217.76 %	27		$255,761.90	$117,450
D2030	Sanitary Waste	$2.90	S.F.	40,500	25	1913	1938	2042	108.00 %	169.16 %	27		$198,682.87	$117,450
D2040	Rain Water Drainage	$3.29	S.F.	40,500	30	1913	1943	2047	106.67 %	134.79 %	32		$179,594.50	$133,245
D3020	Heat Generating Systems	$18.67	S.F.	40,500	35	1994	2029		40.00 %	46.81 %	14		$353,928.87	$756,135
D3030	Cooling Generating Systems	$24.48	S.F.	40,500	20			2037	110.00 %	65.65 %	22		$650,841.27	$991,440
D3040	Distribution Systems	$42.99	S.F.	40,500	25	1913	1938	2042	108.00 %	147.80 %	27		$2,573,281.32	$1,741,095
D3050	Terminal & Package Units	$11.60	S.F.	40,500	15	2009	2024		60.00 %	0.00 %	9			$469,800
D3060	Controls & Instrumentation	$13.50	S.F.	40,500	20	1988	2008	2037	110.00 %	158.90 %	22		$868,809.72	$546,750
D4010	Sprinklers	$8.02	S.F.	40,500	35			2052	105.71 %	178.37 %	37		$579,370.59	$324,810
D4020	Standpipes	$0.99	S.F.	40,500	35			2052	105.71 %	0.00 %	37			$40,095
D5010	Electrical Service/Distribution	$9.70	S.F.	40,500	30	1913	1943	2047	106.67 %	171.34 %	32		$673,097.46	$392,850
D5020	Lighting and Branch Wiring	$34.68	S.F.	40,500	20	1913	1933	2037	110.00 %	32.96 %	22		$462,938.72	$1,404,540
D5030	Communications and Security	$12.99	S.F.	40,500	15	1913	1928	2032	113.33 %	67.22 %	17		$353,627.18	$526,095
D5090	Other Electrical Systems	$3.10	S.F.	40,500	30	1913	1943	2047	106.67 %	246.43 %	32		$309,398.61	$125,550
E1020	Institutional Equipment	$4.82	S.F.		35				0.00 %	0.00 %				$0
E1090	Other Equipment	$11.10	S.F.	40,500	35	1988	2023	2028	37.14 %	0.00 %	13			$449,550
E2010	Fixed Furnishings	$2.13	S.F.		40				0.00 %	0.00 %				$0
								Total	**69.41 %**	**38.96 %**			**$9,185,367.41**	**$23,573,598**

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:	**$9,185,367**	**$0**	**$0**	**$0**	**$0**	**$2,263,111**	**$139,904**	**$0**	**$0**	**$674,281**	**$1,041,166**	**$13,303,828**
*** 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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$816,049	**$816,049**
B2030 - Exterior Doors	$80,961	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$80,961**
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	$0	$0	$0	$0	$0	$745,387	$0	$0	$0	$0	$0	**$745,387**
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	$13,423	$0	$0	$0	$0	$0	**$13,423**
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**

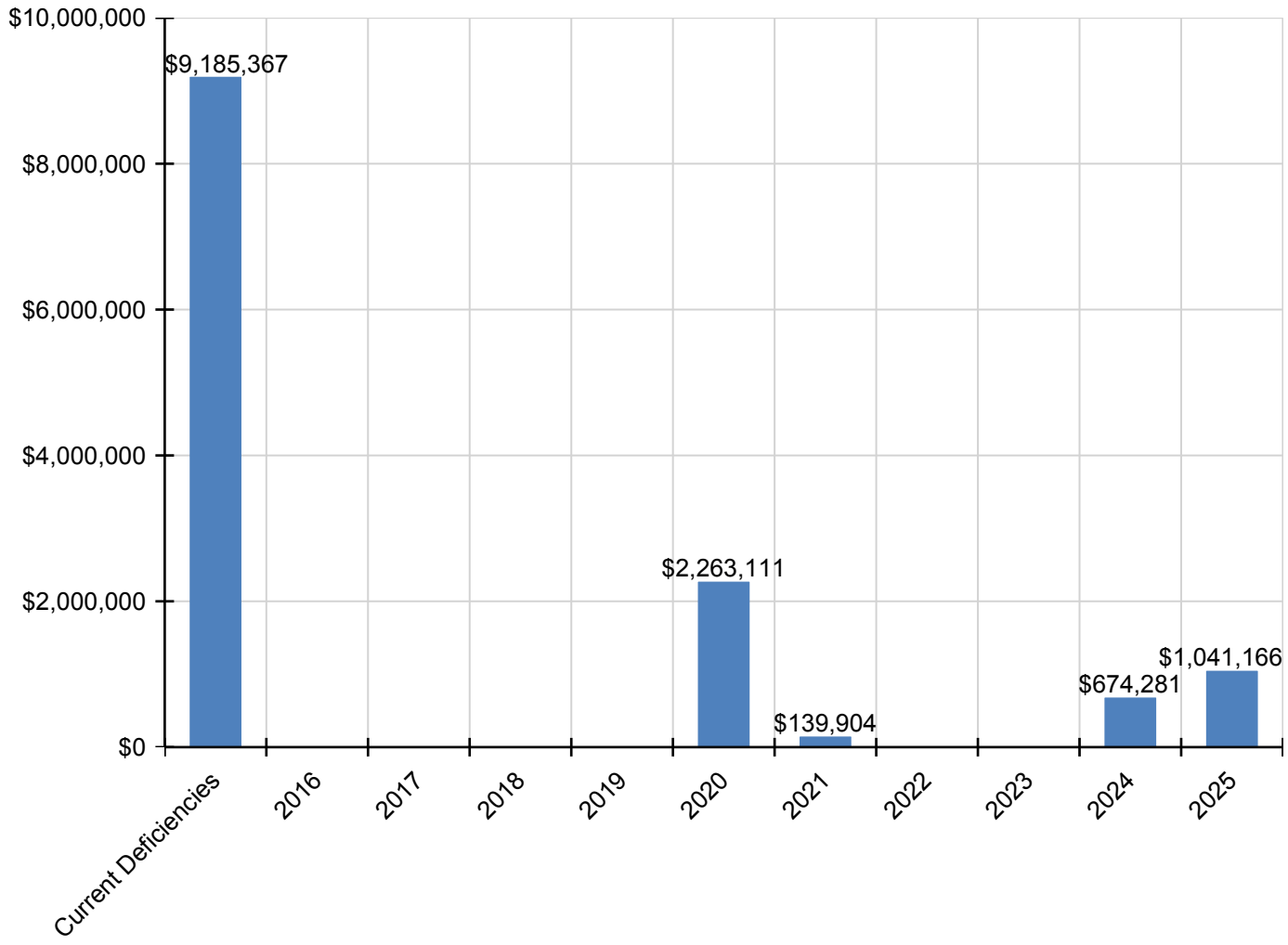
C1020 - Interior Doors	$30,611	$0	$0	$0	$0	$0	$0	$0	$0	$0	$225,117	**$255,728**
C1030 - Fittings	$40,762	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$40,762**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$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	$682,240	$0	$0	$0	$0	$0	**$682,240**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$139,904	$0	$0	$0	$0	**$139,904**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$202,237	$0	$0	$0	$0	$0	**$202,237**
C3020413 - Vinyl Flooring	$12,133	$0	$0	$0	$0	$120,970	$0	$0	$0	$0	$0	**$133,104**
C3020414 - Wood Flooring	$59,218	$0	$0	$0	$0	$485,619	$0	$0	$0	$0	$0	**$544,837**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$13,235	$0	$0	$0	$0	$0	**$13,235**
C3030 - Ceiling Finishes	$462,483	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$462,483**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$1,012,601	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,012,601**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$27,264	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$27,264**
D2020 - Domestic Water Distribution	$255,762	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$255,762**
D2030 - Sanitary Waste	$198,683	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$198,683**
D2040 - Rain Water Drainage	$179,595	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$179,595**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$353,929	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$353,929**
D3030 - Cooling Generating Systems	$650,841	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$650,841**
D3040 - Distribution Systems	$2,573,281	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,573,281**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$674,281	$0	**$674,281**
D3060 - Controls & Instrumentation	$868,810	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$868,810**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$579,371	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$579,371**
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	$673,097	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$673,097**
D5020 - Lighting and Branch Wiring	$462,939	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$462,939**
D5030 - Communications and Security	$353,627	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$353,627**
D5090 - Other Electrical Systems	$309,399	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$309,399**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

