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.

Hancock School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	3700 Morrell Ave.	Enrollment	743
	Philadelphia, Pa 19114	Grade Range	'00-08'
Phone/Fax	215-281-2604 / 215-281-5900	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Hancock	Turnaround Model	School Redesign Initiative

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**38.56%**	**$13,830,273**	**$35,865,612**
Building	39.81 %	$13,455,596	$33,802,058
Grounds	18.16 %	$374,677	$2,063,554

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	89.50 %	$1,399,327	$1,563,448
Exterior Walls (Shows condition of the structural condition of the exterior facade)	17.02 %	$414,598	$2,436,060
Windows (Shows functionality of exterior windows)	26.95 %	$320,402	$1,188,660
Exterior Doors (Shows condition of exterior doors)	118.44 %	$113,345	$95,700
Interior Doors (Classroom doors)	77.67 %	$179,936	$231,660
Interior Walls (Paint and Finishes)	00.00 %	$0	$871,860
Plumbing Fixtures	56.76 %	$506,471	$892,320
Boilers	00.00 %	$0	$1,232,220
Chillers/Cooling Towers	00.00 %	$0	$1,615,680
Radiators/Unit Ventilators/HVAC	78.55 %	$2,228,842	$2,837,340
Heating/Cooling Controls	180.57 %	$1,608,907	$891,000
Electrical Service and Distribution	165.60 %	$1,060,144	$640,200
Lighting	70.64 %	$1,616,950	$2,288,880
Communications and Security (Cameras, Pa System and Fire Alarm)	98.66 %	$845,817	$857,340

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

Facility Condition Assessment Summary Report

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

La Brum School

Governance		Report Type	
Address	10800 Hawley St. Philadelphia, Pa 19154	Enrollment	0
		Grade Range	
Phone/Fax		Admissions Category	
Website		Turnaround Model	

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	**47.90%**	**$11,448,519**	**$23,901,081**
Building	50.35 %	$11,214,195	$22,271,058
Grounds	14.38 %	$234,324	$1,630,023

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	119.13 %	$1,389,309	$1,166,260
Exterior Walls (Shows condition of the structural condition of the exterior facade)	06.88 %	$134,131	$1,948,210
Windows (Shows functionality of exterior windows)	77.31 %	$736,223	$952,300
Exterior Doors (Shows condition of exterior doors)	107.90 %	$69,623	$64,525
Interior Doors (Classroom doors)	268.69 %	$419,678	$156,195
Interior Walls (Paint and Finishes)	11.09 %	$65,186	$587,845
Plumbing Fixtures	58.82 %	$353,856	$601,640
Boilers	00.00 %	$0	$830,815
Chillers/Cooling Towers	00.00 %	$0	$1,089,360
Radiators/Unit Ventilators/HVAC	198.96 %	$3,806,279	$1,913,055
Heating/Cooling Controls	160.69 %	$965,344	$600,750
Electrical Service and Distribution	182.08 %	$785,947	$431,650
Lighting	03.37 %	$52,047	$1,543,260
Communications and Security (Cameras, Pa System and Fire Alarm)	81.84 %	$473,079	$578,055

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

S818001;Hancock

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):	66,000
Year Built:	1968
Last Renovation:	
Replacement Value:	$35,865,612
Repair Cost:	$13,830,272.89
Total FCI:	38.56 %
Total RSLI:	76.56 %

Description:

Facility Condition Assessment
August 2015

School District of Philadelphia FCA
John Hancock Elementary School
3700 Morrell Avenue
Philadelphia, PA 19114

66,000sf; 525 students; LN 08

General

John Hancock Elementary School is located at 3700 Morrell Avenue. The building was constructed in 1968, has 66,000 square feet, and is 2 stories tall. It is constructed as a "split-level" building with two levels of grade access. The main entrance is on the second floor facing East Crown Avenue. The mechanical room and various emergency exits on the Lower Level (basement) are accessed from the grade level parking lot off Morrell Avenue. The floor plan of this building is circular with a single circular corridor on each floor and pie-shaped classrooms radiating off the corridors. Andy Guckin, the Building Engineer, accompanied the team during the building

inspection.

The inspection team met with Principal Bill Griffin at the time of inspection. He indicated that his concerns were the failing/crumbling asphalt parking lot, lack of complete security camera system, leaking roof, leaking/failing windows, non-functional clock system, and mice infestation.

Architectural/Structural

Foundations are constructed of concrete and concrete block seen in the mechanical equipment rooms in the basement. Wall surfaces are in good condition and appear to have been repainted recently. There were no cracks or water seepage areas observed.

Floor slabs in the mechanical basement in the Main Building are in good condition with no major cracks or settlement seen. Raised slabs appeared to be level and in good condition. There are two types of structures supporting the Upper Level. The center circular spaces which are the Cafetorium (cafeteria+auditorium) on the Lower Level and the Gymnasium on the Upper Level are supported by tapered, cast-in-place concrete beams with a concrete floor slab on top. The surrounding classrooms, offices, toilet rooms, etc. are supported by steel bar joists and a metal pan roof deck on top. These two systems meet along the circular wall that forms the inside wall of the circular corridor. Expansion joints run radially across the floors.

Roof system is constructed of two structural systems like the Upper Level. The gymnasium, located in the center round area has tapered, cast-in-place concrete beams with a concrete roof deck on top of the beams. The roof over the surrounding spaces is supported by bar joists and girders with a metal deck on top. The roof is accessed by a roof hatch providing access to most of the roof area. There is a circular raised area over the center of the gym approximately 8 feet above the level of the main roof and approximately 75 feet in diameter, forming a raised are over most of the gym, letting in light to the space through pairs of windows in each of the 14 sides of the flattened circle. The roof on top of this circular element is supported by 14 radially oriented steel box beams, slightly arched up at the center to provide good drainage and structural stability. Expansion joints run radially across the roof.

Exterior walls are constructed of brick with vertical, dark bronze, anodized aluminum elements reflecting the column grid and a matching anodized aluminum panel fascia. There is a "graffiti-resistant" coating on the lower 10 ft of wall accessible by vandals from grade level around the building; the coating does not repel graffiti, as evident by scattered spray paint marks around the building. This semi-translucent coating has vertical fading streaks or water marks, making for an uneven milky appearance and in general is not attractive in its present state. The coating needs to be cleaned and re-applied or removed completely. The back section of masonry near the rear of the site has been painted in beige paint which is covered in graffiti, in need of repainting. Otherwise, the physical condition of the grout and masonry are good and without any obvious cracks or joint failure. The vertical joints between the vertical anodized aluminum column elements and the brick are caulked and failing in a number of locations, requiring re-caulking; a caulk matching the brick or anodized aluminum should be used to be less obtrusive. The vertical anodized aluminum accent panels and the horizontal anodized aluminum fascia along the roof and over doors are fading, a characteristic of this material. Some sections were repainted, which could be considered as making the situation worse. The overall appearance of all the anodized aluminum should be reviewed and then the District should decide if any action (repainting or replacing) is necessary. The curved retaining wall on the left side of entrance of the building has cracking and joint failure along the bottom facing Crown Street. The 14-sided circular element on top of the roof, located over the gym has foam-core metal panel siding. Because of frequent vandalism and years of weathering, some sections of some of these panels were repainted multiple times with paint that never matched the original panel color. These repainted sections are now fading, all panels are dented, and some have new graffiti; they all need to be replaced.

Exterior windows in the Main Building consist of dark bronze anodized aluminum frame units with single thickness plexiglass. Most windows also have plexiglass storm windows on the interior. Windows accessible to vandalism near the grade level have galvanized security screens. Some screens facing play areas have been defaced with graffiti. Each classroom has one vertical window - there are not many windows in this building and therefore not a large amount of natural light inside. There are clerestory windows in the 14-sided circular element on the roof which let light into the gymnasium. Like the other plexiglass windows, these units are cloudy, the frames are fading, they could be sources of water leaks, and in general they all need to be replaced.

Exterior doors are painted hollow metal steel doors and frame units, some with narrow lite vision panels with security grating. The paint on most doors and frames is in poor condition with rust forming on most door frames and bottoms of some door panels. Doors and frames should be repainted if possible to minimize further deterioration. Exit hardware and door closers are generally working but appear to be original equipment and past its normal service life, in need of replacement.

Roof coverings consist of a fully adhered rolled asphalt sheet system, with light gray granules embedded in the surface. Roofs are accessed by a ladder through a roof hatch. Flashing along the perimeter is a flush gravel stop detail with an anodized aluminum fascia; with this type of termination, overflow drains or scuppers are not a requirement from this roof as water will simply spill over

the gravel stop if drains clog. Flashing along rooftop equipment consists of the same roof membrane material secured under the equipment bases. There is a metal panel structure in the center of the roof, which has slit windows allowing some natural light into the gymnasium below. The base of this 14 sided wall has aluminum counterflashing installed over the membrane termination along the base of the metal panel wall. The raised section above the roof has visible positive slope, leading from the center high point to the low edge where water leaves that roof by scuppers which spill onto splash blocks on the main roof deck. There are 3 expansion joints located radially from the metal panel wall (raised section over the gym) to the edge of the building. The expansion joint system has exposed rubber tubing along the top of the system, designed to flex with the building movement. All roof membranes and flashings are worn with most ceramic granules wearing away, exposing the cracked asphalt membrane along the edges of the sheets. There are dirty areas over part of the roof indicating poor drainage and areas that have inadequate slope. At the time of inspection, there were many areas of accumulated water showing that the roof deck has very little slope and dries primarily by evaporation. There were many bubble, cracks, gaps between asphalt sheets and soft areas in the main roof deck. As water accumulates due to the poor slope, it is almost certain that seepage occurs through the roof system into spaces below. The main roof drains are connected to piping leading to vertical leaders down to a storm system below grade.

Partitions in classrooms, offices, toilet rooms, gymnasium, cafetorium, and kitchen are constructed of painted block (concrete masonry unit) walls, which are in good physical condition. The side walls forming the main entrance lobby space is constructed of dark brown brick with large ceramic mosaic tile murals on each face. All partitions have been well maintained and are in good condition. There are a number of classrooms that have moveable wall partitions forming common walls between adjacent classrooms. These panels are door-sized acoustically designed panels, with fiberglass surfaces and tackable surface as finishes. They are in good condition and there is no need for their removal, however they are not often open and closed. Some classrooms have them partially open to create subdivided spaces within a large classroom.

Interior doors in classrooms, offices, and other rooms are mostly the original solid core oak veneer wood doors. Most have glass narrow vision panels with wired glass; although no labels were seen, presumably, the doors are fire rated. Most wood doors can be refinished to improve their appearance. Stairway doors are flush steel panel units with narrow lite wired glass vision panels. Most door frames are rusting near the floor and many doors have small damages, but could be repainted to improve the appearance. Classrooms do not have lever locksets with updated security locking feature that allows for locking from inside the room. Most exit hardware and door closers in stairways is old and needs replacement to provide proper closing and latching. Many doors have the original door closers which are beyond their normal useful service life and should be replaced.

Interior fittings/hardware include wall mounted blackboards, tackboards, and some whiteboard in all classrooms. Classrooms have storage areas with plastic laminate or plywood cabinets and shelves. Some toilet room partitions have the original painted steel partitions and others have replacement plastic toilet room partitions and doors; most toilet room partitions are in good condition with only minor adjustments required to some compartment doors. Toilet room accessories (toilet paper dispensers, soap, paper towel or dryers, grab bars, door latches) are located in all toilet rooms. Enlarged toilet compartments with a sink and toilet are available in some locations, serving as handicap accessible facilities. However, accessible toilet room features and accessories such as wrist-blade faucets, drain pipe protection, grab bars, and accessories were absent.

Stair construction consists of concrete-filled treads with steel risers and stringers, clear anodized aluminum handrails 32” high with no extensions at stair run bottoms; are guards 36” high and balusters have one intermediate bar which does not meet today’s building codes; handrail and guard replacement is recommended to comply with today’s codes. Stair landings and platforms are finished with VCT that is in need of cleaning and painting. Some cracks in landings were seen and should be repaired before repainting.

Wall finishes in the corridors, offices, gym, and classrooms consist of painted block. Most walls have minimal or no areas of minor surface damages; the walls are in need of repainting. Toilet rooms, stairways, cafeteria and gymnasium have painted block walls. The auditorium has exposed concrete columns and tapered beam assembly and painted block walls. Flanking the stage on both sides is a full-height decorative vertical wood board wainscot, in good condition, requiring only minor repairs and refinishing. He interior gymnasium wall has a concrete masonry unit wall that goes up to within a few feet of the roof decl. Above the block is the exposed back-side silver surface and rigid insulation and steel columns which support the walls and roof of the center structure. The Lobby is finished with dark granite, dark brick, and a large glazed stone mural on both sides of the lobby. These bright murals help give the building an inviting appearance and the appearance that the building is child-oriented. The overall physical condition and appearance of the walls is good.

Floor finishes consist of terrazzo in the lobby and first floor corridors, ceramic mosaic tile in toilet rooms, and VCT (vinyl composition tile) in all other rooms such as corridors, classrooms, offices, gym, and cafetorium. There are some cracks in the terrazzo representative of minor slab movement; these can be repaired. Similar cracks in VCT would involve replacing the VCT in that area of cracking after patching slab cracks. There is delamination of VCT at the bottom of the main stairway leading into the cafetorium. This area needs to be stripped, cleaned and refinished.

Ceiling finishes in classrooms, corridors, offices, and toilet rooms are 2’x4’ suspended acoustical tile ceilings with either recessed or

surface mounted lighting fixtures. In classrooms, these ceilings are old, grids are discolored, and some tiles are damaged; theses ceilings need to be replaced. The cafetorium, kitchen, gymnasium and most of the associated supporting spaces have 12"x12" concealed spline ceiling tiles with surface mounted lighting fixtures. The kitchen ceiling needs to be replaced. There are some ceiling tiles in the gymnasium that have been stained from roof leaks, in need of replacement, but in general, these ceilings are in fair condition and do not require replacement.

Furnishings in the building include wood storage cubbies with coat areas and kitchenette sink/cabinets in classrooms. Toilet rooms have plastic (phenolic resin) partitions mostly in good working conditions. The auditorium being combined with the cafeteria ("cafetorium") has portable folding tables and chairs depending on the use of the space. Food preparation kitchen has stainless steel institutional equipment and tables and stainless steel food service counters.

The front door and all other doors into the Main Building have one or two steps leading up to the doors and are not ADA accessible. Handicap and accessible parking spaces are not marked, there are no curb cuts, and there are no accessible routes. These features should be provided.

There is no elevator in the building, as the building has only two floors, both of which have grade access.

An automatic sprinkler system is not provided in the building.

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 equipped with floor drains.

Throughout the school there is a combination of drinking fountains and vertical floor standing self-contained electric drinking fountain s, located in the corridors. Some fountains are located near bathroom groups while others are located throughout the hallways intermittently. Drinking fountains are also located in the Auditorium/Cafeteria and the Gymnasium. An electric water cooler is also located in the staff lounge and kitchen. The replacement of all drinking fountains and electric water coolers is recommended as the equipment is approximately 47 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 bathrooms. The sinks appear have exceeded their service life, and should be replaced. There are also hand sinks located in the majority of the classrooms. Kitchen sinks are located in staff lounges. 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 grease trap located below the floor and is accessible by a floor access panel. The kitchen is also equipped with a hand sink. The triple wash sink (with lever handles) and hand sink (with lever handles) show signs of normal usage. The grease interceptor could not be inspected or accessed at the time of the survey as it is only accessible via an access panel in the floor. 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 on the ground level, with double check backflow preventer (RPZA – reduced pressure zone assembly) and a 4" water meter on the main line upon entering the building. The backflow preventer and water meter appear 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.

There are two vertical tank type natural gas fired water heaters. One is aBradford White Model D100T1993N, 100 gallon tank capacity, 199,000 BTUH input, with a date of manufacture of 2008 while the other is a State Model SBF100199NET, 100 gallon tank capacity, 199,990 BTUH, with a date of manufacture of 2003. Both are located in the boiler mechanical equipment room. The hot water system is equipped with a common recirculation pump to serve the water heaters as well. The water heater appears to be in satisfactory condition. The unit installed in 2003 will need replacement in approximately 3 years while the unit installed in 2008 will need to be replaced in approximately 8 years

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 operatesby 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 is no roof parapetthereforeoverflow scuppers are not needed.

Energy Supply- Duplex fuel oil supply pumps provide the required fuel to the boilers when operating on fuel oil. The 10,000 gallon, double wall, fuel storage tank is located below ground which was installed in 2009. The fuel pumps and controls were recently replaced in 2009 and will not need to be replaced for 15 – 20 years. A 6" natural gas service enters the building on the ground level in the service room adjacent to the main boiler mechanical equipment room. The natural gas main is welded, black steel piping while the branches are threaded, black steel.

Heat Generating Systems–The two heating water boilers serve the heating needs for the building. Heating water is generated by two 3,112 MBH Buderus, Model Logano GE615/13, with dual fuel burners. Both boilers are equipped with Power Flame dual fuel burners, natural gas and number 2 fuel oil, model LNIC-GO-25B.These appear to be low NOx burners. Burner controls provide full modulation with electronic ignition, digital flame sensing and pressure atomization on oil. Burner oil pumps are driven by independent motors. The boilers were installed in 2009 and will not need to be replaced for 30 – 35 years. There is draft control on both of the boiler flues. 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.

CoolingGenerating Systems– Adjacent to the boiler mechanical equipment exterior wall is where the Carrier air cooled screw chiller is located. The chiller has a nominal tonnage of 225 tons. As stated before the chilled water distribution is handled by the dual temperature pumps. The existing condenser water pumps now provide circulation through the air cooled chiller. A cooling only split system serves the LAN room. The condensing unit is located on the roof. The system consists of a Mitsubishi Mr. Slim unit indoor evaporator a PUY-A24NHA condenser unit with a system capacity of two tons.

Distribution Systems–The building heating water distribution piping is black steel with welded fittings. The piping within the boiler mechanical equipment room was recently replaced during the boiler replacement and renovation project in 2009, however the distribution piping to the unit ventilators is original piping and is beyond its service life and should be replaced. 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 heating water piping and pumping distribution system is shared with the chilled water system, as the system is a two pipe configuration. There are two dual temperature distribution pumps, 475 GPM, end suction pump, 20 HP, 90 feet head and 1750 RPM. There are also two freeze protection pumps which serve heating coils for units which are located in the boiler.

Fresh air is admitted into the building through the unit ventilators outside air intakes connected to air handling unit systems. 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 dual temperature coils in the classrooms. Generally vertical unit ventilators are located at the building perimeter walls of the classrooms for the classroom with an exterior exposed wall. For the interior spaces horizontal unit ventilators (mounted above the acoustical ceiling) serves these areas, however outside air for ventilation purposes is introduced through outside air roof intakes which are then ducted to the return air ductwork of the unit ventilator. For larger classroom arrangements horizontal unit ventilators serve the space in addition to the vertical unit ventilators at the space perimeter exterior wall. The unit ventilators have surpassed their anticipated service life of 15-20 years and should be replaced. The new units should be designed for quiet operation and equipped with hot water and chilled water coils, and integral heat exchangers so the existing exchangers can also be removed from the rooms. The two pipe system shouldbe converted to a four pipe system.

The Gymnasium is served by a ducted supply and return large volume ceiling suspended horizontal unit ventilators equipped with dual temperature coils. Supply air is distributed through sidewall registers. Outside air ventilation is provided to these units via outside air roof intakes. It is recommended to replace these systems with a similar unit ventilator configuration or alternatively a roof top mounted unit which is equipped with energy recovery to pre-condition the ventilation air.

The Auditorium/Cafeteria is served by an air handling unit located in the boiler mechanical equipment room. The unit is coupled with an exhaust air fan in the boiler mechanical room which provides relief air for the space served by the air handling unit. The space is served by a ducted supply system through sidewall registers. The air handling unit was just replaced in 2009 and should not need to be replaced for 20 years with regular and preventative maintenance being performed at the required intervals.

The kitchen is served by a ducted supply and return large volume ceiling suspended horizontal unit ventilator equipped with dual

temperature coils. This system is connected to other systems by a common outside air duct. . The unit has exceeded its life expectancy and should be replaced. A dedicated unit should be provided with heating and cooling coils as well as ventilation to meet the outside air ventilation requirements for the kitchen. The kitchen is equipped with a hood exhaust system for the space but does not have a dedicated make up air system. A dedicated make up air unit with tempering should be installed. 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 hood is equipped with and Ansul fire suppression system.

The library is served by unit ventilators located at the perimeter under the windows. In addition, the library is served by a ceiling suspended horizontal unit ventilator equipped with a dual temperature heating and cooling coil. Outside air is provided by an outside air duct connected to a room intake which is ducted to the units return air duct. 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 roof mounted exhaust fans which serve the restrooms while one exhaust fan serves the hood exhaust from the kitchen. Restroom exhaust is drawing through exhaust grilles in the wall. There are a few exhaust fans which appear to be relatively new, 3-7 years, however the majority of the exhaust fans appear to be original and should be replaced. The art classroom has a kilnwhich has an exhaust duct run below the acoustical ceiling, then terminatedabove an exterior window. The vent piping should be run above the ceiling with the proper vent ducting material to serve the kiln. Several bathrooms and other areas are served with convection heaters.

Controls & Instrumentation- The original pneumatic systems still provide basic control functions for the unit ventilators. For the boilers, chiller and pump control a Honeywell DDC system provides the control and monitoring. Pneumatic room thermostats drive the unit ventilators, the damper actuators and control valves. It appears that DDC zone temperature sensors have been installed in some locations throughout the school. There is an air compressor, located in the boiler room, which generates control air for the pneumatic components of temperature control system. A refrigerated air dryer serves the compressor. Any remaining pneumatic controls have potential problems with oil, moisture or dirt in the pneumatic copper tubing. 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. Any of the original control valves, dampers and pneumatic actuators are over 47 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 has been installed when the chiller and boiler upgrade was performed in 2009 to control and monitor the central plan equipment.

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

Electrical

Site Electrical Service is from medium voltage overhead lines on wooden poles along Crown Ave. An underground medium voltage cable drop from utility power pole feeds the main service switchgear located in the main electrical room in the first floor.

Main service entrance consists of two 600A medium voltage load interrupters, PT/CT section, and 13200V to 208/120V, 3PH, 4 wires, dry type transformer estimated 1000kva and 1600A, 208/120V power distribution switchboard. Utility meter was installed adjacent to the switchgear assembly. A 500KVA, 13200V to 480/277V pad mounted transformer has been provided approximately seven years ago for feeding the new HVAC unit which has been installed in the same year. This transformer is fed from existing switchgear. The main service entrance is installed in 1968 and has not been upgraded.

The electrical distribution is accomplished with several lighting/receptacle panel boards located throughout the building. Several new power panels are installed in the boiler room for feeding the HVAC and other mechanical loads located in that area. The original distribution system has out-lived its useful life and requires replacement.

In general there are not enough receptacles installed in classrooms. The recommendation is to have a minimum of two receptacles on each classroom wall. The computer room should have receptacles at three feet on center on each wall.

Lighting in the building is provided by fluorescent fixtures with outdated T-12 lamps and incandescent fixtures located in some areas. Classrooms and corridors utilize 2x4, (4) lamp surface mounted fixtures. Lighting levels in the most areas including the gymnasium, do not meet IES (Illuminating Engineering Society) standards.

Building is equipped with 120V manual fire alarm system. The system does not meet current fire alarm codes and should be replaced with an automatic fire alarm system.

Telephone / LAN equipment/devices are located on the second floor in Room 220. The data racks are installed under a unit ventilator. Any water leakage or condensation from the coil could cause damage to school data. A removable shelter on top of the rack is recommended for preventing any possible damage from overhead water.

Public address and music are not provided by separate systems. The telephone system is used for public announcements. This system is working adequately.

Intercom System and Paging system is completely functional. The paging system consists of one way communications from office to classrooms. Two way communications is accomplished through wall mounted phones in classrooms and other areas. The paging speakers are old and should be replaced.

Clock and Program system is not functioning properly. A new clock system is needed. The existing bell system is working adequately.

Television System is not provided in the school.

Video surveillance system is not provided in the school. An access control system is provided and functions properly.

Emergency power system (backup power generator) is provided in this school. A 12.5KVA diesel generator made by Kohler is installed in the boiler room for providing power for emergency lighting in the building. This diesel generator is old and has exceeded its useful life and should be replaced.

Emergency Lighting System provided in the building is fed from the existing backup power generator. Exit signs are not battery-pack type, since power is provided by the emergency 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 are old and not compliant with today's codes. Lights are turned on and off by circuit breakers.

Sound System in Auditorium is old and should be replaced.

Site Lighting System is adequate. There are sufficient numbers of pole mounted flood lights provided around the building, however a lighting fixture should be provided in the outside chiller area.

Site Video Surveillance system is not provided in the school.

Site Paging system is provided in the school and working adequately.

Grounds

There are five paved asphalt areas surrounding the building. The curved driveway off East Crown Avenue serves as the front drop-off and visitor parking area. The curved driveway off Fordham Road is the bus staging and children drop-off / pick-up area. The area accessed from Morrell Avenue is the staff parking and engineering entrance area. The large paved area with a gate prohibiting regular vehicular access is the asphalt playground. The fifth area is accessed by an upper level door and is enclosed with fencing, used as a secure play area for kindergarten children. Children can access the playground from doors on the lower level opening into the area or from a set of stairs leading up to the Fordham Road doors. Having separate access and no connections for vehicular access, each area has its own function without traffic or danger from pedestrians or stray vehicles interfering. The front drop-off, bus staging driveway, and faculty parking areas have large sinkholes with severe pavement cracking and disintegration. Before repairing paving, catch basins serving each area should be cleaned out and check to ensure water is flowing through them as designed. The playground has many cracks giving the appearance of a jigsaw puzzle. All asphalt areas need to be repaved and restriped. Additionally, the concrete aprons leading into the asphalt areas also need replacing.

The brick retaining wall facing Morrell and East Crown has areas of joint failure, in need of repair. Some of the sidewalks along the front and side are cracking and should be replaced. The sidewalk leading into the Fordham Avenue side entrance has two steel post sleeves remaining in the concrete which are tripping hazards as they are almost invisible. The 26 riser stair that leads down to the main playground from Fordham Avenue needs a new code compliant handrail/guard. Most of the steel picket fence surrounding the property is in good condition, however the south side fencing is rusted and needs to be repainted. Also on the south side a few fence sections are broken in need of replacing.

