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.

Pollock School

Governance	DISTRICT	Report Type	Elementary
Address	2850 Welsh Rd.	Enrollment	675
	Philadelphia, Pa 19152	Grade Range	'00-06'
Phone/Fax	215-961-2004 / 215-961-2597	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Pollock	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	**32.84%**	**$15,252,716**	**$46,444,270**
Building	36.31 %	$14,982,493	$41,265,792
Grounds	05.22 %	$270,223	$5,178,478

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.58 %	$9,763	$1,683,672
Exterior Walls (Shows condition of the structural condition of the exterior facade)	02.27 %	$51,763	$2,279,060
Windows (Shows functionality of exterior windows)	00.00 %	$0	$994,990
Exterior Doors (Shows condition of exterior doors)	60.39 %	$73,625	$121,910
Interior Doors (Classroom doors)	12.06 %	$33,112	$274,480
Interior Walls (Paint and Finishes)	01.12 %	$10,821	$964,330
Plumbing Fixtures	18.33 %	$422,585	$2,305,340
Boilers	50.07 %	$682,475	$1,362,910
Chillers/Cooling Towers	67.40 %	$1,204,455	$1,787,040
Radiators/Unit Ventilators/HVAC	161.24 %	$5,060,075	$3,138,270
Heating/Cooling Controls	163.26 %	$1,608,907	$985,500
Electrical Service and Distribution	208.01 %	$1,472,912	$708,100
Lighting	71.04 %	$1,798,515	$2,531,640
Communications and Security (Cameras, Pa System and Fire Alarm)	38.63 %	$366,332	$948,270

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

S841001;Pollock

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):	73,000
Year Built:	1962
Last Renovation:	
Replacement Value:	$46,444,270
Repair Cost:	$15,252,716.24
Total FCI:	32.84 %
Total RSLI:	66.30 %

Description:

Facility Condition Assessment

August 2015

School District of Philadelphia
Robert Pollock Elementary School
2850 Welsh Road
Philadelphia, PA 19152

73,000 SF / 696 Students / LN 08

General

Robert Pollock Elementary School is located at 2850 Welsh Road. This building was constructed in 1962, has 73,000 square feet and is 2 stories tall; it has a partial basement with crawl spaces and a mechanical equipment mezzanine above the first floor accessed by a stair outside the gym. The front entrance to the Main Building faces Welsh Road. There is an extensive asphalt playground behind

the building separated by a precast concrete wall from the adjacent municipal recreational facilities. Steve Finucane, the Building Engineer accompanied the FCA team during the inspection.

The inspection Team met Principal Wilson who expressed concern over some issues. In particular, he indicated that the parking lot has only one access for cars and busses and is a bottleneck at the start and end of the school day; a second vehicular access (exit) out the back to Ashton Road or to Welsh Road would remediate this situation. Air-conditioning, a larger cafeteria that better matches the capacity of the school, and an elevator were also requested.

Architectural/Structural

Foundations in the Main Building are constructed of brick and concrete. Basement brick and masonry joints are in good condition with no major settlement cracks observed. Footings were not seen and their construction type or condition could not be ascertained. There are extensive crawl spaces utilized for utility runs in this building assessed by doors in the basement; these spaces were not inspected due to limited access and lighting, but from the outside appeared to be in good condition.

Floor slabs in the basement are in good condition although covered with dirt and in need of stripping, cleaning and repainting. Upper floor slabs are constructed of cast-in-place concrete with cast-in-place concrete beams. There is a mechanical mezzanine located above the west classroom wing, accessed from the stairway near the gym. Maintenance access in this space appears to be quite constricted, considering the large size of the equipment in the space. No major cracking was observed on any floor slab inspected.

Roof construction over the classroom wings and the lobby consists of reinforced concrete beams and deck, bearing on concrete beams and columns. The gymnasium has an exposed steel bar joist and metal deck roof system and although not observed, it is suspected that the same system extends over the auditorium. The roof deck above all parts of the building consists of a "flat" deck with minimum overall slope and pitch to roof drains. Roof access is via a hatch in the roof over the west classroom wing. The roof has no parapets and has one brick masonry roof structure located over the mechanical mezzanine which is over the gym and auditorium section of the building. The roof of this raised area is accessed by a ladder up the east wall. All roofs have internal roof drains at low points created by "crickets" (areas with slight slope created by additional insulation); vertical leaders run through the building in internal chases. There are no vertical leaders running down the outside of the exterior walls. None of the roofs have overflow scuppers or overflow roof drains, but as long as the roof deck was designed to carry the load of the water contained by the parapet if all roof drains were clogged, this is not a structural concern.

Exterior walls in are generally in good condition but show signs of past caulking and pointing which was a result of joint cracks. The brick roof structure has a number of caulked joints and extra caulking along the reglet set into the masonry. Large sections of the building wall appeared to have been repointed, above the main entrance and basement adjacent to the south parking lot. In particular, the wall to the right of the entrance continues to have integrity issues with stepped cracks observed in areas that have been repaired at least twice (two different colors of grout). Before repairing this area, some additional investigation is needed to look for a root cause of this joint failure issue. Some grout is popping out of brick joints along the handicap ramp into the door near the kindergarten wing. Windows run horizontally between concrete column elements and have brick headers supported by steel lintels. First and second floor lintels appear to be in good condition with no cracks or joint problems seen. The south wall facing the parking lot has some horizontal and vertical joint cracking that appears to have been repointed. The entire lower half of the south and west wall of the gym/auditorium section appears to have been repointed, but seems to be in good condition at the time of inspection, although a difference in brick color is noticeable. The brickwork on the left side of the main stair into the building is spalling, has joint separation under the concrete coping along the top of the wall and is very dirty; this need to be cleaned and repointed to maintain water-tightness and structural integrity of the brickwork. There is a large area graffiti on the wall to the left of the gymnasium entrance in the southeast area of the building.

Exterior windows in the gym section of the building appear to be the original 1962 window system with clear anodized aluminum frames and operable hopper-style single glazed lower half units. Windows in other areas of the building are bronze anodized single hung units that might have been replacement units or could be original equipment. In any case, they are single glazed which provides almost no insulation value and do not meet today's energy code requirements making them a large source of heat loss. Aside from being single glazed, there were no leaks or operational issues expressed with respect to the windows. A few classrooms have window -mounted air conditioners. First floor and basement windows have galvanized steel security screens on the exterior, which are in good condition.

Exterior doors at the front entrances and two other student entrances are flush, painted, hollow metal steel doors & frames with narrow vertical vision panels with security screens. Exit doors or mechanical area entrance/exit doors around the building are flush, painted hollow metal steel doors & frames without vision panels. Doors are generally in fair condition, with few dents and no graffiti. Most exteriors of doors could use a new coat of paint. Most hardware is operational with some doors needing adjustment. Weatherstripping should be inspected on all doors as gaps can be seen in some doors; weatherstipping should be replaced where not

closing tight to prevent cold weather air infiltration. There is an ADA compliant handicap accessible ramp and entrance at the front of the building facing Welsh Road leading into the kindergarten area. Better, more complete Accessible Route signage is required from handicap parking spaces into the accessible entrance.

Roof coverings consist of a fully adhered built-up rolled asphalt membrane system, with impregnated surface granules. There were some areas of softness underfoot and delamination; these areas need to be repaired before the membrane fails and leaks develop. Flashing is asphalt-backed adhered metal-faced flashing secured to rooftop ventilation ductwork, plumbing vents, and masonry parapets into reglets. Roof structures include masonry walls, and chimney, plumbing vents, ventilation ductwork, and roof drains. Metal-faced asphalt-backed flashing terminates under aluminum counterflashing either set into masonry with reglets or attached to roof structures. There are many opportunities for water infiltration along brick structures where counterflashing is set under reglets; this continuous joint has been recently recaulked with black caulking over the existing copper flashing and although it appears that there are no leaks at this time visible on the inside, this continuous joint is a potential source of leaks and requires constant maintenance. Metal-faced asphalt-backed flashing is used to seal the gravel stops along the roofing membrane. These continuous joints appear to be tight and no leaks were reported coming in from outside walls. Overlapping joints of asphalt membrane have some exposed cracking asphalt and should be frequently inspected to ensure water-tightness. There are some loosed and cracked brick joints which require repointing and repair. The ladder secured to the brick mezzanine wall above the roof is loose and requires re-attachment.

Partitions are constructed of painted block (concrete masonry units) throughout the entire school. Corners are bull-nose block to soften the hard edges and provide a more durable surface. Wall bases are either painted block or glazed block. There were no joint cracks observed in the inspection. This highly durable wall system is in good condition.

Interior doors used for classrooms, offices, storage rooms, and bathrooms are solid wood oak veneer doors and steel frames. Many of these wood doors have narrow lite wired glass vision panels where vision is desirable; some have security screens. Most wood door surfaces need to be refinished. Stairway and cafeteria doors are hollow metal doors with narrow lite wired glass vision panels and steel door frames, with panic hardware in fair condition with worn finishes and with some requiring adjustment. Some doors requiring repainting. All steel door frames throughout the building need to be repainted. Interior basement doors in the mechanical room are hollow metal steel doors with steel frames; some doors and frames should be repainted. Classroom, office, and special function room doors throughout the building have old nob-style locksets (except for stairways) and should have lever-handle locksets. None of the classroom doors can be locked from the inside of the classroom, as required today for lock-down security.

Interior fittings/hardware in the old building include black slate chalkboards and tackboards with metal chalk trays mounted on one wall in each classroom. Some of the classrooms have smartboards over blackboards. The library space was created by removing the wall between two classrooms. It has free-standing plastic laminate bookcases, tables, and wood chairs that are all in good condition. Toilet room partitions are plastic partitions and doors, generally in good condition. Classrooms have a shelf area for miscellaneous material storage. Most toilet rooms have accessories in place and operational. Toilet rooms have a minimally accessible toilet compartments that has a toilet and sink with enough manueverablity space for wheelchairs, but no grab bars or properly mounted accessories, not fully meeting ADA. Sinks also do not meet accessibility requirements since they do not have wrist blade faucets, leg protection, and extended or properly mounted bowl heights.

Stair construction consists of concrete treads with steel nosings, concrete risers, and concrete treads with steel handrails (36” high) and guards (42” high) at tops of landings and open sides of stairways and steel balusters with 4” spacing. Stairway handrails and guards meet today’s code requirements. Concrete platforms and landings are finished with clear sealer, but the concrete has a mottled appearance and looks dirty. Stairs should be stripped and refinished to give them a cleaner appearance.

Wall finishes in the basement, first, and second, floors are full height painted concrete masonry units (block) throughout the building. There are few if any locations in corridors and classrooms where the walls are damaged and in need of repainting. The auditorium has a wood panel overlay installed around the sides and front of the stage area, adding warmth to the space. There are artistic wall mosaics installed in the entrance lobby area and entrance stair which appear to be designed by and possibly installed by students.

Floor finishes in the classrooms, corridors, the kitchen, the auditorium, and the auditorium stage consist of vinyl asbestos tile (VAT). The gymnasium, cafeteria, lobby area, and very few classrooms have vinyl composition tile (VCT) in place of the VAT; the VCT floors have been well maintained and do not appear to need replacement. The rooms with vinyl asbestos tile floors should be tested for asbestos and if they are asbestos containing, although they are not damaged, they should be properly removed and replaced at some point in the near future. Basements, stairs, and toilet rooms have sealed concrete finishes which are in need of stripping, cleaning, and resealing; toilet rooms in particular should have a clean finish to promote the appearance of cleanliness. The library and some administrative offices have carpet, which needs to be cleaned or replaced.

Ceiling finishes in most spaces throughout the building consist of exposed precast concrete plank painted white, with surface mounted 1x4 or 2x4 fluorescent lighting fixtures in corridors, classrooms, and offices. Electrical conduit is secured to the deck above and

exposed to view. These painted ceiling surfaces are well maintained. The gym has precast concrete planks over an exposed steel truss structure, all painted white and in good condition. The entrance lobby, auditorium, and cafeteria have surface mounted concealed spline 12"x12" acoustical tile ceilings with surface mounted fluorescent lighting; ceiling tiles are in good condition.

Fixed furnishings include wood seating in the auditorium which is in good condition. Some chairs might need adjustment and others might need refinishing, but overall the appearance is good with minimal repairs required. The cafeteria has folding tables for serving students. The kitchen area has stainless steel service counters and food preparation fittings.

There is an ADA accessible ramp into the building. Some of the concrete surface is pitted and spalling in need of repair. Railings and fencing by the stairs to the sidewalk need to be replaced.

There is no elevator in the building. With a ramp into the first floor, as long as all classroom and public space functionality and toilet room accessibility is provided on the main floor an elevator is not required to meet ADA.

Mechanical

Plumbing Fixtures – The building is equipped with wall hung urinals (flush valve type), wall hung water closets (flush valve type), and wall hung lavatories with wheel handle faucets. Many of the original plumbing fixtures remain in service, however, these fixtures have reached the end of their service life and should be replaced. New fixtures will provide lower water consumption and provide savings on water heating costs. The bathrooms were not equipped with floor drains.

Vertical floor standing self contained electric drinking fountains are located in the corridors. The replacement of all drinking fountains is recommended as the equipment is approximately 53 years old and beyond its service life.

Wall hung service sinks are original and are available throughout the building for use by the janitorial staff. Service sinks are typically located in the vicinity of the bathroom groups. The sinks appear have exceeded their service life, and should be replaced. The Cafeteria's food prep/kitchen is equipped with one, three compartment stainless steel sink with wheel handle operated faucets and its sanitary connection is served by a floor mounted grease trap. The kitchen is also equipped with a hand sink. The triple wash sink (with wheel handles) and hand sink (with lever handles) show signs of normal usage. The grease interceptor shows no signs of rust or corrosion and is accessible for maintenance. Chemicals are injected manually into the sanitizing basin.

