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.

Day School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	6324 Crittenden St.	Enrollment	505
	Philadelphia, Pa 19138	Grade Range	'00-08'
Phone/Fax	215-276-5250 / 215-276-5817	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Day	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	**29.55%**	**$12,527,895**	**$42,396,565**
Building	46.02 %	$11,329,873	$24,620,377
Grounds	05.33 %	$155,587	$2,918,476

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	87.31 %	$926,470	$1,061,069
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.99 %	$12,916	$1,311,240
Windows (Shows functionality of exterior windows)	127.82 %	$731,691	$572,460
Exterior Doors (Shows condition of exterior doors)	173.14 %	$121,441	$70,140
Interior Doors (Classroom doors)	181.25 %	$286,235	$157,920
Interior Walls (Paint and Finishes)	27.09 %	$223,705	$825,720
Plumbing Fixtures	24.11 %	$319,806	$1,326,360
Boilers	44.22 %	$346,765	$784,140
Chillers/Cooling Towers	67.26 %	$691,492	$1,028,160
Radiators/Unit Ventilators/HVAC	154.97 %	$2,798,122	$1,805,580
Heating/Cooling Controls	158.90 %	$900,988	$567,000
Electrical Service and Distribution	264.83 %	$1,078,936	$407,400
Lighting	33.69 %	$490,713	$1,456,560
Communications and Security (Cameras, Pa System and Fire Alarm)	77.15 %	$420,923	$545,580

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

Facility Condition Assessment Summary Report

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

Day LSH School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	6324 Crittenden St.	Enrollment	
	Philadelphia, Pa 19138	Grade Range	'00-08'
Phone/Fax	215-276-5250 / 215-276-5817	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Day	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	**29.55%**	**$12,527,895**	**$42,396,565**
Building	07.02 %	$1,042,434	$14,857,712
Grounds	05.33 %	$155,587	$2,918,476

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	04.22 %	$43,990	$1,042,329
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$785,433
Windows (Shows functionality of exterior windows)	58.86 %	$201,846	$342,904
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$42,014
Interior Doors (Classroom doors)	00.00 %	$0	$94,594
Interior Walls (Paint and Finishes)	00.00 %	$0	$422,906
Plumbing Fixtures	00.00 %	$0	$794,490
Boilers	02.47 %	$11,600	$469,700
Chillers/Cooling Towers	00.00 %	$0	$615,868
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$1,081,542
Heating/Cooling Controls	158.90 %	$539,690	$339,633
Electrical Service and Distribution	00.00 %	$0	$244,033
Lighting	00.00 %	$0	$872,479
Communications and Security (Cameras, Pa System and Fire Alarm)	33.29 %	$108,796	$326,802

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

S620001;Day

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):	42,000
Year Built:	1952
Last Renovation:	
Replacement Value:	$42,396,565
Repair Cost:	$12,527,894.70
Total FCI:	29.55 %
Total RSLI:	64.60 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 5 / Tm 4
Status:	Accepted by SDP	Team:	Tm 4
Site ID:	S620001		

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.

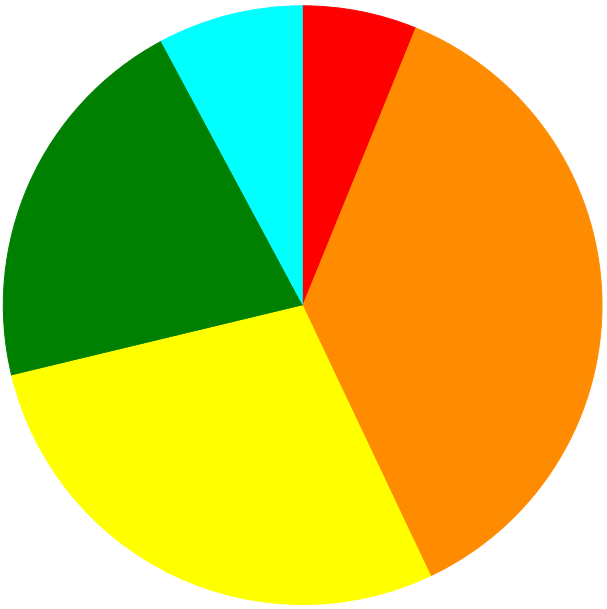
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	54.98 %	0.00 %	$0.00
A20 - Basement Construction	54.98 %	0.00 %	$0.00
B10 - Superstructure	54.98 %	0.00 %	$0.00
B20 - Exterior Enclosure	65.96 %	34.18 %	$1,067,893.68
B30 - Roofing	67.88 %	46.14 %	$970,459.25
C10 - Interior Construction	66.76 %	21.12 %	$323,553.91
C20 - Stairs	54.98 %	0.00 %	$0.00
C30 - Interior Finishes	67.34 %	6.83 %	$223,705.25
D10 - Conveying	105.71 %	102.54 %	$387,153.48
D20 - Plumbing	63.05 %	39.76 %	$1,085,909.76
D30 - HVAC	83.11 %	70.79 %	$5,288,656.27
D40 - Fire Protection	87.52 %	99.30 %	$600,828.75
D50 - Electrical	78.64 %	59.88 %	$2,424,146.90
E10 - Equipment	62.50 %	0.00 %	$0.00
E20 - Furnishings	42.17 %	0.00 %	$0.00
G20 - Site Improvements	0.00 %	1.47 %	$32,477.25
G40 - Site Electrical Utilities	106.67 %	17.43 %	$123,110.20
Totals:	**64.60 %**	**29.55 %**	**$12,527,894.70**

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)
B620001;Day	42,000	46.02	$738,635.40	$3,922,729.62	$3,411,911.73	$2,273,708.54	$982,887.68
B620002;Day LSH	25,158	7.02	$0.00	$687,803.15	$43,989.57	$310,641.56	$0.00
G620001;Grounds	162,400	5.33	$32,477.25	$0.00	$87,682.78	$35,427.42	$0.00
Total:		**29.55**	**$771,112.65**	**$4,610,532.77**	**$3,543,584.08**	**$2,619,777.52**	**$982,887.68**

Deficiencies By Priority



1 - Response Time (< 2 yr) - $771,112.65
2 - Response Time (2-3 yrs) - $4,610,532.77
3 - Response Time (3-4 yrs) - $3,543,584.08
4 - Response Time (4-5 yrs) - $2,619,777.52
5 - Response Time (> 5 yrs) - $982,887.68

Budget Estimate Total: $12,527,894.70

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):	42,000
Year Built:	1952
Last Renovation:	
Replacement Value:	$24,620,377
Repair Cost:	$11,329,872.97
Total FCI:	46.02 %
Total RSLI:	69.93 %

Description:

Facility Assessment
December 2015

School District of Philadelphia
Day Elementary School
6324-42 Crittenden Street
Philadelphia, PA 19138

42,000 SF / 358 Students / LN 06

The Day Elementary School building is located at 6324-42 Crittenden St. in Philadelphia, PA. The 2 story 42,000 square foot building was originally constructed in 1952. The building has an L-shape footprint.

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

STRUCTURAL/ EXTERIOR CLOSURE:

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 slab does not show signs of heaving.

The main structure consists typically of cast-in-place concrete columns, beams and one-way concrete slabs. Above ground floor slabs are generally in good condition.

The roof structure is typically similar to floor construction.

The building envelope is typically masonry with face brick over CMU. In general, masonry is in fair condition with some small cracks and missing mortar.

The original windows were replaced in 1990 with extruded aluminum single hung windows, Lexan Plexiglas in poor condition with heavy hazing and not energy efficient. Exterior doors are typically hollow metal in poor condition; they are beyond their service life. Generally, the building is not accessible per ADA requirements due to first floor-grade separation, with no ramps or lifts.

Roofing is typically built-up system installed before 1990. All roofing is beyond service life. No leaks have been reported.

INTERIORS:

Partition wall types typically include painted CMU. The interior wall finishes are generally painted CMU with glazed block in entry and toilets. Generally, paint is in poor condition, applied in approximately 2003. Approximately 80% of ceilings are exposed, plastered and painted. 2x4 suspended acoustical panels are installed in office spaces and entry lobby in fair condition. Ceilings in gym and auditorium are exposed steel structure in fair condition.

Flooring throughout is generally VAT with concrete in toilets and mechanical spaces and carpet in library.

Interior doors are generally solid core wood doors with some glazing in hollow metal frames. Original doors are typically beyond their service life. Most doors are fitted with door knobs and are not ADA compliant.

Fittings include original chalk boards, generally in fair condition. Toilet partitions and accessories in are in very poor condition, mostly original to the building and not accessible. Interior identifying signage is typically directly painted on wall or door surfaces generally in poor condition.

Stair construction is generally concrete in good condition.

Furnishings include fixed metal casework in classrooms and auditorium seating in need or refinishing.

CONVEYING SYSTEMS:

The building has no elevator.

MECHANICAL

Plumbing Fixtures

Many of the plumbing fixtures were replaced in the 1980s and are approaching the end of their useful service lives. Fixtures in the restrooms on each floor consist of wall mounted flush valve water closets, wall hung urinals, and lavatories with wheel handle faucets. The Building Engineer reported minor issues with the plumbing fixtures, but they are in poor condition. The plumbing fixtures are approaching the end of their service lives and should be replaced in the next 3-5 years.

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

A service sinks are available in janitor closets in the corridor on each floor for use by the janitorial staff. The sinks are original to the building, beyond their service lives, and should be replaced.

The Kitchen has one (1) sink; a three-compartment stainless steel sink with lever operated faucets. A grease trap is not installed. Chemicals are injected manually into the sanitizing basins.

Domestic Water Distribution

A 4” city water service enters the building in the boiler room on the Northwest side of the building from East Johnson Street. The 4” meter and valves are located in the same room. A reduced pressure backflow preventer is not installed but should be. The original domestic hot and cold water distribution piping was replaced with copper piping and sweat fittings. A chemical treatment system is installed. 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) Paloma instant hot water heater with associated circulating pump, installation date unknown, supplies hot water for domestic use. The hot water heater serves a domestic water storage tank located in the boiler room with a single circulating pump is connected to the storage tank. The heater and tank are located in the boiler room. The heater was operable during the site visit and the Building Engineer reported no serious issues; however it is most likely beyond its service life and should be replaced in the next 1-3 years.

Sanitary Waste

The original storm and sanitary sewer piping is galvanized piping with threaded fittings. Repairs have been made with cast iron piping and no-hub fittings.

A sewage ejector pit located in the basement boiler room receives sewage from the basement area. The system has been in use for an unknown amount of time and appears to be in good condition. The pit is sealed. Two (2) pumps are located outside the pit and appeared to be in good condition.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. However, the sewer piping has been in service for almost 65 years and will require more frequent attention from the maintenance staff as time passes. The District should hire a qualified contractor to examine the sanitary waste piping using video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

Rain Water Drainage

Rain water drains from the roof are routed through mechanical chases in the building and appear to be original. The piping is threaded galvanized 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 4" city gas service enters the building in the basement boiler room. The gas meter is 4" and is located in the boiler room. A gas booster pump is installed to ensure adequate gas pressure to the boilers.

The reserve oil supply is stored in a 10,000 gallon underground storage tank (UST) located in the paved play area on the Southwest side of the school. Duplex pumps located in the boiler room circulate oil through the system. Oil is used as a backup fuel and the District receives credit from the gas utility as an interruptible service. The storage tank should be inspected on a regular basis. USTs have an anticipated service life of 20 years. The actual condition of the fuel side is unknown.

Heat Generating Systems

Low pressure steam is generated at a maximum of 15 lbs. /sq. in by three (3) 81.4HP Weil-McLain model 88 cast iron sectional boilers, estimated to have been installed in the early 2000s. Each boiler is equipped with a Power Flame burner designed to operate on natural gas or fuel oil. Combustion air makeup is supplied by louvers equipped with motorized dampers. Burner controls provide full modulation with flame sensing and pressure atomization on oil. Burner oil pumps are loose and not driven by the fan motor. The gas train serving the boilers appears to have code required venting of the regulators and dual solenoid valves with venting of the chamber between. The oil supply to the burner is equipped with dual solenoid valves and a strainer, and a disposable media filter. The condensate has a chemical treatment system. Gas/oil burners have an anticipated service life of 18 years; these burners have been in service an estimated 15-20 years and should be replaced with new units that have direct spark oil ignition and solid state flame sensing. Cast iron sectional boilers have an anticipated service life of 35 years or more; these units have been in service an estimated 20 years. The District should provide reliable service for the next 10 to 15 years.

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

Distribution Systems

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

Unit ventilators and fin tube radiators provide heating for classrooms, offices, and to the corridors. The unit ventilators and fin tube radiators are original to the building and well beyond their service lives. Outdoor air for the building is provided by wall openings in the unit ventilators. The existing unit ventilators should be removed and new units installed with hot and chilled water coils and integral heat exchangers to introduce sufficient outdoor air to the building. Ventilation is provided to the Gymnasium/Cafeteria by one (1) heating and ventilation unit (HV) located in the penthouse mechanical room on the roof above; this unit is well beyond its service life and should be replaced. Ventilation is provided to the Auditorium by one (1) heating and ventilation unit (HV) located in the same penthouse mechanical room; this unit is well beyond its service life and should be replaced. Supplemental heating is supplied to the Auditorium and Gymnasium/Cafeteria by fin tube radiators. The Building Engineer rarely runs the HV units as heating for the spaces is sufficient from the radiators. Ventilation should be provided for the Gymnasium/Cafeteria by installing a fan coil air handling unit in the penthouse with outdoor air ducted to the unit from louvers. Similar units should be installed for the administration offices. Ventilation should be provided for the Auditorium by installing a constant volume air handling unit with distribution ductwork and registers. These units would be equipped with hot water heating coils and chilled water cooling coils.

Exhaust for the restrooms and janitor closets is provided by four (4) exhaust fans; two (2) located in the penthouse on the West roof and two (2) located in closets on the second floor of the East side of the building. According to the Building Engineer all fans are operational. The fans are all well beyond their service lives and should be replaced. Twelve (12) roof mounted gravity ventilators allow relief air to escape from the corridors and are in poor condition. All gravity ventilators are

beyond their service lives and should be replaced.

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 120 ton air-cooled chiller, with pumps located in a mechanical room, and chilled water distribution piping would supply more reliable air conditioning for the building with a much longer service life.

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

One (1) exhaust hood is installed above the warming equipment in the Kitchen. An automatic gas shutoff system and fire suppression system are NOT installed with the kitchen equipment as only premade meals are served. A make-up air unit is not installed but should be.

Controls & Instrumentation

The original pneumatic systems no longer provide basic control functions. Pneumatic room thermostats are intended to control the unit ventilator control valves. In reality the unit ventilator control valves are wide open and heating control is controlled via the boilers. Pneumatic control air is no longer supplied as the air compressor has been removed. The pneumatic systems are beyond their service life, no longer functional, and require too much attention from the maintenance staff. 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 stand pipes.

ELECTRICAL:

Site electrical service - The primary power is at 13.2KV from the street power pole which goes underground and feeds the PECO transformer (13.2KV – 120V/240V, 2 Phase). The main disconnect is rated at 800A, 120V/240V, 2 phase, and is located in main electrical room. The PECO meter (PECO 02 016953028) is also located inside the electrical room. The service entrance and the main building electrical distribution systems do not have ample capacity for future growth. The entire electric service is in poor condition and has reached the end of its useful service life.

Distribution system - The electrical distribution is accomplished by using several 120V/240V, 2 phase individual circuit breakers that feed the 120V panels throughout the building (two in each floor). These panels are in poor condition and have reached the end of their useful service.

Receptacles - There are not enough receptacles in classrooms, computer rooms, libraries, and other areas (70% of the building). There should be minimum of two receptacles on each wall of the classrooms, and other areas.

Lighting - Interior building is illuminated by various types of fixtures. They include fluorescent lighting (with T-12 & T-8 lamp) in majority of the areas, including; classrooms, corridor, offices, Gymnasium, and Kitchen. Surface or pendant mounted industrial fluorescent fixtures are used in mechanical and electrical rooms. Auditorium has special incandescent down lights. There has been some lighting upgrades, however the majority of interior lighting fixtures (70%) are in a poor condition and have reached the end of their useful service life.

Fire alarm - The present Fire Alarm (FA) system is old and is not fully automatic/addressable. The present FA system is not in compliance with safety codes. There are some manual pulls stations throughout the building. There are insufficient number of horn/strobes installed in the classrooms, corridors, offices and other areas in the school. The FA system has reached the end of its useful service life.

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

Public Address - Separate PA system does not exist. School uses the telephone systems for public announcement. This system is working adequately. Each class room is provided with intercom telephone service. The system allows paging and intercom communication between main office to classrooms, and vice versa, between classrooms to the main office. The system also allows communication between classrooms to other classrooms.

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

Television System - Television system is not provided in the school. Most classes are equipped with smart boards having the ability to connect to computers and internet.