RECOMMENDATIONS

Architectural

- Clean graffiti from brick facing playground and Fordham Road (1,000sf)
- Repaint Lower Level foundation wall to hide graffiti facing playground (4,000sf)
- Replace damaged, dented insulated metal panels around gymnasium clerestory (1500ft x 6ft = 9000sf)
- Replace damaged suspended aluminum soffit over entrance (500sf)
- Repoint brick chimney (boiler flue) (100sf)
- Remove and replace built-up roof, including gravel stop, expansion joints and curbs (41,300sf)
- Refinish all original solid core wood interior doors. Refinish steel frames. (120) 3'x7' doors
- Replace all hardware with lever handle hardware sets. (120) 3'x7' doors
- Provide security hardware for classrooms and offices locking from inside of room (60 each)
- Replace steel exterior doors, frames, and hardware including glass or aluminum transoms (14) 3'x7'
- Replace all faded anodized aluminum frame single sheet plexiglass windows with insulated units (28 - 1'x6' units in clerestory; 28 - 3.5' x 7' windows in building)
- Replace non-code compliant railings and balustrades in stairways (24' wall and stair rail per stair and 20' guard) x 3 = 72' handrails; 60ft guard 42" high around openings
- Replace non-code compliant handrails and guards in Main Lobby stair with code compliant systems: 29 risers = 28' run x 2 sides x 2 rails each stair = 112' handrails; 50' guard 42" high around opening
- Replace approximately half of all VCT - damaged and cracked (15,000sf)
- Replace VAT after testing to confirm presence of asbestos (4,500 aud + 5,000 gym and contiguous rooms; classes, and offices (24,300sf)
- Strip and polish terrazzo floors (6,400sf)
- Repaint concrete floors in mechanical rooms (1,000sf)
- Replace worn kitchenette/storage units in classrooms (10 each, 6ft long)
- Replace damaged or stained acoustical tile ceilings in all corridors and some classrooms with new suspended acoustical tile clg system (40,000sf)
- Repaint water damaged gyp bd ceilings (200sf)
- Provide new ADA ramps into building at 3 locations (up 6"; 6ft long concrete apron @ doors)
- Provide new 26 riser stair with railings each side connecting lower asphalt playground with upper area (50ft railing)
- Recaulk vertical joints between brick and windows/aluminum panels (600ft)
- Provide ADA accessible grab bars and accessories in one toilet room per accessible floor (2)

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 vertical water coolers and the drinking fountains. 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.
- Add automatic sanitizing chemicals to the stainless steel sink in the cafeteria.
- 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.
- Hire a qualified contractor to examine the heating hot water piping in service for 47 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.
- The two pipe system shall be converted to a four pipe system.

- 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 unit ventilators and window air conditioning units.
- 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
- Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency.
- 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

Electrical

- Upgrade the existing electrical service with a new service. Replace the existing switchboard with new 2000A, 208/120V, 3PH, 4 wire switchboard.
- Replace the entire distribution system with new panels and new wiring/conduits. Our recommendation is to replace existing conduits and wiring to new Junction boxes, receptacles, and lighting. Provide arc flash label on the electrical equipment. Estimated 15 panel boards.
- Install minimum two receptacles in each wall of class rooms and sufficient number of receptacles in other areas per NEC. We recommend adding a two-compartment surface mounted raceway, for data & power, for the computer lab room. Estimated 300 receptacles.
- Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamp throughout all buildings. Use LED high bay lighting fixture for gymnasium. Provide emergency power to sufficient number of lighting fixtures in corridors (every three other), hallways, stairways and other egress ways to get minimum 1fc at egress ways per code.
- Replace existing fire alarm system with an automatic fire alarm system including smoke detectors in corridors and other recommended areas per NEC. Install horn/strobes in class rooms, corridors, offices, toilets, library and other recommended areas per codes.
- Replace existing master clock system.
- Replace existing emergency generator with 100KW diesel generator.
- Provide lightning protection studies to ascertain adequacy of existing systems.
- Provide new stage lighting and controller in Auditorium.
- Provide one lighting fixture in chiller area.
- 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.
- Replace existing exit signs with Battery pack exit signs. Estimated 30 each
- Provide new sound system including a freestanding 19" rack backstage with mixer per amplifiers, CD player, cassette player, AM-FM radio, graphic or parametric equalizer, and receivers for wireless microphone.

Grounds

- Repave damaged sections of concrete walkway at building entrance (400sf)
- Repave asphalt parking and play surfaces; including re-striping (70,000sf)
- Replace damaged steel picket fencing (100lf x 8ft tall)
- Repaint steel picket fencing (1000ft)

Attributes:

General Attributes:			
Active:	Open	Bldg Lot Tm:	Lot 2 / Tm 2
Status:	Accepted by SDP	Team:	Tm 2
Site ID:	S818001		

Site Condition Summary

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

Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	53.00 %	0.00 %	$0.00
A20 - Basement Construction	53.00 %	0.00 %	$0.00
B10 - Superstructure	53.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	71.03 %	22.80 %	$848,345.74
B30 - Roofing	110.00 %	89.50 %	$1,399,327.06
C10 - Interior Construction	42.06 %	11.23 %	$181,841.96
C20 - Stairs	53.00 %	130.43 %	$121,375.60
C30 - Interior Finishes	73.13 %	31.63 %	$1,121,172.50
D10 - Conveying	0.00 %	0.00 %	$0.00
D20 - Plumbing	115.84 %	89.80 %	$1,210,302.91
D30 - HVAC	106.09 %	52.27 %	$3,837,748.97
D40 - Fire Protection	105.71 %	161.35 %	$858,326.79
D50 - Electrical	110.11 %	97.53 %	$3,783,708.25
E10 - Equipment	14.29 %	8.89 %	$93,445.81
E20 - Furnishings	12.50 %	0.00 %	$0.00
G20 - Site Improvements	37.32 %	23.34 %	$374,677.30
G40 - Site Electrical Utilities	26.67 %	0.00 %	$0.00
Totals:	**76.56 %**	**38.56 %**	**$13,830,272.89**

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)
B818001;Hancock	66,000	39.81	$4,298,852.20	$4,261,490.52	$1,956,793.86	$38,860.48	$2,899,598.53
G818001;Grounds	105,400	18.16	$20,156.74	$87,851.07	$266,669.49	$0.00	$0.00
Total:		**38.56**	**$4,319,008.94**	**$4,349,341.59**	**$2,223,463.35**	**$38,860.48**	**$2,899,598.53**

Deficiencies By Priority

1 - Response Time (< 2 yr) - $4,319,008.94
2 - Response Time (2-3 yrs) - $4,349,341.59
3 - Response Time (3-4 yrs) - $2,223,463.35
4 - Response Time (4-5 yrs) - $38,860.48
5 - Response Time (> 5 yrs) - $2,899,598.53

Budget Estimate Total: $13,830,272.89

Executive Summary

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

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

Function:	Elementary School
Gross Area (SF):	66,000
Year Built:	1968
Last Renovation:	
Replacement Value:	$33,802,058
Repair Cost:	$13,455,595.59
Total FCI:	39.81 %
Total RSLI:	79.10 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B818001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S818001		

Condition Summary

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

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
A10 - Foundations	53.00 %	0.00 %	$0.00
A20 - Basement Construction	53.00 %	0.00 %	$0.00
B10 - Superstructure	53.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	71.03 %	22.80 %	$848,345.74
B30 - Roofing	110.00 %	89.50 %	$1,399,327.06
C10 - Interior Construction	42.06 %	11.23 %	$181,841.96
C20 - Stairs	53.00 %	130.43 %	$121,375.60
C30 - Interior Finishes	73.13 %	31.63 %	$1,121,172.50
D10 - Conveying	0.00 %	0.00 %	$0.00
D20 - Plumbing	115.84 %	89.80 %	$1,210,302.91
D30 - HVAC	106.09 %	52.27 %	$3,837,748.97
D40 - Fire Protection	105.71 %	161.35 %	$858,326.79
D50 - Electrical	110.11 %	97.53 %	$3,783,708.25
E10 - Equipment	14.29 %	8.89 %	$93,445.81
E20 - Furnishings	12.50 %	0.00 %	$0.00
Totals:	**79.10 %**	**39.81 %**	**$13,455,595.59**

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	$18.40	S.F.	66,000	100	1968	2068		53.00 %	0.00 %	53			$1,214,400
A1030	Slab on Grade	$7.73	S.F.	66,000	100	1968	2068		53.00 %	0.00 %	53			$510,180
A2010	Basement Excavation	$6.55	S.F.	66,000	100	1968	2068		53.00 %	0.00 %	53			$432,300
A2020	Basement Walls	$12.70	S.F.	66,000	100	1968	2068		53.00 %	0.00 %	53			$838,200
B1010	Floor Construction	$75.10	S.F.	66,000	100	1968	2068		53.00 %	0.00 %	53			$4,956,600
B1020	Roof Construction	$13.88	S.F.	66,000	100	1968	2068		53.00 %	0.00 %	53			$916,080
B2010	Exterior Walls	$36.91	S.F.	66,000	100	1968	2068		53.00 %	17.02 %	53		$414,598.17	$2,436,060
B2020	Exterior Windows	$18.01	S.F.	66,000	40	1968	2008	2057	105.00 %	26.95 %	42		$320,402.44	$1,188,660
B2030	Exterior Doors	$1.45	S.F.	66,000	25	1968	1993	2042	108.00 %	118.44 %	27		$113,345.13	$95,700
B3010105	Built-Up	$37.76	S.F.	41,300	20	1968	1988	2037	110.00 %	89.73 %	22		$1,399,327.06	$1,559,488
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.		25				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.06	S.F.	66,000	20	1968	1988	2037	110.00 %	0.00 %	22			$3,960
C1010	Partitions	$17.91	S.F.	66,000	100	1968	2068		53.00 %	0.00 %	53			$1,182,060
C1020	Interior Doors	$3.51	S.F.	66,000	40	1968	2008	2020	12.50 %	77.67 %	5		$179,936.48	$231,660
C1030	Fittings	$3.12	S.F.	66,000	40	1968	2008	2020	12.50 %	0.93 %	5		$1,905.48	$205,920
C2010	Stair Construction	$1.41	S.F.	66,000	100	1968	2068		53.00 %	130.43 %	53		$121,375.60	$93,060

Site Assessment Report - B818001;Hancock

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.	66,000	10	1968	1978	2020	50.00 %	0.00 %	5			$871,860
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.		10				0.00 %	0.00 %				$0
C3020412	Terrazzo & Tile	$75.52	S.F.	10,000	50	1968	2018	2020	10.00 %	2.74 %	5		$20,697.31	$755,200
C3020413	Vinyl Flooring	$9.68	S.F.	55,000	20	1968	1988	2037	110.00 %	91.80 %	22		$488,725.35	$532,400
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	1,000	50	1968	2018	2020	10.00 %	396.34 %	5		$3,844.53	$970
C3030	Ceiling Finishes	$20.97	S.F.	66,000	25	1968	1993	2042	108.00 %	43.92 %	27		$607,905.31	$1,384,020
D1010	Elevators and Lifts	$1.53	S.F.	66,000	35				0.00 %	0.00 %				$100,980
D2010	Plumbing Fixtures	$13.52	S.F.	66,000	35	1968	2003	2055	114.29 %	56.76 %	40		$506,471.39	$892,320
D2020	Domestic Water Distribution	$1.68	S.F.	66,000	25	1968	1993	2045	120.00 %	342.76 %	30		$380,051.97	$110,880
D2030	Sanitary Waste	$2.90	S.F.	66,000	25	1968	1993	2045	120.00 %	169.16 %	30		$323,779.55	$191,400
D2040	Rain Water Drainage	$2.32	S.F.	66,000	30	1968	1998	2050	116.67 %	0.00 %	35			$153,120
D3020	Heat Generating Systems	$18.67	S.F.	66,000	35	2009	2044	2044	82.86 %	0.00 %	29			$1,232,220
D3030	Cooling Generating Systems	$24.48	S.F.	66,000	30	2009	2039	2039	80.00 %	0.00 %	24			$1,615,680
D3040	Distribution Systems	$42.99	S.F.	66,000	25	1968	1993	2045	120.00 %	78.55 %	30		$2,228,842.12	$2,837,340
D3050	Terminal & Package Units	$11.60	S.F.	66,000	20	1968	1988	2040	125.00 %	0.00 %	25			$765,600
D3060	Controls & Instrumentation	$13.50	S.F.	66,000	20	1968	1988	2040	125.00 %	180.57 %	25		$1,608,906.85	$891,000
D4010	Sprinklers	$7.05	S.F.	66,000	35	1968	2003	2052	105.71 %	184.47 %	37		$858,326.79	$465,300
D4020	Standpipes	$1.01	S.F.	66,000	35	1968	2003	2052	105.71 %	0.00 %	37			$66,660
D5010	Electrical Service/Distribution	$9.70	S.F.	66,000	30	1968	1998	2047	106.67 %	165.60 %	32		$1,060,144.04	$640,200
D5020	Lighting and Branch Wiring	$34.68	S.F.	66,000	20	1968	1988	2037	110.00 %	70.64 %	22		$1,616,949.72	$2,288,880
D5030	Communications and Security	$12.99	S.F.	66,000	15	1968	1983	2032	113.33 %	98.66 %	17		$845,816.72	$857,340
D5090	Other Electrical Systems	$1.41	S.F.	66,000	30	1968	1998	2047	106.67 %	280.25 %	32		$260,797.77	$93,060
E1020	Institutional Equipment	$4.82	S.F.	66,000	35	1968	2003	2020	14.29 %	29.37 %	5		$93,445.81	$318,120
E1090	Other Equipment	$11.10	S.F.	66,000	35	1968	2003	2020	14.29 %	0.00 %	5			$732,600
E2010	Fixed Furnishings	$2.13	S.F.	66,000	40	1968	2008	2020	12.50 %	0.00 %	5			$140,580
								Total	**79.10 %**	**39.81 %**			**$13,455,595.59**	**$33,802,058**

System Notes

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

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

Note: painted block 99%
granite 1%

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

Note: Concrete – 1,000
VCT - 30,700
VAT - 24,300
Ceramic mosaic - 3,000
Terrazzo - 7,000
66,000sf

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

Note: Acoustical tile ceilings (suspended and glued to deck) 96%
Exposed metal deck 2%
Wood plank (stage area) 1%
Gyp Bd (stage area toilets/stor) 1%

Renewal Schedule

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

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$13,455,596**	**$0**	**$0**	**$0**	**$0**	**$4,153,216**	**$0**	**$0**	**$0**	**$0**	**$0**	**$17,608,812**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A10 - Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A20 - Basement Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$414,598	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$414,598**
B2020 - Exterior Windows	$320,402	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$320,402**
B2030 - Exterior Doors	$113,345	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$113,345**
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	$1,399,327	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,399,327**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

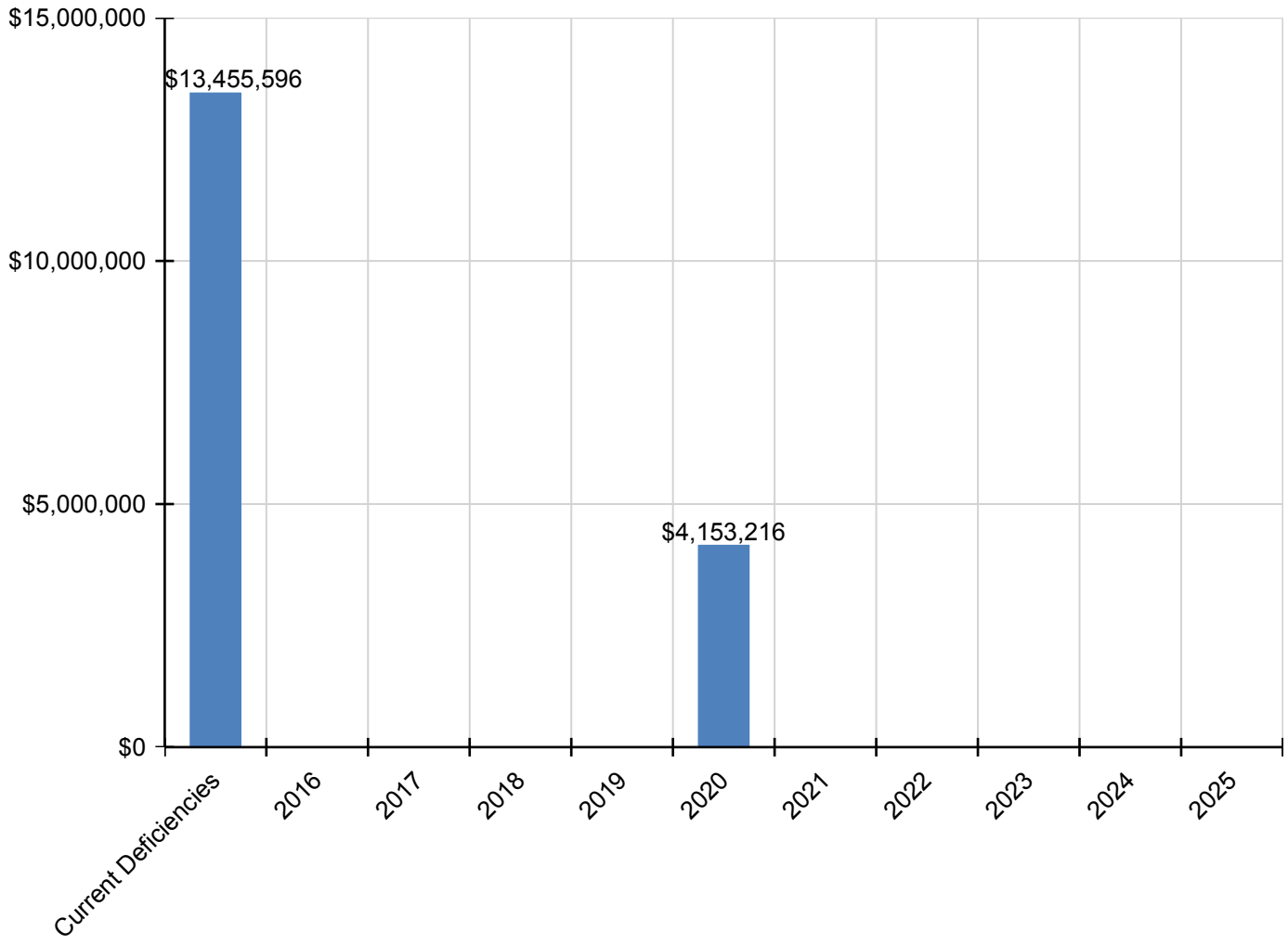
C1020 - Interior Doors	$179,936	$0	$0	$0	$0	$295,413	$0	$0	$0	$0	$0	**$475,350**
C1030 - Fittings	$1,905	$0	$0	$0	$0	$262,589	$0	$0	$0	$0	$0	**$264,495**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$121,376	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$121,376**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$1,111,797	$0	$0	$0	$0	$0	**$1,111,797**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$20,697	$0	$0	$0	$0	$963,032	$0	$0	$0	$0	$0	**$983,729**
C3020413 - Vinyl Flooring	$488,725	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$488,725**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$3,845	$0	$0	$0	$0	$1,237	$0	$0	$0	$0	$0	**$5,081**
C3030 - Ceiling Finishes	$607,905	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$607,905**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$506,471	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$506,471**
D2020 - Domestic Water Distribution	$380,052	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$380,052**
D2030 - Sanitary Waste	$323,780	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$323,780**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$2,228,842	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,228,842**
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	$1,060,144	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,060,144**
D5020 - Lighting and Branch Wiring	$1,616,950	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,616,950**
D5030 - Communications and Security	$845,817	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$845,817**
D5090 - Other Electrical Systems	$260,798	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$260,798**
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	$93,446	$0	$0	$0	$0	$405,667	$0	$0	$0	$0	$0	**$499,113**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$934,213	$0	$0	$0	$0	$0	**$934,213**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$179,268	$0	$0	$0	$0	$0	**$179,268**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

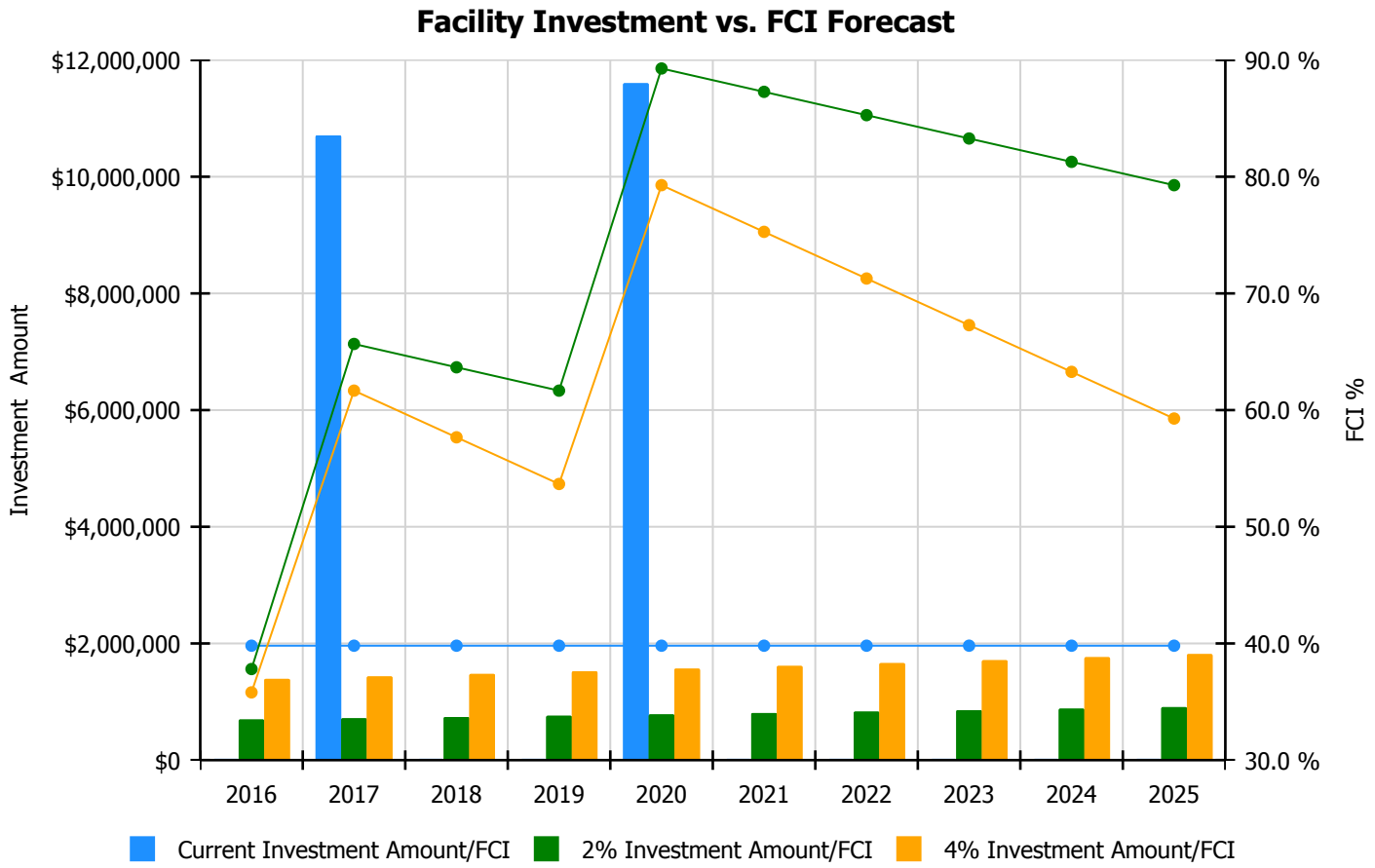
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

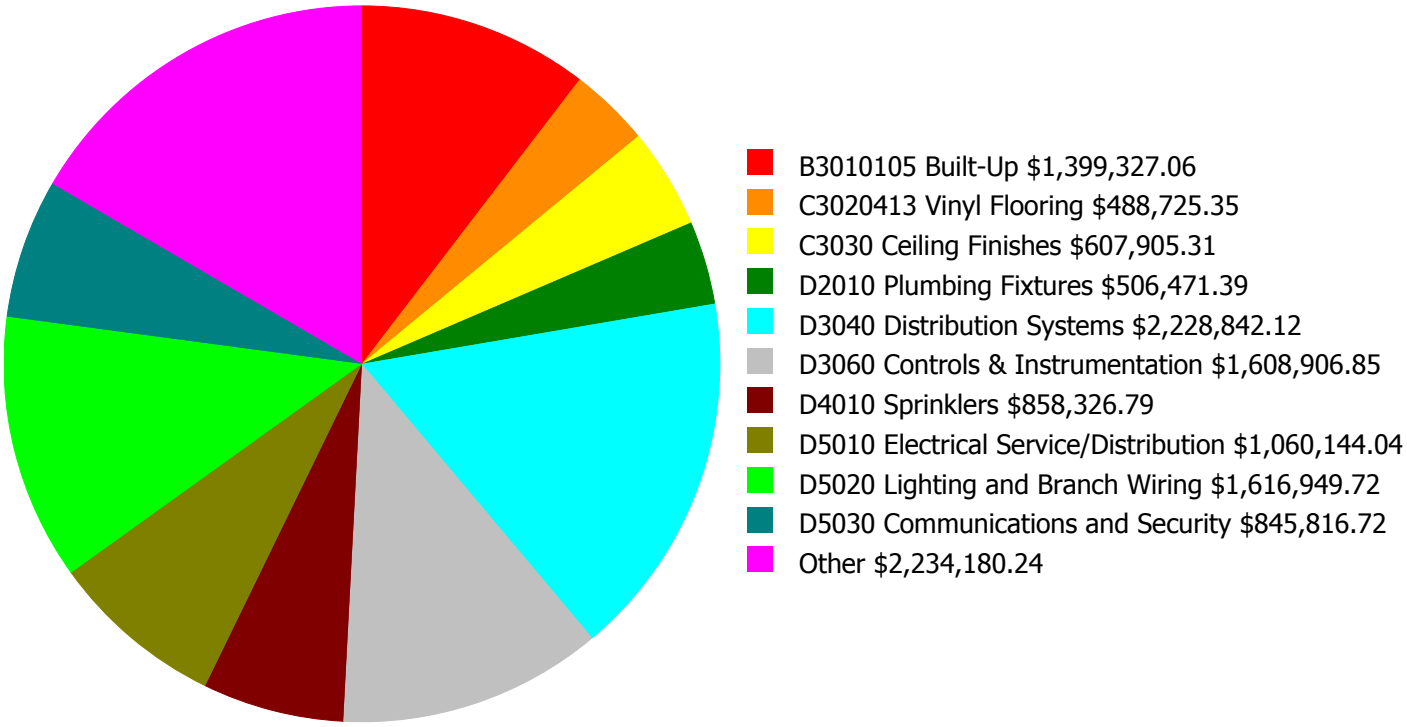
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 39.81%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$696,322.00	37.81 %	$1,392,645.00	35.81 %
2017	$10,707,913	$717,212.00	65.67 %	$1,434,424.00	61.67 %
2018	$0	$738,728.00	63.67 %	$1,477,457.00	57.67 %
2019	$0	$760,890.00	61.67 %	$1,521,781.00	53.67 %
2020	$11,602,510	$783,717.00	89.28 %	$1,567,434.00	79.28 %
2021	$0	$807,228.00	87.28 %	$1,614,457.00	75.28 %
2022	$0	$831,445.00	85.28 %	$1,662,891.00	71.28 %
2023	$0	$856,389.00	83.28 %	$1,712,777.00	67.28 %
2024	$0	$882,080.00	81.28 %	$1,764,161.00	63.28 %
2025	$0	$908,543.00	79.28 %	$1,817,086.00	59.28 %
Total:	**$22,310,423**	**$7,982,554.00**		**$15,965,113.00**	