Domestic Water Distribution – It appears that the 4" domestic water service piping is mostly soldered copper. Water service enters the building in the basement, with double check backflow preventer (RPZA – reduced pressure zone assembly) and a 4" water meter on the main line upon entering the building. The water meter appears to be new. The piping is copper with soldered joints. A separate RPZA backflow preventer serves the dedicated cold water make up line for the boiler system. The distribution piping appears to be original and is at the end of its service life and is recommended to be inspected and repaired as needed.

The previous domestic water generation system has been decommissioned with some components remaining which have been abandoned in place. There is one vertical tank-type natural gas fired water heater, Bradford White Model MI175S6BN, 75 gallon tank capacity which is located in the boiler mechanical room. The heater is rated for a maximum gas input of 76,000 btuh. The hot water system is equipped with a recirculation pump as well. The water heater appears to be in satisfactory condition, was manufactured in 2004 and should not need replacement within the next 5 years. A water softener was located in the boiler room for treating the boiler make up water system. The water softener system appears to be 5 – 7 years in age.

Sanitary Waste - The sanitary waste piping system in the original building is extra heavy cast iron with lead and oakum seals and appears to be the original piping installed in the building. It is therefore recommended to inspect this piping and repair or replace sections as needed. The sanitary system leaves the building by gravity flow.

Rain Water Drainage - The rain water drains from the roof are routed through mechanical chases in the building and connect to the underground site drainage system. There are overflow scuppers for emergency drainage of the roof if roof drains become clogged.

Energy Supply - Duplex fuel oil supply pumps provide the required fuel to the boilers when operating on fuel oil. The fuel storage tank is located. The fuel pumps and controls are beyond their serviceable life and therefore should be replaced. Natural gas enters the building in the basement. The natural gas main is welded, black steel piping while the branches are threaded, black steel.

Heat Generating Systems – Low pressure steam is generated at 15 lbs/sq. in. or less by two 3,385 MBH Weil McLain 94 series, Model 1994, steam boilers with dual fuel burners. All boilers are equipped with Power Flame dual fuel burners, natural gas and number 2 fuel oil, model CR4-GO-30. The boilers appear to have been install in the early 1990's and are at the end of their service life and should be replaced. There is no draft control on the either boiler flue. Combustion air louvers serve the boiler room to provide

combustion air for the boiler operation. Burner oil pumps are driven by independent motors. The gas train serving each boiler 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 strainer/disposable media filter.

Distribution Systems – The building steam distribution piping is black steel with welded fittings. The condensate piping is Schedule 80 black steel with threaded fittings. The piping has been in use 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 distribution 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 5 years.

The boiler feed water is collected by a boiler feedwater pad mounted system and is treated with a combination of chemicals by a water treatment controller. The old condensate receiver system has been abandoned, so the condensate is now returned directly to the boiler feedwater tank and then pumped back to the boiler. The condensate return piping is black steel with threaded joints. The boiler feedwater assembly is equipped with three pumps and a pump control panel. It is recommended that the District conduct a steam trap survey to determine the quantity and condition of all steam taps. The boiler feed tank, pumps and associated components are nearing the end of their service life and should be replaced.

Fresh air is admitted into the building through the unit ventilators and by opening windows. Ventilation air is induced into the spaces through the outside air intake grilles located in the building exterior wall which are ducted to the unit ventilators.

The building uses unit ventilators with steam coils in the classrooms and steam convectors in the hallways and currently is the sole source of heat for these areas. During our survey we observed that most steam convection heaters were recessed models, if however there any steam radiators in service without guards or enclosures, these units should be replaced with finned tube convectors to protect students from exposure to the hot surfaces. The classrooms are also equipped with transfer air ducts between the class and corridor. These were used to facilitate natural ventilation when they were in the open position. Most were noted to be closed as noise is easily transferred from the hall into the classrooms through these open registers.

The gymnasium is served by a ducted H&V unit with steam coils with a ducted supply system with concentric round diffusers for air distribution and return grilles which are flush with the wall surface. There are also outside air intakes which are used for natural ventilation of the space and horizontal steam unit heaters which provide additional heat located on the wall opposite of the unit ventilators. It is recommended to replace these systems with a roof top mounted unit with an overhead supply air distribution system and return air ductwork and low return intake grilles which would be protected from damage.

The auditorium is served by a ducted H&V unit with steam coils with a ducted supply system with concentric round diffusers for air distribution and decorative return grilles near stage. There are also operable windows which are used for natural ventilation of the space. Vertical recessed steam convectors provide additional heat and are located below each window. It is recommended to replace these systems with a roof top mounted unit with an overhead supply air distribution system and return air ductwork

The cafeteria is served by a ducted H&V unit with steam coils. The unit has exceeded its life expectancy and should be replaced. A roof top mounted unit could be provided with heating and cooling coils as well as ventilation to meet the outside air ventilation requirements for the cafeteria seating area. The kitchen equipped with a hood exhaust system for the space but does not have a dedicated make up air system. The hood is equipped with and Ansul fire suppression system. It is recommended that a hood exhaust system be implemented for any equipment which generates heat. This system should be coupled with a heating and ventilating supply air system. Proper air flow pressurization and balancing should be performed for the seating area with respect to the kitchen to maintain the kitchen under negative pressurization.

The library is served by unit ventilators located at the perimeter under the windows. The space is also served by window AC units for cooling. It recommended to replace these systems terminal fan coil units with heating and cooling coils as well as ventilation with energy recovery to meet the outside air ventilation requirements for the space.

Terminal & Package Units - There are a few which have window air conditioning units but predominantly the building does not have cooling systems. There are roof mounted exhaust fans which serve the restrooms while one serves the hood exhaust from the kitchen. Restroom exhaust draws air through exhaust grilles in the wall. The exhaust fans appear to have been replaced in the recent past and do not need replacement for 10 – 15 years.

Controls & Instrumentation - The original pneumatic systems still provide basic control functions. Pneumatic room thermostats drive the unit ventilators, the damper actuators and control valves. Wall mounted pneumatic thermostats on the corridor walls control the steam radiators. There are two air compressors which generate control air for the temperature control system which are located in the boiler room. A common refrigerated air dryer serves the compressors. The maintenance staff reports temperature control is

generally lacking throughout the facility. Potential problems with oil, moisture or dirt in the pneumatic copper tubing can be one source of problems. The small rubber gaskets and tubing connections at control devices can become brittle over time and fail to compound control problems. The pneumatic systems are beyond their service life and require too much attention from the maintenance staff. The original control valves, dampers and pneumatic actuators are over 53 years old and should be 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.

Electrical

Site Electrical Service comes from medium voltage overhead lines on wooden poles along Welsh Road. One 300KVA pit mounted utility transformer with 13.2KVAC primary and 208/120VAC secondary is installed outside the building for supplying power to facility.

The service entrance to the facility consists of a disconnect switch, utility meter, and switchboard with an estimated available power of 400A located in the Boiler Room in the basement. The service entrance including the switchboard has exceed its useful life and should be replaced.

Main distribution switchboard feeds AC units and other mechanical and kitchen loads. Lighting and receptacles are fed by several 208/120V panel boards throughout the building. There are four, flush mounted panel boards located on each floor in the corridors. These panel boards and branch circuit breakers have out-lived their useful lives and are ready for upgrade/replacement. There is also a new 120/208 volt distribution panel provided for feeding the IT loads. This panel is in good condition and does not have to be replaced.

In general there are not enough receptacles in classrooms, offices, and corridors. It is recommended to have a minimum of two receptacles on each classroom wall. The computer lab should have one receptacle every three feet on center on each wall.

Most lighting fixtures are fluorescents with outdated T-12 lamps. Some spaces such as the auditorium have incandescent lighting fixtures, which are also outdated and should be replaced. The gymnasium has inadequate lighting. Lighting levels in the most areas do not meet IES (Illuminating Engineering Society) standards.

Fire Alarm system has been recently upgraded and is functioning properly. Fire monitoring is by smoke detectors in corridors and pulls stations at building egress points. There are sufficient numbers of horn/strobes installed throughout the building in rooms such as classrooms, corridors, offices, and other areas. No major deficiencies were observed.

Telephone/LAN systems in the buildings are working adequately. The building has a new IT system and it is functioning properly.

There is no PA or music system in use. PA announcements are through the telephone system.

Intercom and paging is functioning adequately except in the gymnasium; speakers or wiring need to be repaired. The paging system consists of one-way communication system from the main office to all classrooms. Two way communications occur through wall mounted phones in the classrooms and other areas.

Clock and Program system is in the school is not functioning and should be replaced.

Television System is not provided in the school.

Video surveillance system is not provided in the school. The only type of security system in place is an access control system.

Emergency power system is provided. One 18.7KVA, 120/208 volt diesel generator made by "Generac" is installed in the boiler room, sized for feeding the emergency lighting in the building. This diesel generator is old, has exceeded its useful life, and should be replaced.

The source of power for IT servers was not verified since the IT room was locked at the time of the field investigation. However it is assumed that servers are supported by UPS, based on similar installations at other school. If this is not the case, it is recommended to provide UPS power for the IT equipment.

Emergency Lighting System / Exit Lighting are provided in the school. There are a sufficient number of lighting fixtures throughout the building. They are fed from the existing backup power generator.

Lightning Protection System is adequate. It is accomplished with air terminals mounted on the chimney, however, some repairs are needed. A study is needed to verify that the air terminals provide the proper coverage.

Grounding system is present and appears to be adequate.

Elevator is not provided in this school.

Theater Lighting and dimming controls is old and not a code compliant installation; lights are turned on and off by circuit breakers.

Auditorium Sound System is old and should be replaced with a new PA/sound system.

Site Lighting System is not adequate. Additional lighting fixtures should be installed around the exterior building to provide better lighting and improved security.

Site Video Surveillance system is not provided in the building

Site Paging System is not provided in the building.

Grounds

Paving and parking is constructed of asphalt and is in poor condition. There are many cracked and broken areas throughout the faculty parking lot and the asphalt play area within the school yard. The section of asphalt that drains to the southeast under the entrance to the temporary classroom building is clogged and causes flooding. The underground drain pipe should be inspected to ascertain the condition of the pipe.

The Principal indicated that the parking lot has only one access for cars and busses and is a bottleneck at the start and end of the school day. A second vehicular access (exit) out the back to Ashton Road or to Welsh Road or a second access back onto Welsh Road (if Zoning allows) would remediate this situation.

Site fencing is composed of chain link fencing which is in fair condition with some bent and rusting sections around the site. There is no fence and gate to close-off the entrance to the parking lot which might be a security issue. Fencing surrounding the handicap entrance and ramp is rusted, falling, bent, and should be replaced.

Landscaping is in need of trimming and maintenance.

RECOMMENDATIONS

Architectural

- Strip and reseal concrete floors in stairways, toilet rooms and part of basement, (10,000sf)
- Repoint cracked and failing masonry walls above main building entrance, at wall supporting handicap ramp into building, and other locations around building (1500sf)
- Repaint exterior metal doors and frames (18)3x7
- Replace weatherstripping on exterior metal doors (18) 3x7
- Provide new hollow metal doors and frames with narrow lite vision panels at kindergarden entrance (8) 3x7 doors.
- Repair flashing and counterflashing at brick walls on roofs (150lf)
- Re-attach ladder to roof into brick wall
- Repaint steel doors and metal frames in mechanical rooms, stairs, and basement (30) 3x7
- Refinish wood doors into classroom, toilet rooms, office, and auditorium in corridors where damaged (20) 3x7
- Provide security hardware for classrooms and offices, locking from the inside of the room (50)
- Repair and repaint interior plaster walls where damaged in corridors, classrooms, and stairways (2,000sf)

- Provide toilet room accessories where partitions are replaced (2 toilet rooms)
- Replace transite toilet room partitions with plastic partitions (4 toilet compartments)
- Remove 9”x9” VAT floors in classrooms, corridors, and auditorium with and replace with VCT (42,500sf)
- Refinish auditorium seats (30)
- Replace exterior handrails along handicap entrance stairs, complying with 2015 building codes (60ft total length) and side stairs (16ft total length)

Mechanical

- Replace all lavatories in the building with lower flow fixtures, as the fixtures are original.
- Replace all water closets in the building with lower flow fixtures, as the fixtures are original.
- Replace all urinals in the building with lower flow fixtures, as the fixtures are original.
- Replace the integral refrigerated. These units are well beyond their service life and most are NOT accessible type.
- Replace service sinks (janitor sinks) in the building.
- 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.
- Replace the underground storage tank (UST) for the fuel oil system.
- Add automatic sanitizing chemicals to the stainless steel sink in the cafeteria.
- Replace the vertical tank style natural gas fired water heater.
- Inspect and replace the original as needed the domestic water piping in the building
- 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.
- Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.
- Hire a qualified contractor to examine the steam and condensate piping in service for 53 years 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.
- Replace duplex fuel oil pumps.
- Replace the two 3,385 MBH Weil McLain 94 series steam boilers estimated to have been in service since the 1990s.
- Replace the steam convection units and any of the original radiant heating (manifold) terminals fashioned from welded piping still present in the building with finned tube elements to protect students from exposure to the hot surfaces.
- Replace the existing unit ventilators throughout the building with new units designed to provide adequate ventilation per ASHRAE Std 62. The new units shall be equipped with hot water / chilled water coils and integral heat recovery wheels. Install steam converters in the existing boiler room with circulating pumps, distribution piping and controls to provide heating hot water for the new coils. This would include removing and providing new unit ventilators for the library as well which is currently served by nit ventilators and window air conditioning units.
- Remove the window air conditioning units and install a 250 ton air-cooled chiller on the roof with chilled water distribution piping and pumps located in a mechanical room on the basement level to supply more reliable air conditioning for the building with a much longer service life.
- Provide ventilation, heating and cooling for the gymnasium by installing a packaged roof top unit.
- Provide ventilation for the corridors at first floor entryways (6 locations total) by installing fan coil air handling units hung from the structure with outdoor air ducted to the unit from louvers in the window openings
- Provide ventilation, heating and cooling for the Cafeteria by removing the existing H&V unit and installing a packaged constant volume air handling unit with distribution ductwork and registers.
- Provide ventilation, heating and cooling for the Auditorium by removing the existing H&V unit and recessed steam convectors and installing a packaged constant volume air handling unit with distribution ductwork and registers.
- Provide ventilation, heating and cooling for the Gymnasium by removing the existing H&V unit and installing a packaged constant volume air handling unit with supply air distribution ductwork and registers and a low return air system.
- 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.
- Remove existing steam boilers and steam distribution system. Install hot water boilers and hot water distribution system.

