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.

Workshop (West Philly Auto) School

Governance	DISTRICT	Report Type	High
Address	221 S. Hanson St.	Enrollment	224
	Philadelphia, Pa 19139	Grade Range	'09-12'
Phone/Fax	215-471-2960 / 215-471-2948	Admissions Category	Citywide
Website	Http://Www.Workshopschool.Org	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	**13.92%**	**$2,734,342**	**$19,637,280**
Building	13.99 %	$2,734,342	$19,546,730
Grounds	00.00 %	$0	$90,550

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$1,202,019
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$976,249
Windows (Shows functionality of exterior windows)	00.00 %	$0	$426,210
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$52,221
Interior Doors (Classroom doors)	00.00 %	$0	$117,575
Interior Walls (Paint and Finishes)	00.00 %	$0	$413,077
Plumbing Fixtures	01.54 %	$15,158	$987,507
Boilers	10.10 %	$58,946	$583,811
Chillers/Cooling Towers	00.00 %	$0	$765,490
Radiators/Unit Ventilators/HVAC	125.60 %	$1,688,417	$1,344,297
Heating/Cooling Controls	00.00 %	$0	$422,145
Electrical Service and Distribution	00.00 %	$0	$303,319
Lighting	17.34 %	$188,017	$1,084,444
Communications and Security (Cameras, Pa System and Fire Alarm)	16.50 %	$67,007	$406,197

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

S102201;West Philadelphia Auto

Final

Site Assessment Report

February 2, 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):	31,270
Year Built:	1968
Last Renovation:	
Replacement Value:	$19,637,280
Repair Cost:	$2,734,341.83
Total FCI:	13.92 %
Total RSLI:	61.82 %

Description:

Facility Condition Assessment
September 2015

School District of Philadelphia
West Philadelphia Automotive
1435 N 26th St
Philadelphia, PA 19121

31,270 SF / LN 04

GENERAL

West Philadelphia Automotive School is located at 221-41 S Hanson St. The original building was constructed in 1968 and renovated in 1999, has 31,270 square feet, and is 2 stories tall with a partial basement accessible by hatch. Nelson King, the Building Engineer accompanied the FCA team during the inspection. The Facility Area Coordinator was not able to accompany the Parsons assessment team on this site visit. Mr. Perry Wilson, the Building Engineer, accompanied us on our tour of the school and provided us with detailed information on the building systems and recent maintenance history.

ARCHITECTURAL/STRUCTURAL

The building sits on a slab on grade. Footings were not seen and their construction type or condition could not be ascertained.

Floor slabs on the first and second floor of the building are in good condition. Upper floor slabs in the building are also constructed of cast-in-place concrete with cast-in-place concrete beams. Cracking and spalling of the concrete structure was not observed anywhere.

Roof construction over the old building consists of reinforced concrete beams and deck, bearing on masonry walls. The superstructure is constructed of reinforced concrete columns, beams, and floor slabs. The main building roof deck is pitched with three main ridges running front to back; areas around roof drains are depressed for drainage. Roof access is by hatch via mechanical room. Front parapet follows the pitched roofline and on the sides of the building the roof edges have gravel stops, minimal parapets, and internal roof drains at low points; there are no overflow scuppers or overflow roof drains. All structure observed from second floor stairs appeared to be in good condition.

Exterior walls are generally in good condition. The front elevation at the first floor level is stucco and face brick on the second floor.

Exterior windows were replaced in the 1999 renovation with bronze anodized aluminum frame operable double hung units with perforated metal security screens on first floor windows. . The front entry area has aluminum framed storefront glazing on the first and second floor.

The main entry door is part of the aluminum storefront system and is in good condition. Service entry doors are painted steel framed flush hollow metal units with steel frames. Some doors have small, glazed vision panels. Doors are generally in good condition. The main entry is handicap accessible. A steel overhead door allow vehicle access to the shop area.

Roof covering consists of a ceramic granule impregnated, fully adhered built up roof system with aluminum backed metal flashing up onto rooftop ventilation ductwork, vents, and masonry parapets.

Flashing is tucked under the aluminum coping used throughout and appears to be water tight. Roof structures include toilet room vents, ventilation ductwork, and roof drains. Flashing around the bases of the penetrations on the building roof appears to be in fair condition and no leaks were reported. The building has a combination of brick, glazed ceramic tiles and aluminum parapet caps with joints that have been re-caulked.

Interior partitions are constructed of metal studs with gypsum board covered with "marlite-type" fiber reinforced plastic ("fiberglass") panels in corridors. Window and door trim has also been repaired and repainted.

Interior doors used for classrooms, offices, storage rooms, and bathrooms are hollow metal doors and frames with vision panels (in some cases) and replacement hardware. Doors on the first and second floors are generally in good condition.

Interior fittings/hardware in the building include white marker boards with metal trays mounted on one wall in each classroom. Classrooms have plastic laminate cubby/storage units. Toilet room partitions are floor mounted solid plastic resin partitions; they are in good condition. Not all toilet compartments have doors.

Stair construction consists of concrete treads, risers, and stringers with steel pipe handrails and steel balusters with 5" spacing. Concrete is finished with clear sealer.

Wall finishes are painted gypsum board with FRP in corridors which has been recently repaired and in good condition. The second floor includes the a kitchen / cafeteria, office spaces and shops, finished in painted concrete block. FRP wall panels are used as the finish material in corridors and toilet rooms.

Floors in the classroom spaces are 12"x 12" VCT (vinyl composition tile) and are in fair to good condition. Floors in the offices area's are carpet in fair condition. The kitchen has quarry tile in good condition. The shops area's have sealed concrete flooring in fair to good condition. Restrooms have ceramic tile flooring and cove base boards in good condition. Stair surfaces are exposed sealed concrete that are in good condition.

Ceiling finishes are mostly 2x4 suspended acoustical tile ceilings with recessed 2x4 fluorescent lighting fixtures throughout the two floors except in the shop areas that have exposed painted concrete ceilings with suspended fluorescent lighting fixtures.

Elevator is 2500 lb hydraulic, with 2 stops.

Cafeteria has folding tables.

MECHANICAL

Plumbing Fixtures
The original plumbing fixtures were replaced during a major building renovation in 1999. Fixtures in the restrooms on each floor consist of wall mounted flush valve water closets, wall hung urinals and lavatories with both wheel handle and lever faucets. Several of the restrooms are handicap accessible. 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. Two (2) fountains in the shop area are older wall hung fixtures with integral refrigerated coolers and should be replaced.

A mop basin is available in the Kitchen for use by the janitorial staff.

The Kitchen has two (2) sinks; one (1) three-compartment stainless steel sink with lever operated faucets, a grease trap, and Salvajor disposal and one (1) two-compartment stainless steel sink with lever operated faucets. Chemicals are injected manually into the sanitizing basins.

Domestic Water Distribution

A city water service enters the building in a crawl space under the slab from Hanson Street. The meter and valves were not visible as the crawl space was not accessible. The domestic hot and cold water distribution piping within the building 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, however 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, installed in 2006, supplies hot water for domestic use. The hot water heater has an associated domestic hot water storage tank located in the second floor boiler room. The hot water heater was operable during the site visit and the Building Engineer reported no serious issues; however it is approaching the end of its service life and should be replaced in the next 3-5 years.

Sanitary Waste

The sanitary sewer piping is a mixture of cast iron with hub and spigot fittings and cast iron piping with no-hub fittings; the piping is beyond its service life. The majority of sanitary piping is located under the building slab and within mechanical chases. An 8” sanitary line leaves the building in the crawl space under the slab, exiting towards Hanson Street. The maintenance staff reported no problems with the sanitary waste piping systems.

A sewage ejector or sump pump are not installed in this building.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. However, the sewer piping has been in service for over 45 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 mostly threaded galvanized, repairs have been made with cast iron piping and no-hub fittings, and has been in use well beyond its service life. The District should hire a qualified contractor to examine the rain water drainage piping using video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

Energy Supply

A city gas service enters the building under the slab from Hanson Street, in the same crawl space as the domestic water line. The crawl space was not accessible during the site visit.

Heat Generating Systems

Building heating hot water is generated by one (1) 17HP Weil-McLain model 76 cast iron sectional boiler with gross output of 561MBH and an estimated installation date of 1999. The boiler is equipped with a Power Flame burner designed to operate on natural gas. The burner is at the end of its anticipated 18 year service life and should be replaced. Combustion air makeup is supplied by louvers equipped with motorized dampers. 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; this unit has been in service approximately 17 years. The District should provide reliable service for the next 15 to 20 years.