Security Systems, access control, and video surveillance - The school has an old video surveillance system. Presently, there are cameras at exit doors, corridors, exterior, and other critical areas. However, the security system is old and has reached the end of its useful service life. The new cameras should be controlled by a Closed Circuit Television system (CCTV).

Emergency Power System - School has a small (12.5KW) emergency generator which feeds emergency lighting and other emergency loads. The emergency generator is old and has reached the end of its useful service life.

Emergency lighting system, including exit lighting - there are insufficient number of emergency lighting fixtures and exit signs in corridors and other exit ways. Exit signs and emergency fixtures are old and have reached the end of their useful service life.

Auditorium – The auditorium general lighting uses decorative fixtures with adequate lumen output. The stage lighting and lighting controls are old and have reached the end of their useful service life.

Lightning Protection System - There is adequate lightning protection system in the school. The roof has lightning rods, and they are connected to the ground properly by using stranded bare aluminum cable from the roof top all the way to the ground floor.

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

Portable Classroom

A portable classroom located on the Southeast side of the main school building houses the IMC. The portable has an independent conditioning system from the main building. A packaged rooftop unit provides heating and cooling to the IMC. The Building Engineer reported no issues with the packaged unit, but did not know when it was installed. The RTU could be seen from the main building roof, appeared to have been installed within the last five years, and in good condition. 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.

Site

Parking for staff and visitor vehicles on west side of site is asphalt in good condition. Play yard on south side is asphalt paving in good condition. No play structure on site. Fencing surrounding site is newly added metal picket fencing in very good condition. Landscaping is grass areas on all sides and around parking with mature trees in very good condition.

Site Lighting – There are several exterior lights on the building. However, the school grounds and building perimeters are not adequately lighted for safety of the people and security of property.

Site Paging - The present site paging System is not adequate. There are an insufficient number of speaker on building's exterior walls.

RECOMMENDATIONS:

- Repair cracks in exterior brick masonry
- Replace exterior widows for energy efficiency
- Replace exterior doors – beyond service life and damaged
- Replace built-up roofing system – beyond service life
- Repaint interior wall surfaces – 80% beyond service life
- Replace interior doors – beyond service life
- Replace toilet partitions for accessibility
- Install interior ID signage
- Install elevator for accessibility
- Replace twenty (20) water closets, in use beyond their service life, in the restrooms with new code compliant fixtures.
- Replace twelve (12) urinals, in use beyond their service life, in the restrooms with new low flow fixtures.
- Replace seven (7) porcelain wall hung drinking fountains in the corridors. These units are beyond their service life and most are NOT accessible type.
- Replace three (3) service sinks located in the janitor closets which are beyond their service lives and in poor condition.
- Hire a qualified contractor to perform a detailed inspection of the domestic water piping, in use for an unknown amount of time, and replace any damaged piping.
- Replace the one (1) existing Paloma instant hot water heater, which is most likely beyond its service life and replace the existing hot water storage tank.
- 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.

- Replace the three (3) dual fuel boiler burners, which are estimated to be approaching the end of their service lives, with new more efficient burners within the next 2-4 years.
- 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) pumps in the boiler room.
- Hire a qualified contractor to examine the steam and condensate piping, in service for nearly 65 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Remove the existing unit ventilators and install units with hot and chilled water coils and integral heat exchangers to introduce outdoor air to the building.
- Remove the existing heating and ventilation unit which is beyond its service life and provide ventilation for the Gymnasium/Cafeteria by installing a fan coil air handling unit in the penthouse with outdoor air ducted to the unit from the existing outdoor air louvers.
- Remove the existing heating and ventilation unit which is beyond its service life and provide ventilation for the Auditorium by installing a fan coil air handling unit in the penthouse with outdoor air ducted to the unit from the existing outdoor air louvers.
- Provide ventilation for the administration offices by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.
- Remove the window air conditioning units and install a 120 ton air-cooled chiller with chilled water distribution piping and pumps located in a mechanical room to supply more reliable air conditioning for the building with a much longer service life.
- Replace four (4) exhaust fans, located in the penthouse and in closets on the second floor, serving the restrooms which are well beyond their service lives.
- Replace twelve (12) roof mounted gravity ventilators which are beyond their service lives and in poor condition.
- Install a gas fired make-up air system for the Kitchen exhaust hoods.
- Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.

- Install new Site electrical service 1000KVA, 480V, 3 Phase to feed the existing loads plus new HVAC additional loads.
- Install new 480V, 3 phase switchgear.
- Install a new MCC for the new HVAC loads.
- Install a new 120V/208V, 3 phase switchboard.
- Install new 120V panelboards throughout the building for lighting, and receptacles loads.
- Install minimum two receptacles on each wall of classrooms and other areas (70% of the building).
- Install new a lighting system for the most of the building (70%).
- Install a new FA system that is fully automated and addressable.
- Install a new Clock System.
- Install new video surveillance system
- Install auditorium stage lighting and lighting controls.
- Install new emergency exit signs & emergency lights.
- Install a new 100KW Emergency Generator to feed all the emergency loads.

- Install accessible ramp on at least one main entrance

- Install new site lighting for safety of the people and security of property.
- Install new site paging on building exterior walls.

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B620001
Sewage Ejector:	Yes	Status:	Accepted by SDP
Site ID:	S620001		

Condition Summary

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

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
A10 - Foundations	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	0.00 %	$0.00
B10 - Superstructure	37.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	59.47 %	44.33 %	$866,047.91
B30 - Roofing	110.00 %	87.31 %	$926,469.68
C10 - Interior Construction	60.49 %	33.77 %	$323,553.91
C20 - Stairs	37.00 %	0.00 %	$0.00
C30 - Interior Finishes	77.62 %	10.88 %	$223,705.25
D10 - Conveying	105.71 %	102.54 %	$387,153.48
D20 - Plumbing	68.40 %	55.58 %	$949,396.77
D30 - HVAC	95.14 %	101.40 %	$4,737,366.11
D40 - Fire Protection	105.71 %	158.77 %	$600,828.75
D50 - Electrical	109.97 %	90.11 %	$2,315,351.11
E10 - Equipment	65.71 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	0.00 %	$0.00
Totals:	**69.93 %**	**46.02 %**	**$11,329,872.97**

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.	42,000	100	1952	2052		37.00 %	0.00 %	37			$1,021,440
A1030	Slab on Grade	$15.51	S.F.	42,000	100	1952	2052		37.00 %	0.00 %	37			$651,420
A2010	Basement Excavation	$13.07	S.F.	42,000	100	1952	2052		37.00 %	0.00 %	37			$548,940
A2020	Basement Walls	$23.02	S.F.	42,000	100	1952	2052		37.00 %	0.00 %	37			$966,840
B1010	Floor Construction	$92.20	S.F.	42,000	100	1952	2052		37.00 %	0.00 %	37			$3,872,400
B1020	Roof Construction	$24.11	S.F.	42,000	100	1952	2052		37.00 %	0.00 %	37			$1,012,620
B2010	Exterior Walls	$31.22	S.F.	42,000	100	1952	2052		37.00 %	0.99 %	37		$12,915.80	$1,311,240
B2020	Exterior Windows	$13.63	S.F.	42,000	40	1992	2032	2057	105.00 %	127.82 %	42		$731,690.90	$572,460
B2030	Exterior Doors	$1.67	S.F.	42,000	25	1952	1977	2042	108.00 %	173.14 %	27		$121,441.21	$70,140
B3010105	Built-Up	$37.76	S.F.	27,344	20	1987	2007	2037	110.00 %	89.73 %	22		$926,469.68	$1,032,509
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.	42,000	20	1987	2007	2037	110.00 %	0.00 %	22			$28,560
C1010	Partitions	$14.93	S.F.	42,000	100	1952	2052		37.00 %	0.00 %	37			$627,060
C1020	Interior Doors	$3.76	S.F.	42,000	40	1952	1992	2057	105.00 %	181.25 %	42		$286,235.23	$157,920
C1030	Fittings	$4.12	S.F.	42,000	40	1952	1992	2057	105.00 %	21.57 %	42		$37,318.68	$173,040
C2010	Stair Construction	$1.28	S.F.	42,000	100	1952	2052		37.00 %	0.00 %	37			$53,760

Site Assessment Report - B620001;Day

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	$18.69	S.F.	42,000	10	2003	2013	2027	120.00 %	28.50 %	12		$223,705.25	$784,980
C3010231	Vinyl Wall Covering	$0.00	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$0.97	S.F.	42,000	30	1952	1982	2030	50.00 %	0.00 %	15			$40,740
C3020411	Carpet	$7.30	S.F.	840	10	2012	2022		70.00 %	0.00 %	7			$6,132
C3020412	Terrazzo & Tile	$75.52	S.F.		50				0.00 %	0.00 %				$0
C3020413	Vinyl Flooring	$9.68	S.F.	34,860	20	1987	2007	2025	50.00 %	0.00 %	10			$337,445
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	6,300	50	1987	2037		44.00 %	0.00 %	22			$6,111
C3030	Ceiling Finishes	$20.97	S.F.	42,000	25	2003	2028		52.00 %	0.00 %	13			$880,740
D1010	Elevators and Lifts	$8.99	S.F.	42,000	35			2052	105.71 %	102.54 %	37		$387,153.48	$377,580
D2010	Plumbing Fixtures	$31.58	S.F.	42,000	35	1952	1987	2035	57.14 %	24.11 %	20		$319,806.46	$1,326,360
D2020	Domestic Water Distribution	$2.90	S.F.	42,000	25	1952	1977	2042	108.00 %	194.83 %	27		$237,302.70	$121,800
D2030	Sanitary Waste	$2.90	S.F.	42,000	25	1952	1977	2042	108.00 %	169.16 %	27		$206,041.55	$121,800
D2040	Rain Water Drainage	$3.29	S.F.	42,000	30	1952	1982	2047	106.67 %	134.79 %	32		$186,246.06	$138,180
D3020	Heat Generating Systems	$18.67	S.F.	42,000	35	2000	2035		57.14 %	44.22 %	20		$346,764.84	$784,140
D3030	Cooling Generating Systems	$24.48	S.F.	42,000	20			2037	110.00 %	67.26 %	22		$691,491.85	$1,028,160
D3040	Distribution Systems	$42.99	S.F.	42,000	25	1952	1977	2042	108.00 %	154.97 %	27		$2,798,121.60	$1,805,580
D3050	Terminal & Package Units	$11.60	S.F.	42,000	20	1952	1972	2027	60.00 %	0.00 %	12			$487,200
D3060	Controls & Instrumentation	$13.50	S.F.	42,000	20	1980	2000	2037	110.00 %	158.90 %	22		$900,987.82	$567,000
D4010	Sprinklers	$8.02	S.F.	42,000	35			2052	105.71 %	178.37 %	37		$600,828.75	$336,840
D4020	Standpipes	$0.99	S.F.	42,000	35			2052	105.71 %	0.00 %	37			$41,580
D5010	Electrical Service/Distribution	$9.70	S.F.	42,000	30	1952	1982	2047	106.67 %	264.83 %	32		$1,078,935.92	$407,400
D5020	Lighting and Branch Wiring	$34.68	S.F.	42,000	20	1952	1972	2037	110.00 %	33.69 %	22		$490,712.98	$1,456,560
D5030	Communications and Security	$12.99	S.F.	42,000	15	1952	1967	2032	113.33 %	77.15 %	17		$420,922.66	$545,580
D5090	Other Electrical Systems	$3.81	S.F.	42,000	30	1952	1982	2047	106.67 %	202.96 %	32		$324,779.55	$160,020
E1020	Institutional Equipment	$4.82	S.F.	42,000	35	2003	2038		65.71 %	0.00 %	23			$202,440
E1090	Other Equipment	$11.10	S.F.	42,000	35	2003	2038		65.71 %	0.00 %	23			$466,200
E2010	Fixed Furnishings	$2.13	S.F.	42,000	40	1987	2027		30.00 %	0.00 %	12			$89,460
								Total	**69.93 %**	**46.02 %**			**$11,329,872.97**	**$24,620,377**

System Notes

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

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

Note: 95% - Paint & Covering
5% - Wall tile (glazed block)

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

Note: 2% - Carpet
83% - Vinyl Flooring
15% - Concrete Floor Finishes

Renewal Schedule

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

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$11,329,873**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$8,295**	**$0**	**$0**	**$498,847**	**$11,837,015**
*** 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	$12,916	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$12,916**
B2020 - Exterior Windows	$731,691	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$731,691**
B2030 - Exterior Doors	$121,441	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$121,441**
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	$926,470	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$926,470**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

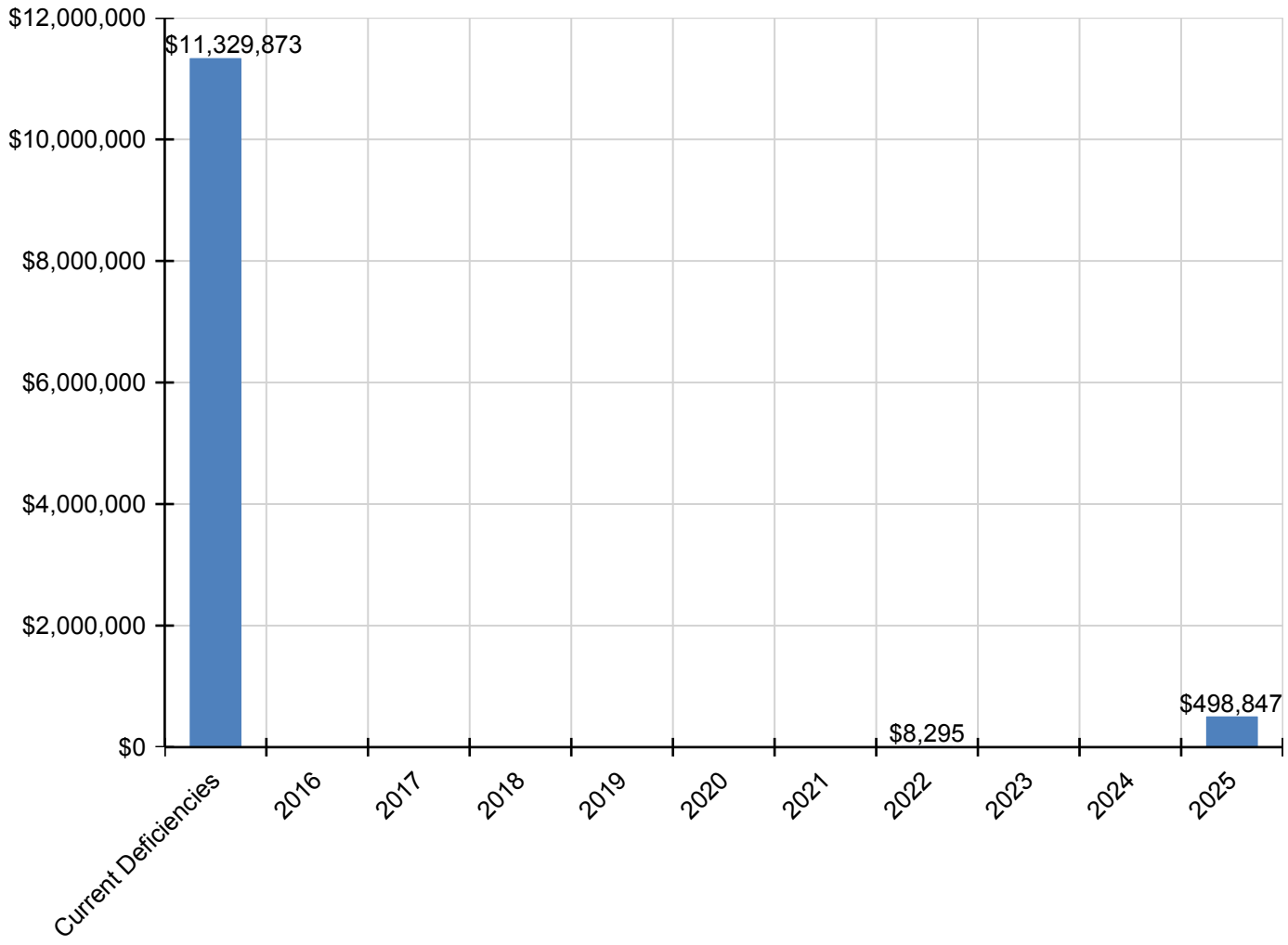
C1020 - Interior Doors	$286,235	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$286,235**
C1030 - Fittings	$37,319	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$37,319**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$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	$223,705	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$223,705**
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	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$8,295	$0	$0	$0	**$8,295**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$498,847	**$498,847**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$387,153	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$387,153**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$319,806	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$319,806**
D2020 - Domestic Water Distribution	$237,303	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$237,303**
D2030 - Sanitary Waste	$206,042	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$206,042**
D2040 - Rain Water Drainage	$186,246	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$186,246**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$346,765	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$346,765**
D3030 - Cooling Generating Systems	$691,492	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$691,492**
D3040 - Distribution Systems	$2,798,122	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,798,122**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$900,988	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$900,988**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$600,829	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$600,829**
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	$1,078,936	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,078,936**
D5020 - Lighting and Branch Wiring	$490,713	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$490,713**
D5030 - Communications and Security	$420,923	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$420,923**
D5090 - Other Electrical Systems	$324,780	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$324,780**
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