Electrical

- Upgrade the existing electrical service with new service. Replace the existing switchboard with one 1600A, 480/277,3PH, 4 wire switchboard. Provide one 150KVA, 480V to 120/208V transformer and one 600A, 120/208 volt distribution panel for the

low voltage distribution (120/208V) system.
- Upgrade the existing distribution system by replacing old panel boards with new panel boards and new feeders. Provide arc flash label on all panel boards. Estimated 18 panel boards.
- Install minimum of two receptacles in each wall in each classroom. It is recommend that surface mounted raceways with two-compartments (one for data and one for power), be installed on the computer lab walls, with receptacles at 3 feet on center.
- Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamps throughout all spaces. Provide emergency power to a sufficient number of fixtures in corridors and other egress ways.
- Replace existing emergency power generator with a 100KVA diesel generator.
- Provide new stage lighting and lighting controller in the Auditorium.
- Provide new sound system including a freestanding 19" tack back stage with mixer per amplifiers, CD player, cassette player, AM-FM radio, graphic or parametric equalizer, and receivers for wireless microphones.
- Replace existing exterior lighting fixtures with wall mounted flood lights. Estimate 20 lighting fixtures.
- Provide pole mounted area lighting in the parking area. Estimated 4 each
- Provide adequate exterior speakers at various locations to cover the site area. Estimated 10 speakers.
- Perform lightning protection studies to ascertain adequacy of existing systems.

Grounds

- Repave damaged asphalt parking lot and play area with new asphalt (32,000)
- Provide new driveway access road to Welsh Rd or to Ashton Rd for better site circulation (4000sf)
- Repair spalling concrete in ADA handicap accessible ramp into front of building (200sf)
- Replace damaged sections of chain link fence at handicap entrance (100ft 4ft tall)
- Provide new fence and gate to close-off driveways to Welsh Road and Ashton Rd. (225ft 8ft tall + (3) 25' gates)

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 2 / Tm 2
Status:	Accepted by SDP	Team:	Tm 2
Site ID:	S841001		

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.

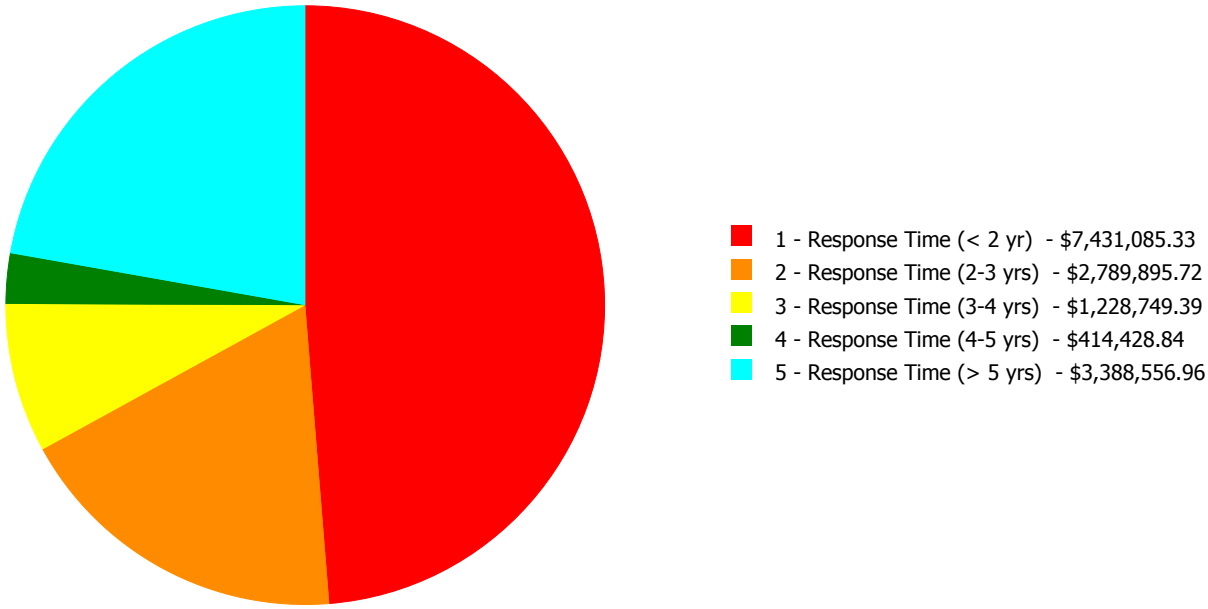
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	47.00 %	0.00 %	$0.00
A20 - Basement Construction	47.00 %	0.00 %	$0.00
B10 - Superstructure	47.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	40.30 %	3.69 %	$125,388.20
B30 - Roofing	25.00 %	0.58 %	$9,762.86
C10 - Interior Construction	43.72 %	2.67 %	$44,482.45
C20 - Stairs	47.00 %	7.97 %	$7,446.38
C30 - Interior Finishes	51.28 %	17.09 %	$519,419.64
D20 - Plumbing	108.97 %	28.60 %	$848,961.61
D30 - HVAC	107.77 %	105.36 %	$8,555,911.39
D40 - Fire Protection	105.71 %	130.50 %	$858,326.79
D50 - Electrical	110.11 %	90.81 %	$3,896,636.23
E10 - Equipment	14.29 %	7.96 %	$92,489.39
E20 - Furnishings	12.50 %	15.22 %	$23,668.48
G20 - Site Improvements	38.70 %	5.78 %	$223,914.37
G40 - Site Electrical Utilities	75.66 %	3.54 %	$46,308.45
Totals:	**66.30 %**	**32.84 %**	**$15,252,716.24**

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)
B841001;Pollock	73,000	36.31	$7,328,213.26	$2,744,451.01	$1,106,843.35	$414,428.84	$3,388,556.96
G841001;Grounds	300,400	5.22	$102,872.07	$45,444.71	$121,906.04	$0.00	$0.00
Total:		**32.84**	**$7,431,085.33**	**$2,789,895.72**	**$1,228,749.39**	**$414,428.84**	**$3,388,556.96**

Deficiencies By Priority



Budget Estimate Total: $15,252,716.24

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):	73,000
Year Built:	1962
Last Renovation:	
Replacement Value:	$41,265,792
Repair Cost:	$14,982,493.42
Total FCI:	36.31 %
Total RSLI:	68.60 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B841001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S841001		

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	47.00 %	0.00 %	$0.00
A20 - Basement Construction	47.00 %	0.00 %	$0.00
B10 - Superstructure	47.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	40.30 %	3.69 %	$125,388.20
B30 - Roofing	25.00 %	0.58 %	$9,762.86
C10 - Interior Construction	43.72 %	2.67 %	$44,482.45
C20 - Stairs	47.00 %	7.97 %	$7,446.38
C30 - Interior Finishes	51.28 %	17.09 %	$519,419.64
D20 - Plumbing	108.97 %	28.60 %	$848,961.61
D30 - HVAC	107.77 %	105.36 %	$8,555,911.39
D40 - Fire Protection	105.71 %	130.50 %	$858,326.79
D50 - Electrical	110.11 %	90.81 %	$3,896,636.23
E10 - Equipment	14.29 %	7.96 %	$92,489.39
E20 - Furnishings	12.50 %	15.22 %	$23,668.48
Totals:	**68.60 %**	**36.31 %**	**$14,982,493.42**

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.	73,000	100	1962	2062		47.00 %	0.00 %	47			$1,775,360
A1030	Slab on Grade	$15.51	S.F.	73,000	100	1962	2062		47.00 %	0.00 %	47			$1,132,230
A2010	Basement Excavation	$13.07	S.F.	73,000	100	1962	2062		47.00 %	0.00 %	47			$954,110
A2020	Basement Walls	$23.02	S.F.	73,000	100	1962	2062		47.00 %	0.00 %	47			$1,680,460
B1010	Floor Construction	$92.20	S.F.	73,000	100	1962	2062		47.00 %	0.00 %	47			$6,730,600
B1020	Roof Construction	$24.11	S.F.	73,000	100	1962	2062		47.00 %	0.00 %	47			$1,760,030
B2010	Exterior Walls	$31.22	S.F.	73,000	100	1962	2062		47.00 %	2.27 %	47		$51,762.82	$2,279,060
B2020	Exterior Windows	$13.63	S.F.	73,000	40	1962	2002	2025	25.00 %	0.00 %	10			$994,990
B2030	Exterior Doors	$1.67	S.F.	73,000	25	1962	1987	2025	40.00 %	60.39 %	10		$73,625.38	$121,910
B3010105	Built-Up	$37.76	S.F.	43,800	20	1962	1982	2020	25.00 %	0.59 %	5		$9,762.86	$1,653,888
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.	43,800	20	1962	1982	2020	25.00 %	0.00 %	5			$29,784
C1010	Partitions	$14.93	S.F.	73,000	100	1962	2062		47.00 %	0.00 %	47			$1,089,890
C1020	Interior Doors	$3.76	S.F.	73,000	40	1962	2002	2030	37.50 %	12.06 %	15		$33,111.83	$274,480
C1030	Fittings	$4.12	S.F.	73,000	40	1962	2002	2030	37.50 %	3.78 %	15		$11,370.62	$300,760
C2010	Stair Construction	$1.28	S.F.	73,000	100	1962	2062		47.00 %	7.97 %	47		$7,446.38	$93,440

Site Assessment Report - B841001;Pollock

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.	73,000	10	2010	2020		50.00 %	1.12 %	5		$10,821.16	$964,330
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.	2,500	10	2010	2020		50.00 %	0.00 %	5			$18,250
C3020412	Terrazzo & Tile	$75.52	S.F.		50				0.00 %	0.00 %				$0
C3020413	Vinyl Flooring	$9.68	S.F.	52,500	20	1962	1982	2037	110.00 %	94.34 %	22		$479,448.35	$508,200
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	18,000	50	1962	2012	2067	104.00 %	166.95 %	52		$29,150.13	$17,460
C3030	Ceiling Finishes	$20.97	S.F.	73,000	25	1962	1987	2023	32.00 %	0.00 %	8			$1,530,810
D2010	Plumbing Fixtures	$31.58	S.F.	73,000	35	1962	1997	2052	105.71 %	18.33 %	37		$422,585.39	$2,305,340
D2020	Domestic Water Distribution	$2.90	S.F.	73,000	25	1962	1987	2047	128.00 %	32.24 %	32		$68,256.49	$211,700
D2030	Sanitary Waste	$2.90	S.F.	73,000	25	1962	1987	2047	128.00 %	169.16 %	32		$358,119.73	$211,700
D2040	Rain Water Drainage	$3.29	S.F.	73,000	30	1962	1992	2047	106.67 %	0.00 %	32			$240,170
D3020	Heat Generating Systems	$18.67	S.F.	73,000	35	1962	1997	2052	105.71 %	50.07 %	37		$682,474.97	$1,362,910
D3030	Cooling Generating Systems	$24.48	S.F.	73,000	30	1962	1992	2047	106.67 %	67.40 %	32		$1,204,454.53	$1,787,040
D3040	Distribution Systems	$42.99	S.F.	73,000	25	1962	1987	2042	108.00 %	161.24 %	27		$5,060,075.04	$3,138,270
D3050	Terminal & Package Units	$11.60	S.F.	73,000	20	1962	1982	2037	110.00 %	0.00 %	22			$846,800
D3060	Controls & Instrumentation	$13.50	S.F.	73,000	20	1962	1982	2037	110.00 %	163.26 %	22		$1,608,906.85	$985,500
D4010	Sprinklers	$8.02	S.F.	73,000	35	1962	1997	2052	105.71 %	146.61 %	37		$858,326.79	$585,460
D4020	Standpipes	$0.99	S.F.	73,000	35	1962	1997	2052	105.71 %	0.00 %	37			$72,270
D5010	Electrical Service/Distribution	$9.70	S.F.	73,000	30	1962	1992	2047	106.67 %	208.01 %	32		$1,472,911.72	$708,100
D5020	Lighting and Branch Wiring	$34.68	S.F.	73,000	20	1962	1982	2037	110.00 %	71.04 %	22		$1,798,514.69	$2,531,640
D5030	Communications and Security	$12.99	S.F.	73,000	15	1962	1977	2032	113.33 %	38.63 %	17		$366,332.09	$948,270
D5090	Other Electrical Systems	$1.41	S.F.	73,000	30	1962	1992	2047	106.67 %	251.51 %	32		$258,877.73	$102,930
E1020	Institutional Equipment	$4.82	S.F.	73,000	35	1962	1997	2020	14.29 %	26.29 %	5		$92,489.39	$351,860
E1090	Other Equipment	$11.10	S.F.	73,000	35	1962	1997	2020	14.29 %	0.00 %	5			$810,300
E2010	Fixed Furnishings	$2.13	S.F.	73,000	40	1962	2002	2020	12.50 %	15.22 %	5		$23,668.48	$155,490
								Total	**68.60 %**	**36.31 %**			**$14,982,493.42**	**$41,265,792**