Cooling Generating Systems

Cooling is provided by two (2) roof mounted York condensing units serving the two (2) air handling units (AHU) located in the second floor mechanical room. Each condensing unit operates with an associated AHU and utilizes R22 refrigerant, which is being phased out of use. The condensing units are estimated to have been installed in 1999 and are in poor condition with rust forming on many of the surfaces. Air cooled condensers have an anticipated service life of 20 years; these units have been in service 17 years and are in poor condition. The District should budget for replacing the condensers over the next 1-3 years. The Building Engineer reported no issues with either of the condensers.

Two (2) small roof mounted Carrier model 24ANA condensing units provide cooling for two (2) classrooms on the first floor. The condensing units are estimated to have been installed in 2007 and are in poor condition. These units have been in service for nine (9) nears, the District should provide reliable service for the next 4-6 years.

Distribution Systems

A two pipe distribution system supplies building heating water from the boiler to the two (2) AHUs located in the second floor mechanical room and to two (2) fan coil units on the first floor. The piping is copper with sweat fittings; all piping in the mechanical room was covered with insulation and appears to be in good condition. Two (2) 1/4HP in-line Armstrong hot water pumps circulate building hot water to the fan coil units located on the first floor. One (1) 1/4HP in-line Armstrong hot water pump circulates hot water to the air handling units. The heating hot water system is equipped with an expansion tank located in the mechanical room. The Building Engineer did not report any issues with the distribution piping, but it should be inspected by a qualified contractor.

Two (2) York model CS air handling units provide heating and cooling to specific spaces within the building. AHU-1 serves the South side of the building; classrooms 201 and 210, rooms 206-208, and the corridor outside of room 201. AHU-2 serves the North side of the building; classroom 212, rooms 214-216, and the corridor outside of the Cafeteria. The units are equipped with hot water heating coils and DX cooling coils. These units are estimated to have been installed in 1991. Packaged air handling units have an anticipated service life of 25 years; these units have been in service 25. The AHUs are at the end of their service lives and should be replaced in the next 2-4 years. One (1) rooftop mounted Annex Air AHU provides heating and cooling to the Cafeteria. The unit has an integral condenser to supply cooling air and is gas fired for heating. The unit is estimated to have been installed within the last 10 years and appears to be in good condition; the District should provide reliable service for the next 5-10 years.

Two (2) fan coil units (FCU) located in the shops on the first floor provide heating to the garage/shop areas. The fan coil units are served by the building heating hot water system. The FCUs are estimated to be approaching the end of their service lives and the District should budget to replace them in the next 5-8 years.

Terminal & Package Units

Two (2) Reznor gas fired makeup air units provide supplemental heating and ventilation to the garage/shop area and machine room. The units are utilized most often when the paint bays are in use. The installation date of these units is unknown, but they appear to be in good condition. Two (2) Smokeeter air filtering devices are installed to improve air quality within the garage/shop where the paint bays are located.

The building is exhausted by a total of five (5) roof mounted exhaust fans. The fans serve the restrooms, Cafeteria, and Kitchen. The Building Engineer did not report and problems with the exhaust system. The exhaust fans remove air from the ceiling plenum above the drop ceiling. Fifteen (15) gravity ventilators allow relief air to escape from the building and are in good condition.

Two (2) kitchen hoods with an integral Ansul fire suppression system are installed above the gas fired cooking equipment and ovens. Two (2) roof mounted Greenheck model IGX-109 gas fired make-up air units (MAU) provide makeup air for the hoods. The MAUs are in good condition and the Building Engineer reported no issues with them. An automatic gas shutoff valve is installed with the kitchen

hood equipment. The equipment is well within service its life.

Controls & Instrumentation

A Niagara building management system (BMS) is installed in this building. The Building Engineer said he is able to monitor the mechanical equipment and room set points from the computer in his office through the BMS. Two (2) air compressors located in the second floor mechanical room provide control air and compressed air for the shops. A Champion air compressor provides air for the shops. A duplex Quincy compressor provides control air for the building. The major mechanical equipment (boilers, air handling units, etc.) should be monitored and controlled by the system. This system is within its service life and functioning properly.

Sprinklers

The building is equipped with a wet type sprinkler system. A 6" sprinkler water line enters the building from Hanson Street in the same crawl space as the domestic water. The fire suppression system is estimated to have been installed during the building renovation in 1999; the originally installed equipment and should not need replacement within the next 15 years.

The school does not have fire stand pipes installed.

ELECTRICAL:

Site electrical service - The primary power is at 13.2KV from the street power pole which feeds a pole-top 300KVA transformer (13.2KV – 120V/208V, three phase). The secondary power feeds a 120V/208V, three phase switchboard inside the electrical room. The overall electrical service is functioning adequately and is fairly new (built in 1997). The main switchgear is rated at 800 Amp, 120V/208 V, 3 phase, 4W, and is located in main electrical room. The PECO meter (PECO 02 017007102) is also located inside the electrical room. Overall, the electrical service entrance and the main building electrical distribution systems are in good condition.

Distribution system - The electrical distribution is accomplished by a 120V/208V distribution switchboard, located in the electrical room, feeding several 120V panels throughout the building (two panels in each floor). These panels are also in good condition.

Receptacles - The receptacles in classrooms, computer rooms, libraries, and other areas are not adequate. There is a need for minimum of two receptacles on each wall of the classrooms.

Lighting- Interior building is illuminated by various types of fixtures. They include fluorescent lighting (T-8 and some T-5) 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 interior lighting fixtures are in a good condition.

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 horns/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. A main distribution frame (MDF) along with a telephone PBX system are providing the communication system function for the building. School is also equipped with Wi-Fi system.

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

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

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

Security Systems, access control, and video surveillance - The school is provided with video surveillance system. Cameras are installed at exit doors, corridors, exterior, and other critical areas. These cameras are controlled by a Closed Circuit Television system (CCTV).

Emergency Power System - School is not provided with an emergency generator.

Emergency lighting system, including exit lighting - There are insufficient emergency lighting fixtures in corridors, library and other exit ways. Exit signs and emergency fixtures are old and beyond their useful life.

Lightning Protection System- There is no lightning protection system installed in the school.

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

Site lighting – The grounds are properly illuminated. There are exterior outdoor fixtures that work properly and provide adequate illumination for safety.

Site paging – The grounds are provided with adequate exterior speakers, and additional speakers are needed.

Grounds

The only parking is curb side in front of the building.

There is no landscaping along the front elevation. The building sits on the property line on all four sides.

RECOMMENDATIONS:

- Replace two (2) wall hung drinking fountains in the shop area. These units are beyond their service lives and are 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 approaching the end of its service life, within the next 3 -5 years.
- 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 one (1) 714MBH gas boiler burner, which is at the end of its service life, with a new more efficient burner within the next 2-4 years.
- Hire a qualified contractor to examine the building heating hot water piping, in service for an unknown amount of time, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the two (2) York AHUs, located in the second floor mechanical room, which are at the end of their service lives, and the two (2) 25 ton associated roof mounted condensing units in the next 1-3 years.
- Install adequate (two on each wall minimum) surface-mounted receptacles in all classrooms and other areas within the building.
- Install new Clock System.
- Install new lightning protection system.
- Install new emergency exit signs & emergency lights.
- Install a new Emergency generator.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 4 / Tm 4
Status:	Accepted by SDP	Team:	Tm 4
Site ID:	S102201		

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.