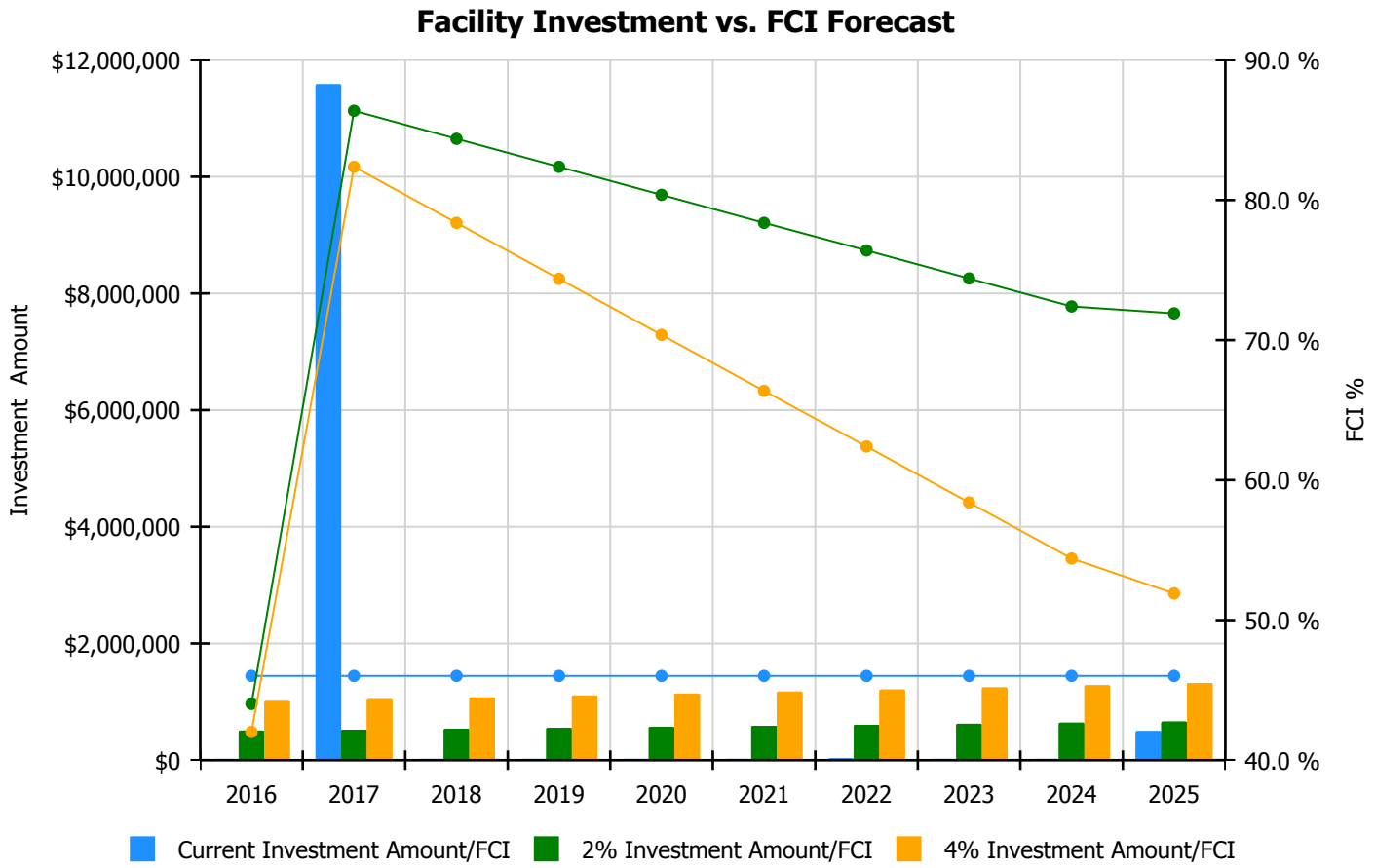
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

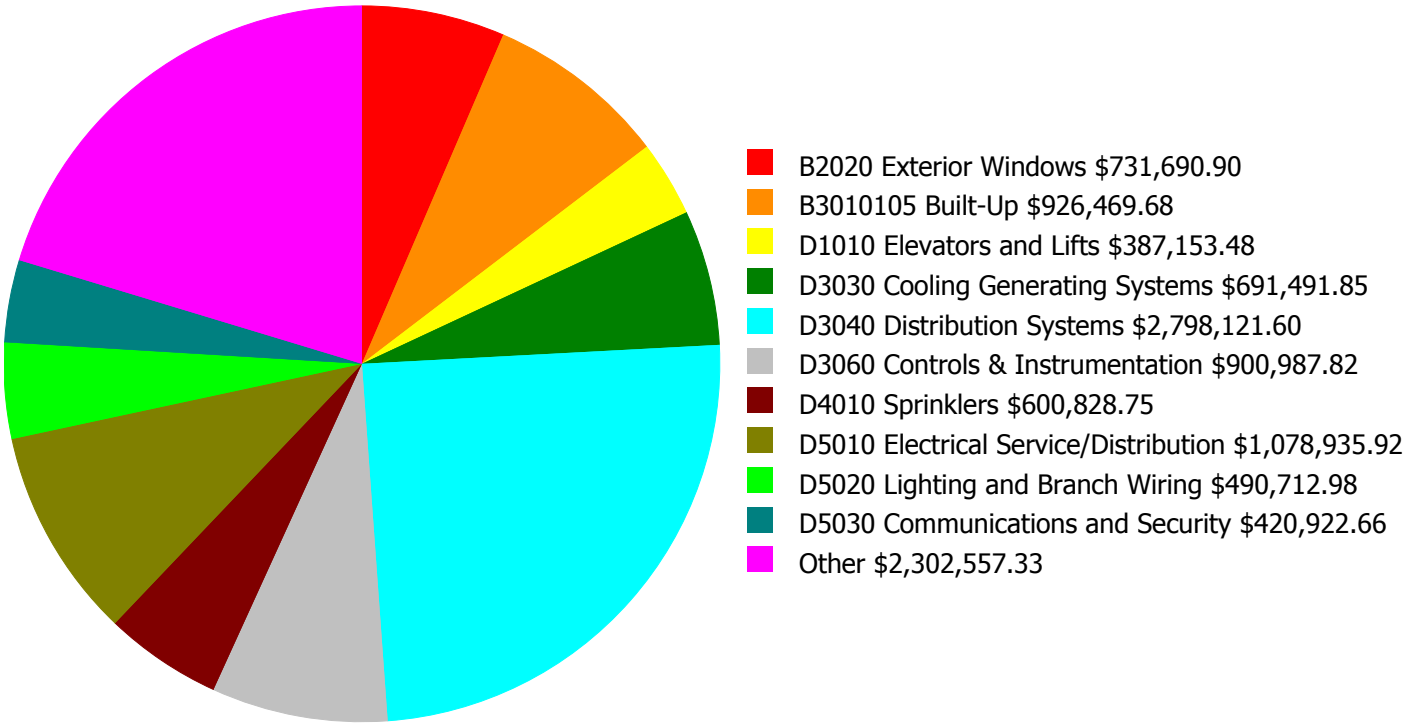
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 46.02%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$507,180.00	44.02 %	$1,014,360.00	42.02 %
2017	$11,585,514	$522,395.00	86.37 %	$1,044,790.00	82.37 %
2018	$0	$538,067.00	84.37 %	$1,076,134.00	78.37 %
2019	$0	$554,209.00	82.37 %	$1,108,418.00	74.37 %
2020	$0	$570,835.00	80.37 %	$1,141,671.00	70.37 %
2021	$0	$587,960.00	78.37 %	$1,175,921.00	66.37 %
2022	$8,295	$605,599.00	76.40 %	$1,211,198.00	62.40 %
2023	$0	$623,767.00	74.40 %	$1,247,534.00	58.40 %
2024	$0	$642,480.00	72.40 %	$1,284,960.00	54.40 %
2025	$498,847	$661,755.00	71.91 %	$1,323,509.00	51.91 %
Total:	**$12,092,656**	**$5,814,247.00**		**$11,628,495.00**	

Deficiency Summary by System

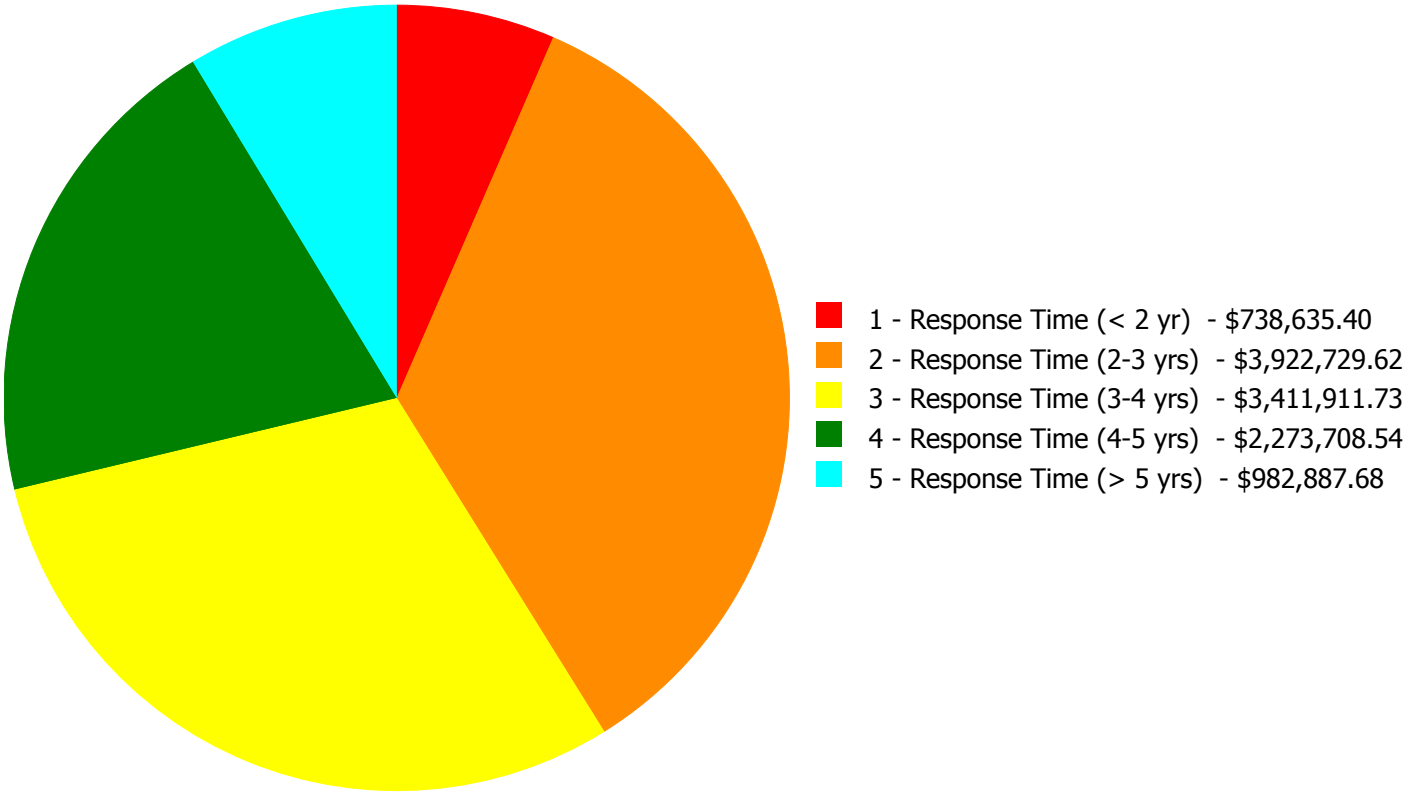
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $11,329,872.97

Deficiency Summary by Priority

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



Budget Estimate Total: $11,329,872.97

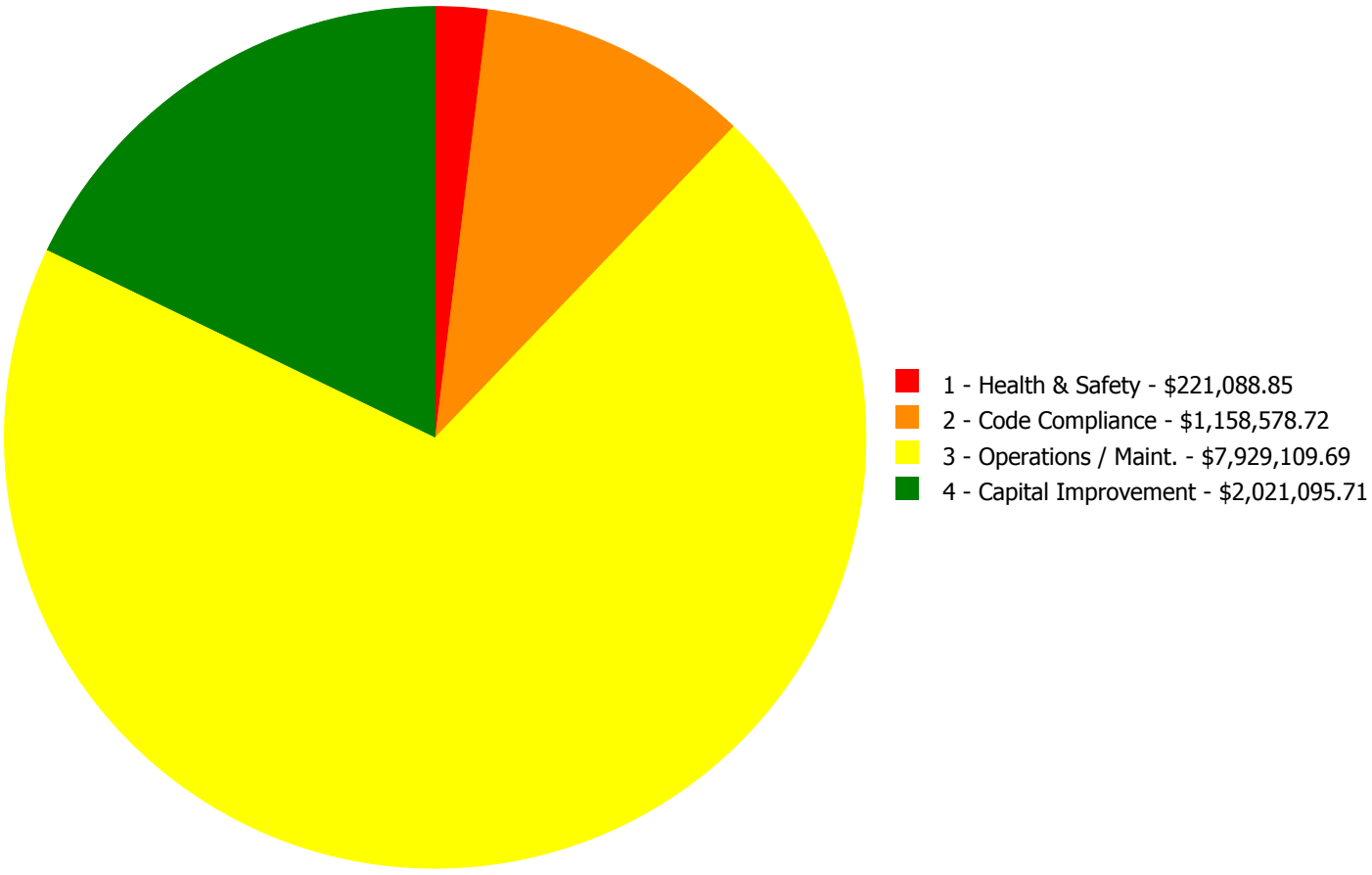
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2010	Exterior Walls	$0.00	$0.00	$0.00	$12,915.80	$0.00	$12,915.80
B2020	Exterior Windows	$0.00	$0.00	$0.00	$731,690.90	$0.00	$731,690.90
B2030	Exterior Doors	$0.00	$0.00	$121,441.21	$0.00	$0.00	$121,441.21
B3010105	Built-Up	$0.00	$926,469.68	$0.00	$0.00	$0.00	$926,469.68
C1020	Interior Doors	$0.00	$0.00	$0.00	$286,235.23	$0.00	$286,235.23
C1030	Fittings	$0.00	$0.00	$15,645.68	$21,673.00	$0.00	$37,318.68
C3010230	Paint & Covering	$0.00	$0.00	$0.00	$223,705.25	$0.00	$223,705.25
D1010	Elevators and Lifts	$0.00	$387,153.48	$0.00	$0.00	$0.00	$387,153.48
D2010	Plumbing Fixtures	$0.00	$0.00	$319,806.46	$0.00	$0.00	$319,806.46
D2020	Domestic Water Distribution	$0.00	$24,473.55	$0.00	$212,829.15	$0.00	$237,302.70
D2030	Sanitary Waste	$0.00	$0.00	$206,041.55	$0.00	$0.00	$206,041.55
D2040	Rain Water Drainage	$0.00	$0.00	$186,246.06	$0.00	$0.00	$186,246.06
D3020	Heat Generating Systems	$0.00	$113,045.40	$233,719.44	$0.00	$0.00	$346,764.84
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$691,491.85	$691,491.85
D3040	Distribution Systems	$137,806.65	$1,076,489.17	$1,292,429.95	$0.00	$291,395.83	$2,798,121.60
D3060	Controls & Instrumentation	$0.00	$900,987.82	$0.00	$0.00	$0.00	$900,987.82
D4010	Sprinklers	$600,828.75	$0.00	$0.00	$0.00	$0.00	$600,828.75
D5010	Electrical Service/Distribution	$0.00	$494,110.52	$0.00	$584,825.40	$0.00	$1,078,935.92
D5020	Lighting and Branch Wiring	$0.00	$0.00	$490,712.98	$0.00	$0.00	$490,712.98
D5030	Communications and Security	$0.00	$0.00	$221,088.85	$199,833.81	$0.00	$420,922.66
D5090	Other Electrical Systems	$0.00	$0.00	$324,779.55	$0.00	$0.00	$324,779.55
	Total:	$738,635.40	$3,922,729.62	$3,411,911.73	$2,273,708.54	$982,887.68	$11,329,872.97

Deficiency Summary by Category

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



Budget Estimate Total: $11,329,872.97

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: D3040 - Distribution Systems

Location: Throughout building
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Conduct a steam trap survey and replace failed units.
Qty: 42,000.00
Unit of Measure: S.F.
Estimate: $137,806.65
Assessor Name: System
Date Created: 02/01/2016

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: 42,000.00
Unit of Measure: S.F.
Estimate: $600,828.75
Assessor Name: System
Date Created: 02/01/2016

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: B3010105 - Built-Up

Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Built Up Roof

Qty: 27,344.00

Unit of Measure: S.F.