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: C1010 - Partitions — This system contains no images

Note: painted block 100%

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

Note:
Concrete: 18,000 25%
Carpet: 2,500 3%
VAT: 42,500 58%
VCT: 10,000 14%

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

Note:
Glued-on Acoustical Tile Ceiling: 14%
Painted Concrete Plank: 86%

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:	**$14,982,493**	**$0**	**$0**	**$0**	**$0**	**$5,080,278**	**$0**	**$0**	**$2,133,103**	**$0**	**$1,651,122**	**$23,846,996**
*** 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	$51,763	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$51,763**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,470,902	**$1,470,902**
B2030 - Exterior Doors	$73,625	$0	$0	$0	$0	$0	$0	$0	$0	$0	$180,221	**$253,846**
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	$9,763	$0	$0	$0	$0	$2,109,041	$0	$0	$0	$0	$0	**$2,118,804**
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	$37,980	$0	$0	$0	$0	$0	**$37,980**
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**

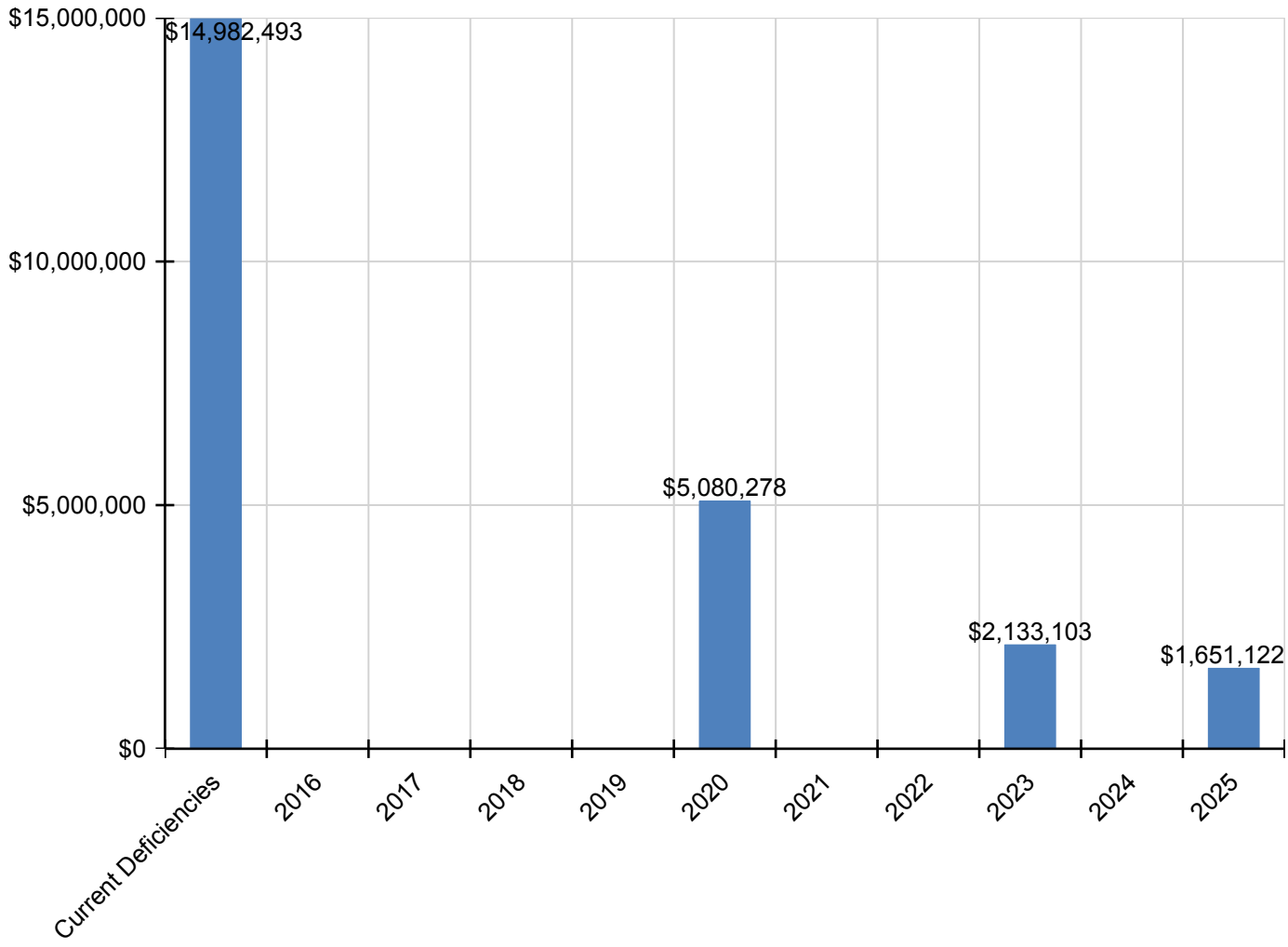
C1020 - Interior Doors	$33,112	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$33,112**
C1030 - Fittings	$11,371	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$11,371**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$7,446	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$7,446**
C30 - Interior Finishes	$0	$0	$0	$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	$10,821	$0	$0	$0	$0	$1,229,715	$0	$0	$0	$0	$0	**$1,240,536**
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	$23,272	$0	$0	$0	$0	$0	**$23,272**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$479,448	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$479,448**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$29,150	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$29,150**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$2,133,103	$0	$0	**$2,133,103**
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	$422,585	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$422,585**
D2020 - Domestic Water Distribution	$68,256	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$68,256**
D2030 - Sanitary Waste	$358,120	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$358,120**
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	$682,475	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$682,475**
D3030 - Cooling Generating Systems	$1,204,455	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,204,455**
D3040 - Distribution Systems	$5,060,075	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$5,060,075**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,608,907	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,608,907**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$858,327	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$858,327**
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	$1,472,912	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,472,912**

D5020 - Lighting and Branch Wiring	$1,798,515	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,798,515**
D5030 - Communications and Security	$366,332	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$366,332**
D5090 - Other Electrical Systems	$258,878	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$258,878**
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	$92,489	$0	$0	$0	$0	$448,692	$0	$0	$0	$0	$0	**$541,182**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$1,033,296	$0	$0	$0	$0	$0	**$1,033,296**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$23,668	$0	$0	$0	$0	$198,281	$0	$0	$0	$0	$0	**$221,950**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

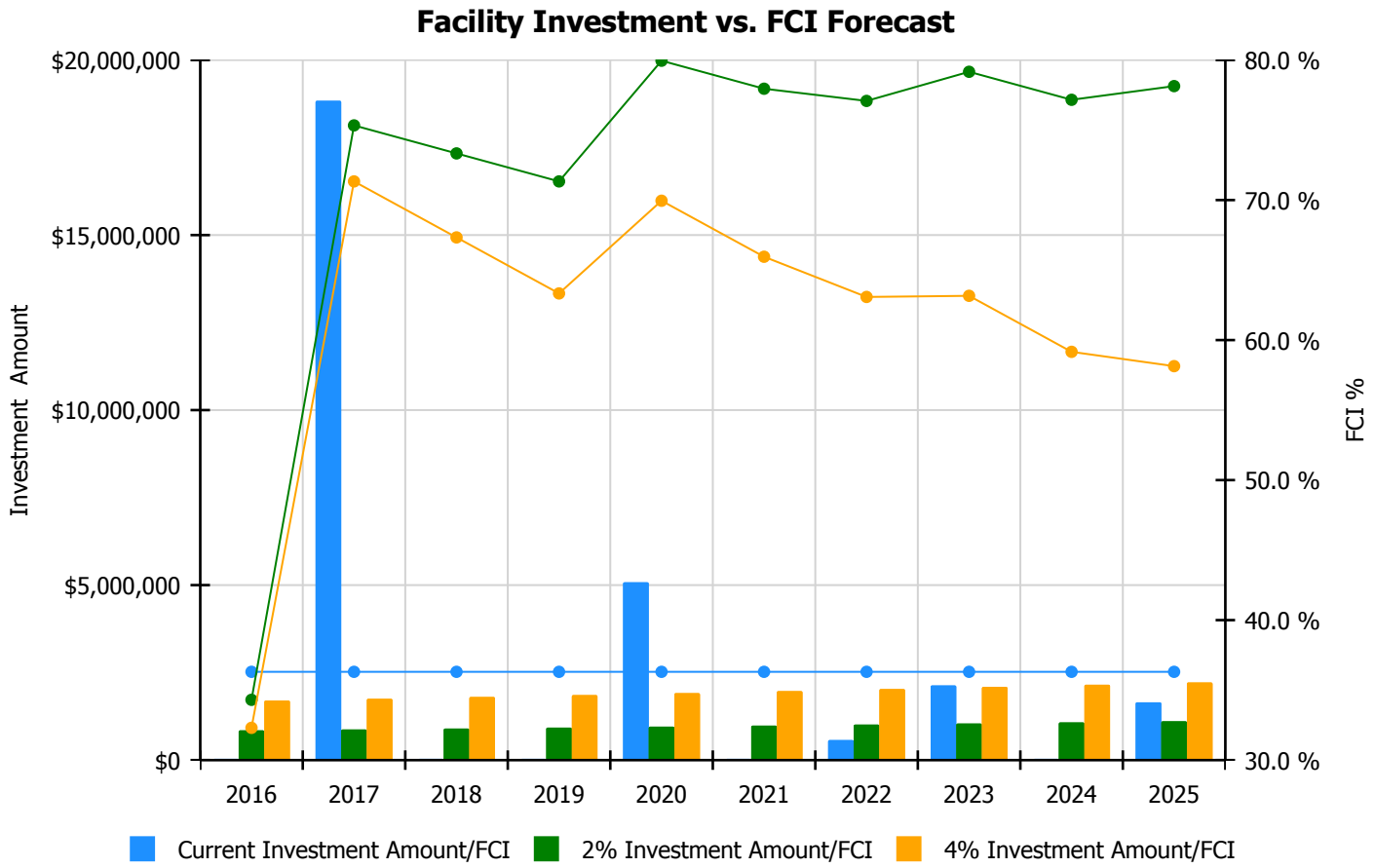
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

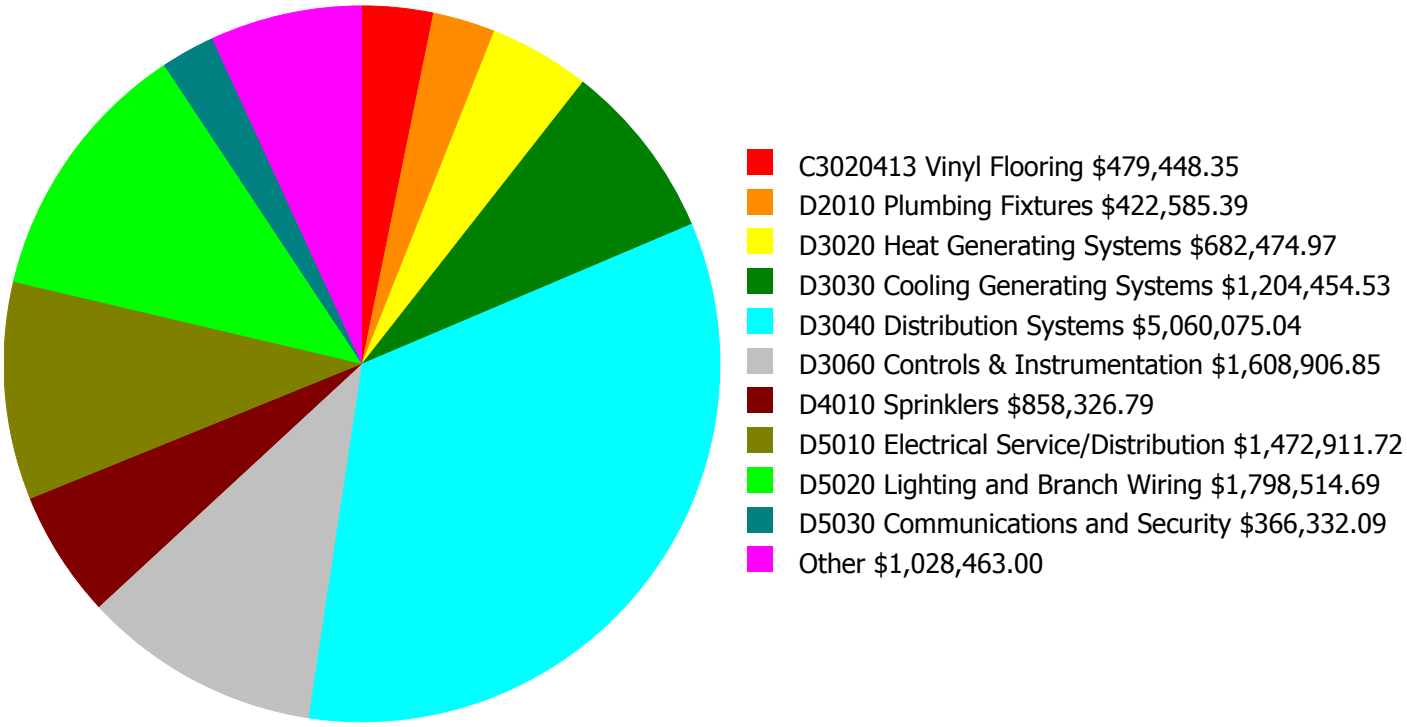
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 36.31%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$850,075.00	34.31 %	$1,700,151.00	32.31 %
2017	$18,835,639	$875,578.00	75.33 %	$1,751,155.00	71.33 %
2018	$0	$901,845.00	73.33 %	$1,803,690.00	67.33 %
2019	$0	$928,900.00	71.33 %	$1,857,800.00	63.33 %
2020	$5,080,278	$956,767.00	79.95 %	$1,913,535.00	69.95 %
2021	$0	$985,470.00	77.95 %	$1,970,941.00	65.95 %
2022	$572,801	$1,015,034.00	77.08 %	$2,030,069.00	63.08 %
2023	$2,133,103	$1,045,485.00	79.16 %	$2,090,971.00	63.16 %
2024	$0	$1,076,850.00	77.16 %	$2,153,700.00	59.16 %
2025	$1,651,122	$1,109,155.00	78.14 %	$2,218,311.00	58.14 %
Total:	**$28,272,943**	**$9,745,159.00**		**$19,490,323.00**	