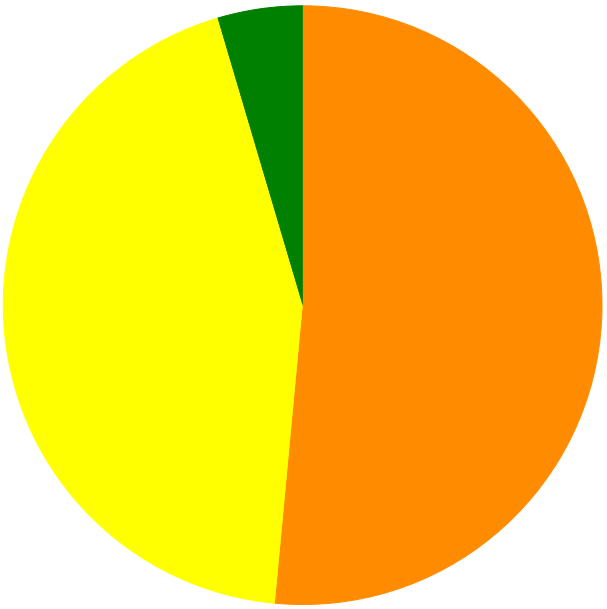
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	53.00 %	0.00 %	$0.00
A20 - Basement Construction	53.00 %	0.00 %	$0.00
B10 - Superstructure	53.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	54.44 %	0.00 %	$0.00
B30 - Roofing	25.00 %	0.00 %	$0.00
C10 - Interior Construction	55.42 %	0.00 %	$0.00
C20 - Stairs	53.00 %	0.00 %	$0.00
C30 - Interior Finishes	44.51 %	0.00 %	$0.00
D10 - Conveying	54.29 %	0.00 %	$0.00
D20 - Plumbing	66.18 %	38.54 %	$490,155.30
D30 - HVAC	65.03 %	50.23 %	$1,747,363.27
D40 - Fire Protection	54.29 %	0.00 %	$0.00
D50 - Electrical	148.98 %	25.97 %	$496,823.26
E10 - Equipment	35.37 %	0.00 %	$0.00
E20 - Furnishings	60.00 %	0.00 %	$0.00
G20 - Site Improvements	12.50 %	0.00 %	$0.00
G40 - Site Electrical Utilities	90.00 %	0.00 %	$0.00
Totals:	**61.82 %**	**13.92 %**	**$2,734,341.83**

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)
B102202;West Philadelphia Automotive	31,270	13.99	$0.00	$1,407,749.35	$1,201,369.96	$125,222.52	$0.00
G102201;Grounds	5,000	0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total:		**13.92**	**$0.00**	**$1,407,749.35**	**$1,201,369.96**	**$125,222.52**	**$0.00**

Deficiencies By Priority



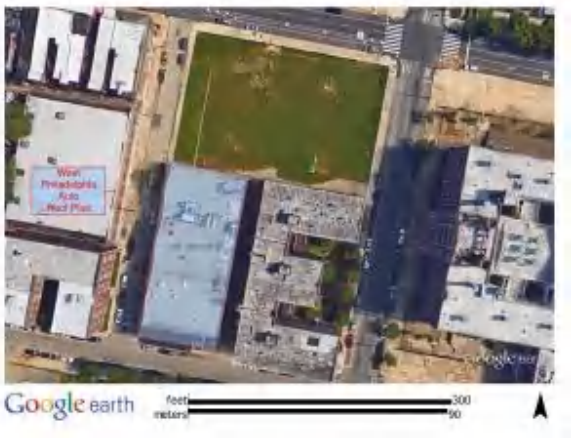
Budget Estimate Total: $2,734,341.83

Executive Summary

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

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

Function:	CTE
Gross Area (SF):	31,270
Year Built:	1968
Last Renovation:	1999
Replacement Value:	$19,546,730
Repair Cost:	$2,734,341.83
Total FCI:	13.99 %
Total RSLI:	61.93 %



Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B102202
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S102201		

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	53.00 %	0.00 %	$0.00
A20 - Basement Construction	53.00 %	0.00 %	$0.00
B10 - Superstructure	53.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	54.44 %	0.00 %	$0.00
B30 - Roofing	25.00 %	0.00 %	$0.00
C10 - Interior Construction	55.42 %	0.00 %	$0.00
C20 - Stairs	53.00 %	0.00 %	$0.00
C30 - Interior Finishes	44.51 %	0.00 %	$0.00
D10 - Conveying	54.29 %	0.00 %	$0.00
D20 - Plumbing	66.18 %	38.54 %	$490,155.30
D30 - HVAC	65.03 %	50.23 %	$1,747,363.27
D40 - Fire Protection	54.29 %	0.00 %	$0.00
D50 - Electrical	148.98 %	25.97 %	$496,823.26
E10 - Equipment	35.37 %	0.00 %	$0.00
E20 - Furnishings	60.00 %	0.00 %	$0.00
Totals:	**61.93 %**	**13.99 %**	**$2,734,341.83**

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.	31,270	100	1968	2068		53.00 %	0.00 %	53			$760,486
A1030	Slab on Grade	$15.51	S.F.	31,270	100	1968	2068		53.00 %	0.00 %	53			$484,998
A2010	Basement Excavation	$13.07	S.F.	31,270	100	1968	2068		53.00 %	0.00 %	53			$408,699
A2020	Basement Walls	$23.02	S.F.	31,270	100	1968	2068		53.00 %	0.00 %	53			$719,835
B1010	Floor Construction	$92.20	S.F.	31,270	100	1968	2068		53.00 %	0.00 %	53			$2,883,094
B1020	Roof Construction	$24.11	S.F.	31,270	100	1968	2068		53.00 %	0.00 %	53			$753,920
B2010	Exterior Walls	$31.22	S.F.	31,270	100	1968	2068		53.00 %	0.00 %	53			$976,249
B2020	Exterior Windows	$13.63	S.F.	31,270	40	1999	2039		60.00 %	0.00 %	24			$426,210
B2030	Exterior Doors	$1.67	S.F.	31,270	25	1999	2024		36.00 %	0.00 %	9			$52,221
B3010105	Built-Up	$37.76	S.F.	31,270	20	1999	2019	2020	25.00 %	0.00 %	5			$1,180,755
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.	31,270	20	1999	2019	2020	25.00 %	0.00 %	5			$21,264
C1010	Partitions	$14.93	S.F.	31,270	100	1968	2068		53.00 %	0.00 %	53			$466,861
C1020	Interior Doors	$3.76	S.F.	31,270	40	1999	2039		60.00 %	0.00 %	24			$117,575
C1030	Fittings	$4.12	S.F.	31,270	40	1999	2039		60.00 %	0.00 %	24			$128,832
C2010	Stair Construction	$1.28	S.F.	31,270	100	1968	2068		53.00 %	0.00 %	53			$40,026

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$13.21	S.F.	31,270	10	1999	2009	2020	50.00 %	0.00 %	5			$413,077
C3010231	Vinyl Wall Covering	$0.97	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.63	S.F.		30				0.00 %	0.00 %				$0
C3020411	Carpet	$7.30	S.F.	46,000	10	1999	2009	2020	50.00 %	0.00 %	5			$335,800
C3020412	Terrazzo & Tile	$75.52	S.F.	1,700	50	1999	2049		68.00 %	0.00 %	34			$128,384
C3020413	Vinyl Flooring	$9.68	S.F.	10,000	20	1999	2019	2020	25.00 %	0.00 %	5			$96,800
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	15,000	50	1999	2049		68.00 %	0.00 %	34			$14,550
C3030	Ceiling Finishes	$20.97	S.F.	31,270	25	1999	2024		36.00 %	0.00 %	9			$655,732
D1010	Elevators and Lifts	$2.03	S.F.	31,270	35	1999	2034		54.29 %	0.00 %	19			$63,478
D2010	Plumbing Fixtures	$31.58	S.F.	31,270	35	1999	2034		54.29 %	1.54 %	19		$15,158.38	$987,507
D2020	Domestic Water Distribution	$2.90	S.F.	31,270	25	1968	1993	2042	108.00 %	201.72 %	27		$182,929.54	$90,683
D2030	Sanitary Waste	$2.90	S.F.	31,270	25	1968	1993	2042	108.00 %	169.16 %	27		$153,402.71	$90,683
D2040	Rain Water Drainage	$3.29	S.F.	31,270	30	1968	1998	2047	106.67 %	134.79 %	32		$138,664.67	$102,878
D3020	Heat Generating Systems	$18.67	S.F.	31,270	35	1999	2034		54.29 %	10.10 %	19		$58,946.34	$583,811
D3030	Cooling Generating Systems	$24.48	S.F.	31,270	20	1999	2019	2020	25.00 %	0.00 %	5			$765,490
D3040	Distribution Systems	$42.99	S.F.	31,270	25	1968	1993	2042	108.00 %	125.60 %	27		$1,688,416.93	$1,344,297
D3050	Terminal & Package Units	$11.60	S.F.	31,270	20	1999	2019	2020	25.00 %	0.00 %	5			$362,732
D3060	Controls & Instrumentation	$13.50	S.F.	31,270	20	2005	2025		50.00 %	0.00 %	10			$422,145
D4010	Sprinklers	$8.02	S.F.	31,270	35	1999	2034		54.29 %	0.00 %	19			$250,785
D4020	Standpipes	$0.99	S.F.	31,270	35	1999	2034		54.29 %	0.00 %	19			$30,957
D5010	Electrical Service/Distribution	$9.70	S.F.	31,270	30	1997	2027	2027	40.00 %	0.00 %	12			$303,319
D5020	Lighting and Branch Wiring	$34.68	S.F.	31,270	20	1997	2017	2047	160.00 %	17.34 %	32		$188,017.11	$1,084,444
D5030	Communications and Security	$12.99	S.F.	31,270	15	1997	2012	2047	213.33 %	16.50 %	32		$67,007.01	$406,197
D5090	Other Electrical Systems	$3.81	S.F.	31,270	30	1997	2027	2047	106.67 %	202.96 %	32		$241,799.14	$119,139
E1020	Institutional Equipment	$4.82	S.F.	31,270	35	1999	2034		54.29 %	0.00 %	19			$150,721
E1030110	Vehicular Service Equipment, S.F.	$29.05	S.F.	31,270	20	1999	2019	2020	25.00 %	0.00 %	5			$908,394
E1090	Other Equipment	$11.10	S.F.	31,270	35	1999	2034		54.29 %	0.00 %	19			$347,097
E2010	Fixed Furnishings	$2.13	S.F.	31,270	40	1999	2039		60.00 %	0.00 %	24			$66,605
								Total	**61.93 %**	**13.99 %**			**$2,734,341.83**	**$19,546,730**