Deficiency Summary by System

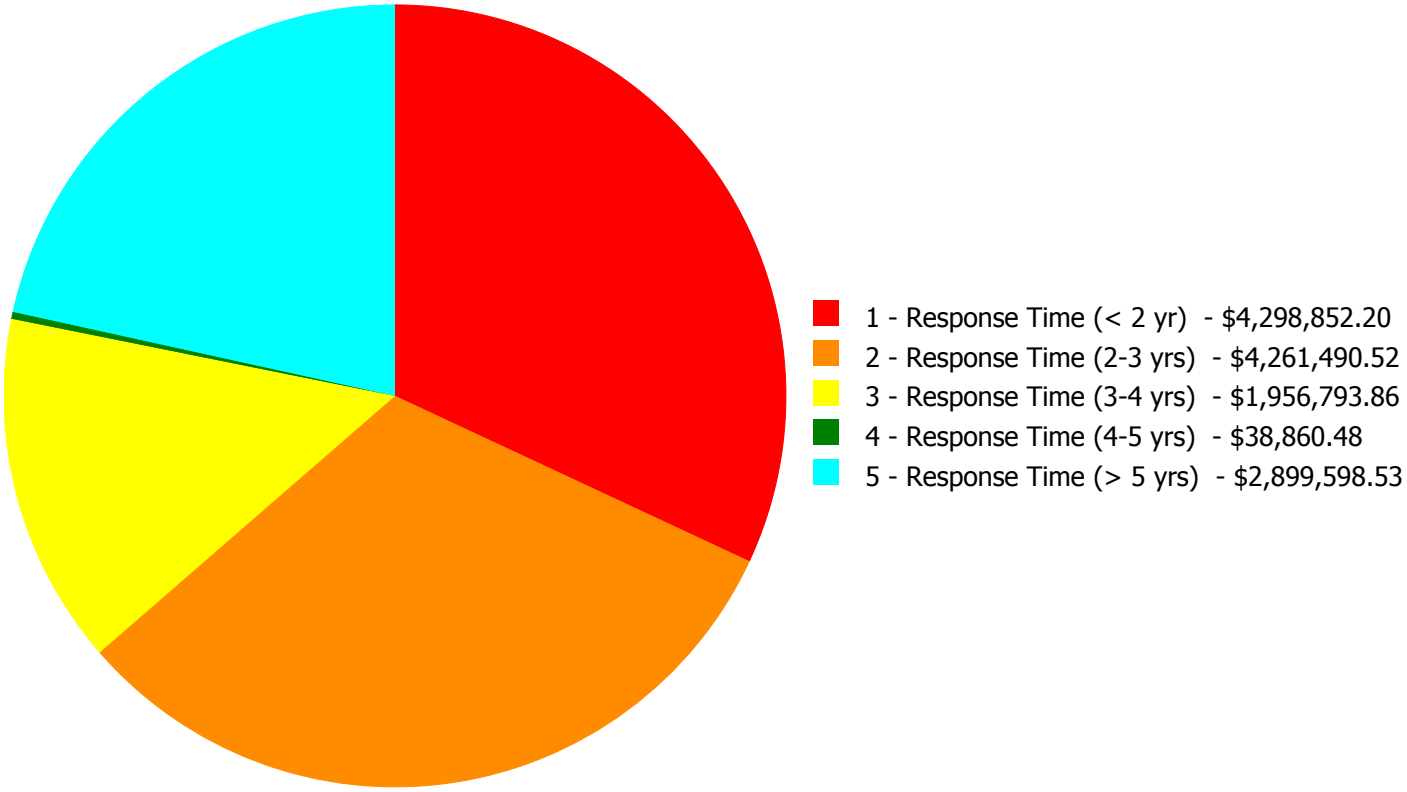
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $13,455,595.59

Deficiency Summary by Priority

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



Budget Estimate Total: $13,455,595.59

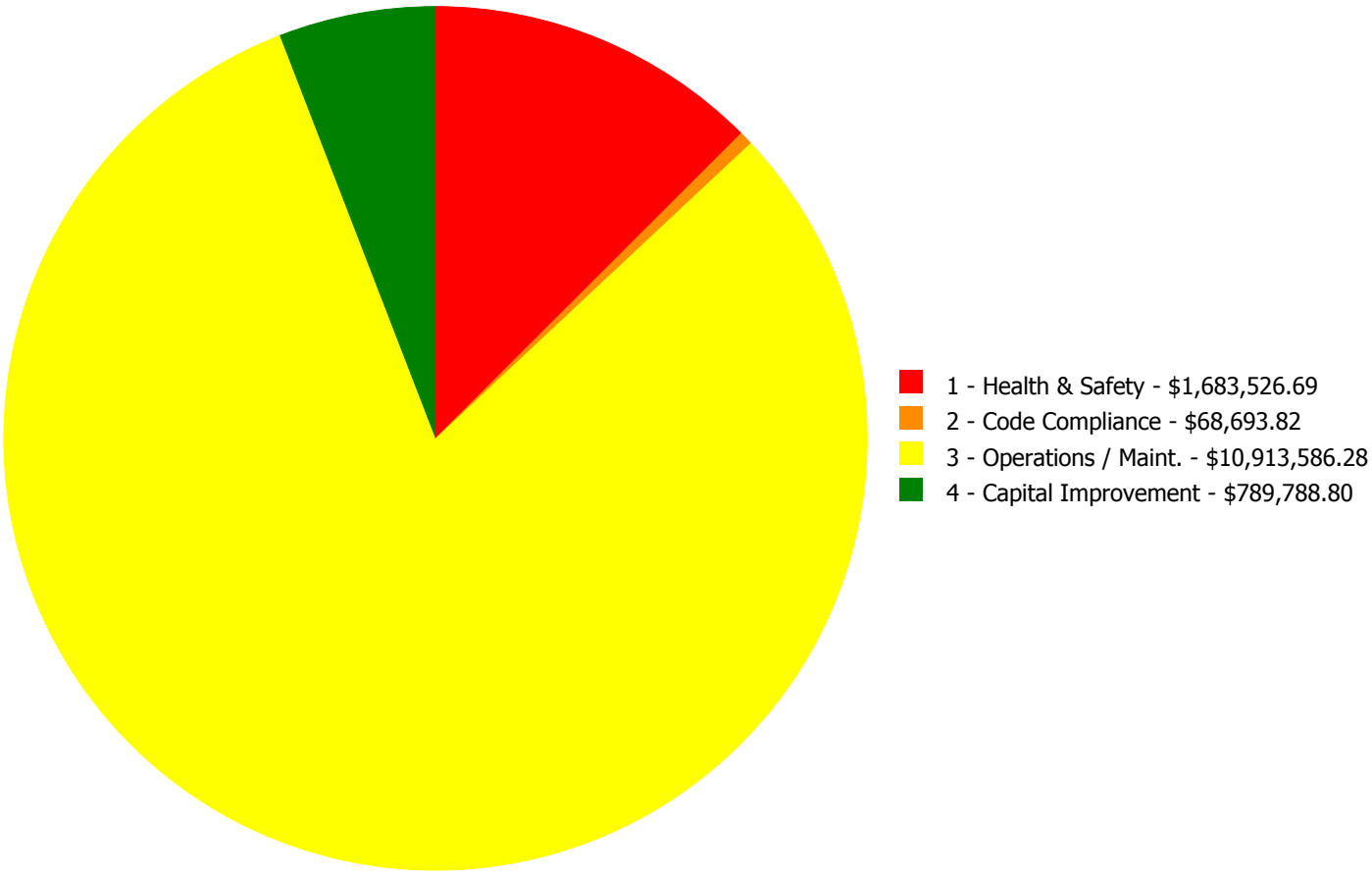
Deficiency By Priority Investment Table

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	$409,350.25	$5,247.92	$0.00	$0.00	$414,598.17
B2020	Exterior Windows	$0.00	$320,402.44	$0.00	$0.00	$0.00	$320,402.44
B2030	Exterior Doors	$0.00	$113,345.13	$0.00	$0.00	$0.00	$113,345.13
B3010105	Built-Up	$1,399,327.06	$0.00	$0.00	$0.00	$0.00	$1,399,327.06
C1020	Interior Doors	$0.00	$179,936.48	$0.00	$0.00	$0.00	$179,936.48
C1030	Fittings	$0.00	$1,905.48	$0.00	$0.00	$0.00	$1,905.48
C2010	Stair Construction	$121,375.60	$0.00	$0.00	$0.00	$0.00	$121,375.60
C3020412	Terrazzo & Tile	$0.00	$20,697.31	$0.00	$0.00	$0.00	$20,697.31
C3020413	Vinyl Flooring	$0.00	$488,725.35	$0.00	$0.00	$0.00	$488,725.35
C3020415	Concrete Floor Finishes	$0.00	$3,844.53	$0.00	$0.00	$0.00	$3,844.53
C3030	Ceiling Finishes	$0.00	$607,905.31	$0.00	$0.00	$0.00	$607,905.31
D2010	Plumbing Fixtures	$0.00	$506,471.39	$0.00	$0.00	$0.00	$506,471.39
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$0.00	$380,051.97	$380,051.97
D2030	Sanitary Waste	$0.00	$0.00	$323,779.55	$0.00	$0.00	$323,779.55
D3040	Distribution Systems	$0.00	$0.00	$567,622.35	$0.00	$1,661,219.77	$2,228,842.12
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	$0.00	$0.00	$1,060,144.04	$0.00	$0.00	$1,060,144.04
D5020	Lighting and Branch Wiring	$1,616,949.72	$0.00	$0.00	$0.00	$0.00	$1,616,949.72
D5030	Communications and Security	$806,956.24	$0.00	$0.00	$38,860.48	$0.00	$845,816.72
D5090	Other Electrical Systems	$260,797.77	$0.00	$0.00	$0.00	$0.00	$260,797.77
E1020	Institutional Equipment	$93,445.81	$0.00	$0.00	$0.00	$0.00	$93,445.81
	Total:	$4,298,852.20	$4,261,490.52	$1,956,793.86	$38,860.48	$2,899,598.53	$13,455,595.59

Deficiency Summary by Category

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



Budget Estimate Total: $13,455,595.59

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
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Remove and Replace Built Up Roof
Qty: 41,300.00
Unit of Measure: S.F.
Estimate: $1,399,327.06
Assessor Name: Carlton Ross
Date Created: 11/10/2015

Notes: Remove and replace built-up roof, including gravel stop, expansion joints and curbs (41,300sf)

System: C2010 - Stair Construction

Location: main lobby stairs
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 1 - Response Time (< 2 yr)
Correction: Replace inadequate or install proper stair railing - select appropriate material
Qty: 162.00
Unit of Measure: L.F.
Estimate: $54,614.30
Assessor Name: Carlton Ross
Date Created: 11/10/2015

Notes: Replace non-code compliant handrails and guards in Main Lobby stair with code compliant systems: 29 risers = 28′ run x 2 sides x 2 rails each stair = 112′ handrails; 50′ guard 42″ high around opening

System: C2010 - Stair Construction

Location: stairways

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

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

Qty: 132.00

Unit of Measure: L.F.

Estimate: $44,500.54

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Replace non-code compliant railings and balustrades in stairways (24' wall and stair rail per stair) x 3 = 72' handrails; 60ft guard 42" high around openings

System: C2010 - Stair Construction

Location: exterior stair - play area

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 100.00

Unit of Measure: L.F.

Estimate: $16,886.28

Assessor Name: Carlton Ross

Date Created: 11/10/2015

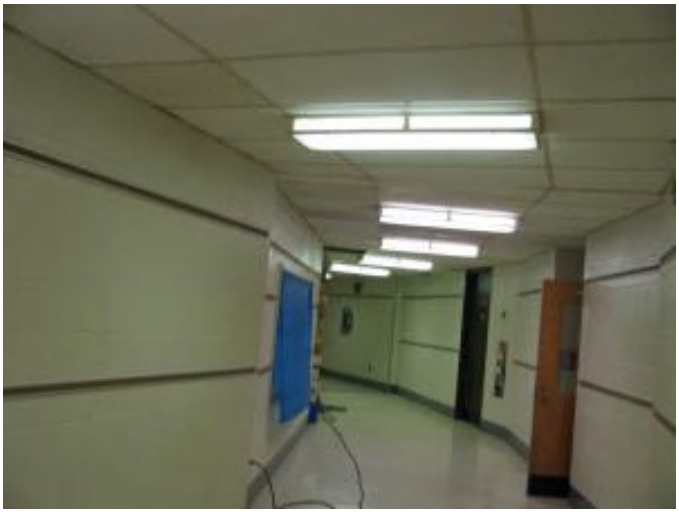
Notes: Provide new stair railings each side of new 26 riser stair connecting lower asphalt playground with upper area (50ft railing; 50 ft guard along top wall)

System: C2010 - Stair Construction

Location: exterior stair - play area
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Repair exterior stairs
Qty: 26.00
Unit of Measure: Riser
Estimate: $5,374.48
Assessor Name: Carlton Ross
Date Created: 11/10/2015

Notes: Provide new 26 riser stair with railings each side connecting lower asphalt playground with upper area (50ft railing)

System: D5020 - Lighting and Branch Wiring



Location: Entire 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: $1,109,893.36
Assessor Name: Carlton Ross
Date Created: 09/09/2015

Notes: Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamp throughout all buildings. Use LED high bay lighting fixture for gymnasium. Provide emergency power to sufficient number of lighting fixtures in corridors (every three other), hallways, stairways and other egress ways to get minimum 1fc at egress ways per code.

System: D5020 - Lighting and Branch Wiring

Location: Entire 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: $472,893.30

Assessor Name: Carlton Ross

Date Created: 09/09/2015

Notes: Install minimum two receptacles in each wall of class rooms and sufficient number of receptacles in other areas per NEC. We recommend adding a two-compartment surface mounted raceway, for data power, for the computer lab room. Estimated 300 receptacles.

System: D5020 - Lighting and Branch Wiring

Location: Entire Building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Add Lighting Fixtures

Qty: 1.00

Unit of Measure: Ea.

Estimate: $30,304.68

Assessor Name: Carlton Ross

Date Created: 09/10/2015

Notes: Replace existing exit signs with Battery pack exit signs. Estimated 30 each

System: D5020 - Lighting and Branch Wiring

Location: Chiller area

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Add Exterior Lighting

Qty: 1.00

Unit of Measure: Ea.

Estimate: $3,858.38

Assessor Name: Carlton Ross

Date Created: 09/10/2015

Notes: Provide one lighting fixture in chiller area.

System: D5030 - Communications and Security

Location: Entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $339,713.26

Assessor Name: Carlton Ross

Date Created: 09/09/2015

Notes: Replace existing fire alarm system with an automatic fire alarm system including smoke detectors in corridors and other recommended areas per NEC. Install horn/strobes in class rooms, corridors, offices, toilets, library and other recommended areas per codes.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Security Issue

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Video Surveillance System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $286,512.15

Assessor Name: Carlton Ross

Date Created: 09/10/2015

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: Entire Building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Clock System or Components

Qty: 1.00

Unit of Measure: Ea.

Estimate: $180,730.83

Assessor Name: Carlton Ross

Date Created: 09/09/2015

Notes: Replace existing master clock system.

System: D5090 - Other Electrical Systems

Location: Basement

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: $233,845.76

Assessor Name: Carlton Ross

Date Created: 09/09/2015

Notes: Replace existing emergency generator with 100KW diesel generator.

System: D5090 - Other Electrical Systems

Location: Roof

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Provide Lightning Protection System

Qty: 1.00

Unit of Measure: LS

Estimate: $26,952.01

Assessor Name: Carlton Ross

Date Created: 09/10/2015

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

System: E1020 - Institutional Equipment

Location: Auditorium

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $93,445.81

Assessor Name: Carlton Ross

Date Created: 09/10/2015

Notes: Provide new stage lighting and controller in Auditorium.

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

System: B2010 - Exterior Walls

Location: clerestory wall (roof)

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace insulated metal exterior wall panels

Qty: 9,000.00

Unit of Measure: S.F.

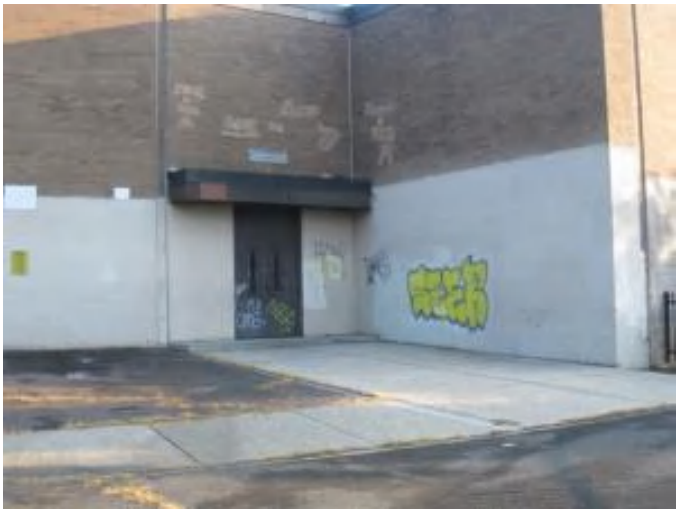
Estimate: $341,029.11

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Replace damaged, dented insulated metal panels around gymnasium clerestory (1500ft sx x6ft = 9000sf)

System: B2010 - Exterior Walls



Location: exterior lower level wall (painted)

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Repaint exterior walls - CMU

Qty: 4,000.00

Unit of Measure: S.F.

Estimate: $33,230.34

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Repaint Lower Level foundation wall to hide graffiti facing playground (4,000sf)

System: B2010 - Exterior Walls

Location: soffit over main entrance

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace insulated metal exterior wall panels

Qty: 500.00

Unit of Measure: S.F.

Estimate: $18,946.06

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Replace damaged suspended aluminum soffit over entrance (500sf)

System: B2010 - Exterior Walls

Location: boiler flue - chimney

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: 500.00

Unit of Measure: S.F.

Estimate: $16,144.74

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Repoint brick chimney (boiler flue) (100sf)

System: B2020 - Exterior Windows

Location: exterior windows

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace aluminum windows - pick the appropriate size and style and insert the number of units

Qty: 56.00

Unit of Measure: Ea.

Estimate: $316,591.41

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Replace all faded anodized aluminum frame single sheet plexiglass windows with insulated units (28 - 1'x6' units in clerestory; 28 - 3.5' x 7' windows in building)

System: B2020 - Exterior Windows

Location: exterior windows

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replacement of failing perimeter window sealant - per LF of sealant

Qty: 600.00

Unit of Measure: L.F.

Estimate: $3,811.03

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Recaulk vertical joints between brick and windows/aluminum panels (600ft)

System: B2030 - Exterior Doors

Location: exterior doors

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 14.00

Unit of Measure: Ea.

Estimate: $113,345.13

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Replace steel exterior doors, frames, and hardware including glass or aluminum transoms (14) 3'x7'

System: C1020 - Interior Doors

Location: interior doors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Refinish interior doors

Qty: 120.00

Unit of Measure: Ea.

Estimate: $99,381.95

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Refinish all original solid core wood interior doors. Refinish steel frames. (120) 3'x7' doors

System: C1020 - Interior Doors

Location: interior doors

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace door knobs with compliant lever type

Qty: 120.00

Unit of Measure: Ea.

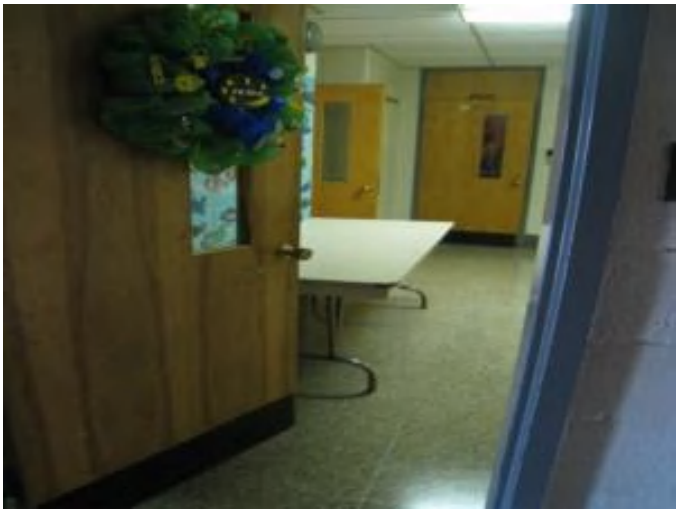
Estimate: $66,788.34

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Replace all hardware with lever handle hardware sets. (120) 3'x7' doors

System: C1020 - Interior Doors



Location: classrooms and offices

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Provide security hardware for classroom and office doors

Qty: 60.00

Unit of Measure: Ea.

Estimate: $13,766.19

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Provide security hardware for classrooms and offices locking from inside of room (60 each)

System: C1030 - Fittings

Location: toilet rooms

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Replace toilet accessories - select accessories and quantity

Qty: 2.00

Unit of Measure: Ea.

Estimate: $1,905.48

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Provide ADA accessible grab bars and accessories in one toilet room per accessible floor (2)

System: C3020412 - Terrazzo & Tile

Location: upper level corridors

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Refinish terrazzo or tile flooring

Qty: 6,400.00

Unit of Measure: S.F.

Estimate: $20,697.31

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Patch cracks and refinish terrazzo (6400ft)

System: C3020413 - Vinyl Flooring

Location: gym, auditorium, offices, classrooms

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: 24,300.00

Unit of Measure: S.F.

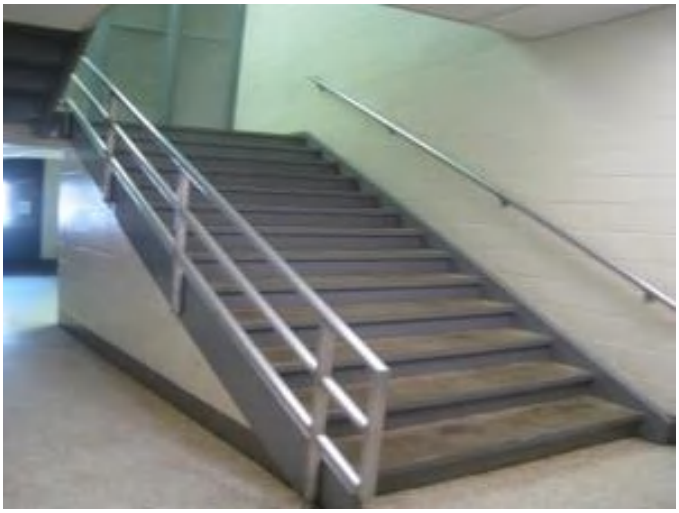
Estimate: $368,550.03

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Replace VAT after testing to confirm presence of asbestos (4,500 aud + 5,000 gym and contiguous rooms; classes, and offices (24,300sf)

System: C3020413 - Vinyl Flooring



Location: interior rooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace VCT

Qty: 10,000.00

Unit of Measure: S.F.

Estimate: $120,175.32

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Replace approximately half of all VCT - damaged and cracked (15,000sf)

System: C3020415 - Concrete Floor Finishes

Location: mechanical areas

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Clean and reseal concrete floors

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $3,844.53

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Repaint concrete floors in mechanical rooms (1,000sf)

System: C3030 - Ceiling Finishes

Location: corridors and most rooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 40,000.00

Unit of Measure: S.F.

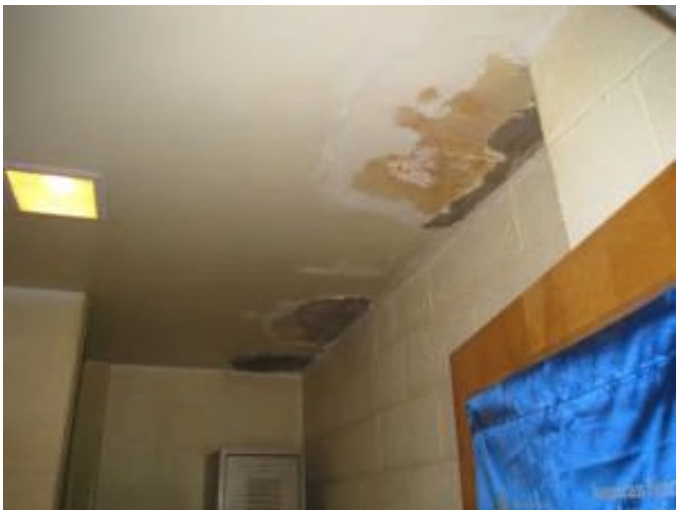
Estimate: $603,297.21

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Replace damaged or stained acoustical tile ceilings in all corridors and some classrooms with new suspended acoustical tile clg system (40,000sf)

System: C3030 - Ceiling Finishes



Location: toilet room ceiling

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace gypsum board ceilings

Qty: 200.00

Unit of Measure: S.F.

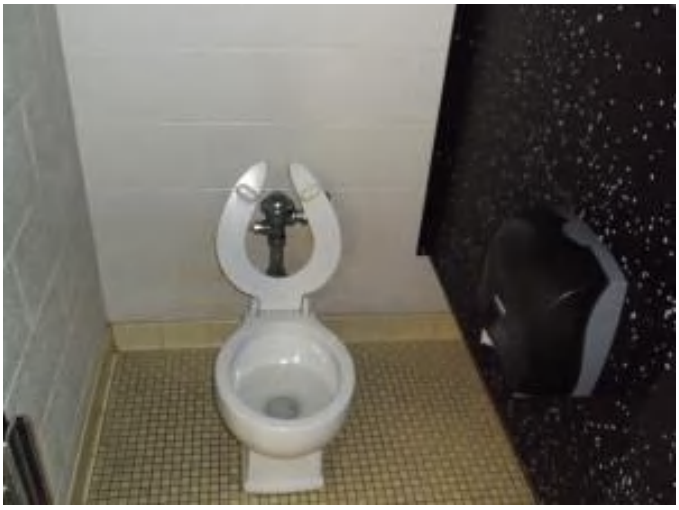
Estimate: $4,608.10

Assessor Name: Carlton Ross

Date Created: 11/10/2015

Notes: Repaint water damaged gyp bd ceilings (200sf)

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: 40.00

Unit of Measure: Ea.