Deficiency Summary by System

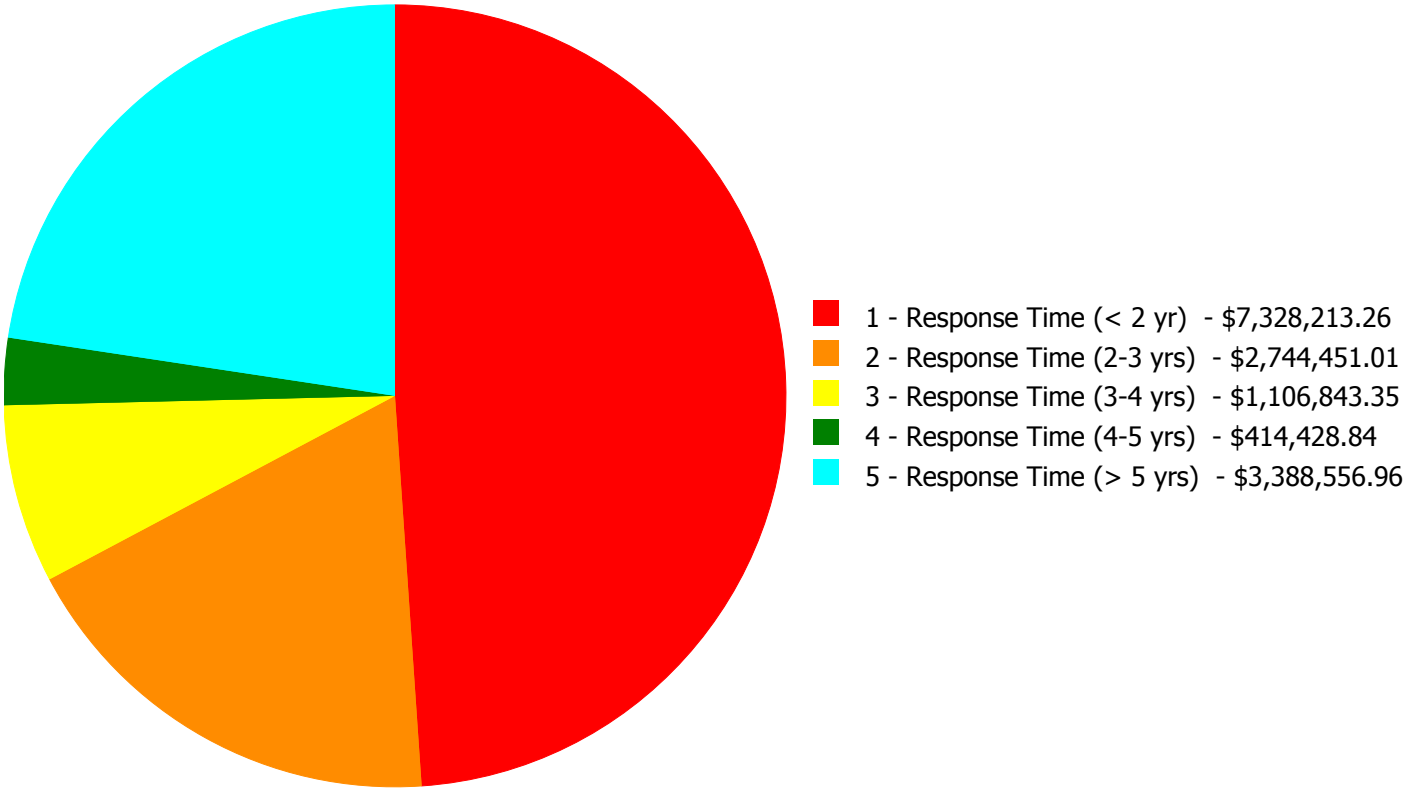
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $14,982,493.42

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: $14,982,493.42

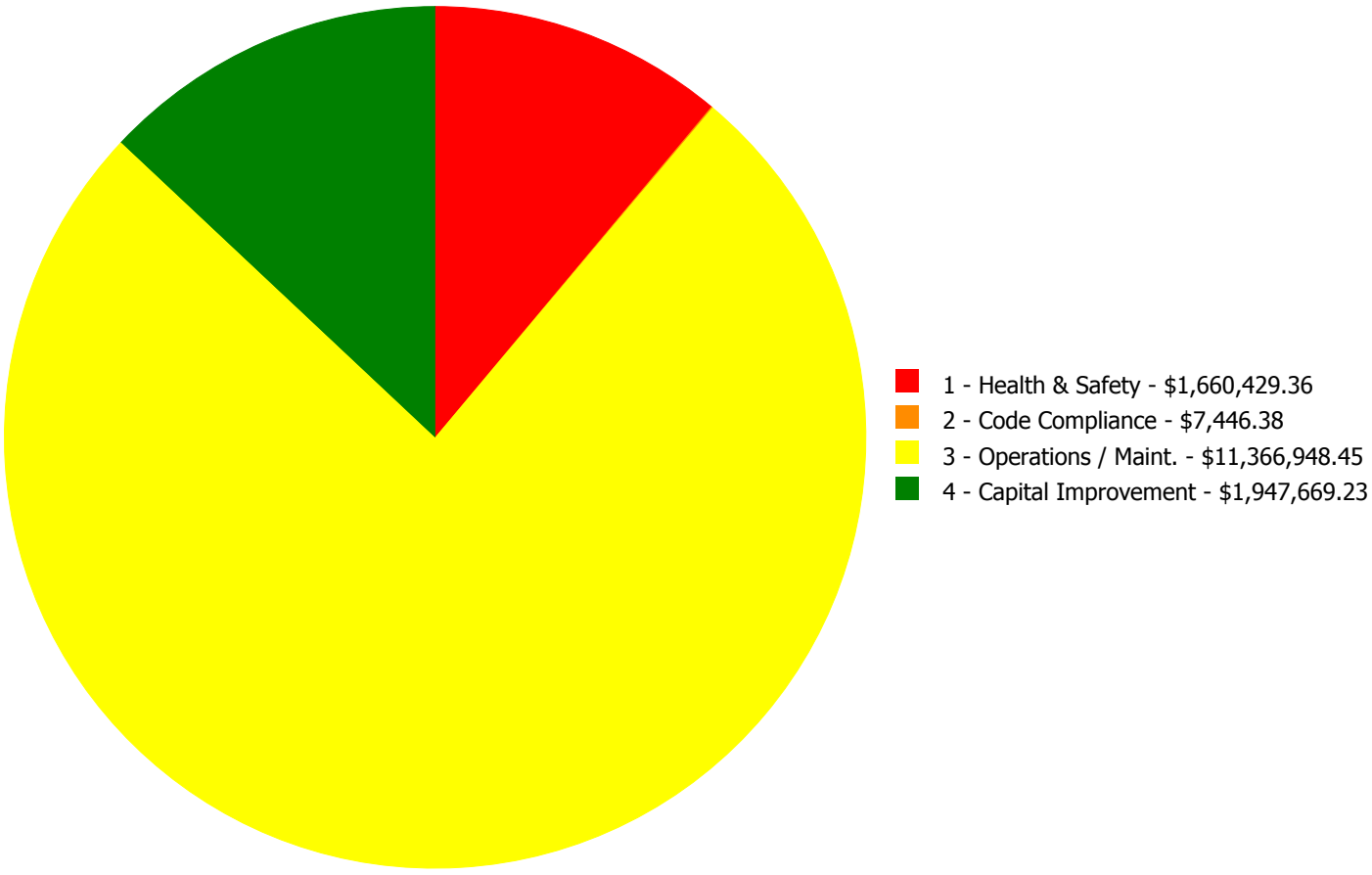
Deficiency By Priority Investment Table

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	$51,762.82	$0.00	$0.00	$0.00	$51,762.82
B2030	Exterior Doors	$0.00	$73,625.38	$0.00	$0.00	$0.00	$73,625.38
B3010105	Built-Up	$9,762.86	$0.00	$0.00	$0.00	$0.00	$9,762.86
C1020	Interior Doors	$0.00	$33,111.83	$0.00	$0.00	$0.00	$33,111.83
C1030	Fittings	$0.00	$11,370.62	$0.00	$0.00	$0.00	$11,370.62
C2010	Stair Construction	$7,446.38	$0.00	$0.00	$0.00	$0.00	$7,446.38
C3010230	Paint & Covering	$0.00	$10,821.16	$0.00	$0.00	$0.00	$10,821.16
C3020413	Vinyl Flooring	$0.00	$479,448.35	$0.00	$0.00	$0.00	$479,448.35
C3020415	Concrete Floor Finishes	$0.00	$29,150.13	$0.00	$0.00	$0.00	$29,150.13
D2010	Plumbing Fixtures	$0.00	$422,585.39	$0.00	$0.00	$0.00	$422,585.39
D2020	Domestic Water Distribution	$0.00	$0.00	$68,256.49	$0.00	$0.00	$68,256.49
D2030	Sanitary Waste	$0.00	$0.00	$358,119.73	$0.00	$0.00	$358,119.73
D3020	Heat Generating Systems	$0.00	$0.00	$655,796.89	$0.00	$26,678.08	$682,474.97
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,204,454.53	$1,204,454.53
D3040	Distribution Systems	$3,760,977.48	$0.00	$0.00	$0.00	$1,299,097.56	$5,060,075.04
D3060	Controls & Instrumentation	$0.00	$1,608,906.85	$0.00	$0.00	$0.00	$1,608,906.85
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$858,326.79	$858,326.79
D5010	Electrical Service/Distribution	$1,472,911.72	$0.00	$0.00	$0.00	$0.00	$1,472,911.72
D5020	Lighting and Branch Wiring	$1,798,514.69	$0.00	$0.00	$0.00	$0.00	$1,798,514.69
D5030	Communications and Security	$44,392.64	$0.00	$0.00	$321,939.45	$0.00	$366,332.09
D5090	Other Electrical Systems	$234,207.49	$0.00	$24,670.24	$0.00	$0.00	$258,877.73
E1020	Institutional Equipment	$0.00	$0.00	$0.00	$92,489.39	$0.00	$92,489.39
E2010	Fixed Furnishings	$0.00	$23,668.48	$0.00	$0.00	$0.00	$23,668.48
	Total:	$7,328,213.26	$2,744,451.01	$1,106,843.35	$414,428.84	$3,388,556.96	$14,982,493.42

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: $14,982,493.42

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: B3010105 - Built-Up

Location: roof flashing at brick

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Repair or replace flashing where it connects to masonry parapet - choose proper material

Qty: 150.00

Unit of Measure: L.F.

Estimate: $9,762.86

Assessor Name: System

Date Created: 09/29/2015

Notes: Repair flashing and counterflashing at brick walls on roofs (150lf)

System: C2010 - Stair Construction

Location: exterior stair near ramp

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

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

Qty: 16.00

Unit of Measure: L.F.

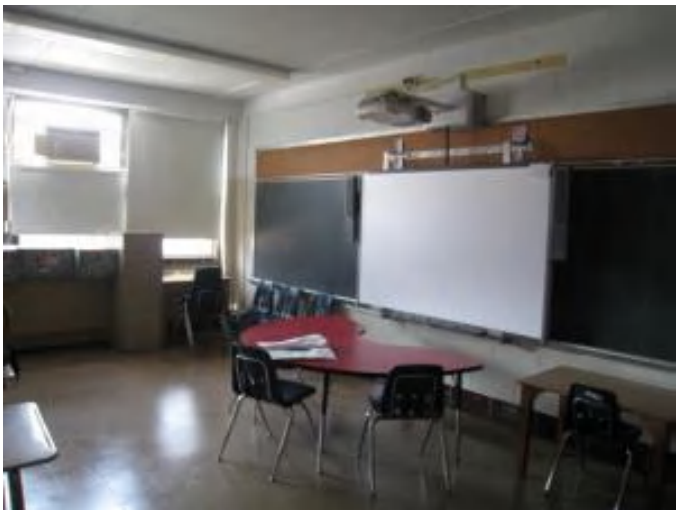
Estimate: $7,446.38

Assessor Name: System

Date Created: 09/29/2015

Notes: Replace exterior handrails along handicap entrance stairs, complying with 2015 building codes (60ft total length) and side stairs (16ft total length)

System: D3040 - Distribution Systems



Location: Throughout the school

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 73,000.00

Unit of Measure: S.F.