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: Gypsum board walls surfaced with "Fiber Reinforced Plastic" FRP panels.

System: C3030 - Ceiling Finishes — This system contains no images

Note: Ceilings = 70% painted concrete
= 30% ACT

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:	**$2,734,342**	**$0**	**$0**	**$0**	**$0**	**$5,208,319**	**$0**	**$0**	**$0**	**$1,016,090**	**$624,061**	**$9,582,812**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A10 - Foundations**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A20 - Basement Construction**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$74,950	$0	**$74,950**
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	$1,505,701	$0	$0	$0	$0	$0	**$1,505,701**
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	$27,115	$0	$0	$0	$0	$0	**$27,115**
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**

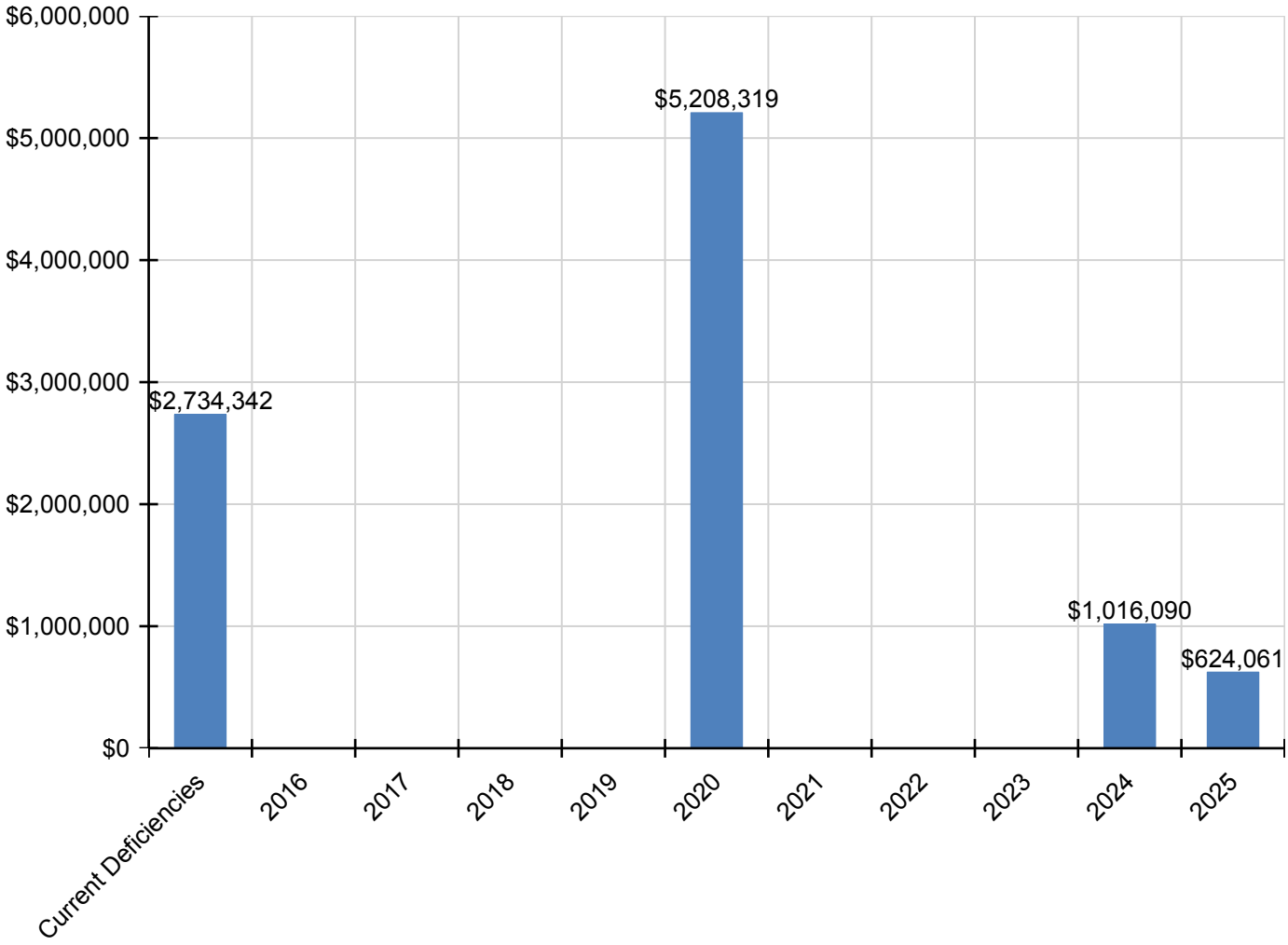
C1020 - Interior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$526,756	$0	$0	$0	$0	$0	**$526,756**
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	$428,213	$0	$0	$0	$0	$0	**$428,213**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$123,440	$0	$0	$0	$0	$0	**$123,440**
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	$941,139	$0	**$941,139**
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	$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	$15,158	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$15,158**
D2020 - Domestic Water Distribution	$182,930	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$182,930**
D2030 - Sanitary Waste	$153,403	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$153,403**
D2040 - Rain Water Drainage	$138,665	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$138,665**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$58,946	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$58,946**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$976,154	$0	$0	$0	$0	$0	**$976,154**
D3040 - Distribution Systems	$1,688,417	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,688,417**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$462,556	$0	$0	$0	$0	$0	**$462,556**
D3060 - Controls & Instrumentation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$624,061	**$624,061**
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	$188,017	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$188,017**
D5030 - Communications and Security	$67,007	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$67,007**
D5090 - Other Electrical Systems	$241,799	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$241,799**
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**
E1030 - Vehicular Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1030110 - Vehicular Service Equipment, S.F.	$0	$0	$0	$0	$0	$1,158,385	$0	$0	$0	$0	$0	**$1,158,385**
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