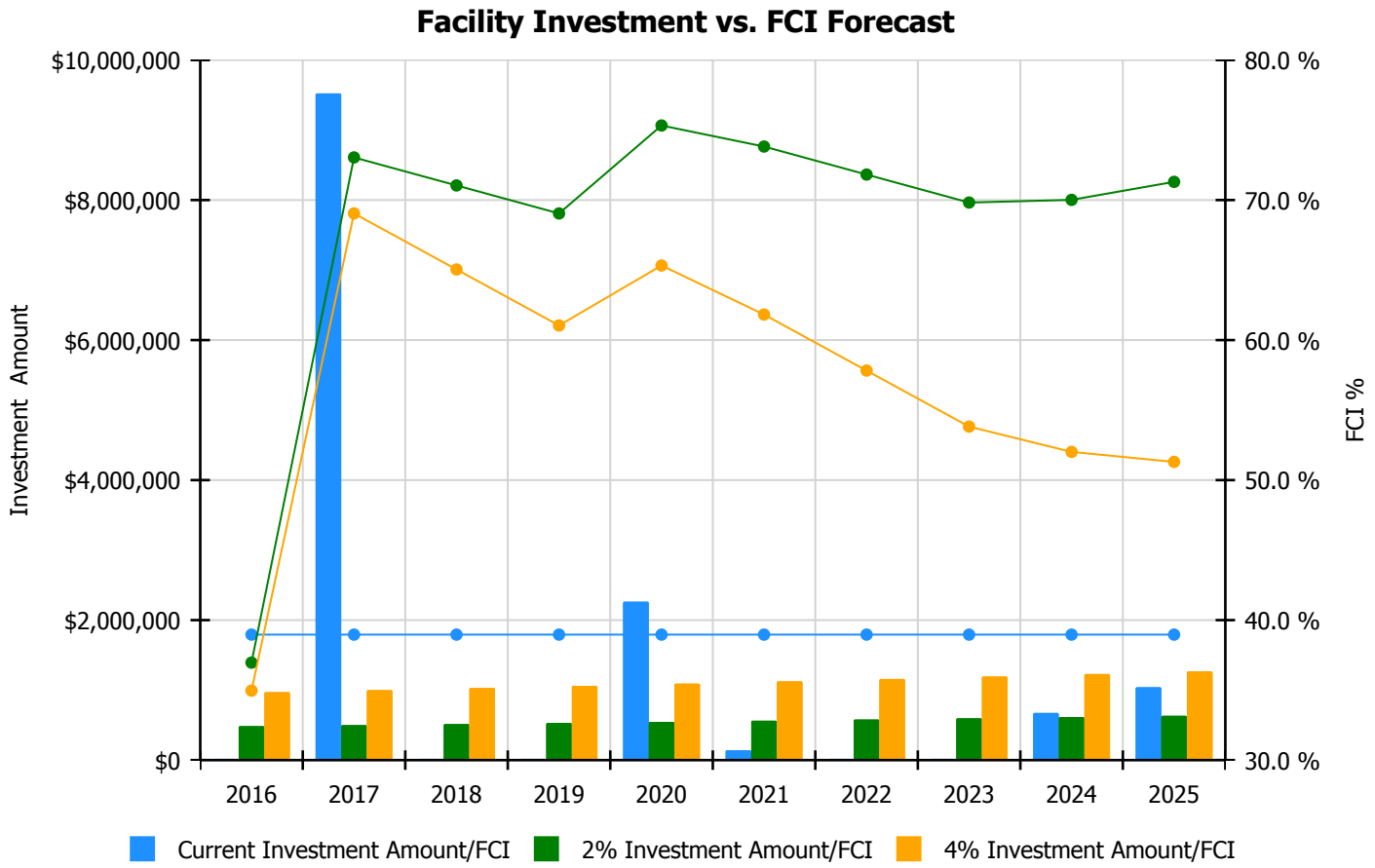
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

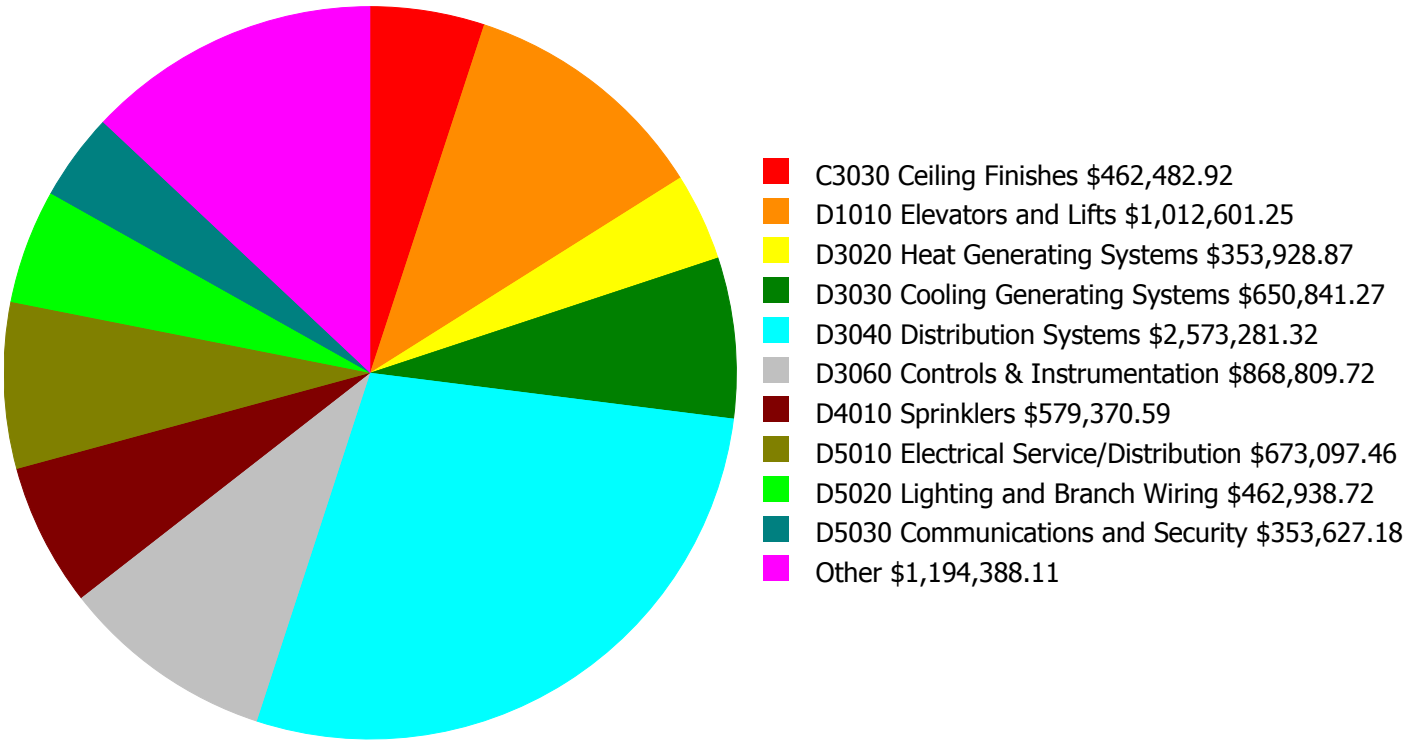
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 38.96%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$485,616.00	36.96 %	$971,232.00	34.96 %
2017	$9,523,243	$500,185.00	73.04 %	$1,000,369.00	69.04 %
2018	$0	$515,190.00	71.04 %	$1,030,380.00	65.04 %
2019	$0	$530,646.00	69.04 %	$1,061,292.00	61.04 %
2020	$2,263,111	$546,565.00	75.32 %	$1,093,130.00	65.32 %
2021	$139,904	$562,962.00	73.82 %	$1,125,924.00	61.82 %
2022	$0	$579,851.00	71.82 %	$1,159,702.00	57.82 %
2023	$0	$597,247.00	69.82 %	$1,194,493.00	53.82 %
2024	$674,281	$615,164.00	70.01 %	$1,230,328.00	52.01 %
2025	$1,041,166	$633,619.00	71.30 %	$1,267,238.00	51.30 %
Total:	**$13,641,703**	**$5,567,045.00**		**$11,134,088.00**	

Deficiency Summary by System

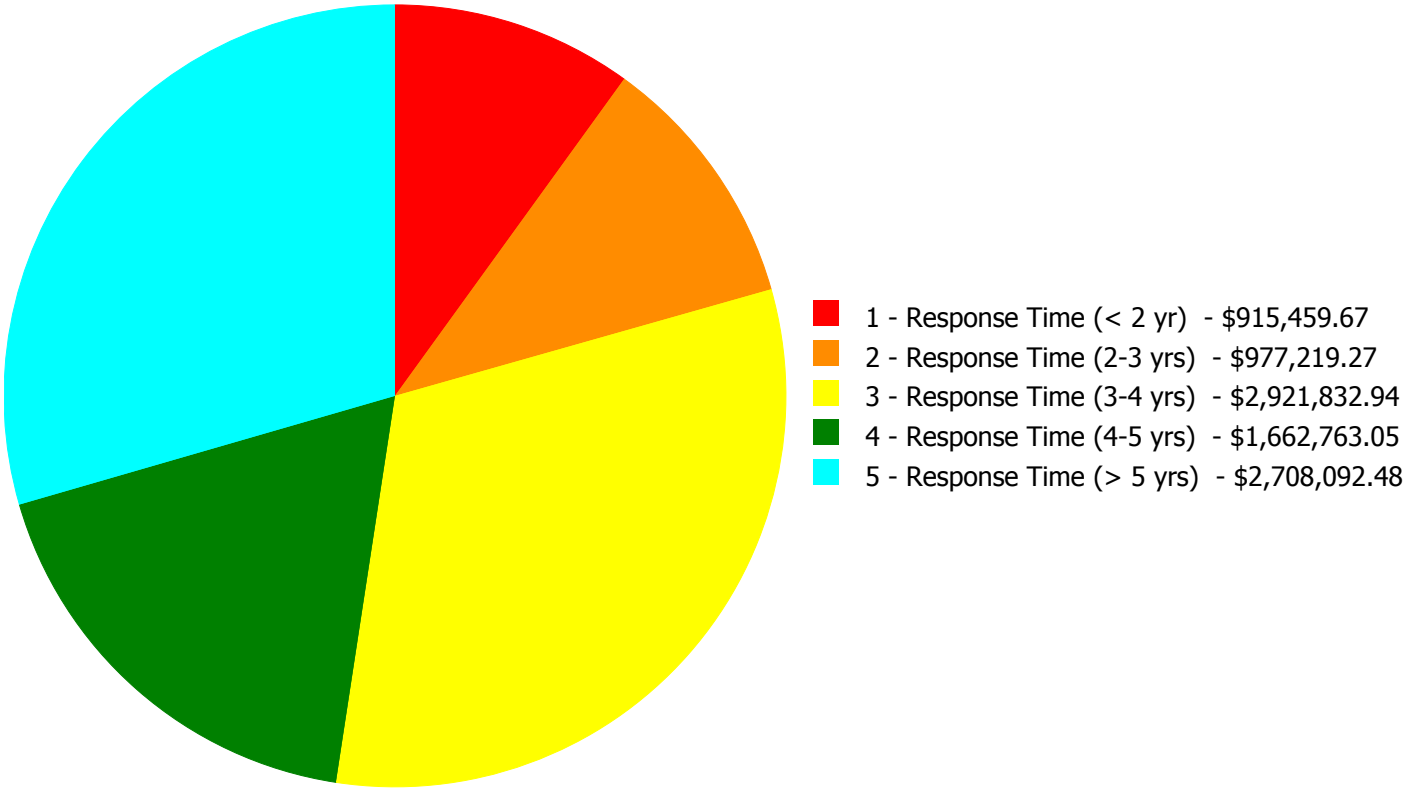
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $9,185,367.41