Estimate: $3,521,456.54

Assessor Name: System

Date Created: 11/16/2015

Notes: Replace the existing unit ventilators throughout the building with new units designed to provide adequate ventilation per ASHRAE Std 62. The new units shall be equipped with hot water / chilled water coils and integral heat recovery wheels. Install steam converters in the existing boiler room with circulating pumps, distribution piping and controls to provide heating hot water for the new coils. This would include removing and providing new unit ventilators for the library as well which is currently served by nit ventilators and window air conditioning units.

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 73,000.00

Unit of Measure: S.F.

Estimate: $239,520.94

Assessor Name: System

Date Created: 11/16/2015

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

System: D5010 - Electrical Service/Distribution

Location: Boiler Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add Electrical Switchgear and Distribution System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $999,249.71

Assessor Name: System

Date Created: 09/02/2015

Notes: Upgrade the existing electrical service with a new service. Replace the existing switchboard with new1600A, 480/277,3PH, 4 wire switchboard. Provide one 150KVA, 480V to 120/208V transformers and one 120/208 volt distribution panel for providing power to kitchen equipment, lighting/receptacle panels and other 208/120V loads.

System: D5010 - Electrical Service/Distribution

Location: Entier Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Electrical Distribution System (U)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $473,662.01

Assessor Name: System

Date Created: 09/02/2015

Notes: Upgrade existing distribution system by replacing new panel boards and new feeders. Provide arc flush label on all panel boards. Estimated 18 panel boards.

System: D5020 - Lighting and Branch Wiring

Location: entier building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Lighting Fixtures (SF)

Qty: 1.00

Unit of Measure: S.F.

Estimate: $1,227,609.32

Assessor Name: System

Date Created: 09/02/2015

Notes: Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamp throughout all buildings. Provide emergency power to sufficient number of lights in corridors and other egress ways.

System: D5020 - Lighting and Branch Wiring

Location: Entier Building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

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

Qty: 1.00

Unit of Measure: S.F.

Estimate: $523,048.65

Assessor Name: System

Date Created: 09/02/2015

Notes: Install minimum two receptacles in each wall of class rooms. It is recommend that surface mounted raceway with tow-compartment, for data and power, be installed in the computer lab room.

System: D5020 - Lighting and Branch Wiring

Location: Exterior wall

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Add Exterior Lighting

Qty: 1.00

Unit of Measure: Ea.

Estimate: $47,856.72

Assessor Name: System

Date Created: 09/02/2015

Notes: Replace existing exterior lighting fixtures with wall mounted flood light. Estimate 20 lighting fixtures

System: D5030 - Communications and Security

Location: Auditorium

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Sound System

Qty: 1.00

Unit of Measure: LS

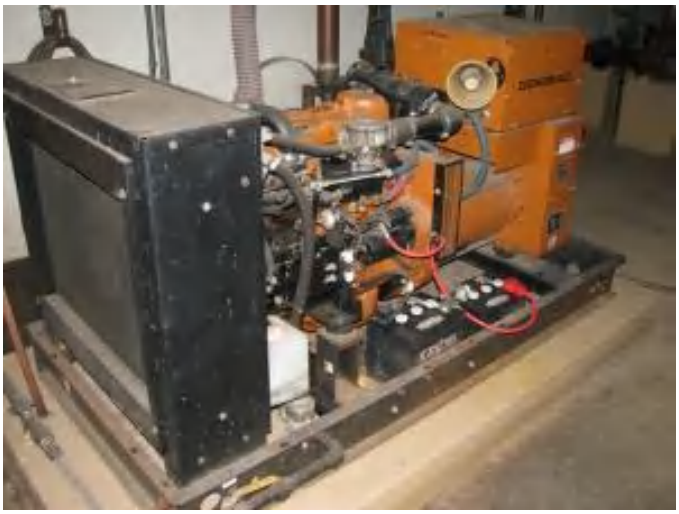
Estimate: $44,392.64

Assessor Name: System

Date Created: 09/02/2015

Notes: Provide new sound system including a freestanding 19” tack back stage with mixer per amplifiers, CD player, cassette player, AM-FM radio, graphic or parametric equalizer, and receivers for wireless microphone.

System: D5090 - Other Electrical Systems



Location: Boiler Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add Standby Generator System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $234,207.49

Assessor Name: System

Date Created: 09/02/2015

Notes: Replace existing emergency power system with 100KVA diesel generator.

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

System: B2010 - Exterior Walls

Location: exterior brick walls

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 1,500.00

Unit of Measure: S.F.

Estimate: $48,434.21

Assessor Name: System

Date Created: 09/29/2015

Notes: Repoint cracked and failing masonry walls above main building entrance, at wall supporting handicap ramp into building, and other locations around building (1500sf)

System: B2010 - Exterior Walls

Location: ladder to roof

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Add fixed ladders to wall

Qty: 12.00

Unit of Measure: V.L.F.

Estimate: $3,328.61

Assessor Name: System

Date Created: 09/29/2015

Notes: Re-attach ladder to roof into brick wall

System: B2030 - Exterior Doors

Location: exterior doors at kindergarden
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace exterior doors - per leaf
Qty: 8.00
Unit of Measure: Ea.
Estimate: $53,188.37
Assessor Name: System
Date Created: 09/29/2015

Notes: Provide new hollow metal doors and frames with narrow lite vision panels at kindergarden entrance (8) 3x7 doors.

System: B2030 - Exterior Doors

Location: exterior doors
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Refinish and repaint exterior doors - per leaf
Qty: 18.00
Unit of Measure: Ea.
Estimate: $10,750.60
Assessor Name: System
Date Created: 09/29/2015

Notes: Repaint exterior metal doors and frames (18)3x7

System: B2030 - Exterior Doors

Location: exterior doors
Distress: Building Envelope Integrity
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace exterior doors - per leaf
Qty: 18.00
Unit of Measure: Ea.
Estimate: $9,686.41
Assessor Name: System
Date Created: 09/29/2015

Notes: Replace weatherstripping on exterior metal doors (18) 3x7

System: C1020 - Interior Doors

Location: corridor doors
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Refinish interior doors
Qty: 20.00
Unit of Measure: Ea.
Estimate: $16,563.66
Assessor Name: System
Date Created: 09/29/2015

Notes: Refinish wood doors into classroom, toilet rooms, office, and auditorium in corridors where damaged (20) 3x7

System: C1020 - Interior Doors

Location: classroom and office doors

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Provide security hardware for classroom and office doors

Qty: 50.00

Unit of Measure: Ea.

Estimate: $11,471.83

Assessor Name: System

Date Created: 09/29/2015

Notes: Provide security hardware for classrooms and offices, locking from the inside of the room (50)

System: C1020 - Interior Doors

Location: basement, stair doors

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Repair and repaint HM door frames - per frame

Qty: 30.00

Unit of Measure: Ea.

Estimate: $5,076.34

Assessor Name: System

Date Created: 09/29/2015

Notes: Repaint steel doors and metal frames in mechanical rooms, stairs, and basement (30) 3x7

System: C1030 - Fittings

Location: toilet rooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace toilet accessories - select accessories and quantity

Qty: 4.00

Unit of Measure: Ea.

Estimate: $7,459.20

Assessor Name: System

Date Created: 09/29/2015

Notes: Provide toilet room accessories where partitions are replaced (2 toilet rooms)

System: C1030 - Fittings

Location: toilet rooms

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace damaged toilet paritions - handicap units

Qty: 4.00

Unit of Measure: Ea.

Estimate: $3,911.42

Assessor Name: System

Date Created: 09/29/2015

Notes: Replace transite toilet room partitions with plastic partitions (4 toilet compartments)

System: C3010230 - Paint & Covering

Location: interior walls

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Repair substrate and repaint interior concrete or CMU walls - SF of wall surface

Qty: 2,000.00

Unit of Measure: S.F.

Estimate: $10,821.16

Assessor Name: System

Date Created: 09/29/2015

Notes: Repair and repaint interior plaster walls where damaged in corridors, classrooms, and stairways (2,000sf)

System: C3020413 - Vinyl Flooring

Location: corridors, classrooms, auditorium

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 42,500.00

Unit of Measure: S.F.

Estimate: $479,448.35

Assessor Name: System

Date Created: 09/29/2015

Notes: Remove 9”x9” VAT floors in classrooms, corridors, and auditorium with and replace with VCT (42,500sf)

System: C3020415 - Concrete Floor Finishes

Location: basement, toilet rooms, stairs

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Clean and reseal concrete floors

Qty: 10,000.00

Unit of Measure: S.F.

Estimate: $29,150.13

Assessor Name: System

Date Created: 09/29/2015

Notes: Strip and reseal concrete floors in stairways, toilet rooms and part of basement, (10,000sf)

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 26.00

Unit of Measure: Ea.

Estimate: $194,015.84

Assessor Name: System

Date Created: 11/16/2015

Notes: Replace all water closets in the building with lower flow fixtures, as the fixtures are original.

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 8.00

Unit of Measure: Ea.

Estimate: $125,543.18

Assessor Name: System

Date Created: 11/16/2015

Notes: Replace the wall hung drinking fountains and integral refrigerated coolers in the corridors and at the restrooms. These units are well beyond their service life and most are NOT accessible type.

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 16.00

Unit of Measure: Ea.

Estimate: $53,105.34

Assessor Name: System

Date Created: 11/16/2015

Notes: Replace all urinals in the building with lower flow fixtures, as the fixtures are original.

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 6.00

Unit of Measure: Ea.

Estimate: $47,188.24

Assessor Name: System

Date Created: 11/16/2015

Notes: Replace service sinks (janitor sinks) in the building.

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace lavatory - quantify accessible if required

Qty: 16.00

Unit of Measure: Ea.

Estimate: $2,732.79

Assessor Name: System

Date Created: 11/16/2015

Notes: Replace all lavatories in the building with lower flow fixtures, as the fixtures are original.

System: D3060 - Controls & Instrumentation

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 75,000.00

Unit of Measure: S.F.

Estimate: $1,608,906.85

Assessor Name: System

Date Created: 11/16/2015

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

System: E2010 - Fixed Furnishings

Location: auditorium

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 30.00

Unit of Measure: Ea.

Estimate: $23,668.48

Assessor Name: System

Date Created: 09/29/2015

Notes: Refinish auditorium seats (30)

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

System: D2020 - Domestic Water Distribution

Location: Boiler Mechanical Equipment Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $68,256.49

Assessor Name: System

Date Created: 11/16/2015

Notes: Replace the vertical tank style natural gas fired water heater.

System: D2030 - Sanitary Waste

Location: Throughout the 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: 73,000.00

Unit of Measure: S.F.

Estimate: $358,119.73

Assessor Name: System

Date Created: 11/16/2015

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

System: D3020 - Heat Generating Systems

Location: Boiler Mechanical Equipment Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace boiler, cast iron sectional (100 HP)

Qty: 2.00

Unit of Measure: Ea.

Estimate: $655,796.89

Assessor Name: System

Date Created: 11/16/2015

Notes: Replace the two 3,385 MBH Weil McLain 94 series steam boilers estimated to have been in service since the 19790s

System: D5090 - Other Electrical Systems

Location: Roof

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Repair Lightning Protection System

Qty: 1.00

Unit of Measure: Job

Estimate: $24,670.24

Assessor Name: System

Date Created: 09/02/2015

Notes: Perform lightning protection studies to ascertain adequacy of existing systems.

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

System: D5030 - Communications and Security

Location: Entire Building
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Video Surveillance System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $286,512.15
Assessor Name: System
Date Created: 09/03/2015

Notes: Provide an adequate video surveillance system including camera and Closed Circuit Television (CCTV) for monitoring the system. Cameras should install in the corridors, school entrance doors and on the walls around the building. Provide monitor in main office and building engineer office.

System: D5030 - Communications and Security

Location: Exterior Building
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Paging System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $35,427.30
Assessor Name: System
Date Created: 09/02/2015

Notes: Provide adequate exterior speakers on different locations to cover the area. Estimate 10 speakers.

System: E1020 - Institutional Equipment

Location: Auditorium

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $92,489.39

Assessor Name: System

Date Created: 09/02/2015

Notes: Provide new stage lighting and lighting controller in the Auditorium.

Priority 5 - Response Time (> 5 yrs):

System: D3020 - Heat Generating Systems

Location: Boiler Mechanical Equipment Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace fuel oil pumps

Qty: 1.00

Unit of Measure: Ea.

Estimate: $26,678.08

Assessor Name: System

Date Created: 11/16/2015

Notes: Replace duplex fuel oil pumps.

System: D3030 - Cooling Generating Systems

Location: Throughout the 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: 75,000.00

Unit of Measure: S.F.

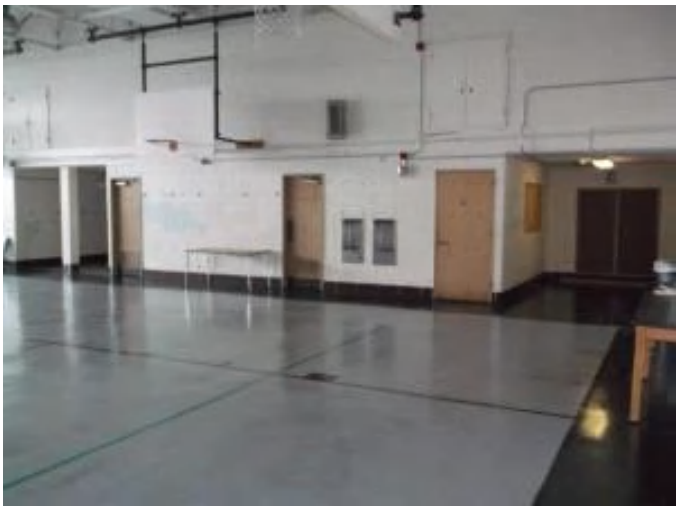
Estimate: $1,204,454.53

Assessor Name: System

Date Created: 11/16/2015

Notes: Remove the window air conditioning units and install a 250 ton air-cooled chiller on the roof with chilled water distribution piping and pumps located in a mechanical room on the basement level to supply more reliable air conditioning for the building with a much longer service life.