Estimate: $926,469.68

Assessor Name: System

Date Created: 02/17/2016

Notes: Replace built-up roofing system – beyond service life

System: D1010 - Elevators and Lifts

Location: TBD

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Add interior hydraulic elevator - 2 floors - adjust the electrical run lengths to hook up the elevator

Qty: 1.00

Unit of Measure: Ea.

Estimate: $387,153.48

Assessor Name: System

Date Created: 02/17/2016

Notes: Install elevator for accessibility

System: D2020 - Domestic Water Distribution

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace instantaneous water heater

Qty: 1.00

Unit of Measure: Ea.

Estimate: $24,473.55

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace the one (1) existing Paloma instant hot water heater, which is most likely beyond its service life and replace the existing hot water storage tank.

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 1.00

Unit of Measure: Ea.

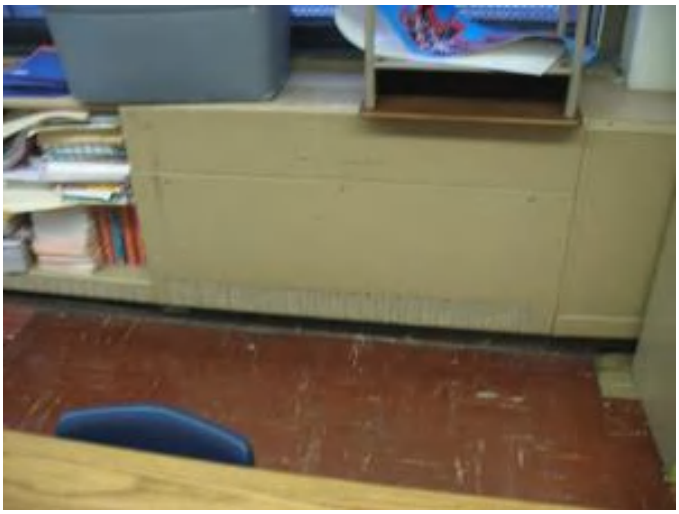
Estimate: $113,045.40

Assessor Name: System

Date Created: 02/01/2016

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

System: D3040 - Distribution Systems



Location: Classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace classroom unit ventilator (htg/clg coils, 5 tons, 2,000 CFM)

Qty: 18.00

Unit of Measure: Ea.

Estimate: $897,816.11

Assessor Name: System

Date Created: 02/01/2016

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

System: D3040 - Distribution Systems

Location: Mechanical rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace utility set exhaust fan (5 HP)

Qty: 4.00

Unit of Measure: Ea.

Estimate: $152,349.03

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace four (4) exhaust fans, located in the penthouse and in closets on the second floor, serving the restrooms which are well beyond their service lives.

System: D3040 - Distribution Systems

Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace rooftop gravity ventilator units - select the proper type and size

Qty: 12.00

Unit of Measure: Ea.

Estimate: $26,324.03

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace twelve (12) roof mounted gravity ventilators which are beyond their service lives and in poor condition.

System: D3060 - Controls & Instrumentation

Location: Throughout building

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 42,000.00

Unit of Measure: S.F.

Estimate: $900,987.82

Assessor Name: System

Date Created: 02/01/2016

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.

System: D5010 - Electrical Service/Distribution

Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Panelboard - 400 amp

Qty: 1.00

Unit of Measure: Ea.

Estimate: $494,110.52

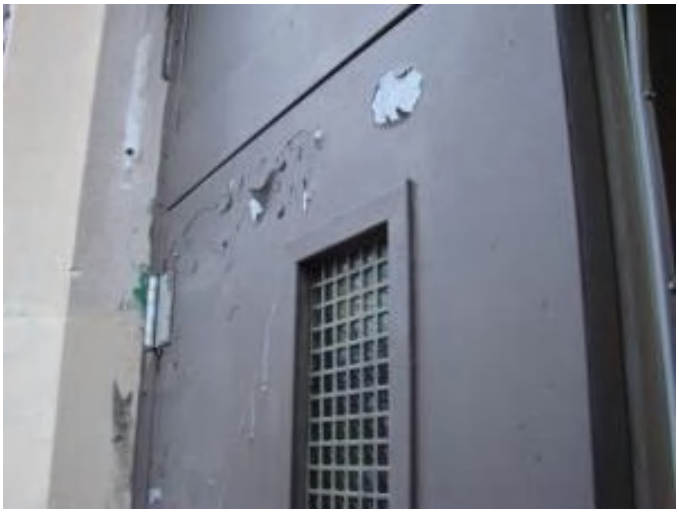
Assessor Name: System

Date Created: 02/11/2016

Notes: Install new 120V panel-boards throughout the building for lighting, and receptacles loads.

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

System: B2030 - Exterior Doors



Location: Throughout

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 15.00

Unit of Measure: Ea.

Estimate: $121,441.21

Assessor Name: System

Date Created: 02/17/2016

Notes: Replace exterior doors – beyond service life and damaged

System: C1030 - Fittings

Location: Toilets

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Remove and replace damaged toilet paritions - handicap units

Qty: 16.00

Unit of Measure: Ea.

Estimate: $15,645.68

Assessor Name: System

Date Created: 02/17/2016

Notes: Replace toilet partitions for accessibility

System: D2010 - Plumbing Fixtures

Location: Restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 20.00

Unit of Measure: Ea.

Estimate: $149,554.35

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace twenty (20) water closets, in use beyond their service life, in the restrooms with new code compliant fixtures.

System: D2010 - Plumbing Fixtures

Location: Corridors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace water fountains to meet ADA - includes high and low fountains and new recessed alcove

Qty: 7.00

Unit of Measure: Ea.

Estimate: $109,850.27

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace seven (7) porcelain wall hung drinking fountains in the corridors. These units are beyond their service life and most are NOT accessible type.

System: D2010 - Plumbing Fixtures

Location: Restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 12.00

Unit of Measure: Ea.

Estimate: $39,953.56

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace twelve (12) urinals, in use beyond their service life, in the restrooms with new low flow fixtures.

System: D2010 - Plumbing Fixtures

Location: Corridors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace floor janitor or mop sink - insert the quantity

Qty: 3.00

Unit of Measure: Ea.

Estimate: $20,448.28

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace three (3) service sinks located in the janitor closets which are beyond their service lives and in poor condition.

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: 42,000.00

Unit of Measure: S.F.

Estimate: $206,041.55

Assessor Name: System

Date Created: 02/01/2016

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: 42,000.00

Unit of Measure: S.F.

Estimate: $186,246.06

Assessor Name: System

Date Created: 02/01/2016

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 power burner, gas/oil (100 HP)

Qty: 3.00

Unit of Measure: Ea.

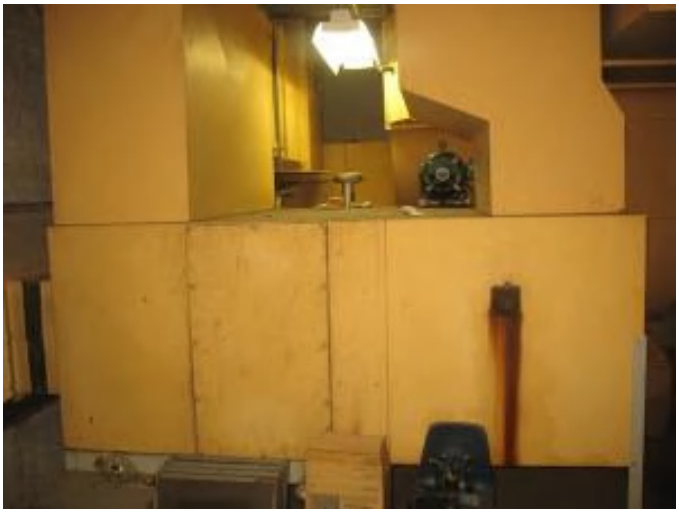
Estimate: $233,719.44

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace the three (3) dual fuel boiler burners, which are estimated to be approaching the end of their service lives, with new more efficient burners within the next 2-4 years.

System: D3040 - Distribution Systems



Location: Auditorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 358.00

Unit of Measure: Seat

Estimate: $533,034.21

Assessor Name: System

Date Created: 02/01/2016

Notes: Remove the existing heating and ventilation unit which is beyond its service life and provide ventilation for the Auditorium by installing a fan coil air handling unit in the penthouse with outdoor air ducted to the unit from the existing outdoor air louvers.

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: 42,000.00

Unit of Measure: S.F.

Estimate: $397,335.64

Assessor Name: System

Date Created: 02/01/2016

Notes: Hire a qualified contractor to examine the steam and condensate piping, in service for nearly 65 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D3040 - Distribution Systems

Location: Gymnasium/Cafeteria

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $362,060.10

Assessor Name: System

Date Created: 02/01/2016

Notes: Remove the existing heating and ventilation unit which is beyond its service life and provide ventilation for the Gymnasium/Cafeteria by installing a fan coil air handling unit in the penthouse with outdoor air ducted to the unit from the existing outdoor air louvers.

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: $326,606.22

Assessor Name: System

Date Created: 02/11/2016

Notes: Install new a lighting system for the most of the building (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: $164,106.76

Assessor Name: System

Date Created: 02/11/2016

Notes: Install minimum two receptacles on each wall of classrooms and other areas (70% of the building).
42,000 SF x 70% = 29,400 SF

System: D5030 - Communications and Security

Location: throughout the building

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $221,088.85

Assessor Name: System

Date Created: 02/11/2016

Notes: Install a new FA system that is fully automated and addressable.

System: D5090 - Other Electrical Systems

Location: electrical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace standby generator system

Qty: 1.00

Unit of Measure: Ea.

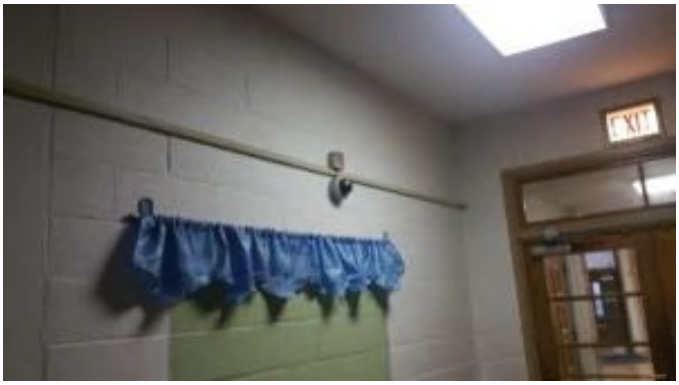
Estimate: $174,591.39

Assessor Name: System

Date Created: 02/11/2016

Notes: Install a new 100KW Emergency Generator to feed all the emergency loads.

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: $150,188.16

Assessor Name: System

Date Created: 02/11/2016

Notes: Install new emergency exit signs emergency lights.

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

System: B2010 - Exterior Walls

Location: Exterior walls

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 400.00

Unit of Measure: S.F.

Estimate: $12,915.80

Assessor Name: System

Date Created: 02/17/2016

Notes: Repair cracks in exterior brick masonry

System: B2020 - Exterior Windows

Location: Ext. windows

Distress: Energy Efficiency

Category: 4 - Capital Improvement

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

Correction: Remove and replace double slider windows

Qty: 145.00

Unit of Measure: Ea.

Estimate: $731,690.90

Assessor Name: System

Date Created: 02/17/2016

Notes: Replace exterior widows for energy efficiency

System: C1020 - Interior Doors

Location: Throughout

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 60.00

Unit of Measure: Ea.

Estimate: $286,235.23

Assessor Name: System

Date Created: 02/17/2016

Notes: Replace interior doors – beyond service life

System: C1030 - Fittings

Location: Throughout

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 80.00

Unit of Measure: Ea.

Estimate: $21,673.00

Assessor Name: System

Date Created: 02/17/2016

Notes: Install interior ID signage

System: C3010230 - Paint & Covering

Location: Throughout

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

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

Qty: 67,200.00

Unit of Measure: S.F.

Estimate: $223,705.25

Assessor Name: System

Date Created: 02/17/2016

Notes: Repaint interior wall surfaces – 80% beyond service life

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: 42,000.00

Unit of Measure: S.F.

Estimate: $212,829.15

Assessor Name: System

Date Created: 02/01/2016

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: 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: $309,137.22

Assessor Name: System

Date Created: 02/10/2016

Notes: Install new Site electrical service 1000KVA, 480V, 3 Phase to feed the existing loads plus new HVAC additional loads. Install new 480V, 3 phase switchgear. Install a new MCC for the new HVAC loads.
Install a new 120V/208V, 3 phase switchboard.

System: D5010 - Electrical Service/Distribution

Location: electrical room

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Electrical Switchgear and Distribution System

Qty: 0.00

Unit of Measure: Ea.

Estimate: $275,688.18

Assessor Name: System

Date Created: 02/11/2016

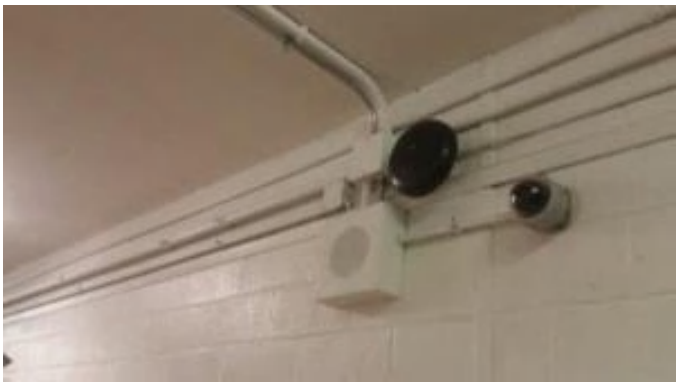
Notes: Install new MCCs for mechanical loads and a new 120V 3 phase switchboard for all the 120V panels.

System: D5030 - Communications and Security

Location: throughout the building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Clock System or Components
Qty: 0.00
Unit of Measure: Ea.
Estimate: $135,072.27
Assessor Name: System
Date Created: 02/11/2016

Notes: Install a new Clock System.
Note: A multiplier of 1.2 (instead of 1.0) is used to cover the additional costs associated with other related construction.

System: D5030 - Communications and Security



Location: throughout the building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Video Surveillance System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $64,761.54
Assessor Name: System
Date Created: 02/11/2016

Notes: Install 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: 42,000.00

Unit of Measure: S.F.

Estimate: $691,491.85

Assessor Name: System

Date Created: 02/01/2016

Notes: Remove the window air conditioning units and install a 120 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: Administration offices

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 358.00

Unit of Measure: Student

Estimate: $154,950.81

Assessor Name: System

Date Created: 02/01/2016

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

System: D3040 - Distribution Systems

Location: Kitchen

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 0.50

Unit of Measure: Ea.