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: $9,185,367.41

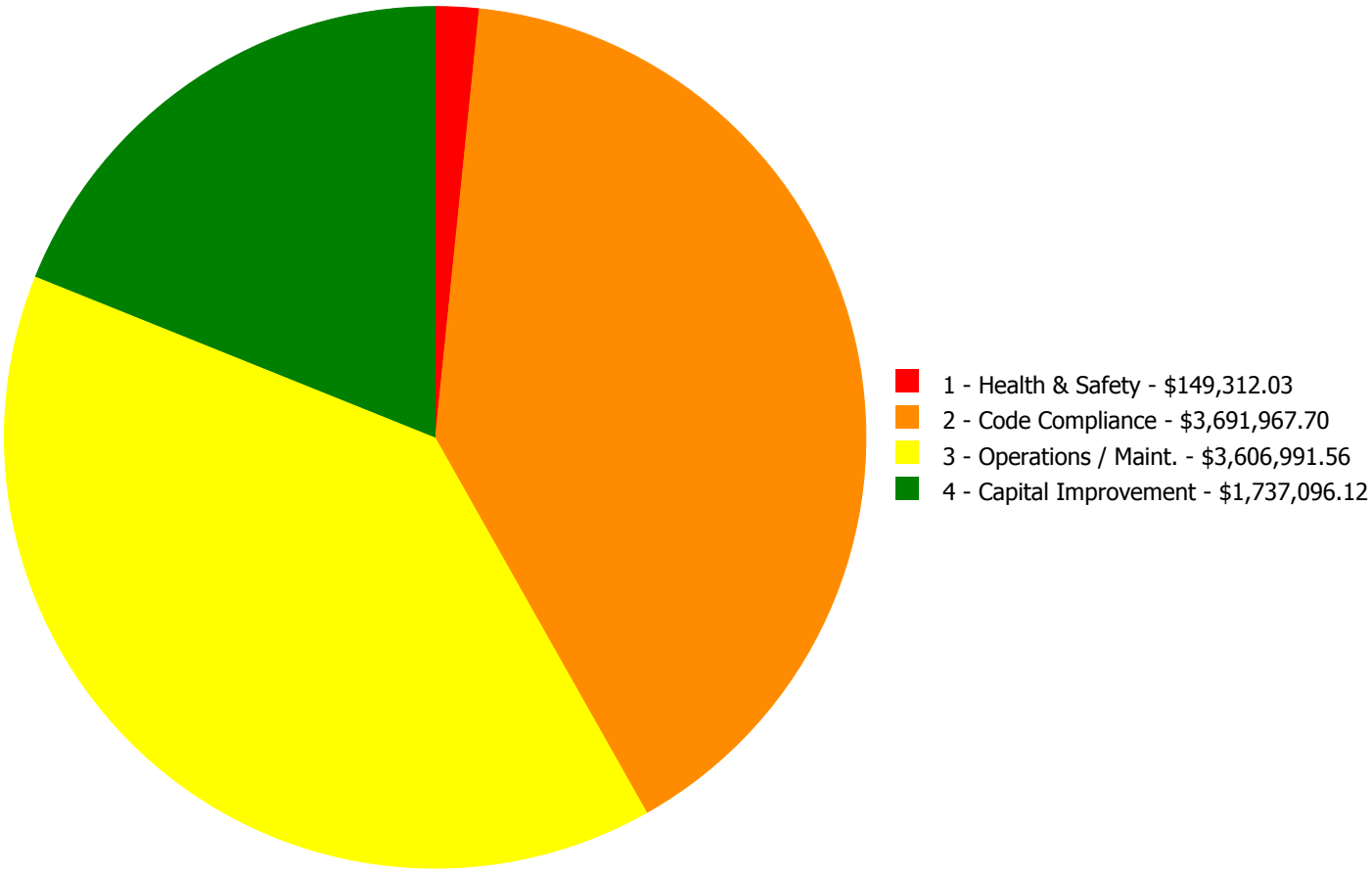
Deficiency By Priority Investment Table

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
B2030	Exterior Doors	$0.00	$0.00	$0.00	$80,960.80	$0.00	$80,960.80
C1020	Interior Doors	$0.00	$30,611.32	$0.00	$0.00	$0.00	$30,611.32
C1030	Fittings	$0.00	$0.00	$0.00	$40,762.24	$0.00	$40,762.24
C3020413	Vinyl Flooring	$0.00	$0.00	$12,133.33	$0.00	$0.00	$12,133.33
C3020414	Wood Flooring	$0.00	$0.00	$0.00	$59,218.17	$0.00	$59,218.17
C3030	Ceiling Finishes	$0.00	$0.00	$0.00	$462,482.92	$0.00	$462,482.92
D1010	Elevators and Lifts	$0.00	$0.00	$1,012,601.25	$0.00	$0.00	$1,012,601.25
D2010	Plumbing Fixtures	$0.00	$27,264.37	$0.00	$0.00	$0.00	$27,264.37
D2020	Domestic Water Distribution	$0.00	$50,533.86	$0.00	$205,228.04	$0.00	$255,761.90
D2030	Sanitary Waste	$0.00	$0.00	$198,682.87	$0.00	$0.00	$198,682.87
D2040	Rain Water Drainage	$0.00	$0.00	$179,594.50	$0.00	$0.00	$179,594.50
D3020	Heat Generating Systems	$203,204.05	$0.00	$150,724.82	$0.00	$0.00	$353,928.87
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$650,841.27	$650,841.27
D3040	Distribution Systems	$132,885.03	$0.00	$383,145.08	$0.00	$2,057,251.21	$2,573,281.32
D3060	Controls & Instrumentation	$0.00	$868,809.72	$0.00	$0.00	$0.00	$868,809.72
D4010	Sprinklers	$579,370.59	$0.00	$0.00	$0.00	$0.00	$579,370.59
D5010	Electrical Service/Distribution	$0.00	$0.00	$0.00	$673,097.46	$0.00	$673,097.46
D5020	Lighting and Branch Wiring	$0.00	$0.00	$462,938.72	$0.00	$0.00	$462,938.72
D5030	Communications and Security	$0.00	$0.00	$212,613.76	$141,013.42	$0.00	$353,627.18
D5090	Other Electrical Systems	$0.00	$0.00	$309,398.61	$0.00	$0.00	$309,398.61
	Total:	$915,459.67	$977,219.27	$2,921,832.94	$1,662,763.05	$2,708,092.48	$9,185,367.41

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: $9,185,367.41

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: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace power burner, gas/oil (150 HP)

Qty: 2.00

Unit of Measure: Ea.

Estimate: $203,204.05

Assessor Name: System

Date Created: 01/18/2016

Notes: Replace the two (2) 5800MBH dual fuel boiler burners, which are beyond their service lives, with new more efficient burners within the next 0-2 years.

System: D3040 - Distribution Systems

Location: Throughout building

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 40,500.00

Unit of Measure: S.F.

Estimate: $132,885.03

Assessor Name: System

Date Created: 01/18/2016

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

System: D4010 - Sprinklers

Location: Throughout building

Distress: Life Safety / NFPA / PFD

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

Correction: Install a fire protection sprinkler system

Qty: 40,500.00

Unit of Measure: S.F.

Estimate: $579,370.59

Assessor Name: System

Date Created: 01/18/2016

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: C1020 - Interior Doors

Location: Throughout building

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Replace door knobs with compliant lever type

Qty: 55.00

Unit of Measure: Ea.

Estimate: $30,611.32

Assessor Name: System

Date Created: 02/23/2016

Notes: Provide ADA compliant hardware on interior doors

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 floor janitor or mop sink - insert the quantity

Qty: 4.00

Unit of Measure: Ea.

Estimate: $27,264.37

Assessor Name: System

Date Created: 01/18/2016

Notes: Replace four (4) service sinks in the corridors for use by the janitorial staff which are beyond their service lives.

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: 01/18/2016

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

System: D3060 - Controls & Instrumentation

Location: Throughout building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 40,500.00

Unit of Measure: S.F.

Estimate: $868,809.72

Assessor Name: System

Date Created: 01/18/2016

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.

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

System: C3020413 - Vinyl Flooring

Location: First floor rooms 1050

Distress: Building Envelope Integrity

Category: 2 - Code Compliance

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

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

Qty: 800.00

Unit of Measure: S.F.

Estimate: $12,133.33

Assessor Name: System

Date Created: 02/23/2016

Notes: Replace all VAT floor tiles

System: D1010 - Elevators and Lifts

This deficiency has no image.

Location: Exterior near main lobby

Distress: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $1,012,601.25

Assessor Name: System

Date Created: 02/23/2016

Notes: Provide ADA compliant elevator serving basement and all floors (exterior)

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: 40,500.00

Unit of Measure: S.F.

Estimate: $198,682.87

Assessor Name: System

Date Created: 01/18/2016

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: 40,500.00

Unit of Measure: S.F.