System: D3040 - Distribution Systems



Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 12,000.00

Unit of Measure: Ea.

Estimate: $616,602.09

Assessor Name: System

Date Created: 11/16/2015

Notes: Provide ventilation, heating and cooling for the Gymnasium by removing the existing HV unit and installing a packaged constant volume air handling unit with supply air distribution ductwork and registers and a low return air system.

System: D3040 - Distribution Systems

Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 850.00

Unit of Measure: Pr.

Estimate: $397,410.06

Assessor Name: System

Date Created: 11/16/2015

Notes: Provide ventilation, heating and cooling for the Cafeteria by removing the existing unit ventilators, HV unit and installing a packaged rooftop constant volume air handling unit with distribution ductwork and registers.

System: D3040 - Distribution Systems

Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 200.00

Unit of Measure: Seat

Estimate: $285,085.41

Assessor Name: System

Date Created: 11/16/2015

Notes: Provide ventilation, heating and cooling for the Auditorium by removing the existing HV unit and recessed steam convectors and installing a packaged constant volume air handling unit with distribution ductwork and registers

System: D4010 - Sprinklers

Location: Throughout the building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Install a fire protection sprinkler system

Qty: 60,000.00

Unit of Measure: S.F.

Estimate: $858,326.79

Assessor Name: System

Date Created: 11/16/2015

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

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 3770 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler Mechanical Equipment Room	Weil McLain	Model 1994			35	1991	2026	$101,088.50	$222,394.70
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 3770 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler Mechanical Equipment Room	Weil McLain	Model 1994			35	1991	2026	$101,088.50	$222,394.70
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 400 amp, excl breakers	1.00	Ea.	Boiler Room					30	1962	2017	$3,291.30	$3,620.43
												Total:	**$448,409.83**

Executive Summary

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

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

Function:	
Gross Area (SF):	300,400
Year Built:	1962
Last Renovation:	
Replacement Value:	$5,178,478
Repair Cost:	$270,222.82
Total FCI:	5.22 %
Total RSLI:	48.03 %

Description:

Attributes:

General Attributes:

Bldg ID:	S841001	Site ID:	S841001

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	38.70 %	5.78 %	$223,914.37
G40 - Site Electrical Utilities	75.66 %	3.54 %	$46,308.45
Totals:	**48.03 %**	**5.22 %**	**$270,222.82**

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.	5,500	30	1962	1992	2025	33.33 %	0.00 %	10			$63,360
G2020	Parking Lots	$7.65	S.F.	43,600	30	1962	1992	2025	33.33 %	53.51 %	10		$178,469.66	$333,540
G2030	Pedestrian Paving	$11.52	S.F.	157,000	40	1962	2002	2025	25.00 %	0.16 %	10		$2,876.57	$1,808,640
G2040	Site Development	$4.36	S.F.	300,400	25	1962	1987	2027	48.00 %	3.25 %	12		$42,568.14	$1,309,744
G2050	Landscaping & Irrigation	$3.78	S.F.	94,300	15	1962	1977	2027	80.00 %	0.00 %	12			$356,454
G4020	Site Lighting	$3.58	S.F.	300,400	30	1962	1992	2040	83.33 %	4.31 %	25		$46,308.45	$1,075,432
G4030	Site Communications & Security	$0.77	S.F.	300,400	30	1962	1992	2027	40.00 %	0.00 %	12			$231,308
								Total	**48.03 %**	**5.22 %**			**$270,222.82**	**$5,178,478**

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.

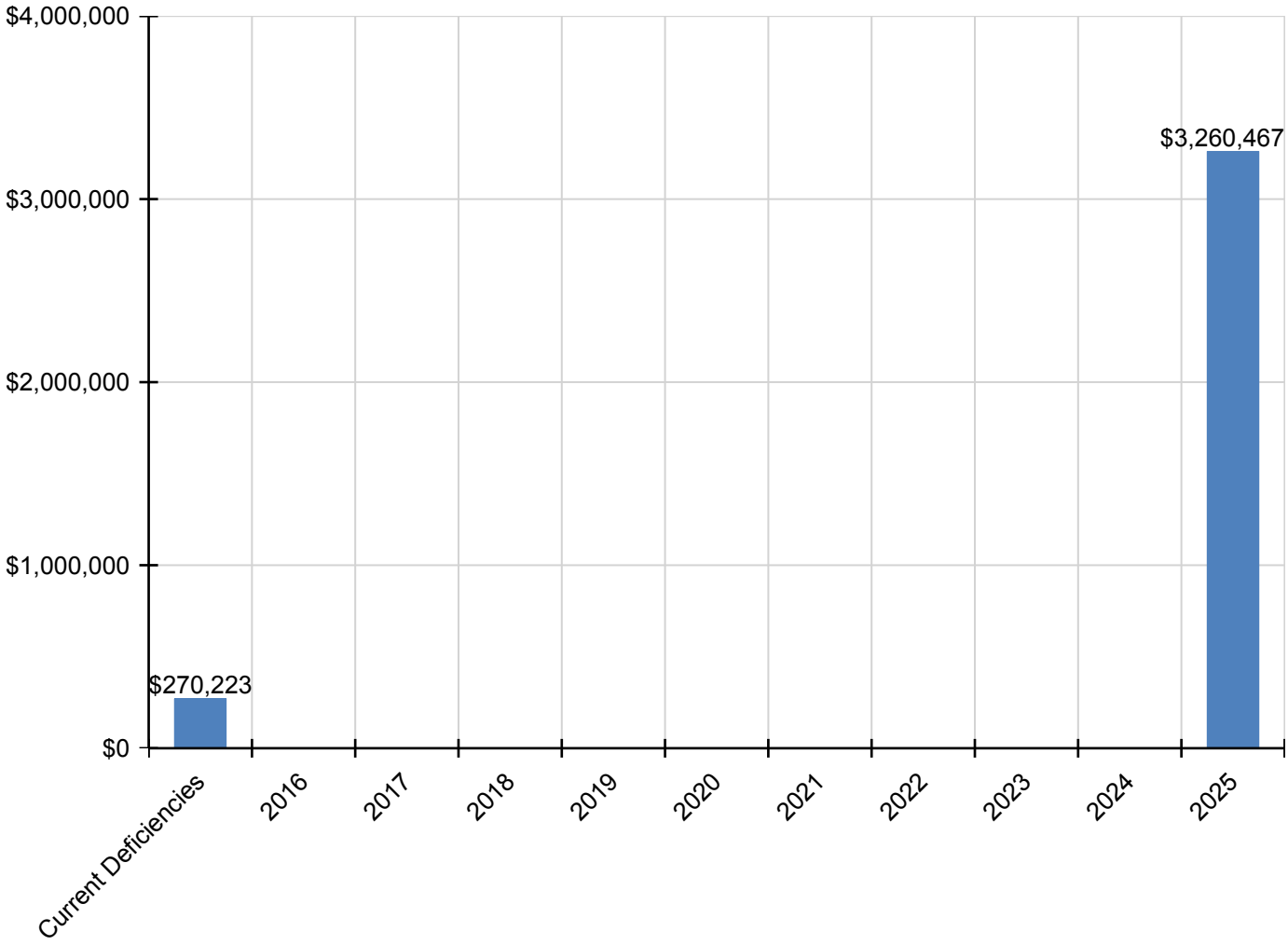
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$270,223**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$3,260,467**	**$3,530,690**
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	$93,666	**$93,666**
G2020 - Parking Lots	$178,470	$0	$0	$0	$0	$0	$0	$0	$0	$0	$493,075	**$671,545**
G2030 - Pedestrian Paving	$2,877	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,673,727	**$2,676,604**
G2040 - Site Development	$42,568	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$42,568**
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	$46,308	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$46,308**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

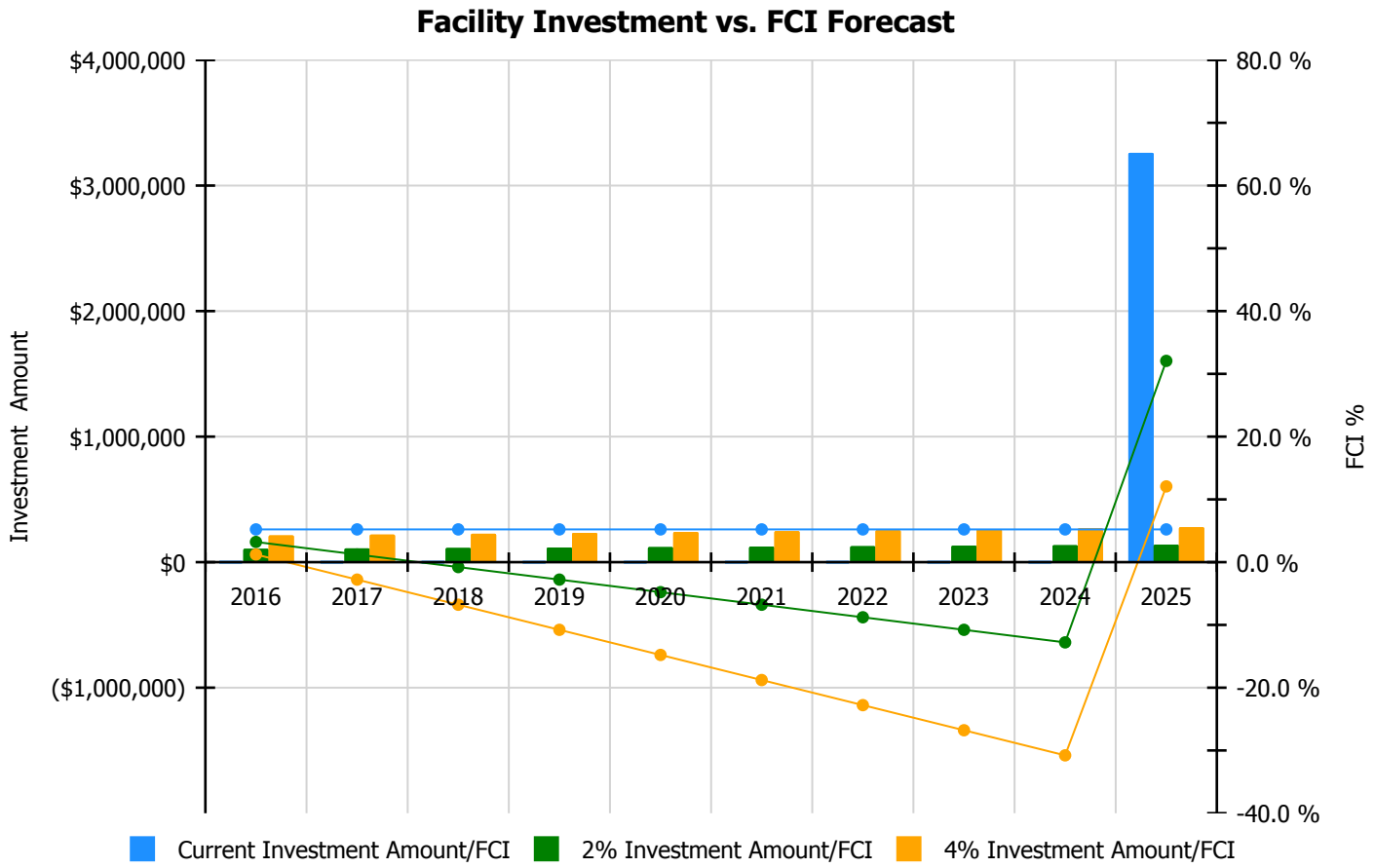
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