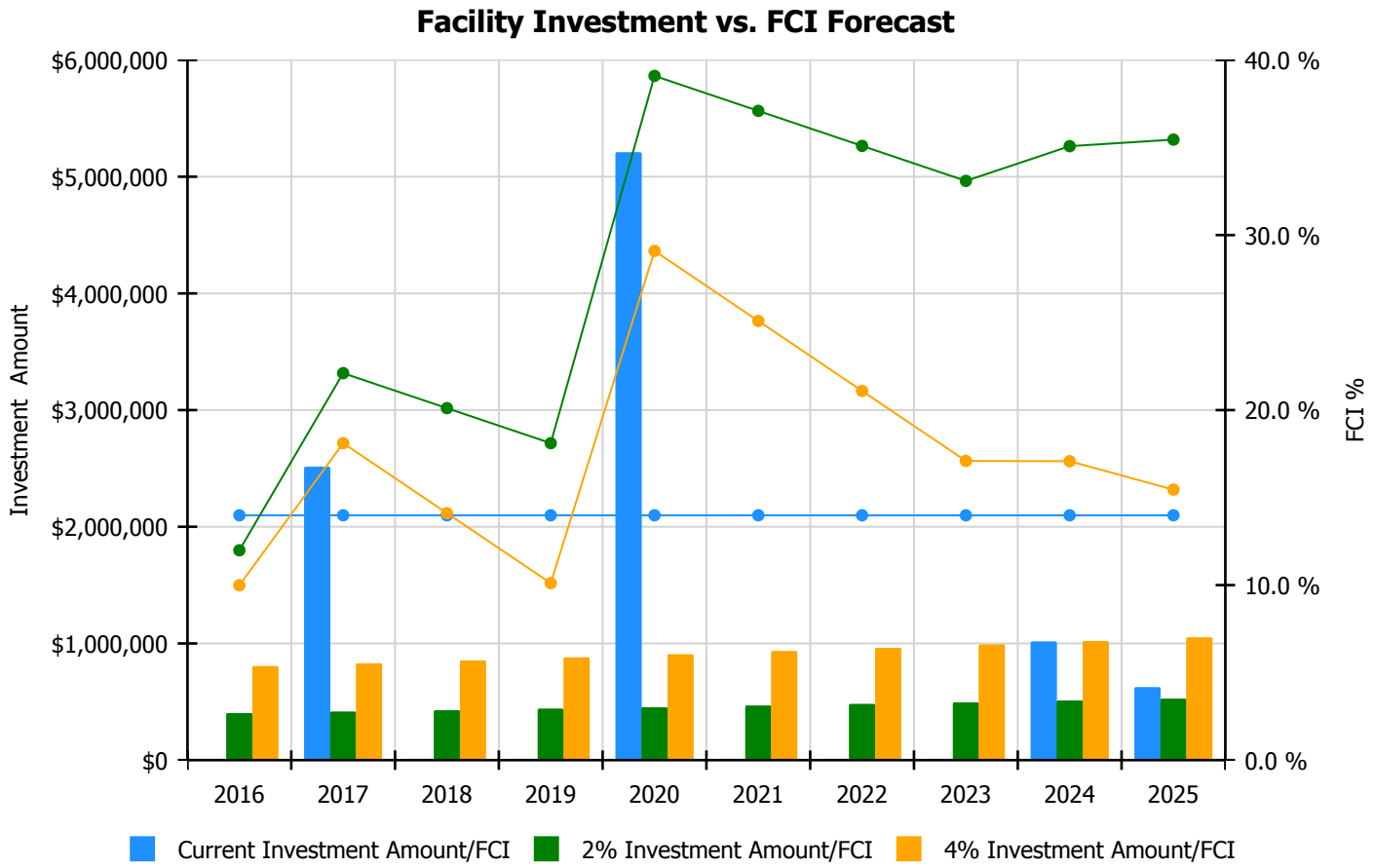
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

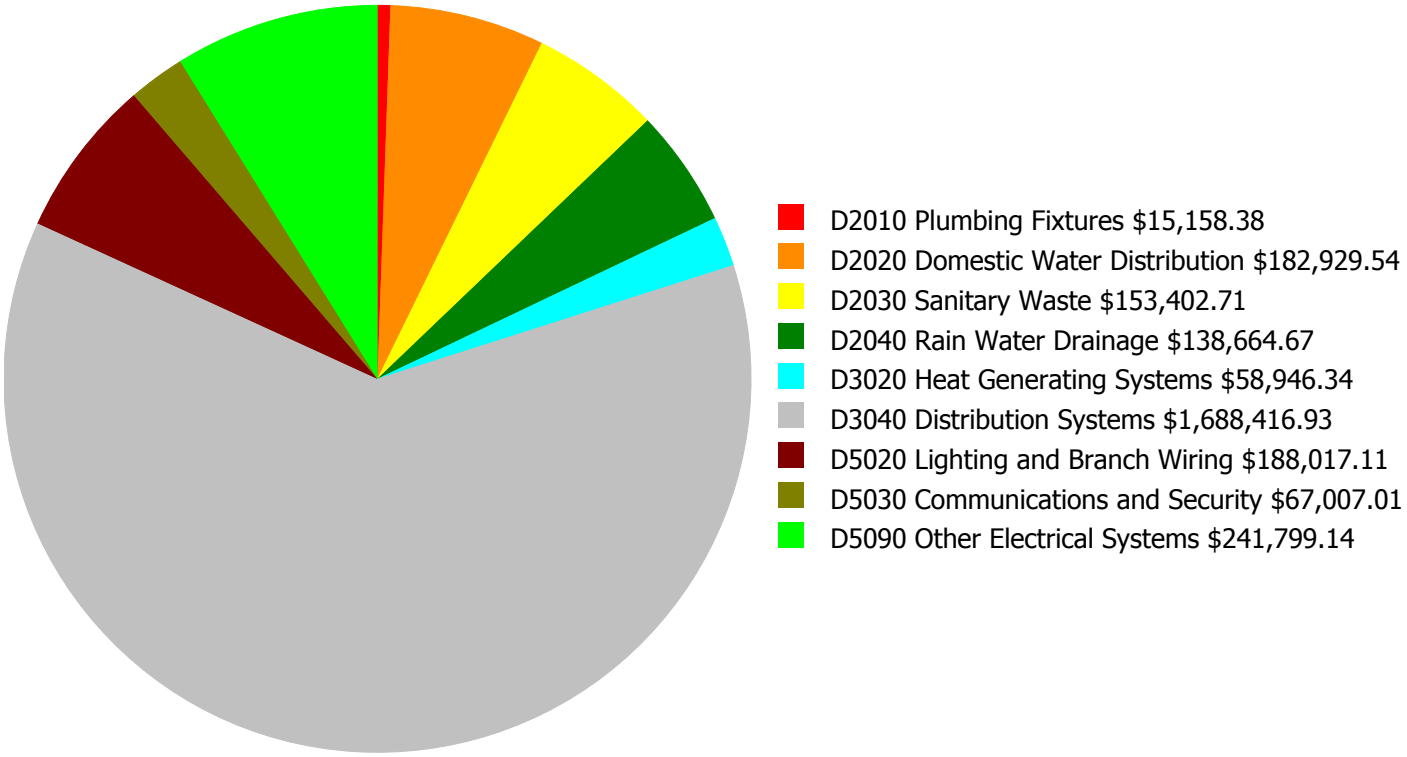
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 13.99%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$402,663.00	11.99 %	$805,325.00	9.99 %
2017	$2,513,553	$414,743.00	22.11 %	$829,485.00	18.11 %
2018	$0	$427,185.00	20.11 %	$854,370.00	14.11 %
2019	$0	$440,000.00	18.11 %	$880,001.00	10.11 %
2020	$5,208,319	$453,200.00	39.09 %	$906,401.00	29.09 %
2021	$0	$466,796.00	37.09 %	$933,593.00	25.09 %
2022	$0	$480,800.00	35.09 %	$961,600.00	21.09 %
2023	$0	$495,224.00	33.09 %	$990,449.00	17.09 %
2024	$1,016,090	$510,081.00	35.08 %	$1,020,162.00	17.08 %
2025	$624,061	$525,383.00	35.45 %	$1,050,767.00	15.45 %
Total:	**$9,362,023**	**$4,616,075.00**		**$9,232,153.00**	