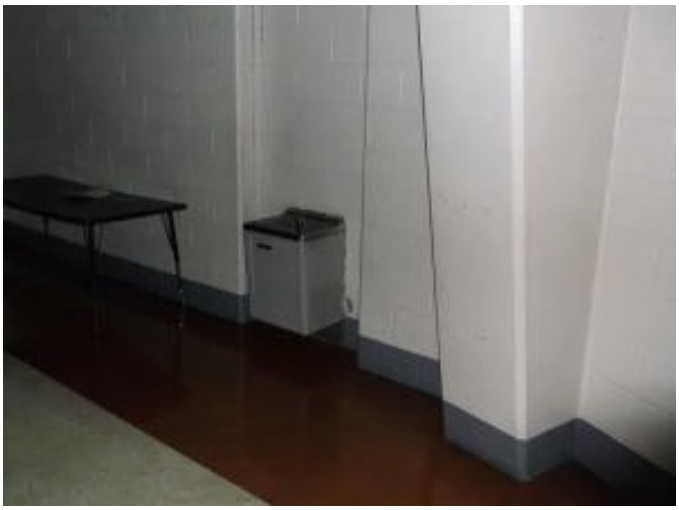
Estimate: $298,485.91

Assessor Name: Carlton Ross

Date Created: 11/18/2015

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: Carlton Ross

Date Created: 11/18/2015

Notes: Replace the integral refrigerated vertical water coolers and the drinking fountains. 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: 14.00

Unit of Measure: Ea.

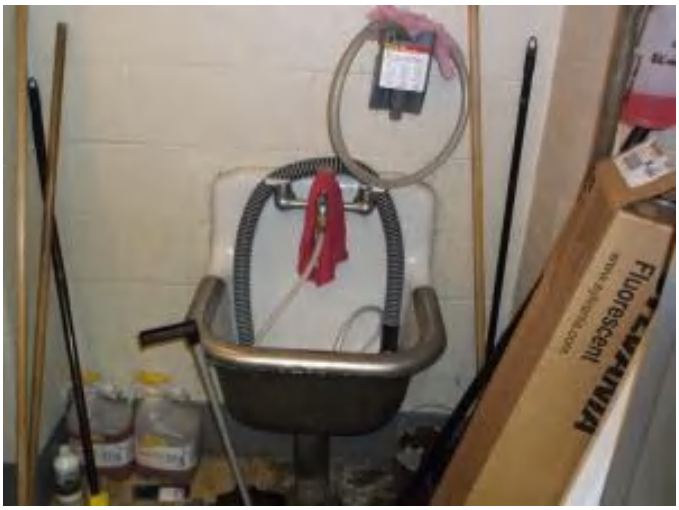
Estimate: $46,467.17

Assessor Name: Carlton Ross

Date Created: 11/18/2015

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 floor janitor or mop sink - insert the quantity

Qty: 4.00

Unit of Measure: Ea.

Estimate: $27,264.37

Assessor Name: Carlton Ross

Date Created: 11/18/2015

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: 51.00

Unit of Measure: Ea.

Estimate: $8,710.76

Assessor Name: Carlton Ross

Date Created: 11/18/2015

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: Carlton Ross

Date Created: 11/18/2015

Notes: Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency.

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

System: B2010 - Exterior Walls

Location: exterior wall
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Remove graffiti - power wash and paint
Qty: 1,000.00
Unit of Measure: S.F.
Estimate: $5,247.92
Assessor Name: Carlton Ross
Date Created: 11/10/2015

Notes: Clean graffiti from brick facing playground and Fordham Road (1,000sf)

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: 66,000.00
Unit of Measure: S.F.
Estimate: $323,779.55
Assessor Name: Carlton Ross
Date Created: 11/18/2015

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: D3040 - Distribution Systems

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 60,000.00

Unit of Measure: S.F.

Estimate: $567,622.35

Assessor Name: Carlton Ross

Date Created: 11/18/2015

Notes: Hire a qualified contractor to examine the heating hot water piping in service for 47 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.

System: D5010 - Electrical Service/Distribution

Location: Basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Substation

Qty: 0.00

Unit of Measure: Ea.

Estimate: $648,986.55

Assessor Name: Carlton Ross

Date Created: 09/09/2015

Notes: Upgrade the existing electrical service with a new service . Replace the existing substation with new 2000A, 208/120V, 3PH, 4 wire substation.

System: D5010 - Electrical Service/Distribution

Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Electrical Distribution System (U)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $411,157.49

Assessor Name: Carlton Ross

Date Created: 09/09/2015

Notes: Replace the entire distribution system with new panels and new wiring/conduits. Our recommendation is to replace existing conduits and wiring to new Junction boxes, receptacles, and lighting. Provide arc flush label on the electrical equipment. Estimated 15 panel boards.

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

System: D5030 - Communications and Security

Location: Auditorium

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add/Replace Sound System

Qty: 1.00

Unit of Measure: LS

Estimate: $38,860.48

Assessor Name: Carlton Ross

Date Created: 09/10/2015

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

Priority 5 - Response Time (> 5 yrs):

System: D2020 - Domestic Water Distribution

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace domestic water piping (75 KSF)

Qty: 75,000.00

Unit of Measure: S.F.

Estimate: $380,051.97

Assessor Name: Carlton Ross

Date Created: 11/18/2015

Notes: Inspect and replace the original as needed the domestic water piping in the building

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 20.00

Unit of Measure: C

Estimate: $1,661,219.77

Assessor Name: Carlton Ross

Date Created: 11/18/2015

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 unit ventilators and window air conditioning units

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: Carlton Ross

Date Created: 11/18/2015

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:

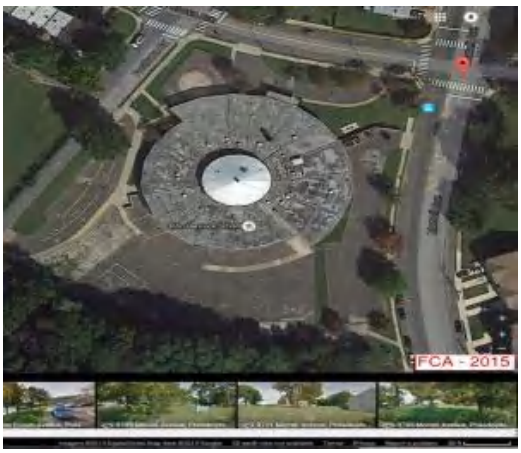
Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler Mechanical Equipment Room	Buderus	Logano GE615			35	2009	2044	$75,956.00	$167,103.20
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler Mechanical Equipment Room	Buderus	Logano GE615			35	2009	2044	$75,956.00	$167,103.20
D3030 Cooling Generating Systems	Water chiller, screw liquid chiller, air cooled, insulated evaporator, 270 ton, includes standard controls	1.00	Ea.	Adjacent to building	Carrier	30GXR225			30	2009	2039	$202,554.00	$222,809.40
D3040 Distribution Systems	Pump, circulating, cast iron, close coupled, end suction, bronze impeller, flanged joints, 20 HP to 1350 GPM, 5" size	3.00	Ea.	Boiler Mechanical Equipment Room	Taco				25	2009	2034	$8,350.50	$27,556.65
D3040 Distribution Systems	Pump, circulating, cast iron, close coupled, end suction, bronze impeller, flanged joints, 20 HP to 1350 GPM, 5" size	3.00	Ea.	Boiler Mechanical Equipment Room	Taco				25	2009	2034	$8,350.50	$27,556.65
D3040 Distribution Systems	Pump, circulating, cast iron, close coupled, end suction, bronze impeller, flanged joints, 20 HP to 1350 GPM, 5" size	3.00	Ea.	Boiler Mechanical Equipment Room	Bell & Gossett				25	2009	2034	$8,350.50	$27,556.65
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 300 kVA & below, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	2.00	Ea.	Basement					30			$42,600.60	$93,721.32
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 1600 amp, excl breakers	1.00	Ea.	Basement					30			$7,358.85	$8,094.74
D5010 Electrical Service/Distribution	Transformer, liquid-filled, 5 kV or 15 kV primary, 277/480 V secondary, 3 phase, 1000 kVA, pad mounted	1.00	Ea.	Basement					30			$50,425.20	$55,467.72
												Total:	**$796,969.53**

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):	105,400
Year Built:	1968
Last Renovation:	
Replacement Value:	$2,063,554
Repair Cost:	$374,677.30
Total FCI:	18.16 %
Total RSLI:	34.95 %



Description:

Attributes:

General Attributes:

Bldg ID:	S818001	Site ID:	S818001

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	37.32 %	23.34 %	$374,677.30
G40 - Site Electrical Utilities	26.67 %	0.00 %	$0.00
Totals:	**34.95 %**	**18.16 %**	**$374,677.30**

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.	15,000	30	1968	1998	2025	33.33 %	0.00 %	10			$172,800
G2020	Parking Lots	$7.65	S.F.	15,000	30	1968	1998	2025	33.33 %	232.39 %	10		$266,669.49	$114,750
G2030	Pedestrian Paving	$11.52	S.F.	66,700	40	1968	2008	2026	27.50 %	3.37 %	11		$25,909.89	$768,384
G2040	Site Development	$4.36	S.F.	105,400	25	1968	1993	2026	44.00 %	17.87 %	11		$82,097.92	$459,544
G2050	Landscaping & Irrigation	$3.78	S.F.	23,700	15	1968	1983	2030	100.00 %	0.00 %	15			$89,586
G4020	Site Lighting	$3.58	S.F.	105,400	30	1968	1998	2023	26.67 %	0.00 %	8			$377,332
G4030	Site Communications & Security	$0.77	S.F.	105,400	30	1968	1998	2023	26.67 %	0.00 %	8			$81,158
								Total	**34.95 %**	**18.16 %**			**$374,677.30**	**$2,063,554**

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.

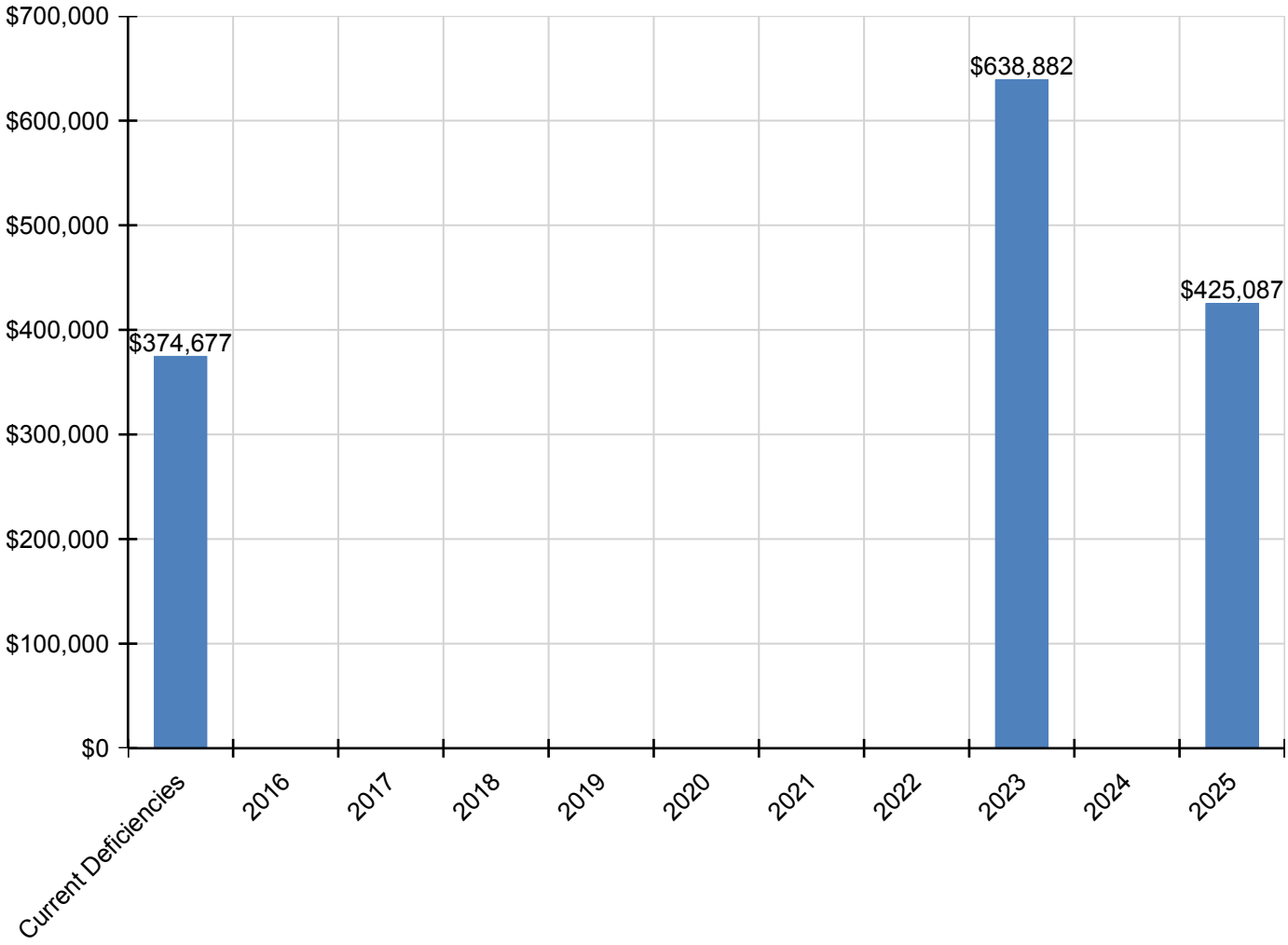
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$374,677**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$638,882**	**$0**	**$425,087**	**$1,438,646**
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	$255,452	**$255,452**
G2020 - Parking Lots	$266,669	$0	$0	$0	$0	$0	$0	$0	$0	$0	$169,636	**$436,305**
G2030 - Pedestrian Paving	$25,910	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$25,910**
G2040 - Site Development	$82,098	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$82,098**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$525,792	$0	$0	**$525,792**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$113,090	$0	$0	**$113,090**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

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

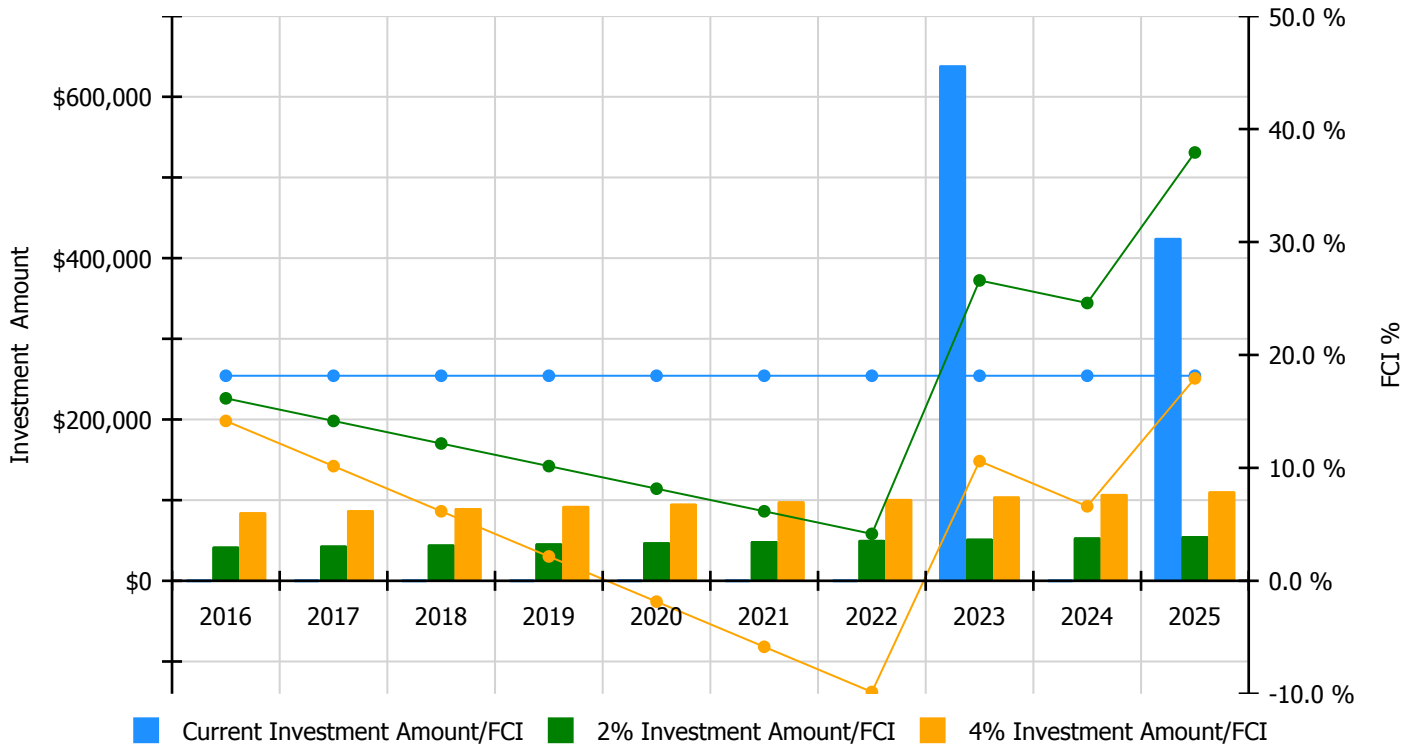


10 Year FCI Forecast by Investment Scenario

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

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

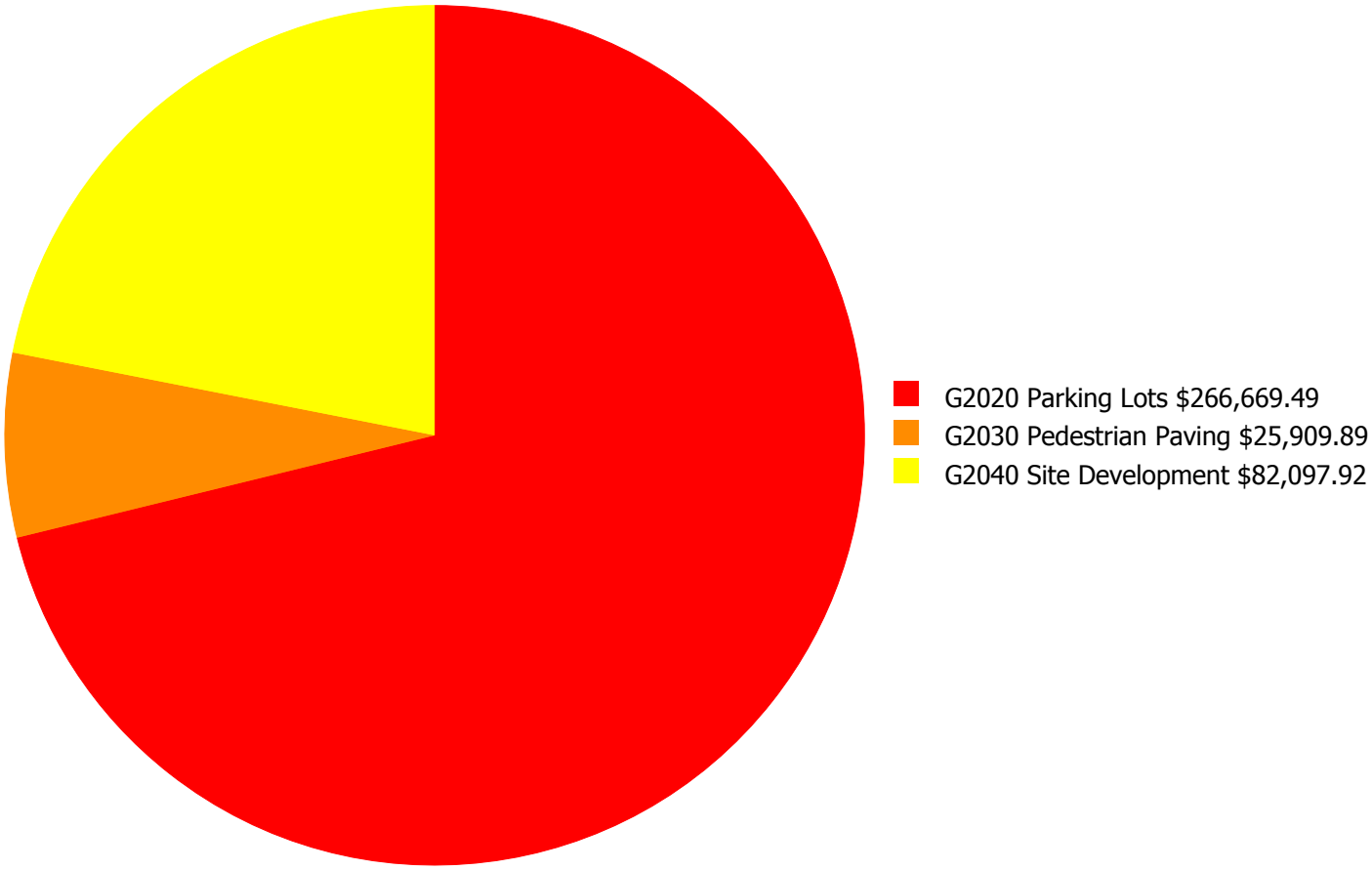
Facility Investment vs. FCI Forecast



Year	Investment Amount Current FCI - 18.16%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$42,509.00	16.16 %	$85,018.00	14.16 %
2017	$0	$43,784.00	14.16 %	$87,569.00	10.16 %
2018	$0	$45,098.00	12.16 %	$90,196.00	6.16 %
2019	$0	$46,451.00	10.16 %	$92,902.00	2.16 %
2020	$0	$47,844.00	8.16 %	$95,689.00	-1.84 %
2021	$0	$49,280.00	6.16 %	$98,560.00	-5.84 %
2022	$0	$50,758.00	4.16 %	$101,516.00	-9.84 %
2023	$638,882	$52,281.00	26.60 %	$104,562.00	10.60 %
2024	$0	$53,849.00	24.60 %	$107,699.00	6.60 %
2025	$425,087	$55,465.00	37.93 %	$110,930.00	17.93 %
Total:	**$1,063,969**	**$487,319.00**		**$974,641.00**	

Deficiency Summary by System

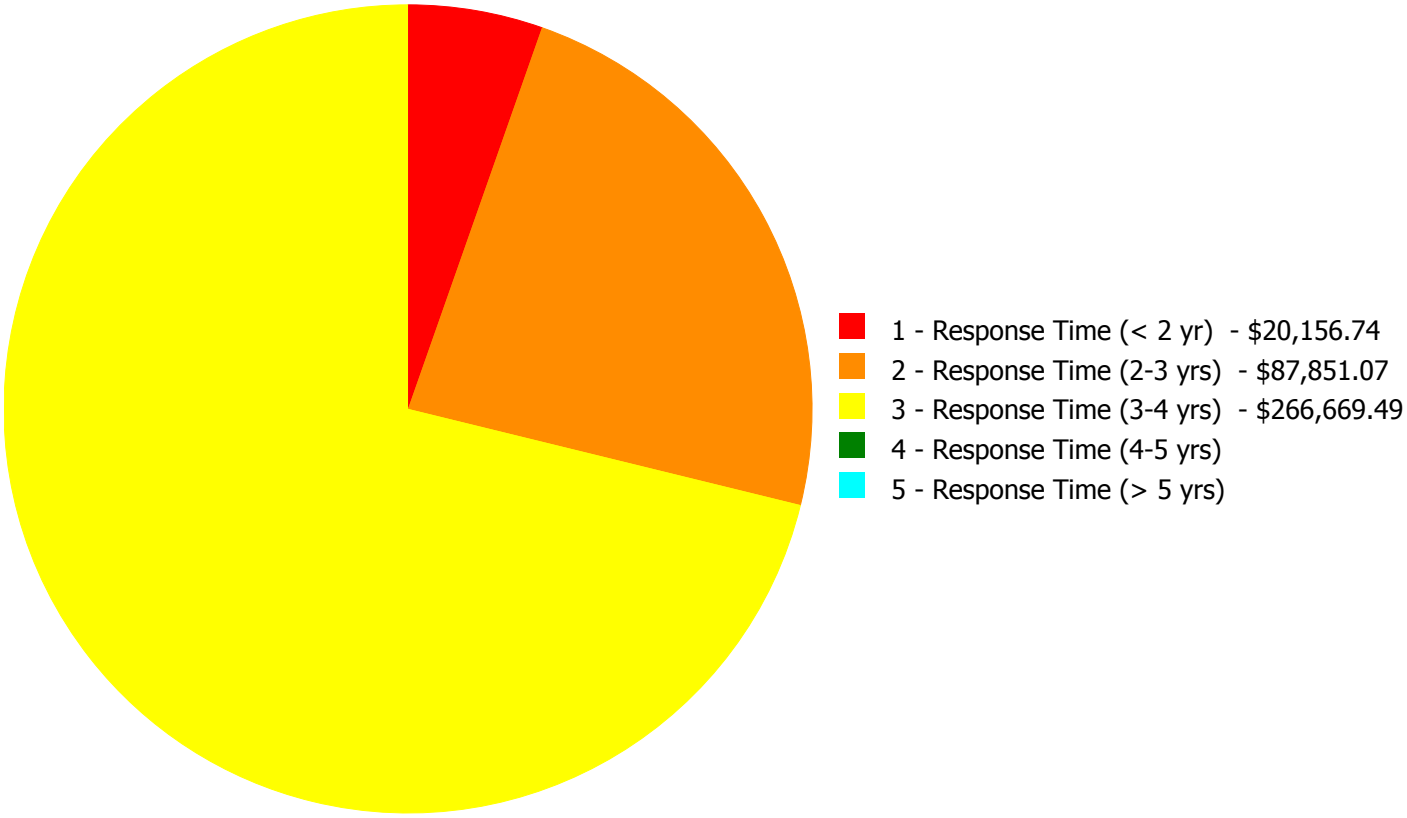
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $374,677.30