Estimate: $179,594.50

Assessor Name: System

Date Created: 01/18/2016

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: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace boiler feed pump (duplex) and surge tank

Qty: 1.50

Unit of Measure: Ea.

Estimate: $150,724.82

Assessor Name: System

Date Created: 01/18/2016

Notes: Replace the existing boiler feed tank, which is estimated to be beyond its service life, and three (3) 1/2HP pumps in the boiler room.

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: 40,500.00

Unit of Measure: S.F.

Estimate: $383,145.08

Assessor Name: System

Date Created: 01/18/2016

Notes: Hire a qualified contractor to examine the steam piping, in service for over 100 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.

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: $305,935.05

Assessor Name: System

Date Created: 02/06/2016

Notes: Install new lighting system for 70% of the building.
40,500 SF x 70% =

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: $157,003.67

Assessor Name: System

Date Created: 02/06/2016

Notes: Install new receptacles for 70% of the building
40,500 SF x 70% = 28,350 SF

System: D5030 - Communications and Security

Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $212,613.76

Assessor Name: System

Date Created: 02/06/2016

Notes: Install new Automated Fire alarm 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: $160,086.58

Assessor Name: System

Date Created: 02/06/2016

Notes: Replace existing exit lights and emergency lights

System: D5090 - Other Electrical Systems

Location: electrical room
Distress: Health Hazard / Risk
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace standby generator system
Qty: 1.00
Unit of Measure: Ea.
Estimate: $142,287.26
Assessor Name: System
Date Created: 02/06/2016

Notes: Install a new emergency generator.

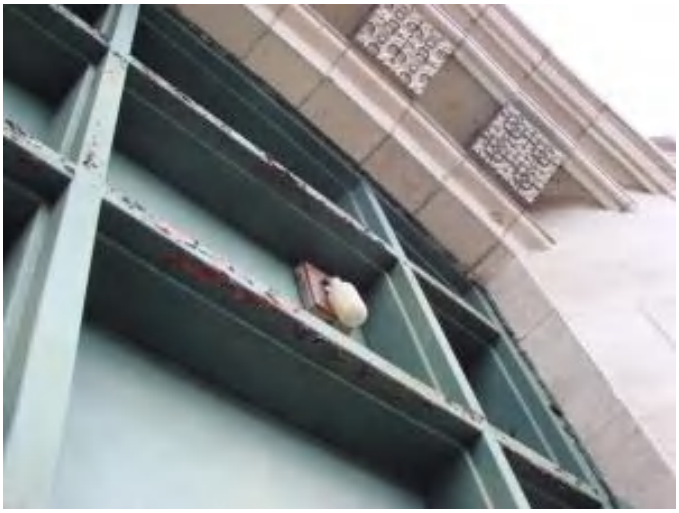
System: D5090 - Other Electrical Systems

Location: roof
Distress: Health Hazard / Risk
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Repair Lightning Protection System
Qty: 1.00
Unit of Measure: Job
Estimate: $7,024.77
Assessor Name: System
Date Created: 02/06/2016

Notes: Install new lightning protection cables for the damaged cables.

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

System: B2030 - Exterior Doors



Location: Front, side and rear elevations

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 10.00

Unit of Measure: Ea.

Estimate: $80,960.80

Assessor Name: System

Date Created: 02/23/2016

Notes: Replace all exterior doors

System: C1030 - Fittings

Location: Classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 18.00

Unit of Measure: Ea.

Estimate: $22,340.20

Assessor Name: System

Date Created: 02/23/2016

Notes: Replace original chalk boards

System: C1030 - Fittings

Location: Throughout building

Distress: Inadequate

Category: 3 - Operations / Maint.

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

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

Qty: 68.00

Unit of Measure: Ea.

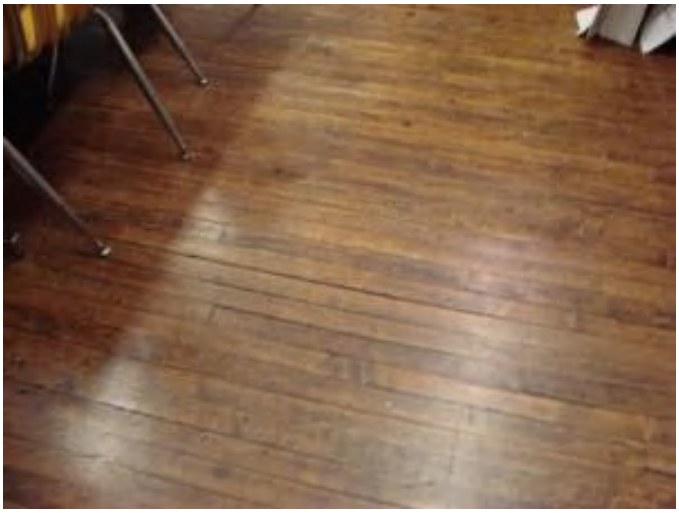
Estimate: $18,422.04

Assessor Name: System

Date Created: 02/23/2016

Notes: Install new signage throughout the building

System: C3020414 - Wood Flooring



Location: Throughout building

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Refinish wood floors

Qty: 5,500.00

Unit of Measure: S.F.

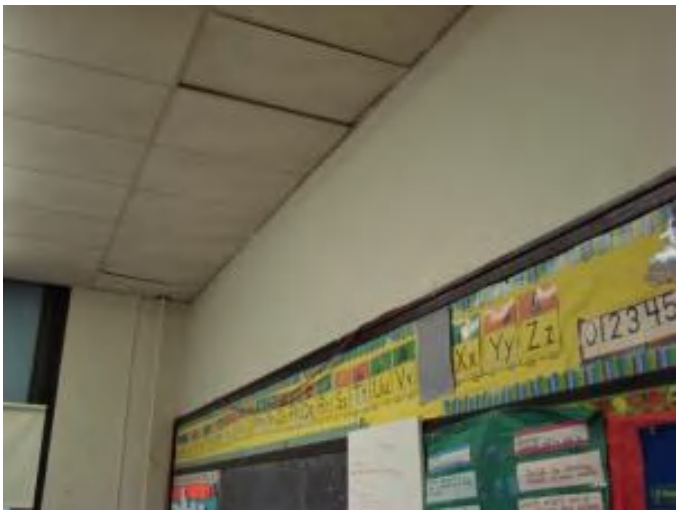
Estimate: $59,218.17

Assessor Name: System

Date Created: 02/23/2016

Notes: Repair refinish hardwood flooring

System: C3030 - Ceiling Finishes



Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 30,250.00

Unit of Measure: S.F.

Estimate: $456,243.52

Assessor Name: System

Date Created: 02/23/2016

Notes: Replace all suspended acoustical ceilings

System: C3030 - Ceiling Finishes

Location: Throughout building

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace glued on or mechanically attached acoustical ceiling tiles

Qty: 500.00

Unit of Measure: S.F.

Estimate: $6,239.40

Assessor Name: System

Date Created: 02/23/2016

Notes: Repair and repaint exposed ceilings

System: D2020 - Domestic Water Distribution

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace domestic water piping (75 KSF)

Qty: 40,500.00

Unit of Measure: S.F.

Estimate: $205,228.04

Assessor Name: System

Date Created: 01/18/2016

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: 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: $340,271.03

Assessor Name: System

Date Created: 02/06/2016

Notes: Install new 120V lighting and receptacle panels throughout the building (total of 10)

System: D5010 - Electrical Service/Distribution

Location: electrical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Service Transformer, Add Switchboard

Qty: 0.00

Unit of Measure: Ea.

Estimate: $332,826.43

Assessor Name: System

Date Created: 02/06/2016

Notes: Install a new and upgraded electrical service for this school to handle existing loads plus any additional mechanical loads.

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: Replace clock/program system

Qty: 0.00

Unit of Measure: Ea.

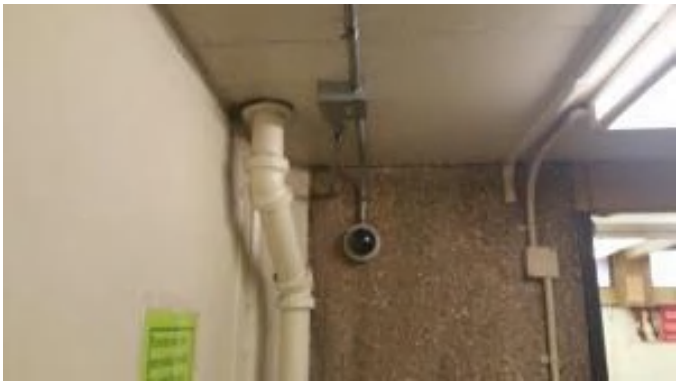
Estimate: $80,571.96

Assessor Name: System

Date Created: 02/06/2016

Notes: Install new clock system

System: D5030 - Communications and Security



Location: throughout the building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add/Replace Video Surveillance System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $60,441.46

Assessor Name: System

Date Created: 02/06/2016

Notes: Add additional cameras for the video surveillance system

Priority 5 - Response Time (> 5 yrs):

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: 40,500.00

Unit of Measure: S.F.

Estimate: $650,841.27

Assessor Name: System

Date Created: 01/18/2016

Notes: Remove the window air conditioning units and install a 110 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: Classrooms

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 22.00

Unit of Measure: C

Estimate: $1,827,341.74

Assessor Name: System

Date Created: 01/18/2016

Notes: Remove the existing fin tube steam radiators 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: Gymnasium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 4,000.00

Unit of Measure: Ea.

Estimate: $229,909.47

Assessor Name: System

Date Created: 01/18/2016

Notes: Provide ventilation for the Gymnasium by installing a constant volume air handling unit with distribution ductwork and registers.