Deficiency Summary by System

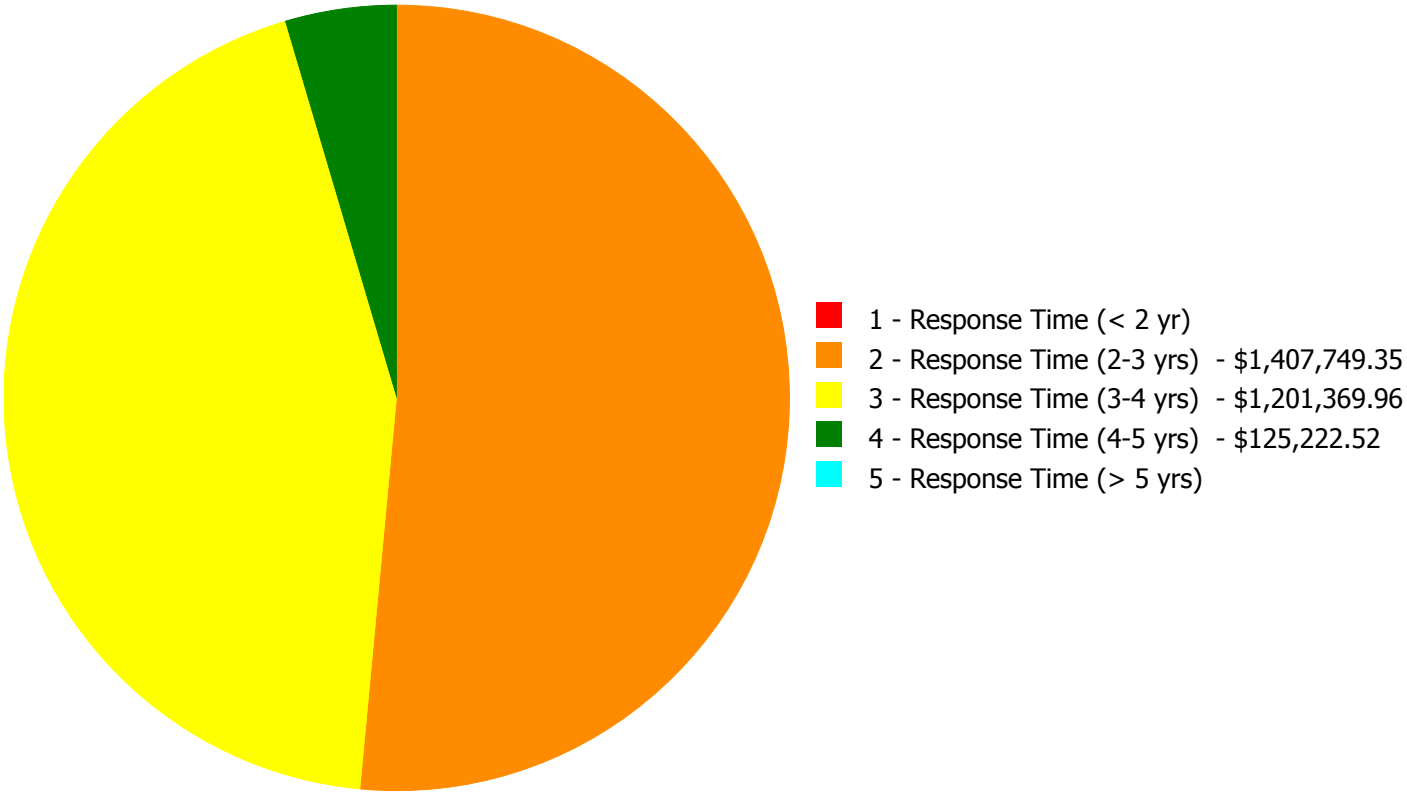
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $2,734,341.83

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: $2,734,341.83

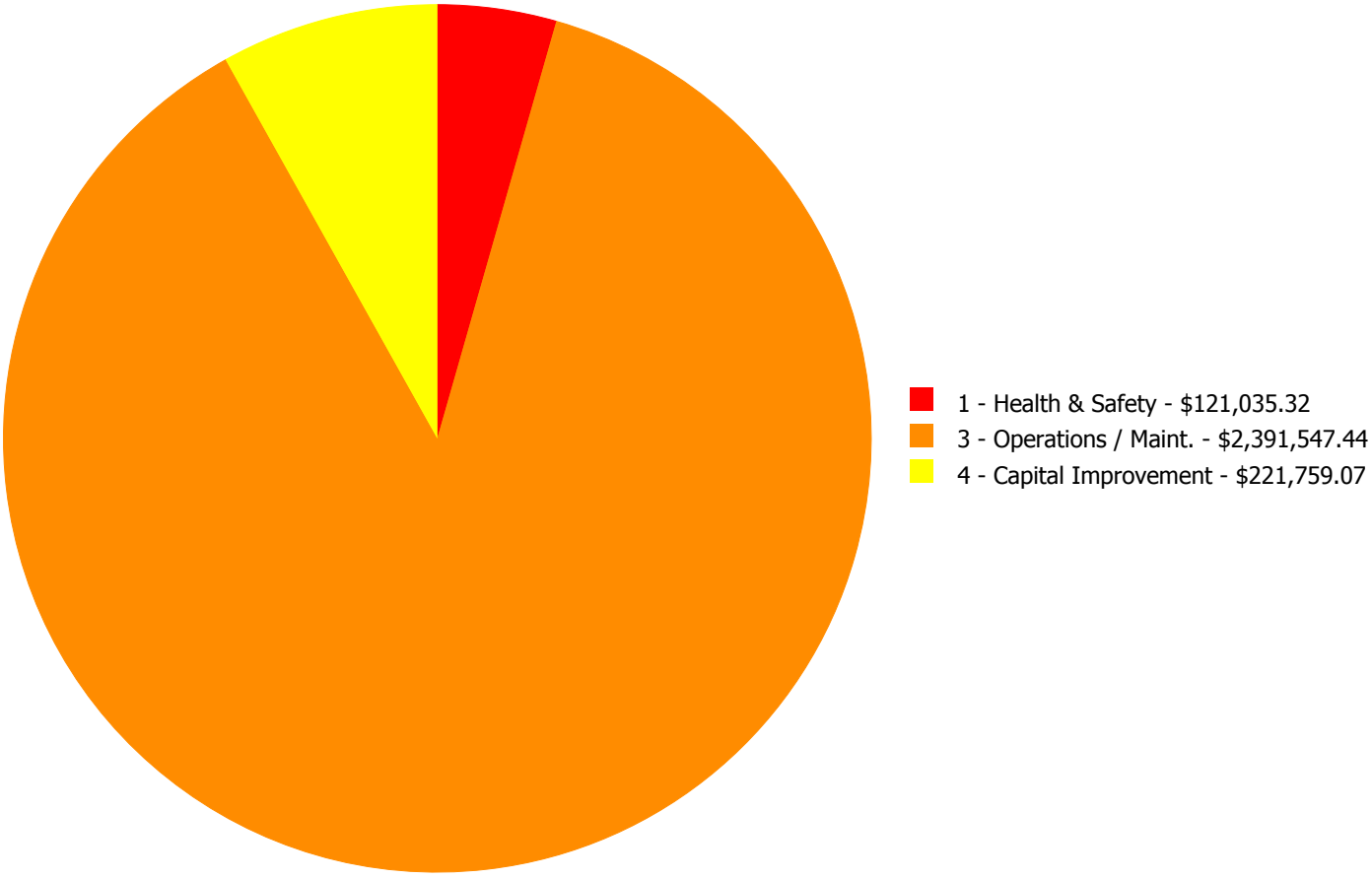
Deficiency By Priority Investment Table

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
D2010	Plumbing Fixtures	$0.00	$15,158.38	$0.00	$0.00	$0.00	$15,158.38
D2020	Domestic Water Distribution	$0.00	$0.00	$158,455.99	$24,473.55	$0.00	$182,929.54
D2030	Sanitary Waste	$0.00	$0.00	$153,402.71	$0.00	$0.00	$153,402.71
D2040	Rain Water Drainage	$0.00	$0.00	$138,664.67	$0.00	$0.00	$138,664.67
D3020	Heat Generating Systems	$0.00	$0.00	$58,946.34	$0.00	$0.00	$58,946.34
D3040	Distribution Systems	$0.00	$1,392,590.97	$295,825.96	$0.00	$0.00	$1,688,416.93
D5020	Lighting and Branch Wiring	$0.00	$0.00	$188,017.11	$0.00	$0.00	$188,017.11
D5030	Communications and Security	$0.00	$0.00	$0.00	$67,007.01	$0.00	$67,007.01
D5090	Other Electrical Systems	$0.00	$0.00	$208,057.18	$33,741.96	$0.00	$241,799.14
	Total:	$0.00	$1,407,749.35	$1,201,369.96	$125,222.52	$0.00	$2,734,341.83

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: $2,734,341.83

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: D2010 - Plumbing Fixtures

Location: Shop area

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 2.00

Unit of Measure: Ea.

Estimate: $15,158.38

Assessor Name: Craig Anding

Date Created: 01/21/2016

Notes: Replace two (2) wall hung drinking fountains in the shop area. These units are beyond their service lives and are in poor condition.