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: $374,677.30

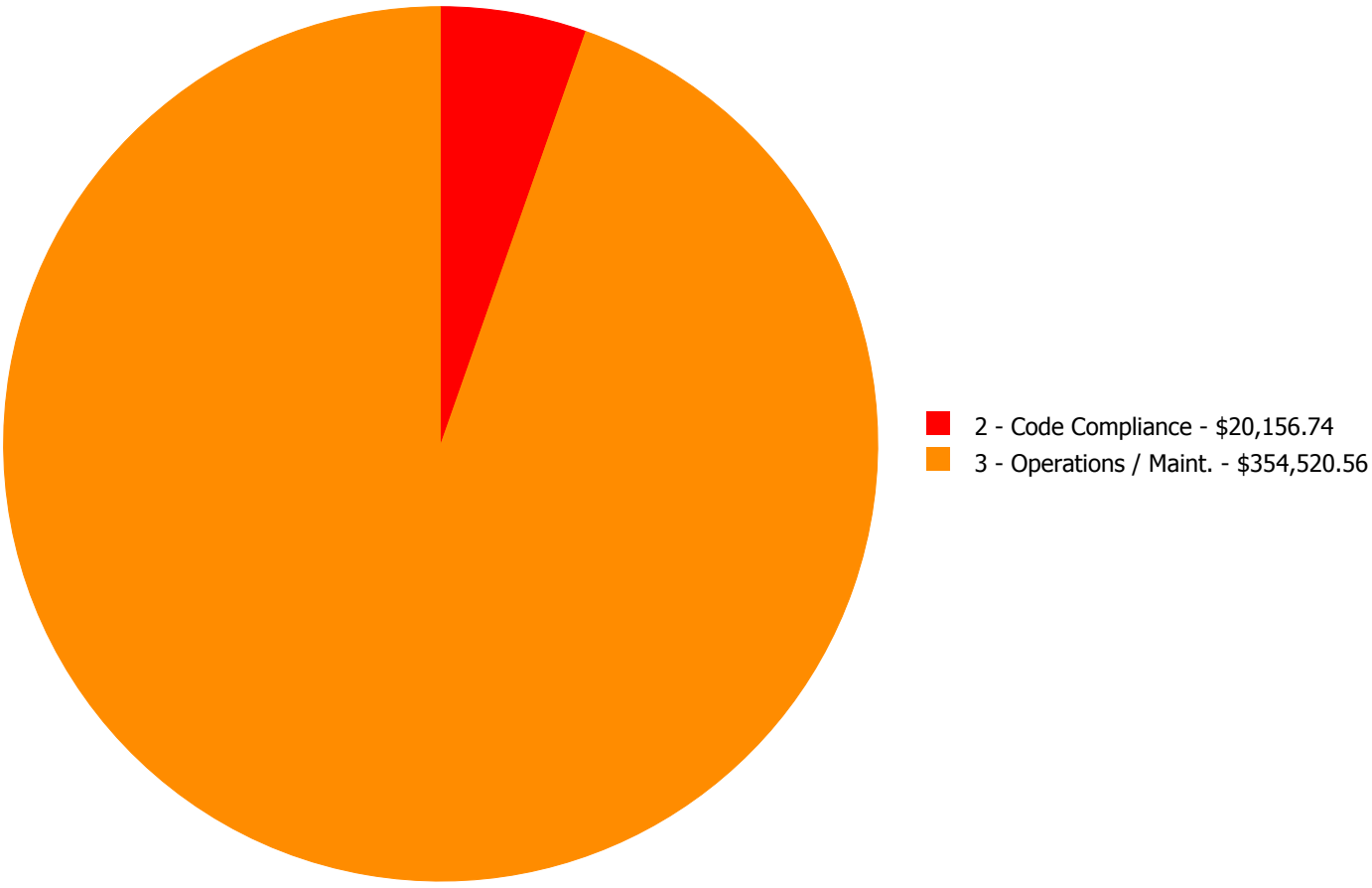
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2020	Parking Lots	$0.00	$0.00	$266,669.49	$0.00	$0.00	$266,669.49
G2030	Pedestrian Paving	$20,156.74	$5,753.15	$0.00	$0.00	$0.00	$25,909.89
G2040	Site Development	$0.00	$82,097.92	$0.00	$0.00	$0.00	$82,097.92
	Total:	$20,156.74	$87,851.07	$266,669.49	$0.00	$0.00	$374,677.30

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:



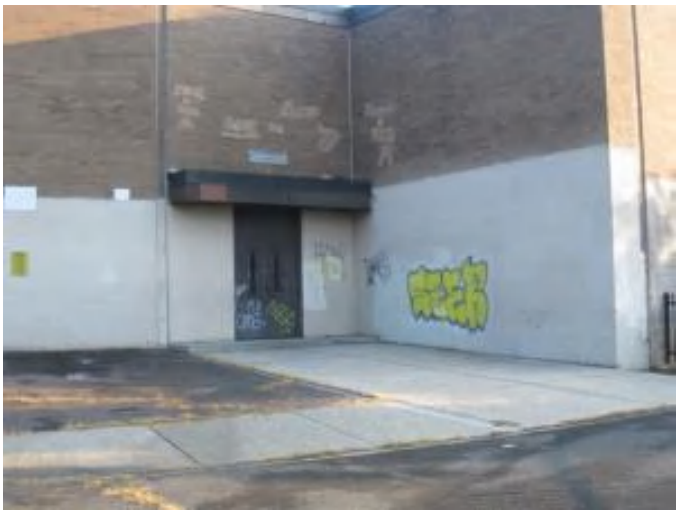
Budget Estimate Total: $374,677.30

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: G2030 - Pedestrian Paving



Location: 3 exterior doors

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

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

Qty: 18.00

Unit of Measure: L.F.

Estimate: $20,156.74

Assessor Name: Steven Litman

Date Created: 11/10/2015

Notes: Provide new ADA ramps into building at 3 locations (up 6”; 6ft long concrete apron @ doors)

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

System: G2030 - Pedestrian Paving

Location: entrance area walkway

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 400.00

Unit of Measure: S.F.

Estimate: $5,753.15

Assessor Name: Steven Litman

Date Created: 11/10/2015

Notes: Repave damaged sections of concrete walkway at building entrance (400sf)

System: G2040 - Site Development

Location: site fence

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Paint steel picket fence - LF of fence 6' high

Qty: 1,000.00

Unit of Measure: L.F.

Estimate: $65,260.05

Assessor Name: Steven Litman

Date Created: 11/10/2015

Notes: Repaint steel picket fencing (1000ft)

System: G2040 - Site Development

Location: site fence

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace metal picket fence - input number of gates

Qty: 100.00

Unit of Measure: L.F.

Estimate: $16,837.87

Assessor Name: Steven Litman

Date Created: 11/10/2015

Notes: Replace damaged steel picket fencing (100lf x 8ft tall)

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

System: G2020 - Parking Lots

Location: parking lot, drop off driveway, play area

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Resurface parking lot - grind and resurface including striping

Qty: 70,000.00

Unit of Measure: S.F.

Estimate: $266,669.49

Assessor Name: Steven Litman

Date Created: 11/10/2015

Notes: Repave asphalt parking and play surfaces; including re-striping (70,000sf)

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

School District of Philadelphia

S832001;LaBrum

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):	44,500
Year Built:	1973
Last Renovation:	
Replacement Value:	$23,901,081
Repair Cost:	$11,448,518.83
Total FCI:	47.90 %
Total RSLI:	72.02 %

Description:

Sold part of site (2010).

Facility Condition Assessment
September 2015

School District of Philadelphia
General J. H. LaBrum Middle School
10800 Hawley Street
Philadelphia, PA 19154

44,500sf / 420 students / LN 08

General

General J. H. LaBrum Middle School is located at 10800 Hawley Street. The main entrance faces Hawley Street. The building was constructed in 1973, has 44,500 square feet, and is 1 and 2 stories tall. There is no basement in this building. The exterior of the building is constructed of flat precast concrete wall panels with exposed aggregate, creating

a simple, clean appearance. Don DiPasquale, the Building Engineer accompanied the team during the building inspection.

After the inspection, the Principal, Bill Griffin, indicated in an email that he felt the building had the following deficiencies: the windows are original and are in bad condition; air conditioning is not consistent throughout the building and not all windows can be opened to allow outside air to come in; door knobs and locks are broken and many have no keys; many bathroom faucets do not work; trees in the front of the building need to be trimmed.

Architectural/Structural

Foundations were not seen. There is no basement, therefore no walls below grade could be seen. Grading around the building is generally flat especially along the north side of the building where parking is located. When the parking lot is repaved, the surface should be adjusted to allow for better natural drainage away from the building wall. Grading along the front has a slight slope and somewhat better natural drainage. Footings at the bottom of the foundations were not seen and their construction type or condition could not be ascertained.

Ground floor slabs are good condition, with some minor floor tile cracks and joint separation observed. Unfinished slabs in the mechanical area and loading door area need to be cleaned and resealed. Upper floor slabs are constructed of precast concrete planks, exposed to view as first floor ceilings in most locations. There were a few locations where small cracks were observed in corridors across vinyl tile flooring in ground floor slabs.

Roof construction is composed of flat concrete planks over the 2 story section and longspan concrete “T” sections over the tall, 1 story gymnasium section. The entire roof deck is flat with minimum overall slope and gradual pitch to roof drains. Drainage is adequate on the two higher roof areas, over the gym roof and 2 story roof sections. Since there is a minimal height gravel stop (no parapet) over these 2 story sections, there is no need for overflow drains or pipes; if all roof drains are clogged, roof water simply runs over the edge of the roof with little accumulation. Roof drains over these two higher roofs were not clogged and relatively clear of debris. There is a low roof area over the gym lockers created by the higher gym and second floor walls. The structure for this section is at the same level as the second floor structure, making it easy to walk into this area through a door at the end of the second floor corridor. This roof area, however, has serious drainage problems with almost full ponding and no drainage observed. To make matters worse, there are no overflow drains or scuppers to alleviate the ponding and flashing along building walls is failing creating opportunities for water intrusion into the building. This area needs to be re-roofed, as discussed in the roof coverings section, below.

Exterior walls and are constructed of rectangular precast concrete panels and window panels separated by small concrete panels; square, cast in place concrete columns separate the precast panels and window panels. All concrete panels are in good condition over most building wall surfaces with no surface spalling observed. Wall panels have some aggregate exposed to create texture. Joints at columns are in fair condition with some joints separating and caulking failing. A small upper section of the walls is cantilevered approximately 2 ft. beyond the second floor walls with a plaster soffit, in need of refinishing. The lower first floor section of the precast panels is painted off-white, presumable to hide graffiti; the line where this paint ends is sloppy and the paint is worn and blotchy. The entire painted area needs to be redone to improve the building’s appearance. A thorough inspection of all walls and cantilever beams is required to determine where joint re-sealing is required to prevent water infiltration between panels and concrete columns. A unique partition problem seen in this school is one in which squirrels have created a passageway into the building in the gymnasium from the joint where concrete panels intersect the windows, concrete wall panels and concrete columns. Piles of debris can be seen on gym floors every day. All possible entry points along the gymnasium walls need to be filled with grout and closed off. Additionally, an exterminator might be needed to prevent future pest infiltration. Some gaps were observed at the tops of some first and second floor block walls under the deck above. A larger space of approximately 1” gap was seen in the east stairway where at the low roof area between the gym section and the 2 story section of the building. The precast wall panels seem to be moving away from the stairway walls; steel angles have been added to the exterior to bring these parts together but do not seem to be working as planned.

Exterior windows the original anodized aluminum frame units with single hung operable units with single thickness clear plexiglass acrylic glazing. Windows are in poor condition with severely scratched single-pane plexiglass vision panels. Some windows cannot be opened. Units do not seal tightly and have corroded frames. There is galvanized security screening on first floor windows which is damaged in some locations. Single pane plexiglass units do not meet today’s energy code requirements and are large sources of heat loss – they should be replaced with new insulated glazing units with improved less visible window/security screens.

Most exterior doors are painted steel frames and flush hollow metal door units. They have dents, chips, rust, and re in poor condition. Some have broken or non-functioning panic hardware and are not ADA compliant. Entrance doors were recently replaced with new FRP units with aluminum edges, narrow lite vision panels, and new hardware – these are excellent units and should be the standard for all door replacements. Stairway and other grade exit doors are the original old, damaged, flush hollow metal; some have narrow lite vision panels. All original doors are in poor condition and need to be replaced.

Roof covering consists of a fully adhered EPDM ("rubber") roofing system. The system is over 20 years old; Building Engineer thought that it could be the original roof, which would make the roof covering 42 years old. There are some soft areas indicating moisture has penetrated into the insulation underneath. Even though most off the roof membrane is in fair condition, flashing is generally cracking in a number of locations at overlap joints. Since the overall pitch appears to be less than the code required 2% slope, even though the main roofs have no major areas of ponding, there are many small areas of ponding due to this nearly flat condition. The one low area located between the gymnasium section and the 2 story section has serious ponding – almost 100% of this area is flooded. This is the area where there are many penetrations and flashing locations for rooftop equipment such as air handlers, exhaust fans, and equipment curbs. Flashing of penetrations appears to be failing and past its normal service life. The overall condition of the roofing membrane and flashing is "weathered" and is past its normal service life of 20 years and needs to be completely replaced.

Partitions in all spaces are constructed of concrete block. There are no vision panels in any of the corridor walls, preserving a fire-rated construction which is required by today's codes in a non-sprinklered Educational building. Some second floor classrooms have the original folding wood partitions that subdivided large classroom spaces into 3 smaller classrooms. These partitions are not easy to operated and are no longer opened, however in their closed position, they have whiteboards attached, are good classroom dividers and do not need to be replaced. All stairways, toilet rooms, the cafetorium, gym, and school offices are also constructed of concrete block and are in good condition. However, the concrete block walls in the office area near the Principal's office are cracking at the top due to some movement in the precast concrete planks or walls. Since the movement appears to be noticeable across the school office area and in the many areas of the first floor corridor slabs, a structural review of this condition should be conducted to ascertain if it is something to be concerned about or if it is simply "minor settlement" and not unusual for the amount of movement over the lifespan of this building.

Interior classroom and office doors are solid core wood with hollow metal door frames. Some doors have narrow lite vision panels. All doors have round knob hardware, and do not have locksets with security feature which allows for locking by a key from inside the room – this is required to provide the best security today in case a school-wide lockdown is needed. Most wood doors to classrooms can be refinished; doors to toilet rooms, cafetorium and other high use spaces must be replaced. Stairway doors are flush steel doors with push/pull hardware that does not positively latch as required of fire rated doors; some stair doors have panic hardware, but not all of those doors have working/latching hardware sets. Most steel doors frames are rusting at the bottom where in contact with floors. Interior doors in mechanical rooms are also hollow metal doors in hollow metal frames and are rusted where coming in contact with floors. All metal doors and the scratched, damaged original wood doors on upper floors need to be replaced.

Interior fittings/hardware in upper floor classrooms include black slate chalkboards in center of the front walls (exterior wall of the building with cork bulletin boards on walls flanking the blackboards. Science rooms have oak furniture that is old and worn with lab-grade countertops. Toilet room partitions are solid plastic partitions; some hardware required adjustment, but most are in good condition. Toilet room accessories (toilet paper dispensers, soap, paper towel or dryers, grab bars, door latches) seem to be mostly in place and operating. There some partially compliant toilet rooms that have grab bars and open space around toilets; there are other toilet rooms with combination sink-toilet compartments not equipped with grab bars; sinks and urinals do not comply with ADA guidelines. At least one toilet room should be converted to become a fully compliant ADA toilet meeting all dimensions with fully compliant fixtures and accessories.

Stair construction consists of concrete filled steel treads, steel risers, and steel stringers. Handrails are 29-30" height with no guards on open sides and guards at the top of stair runs are 36" in height. Balustrade is a two horizontal rail system which does not comply with 4" maximum spacing required today. Concrete treads and platforms are dirty and should be stripped and resealed. Steel handrails are mounted to the concrete walls on one side of stairs and could be reused if remounted at the correct 36" height. The free-standing handrails and guards should be replaced with code compliant handrails and guards.

Wall finishes in classrooms, cafetorium, gymnasium, and stairways are painted concrete block interior walls and painted

interior surface of precast concrete panel exterior walls. Walls appear to have been recently repainted and are generally in good condition. Toilet room walls are painted block also in good condition. One missing design element is the entrance vestibule at the main front visitor and student entry doors. They now open up into the main school lobby, which admits large amounts of cold air into the building during winter. There seems to be enough wall space to allow for the creation of a vestibule to control the cold air admitted to the building when doors are opened during winter. Construction of a lobby vestibule is recommended.

Floor finish in most of the school is 12" x 12" VCT (vinyl composition tile) glued to the concrete slab. Most VCT is in good condition except for some locations at toilet room doors and other doors where dirt has accumulated or chipping has occurred at transitions to other rooms. The entrance lobby has newer blue and white tiles in good condition. The cafetorium and the kitchen have highly durable terrazzo that is in good condition. The gymnasium has wood floors which should be refinished. Gym lockers are finished in VCT which is in good condition. Stair walking surfaces are exposed concrete which is dirty and needs to be stripped, cleaned and resealed. Most toilet rooms have ceramic mosaic floors which are dirty and in need of cleaning. Sections of VCT need to be added where old unit ventilators were replaced with newer smaller units, exposing sections of bare concrete floor.

Ceiling finish in the cafetorium is 2x4 suspended acoustical tile panels installed around existing surface mounted lighting fixtures, creating gaps ("clouds") around the fixtures. The Gymnasium has an exposed precast concrete "T" roof system, painted white. All other spaces in the building have exposed precast concrete floor or roof planks painted white with surface mounted 1x4 fluorescent lighting fixtures. Finishes are in good condition.

Fixed furnishings include the original oak casework and storage cabinets in science classrooms which are very worn in need of replacement and metal book shelves in the Library which appear to be in good condition. Steel lockers for students are located in the second floor corridor and are in fair condition. Univents have been replaced in some classrooms with newer units that are somewhat smaller than the original units. After installing the smaller unit, sections of the exterior wall were blanked off with thin sheets of metal having no insulation. A finished layer of insulation and gypsum board needs to be added to the gaps left by the new smaller units, to prevent cold drafts and condensation on the inside of the metal panels during winter. The school office has old metal and plastic laminate office furniture in fair condition.

There is an elevator in the building, 2500 lb. capacity, serving both floors. There is no wheelchair access into the main building entrance, however there is access into the cafetorium. Access should be provided into the main entrance and ADA accessible route signage is needed to help direct personnel to this accessible entrance.

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 are also equipped with floor drains.

Electric water coolers in the corridors are located near the restrooms in general. These EWCs are wall hung fountains. There are a few vertical floor standing electrical water coolers, such as those located in the Cafetorium. There are also recessed style drinking fountains located in the gymnasium. Most appear to be the original installed equipment. The replacement of all drinking fountains is recommended as the equipment is approximately 42 years old and beyond its service life.

Wall hung service sinks are original and are available within the building for use by the janitorial staff. The Cafeteria's food prep/kitchen is equipped with one, three compartment stainless steel sink with blade handle operated faucets. The grease trap could not be located during the survey. The kitchen is also equipped with a hand sink. The triple wash sink and hand sink show signs of normal usage. Chemicals are injected manually into the sanitizing basin.

Gas turrets for the science labs are still in place, but are no longer used as the gas main has been shut off to these devices.

Science and prep sinks in the science classrooms are still active with hot and cold water. These fixtures have exceeded their service life and should be replaced.

Domestic Water Distribution – It appears that the 3" domestic water service piping is mostly soldered copper. Water service enters the building on the first floor, without a double check backflow preventer (RPZA – reduced pressure zone assembly), however there is 3" water meter on the main line upon entering the building. The water meter is not new. The piping is copper with soldered joints. 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.

There is one natural gas fired, vertical tank type water heater Bradford White, 48 gallon, model 50T65FB3N which serves the school and is located in the mechanical room near the building engineer's office. The water heater was installed in 2010 and should not need to be replaced for 5 – 7 years. The hot water system is equipped with a recirculation pump as well but does not have an expansion tank installed.

Sanitary Waste - The sanitary waste piping system in the original building is galvanized with threaded fittings and joints 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 no overflow scuppers for the building.

Energy Supply - A 2" natural gas service enters the building on the first floor in the main mechanical equipment room. The natural gas main is welded, black steel piping while the branches are threaded, black steel.

Heat Generating and Cooling Generating Systems – There is no heating or cooling systems for the building.

Distribution Systems – There is no piping distribution systems for the building.

Fresh air is admitted into the building through the unit ventilators and through outside air connections to roof top unit equipment. 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 electric resistance heating and direct expansion coils for cooling in the classrooms and cafetorium. The unit ventilators are packaged self-contained equipment manufactured by American Air Filter (AAF). Electric resistance convectors are located at the mid landing levels for the stairwells.

The administrative office areas are served by served by ceiling suspended DX cooling, electric resistance heat, split systems. The system consist of a ducted supply air system. The condensing units are located on the roof.

The gymnasium is served by two roof top units, manufactured by Titan, heating and ventilation only, with electric resistance heating coils. The supply distribution system consists of overhead supply duct with round concentric diffusers. The return system consists of return grilles connected to a ducted return system. These units were recently installed in 2007 and have approximately another 10 – 15 years of service life provided that regular maintenance is performed at the required intervals.

The kitchen has not been provided with a hood exhaust system nor a make-up air heating and ventilation system for the space. 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.

Terminal & Package Units - There are seven roof mounted exhaust fans of which all are not in use. The bathroom fans are operational, however the foul air hallway exhaust system is no longer used nor are the former wood shop fans.

Controls & Instrumentation - The original control system consists of electric/electronic controls. These controls should be replaced and 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 is provided from medium voltage underground lines on wooden poles along Calera Road. An underground medium voltage cable drop from utility power pole feeds the main service switchgear located in the main electrical room in the basement.

The Main Service Substation consists of 600A medium voltage load interrupter, metering transformer section, 750KVA, 13200V to 480/277V transformer and a 1200A, 408/277V power distribution switchboard. The service substation is 33 years old and has exceeded its useful service life.

The electrical distribution is accomplished with several lighting and power panels located throughout the building. Two 75KVA, 480V to 208/120V step down transformers are provided (one in electrical room in gymnasium and one in electrical room in the second floor) for feeding receptacles, kitchen equipment, and other 120/208 volts loads. The distribution system was installed in 1974, has outlived its useful life, and should be replaced.

In general there are not enough receptacles in classrooms. Our recommendation is to have a minimum of two receptacles on each classroom wall. The computer room should have receptacles at three feet on center on each wall or wire-mold power poles.

Majority of lighting fixtures in the building have outdated T-12 lamps. The Gymnasium is illuminated by pendent mounted metal halide fixtures, which have high energy consumption and are difficult to re-lamp. Lighting levels in most area do not meet IES (Illuminating Engineering Society) recommended levels.

Fire Alarm System is not adequate. Horn/strobes are not installed in classrooms. The existing system is old and does not meet current fire alarm codes.

The school telephone and data systems are new and working adequately. A main distribution frame (MDF) along with a telephone PBX system (telephone within an enterprise that switches calls between enterprise users on local lines while allowing all users to share a certain number of external phone lines) servicing the communication system in the building. The school is also equipped with Wi-Fi system.

A separate PA system is not installed in this school. The telephone system is used for public announcements. This system is working adequately.

Each classroom has telephone intercom service. The system permits paging and intercom communications between the main office to classrooms, classrooms to the main office, and classroom to classroom. Outside line access from a classroom phone through the PBX is blocked. The intercom system interfaces with master clock system for class change signaling, utilizing paging speakers. The system is also equipped with a tone generator and input from the program/clock controller.

Existing clock system is not working. The school has a time system controller consisting of combination of clock and speaker installed on a wall in each classroom and a master time programmer manufactured by "STANDARD" located in the main office. The clocks are not controlled properly with the central master controller. The system is old and has exceeded its useful service life thus requiring replacement. The present bell system is working adequately.

Television System is not provided in the school.

Video surveillance system is not provided in the school. School provided only with access control system including door contact and motion security sensors in critical areas. The school desires a complete video surveillance system with cameras located in critical areas, such as exit doors, corridors, and building exterior areas. The cameras should be controlled by a Closed Circuit Television (CCTV) system.

An emergency backup power system (backup power generator) is provided in this school. A 25KW diesel generator is

installed in the boiler room, providing power for the emergency lighting of the building. This diesel generator is old and has exceeded its useful life and should be replaced with a new larger unit and an Automatic Transfer Switch and an emergency distribution panel.

An Emergency Lighting System is provided in this school, fed from the existing backup generator. Exit signs are not battery-pack type and are not on emergency backup power.

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.

An estimated 20 horsepower rated hydraulic type elevator is in operation at the school. The elevator appears to be working properly.

Theater Lighting and dimming controls are old and not a code compliant installation - lights are turned on and off by feeder breakers.

Sound System in the Auditorium is old and does not comply with recent multipurpose auditorium sound system requirements recommended by ECE40020 and should be replaced.

Site Lighting System is adequate. There are sufficient numbers of lights provided around the building

Site Video Surveillance system is not provided in the school.

Site Paging system is provided in the school and working adequately. Site speakers provide coverage in the playground.

Grounds

Paving for parking areas consists of asphalt paving. All asphalt is old and in poor condition with broken and missing pavement, cracks, settlement, and weeds vegetation growing along the building foundation. There is no curbing and pavement is disintegrating along grass edges. Parking area striping is worn and almost invisible in most locations. The number of required parking spaces for school staff is unknown, but there seems to be ample parking available. There is accessibility to the cafetorium entrance, although there is no signage and there are bumps and gaps at the threshold into the building. Handicap parking spaces may have been provided, but striping is worn and signage is missing. Handrails and guards at stairs are not fully code compliant – there are no handrail extensions and guard heights are not 42” and existing railings are in need of repainting; new, code compliant railings should be provided at the exterior exits and entrances.

Storm drains in the parking lot are sunken and appear to be partially clogged; an inspection of the storm drain system is required.

There is a tall site fence with a gate into the parking area. Repainting is required due to a coating of rust over most of the surfaces.

RECOMMENDATIONS

Architectural

- Strip, clean and reseal concrete floors mechanical room, shops, and stairways (1,500 sf)
- Replace all exterior windows with insulated units, fixed aluminum units unless noted:
- Remove and replace existing flat roof and insulation; 3 levels (30,000 sf)
- Provide new aluminum coping around entire roof (1000 ft)
- Repaint exterior walls up to second floor window sills (10,000 sf)
- Repair precast panels with exposed rusted reinf rods showing in low roof area (200 sf)
- Refinish plaster soffit around building, under roof (2000 sf)
- Replace all exterior doors and hardware with code compliant, latching, exit hardware (9 doors)
- Remove and replace all wood interior doors, frames and hardware in classrooms and offices on Upper and Ground Levels (65)

- Provide security hardware for classrooms & offices, locking from inside classroom (both floors). (35)
- Replace all interior steel doors, frames, and hardware in mechanical rooms and stairways (20)
- Repair cracks, and damages in concrete walls in corridors and classroom walls (500 sf)
- Repaint interior walls Upper and Ground Floor; half of walls on Lower Level (3,000 sf)
- Gaps between concrete panel walls and structure – re attach panels (40 lf)
- Refinish wood gymnasium floor (4000 sf)
- Remove and replace damaged, old 12”x 12” VCT floors in some classrooms, at univents, corridors, and offices with VCT (1,000 sf)
- Replace carpet in Library and Auditorium (4,000 sf)
- Fill gaps between exterior wall panels, columns, and roof with non-shrink grout preventing squirrels from entering building
- Re-caulk gaps in concrete panels around exterior (800 linear feet of caulk)

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 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. 4
- Replace service sinks (janitor sinks) in the building.
- Replace science lab and prep sinks.
- Inspect and replace, as needed, the original the domestic water piping.
- Add 3” backflow preventer, RPZA type.
- Provide an expansion tank for the 48 gallon vertical tank type water heater.
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Hire a qualified contractor to perform a detailed examination of the storm drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the 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 electric resistance heat / DX cooling coils and integral heat recovery wheels
- Provide a gas-fired makeup unit for the kitchen exhaust hood.
- Add kitchen exhaust hood.
- Replace split systems for administrative office areas.
- Provide ventilation, heating and cooling for the gymnasium by replacing the two existing roof top units.
- Provide ventilation for the corridors and four first floor entryways by installing fan coil air handling units with electric heat 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 unit ventilators and installing a packaged constant volume air handling unit with distribution ductwork and registers.
- Replace the electric and electronic controls for the HVAC systems with modern DDC modules 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.