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
D2020 Domestic Water Distribution	Pump, pressure booster system, 5 HP pump, includes diaphragm tank, control and pressure switch	1.00	Ea.	Boiler Room	Alyan				25			$10,972.50	$12,069.75
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 4650 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler Room	HB Smith	4500A-14	MB94-71		35	1994	2029	$112,258.50	$246,968.70
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 4650 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler Room	HB Smith	4500A-14	MB94-70		35	1994	2029	$112,258.50	$246,968.70
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 300 kVA & below, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	1.00	Ea.	electrical room					30			$42,600.60	$46,860.66
D5010 Electrical Service/Distribution	Panelboards, 3 pole 3 wire, main circuit breaker, 240 V, 225 amp	1.00	Ea.	electrical room					30		2047	$3,105.00	$3,415.50
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			$50,797.80	$55,877.58
												Total:	**$612,160.89**

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):	40,600
Year Built:	1913
Last Renovation:	
Replacement Value:	$1,000,270
Repair Cost:	$274,526.44
Total FCI:	27.45 %
Total RSLI:	52.33 %

Description:

Facility assessment, October 2015

School District of Philadelphia

Howe Elementary School

5800 N 13th St

Philadelphia, PA 19141

40,500 SF / 437 Students / LN 04

GENERAL

The Taylor Elementary School building is located at 5800 N 13th St in Philadelphia, PA. The 3 story, 40,500 square foot building was originally constructed in 1913. Approximately in 1970 a 1 story portable addition was constructed on the north side of the main building and used as a cafeteria. The addition is a precast concrete structure. The original building has a basement partially above ground and 3 penthouses on the roof.

The Facility Area Coordinator was not able to accompany the Parsons assessment team on this site visit. Mr. Darryll Hicks, 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

The building typically rests on concrete foundations and bearing walls that are not showing signs of settlement. Foundation walls do not show signs of deterioration. The basement slab does not show signs of heaving or cracking. No signs of water penetration through walls have been observed or reported.

The main structure consists typically of masonry load bearing walls supporting a combination of one-way concrete slabs with ceramic block fillers and heavy timber framing in the original building. Gymnasium ceiling is supported by a cast concrete slab resting on masonry bearing walls.

The building envelope is typically face brick masonry with decorative stone water table and window sills. In general, masonry is in good condition. Extensive masonry restoration was performed in approximately 2010.

The original windows were replaced in 1980's with extruded aluminum double hung windows, single acrylic glazed. Basement and first floor windows are fitted with security screens attached to adjacent masonry. All windows and screens are generally in fair condition. Exterior doors and frames are typically hollow metal in fair to poor condition. They were installed in early 1980's, have no weather stripping and are difficult to operate.

Roofing is typically built-up. All roofing and flashing is typically in good condition; but localized areas are missing flashing or have gaps between flashing sections.

INTERIORS:

Partition wall types include plastered ceramic hollow blocks painted CMU and hollow metal framed glazed store front partitions. Partitions between some classrooms are original, movable partitions in poor condition and inoperable. The interior wall finishes are generally painted plaster, CMU or drywall.

Generally, paint is in fair condition with some deterioration in stairways, around window's perimeters and toilets.

Most ceilings are 2x4 suspended acoustical panels, 1x1 adhered to ceiling and exposed painted. The suspension system and tile are old and approaching the end of their useful life. Paint on exposed ceilings is in fair to poor condition.

Flooring in classrooms is generally hardwood and VCT; and patterned concrete in corridors. Toilet floors are finished with ceramic tile. Most flooring is original and in fair condition; cove base is typically in fair condition. Some areas have VCT, generally in good condition, installed in 2012. However, tiles in the rooms on the northeast of the main corridor on the first floor are VAT (containing asbestos), in fair condition.

Interior doors are wood rail and stile wood glazed doors with transoms, generally in various stages of deterioration. Most doors are fitted with door knobs and are not ADA compliant. Doors leading to exit stairways are retrofitted with hollow metal doors and frames in good condition. Doors in 1970 addition are mostly solid core in hollow metal frames, generally in poor condition.

Fittings include original chalk boards, generally in poor condition; toilet accessories in fair condition; toilet partitions, generally in good condition; not all restrooms are ADA compliant; handrails and ornamental metals, generally in good condition. Interior identifying signage is typically directly painted on wall or door surfaces generally in poor condition. Some doors have no signage.

Stair construction is generally concrete with cast iron non-slip treads in good condition.

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

Furnishings include fixed casework in classrooms (built-in cabinets), in poor condition; there is no auditorium.

CONVEYING SYSTEMS:

The building has no elevators.

MECHANICAL

Plumbing Fixtures

The plumbing fixtures were replaced in 2005, according to the Building Engineer, and are in good condition. Fixtures in the restrooms on each floor consist of both wall and floor mounted flush valve water closets, wall hung urinals, and lavatories with wheel handle faucets. The Building Engineer did not report any issues with the plumbing fixtures.

Drinking fountains in the corridors consist of wall hung stainless steel fixtures which are in good condition and operational according to the Building Engineer. The fixtures are estimated to be within their service lives and reliable service should be provided for the next 5-10 years.

A sink is available in the corridor on each floor for use by the janitorial staff. These sinks are beyond their service lives, insufficient, and should be replaced with new service sinks.

The Kitchen, located in a "portable" on the North side of the building, does not any sinks in it.

Domestic Water Distribution

A 4" city water service enters the basement from North 13th Street on the Northeast side of the building. The 4" meter and valves are located in the boiler room in the basement. Duplex reduced pressure backflow preventers are installed in parallel. Duplex skid mounted 5HP pressure booster pumps are installed on the domestic water line to ensure adequate pressure throughout the building. The booster pumps leak, have significant rust damage, and should be replaced. The original domestic hot and cold water distribution piping was replaced with copper piping and sweat fittings. A water softener is installed in the boiler room. 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.

One (1) Bradford White natural gas, 50 gallon, vertical hot water heater with circulating pump supplies hot water for domestic use. The unit is located in the boiler room on the basement level and has an installation date of 2013. The hot water heater is equipped with a T&P relief valve. The domestic hot water heater is well within its service life and should provide reliable service for the next 7-10 years.

Sanitary Waste

The original sanitary sewer piping is still in use and is a mixture of cast iron piping with hub and spigot fittings and galvanized piping with threaded fittings. Some repairs have been made with cast iron piping and no-hub fittings.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. The original sewer piping has been in service for over 100 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.

The building does not have a sewage ejector or sump pump.

Rain Water Drainage

Rain water drains from the roof are routed through mechanical chases in the building and appear to be original. The piping is cast iron piping with hub and spigot fittings and has been in use well beyond its service life. 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

A 6" city gas service enters the basement on the North side of the building. The gas meter is 4" and is located in the room adjacent to the boiler room. A gas booster pump is installed to ensure adequate gas pressure to the boiler.

The reserve oil supply is stored in a 10,000 gallon underground storage tank (UST) located on the West side of the school. Duplex pumps located in the basement 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 current supply has been in storage for some time and should be tested for quality on a regular schedule. 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 at 4 lbs. /sq. in., by two (2) 138HP HB Smith model 4500A cast iron sectional boilers, estimated to have been installed in 1994. One (1) boiler can handle the load in normal winter weather conditions; two (2) units are required on very cold days. Each boiler is equipped with a Power Flame burner designed to operate on natural gas or fuel oil. The burners are estimated to be original to the boilers, beyond their anticipated service lives of 18 years and should be replaced. Combustion air makeup is supplied by louvers equipped with motorized dampers. Burner oil pumps are loose and not driven by the fan motor. The gas train serving the boilers does appear to have code required venting of the regulators and dual solenoid valves with venting of the chamber between. The Building Engineer reports the system loses a significant amount of condensate due to failed traps, which is made up with chemically treated city water. Cast iron sectional boilers have an anticipated service life of 35 years or more; these units have been in service approximately 22 years. The District should provide reliable service for the next 10 to 15 years.

The boiler feed tank assembly with three (3) 1/2HP pumps headered together is installed in the boiler room. A serious problem was reported with steam leaking into the system from failed steam traps and of the feed tank system leaking. The boiler feed tank and pumps should be replaced. A water chemical treatment system is connected to the feed tank.

Distribution Systems

Steam piping is black steel with welded fittings. The condensate piping is black steel with threaded fittings. Steam and condensate piping mains from the basement level run up through the building to the 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.

Two pipe fin tube radiators and the house fan provide heating for the building. The house fan is original to the building and well beyond its service life. The house fan is located in a mechanical room in the basement and has been refurbished in the recent past, but the Building Engineer did not know when. The fan is run by a 20HP motor and is not equipped with the OSHA required belt guard. Ventilation for the building is only provided by the house fan when it is in use, which does not meet current codes for outdoor air ventilation. The house fan only runs during the heating season, thus the building is without mechanical ventilation much of the year. The Gymnasium currently does not have an independent ventilation source. Ventilation should be provided for the Gymnasium by installing a constant volume air handling unit with distribution ductwork and registers. A new heating system should be installed to meet ventilation requirements and achieve more efficient operation. The new units should be designed for quiet operation and equipped with hot water coils, chilled water coils, and integral heat exchangers, where applicable, to introduce outdoor air to the building.

Ventilation for the restrooms is provided by one (1) exhaust fan located on the roof. The fan was operational during the site visit and the Building Engineer did not report any issues. Roof mounted gravity ventilators allow relief air to escape from the building when the house fan is run. The ventilators were recently refurbished and appear to be in good condition.

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 110 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.

The Kitchen does not have any cooking equipment as only premade meals are served, thus no exhaust system is installed.