Estimate: $136,445.02

Assessor Name: System

Date Created: 02/01/2016

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

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 2628 MBH, includes burners, controls and insulated jacket, packaged	3.00	Ea.	Boiler Room	Weil-McLain	1188			35	2000	2035	$69,812.50	$230,381.25
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 2628 MBH, includes burners, controls and insulated jacket, packaged	3.00	Ea.	Boiler Room	Weil-McLain	1188			35	2000	2035	$69,812.50	$230,381.25
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 2628 MBH, includes burners, controls and insulated jacket, packaged	3.00	Ea.	Boiler Room	Weil-McLain	1188			35	2000	2035	$69,812.50	$230,381.25
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	1952	2047	$42,600.60	$46,860.66
D5010 Electrical Service/Distribution	Panelboards, 1 phase 3 wire, main lugs, 120/240 V, 225 amp, 24 circuits, NQOD, incl 20 A 1 pole plug-in breakers	1.00	Ea.	electrical room					30	1952	1982	$2,608.20	$2,869.02
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	1952	2047	$50,797.80	$55,877.58
												Total:	**$796,751.01**

Executive Summary

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

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

Function:	Little School House
Gross Area (SF):	25,158
Year Built:	2000
Last Renovation:	
Replacement Value:	$14,857,712
Repair Cost:	$1,042,434.28
Total FCI:	7.02 %
Total RSLI:	63.39 %

Description:

Facility Assessment
December 2015

School District of Philadelphia
Day Little School House
6324-42 Crittenden Street

Philadelphia, PA 19138

25,158 SF / 239 Students / LN 06

The Day LSH building is located at 6324-42 Crittenden St. in Philadelphia, PA. The 1 story, 25,158 square foot building was constructed in 2000. The building is part of a complex that also includes the Day School. A Facility Area Coordinator was not present during the site visit to provide input to the Parsons assessment team on current problems and planned renovation projects. Mr. Rick Alexander, the new Building Engineer, accompanied us on our tour of the school and provided us with information on the building systems.

ARCHITECHURAL/STRUCTURAL SYSTEMS

The building rests on concrete foundations and bearing walls that are not showing signs of settlement damage. The main structure consists of CMU and cast-in-place concrete columns, beams, and one way ribbed slab. The roof structure is steel truss supported by

main structural frame. Main roofing is asphalt shingle with small sections of metal roof in good condition. Metal gutters do not drain well and leak back into the building under the shingles. The building envelope is masonry with glazed brick face in good condition with some deterioration on the front columns due to water/ice. Windows are original extruded aluminum, double hung sliding windows, Lexan Plexiglas with insect/security screens. These windows are generally in fair condition and energy inefficient. Exterior doors are hollow metal doors and frames in good condition. The building is accessible via grade level entrances.

Partition walls are standard and acoustic CMU with some metal stud and gypsum, and sections of glazed curtain walls in good condition. Interior doors are hollow metal frame with solid core wood doors with glazing in very good condition. Doors leading to exit stairways are hollow metal frame and doors in good condition. Interior doors have lever type handles. Fittings include: toilet accessories in very good condition; composite plastic toilet partitions in good condition; and handrails and ornamental metals, generally in good condition. Toilet partitions and accessories are ADA accessible. Interior identifying signage is plastic plaques with brail in very good condition.

The interior wall finishes are painted CMU or gypsum throughout in very good condition. Flooring is vinyl tile throughout most areas in good condition with carpet in offices and tile in kitchen in good condition. Ceiling finishes include: painted steel structure and wood slats in classrooms in very good condition and suspended acoustic tile system in all other areas in good condition.

Commercial equipment includes laundry equipment in fair condition. Other equipment includes food service equipment in good condition.

Fixed furnishings include: window shades and blinds, and fixed casework in classrooms, lounge and offices in good condition.

MECHANICAL

Plumbing Fixtures

The original plumbing fixtures remain in service from 2000. Fixtures in the restrooms consist of both floor and wall mounted flush valve water closets, wall hung urinals and lavatories with both wheel handle and lever faucets. The restrooms are accessible type. The units appear to be in good condition and should provide reliable service for the next 15-20 years.

Drinking fountains in the corridors consist of wall hung fixtures with integral refrigerated coolers. They are within their service life; most are accessible type. A mop basin is available in a janitor closet in the corridor for use by the janitorial staff. The Kitchen has one (1) three-compartment stainless steel sink with lever operated faucets and a disposal. There are no grease traps. Chemicals are injected manually into the sanitizing basins.

Domestic Water Distribution

A 3” city water service enters from under the slab on the south side of the mechanical room from Anderson Street. The 3” meter and valves are located in the mechanical room and a reduced pressure backflow preventer is installed. The domestic hot and cold water distribution piping is copper piping and sweat fittings. The maintenance staff reports no significant problems with scale build up in the domestic piping and the supply is adequate to the fixtures.

Two (2) gas fired PVI 125 gallon vertical domestic hot water heaters with nickel plated storage tanks, associated circulating pumps and expansion tanks provide domestic hot water for the building. The units are assumed to be original to the building, are gas fired, and are located in the mechanical room. The hot water heaters are equipped with T&P relief valves and two (2) small expansion tanks. The domestic hot water heaters are assumed to be at the end of their service lives and should be replaced in the next 1-3 years. A water softener is located in the mechanical room.

Sanitary Waste

The sanitary sewer piping is all located under the building slab and was not accessible. It is assumed that all sanitary piping is original to the building and within its service life. The maintenance staff reported no problems with the sanitary waste piping systems.

Rain Water Drainage

Rain water drains from gutters on the sloped roof are routed through mechanical chases and storage closets in the building to piping under the slab and are original. The piping is cast iron with no-hub fittings. The system is original to the building and is well within its service life. No issues were reported with the roof drains or rain leaders.

Energy Supply

A 4" city gas service enters the building under the slab from Anderson Street near the middle of the block. The gas meter is 4" and is located in the equipment yard outside of the mechanical room.

The reserve oil supply is stored in two (2) 300 gallon storage tanks located in the mechanical room. Oil is used as a backup fuel and the District receives credit from the gas utility as an interruptible service. The current tanks are nearly empty according to the gauge on the wall; the Building Engineer did not know their status. The actual condition of the fuel side is unknown and should be inspected on a regular basis.

Heat Generating Systems

Building heating hot water is generated by two (2) 42HP HB Smith Series 19 cast iron sectional boilers with gross output of 1,388MBH. Each boiler is equipped with a Power Flame burner designed to operate on natural gas or fuel oil. Combustion air makeup is supplied by louvers equipped with motorized dampers. Burner oil pumps are loose and not driven by the fan motor. The gas train serving the boiler does appear to have code required venting of the regulators and dual solenoid valves with venting of the chamber between. No major issues with the boilers were reported by the Building Engineer. Cast iron boilers have an anticipated service life of 35 years or more; these units have been in service 15 years. The District should provide reliable service for the next 20 to 25 years.

Cooling Generating Systems

Chilled water is generated by one (1) nominal 82 ton York model YLAA air-cooled scroll chiller located in the equipment yard outside of the mechanical room. The unit was installed in 2015. This unit has two (2) compressors and utilizes R-410A refrigerant. Scroll compressor chillers have an anticipated service life of 15 years; this unit has been in service less than one (1) year. The Building Engineer has not yet used the chiller and was unable to report any issues. The District should provide reliable service for at least the next 15 years.

Distribution Systems

A four pipe distribution system supplies building heating and cooling water to the fan coil units and air handling unit. Two (2) 2HP end -suction Bell and Gossett heating water return pumps, P-1 and P-2, circulate heating water to the boilers from throughout the building. Two (2) smaller in-line Bell and Gossett hot water circulating pumps ensure water flow through the boilers. One (1) of these pumps is leaking, has rust damage, and should be replaced. An expansion tank, air separator, and Neptune chemical treatment system are installed on the heating water distribution system. Two (2) 2HP end-suction Bell and Gossett chilled water return pumps, P-3 and P-4, circulate chilled water from the chiller throughout the building. A glycol injection tank is installed in the mechanical room so the chilled water system has glycol in it to prevent freezing during the winter. The District should provide reliable service for the next 8 to 10 years.

All pumps are original to the building, appear to be in good condition with the exception of one (1), and are within the anticipated service life of 25 years. Distribution piping is copper, covered with insulation, and appears to be in good condition. No problems with the distribution systems were reported. The District should provide reliable service for the next 8 to 10 years.

One (1) Magic Aire model 180-BMW nominal 15 ton air handling unit (AHU) provides heating and cooling to the Cafeteria. The unit is located in the mechanical room adjacent to the fuel oil storage tanks. Heating, cooling, and outdoor air are supplied to the Cafeteria by a ducted distribution system above the drop ceiling. The unit was operational and appeared to be in good condition, no major issues were reported by the Building Engineer.

Fan coil units provide heating and cooling for the classrooms and offices. Fin tube radiators installed along the perimeter of classrooms and the Cafeteria supply additional heating during the winter. The units are original to the building and are within their service lives. Outdoor air for the building is provided by the fan coil units which take in outdoor air through louvered wall openings. No major issues were reported with the fan coil units and all radiators appeared to be in good condition.

Terminal & Package Units

The building is exhausted by a total of eight (8) roof mounted exhaust fans. The Building Engineer did not report any problems with the exhaust fans. The exhaust fans remove air from the ceiling plenum above the drop ceiling in some areas, from restrooms, and from the Kitchen. The roof was not accessible during the site visit so no additional information about the fans is available.

One (1) kitchen hood without an integral fire suppression system is installed above the electric heating equipment. No cooking is done

in the kitchen; only prepared meals are served. The equipment is well within its service life. There was no visible make-up air unit for the kitchen while the exhaust hoods are active, but it is assumed that this air is made up from the adjoining Cafeteria.

Controls & Instrumentation

A building management system (BMS) with DDC modules and communications network is installed in this building. According to the Building Engineer the BMS, installed when the building was built, is no longer operational. The Building Engineer no longer has access to the system and runs all mechanical equipment manually. All major mechanical equipment (chillers, boilers, air handling units, pumps, fans, etc.) should be monitored and controlled by the system. This system is at the end of its service life and should be replaced.

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 building is equipped with a wet type sprinkler system with sprinklers throughout the building. A 4" fire water line enters the building in the mechanical room along the same wall as the domestic water. A booster pump is not installed on the fire line. The fire suppression system is the originally installed equipment, appears to be in good condition, and should not need replacement within the next 15-20 years.

ELECTRICAL:

Site electrical service - The primary power is at 13.2KV from the street power pole which goes underground and feeds a PECO transformer (13.2KV – 120V/208V). The electrical service is fairly new (Installed in 2000) and has not reached the end of its useful service life. The main switchgear is rated at 800A, 120V/208V, 3 phase, and is located in main electrical room. The service entrance and the main building electrical distribution systems have ample capacity for future growth.

Distribution system - The electrical distribution is accomplished with a 120V/208V, 3 phase distribution switchboards. Switchboard feeds the 120V lighting and receptacle panels throughout the building (total of four). These panels are fairly new (installed in 2000) in good condition and have not reached the end of their useful service life.

Receptacles - There are ample receptacles in classrooms, computer rooms, libraries, and other areas. They meet the requirement of minimum of two receptacles on each wall of the classrooms, and other areas.

Lighting - Interior building is illuminated by various types of fixtures. They include fluorescent lighting (with T-5 & T-8 lamp) in majority of the areas, including; classrooms, corridor, offices and Kitchen. Surface or pendant mounted industrial fluorescent fixtures are used in mechanical and electrical rooms. The entire interior lighting fixtures are in good condition and have not reached the end of their useful service life.

Fire alarm - The present Fire Alarm system is automatic/addressable, and is in compliance with safety codes. There are manual pulls stations throughout the building. There are sufficient number of horn/strobes installed in the classrooms, corridors, offices and other areas in the school.

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

Public Address - Separate PA system does not exist. School uses the telephone systems for public announcements. This system is working adequately. Each class room is provided with intercom telephone service. The system allows paging and intercom communication between the main office to all the classrooms, and vice versa, between classrooms to the main office. Also, the system allows communication between classrooms to other classrooms.

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

Television System - Television system is not provided in the school. Most classes are equipped with smart boards having the ability to connect with computers and internet.

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

Emergency Power System - School is not provided with an emergency generator to feed emergency lighting and other emergency loads. However, the Day LSH can use the emergency generator from the Day ES next door.

Emergency lighting system, including exit lighting - there are sufficient number of emergency lighting fixtures and exit signs in corridors, library and other exit ways. Exit signs and emergency fixtures have not reached the end of their useful service.

Lightning Protection System - There is no lightning protection system installed in the LSH portion of the school. The roof is not tall to require lighting protection.

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

Grounds (site): Included in the Day School.

Site Lighting - The school grounds and building perimeters are not adequately lighted for safety of the people and security of property. However, the site lighting deficiency is covered under the main building.

Site Paging - The present Site paging System is not adequate. There are an insufficient number of speaker on building's exterior walls. However, the site paging deficiency is covered under the main building.

Accessibility: the building is accessible at all entrances and has accessible routes. Toilets are equipped with accessible fixtures, partitions and accessories, such as grab bars and accessible partitions. Doors in the addition building have lever type door handles.

RECOMMENDATIONS:

- Replace Plexiglas window – hazed and not energy efficient
- Repair gutter drains and seal joint
- Replace the two (2) 125 gallon vertical gas fired domestic hot water heaters which are original to the building and beyond their service life.
- Replace one (1) ½ HP in-line hot water circulating pump which is leaking and damaged from rust.
- Replace the existing controls for the HVAC systems with modern DDC modules 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 new video surveillance security system
- Install a Clock System.

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B620002
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S620001		

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	85.00 %	0.00 %	$0.00
A20 - Basement Construction	85.00 %	0.00 %	$0.00
B10 - Superstructure	85.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	76.79 %	17.25 %	$201,845.77
B30 - Roofing	25.00 %	4.22 %	$43,989.57
C10 - Interior Construction	77.23 %	0.00 %	$0.00
C20 - Stairs	85.00 %	0.00 %	$0.00
C30 - Interior Finishes	50.04 %	0.00 %	$0.00
D20 - Plumbing	54.12 %	13.34 %	$136,512.99
D30 - HVAC	63.01 %	19.70 %	$551,290.16
D40 - Fire Protection	57.14 %	0.00 %	$0.00
D50 - Electrical	24.20 %	7.36 %	$108,795.79
E10 - Equipment	57.14 %	0.00 %	$0.00
E20 - Furnishings	62.50 %	0.00 %	$0.00
Totals:	**63.39 %**	**7.02 %**	**$1,042,434.28**

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.	25,158	100	2000	2100		85.00 %	0.00 %	85			$611,843
A1030	Slab on Grade	$15.51	S.F.	25,158	100	2000	2100		85.00 %	0.00 %	85			$390,201
A2010	Basement Excavation	$13.07	S.F.	25,158	100	2000	2100		85.00 %	0.00 %	85			$328,815
A2020	Basement Walls	$23.02	S.F.	25,158	100	2000	2100		85.00 %	0.00 %	85			$579,137
B1010	Floor Construction	$92.20	S.F.	25,158	100	2000	2100		85.00 %	0.00 %	85			$2,319,568
B1020	Roof Construction	$24.11	S.F.	25,158	100	2000	2100		85.00 %	0.00 %	85			$606,559
B2010	Exterior Walls	$31.22	S.F.	25,158	100	2000	2100		85.00 %	0.00 %	85			$785,433
B2020	Exterior Windows	$13.63	S.F.	25,158	40	2000	2040		62.50 %	58.86 %	25		$201,845.77	$342,904
B2030	Exterior Doors	$1.67	S.F.	25,158	25	2000	2025		40.00 %	0.00 %	10			$42,014
B3010105	Built-Up	$37.76	S.F.		20				0.00 %	0.00 %				$0
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.	26,471	20	2000	2020		25.00 %	4.29 %	5		$43,989.57	$1,025,222
B3020	Roof Openings	$0.68	S.F.	25,158	20	2000	2020		25.00 %	0.00 %	5			$17,107
C1010	Partitions	$14.93	S.F.	25,158	100	2000	2100		85.00 %	0.00 %	85			$375,609
C1020	Interior Doors	$3.76	S.F.	25,158	40	2000	2040		62.50 %	0.00 %	25			$94,594
C1030	Fittings	$4.12	S.F.	25,158	40	2000	2040		62.50 %	0.00 %	25			$103,651
C2010	Stair Construction	$1.28	S.F.	25,158	100	2000	2100		85.00 %	0.00 %	85			$32,202