Electrical

- Upgrade the existing electrical service with a new service. Replace the existing substation with a new 1200 A, 480/277 V substation.
- Replace the entire distribution system with new panels and new wiring/conduits. Estimated 10 panel boards. Provide arc flash labels on electrical equipment.
- Replace two 75 kVA existing transformers with new transformers.
- Install a minimum of two receptacles on each wall of each classroom. We recommend adding a two-compartment surface mounted raceway for data & power in the computer lab. Estimated 80 each.
- Replace all existing T-12 lighting fixtures with new fluorescent lighting fixtures with T-5 lamps. Replace metal

halide fixtures in gymnasium with high bay LED lighting fixtures.
- Replace existing fire alarm system with an automatic fire alarm system including smoke detectors in corridors and other areas as recommended by the NEC. Install horn/strobes in class rooms, corridors, offices, toilets, library and other areas as recommended by codes in effect.
- Provide a master clock system including wireless master clock controller and new clocks in the classrooms and offices.
- Provide an adequate video surveillance system including cameras and Closed Circuit Television (CCTV) monitoring system. Cameras should be installed in corridors, at school entrance doors, and on various walls around the building. Provide monitors in main office and building engineer's office.
- Replace the existing emergency generator with a 30 kW diesel generator.
- Provide lightning protection studies to ascertain adequacy of existing systems.
- Provide new stage lighting and lighting controller in the Auditorium.
- Provide new sound system including a freestanding 19" rack backstage area with a mixer, amplifiers, CD player, cassette player, AM-FM radio, graphic or parametric equalizer, and receivers for microphones.

Grounds

- Repave parking lot and roadways, including regrading of north side paving along building to provide slope away from building (40,000sf)
- Repair concrete walkways (200 sf)
- Provide new ADA accessible wheelchair ramp into front of building (35 ft. long with handrails)
- Replace damaged sections of 8 ft high site fence (300 sf)
- Replace broken or missing 8 ft high site fence and gate (500 lf (4000 sf) + one gate)

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 3 / Tm 2
Status:	Accepted by SDP	Team:	Tm 2
Site ID:	S832001		

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.

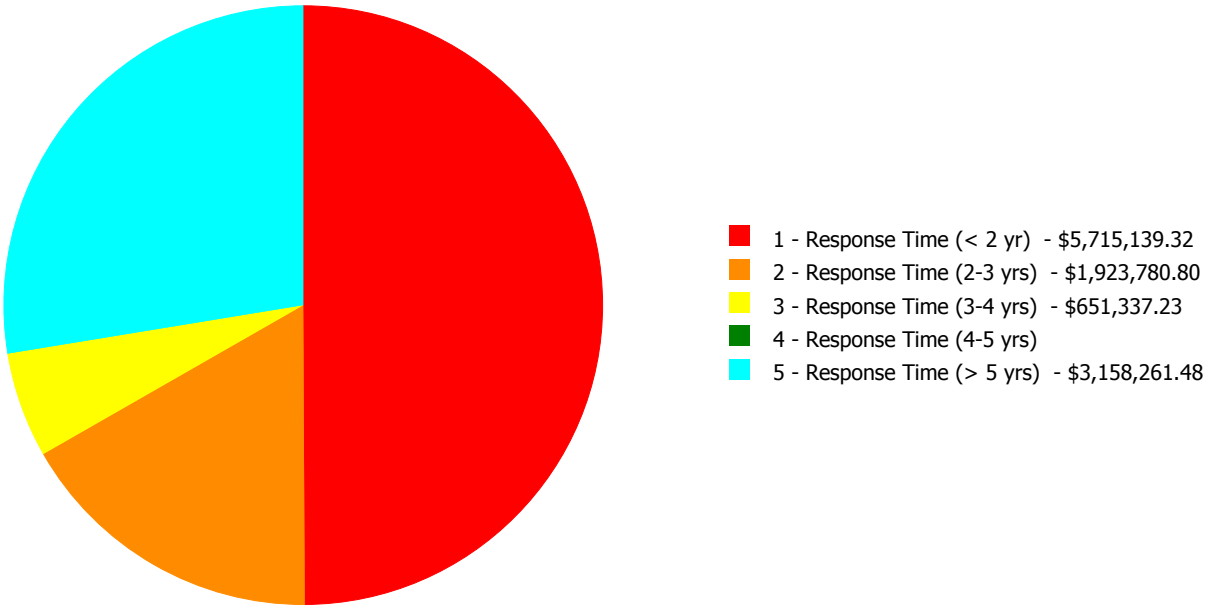
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	59.00 %	0.00 %	$0.00
A20 - Basement Construction	59.00 %	0.00 %	$0.00
B10 - Superstructure	59.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	74.84 %	31.70 %	$939,976.81
B30 - Roofing	109.99 %	119.13 %	$1,389,308.60
C10 - Interior Construction	59.67 %	40.35 %	$440,587.91
C20 - Stairs	59.00 %	0.00 %	$0.00
C30 - Interior Finishes	30.56 %	8.58 %	$170,801.60
D10 - Conveying	14.29 %	0.00 %	$0.00
D20 - Plumbing	73.37 %	141.26 %	$1,259,745.91
D30 - HVAC	102.28 %	115.83 %	$4,771,622.64
D40 - Fire Protection	71.43 %	177.49 %	$636,593.78
D50 - Electrical	110.11 %	53.91 %	$1,410,240.33
E10 - Equipment	14.29 %	27.57 %	$195,317.62
E20 - Furnishings	12.50 %	0.00 %	$0.00
G20 - Site Improvements	50.85 %	20.24 %	$234,323.63
G40 - Site Electrical Utilities	16.67 %	0.00 %	$0.00
Totals:	**72.02 %**	**47.90 %**	**$11,448,518.83**

Condition Deficiency Priority

Facility Name	Gross Area (S.F.)	FCI %	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)
B832001;La Brum	44,500	50.35	$5,669,671.17	$1,887,307.89	$498,954.66	$0.00	$3,158,261.48
G832001;Grounds	108,600	14.38	$45,468.15	$36,472.91	$152,382.57	$0.00	$0.00
Total:		**47.90**	**$5,715,139.32**	**$1,923,780.80**	**$651,337.23**	**$0.00**	**$3,158,261.48**

Deficiencies By Priority



Budget Estimate Total: $11,448,518.83

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:	Middle School
Gross Area (SF):	44,500
Year Built:	1974
Last Renovation:	
Replacement Value:	$22,271,058
Repair Cost:	$11,214,195.20
Total FCI:	50.35 %
Total RSLI:	74.30 %

Description:

Facility Condition Assessment
September 2015

School District of Philadelphia
General J. H. LaBrum Middle School
10800 Hawley Street
Philadelphia, PA 19154

44,500sf / 420 students / LN 08

General

General J. H. LaBrum Middle School is located at 10800 Hawley Street. The main entrance faces Hawley Street. The building was constructed in 1973, has 44,500 square feet, and is 1 and 2 stories tall. There is no basement in this building. The exterior of the building is constructed of flat precast concrete wall panels with exposed aggregate, creating a simple, clean appearance. Don DiPasquale, the Building Engineer accompanied the team during the building inspection.

After the inspection, the Principal, Bill Griffin, indicated in an email that he felt the building had the following deficiencies: the windows are original and are in bad condition; air conditioning is not consistent throughout the building and not all windows can be opened to allow outside air to come in; door knobs and locks are broken and many have no keys; many bathroom faucets do not work; trees in the front of the building need

to be trimmed.

Architectural/Structural

Foundations were not seen. There is no basement, therefore no walls below grade could be seen. Grading around the building is generally flat especially along the north side of the building where parking is located. When the parking lot is repaved, the surface should be adjusted to allow for better natural drainage away from the building wall. Grading along the front has a slight slope and somewhat better natural drainage. Footings at the bottom of the foundations were not seen and their construction type or condition could not be ascertained.

Ground floor slabs are good condition, with some minor floor tile cracks and joint separation observed. Unfinished slabs in the mechanical area and loading door area need to be cleaned and resealed. Upper floor slabs are constructed of precast concrete planks, exposed to view as first floor ceilings in most locations. There were a few locations where small cracks were observed in corridors across vinyl tile flooring in ground floor slabs.

Roof construction is composed of flat concrete planks over the 2 story section and longspan concrete “T” sections over the tall, 1 story gymnasium section. The entire roof deck is flat with minimum overall slope and gradual pitch to roof drains. Drainage is adequate on the two higher roof areas, over the gym roof and 2 story roof sections. Since there is a minimal height gravel stop (no parapet) over these 2 story sections, there is no need for overflow drains or pipes; if all roof drains are clogged, roof water simply runs over the edge of the roof with little accumulation. Roof drains over these two higher roofs were not clogged and relatively clear of debris. There is a low roof area over the gym lockers created by the higher gym and second floor walls. The structure for this section is at the same level as the second floor structure, making it easy to walk into this area through a door at the end of the second floor corridor. This roof area, however, has serious drainage problems with almost full ponding and no drainage observed. To make matters worse, there are no overflow drains or scuppers to alleviate the ponding and flashing along building walls is failing creating opportunities for water intrusion into the building. This area needs to be re-roofed, as discussed in the roof coverings section, below.

Exterior walls and are constructed of rectangular precast concrete panels and window panels separated by small concrete panels; square, cast in place concrete columns separate the precast panels and window panels. All concrete panels are in good condition over most building wall surfaces with no surface spalling observed. Wall panels have some aggregate exposed to create texture. Joints at columns are in fair condition with some joints separating and caulking failing. A small upper section of the walls is cantilevered approximately 2 ft. beyond the second floor walls with a plaster soffit, in need of refinishing. The lower first floor section of the precast panels is painted off-white, presumable to hide graffiti; the line where this paint ends is sloppy and the paint is worn and blotchy. The entire painted area needs to be redone to improve the building’s appearance. A thorough inspection of all walls and cantilever beams is required to determine where joint re-sealing is required to prevent water infiltration between panels and concrete columns. A unique partition problem seen in this school is one in which squirrels have created a passageway into the building in the gymnasium from the joint where concrete panels intersect the windows, concrete wall panels and concrete columns. Piles of debris can be seen on gym floors every day. All possible entry points along the gymnasium walls need to be filled with grout and closed off. Additionally, an exterminator might be needed to prevent future pest infiltration. Some gaps were observed at the tops of some first and second floor block walls under the deck above. A larger space of approximately 1” gap was seen in the east stairway where at the low roof area between the gym section and the 2 story section of the building. The precast wall panels seem to be moving away from the stairway walls; steel angles have been added to the exterior to bring these parts together but do not seem to be working as planned.

Exterior windows the original anodized aluminum frame units with single hung operable units with single thickness clear plexiglass acrylic glazing. Windows are in poor condition with severely scratched single-pane plexiglass vision panels. Some windows cannot be opened. Units do not seal tightly and have corroded frames. There is galvanized security screening on first floor windows which is damaged in some locations. Single pane plexiglass units do not meet today’s energy code requirements and are large sources of heat loss – they should be replaced with new insulated glazing units with improved less visible window/security screens.

Most exterior doors are painted steel frames and flush hollow metal door units. They have dents, chips, rust, and re in poor condition. Some have broken or non-functioning panic hardware and are not ADA compliant. Entrance doors were recently replaced with new FRP units with aluminum edges, narrow lite vision panels, and new hardware – these are excellent units and should be the standard for all door replacements. Stairway and other grade exit doors are the original old, damaged, flush hollow metal; some have narrow lite vision panels. All original doors are in poor condition and need to be replaced.

Roof covering consists of a fully adhered EPDM (“rubber”) roofing system. The system is over 20 years old; Building Engineer thought that it could be the original roof, which would make the roof covering 42 years old. There are some soft areas indicating moisture has penetrated into the insulation underneath. Even though most off the roof membrane is in fair condition, flashing is generally cracking in a number of locations at overlap joints. Since the overall pitch appears to be less than the code required 2% slope, even though the main roofs have no major areas of ponding, there are many small areas of ponding due to this nearly flat condition. The one low area located between the gymnasium section and the 2 story section has serious ponding – almost 100% of this area is flooded. This is the area where there are many penetrations and flashing locations for rooftop equipment such as air handlers, exhaust fans, and equipment curbs. Flashing of penetrations appears to be failing and past

its normal service life. The overall condition of the roofing membrane and flashing is “weathered” and is past its normal service life of 20 years and needs to be completely replaced.

Partitions in all spaces are constructed of concrete block. There are no vision panels in any of the corridor walls, preserving a fire-rated construction which is required by today’s codes in a non-sprinklered Educational building. Some second floor classrooms have the original folding wood partitions that subdivided large classroom spaces into 3 smaller classrooms. These partitions are not easy to operated and are no longer opened, however in their closed position, they have whiteboards attached, are good classroom dividers and do not need to be replaced. All stairways, toilet rooms, the cafetorium, gym, and school offices are also constructed of concrete block and are in good condition. However, the concrete block walls in the office area near the Principal’s office are cracking at the top due to some movement in the precast concrete planks or walls. Since the movement appears to be noticeable across the school office area and in the many areas of the first floor corridor slabs, a structural review of this condition should be conducted to ascertain if it is something to be concerned about or if it is simply “minor settlement” and not unusual for the amount of movement over the lifespan of this building.

Interior classroom and office doors are solid core wood with hollow metal door frames. Some doors have narrow lite vision panels. All doors have round knob hardware, and do not have locksets with security feature which allows for locking by a key from inside the room – this is required to provide the best security today in case a school-wide lockdown is needed. Most wood doors to classrooms can be refinished; doors to toilet rooms, cafetorium and other high use spaces must be replaced. Stairway doors are flush steel doors with push/pull hardware that does not positively latch as required of fire rated doors; some stair doors have panic hardware, but not all of those doors have working/latching hardware sets. Most steel doors frames are rusting at the bottom where in contact with floors. Interior doors in mechanical rooms are also hollow metal doors in hollow metal frames and are rusted where coming in contact with floors. All metal doors and the scratched, damaged original wood doors on upper floors need to be replaced.

Interior fittings/hardware in upper floor classrooms include black slate chalkboards in center of the front walls (exterior wall of the building with cork bulletin boards on walls flanking the blackboards. Science rooms have oak furniture that is old and worn with lab-grade countertops. Toilet room partitions are solid plastic partitions; some hardware required adjustment, but most are in good condition. Toilet room accessories (toilet paper dispensers, soap, paper towel or dryers, grab bars, door latches) seem to be mostly in place and operating. There some partially compliant toilet rooms that have grab bars and open space around toilets; there are other toilet rooms with combination sink-toilet compartments not equipped with grab bars; sinks and urinals do not comply with ADA guidelines. At least one toilet room should be converted to become a fully compliant ADA toilet meeting all dimensions with fully compliant fixtures and accessories.

Stair construction consists of concrete filled steel treads, steel risers, and steel stringers. Handrails are 29-30” height with no guards on open sides and guards at the top of stair runs are 36” in height. Balustrade is a two horizontal rail system which does not comply with 4” maximum spacing required today. Concrete treads and platforms are dirty and should be stripped and resealed. Steel handrails are mounted to the concrete walls on one side of stairs and could be reused if remounted at the correct 36” height. The free-standing handrails and guards should be replaced with code compliant handrails and guards.

Wall finishes in classrooms, cafetorium, gymnasium, and stairways are painted concrete block interior walls and painted interior surface of precast concrete panel exterior walls. Walls appear to have been recently repainted and are generally in good condition. Toilet room walls are painted block also in good condition. One missing design element is the entrance vestibule at the main front visitor and student entry doors. They now open up into the main school lobby, which admits large amounts of cold air into the building during winter. There seems to be enough wall space to allow for the creation of a vestibule to control the cold air admitted to the building when doors are opened during winter. Construction of a lobby vestibule is recommended.

Floor finish in most of the school is 12” x 12” VCT (vinyl composition tile) glued to the concrete slab. Most VCT is in good condition except for some locations at toilet room doors and other doors where dirt has accumulated or chipping has occurred at transitions to other rooms. The entrance lobby has newer blue and white tiles in good condition. The cafetorium and the kitchen have highly durable terrazzo that is in good condition. The gymnasium has wood floors which should be refinished. Gym lockers are finished in VCT which is in good condition. Stair walking surfaces are exposed concrete which is dirty and needs to be stripped, cleaned and resealed. Most toilet rooms have ceramic mosaic floors which are dirty and in need of cleaning. Sections of VCT need to be added where old unit ventilators were replaced with newer smaller units, exposing sections of bare concrete floor.

Ceiling finish in the cafetorium is 2x4 suspended acoustical tile panels installed around existing surface mounted lighting fixtures, creating gaps (“clouds”) around the fixtures. The Gymnasium has an exposed precast concrete “T” roof system, painted white. All other spaces in the building have exposed precast concrete floor or roof planks painted white with surface mounted 1x4 fluorescent lighting fixtures. Finishes are in good condition.

Fixed furnishings include the original oak casework and storage cabinets in science classrooms which are very worn in need of replacement and metal book shelves in the Library which appear to be in good condition. Steel lockers for students are located in the second floor corridor and are in fair condition. Univents have been replaced in some classrooms with newer units that are somewhat smaller than the original units. After

installing the smaller unit, sections of the exterior wall were blanked off with thin sheets of metal having no insulation. A finished layer of insulation and gypsum board needs to be added to the gaps left by the new smaller units, to prevent cold drafts and condensation on the inside of the metal panels during winter. The school office has old metal and plastic laminate office furniture in fair condition.

There is an elevator in the building, 2500 lb. capacity, serving both floors. There is no wheelchair access into the main building entrance, however there is access into the cafetorium. Access should be provided into the main entrance and ADA accessible route signage is needed to help direct personnel to this accessible entrance.

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 are also equipped with floor drains.

Electric water coolers in the corridors are located near the restrooms in general. These EWCs are wall hung fountains. There are a few vertical floor standing electrical water coolers, such as those located in the Cafetorium. There are also recessed style drinking fountains located in the gymnasium. Most appear to be the original installed equipment. The replacement of all drinking fountains is recommended as the equipment is approximately 42 years old and beyond its service life.

Wall hung service sinks are original and are available within the building for use by the janitorial staff. The Cafeteria's food prep/kitchen is equipped with one, three compartment stainless steel sink with blade handle operated faucets. The grease trap could not be located during the survey. The kitchen is also equipped with a hand sink. The triple wash sink and hand sink show signs of normal usage. Chemicals are injected manually into the sanitizing basin.

Gas turrets for the science labs are still in place but are no longer used as the gas main has been shut off to these devices.

Science and prep sinks in the science classrooms are still active with hot and cold water. These fixtures have exceeded their service life and should be replaced.

Domestic Water Distribution – It appears that the 3" domestic water service piping is mostly soldered copper. Water service enters the building on the first floor, without a double check backflow preventer (RPZA – reduced pressure zone assembly), however there is 3" water meter on the main line upon entering the building. The water meter is not new. The piping is copper with soldered joints. 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.

There is one natural gas fired, vertical tank, water heaters, Bradford White, 48 gallon, model 50T65FB3N which serves the school and is located in the mechanical room near the building engineer's office. The water heater was installed in 2010 and should not need to be replaced for 5 – 7 years. The hot water system is equipped with a recirculation pump as well but does not have an expansion tank installed.

Sanitary Waste - The sanitary waste piping system in the original building is galvanized with threaded fittings and joints 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 no overflow scuppers for the building.

Energy Supply - A 2" natural gas service enters the building on the first floor in the main mechanical equipment room. The natural gas main is welded, black steel piping while the branches are threaded, black steel.

Heat Generating and Cooling Generating Systems – There is no heating or cooling systems for the building.

Distribution Systems – There is no piping distribution systems for the building.

Fresh air is admitted into the building through the unit ventilators and through outside air connections to roof top unit equipment. 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 electric resistance heating and direct expansion coils for cooling in the classrooms and cafetorium. The unit ventilators are packaged self-contained equipment manufactured by American Air Filter (AAF). Electric resistance convectors are located at the

mid landing levels for the stairwells.

The administrative office areas are served by served by ceiling suspended DX cooling, electric resistance heat, split systems. The system consist of a ducted supply air system. The condensing units are located on the roof.

The gymnasium is served by two roof top units, manufactured by Titan, heating and ventilation only, with electric resistance heating coils. The supply distribution system consists of overhead supply duct with round concentric diffusers. The return system consists of return grilles connected to a ducted return system. These units were recently installed in 2007 and have approximately another 10 – 15 years of service life provided that regular maintenance is performed at the required intervals.

The kitchen has not been provided with a hood exhaust system nor a make-up air heating and ventilation system for the space. 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.

Terminal & Package Units - There are seven roof mounted exhaust fans of which all are not in use. The bathroom fans are operational, however the foul air hallway exhaust system is no longer used nor are the former wood shop fans.

Controls & Instrumentation - The original control system consists of electric/electronic controls. These controls should be replaced and 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 is provided from medium voltage underground lines on wooden poles along Calera Road. An underground medium voltage cable drop from utility power pole feeds the main service switchgear located in the main electrical room in the basement.

The Main Service Substation consists of 600A medium voltage load interrupter, metering transformer section, 750KVA, 13200V to 480/277V transformer and a 1200A, 408/277V power distribution switchboard. The service substation is 33 years old and has exceeded its useful service life.

The electrical distribution is accomplished with several lighting and power panels located throughout the building. Two 75KVA, 480V to 208/120V step down transformers are provided (one in electrical room in gymnasium and one in electrical room in the second floor) for feeding receptacles, kitchen equipment, and other 120/208 volts loads. The distribution system was installed in 1974, has outlived its useful life, and should be replaced.

In general there are not enough receptacles in classrooms. Our recommendation is to have a minimum of two receptacles on each classroom wall. The computer room should have receptacles at three feet on center on each wall or wire-mold power poles.

Majority of lighting fixtures in the building have outdated T-12 lamps. The Gymnasium is illuminated by pendent mounted metal halide fixtures, which have high energy consumption and are difficult to re-lamp. Lighting levels in most area do not meet IES (Illuminating Engineering Society) recommended levels.

Fire Alarm System is not adequate. Horn/strobes are not installed in classrooms. The existing system is old and does not meet current fire alarm codes.

The school telephone and data systems are new and working adequately. A main distribution frame (MDF) along with a telephone PBX system (telephone within an enterprise that switches calls between enterprise users on local lines while allowing all users to share a certain number of external phone lines) servicing the communication system in the building. The school is also equipped with Wi-Fi system.

A separate PA system is not installed in this school. The telephone system is used for public announcements. This system is working adequately.

Each classroom has telephone intercom service. The system permits paging and intercom communications between the main office to classrooms, classrooms to the main office, and classroom to classroom. Outside line access from a classroom phone through the PBX is blocked. The intercom system interfaces with master clock system for class change signaling, utilizing paging speakers. The system is also equipped with a tone generator and input from the program/clock controller.

Existing clock system is not working. The school has a time system controller consisting of combination of clock and speaker installed on a wall in each classroom and a master time programmer manufactured by "STANDARD" located in the main office. The clocks are not controlled properly with the central master controller. The system is old and has exceeded its useful service life thus requiring replacement. The present bell system is working adequately.

Television System is not provided in the school.

Video surveillance system is not provided in the school. School provided only with access control system including door contact and motion security sensors in critical areas. The school desires a complete video surveillance system with cameras located in critical areas, such as exit doors, corridors, and building exterior areas. The cameras should be controlled by a Closed Circuit Television (CCTV) system.

An emergency backup power system (backup power generator) is provided in this school. A 25KW diesel generator is installed in the boiler room, providing power for the emergency lighting of the building. This diesel generator is old and has exceeded its useful life and should be replaced with a new larger unit and an Automatic Transfer Switch and an emergency distribution panel.

An Emergency Lighting System is provided in this school, fed from the existing backup generator. Exit signs are not battery-pack type and are not on emergency backup power.

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.

An estimated 20 horsepower rated hydraulic type elevator is in operation at the school. The elevator appears to be working properly.

Theater Lighting and dimming controls are old and not a code compliant installation - lights are turned on and off by feeder breakers.

Sound System in the Auditorium is old and does not comply with recent multipurpose auditorium sound system requirements recommended by ECE40020 and should be replaced.

Site Lighting System is adequate. There are sufficient numbers of lights provided around the building

Site Video Surveillance system is not provided in the school.

Site Paging system is provided in the school and working adequately. Site speakers provide coverage in the playground.

Grounds

Paving for parking areas consists of asphalt paving. All asphalt is old and in poor condition with broken and missing pavement, cracks, settlement, and weeds vegetation growing along the building foundation. There is no curbing and pavement is disintegrating along grass edges. Parking area striping is worn and almost invisible in most locations. The number of required parking spaces for school staff is unknown, but there seems to be ample parking available. There is accessibility to the cafetorium entrance, although there is no signage and there are bumps and gaps at the threshold into the building. Handicap parking spaces may have been provided, but striping is worn and signage is missing. Handrails and guards at stairs are not fully code compliant – there are no handrail extensions and guard heights are not 42" and existing railings are in need of repainting; new, code compliant railings should be provided at the exterior exits and entrances.

Storm drains in the parking lot are sunken and appear to be partially clogged; an inspection of the storm drain system is required.

There is a tall site fence with a gate into the parking area. Repainting is required due to a coating of rust over most of the surfaces.

RECOMMENDATIONS

Architectural

Strip, clean and reseal concrete floors mechanical room, shops, and stairways (1,500sf)

Replace all exterior windows with insulated units, fixed aluminum units unless noted:

(15+27+27+24+24+6+6)3x6=(129)3x6 windows

Remove and replace existing flat roof and insulation; 3 levels (30,000sf)

Provide new aluminum coping around entire roof (1000ft)

Repaint exterior walls up to second floor window sills (10,000sf)

Repair precast panels with exposed rusted reinf rods showing in low roof area (200sf)

Refinish plaster soffit around building, under roof (2000sf)

Replace all exterior doors and hardware with code compliant, latching, exit hardware (9 doors)

Remove and replace all wood interior doors, frames and hardware in classrooms and offices on Upper and Ground Levels (65)

Provide security hardware for classrooms & offices, locking from inside classroom (both floors). (35)

Replace all interior steel doors, frames, and hardware in mechanical rooms and stairways (20)

Repair cracks, and damages in concrete walls in corridors and classroom walls (500sf)

Repaint interior walls Upper and Ground Floor; half of walls on Lower Level (3,000sf)

Gaps between concrete panel walls and structure – re attach panels (40 lf)

Refinish wood gymnasium floor (4000sf)

Remove and replace damaged, old 12”x12” VCT floors in some classrooms, at univents, corridors, and offices with VCT (1,000sf)

Replace carpet in Library and Auditorium (4,000sf)

Fill gaps between exterior wall panels, columns, and roof with non-shrink grout preventing squirrels from entering building

Recaulk gaps in concrete panels around exterior (800 linear feet of caulk)

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 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.