Controls & Instrumentation

The original pneumatic systems provide no control functions. Pneumatic room thermostats are intended to control the steam radiator control valves. In reality the radiator control valves are wide open and heating control is achieved via the boilers and house fan. Pneumatic control air is no longer supplied as the air compressor has been removed. The pneumatic systems are beyond their service life and are no longer functional. The original control valves and pneumatic actuators are beyond their service life and should be rebuilt or replaced. 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 building is NOT equipped with fire standpipes, but a second domestic line connected to firehoses in the basement corridor is supposed to supply a way to fight a fire.

Portable Classroom

A portable classroom located on the North side of the main school building houses the Kitchen/Cafeteria. The portable has an independent conditioning system from the main building. A packaged rooftop unit provides heating and cooling to the Kitchen/Cafeteria. According to the Building Engineer the packaged unit was installed in approximately 2009. The roof of the portable was not accessible during the site visit and further information on the packaged unit is not available. The District should provide reliable service to the rooftop unit for the next 5-10 years.

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 into the school building overhead and down on the exterior of the building into in the electrical room. It feeds an old 400A, 120V/240 V, 2 phase switchboard. The PECO (PECO 9U-4216273) meter is also located inside the new electrical room (basement). The switchboard is in a poor condition and has reached the end of its useful service life.

Distribution system - The electrical distribution is accomplished by using the 400A switchboard distribution panel (located in the electrical room) and feeding several 120V lighting and receptacle panels throughout the building. These panels are in poor condition. They have reached the end of their useful service life.

Receptacles - The receptacles in classrooms, computer rooms, libraries, and other areas are not adequate. The walls in classrooms and the computer rooms (70%) have insufficient number of receptacles (minimum of 2 on each wall).

Lighting - Interior building is illuminated by various types of fixtures. They include fluorescent lighting (mostly T-8 & T-12 lamps) in majority of the areas, including; classrooms, corridors, offices, Library, cafeteria, Kitchen, etc. Surface or pendant mounted industrial fluorescent fixtures are used in mechanical and electrical rooms. About 30% of the school lighting was upgraded, however the majority of the building (70%) lacks adequate illumination level. The majority of interior lighting fixtures are not in good condition and have reached the end of their useful service life.

Fire alarm - The present Fire Alarm system is not automatic/addressable, and is not in compliance with safety code. There are some manual pulls stations throughout the building. However, there are 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, and vice versa between each classroom and main office. Also, there is communication between classrooms to classrooms.

Clock and Program system – There are clocks in each classroom (12-inch round clocks), however the clocks are not controlled properly by the master clock control. The overall clock system has reached the end of its useful service life.

Television System - Television system is not provided for the school. There are smart boards in most of the classrooms capable of connecting to computers and internet.

Security Systems, access control, and video surveillance - The school is not provided with video surveillance system. 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 – There is a small 15 KW emergency generator in this building. However, it is not adequate size for this building to feed all emergency loads and a new elevator.

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

Lightning Protection System - There is adequate lightning protection system installed for this school on the roof. There are numerous lighting rods installed on the roof top, and they connected to the ground by using stranded aluminum cables from the roof top all the way to the ground floor. Some of these stranded cable are damaged or broken (20%).

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

Site Lighting - The school has some exterior lighting. However, a few pole-mounted lights are needed to provide adequate lighting for the grounds security and safety of people at night.

Site Paging – The school has some exterior speakers, however a few additional speakers are needed for proper communication with students playing outside.

Elevators – This school has a no elevator

GROUNDS (SITE)

There is a parking lot at the west side of the site. There are no accessible spaces, aisles or signage. The pavement is concrete in good condition;

Playground pavement adjacent to the building is in poor condition, paving is cracked and uneven. Basket ball court pavement section near the entry gate is sinking.

There is no playground equipment; there is only painted concrete hop scotch grids and a list of numbers from one to twelve running parallel to the rear of the building.

Perimeter picket fence separating the playground from the street and parking is generally in fair condition.

The landscaping is limited to a small patch of grass north of the playground, completely fenced and unused. Grass is in poor condition.

ACCESSIBILTY

Generally, the building has no accessible route per ADA requirements to the Gym. The original building is not accessible due to level separation between sidewalk and the original building and lack of elevator to basement, second and the third floors. Most toilets are equipped with accessible fixtures, and accessories, such as grab bars, and accessible partitions. Most of the doors in the building have ADA required door handles.

Parking does not have defined accessible stalls and signage.

RECOMMENDATIONS

- Replace all exterior doors.
- Replace all suspended acoustical ceilings.
- Repair and repaint exposed ceilings.
- Repair & refinish hardwood flooring.
- Replace all VAT floor tiles.
- Install new signage throughout the building.
- Provide ADA compliant elevator serving basement and all floors (exterior).
- Provide ADA compliant hardware on interior doors.
- Replace original chalk boards.
- Provide ADA compliant ramp at main entrance.

- Replace portion of parking paving (20% area).
- Provide parking striping with (2) accessible spaces and aisles.
- Replace four (4) service sinks in the corridors for use by the janitorial staff which are beyond their service lives.
- Replace the duplex 5HP domestic water booster pumps and isolation valves on the incoming domestic water line with a new skid mounted pressure booster system.
- 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.
- 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 piping, in service for over 100 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, which is estimated to be beyond its service life, and three (3) 1/2HP pumps in the boiler room.
- Replace the two (2) dual fuel boiler burners, which are beyond their service lives, with new more efficient burners within the next 0-2 years.
- Remove the existing fin tube steam radiators and install units with hot and chilled water coils and integral heat exchangers to introduce outdoor air to the building.
- Remove the window air conditioning units and install a 110 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.
- Provide ventilation for the Gymnasium by installing a constant volume air handling unit with distribution ductwork and registers.
- 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 a new and upgraded electrical service for this school to handle existing loads plus any additional mechanical loads.
- Install new 120V lighting and receptacle panels throughout the building (total of 10)
- Install new lighting system for 70% of the building.
- Install new receptacles for 70% of the building
- Install a new emergency generator.
- Install new emergency lights and exit lights
- Install a new clock system
- Install new Automated Fire alarm System.
- Install new lightning protection cables for the damaged cables.
- Install additional pole-mounted lights for the grounds
- Install additional exterior speakers for the grounds

Attributes:

General Attributes:

Bldg ID:	S732001	Site ID:	S732001

Condition Summary

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

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
G20 - Site Improvements	35.56 %	20.79 %	$158,948.91
G40 - Site Electrical Utilities	106.67 %	49.00 %	$115,577.53
Totals:	**52.33 %**	**27.45 %**	**$274,526.44**

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	$8.50	S.F.	12,500	30	1913	1943	2020	16.67 %	102.81 %	5		$109,236.13	$106,250
G2030	Pedestrian Paving	$12.30	S.F.	38,300	40	1913	1953	2020	12.50 %	10.55 %	5		$49,712.78	$471,090
G2040	Site Development	$4.36	S.F.	40,600	25	1913	1938	2042	108.00 %	0.00 %	27			$177,016
G2050	Landscaping & Irrigation	$4.36	S.F.	2,300	15	1913	1928	2021	40.00 %	0.00 %	6			$10,028
G4020	Site Lighting	$4.84	S.F.	40,600	30	1913	1943	2047	106.67 %	48.78 %	32		$95,860.24	$196,504
G4030	Site Communications & Security	$0.97	S.F.	40,600	30	1913	1943	2047	106.67 %	50.07 %	32		$19,717.29	$39,382
								Total	**52.33 %**	**27.45 %**			**$274,526.44**	**$1,000,270**

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.

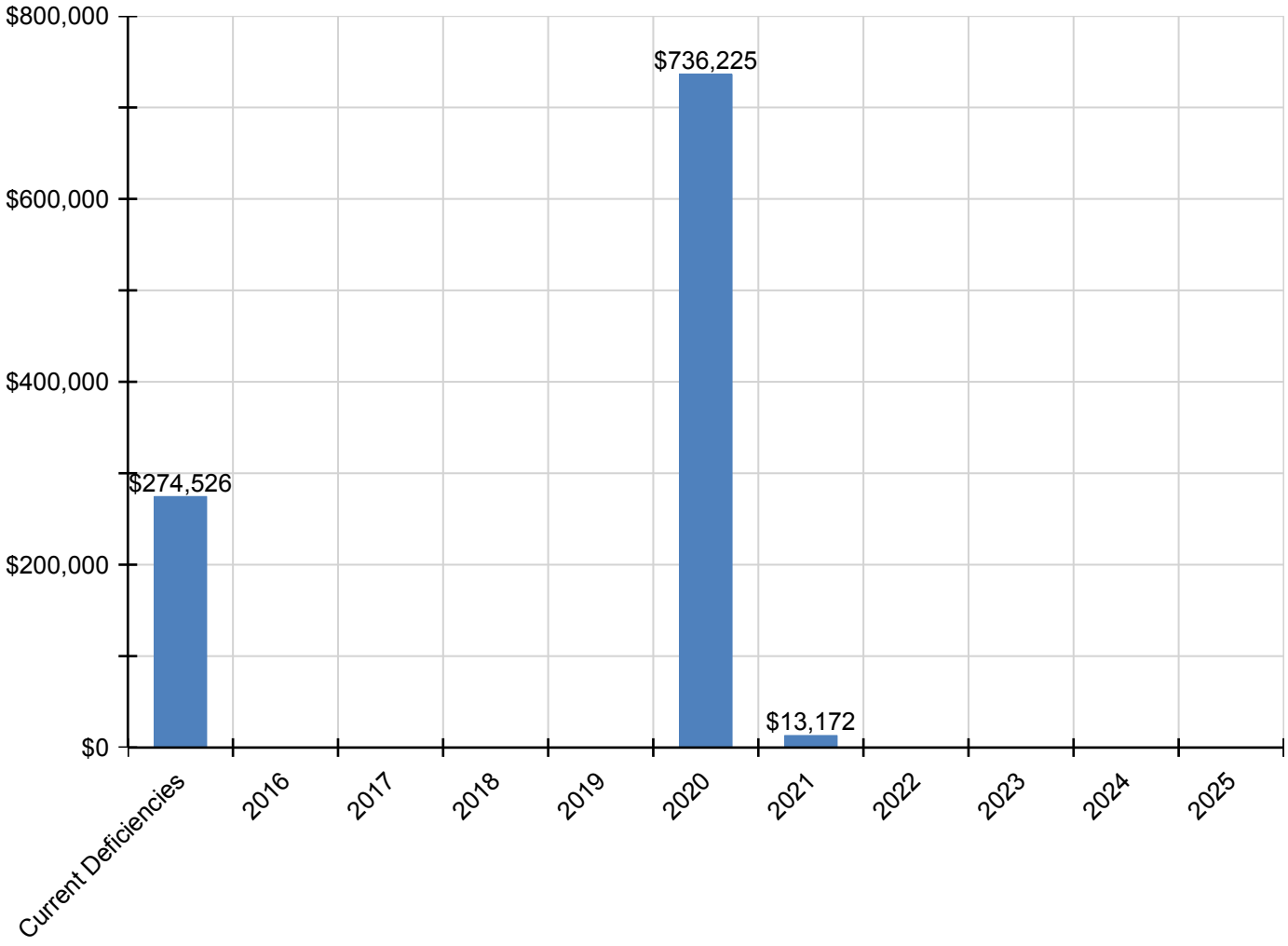
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$274,526**	**$0**	**$0**	**$0**	**$0**	**$736,225**	**$13,172**	**$0**	**$0**	**$0**	**$0**	**$1,023,923**
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	$109,236	$0	$0	$0	$0	$135,490	$0	$0	$0	$0	$0	**$244,726**
G2030 - Pedestrian Paving	$49,713	$0	$0	$0	$0	$600,735	$0	$0	$0	$0	$0	**$650,447**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$13,172	$0	$0	$0	$0	**$13,172**
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	$19,717	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$19,717**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