Site Assessment Report - B620002;Day LSH

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.	25,158	10	2011	2021		60.00 %	0.00 %	6			$332,337
C3010231	Vinyl Wall Covering	$0.97	S.F.	25,158	15				0.00 %	0.00 %				$24,403
C3010232	Wall Tile	$2.63	S.F.	25,158	30				0.00 %	0.00 %				$66,166
C3020411	Carpet	$7.30	S.F.	503	10	2011	2021		60.00 %	0.00 %	6			$3,672
C3020412	Terrazzo & Tile	$75.52	S.F.	503	50	2000	2050		70.00 %	0.00 %	35			$37,987
C3020413	Vinyl Flooring	$9.68	S.F.	23,649	20	2000	2020	2030	75.00 %	0.00 %	15			$228,922
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	503	50	2000	2050		70.00 %	0.00 %	35			$488
C3030	Ceiling Finishes	$20.97	S.F.	25,158	25	2000	2025		40.00 %	0.00 %	10			$527,563
D2010	Plumbing Fixtures	$31.58	S.F.	25,158	35	2000	2035		57.14 %	0.00 %	20			$794,490
D2020	Domestic Water Distribution	$2.90	S.F.	25,158	25	2000	2025	2025	40.00 %	187.11 %	10		$136,512.99	$72,958
D2030	Sanitary Waste	$2.90	S.F.	25,158	25	2000	2025		40.00 %	0.00 %	10			$72,958
D2040	Rain Water Drainage	$3.29	S.F.	25,158	30	2000	2030		50.00 %	0.00 %	15			$82,770
D3020	Heat Generating Systems	$18.67	S.F.	25,158	35	2000	2035		57.14 %	2.47 %	20		$11,600.35	$469,700
D3030	Cooling Generating Systems	$24.48	S.F.	25,158	15	2015	2030		100.00 %	0.00 %	15			$615,868
D3040	Distribution Systems	$42.99	S.F.	25,158	25	2000	2025		40.00 %	0.00 %	10			$1,081,542
D3050	Terminal & Package Units	$11.60	S.F.	25,158	20	2000	2020		25.00 %	0.00 %	5			$291,833
D3060	Controls & Instrumentation	$13.50	S.F.	25,158	20	2000	2020	2037	110.00 %	158.90 %	22		$539,689.81	$339,633
D4010	Sprinklers	$8.02	S.F.	25,158	35	2000	2035		57.14 %	0.00 %	20			$201,767
D4020	Standpipes	$0.99	S.F.	25,158	35	2000	2035		57.14 %	0.00 %	20			$24,906
D5010	Electrical Service/Distribution	$9.70	S.F.	25,158	30	2000	2030		50.00 %	0.00 %	15			$244,033
D5020	Lighting and Branch Wiring	$34.68	S.F.	25,158	20	2000	2020		25.00 %	0.00 %	5			$872,479
D5030	Communications and Security	$12.99	S.F.	25,158	15	2000	2015		0.00 %	33.29 %	0		$108,795.79	$326,802
D5090	Other Electrical Systems	$1.41	S.F.	25,158	30	2000	2030		50.00 %	0.00 %	15			$35,473
E1020	Institutional Equipment	$4.82	S.F.	25,158	35	2000	2035		57.14 %	0.00 %	20			$121,262
E1090	Other Equipment	$11.10	S.F.	25,158	35	2000	2035		57.14 %	0.00 %	20			$279,254
E2010	Fixed Furnishings	$2.13	S.F.	25,158	40	2000	2040		62.50 %	0.00 %	25			$53,587
								Total	**63.39 %**	**7.02 %**			**$1,042,434.28**	**$14,857,712**

System Notes

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

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

Note: 100% - Paint & Covering

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

Note: 2% - Carpet
2% - Terrazzo & Tile (ceramic)
94% - Vinyl Flooring
2% - Concrete Floor Finishes

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:	**$1,042,434**	**$0**	**$0**	**$0**	**$0**	**$2,813,912**	**$441,334**	**$0**	**$0**	**$0**	**$2,656,573**	**$6,954,253**
*** 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	$201,846	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$201,846**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$62,109	**$62,109**
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	$0	$0	$0	$0	$0	$0	**$0**
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	$43,990	$0	$0	$0	$0	$1,307,364	$0	$0	$0	$0	$0	**$1,351,354**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$21,815	$0	$0	$0	$0	$0	**$21,815**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

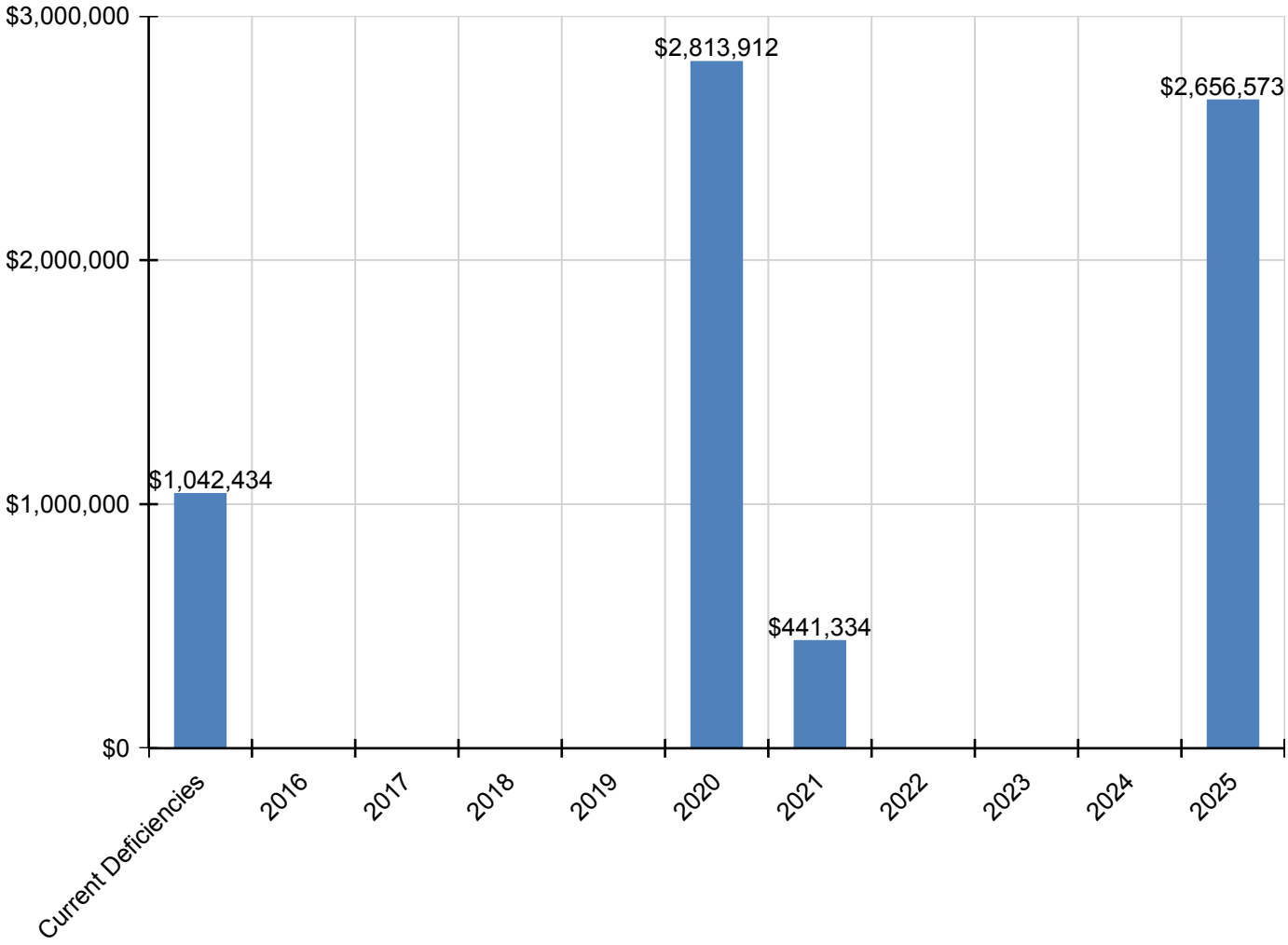
C1020 - Interior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$0	$436,511	$0	$0	$0	$0	**$436,511**
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	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$4,823	$0	$0	$0	$0	**$4,823**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$779,902	**$779,902**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$136,513	$0	$0	$0	$0	$0	$0	$0	$0	$0	$107,855	**$244,368**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$107,855	**$107,855**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$11,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$11,600**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,598,853	**$1,598,853**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$372,146	$0	$0	$0	$0	$0	**$372,146**
D3060 - Controls & Instrumentation	$539,690	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$539,690**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

D5020 - Lighting and Branch Wiring	$0	$0	$0	$0	$0	$1,112,587	$0	$0	$0	$0	$0	**$1,112,587**
D5030 - Communications and Security	$108,796	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$108,796**
D5090 - Other Electrical Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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

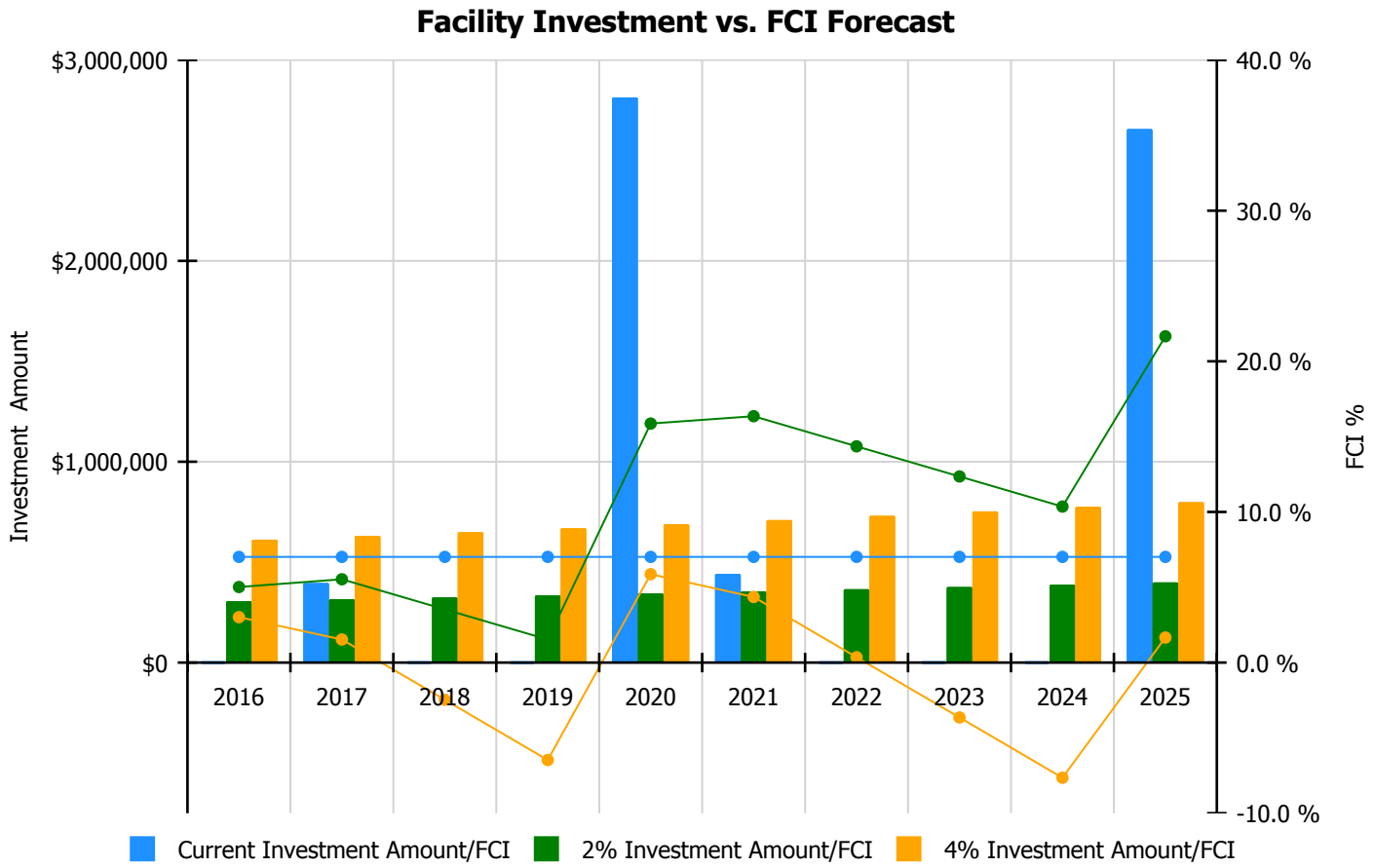
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

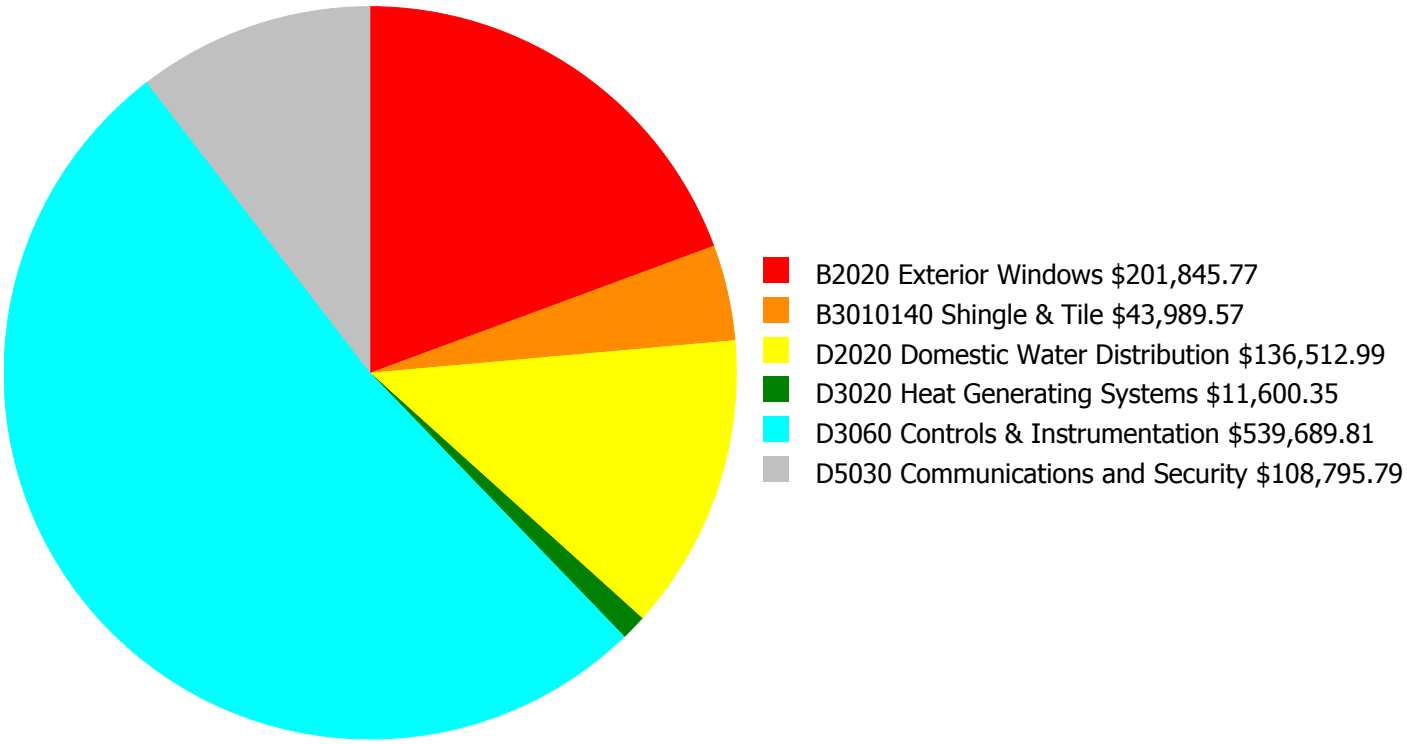
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 7.02%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$306,069.00	5.02 %	$612,138.00	3.02 %
2017	$396,348	$315,251.00	5.53 %	$630,502.00	1.53 %
2018	$0	$324,708.00	3.53 %	$649,417.00	-2.47 %
2019	$0	$334,450.00	1.53 %	$668,899.00	-6.47 %
2020	$2,813,912	$344,483.00	15.87 %	$688,966.00	5.87 %
2021	$441,334	$354,818.00	16.36 %	$709,635.00	4.36 %
2022	$0	$365,462.00	14.36 %	$730,924.00	0.36 %
2023	$0	$376,426.00	12.36 %	$752,852.00	-3.64 %
2024	$0	$387,719.00	10.36 %	$775,438.00	-7.64 %
2025	$2,656,573	$399,350.00	21.66 %	$798,701.00	1.66 %
Total:	**$6,308,167**	**$3,508,736.00**		**$7,017,472.00**	