Replace service sinks (janitor sinks) in the building.

Replace science lab and prep sinks.

Add automatic sanitizing chemicals to the stainless steel sink in the cafeteria.

Inspect and replace the original as needed the domestic water piping in the building.

Add 3" backflow preventer, RPZA type.

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 electric.

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 electric resistance heat / DX cooling coils and integral heat recovery wheels

Add kitchen exhaust hood.

Replace split systems for administrative office areas.

Provide ventilation, heating and cooling for the gymnasium by installing a packaged roof top unit.

Provide ventilation for the corridors at four first floor entryways by installing fan coil air handling units with electric heat 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 unit ventilators and installing a package rooftop constant volume air handling unit with distribution ductwork and registers.

Replace the electric and electronic controls for the HVAC systems with modern DDC modules and actuators to improve reliability and energy efficiency.

Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.

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

Install a new sprinkler system throughout the building

Electrical

Upgrade the existing electrical service with a new service. Replace the existing substation with a new 1200A, 480/277V substation.

Replace the entire distribution system with new panels and new wiring/conduits. Estimated 10 panel boards. Provide arc flash labels on electrical equipment.

Replace two 75KVA existing transformers with new transformers.

Install a minimum of two receptacles on each wall of each classroom. We recommend adding a two-compartment surface mounted raceway for data & power in the computer lab. Estimated 80each.

Replace all existing T-12 lighting fixtures with new fluorescent lighting fixtures with T-5 lamps. Replace metal halide fixtures in gymnasium with high bay LED lighting fixtures.

Replace existing fire alarm system with an automatic fire alarm system including smoke detectors in corridors and other areas as recommended by the NEC. Install horn/strobes in class rooms, corridors, offices, toilets, library and other areas as recommended by codes in effect.

Provide a master clock system including wireless master clock controller and new clocks in the classrooms and offices.

Provide an adequate video surveillance system including cameras and Closed Circuit Television (CCTV) monitoring system. Cameras should be installed in corridors, at school entrance doors, and on various walls around the building. Provide monitors in main office and building engineer's office.

Replace the existing emergency generator with a 30KW diesel generator.

Provide lightning protection studies to ascertain adequacy of existing systems.

Provide new stage lighting and lighting controller in the Auditorium.

Provide new sound system including a freestanding 19" rack backstage area with a mixer, amplifiers, CD player, cassette player, AM-FM radio, graphic or parametric equalizer, and receivers for microphones.

Grounds

Repave parking lot and roadways, including regrading of north side paving along building to provide slope away from building (40,000sf)

Repair concrete walkways (200sf)

Provide new ADA accessible wheelchair ramp into front of building (35 ft. long with handrails)

Replace damaged sections of 8ft high site fence (300sf)

Replace broken or missing 8ft high site fence and gate (500 lf (4000sf) + one gate)

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B832001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S832001		

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	59.00 %	0.00 %	$0.00
A20 - Basement Construction	59.00 %	0.00 %	$0.00
B10 - Superstructure	59.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	74.84 %	31.70 %	$939,976.81
B30 - Roofing	109.99 %	119.13 %	$1,389,308.60
C10 - Interior Construction	59.67 %	40.35 %	$440,587.91
C20 - Stairs	59.00 %	0.00 %	$0.00
C30 - Interior Finishes	30.56 %	8.58 %	$170,801.60
D10 - Conveying	14.29 %	0.00 %	$0.00
D20 - Plumbing	73.37 %	141.26 %	$1,259,745.91
D30 - HVAC	102.28 %	115.83 %	$4,771,622.64
D40 - Fire Protection	71.43 %	177.49 %	$636,593.78
D50 - Electrical	110.11 %	53.91 %	$1,410,240.33
E10 - Equipment	14.29 %	27.57 %	$195,317.62
E20 - Furnishings	12.50 %	0.00 %	$0.00
Totals:	**74.30 %**	**50.35 %**	**$11,214,195.20**

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	$23.16	S.F.	44,500	100	1974	2074		59.00 %	0.00 %	59			$1,030,620
A1030	Slab on Grade	$5.17	S.F.	44,500	100	1974	2074		59.00 %	0.00 %	59			$230,065
A2010	Basement Excavation	$4.36	S.F.	44,500	100	1974	2074		59.00 %	0.00 %	59			$194,020
A2020	Basement Walls	$10.05	S.F.	44,500	100	1974	2074		59.00 %	0.00 %	59			$447,225
B1010	Floor Construction	$85.94	S.F.	44,500	100	1974	2074		59.00 %	0.00 %	59			$3,824,330
B1020	Roof Construction	$9.26	S.F.	44,500	100	1974	2074		59.00 %	0.00 %	59			$412,070
B2010	Exterior Walls	$43.78	S.F.	44,500	100	1974	2074		59.00 %	6.88 %	59		$134,130.67	$1,948,210
B2020	Exterior Windows	$21.40	S.F.	44,500	40	1974	2014	2057	105.00 %	77.31 %	42		$736,223.12	$952,300
B2030	Exterior Doors	$1.45	S.F.	44,500	25	1974	1999	2042	108.00 %	107.90 %	27		$69,623.02	$64,525
B3010105	Built-Up	$37.76	S.F.		20				0.00 %	0.00 %				$0
B3010120	Single Ply Membrane	$38.73	S.F.	30,066	20	1974	1994	2037	110.00 %	119.31 %	22		$1,389,308.60	$1,164,456
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	$0.06	S.F.	30,066	30	1974	2004	2047	106.67 %	0.00 %	32			$1,804
C1010	Partitions	$17.91	S.F.	44,500	100	1974	2074		59.00 %	2.62 %	59		$20,909.73	$796,995
C1020	Interior Doors	$3.51	S.F.	44,500	40	1974	2014	2057	105.00 %	268.69 %	42		$419,678.18	$156,195
C1030	Fittings	$3.12	S.F.	44,500	40	1974	2014	2020	12.50 %	0.00 %	5			$138,840
C2010	Stair Construction	$1.41	S.F.	44,500	100	1974	2074		59.00 %	0.00 %	59			$62,745

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$13.21	S.F.	44,500	10	1974	1984	2020	50.00 %	11.09 %	5		$65,186.46	$587,845
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.	4,000	10	1974	1984	2027	120.00 %	153.30 %	12		$44,763.05	$29,200
C3020412	Terrazzo & Tile	$75.52	S.F.	1,200	50	1974	2024	2020	10.00 %	0.00 %	5			$90,624
C3020413	Vinyl Flooring	$9.68	S.F.	28,800	20	1974	1994	2020	25.00 %	4.31 %	5		$12,017.53	$278,784
C3020414	Wood Flooring	$22.27	S.F.	3,000	25	1974	1999	2020	20.00 %	64.46 %	5		$43,067.76	$66,810
C3020415	Concrete Floor Finishes	$0.97	S.F.	3,500	50	1974	2024	2020	10.00 %	169.86 %	5		$5,766.80	$3,395
C3030	Ceiling Finishes	$20.97	S.F.	44,500	25	1974	1999	2020	20.00 %	0.00 %	5			$933,165
D1010	Elevators and Lifts	$1.53	S.F.	44,500	35	1974	2009	2020	14.29 %	0.00 %	5			$68,085
D2010	Plumbing Fixtures	$13.52	S.F.	44,500	35	1974	2009	2035	57.14 %	58.82 %	20		$353,855.64	$601,640
D2020	Domestic Water Distribution	$1.68	S.F.	44,500	25	1974	1999	2042	108.00 %	431.48 %	27		$322,571.46	$74,760
D2030	Sanitary Waste	$2.52	S.F.	44,500	30	1974	2004	2047	106.67 %	263.14 %	32		$295,080.85	$112,140
D2040	Rain Water Drainage	$2.32	S.F.	44,500	30	1974	2004	2047	106.67 %	279.19 %	32		$288,237.96	$103,240
D3020	Heat Generating Systems	$18.67	S.F.	0	0				0.00 %	0.00 %				$0
D3030	Cooling Generating Systems	$24.48	S.F.	0	0				0.00 %	0.00 %				$0
D3040	Distribution Systems	$67.47	S.F.	44,500	25	1974	1999	2042	108.00 %	126.77 %	27		$3,806,278.53	$3,002,415
D3050	Terminal & Package Units	$11.60	S.F.	44,500	20	1974	1994	2027	60.00 %	0.00 %	12			$516,200
D3060	Controls & Instrumentation	$13.50	S.F.	44,500	20	1974	1994	2037	110.00 %	160.69 %	22		$965,344.11	$600,750
D4010	Sprinklers	$7.05	S.F.	44,500	35			2040	71.43 %	202.91 %	25		$636,593.78	$313,725
D4020	Standpipes	$1.01	S.F.	44,500	35			2040	71.43 %	0.00 %	25			$44,945
D5010	Electrical Service/Distribution	$9.70	S.F.	44,500	30	1974	2004	2047	106.67 %	182.08 %	32		$785,946.85	$431,650
D5020	Lighting and Branch Wiring	$34.68	S.F.	44,500	20	1974	1994	2037	110.00 %	3.37 %	22		$52,046.92	$1,543,260
D5030	Communications and Security	$12.99	S.F.	44,500	15	1974	1989	2032	113.33 %	81.84 %	17		$473,079.27	$578,055
D5090	Other Electrical Systems	$1.41	S.F.	44,500	30	1974	2004	2047	106.67 %	158.05 %	32		$99,167.29	$62,745
E1020	Institutional Equipment	$4.82	S.F.	44,500	35	1974	2009	2020	14.29 %	50.07 %	5		$107,405.48	$214,490
E1090	Other Equipment	$11.10	S.F.	44,500	35	1974	2009	2020	14.29 %	17.80 %	5		$87,912.14	$493,950
E2010	Fixed Furnishings	$2.13	S.F.	44,500	40	1974	2014	2020	12.50 %	0.00 %	5			$94,785
								Total	**74.30 %**	**50.35 %**			**$11,214,195.20**	**$22,271,058**

System Notes

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

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

Note: painted block and painted precast concrete panel 100%

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

Note:
Concrete: 3,500 - 8%
Wood: 3,000 - 7%
Terrazzo: 4,000 - 9%
VCT: 28,800 - 65%
VAT: 0
CT: 1,200 - 2%
Carpet: 4,000 - 9%

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

Note:
exposed painted concrete plank 93%
suspended acoustical tile 7%

System: D5010 - Electrical Service/Distribution — This system contains no images

Note: (2) 75KVA, 480V to 208/120V tranformers

Renewal Schedule

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

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$11,214,195**	**$0**	**$0**	**$0**	**$0**	**$3,788,336**	**$0**	**$0**	**$0**	**$0**	**$0**	**$15,002,531**
*** 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	$134,131	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$134,131**
B2020 - Exterior Windows	$736,223	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$736,223**
B2030 - Exterior Doors	$69,623	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$69,623**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010120 - Single Ply Membrane	$1,389,309	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,389,309**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$20,910	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$20,910**

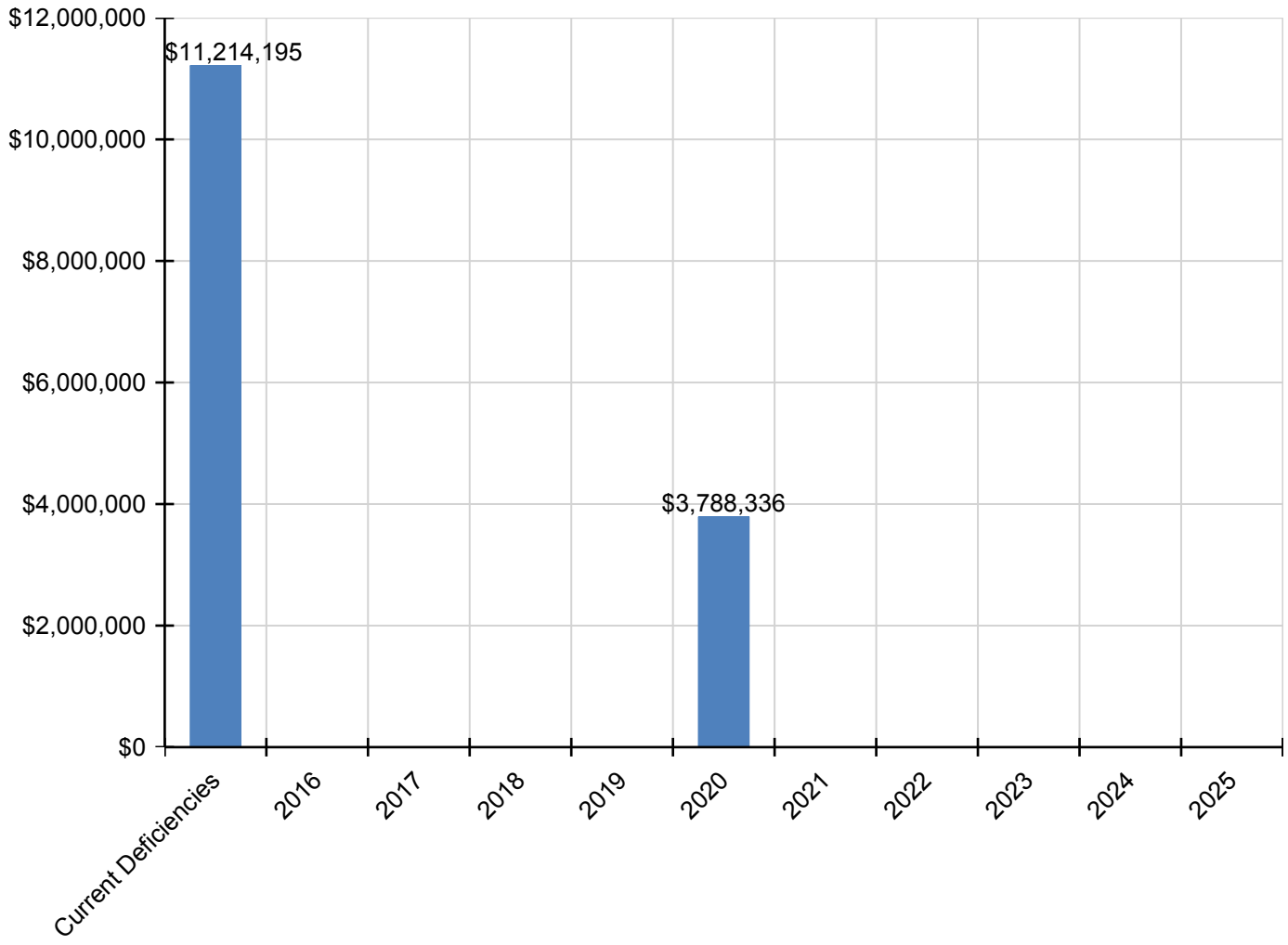
C1020 - Interior Doors	$419,678	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$419,678**
C1030 - Fittings	$0	$0	$0	$0	$0	$177,049	$0	$0	$0	$0	$0	**$177,049**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$65,186	$0	$0	$0	$0	$749,621	$0	$0	$0	$0	$0	**$814,808**
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	$44,763	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$44,763**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$115,563	$0	$0	$0	$0	$0	**$115,563**
C3020413 - Vinyl Flooring	$12,018	$0	$0	$0	$0	$355,505	$0	$0	$0	$0	$0	**$367,523**
C3020414 - Wood Flooring	$43,068	$0	$0	$0	$0	$85,196	$0	$0	$0	$0	$0	**$128,264**
C3020415 - Concrete Floor Finishes	$5,767	$0	$0	$0	$0	$4,330	$0	$0	$0	$0	$0	**$10,097**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$1,189,974	$0	$0	$0	$0	$0	**$1,189,974**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$0	$0	$0	$0	$0	$86,823	$0	$0	$0	$0	$0	**$86,823**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$353,856	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$353,856**
D2020 - Domestic Water Distribution	$322,571	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$322,571**
D2030 - Sanitary Waste	$295,081	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$295,081**
D2040 - Rain Water Drainage	$288,238	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$288,238**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$3,806,279	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,806,279**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$965,344	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$965,344**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$636,594	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$636,594**
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	$785,947	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$785,947**
D5020 - Lighting and Branch Wiring	$52,047	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$52,047**
D5030 - Communications and Security	$473,079	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$473,079**
D5090 - Other Electrical Systems	$99,167	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$99,167**
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	$107,405	$0	$0	$0	$0	$273,518	$0	$0	$0	$0	$0	**$380,923**
E1090 - Other Equipment	$87,912	$0	$0	$0	$0	$629,886	$0	$0	$0	$0	$0	**$717,798**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$120,871	$0	$0	$0	$0	$0	**$120,871**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

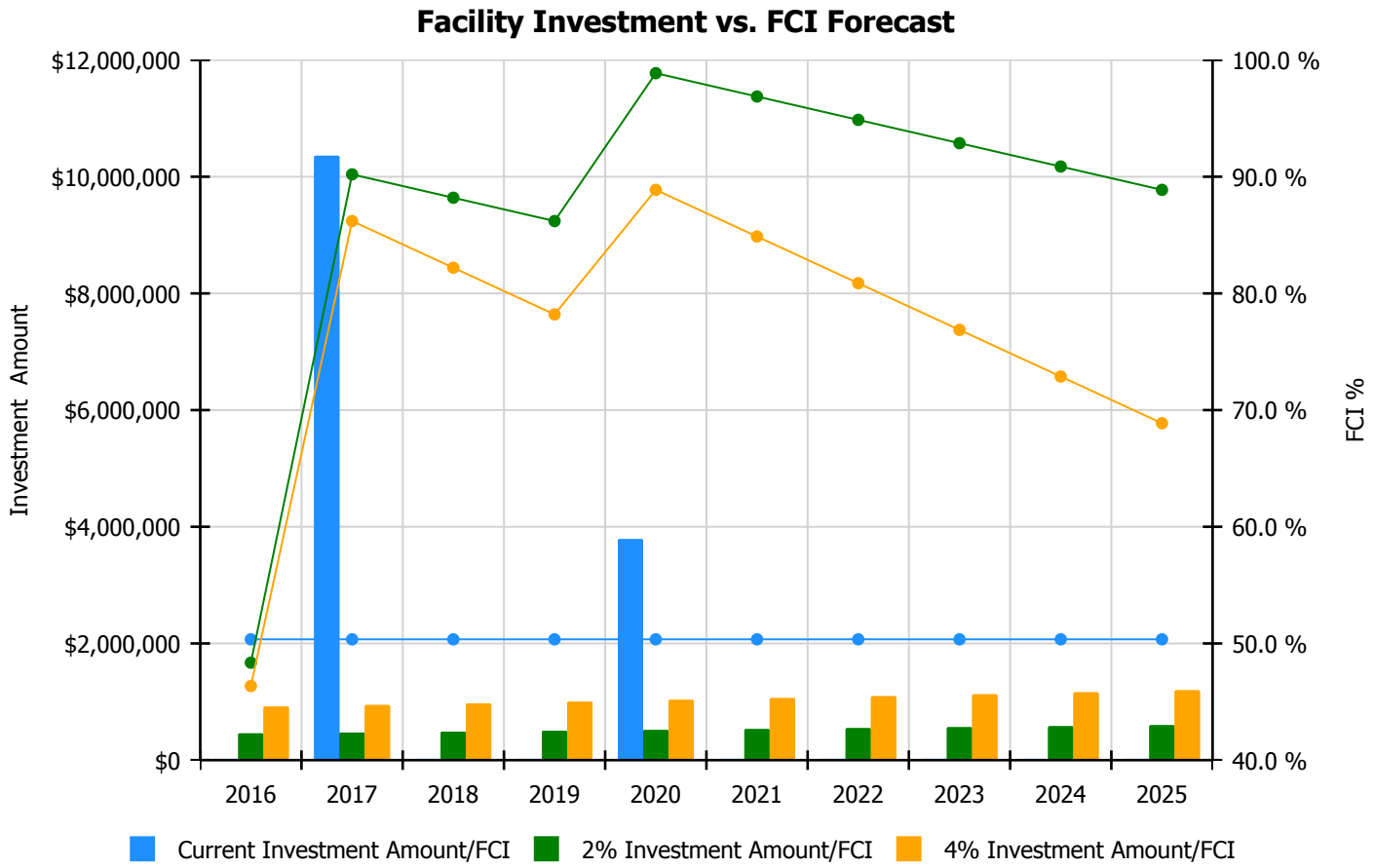
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

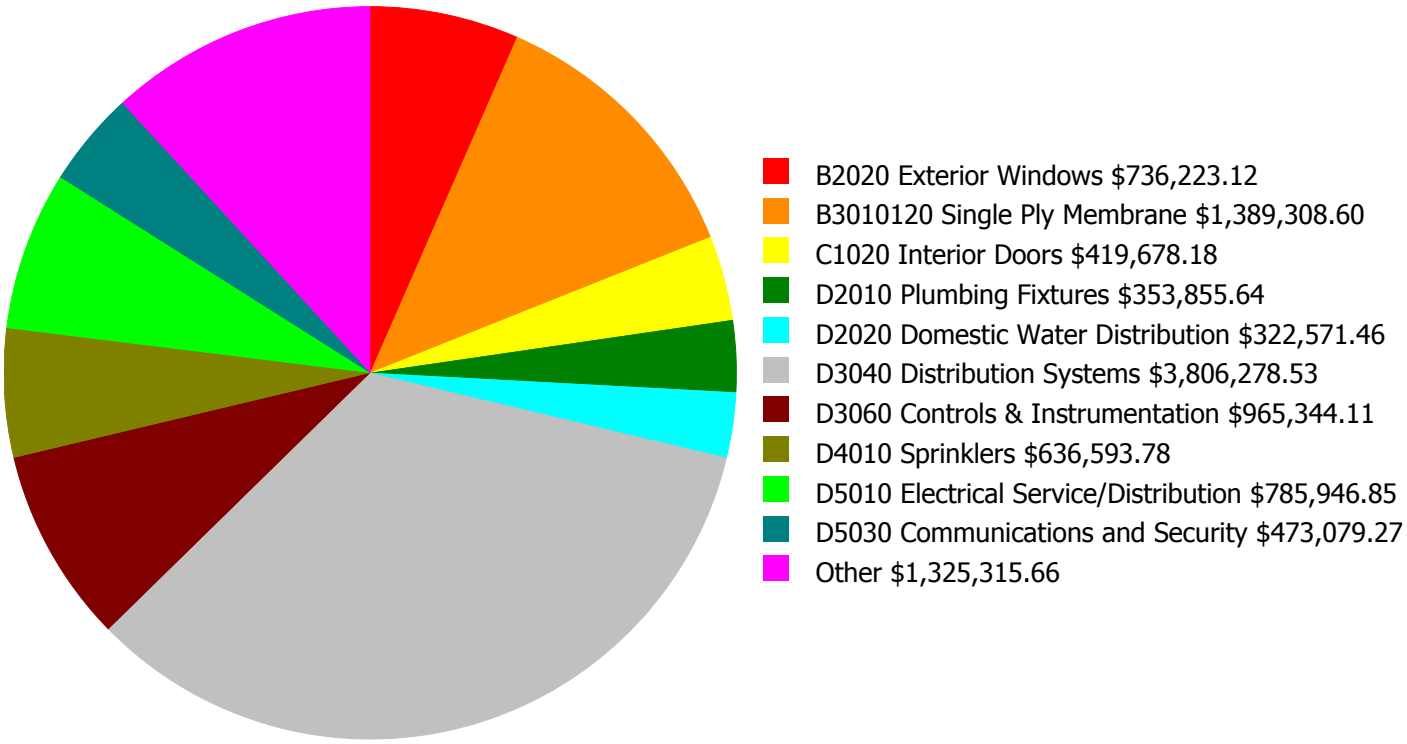
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 50.35%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$458,784.00	48.35 %	$917,568.00	46.35 %
2017	$10,359,951	$472,547.00	90.20 %	$945,095.00	86.20 %
2018	$0	$486,724.00	88.20 %	$973,447.00	82.20 %
2019	$0	$501,325.00	86.20 %	$1,002,651.00	78.20 %
2020	$3,788,336	$516,365.00	98.87 %	$1,032,730.00	88.87 %
2021	$0	$531,856.00	96.87 %	$1,063,712.00	84.87 %
2022	$0	$547,812.00	94.87 %	$1,095,624.00	80.87 %
2023	$0	$564,246.00	92.87 %	$1,128,492.00	76.87 %
2024	$0	$581,174.00	90.87 %	$1,162,347.00	72.87 %
2025	$0	$598,609.00	88.87 %	$1,197,218.00	68.87 %
Total:	**$14,148,287**	**$5,259,442.00**		**$10,518,884.00**	

Deficiency Summary by System

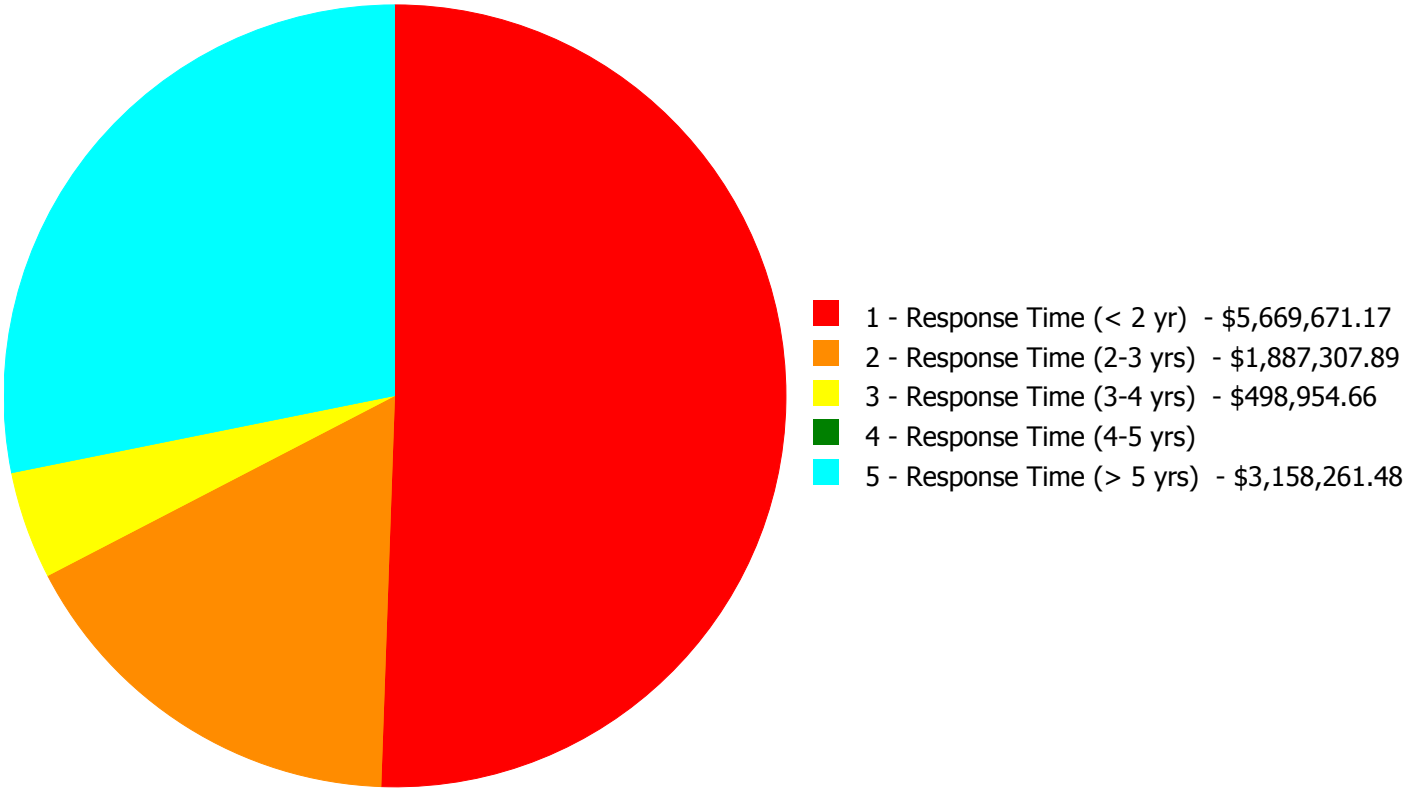
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $11,214,195.20