System: D3040 - Distribution Systems

Location: Second floor mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Indoor Air Handling Unit (25T/10KSF), Condensing Unit and VAV terminals

Qty: 2.00

Unit of Measure: Ea.

Estimate: $1,392,590.97

Assessor Name: Craig Anding

Date Created: 01/21/2016

Notes: Replace the two (2) York AHUs, located in the second floor mechanical room, which are at the end of their service lives, and the two (2) 25 ton associated roof mounted condensing units in the next 1-3 years.

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

System: D2020 - Domestic Water Distribution

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace domestic water piping (75 KSF)

Qty: 31,270.00

Unit of Measure: S.F.

Estimate: $158,455.99

Assessor Name: Craig Anding

Date Created: 01/21/2016

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: 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: 31,270.00

Unit of Measure: S.F.

Estimate: $153,402.71

Assessor Name: Craig Anding

Date Created: 01/21/2016

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: 31,270.00

Unit of Measure: S.F.

Estimate: $138,664.67

Assessor Name: Craig Anding

Date Created: 01/21/2016

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: Second floor mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace power burner, gas/oil (50 HP)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $58,946.34

Assessor Name: Craig Anding

Date Created: 01/21/2016

Notes: Replace the one (1) 714MBH gas boiler burner, which is at the end of its service life, with a new more efficient burner within the next 2-4 years.

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: 31,270.00

Unit of Measure: S.F.

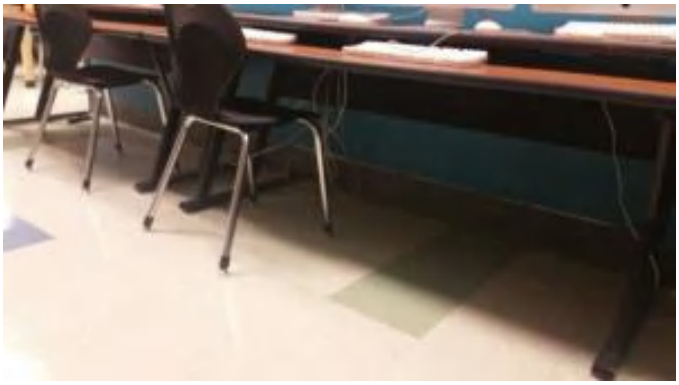
Estimate: $295,825.96

Assessor Name: Craig Anding

Date Created: 01/21/2016

Notes: Hire a qualified contractor to examine the building heating hot water piping, in service for an unknown amount of time, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D5020 - Lighting and Branch Wiring



Location: throughout the building

Distress: 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: $188,017.11

Assessor Name: Craig Anding

Date Created: 01/25/2016

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

System: D5090 - Other Electrical Systems

This deficiency has no image.

Location: electrical room
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Add Standby Generator System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $121,035.32
Assessor Name: Craig Anding
Date Created: 01/25/2016

Notes: Install a new Emergency generator.
Note: There are no pictures attached since the school has no Emergency Generator at present time.

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: Add Emergency/Exit Lighting
Qty: 1.00
Unit of Measure: Ea.
Estimate: $87,021.86
Assessor Name: Craig Anding
Date Created: 01/25/2016

Notes: Install new emergency exit signs emergency lights.

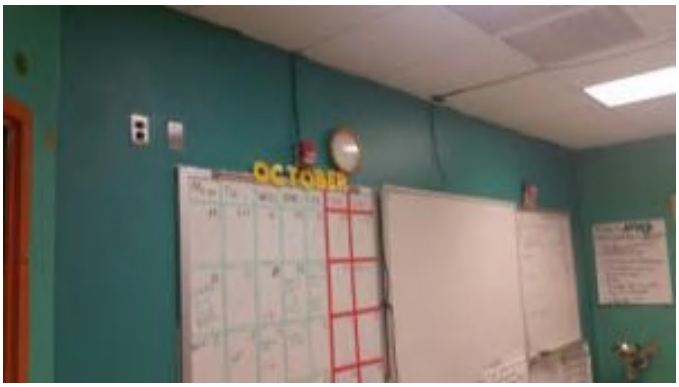
Priority 4 - Response Time (4-5 yrs):

System: D2020 - Domestic Water Distribution

Location: Second floor mechanical room
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Replace instantaneous water heater
Qty: 1.00
Unit of Measure: Ea.
Estimate: $24,473.55
Assessor Name: Craig Anding
Date Created: 01/21/2016

Notes: Replace the one (1) existing Paloma instant hot water heater, which is approaching the end of its service life, within the next 3-5 years.

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: $67,007.01
Assessor Name: Craig Anding
Date Created: 01/25/2016

Notes: Install new Clock System.
Note: A multiplier of 1.4 (instead of 1.0) is used to cover the additional coat of other related construction.

System: D5090 - Other Electrical Systems

Location: roof

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Provide Lightning Protection System

Qty: 1.00

Unit of Measure: LS

Estimate: $33,741.96

Assessor Name: Craig Anding

Date Created: 01/25/2016

Notes: Install new lightning protection 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
D1010 Elevators and Lifts	Hydraulic, passenger elevator, 2500 lb, 5 floors, 100 FPM	1.00	Ea.	Inside the building					30	1999	2029	$142,170.00	$156,387.00
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, hot water, gross output, 544 MBH, includes standard controls and insulated jacket, packaged	1.00	Ea.	Mechanical Room	Weil-McLain	Model 76			35	1999	2034	$18,095.40	$19,904.94
D3040 Distribution Systems	Central station air handling unit, packaged indoor, constant volume, 10,000 CFM, cooling coils may be chilled water or DX, heating coils may be hot water, steam or electric	1.00	Ea.	Second Floor Mechanical Room	York	CS217SHMP	91-000237B		25	1999	2024	$33,042.90	$36,347.19
D5010 Electrical Service/Distribution	Circuit breaker, 3 pole, 600 volt, 1200 amp, enclosed (NEMA 1)	1.00	Ea.	electrical room					30	1968	1998	$13,662.00	$15,028.20
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 5 stories, 50' horizontal	4.00	Ea.	throughout the building					30	1997	2027	$20,524.05	$90,305.82
D5010 Electrical Service/Distribution	Switchboards, pressure switch, 4 wire, 120/208 V, 1200 amp, incl CT compartment, excl CT's or PT's	1.00	Ea.	electrical room					30	1997	2027	$29,559.60	$32,515.56
												Total:	**$350,488.71**

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):	5,000
Year Built:	1968
Last Renovation:	
Replacement Value:	$90,550
Repair Cost:	$0.00
Total FCI:	0.00 %
Total RSLI:	37.36 %

Description:

Attributes:

General Attributes:

Bldg ID:	S102201	Site ID:	S102201

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	12.50 %	0.00 %	$0.00
G40 - Site Electrical Utilities	90.00 %	0.00 %	$0.00
Totals:	**37.36 %**	**0.00 %**	**$0.00**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$8.50	S.F.		30				0.00 %	0.00 %				$0
G2030	Pedestrian Paving	$12.30	S.F.	5,000	40	1968	2008	2020	12.50 %	0.00 %	5			$61,500
G2040	Site Development	$4.36	S.F.		25				0.00 %	0.00 %				$0
G2050	Landscaping & Irrigation	$4.36	S.F.		15				0.00 %	0.00 %				$0
G4020	Site Lighting	$4.84	S.F.	5,000	30	2012	2042	2042	90.00 %	0.00 %	27			$24,200
G4030	Site Communications & Security	$0.97	S.F.	5,000	30	2012	2042	2042	90.00 %	0.00 %	27			$4,850
								Total	**37.36 %**					**$90,550**

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.