Deficiency Summary by System

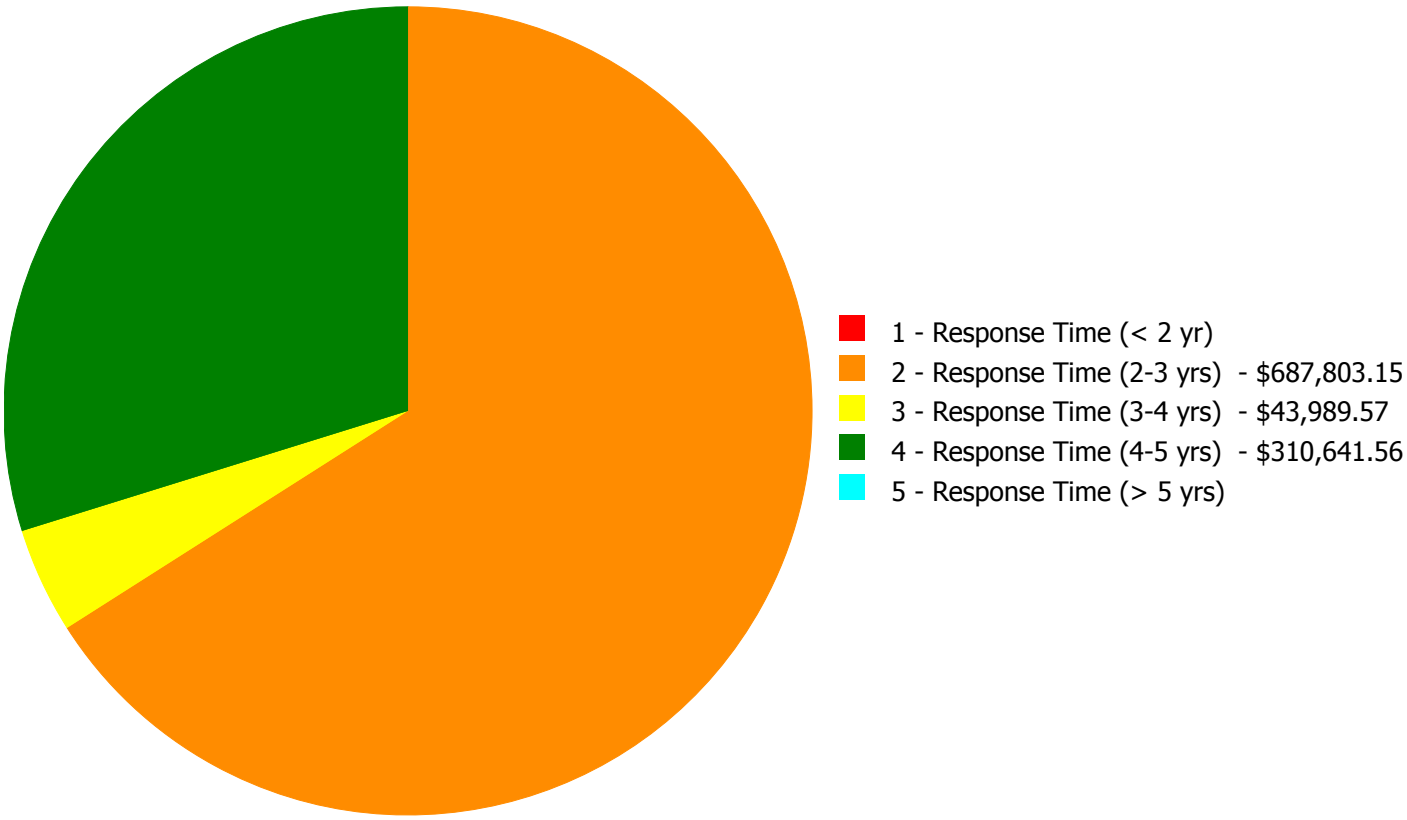
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $1,042,434.28

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: $1,042,434.28

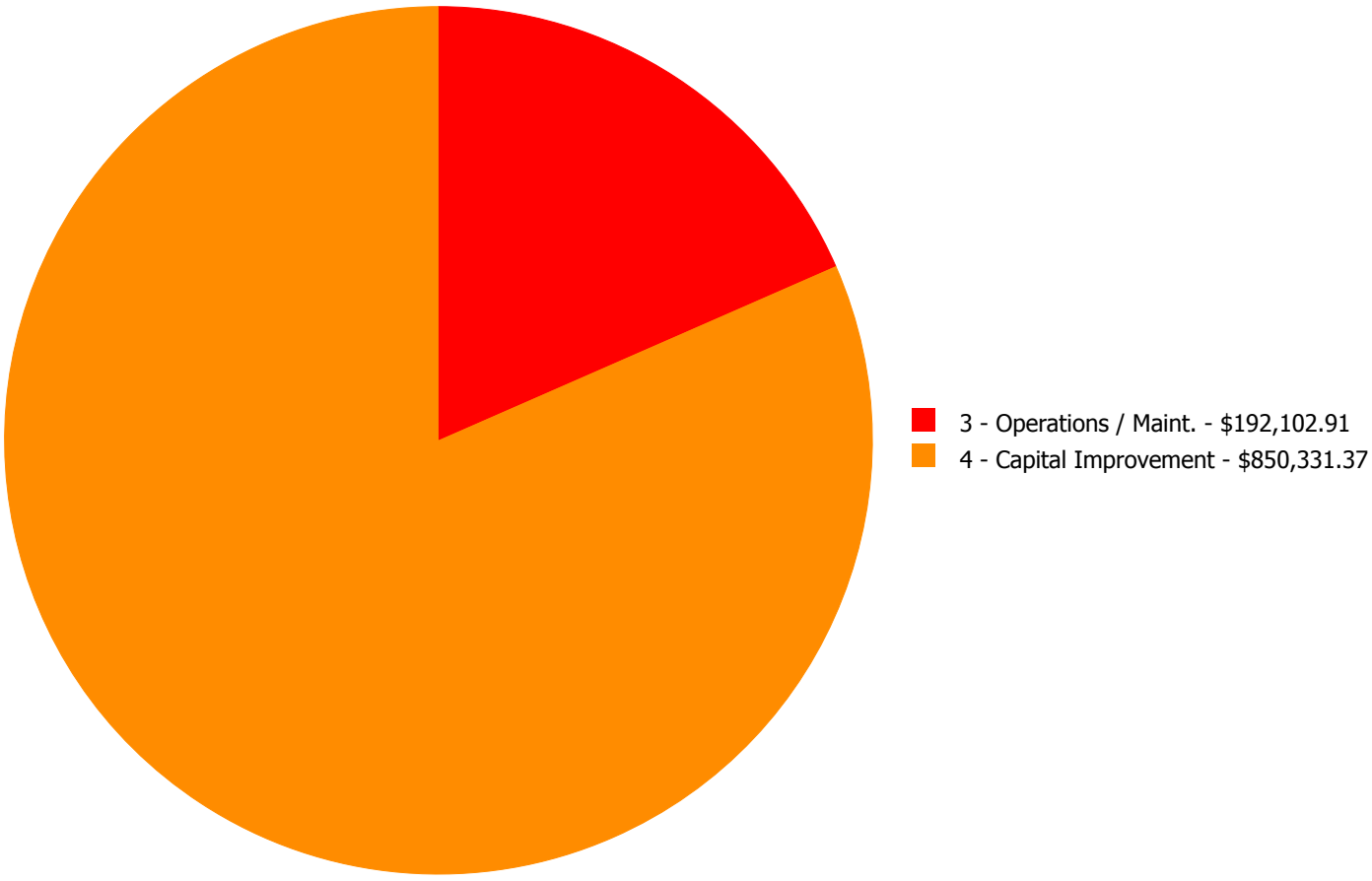
Deficiency By Priority Investment Table

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
B2020	Exterior Windows	$0.00	$0.00	$0.00	$201,845.77	$0.00	$201,845.77
B3010140	Shingle & Tile	$0.00	$0.00	$43,989.57	$0.00	$0.00	$43,989.57
D2020	Domestic Water Distribution	$0.00	$136,512.99	$0.00	$0.00	$0.00	$136,512.99
D3020	Heat Generating Systems	$0.00	$11,600.35	$0.00	$0.00	$0.00	$11,600.35
D3060	Controls & Instrumentation	$0.00	$539,689.81	$0.00	$0.00	$0.00	$539,689.81
D5030	Communications and Security	$0.00	$0.00	$0.00	$108,795.79	$0.00	$108,795.79
	Total:	$0.00	$687,803.15	$43,989.57	$310,641.56	$0.00	$1,042,434.28

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: $1,042,434.28

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: D2020 - Domestic Water Distribution

Location: Mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace vertical tank type gas-fired water heater (120 gal)

Qty: 2.00

Unit of Measure: Ea.

Estimate: $136,512.99

Assessor Name: Matt Mahaffey

Date Created: 12/01/2015

Notes: Replace the two (2) 125 gallon vertical gas fired domestic hot water heaters which are original to the building and beyond their service life.

System: D3020 - Heat Generating Systems

Location: Mechanical room

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Rebuild pump, inline HHW (1 HP)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $11,600.35

Assessor Name: Matt Mahaffey

Date Created: 12/01/2015

Notes: Replace one (1) ½ HP in-line hot water circulating pump which is leaking and damaged from rust.

System: D3060 - Controls & Instrumentation

Location: Throughout building

Distress: Energy Efficiency

Category: 4 - Capital Improvement

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 25,158.00

Unit of Measure: S.F.

Estimate: $539,689.81

Assessor Name: Matt Mahaffey

Date Created: 12/01/2015

Notes: Replace the existing controls for the HVAC systems with modern DDC modules 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: B3010140 - Shingle & Tile

Location: Entire building

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace step flashing for shingle roofs

Qty: 760.00

Unit of Measure: L.F.

Estimate: $43,989.57

Assessor Name: Matt Mahaffey

Date Created: 02/17/2016

Notes: Repair gutter drains and seal joint

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

System: B2020 - Exterior Windows

Location: Throughout

Distress: Energy Efficiency

Category: 4 - Capital Improvement

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

Correction: Remove and replace double slider windows

Qty: 40.00

Unit of Measure: Ea.

Estimate: $201,845.77

Assessor Name: Matt Mahaffey

Date Created: 02/17/2016

Notes: Replace Plexiglas window – hazed and not energy efficient

---

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 Clock System or Components

Qty: 0.00

Unit of Measure: Ea.

Estimate: $57,434.58

Assessor Name: Matt Mahaffey

Date Created: 02/11/2016

Notes: Install a 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: $51,361.21

Assessor Name: Matt Mahaffey

Date Created: 02/11/2016

Notes: Install a new video surveillance security system
Note: There is no picture attached since school presently has no video surveillance system.

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 1168 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Mechanical Room	HB Smith	19A-10	F99-794		35	2000	2035	$44,903.40	$98,787.48
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 1168 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Mechanical Room	HB Smith	19A-10	F99-793		35	2000	2035	$44,903.40	$98,787.48
D3030 Cooling Generating Systems	Chiller, reciprocating, air cooled, standard controls, 80 ton	1.00	Ea.	Mechanical Yard	York	YLAA-0089	11531D53703614		15	2015	2030	$90,207.10	$99,227.81
D3040 Distribution Systems	Air-handling unit, built-up, horizontal or vertical, blow-thru fan, multizone, 7500 CFM, with cooling/heating coil section, filters, mixing box	1.00	Ea.	Mechanical Room	Magic Aire	180-BMW-4-A	W991119598		25	2000	2025	$20,153.10	$22,168.41
												Total:	**$318,971.18**

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):	162,400
Year Built:	2000
Last Renovation:	
Replacement Value:	$2,918,476
Repair Cost:	$155,587.45
Total FCI:	5.33 %
Total RSLI:	25.82 %

Description:

Attributes:

General Attributes:

Bldg ID:	S620001	Site ID:	S620001

Condition Summary

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

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
G20 - Site Improvements	0.00 %	1.47 %	$32,477.25
G40 - Site Electrical Utilities	106.67 %	17.43 %	$123,110.20
Totals:	**25.82 %**	**5.33 %**	**$155,587.45**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$7.65	S.F.	20,800	30				0.00 %	0.00 %				$159,120
G2030	Pedestrian Paving	$11.52	S.F.	104,600	40				0.00 %	2.70 %			$32,477.25	$1,204,992
G2040	Site Development	$4.36	S.F.	162,400	25				0.00 %	0.00 %				$708,064
G2050	Landscaping & Irrigation	$3.78	S.F.	37,000	15				0.00 %	0.00 %				$139,860
G4020	Site Lighting	$3.58	S.F.	162,400	30	1980	2010	2047	106.67 %	15.08 %	32		$87,682.78	$581,392
G4030	Site Communications & Security	$0.77	S.F.	162,400	30	1980	2010	2047	106.67 %	28.33 %	32		$35,427.42	$125,048
								Total	**25.82 %**	**5.33 %**			**$155,587.45**	**$2,918,476**

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.

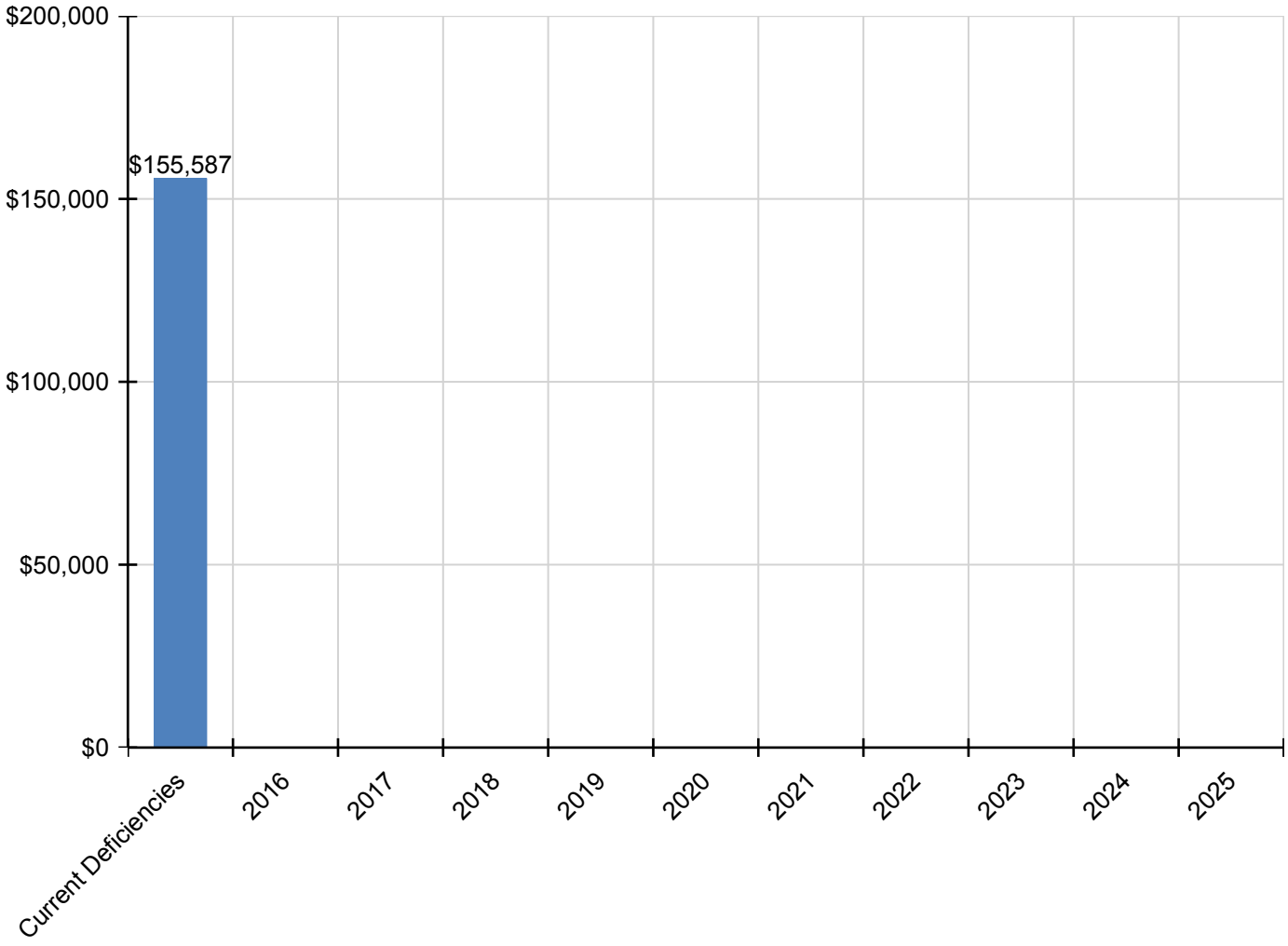
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$155,587**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$155,587**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2030 - Pedestrian Paving	$32,477	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$32,477**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$87,683	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$87,683**
G4030 - Site Communications & Security	$35,427	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$35,427**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