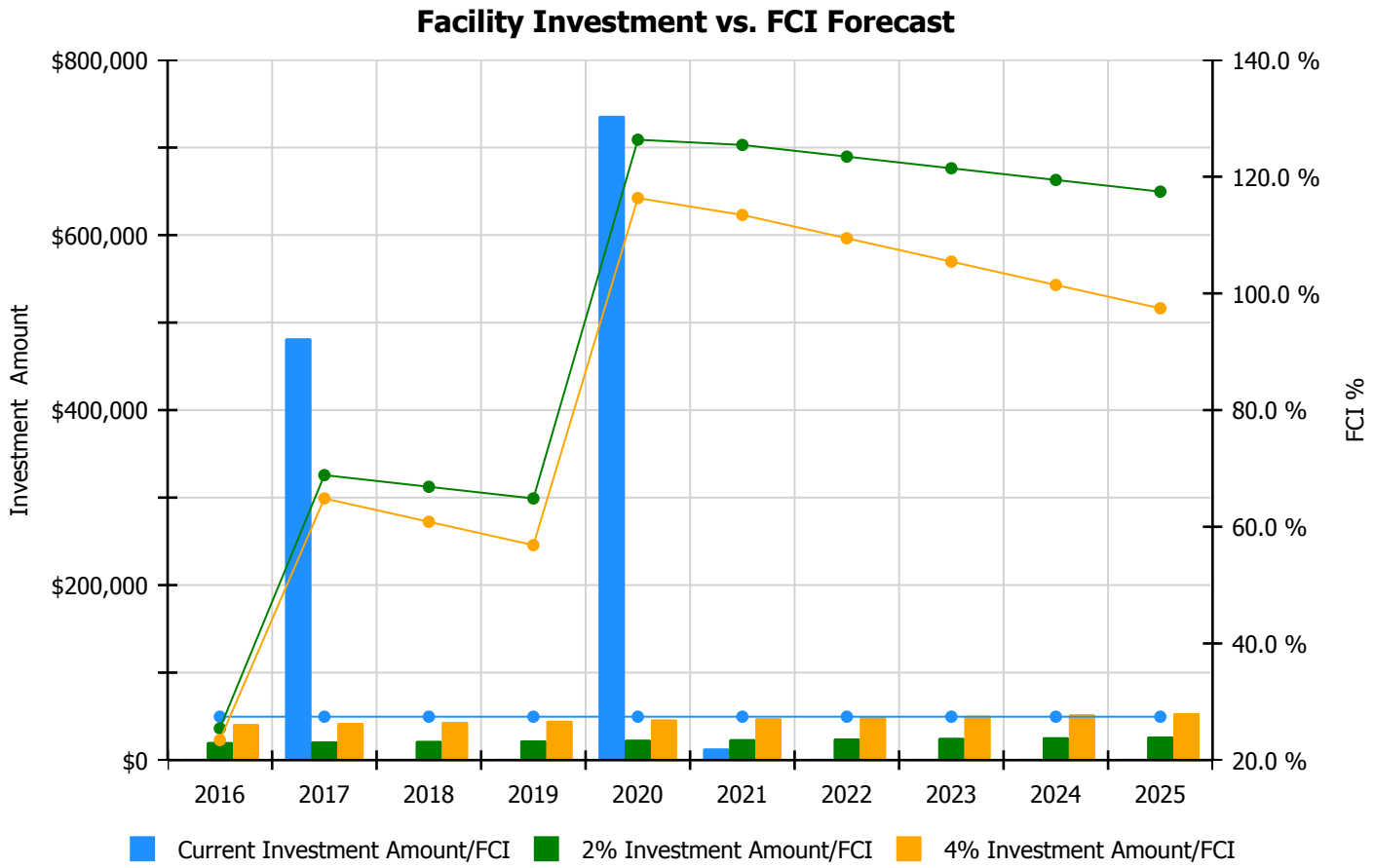
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

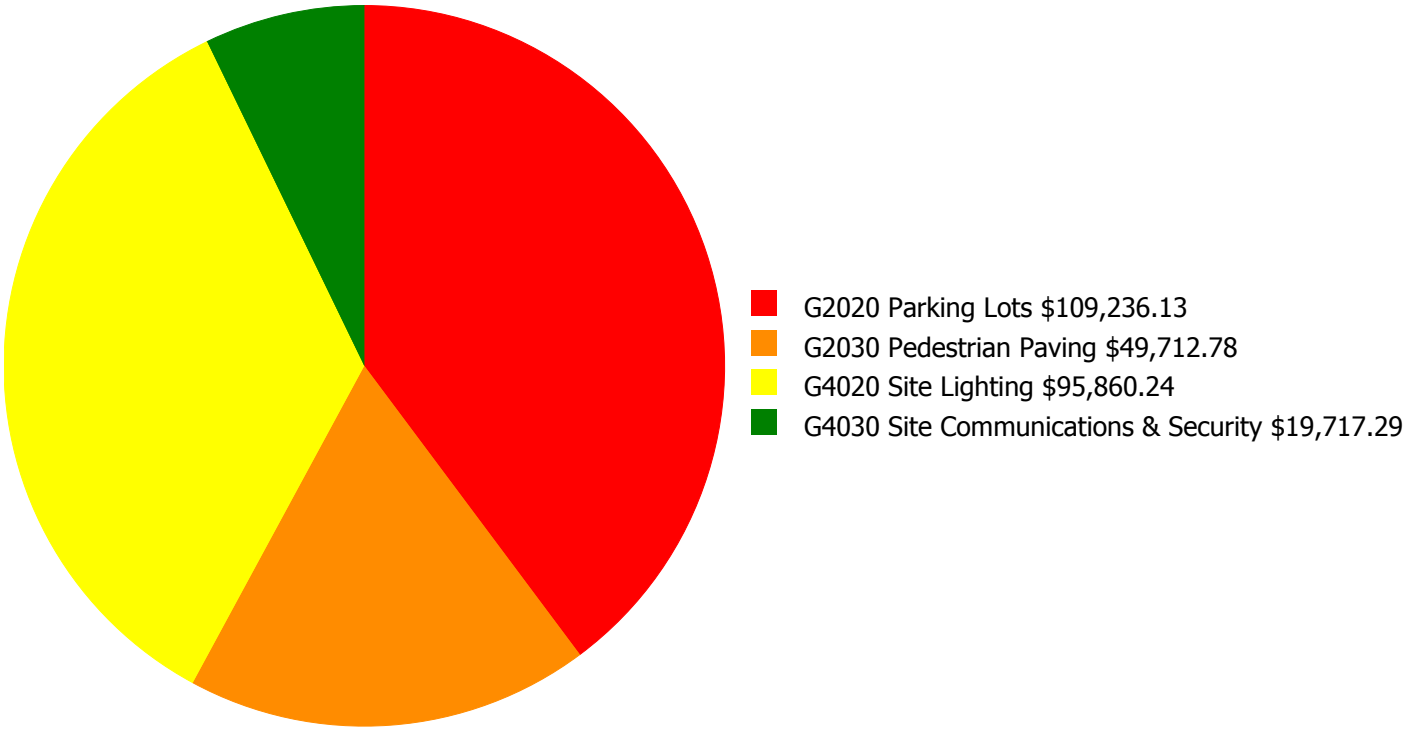
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 27.45%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$20,606.00	25.45 %	$41,211.00	23.45 %
2017	$481,852	$21,224.00	68.85 %	$42,447.00	64.85 %
2018	$0	$21,860.00	66.85 %	$43,721.00	60.85 %
2019	$0	$22,516.00	64.85 %	$45,033.00	56.85 %
2020	$736,225	$23,192.00	126.34 %	$46,383.00	116.34 %
2021	$13,172	$23,887.00	125.45 %	$47,775.00	113.45 %
2022	$0	$24,604.00	123.45 %	$49,208.00	109.45 %
2023	$0	$25,342.00	121.45 %	$50,684.00	105.45 %
2024	$0	$26,103.00	119.45 %	$52,205.00	101.45 %
2025	$0	$26,886.00	117.45 %	$53,771.00	97.45 %
Total:	**$1,231,249**	**$236,220.00**		**$472,438.00**	