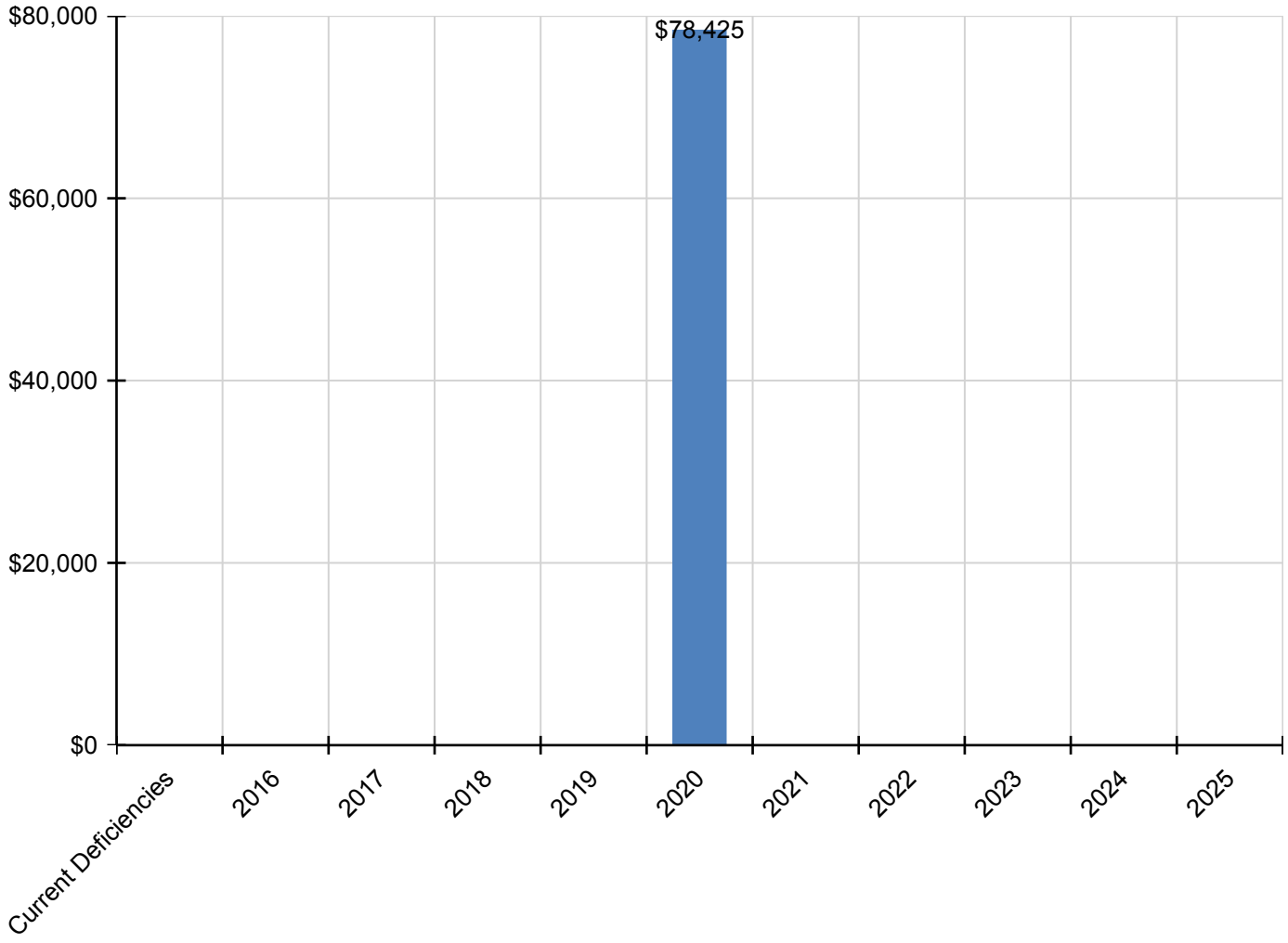
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$0**	**$0**	**$0**	**$0**	**$0**	**$78,425**	**$0**	**$0**	**$0**	**$0**	**$0**	**$78,425**
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	$0	$0	$0	$0	$0	$78,425	$0	$0	$0	$0	$0	**$78,425**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

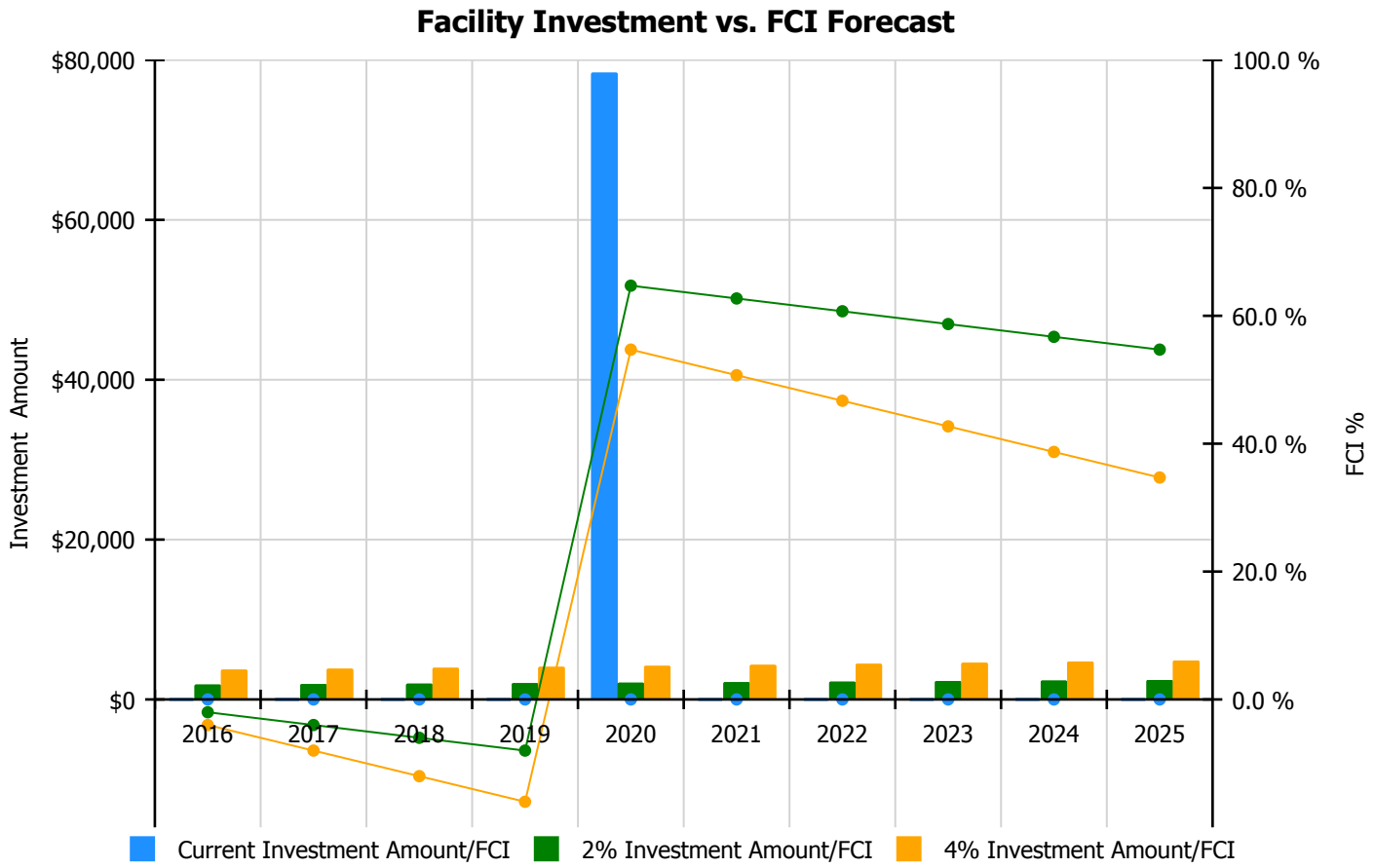
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

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



Year	Investment Amount Current FCI - 0%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,865.00	-2.00 %	$3,731.00	-4.00 %
2017	$0	$1,921.00	-4.00 %	$3,843.00	-8.00 %
2018	$0	$1,979.00	-6.00 %	$3,958.00	-12.00 %
2019	$0	$2,038.00	-8.00 %	$4,077.00	-16.00 %
2020	$78,425	$2,099.00	64.71 %	$4,199.00	54.71 %
2021	$0	$2,162.00	62.71 %	$4,325.00	50.71 %
2022	$0	$2,227.00	60.71 %	$4,455.00	46.71 %
2023	$0	$2,294.00	58.71 %	$4,588.00	42.71 %
2024	$0	$2,363.00	56.71 %	$4,726.00	38.71 %
2025	$0	$2,434.00	54.71 %	$4,868.00	34.71 %
Total:	**$78,425**	**$21,382.00**		**$42,770.00**	

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.

No data found for this asset

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:

No data found for this asset

Deficiency By Priority Investment Table

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

No data found for this asset

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:

No data found for this asset

Deficiency Details by Priority

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

No data found for this asset

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