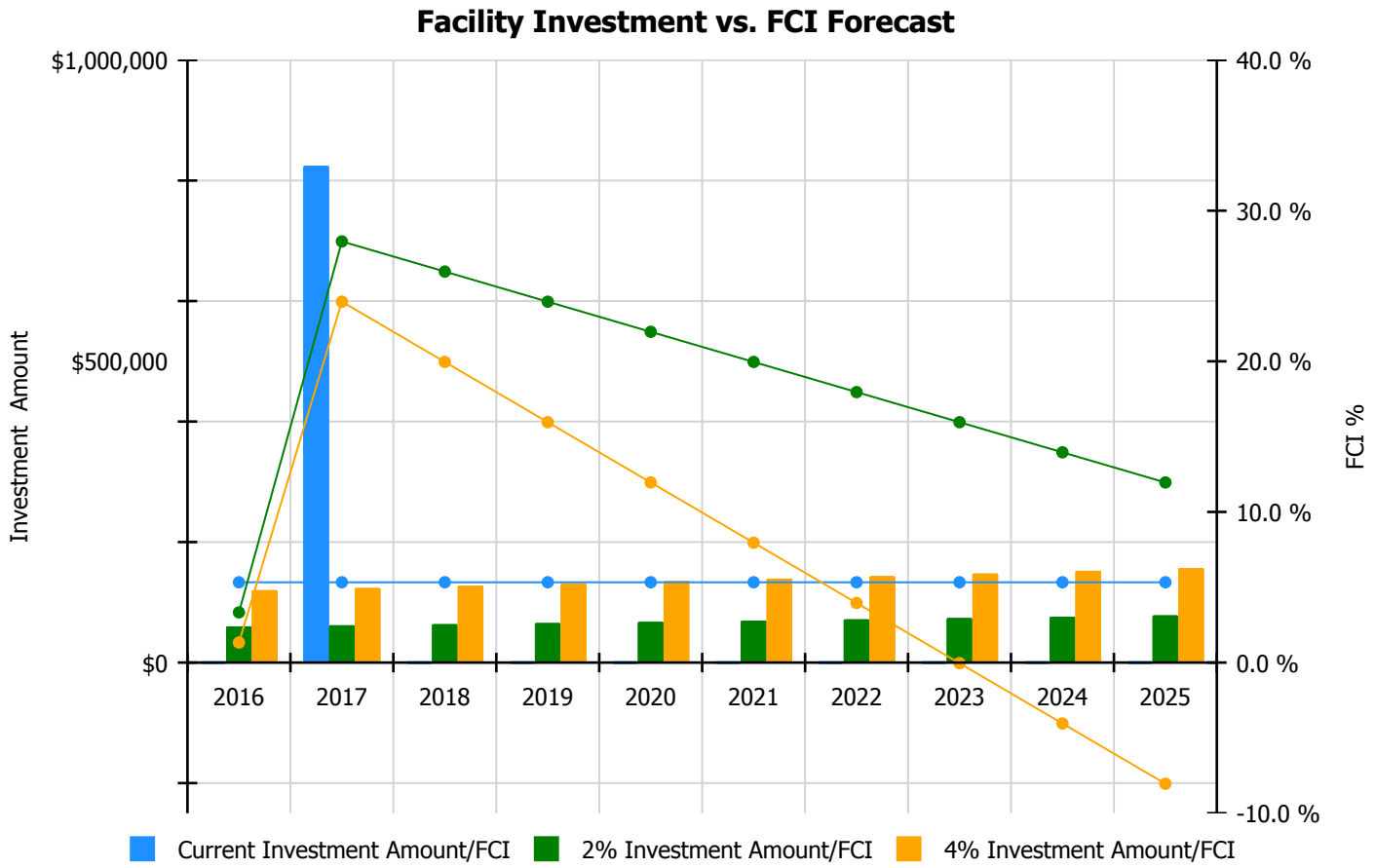
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

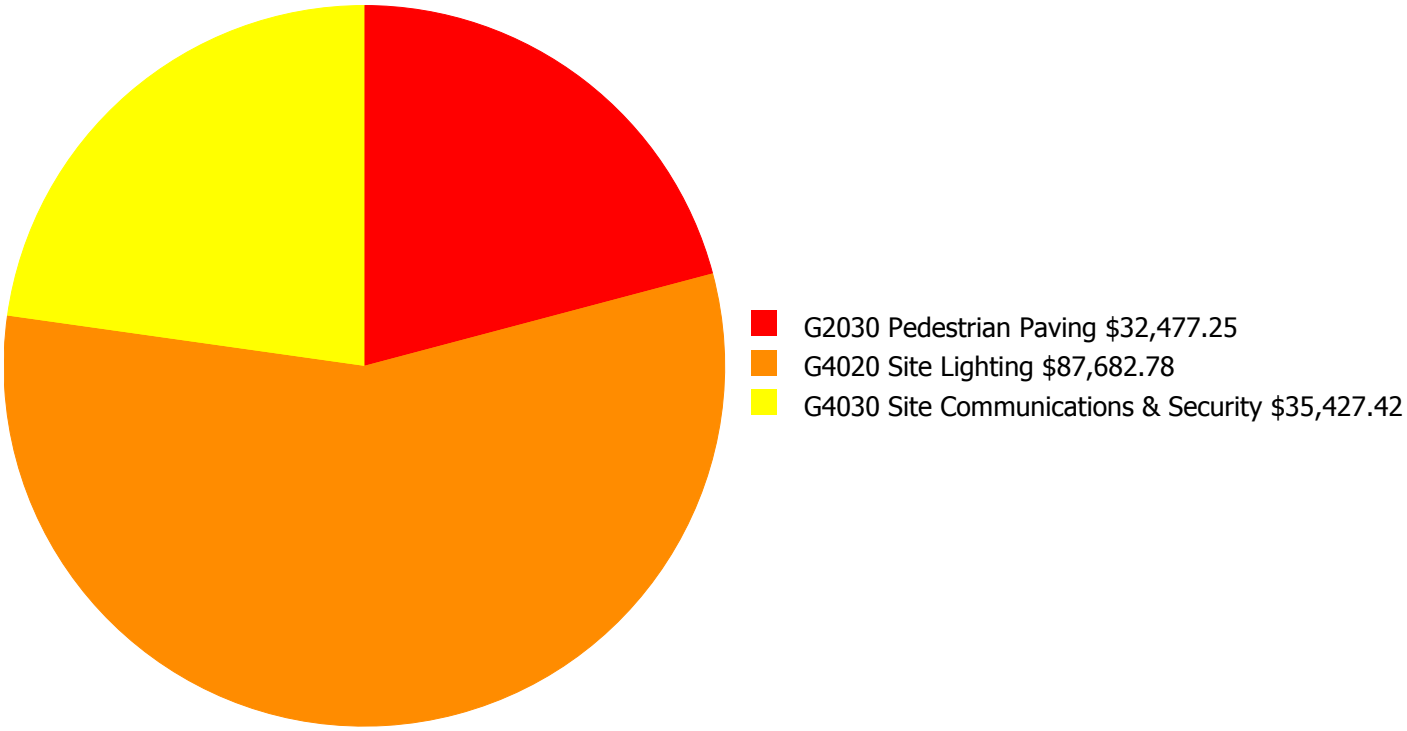
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 5.33%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$60,121.00	3.33 %	$120,241.00	1.33 %
2017	$824,408	$61,924.00	27.96 %	$123,848.00	23.96 %
2018	$0	$63,782.00	25.96 %	$127,564.00	19.96 %
2019	$0	$65,695.00	23.96 %	$131,391.00	15.96 %
2020	$0	$67,666.00	21.96 %	$135,333.00	11.96 %
2021	$0	$69,696.00	19.96 %	$139,393.00	7.96 %
2022	$0	$71,787.00	17.96 %	$143,574.00	3.96 %
2023	$0	$73,941.00	15.96 %	$147,882.00	-0.04 %
2024	$0	$76,159.00	13.96 %	$152,318.00	-4.04 %
2025	$0	$78,444.00	11.96 %	$156,888.00	-8.04 %
Total:	**$824,408**	**$689,215.00**		**$1,378,432.00**	

Deficiency Summary by System

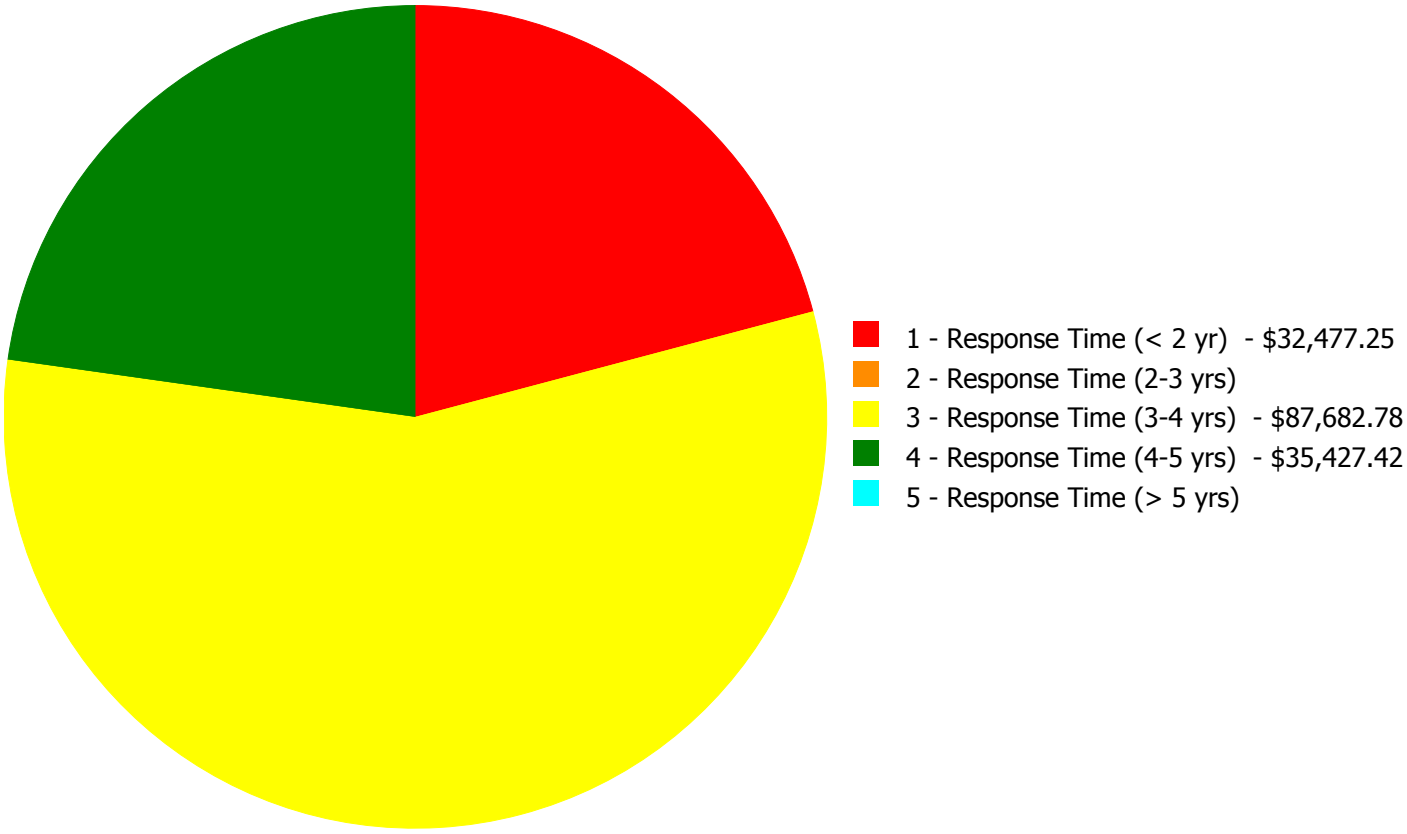
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $155,587.45

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: $155,587.45

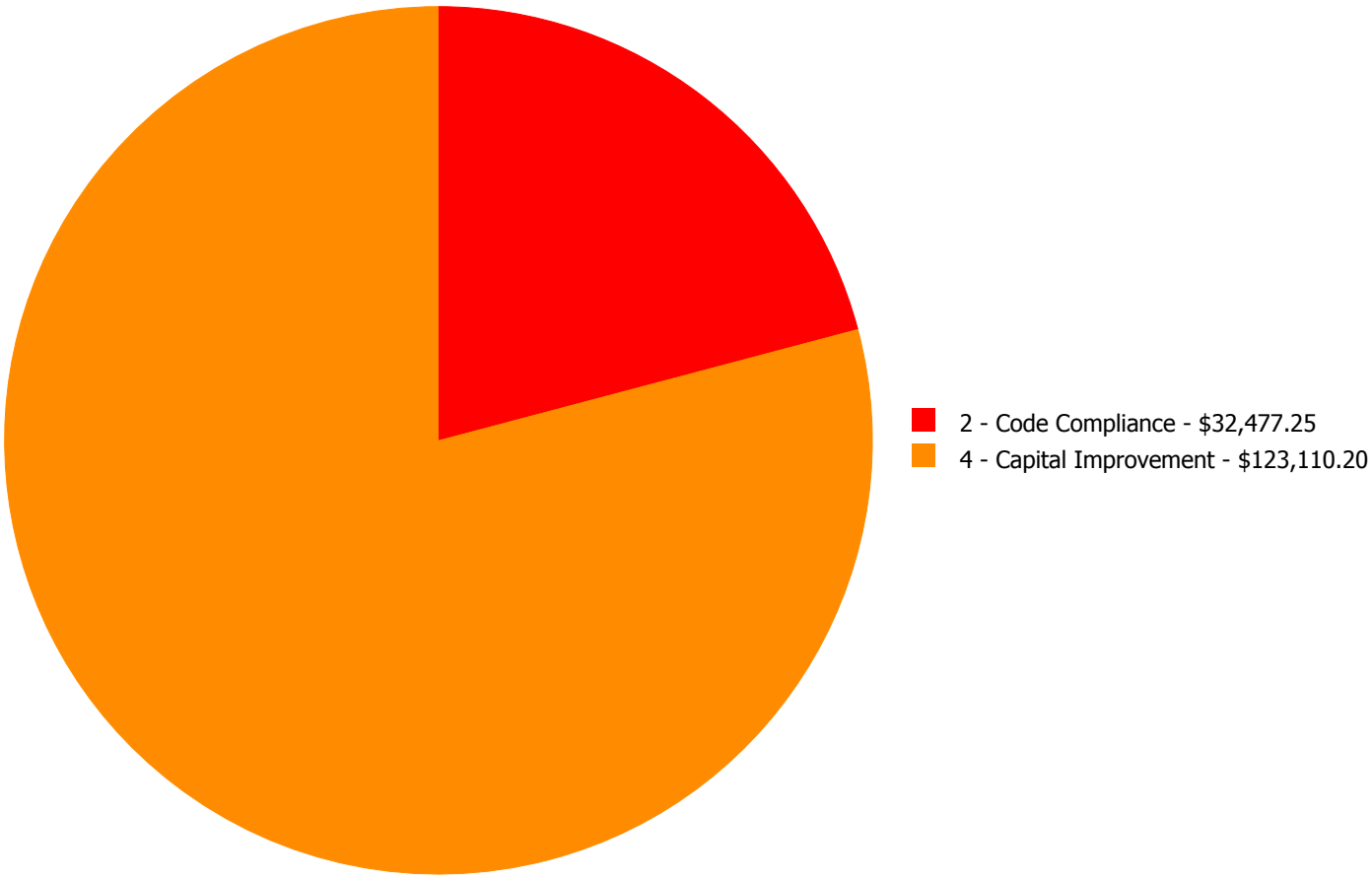
Deficiency By Priority Investment Table

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
G2030	Pedestrian Paving	$32,477.25	$0.00	$0.00	$0.00	$0.00	$32,477.25
G4020	Site Lighting	$0.00	$0.00	$87,682.78	$0.00	$0.00	$87,682.78
G4030	Site Communications & Security	$0.00	$0.00	$0.00	$35,427.42	$0.00	$35,427.42
	Total:	$32,477.25	$0.00	$87,682.78	$35,427.42	$0.00	$155,587.45

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: $155,587.45

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: G2030 - Pedestrian Paving

Location: Entrance

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

Correction: Install an exterior ADA ramp - based on 5' wide by the linear foot - up to a 48" rise - per LF of ramp - figure 1 LF per inch of rise

Qty: 25.00

Unit of Measure: L.F.

Estimate: $32,477.25

Assessor Name: Matt Mahaffey

Date Created: 02/17/2016

Notes: Install accessible ramp on at least one 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: $87,682.78

Assessor Name: Iraj Boroumand

Date Created: 02/11/2016

Notes: Install new site lighting for safety of the people and security of property.

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

System: G4030 - Site Communications & Security

Location: grounds

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Site Paging System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $35,427.42

Assessor Name: Iraj Boroumand

Date Created: 02/11/2016

Notes: Install new site paging on building exterior walls.

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