Deficiency Summary by System

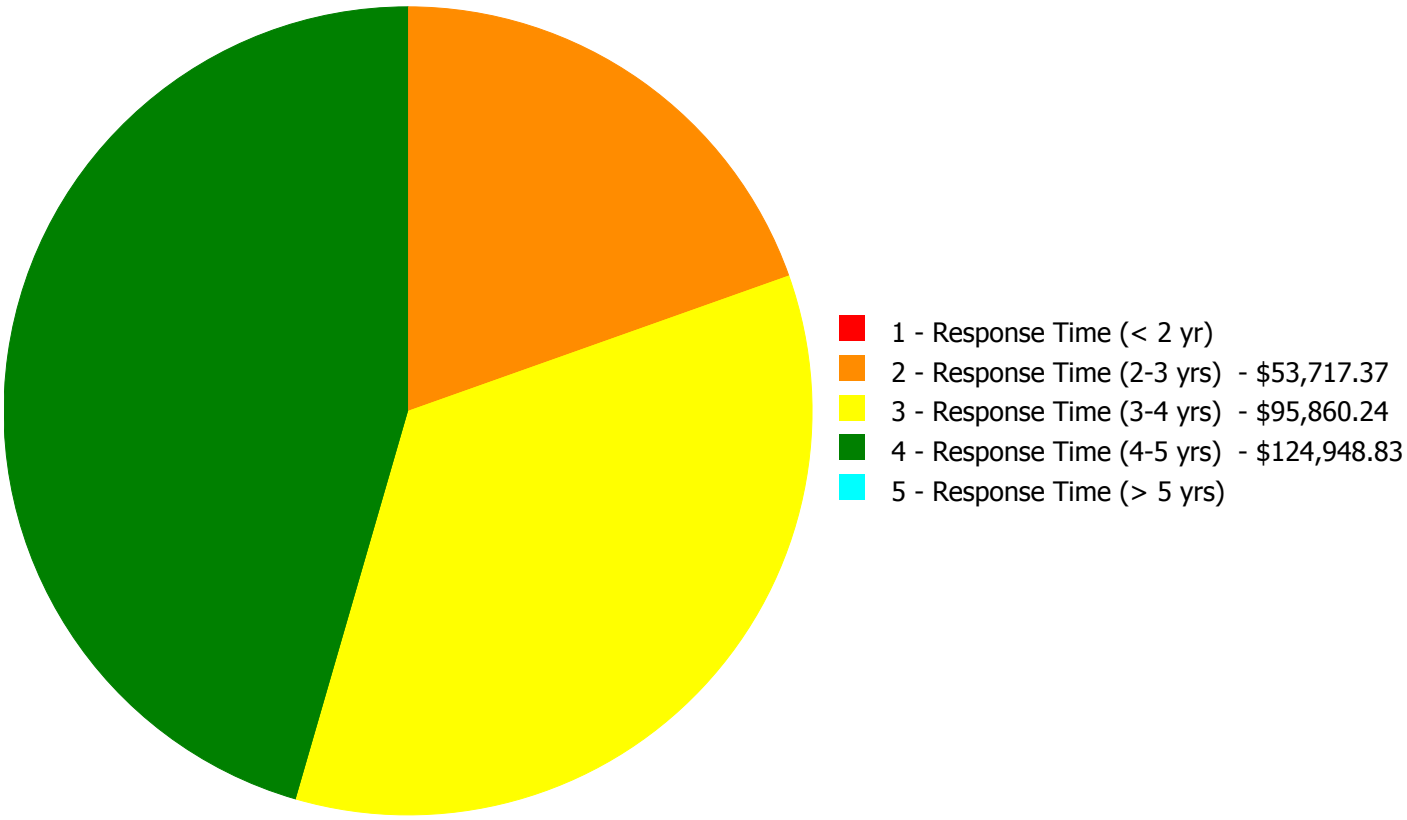
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $274,526.44

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: $274,526.44

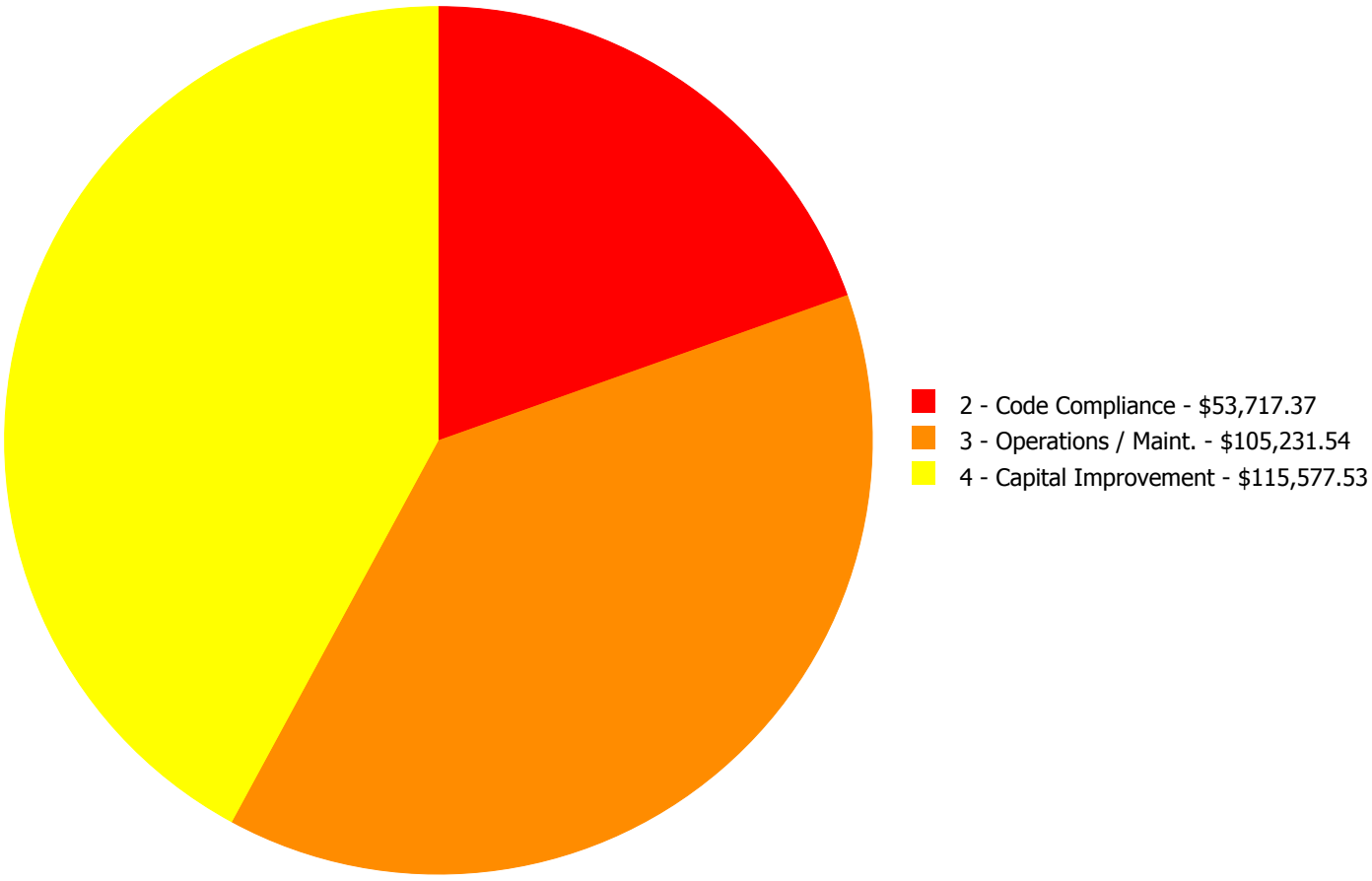
Deficiency By Priority Investment Table

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	$4,004.59	$0.00	$105,231.54	$0.00	$109,236.13
G2030	Pedestrian Paving	$0.00	$49,712.78	$0.00	$0.00	$0.00	$49,712.78
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	$19,717.29	$0.00	$19,717.29
	Total:	$0.00	$53,717.37	$95,860.24	$124,948.83	$0.00	$274,526.44

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: $274,526.44

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: Parking area

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 2 - Response Time (2-3 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: Craig Anding

Date Created: 02/23/2016

Notes: Provide parking striping with (2) accessible spaces and aisles

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System: G2030 - Pedestrian Paving

Location: Side entrance north side

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Install an exterior ADA ramp - based on 5' wide by the linear foot - up to 84" rise - per LF of ramp - figure 1 LF of ramp per inch of rise

Qty: 21.00

Unit of Measure: L.F.

Estimate: $49,712.78

Assessor Name: Craig Anding

Date Created: 02/23/2016

Notes: Provide ADA compliant ramp at main entrance

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

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: Craig Anding

Date Created: 02/06/2016

Notes: Install additional site lighting, pole-mounted for the grounds

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

System: G2020 - Parking Lots

Location: Parking paving area
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Remove and replace concrete paving
Qty: 5,000.00
Unit of Measure: S.F.
Estimate: $105,231.54
Assessor Name: Craig Anding
Date Created: 02/23/2016

Notes: Replace portion of parking paving (20% area)

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: $19,717.29
Assessor Name: Craig Anding
Date Created: 02/06/2016

Notes: Install additional exterior speakers

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