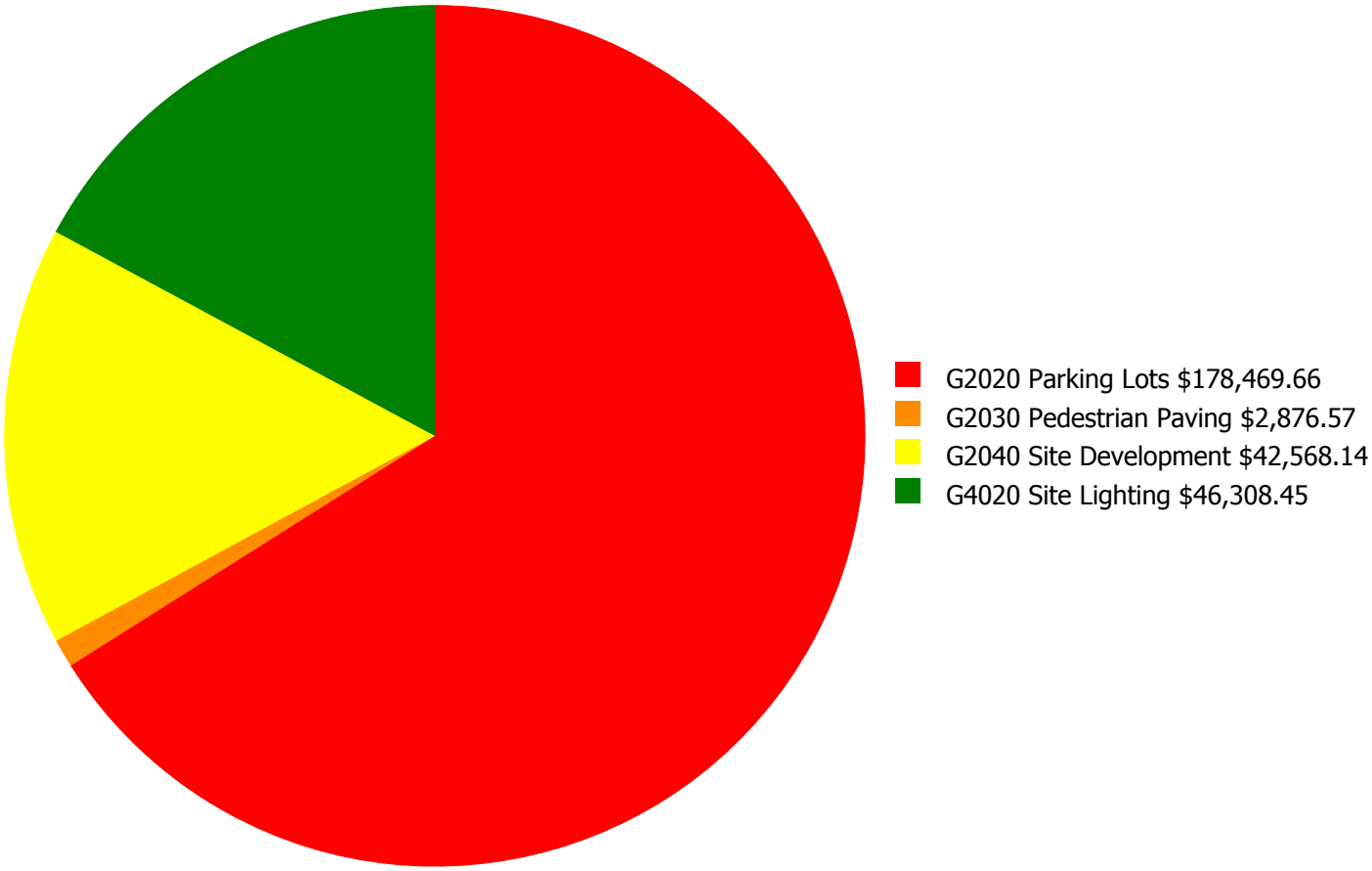
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 5.22%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$106,677.00	3.22 %	$213,353.00	1.22 %
2017	$0	$109,877.00	1.22 %	$219,754.00	-2.78 %
2018	$0	$113,173.00	-0.78 %	$226,347.00	-6.78 %
2019	$0	$116,568.00	-2.78 %	$233,137.00	-10.78 %
2020	$0	$120,066.00	-4.78 %	$240,131.00	-14.78 %
2021	$0	$123,667.00	-6.78 %	$247,335.00	-18.78 %
2022	$0	$127,377.00	-8.78 %	$254,755.00	-22.78 %
2023	$0	$131,199.00	-10.78 %	$262,398.00	-26.78 %
2024	$0	$135,135.00	-12.78 %	$270,270.00	-30.78 %
2025	$3,260,467	$139,189.00	32.07 %	$278,378.00	12.07 %
Total:	**$3,260,467**	**$1,222,928.00**		**$2,445,858.00**	

Deficiency Summary by System

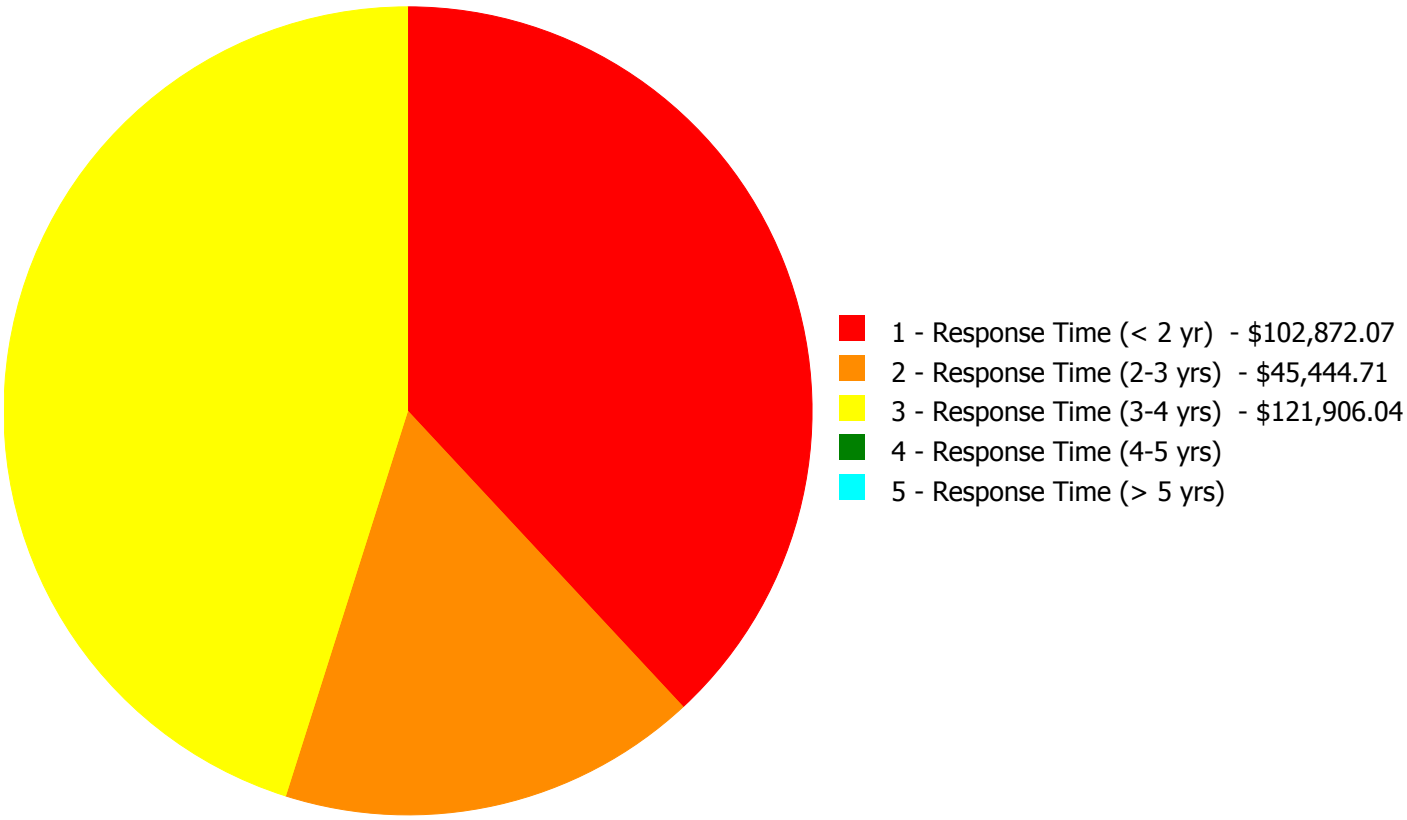
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $270,222.82

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: $270,222.82

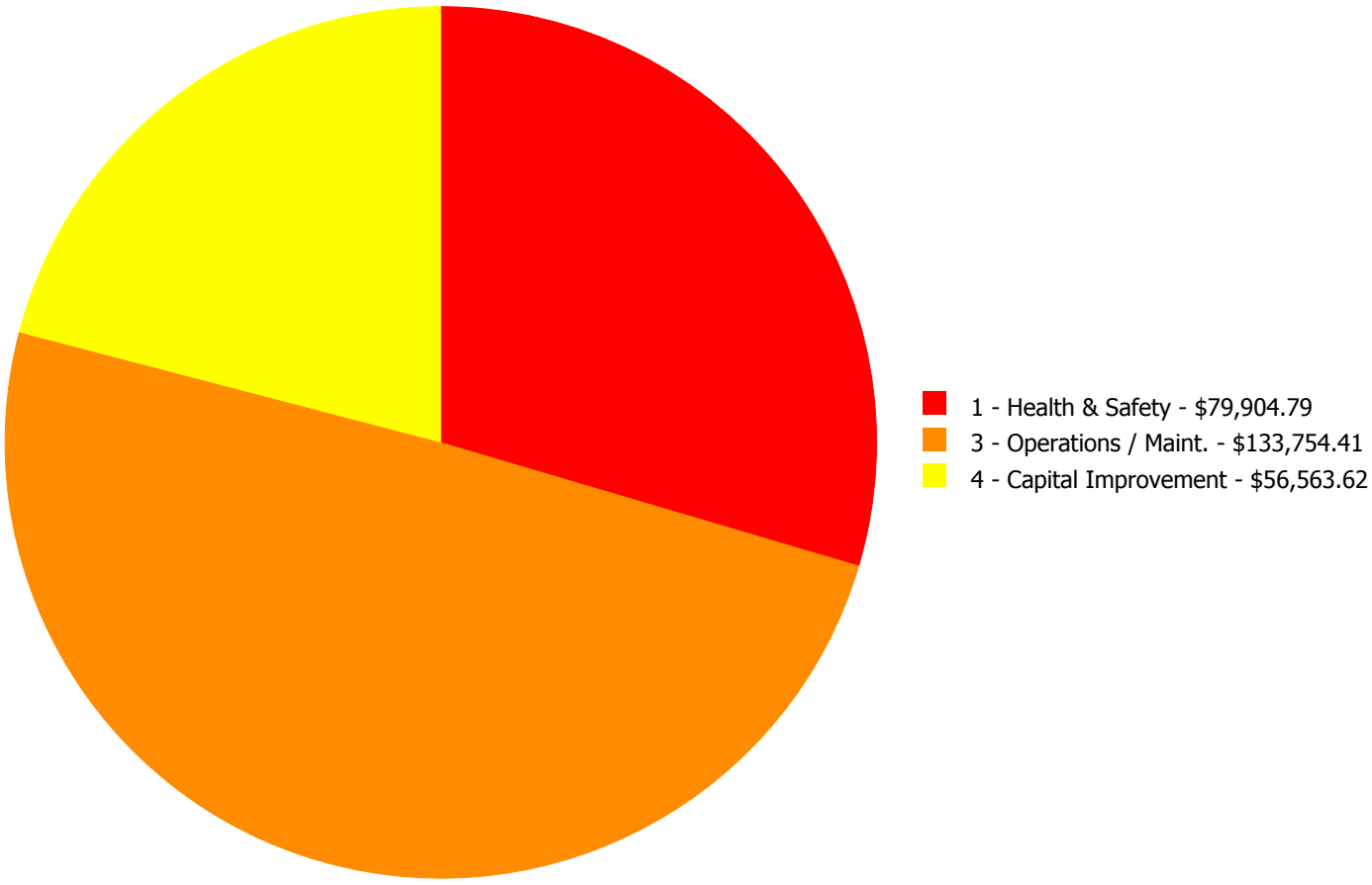
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2020	Parking Lots	$56,563.62	$0.00	$121,906.04	$0.00	$0.00	$178,469.66
G2030	Pedestrian Paving	$0.00	$2,876.57	$0.00	$0.00	$0.00	$2,876.57
G2040	Site Development	$0.00	$42,568.14	$0.00	$0.00	$0.00	$42,568.14
G4020	Site Lighting	$46,308.45	$0.00	$0.00	$0.00	$0.00	$46,308.45
	Total:	$102,872.07	$45,444.71	$121,906.04	$0.00	$0.00	$270,222.82

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: $270,222.82

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: G2020 - Parking Lots

Location: secondary driveway access (exit) to street

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Remove and replace AC paving parking lot

Qty: 4,000.00

Unit of Measure: S.F.

Estimate: $56,563.62

Assessor Name: Steven Litman

Date Created: 09/29/2015

Notes: Provide new driveway access road to Welsh Rd or to Ashton Rd for better site circulation (4000sf)

System: G4020 - Site Lighting

Location: exterior roads, parking and doors

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $46,308.45

Assessor Name: Steven Litman

Date Created: 09/02/2015

Notes: Provide pole mounted area lighting in the parking area. Estimated 4 each

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

System: G2030 - Pedestrian Paving

Location: concrete walk at handicap entrance

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace concrete sidewalk or concrete paving - 4" concrete thickness

Qty: 200.00

Unit of Measure: S.F.

Estimate: $2,876.57

Assessor Name: Steven Litman

Date Created: 09/29/2015

Notes: Repair spalling concrete in ADA handicap accessible ramp into front of building (200sf)

System: G2040 - Site Development

Location: roadway entrances to parking lot

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Replace chain link fence - 8' high

Qty: 300.00

Unit of Measure: L.F.

Estimate: $33,596.34

Assessor Name: Steven Litman

Date Created: 09/29/2015

Notes: Provide new fence and gates to close-off driveways to Welsh Road and Ashton Rd, (225ft 8ft tall + (3) 25’ gates)

System: G2040 - Site Development

Location: fence at handicap entrance

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace chain link fence - 6' high

Qty: 100.00

Unit of Measure: L.F.

Estimate: $8,971.80

Assessor Name: Steven Litman

Date Created: 09/29/2015

Notes: Replace damaged sections of chain link fence at handicap entrance (100ft 4ft tall)

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

System: G2020 - Parking Lots

Location: asphalt parking lots and play areas

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Resurface parking lot - grind and resurface including striping

Qty: 32,000.00

Unit of Measure: S.F.

Estimate: $121,906.04

Assessor Name: Steven Litman

Date Created: 09/29/2015

Notes: Repave damaged asphalt parking lot and play area with new asphalt (32,000)

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