Deficiency Summary by Priority

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



Budget Estimate Total: $11,214,195.20

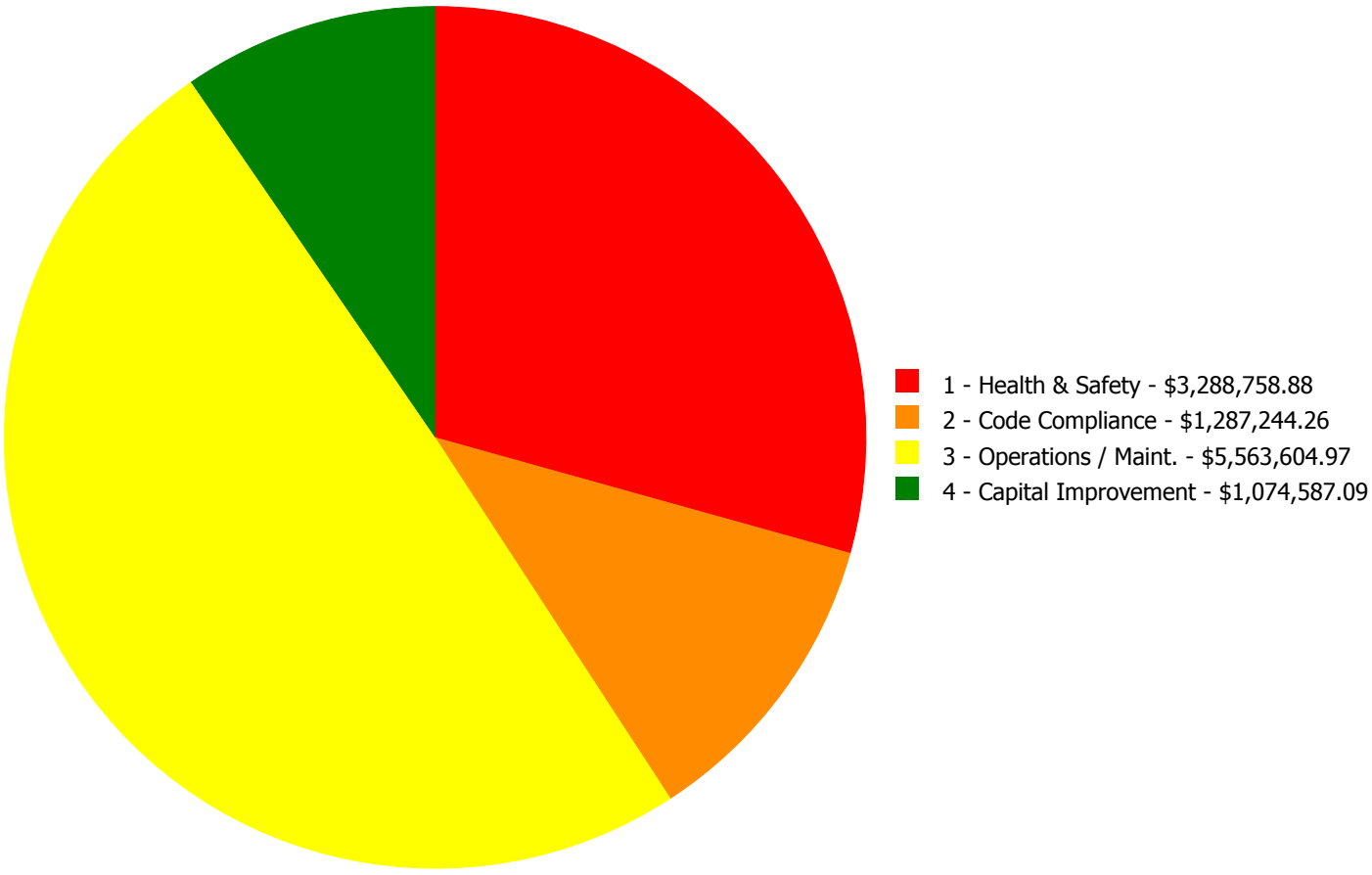
Deficiency By Priority Investment Table

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	$86,153.49	$47,977.18	$0.00	$0.00	$0.00	$134,130.67
B2020	Exterior Windows	$0.00	$736,223.12	$0.00	$0.00	$0.00	$736,223.12
B2030	Exterior Doors	$0.00	$69,623.02	$0.00	$0.00	$0.00	$69,623.02
B3010120	Single Ply Membrane	$1,303,718.03	$85,590.57	$0.00	$0.00	$0.00	$1,389,308.60
C1010	Partitions	$0.00	$20,909.73	$0.00	$0.00	$0.00	$20,909.73
C1020	Interior Doors	$0.00	$419,678.18	$0.00	$0.00	$0.00	$419,678.18
C3010230	Paint & Covering	$0.00	$65,186.46	$0.00	$0.00	$0.00	$65,186.46
C3020411	Carpet	$0.00	$44,763.05	$0.00	$0.00	$0.00	$44,763.05
C3020413	Vinyl Flooring	$0.00	$12,017.53	$0.00	$0.00	$0.00	$12,017.53
C3020414	Wood Flooring	$0.00	$43,067.76	$0.00	$0.00	$0.00	$43,067.76
C3020415	Concrete Floor Finishes	$0.00	$5,766.80	$0.00	$0.00	$0.00	$5,766.80
D2010	Plumbing Fixtures	$0.00	$0.00	$0.00	$0.00	$353,855.64	$353,855.64
D2020	Domestic Water Distribution	$9,560.11	$34,306.86	$0.00	$0.00	$278,704.49	$322,571.46
D2030	Sanitary Waste	$0.00	$0.00	$0.00	$0.00	$295,080.85	$295,080.85
D2040	Rain Water Drainage	$0.00	$288,237.96	$0.00	$0.00	$0.00	$288,237.96
D3040	Distribution Systems	$2,766,553.40	$0.00	$498,954.66	$0.00	$540,770.47	$3,806,278.53
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$0.00	$965,344.11	$965,344.11
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$636,593.78	$636,593.78
D5010	Electrical Service/Distribution	$785,946.85	$0.00	$0.00	$0.00	$0.00	$785,946.85
D5020	Lighting and Branch Wiring	$52,046.92	$0.00	$0.00	$0.00	$0.00	$52,046.92
D5030	Communications and Security	$473,079.27	$0.00	$0.00	$0.00	$0.00	$473,079.27
D5090	Other Electrical Systems	$99,167.29	$0.00	$0.00	$0.00	$0.00	$99,167.29
E1020	Institutional Equipment	$93,445.81	$13,959.67	$0.00	$0.00	$0.00	$107,405.48
E1090	Other Equipment	$0.00	$0.00	$0.00	$0.00	$87,912.14	$87,912.14
	Total:	$5,669,671.17	$1,887,307.89	$498,954.66	$0.00	$3,158,261.48	$11,214,195.20

Deficiency Summary by Category

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



Budget Estimate Total: $11,214,195.20

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: B2010 - Exterior Walls

Location: Low Roof

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Remove and replace precast concrete wall features - SF of surface

Qty: 200.00

Unit of Measure: S.F.

Estimate: $68,139.47

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Repair precast panels with exposed rusted reinf rods showing in low roof area (200sf)

System: B2010 - Exterior Walls

Location: exterior gaps between columns and conc panels

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 800.00

Unit of Measure: L.F.

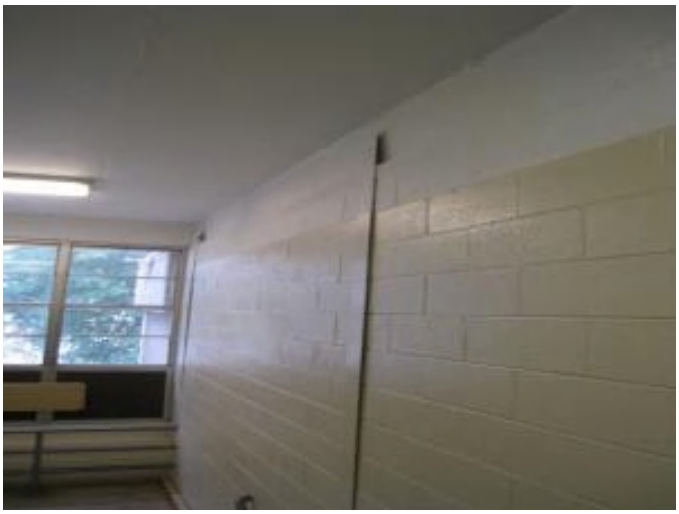
Estimate: $16,052.81

Assessor Name: Craig Anding

Date Created: 12/15/2015

Notes: Recaulk gaps in concrete panels around exterior (800 linear feet of caulk)

System: B2010 - Exterior Walls



Location: Precast concrete panels at low roof

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Remove and replace precast concrete wall features - SF of surface

Qty: 1.00

Unit of Measure: S.F.

Estimate: $1,961.21

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Gaps between concrete panel walls and structure – re attach panels, tighten bolts (40 lf)

System: B3010120 - Single Ply Membrane

Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Repair damaged single ply roofing - per SF of damaged area

Qty: 30,000.00

Unit of Measure: S.F.

Estimate: $1,303,718.03

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Remove and replace existing flat roof and insulation; 3 levels (30,000sf)

System: D2020 - Domestic Water Distribution

Location: Boiler Room

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Provide expansion tank for water heater.

Qty: 1.00

Unit of Measure: Ea.

Estimate: $9,560.11

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Provide an expansion tank for the 48 gallon vertical tank type water heater.

System: D3040 - Distribution Systems

Location: Classrooms

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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: 45,000.00

Unit of Measure: S.F.

Estimate: $2,170,763.34

Assessor Name: Craig Anding

Date Created: 02/09/2016

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 electric resistance heat / DX cooling coils and integral heat recovery wheels /13

System: D3040 - Distribution Systems

Location: Corridors

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

Correction: Install indoor AHU, CV, DT (15T)

Qty: 35.00

Unit of Measure: TonAC

Estimate: $595,790.06

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Provide ventilation for the corridors and four first floor entryways by installing fan coil air handling units with electric heat hung from the structure with outdoor air ducted to the unit from louvers in the window openings.

System: D5010 - Electrical Service/Distribution

Location: Main Electrical Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Substation

Qty: 0.00

Unit of Measure: Ea.

Estimate: $397,734.37

Assessor Name: Craig Anding

Date Created: 11/11/2015

Notes: Upgrade the existing electrical service with a new service. Replace the existing substation with new 1200A, 480/277V substation.

System: D5010 - Electrical Service/Distribution

Location: Entire 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: $388,212.48

Assessor Name: Craig Anding

Date Created: 11/11/2015

Notes: Replace the entire distribution system with new panels and new wiring/conduits. Estimated 10 panel boards Provide arc flash label on the electrical equipment. Replace two 75KVA existing transformer with new transformer.

System: D5020 - Lighting and Branch Wiring

Location: Entire Building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Add wiring device

Qty: 1.00

Unit of Measure: Ea.

Estimate: $52,046.92

Assessor Name: Craig Anding

Date Created: 11/11/2015

Notes: Install minimum two receptacles in each wall of class rooms. We recommend adding a two-compartment surface mounted raceway, for data power, for the computer lab room. Estimated 80each.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $225,011.29

Assessor Name: Craig Anding

Date Created: 11/11/2015

Notes: Replace existing fire alarm system with an automatic fire alarm system including smoke detectors in corridors and other recommended areas per NEC. Install horn/strobes in class rooms, corridors, offices, toilets, library and other recommended areas per codes.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Security Issue

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Video Surveillance System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $173,380.85

Assessor Name: Craig Anding

Date Created: 11/11/2015

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

This deficiency has no image.

Location: Cafetorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Sound System

Qty: 1.00

Unit of Measure: LS

Estimate: $38,400.80

Assessor Name: Craig Anding

Date Created: 11/11/2015

Notes: Provide new sound system including a freestanding 19" rack backstage area with a mixer, amplifiers, CD player, cassette player, AM-FM radio, graphic or parametric equalizer, and receivers.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Clock System or Components

Qty: 1.00

Unit of Measure: Ea.

Estimate: $36,286.33

Assessor Name: Craig Anding

Date Created: 11/11/2015

Notes: Provide master clock system including wireless master clock controller and new clock in the classes and offices.

System: D5090 - Other Electrical Systems

Location: Boiler Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace standby generator system

Qty: 1.00

Unit of Measure: Ea.

Estimate: $70,519.00

Assessor Name: Craig Anding

Date Created: 11/11/2015

Notes: Replace the existing emergency generator with a 30KW diesel generator.

System: D5090 - Other Electrical Systems

Location: Roof

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Repair Lightning Protection System

Qty: 1.00

Unit of Measure: Job

Estimate: $28,648.29

Assessor Name: Craig Anding

Date Created: 11/11/2015

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

System: E1020 - Institutional Equipment

This deficiency has no image.

Location: Cafetorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $93,445.81

Assessor Name: Craig Anding

Date Created: 11/11/2015

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

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

System: B2010 - Exterior Walls

Location: Soffit

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Exterior plaster or stucco repair and refinishing - based on SF of wall surface

Qty: 2,000.00

Unit of Measure: S.F.

Estimate: $28,603.50

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Refinish plaster soffit around building, under roof (2000sf)

System: B2010 - Exterior Walls

Location: Interior block walls

Distress: Damaged

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: 500.00

Unit of Measure: S.F.

Estimate: $16,144.74

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Repair cracks, and damages in concrete walls in corridors and classroom walls (500sf)

System: B2010 - Exterior Walls

Location: Exterior 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: 100.00

Unit of Measure: S.F.

Estimate: $3,228.94

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Fill gaps between exterior wall panels, columns, and roof with non-shrink grout, preventing squirrels from entering building

System: B2020 - Exterior Windows

Location: All exterior windows

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace aluminum windows - pick the appropriate size and style and insert the number of units

Qty: 129.00

Unit of Measure: Ea.

Estimate: $736,223.12

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Replace all exterior windows with insulated units, fixed aluminum units:
(129)3x6 windows

System: B2030 - Exterior Doors

Location: Exterior doors

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 9.00

Unit of Measure: Ea.

Estimate: $69,623.02

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Replace all exterior doors and hardware with code compliant, latching, exit hardware (9 doors)

System: B3010120 - Single Ply Membrane

Location: Roof coping

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace parapet caps - single ply roof

Qty: 1,000.00

Unit of Measure: L.F.

Estimate: $85,590.57

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Provide new aluminum coping around entire roof (1000ft)

System: C1010 - Partitions

Location: Entrance lobby

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Build fire resistant elevator lobby to comply with fire separation requirements - each floor

Qty: 1.00

Unit of Measure: Ea.

Estimate: $20,909.73

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Construct vestibule at main entrance – gypsum board walls and 1 pair of entrance doors.

System: C1020 - Interior Doors

Location: Interior doors

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 65.00

Unit of Measure: Ea.

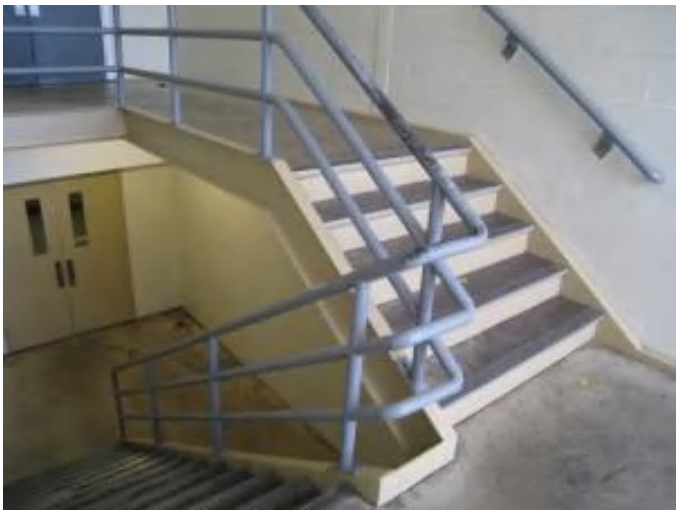
Estimate: $310,088.16

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Remove and replace all wood interior doors, frames and hardware in classrooms and offices on Upper and Ground Levels (65)

System: C1020 - Interior Doors



Location: Interior doors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace hollow metal frames and doors

Qty: 20.00

Unit of Measure: Ea.

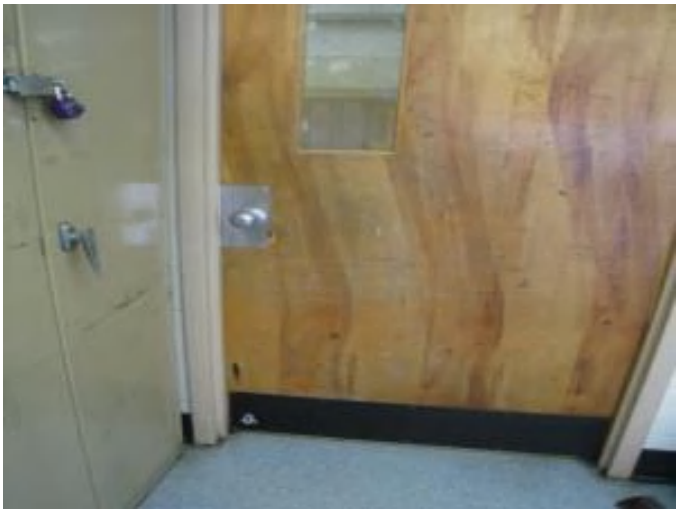
Estimate: $101,559.74

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Replace all interior steel doors, frames, and hardware in mechanical rooms and stairways (20)

System: C1020 - Interior Doors



Location: Classrooms and offices

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Provide security hardware for classroom and office doors

Qty: 35.00

Unit of Measure: Ea.

Estimate: $8,030.28

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Provide security hardware for classrooms offices, locking from inside classroom (both floors). (35)

System: C3010230 - Paint & Covering

Location: first 10ft of exterior concrete panels

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: 10,000.00

Unit of Measure: S.F.

Estimate: $46,747.11

Assessor Name: Craig Anding

Date Created: 12/15/2015

Notes: Repaint exterior walls up to second floor window sills (10,000sf)

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: 3,000.00

Unit of Measure: S.F.

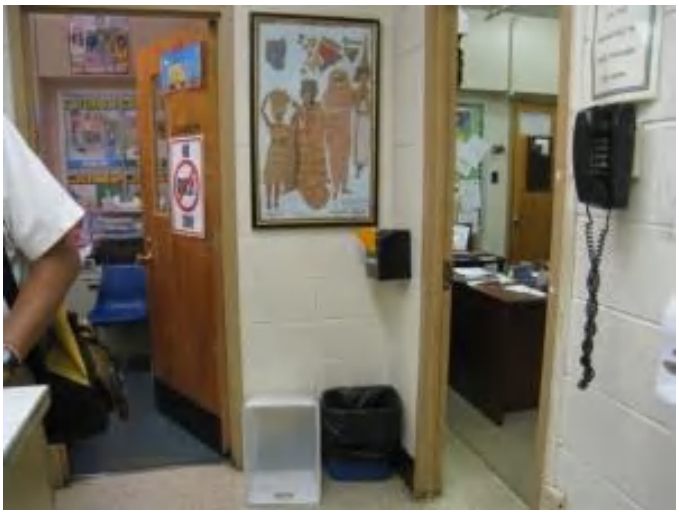
Estimate: $18,439.35

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Repaint interior walls Upper and Ground Floor; half of walls on Lower Level (3,000sf)

System: C3020411 - Carpet



Location: Library

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace carpet

Qty: 4,000.00

Unit of Measure: S.F.

Estimate: $44,763.05

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Replace carpet in Library and Auditorium (4,000sf)

System: C3020413 - Vinyl Flooring

Location: Interiors - floors

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace VCT

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $12,017.53

Assessor Name: Craig Anding

Date Created: 11/24/2015

Notes: Remove and replace damaged, old 12”x12” VCT floors in some classrooms, at univents, corridors, and offices with VCT (1,000sf)

System: C3020414 - Wood Flooring

Location: Gymnasium
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Refinish wood floors
Qty: 4,000.00
Unit of Measure: S.F.
Estimate: $43,067.76
Assessor Name: Craig Anding
Date Created: 11/24/2015

Notes: Refinish wood gymnasium floor (4000sf)

System: C3020415 - Concrete Floor Finishes

Location: Mechanical area and stairs
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Clean and reseal concrete floors
Qty: 1,500.00
Unit of Measure: S.F.
Estimate: $5,766.80
Assessor Name: Craig Anding
Date Created: 11/24/2015

Notes: Strip, clean and reseal concrete floors mechanical room, shops, and stairways (1,500sf)

System: D2020 - Domestic Water Distribution

Location: Boiler Room

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Provide 3" reduced pressure back flow preventer

Qty: 1.00

Unit of Measure: Ea.

Estimate: $34,306.86

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Add 3” backflow preventer, RPZA type.

System: D2040 - Rain Water Drainage

Location: Throughout Building

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 65,000.00

Unit of Measure: S.F.

Estimate: $288,237.96

Assessor Name: Craig Anding

Date Created: 02/09/2016

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

System: E1020 - Institutional Equipment

Location: Science

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace lab base cabinets and countertops - per LF - add sinks in plumbing fixtures if required

Qty: 6.00

Unit of Measure: L.F.

Estimate: $13,959.67

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Replace science lab and prep sinks. /15

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

System: D3040 - Distribution Systems

Location: Administration

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace HVAC unit for Admin (2000 students).

Qty: 650.00

Unit of Measure: Student

Estimate: $271,479.29

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Replace split systems for administrative office areas.

System: D3040 - Distribution Systems

Location: Gymnasium

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Replace HVAC unit for Gymnasium (single station)

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $227,475.37

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Provide ventilation, heating and cooling for the gymnasium by replacing the two existing roof top units.

Priority 5 - Response Time (> 5 yrs):

System: D2010 - Plumbing Fixtures

Location: Restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 16.00

Unit of Measure: Ea.

Estimate: $119,394.37

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Replace all water closets in the building with lower flow fixtures, as the fixtures are original. 16 /32

System: D2010 - Plumbing Fixtures

Location: Restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace lavatory - with finishes

Qty: 14.00

Unit of Measure: Ea.

Estimate: $114,741.07

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Replace all lavatories in the building with lower flow fixtures, as the fixtures are original. 14 /28

System: D2010 - Plumbing Fixtures

Location: Corridors

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 4.00

Unit of Measure: Ea.

Estimate: $62,771.59

Assessor Name: Craig Anding

Date Created: 02/09/2016

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. 4 /39

System: D2010 - Plumbing Fixtures

Location: Restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace or replace wall hung urinals

Qty: 9.00

Unit of Measure: Ea.

Estimate: $33,354.49

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Replace all urinals in the building with lower flow fixtures, as the fixtures are original. 9 /30

System: D2010 - Plumbing Fixtures

This deficiency has no image.

Location: Janitor Closets

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 3.00

Unit of Measure: Ea.

Estimate: $23,594.12

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Replace service sinks (janitor sinks) in the building. 3 /

System: D2020 - Domestic Water Distribution

Location: Throughout Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace domestic water piping (75 KSF)

Qty: 55,000.00

Unit of Measure: S.F.

Estimate: $278,704.49

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Inspect and replace, as needed, the original the domestic water piping.

System: D2030 - Sanitary Waste

Location: Throughout Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 60,150.00

Unit of Measure: S.F.

Estimate: $295,080.85

Assessor Name: Craig Anding

Date Created: 02/09/2016

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

System: D3040 - Distribution Systems

This deficiency has no image.

Location: Kitchen

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 1.00

Unit of Measure: Ea.

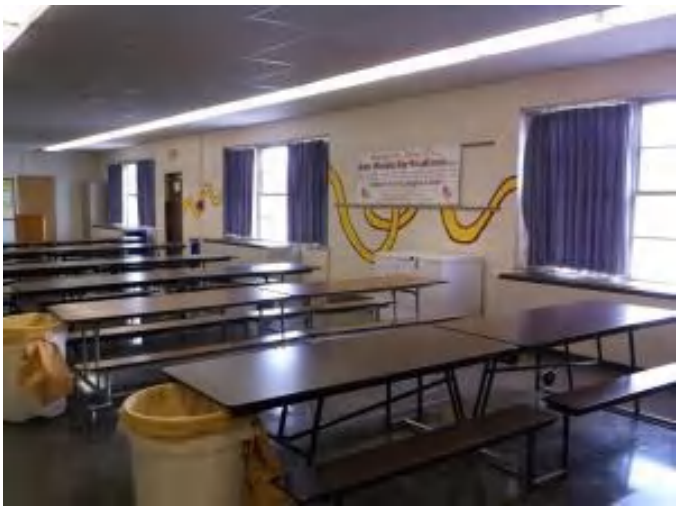
Estimate: $309,401.34

Assessor Name: Craig Anding

Date Created: 02/09/2016

Notes: Provide a gas-fired makeup unit for the kitchen exhaust hood.

System: D3040 - Distribution Systems



Location: Throughout Building

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace HVAC unit for Cafeteria (850)

Qty: 850.00

Unit of Measure: Student

Estimate: $231,369.13

Assessor Name: Craig Anding

Date Created: 02/09/2016

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

System: D3060 - Controls & Instrumentation

Location: Throughout Building

Distress: Energy Efficiency

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 45,000.00

Unit of Measure: S.F.

Estimate: $965,344.11

Assessor Name: Craig Anding

Date Created: 02/08/2016

Notes: Replace the electric and electronic controls for the HVAC systems with modern DDC modules 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: D4010 - Sprinklers

Location: Throughout Building
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 5 - Response Time (> 5 yrs)
Correction: Install a fire protection sprinkler system
Qty: 44,500.00
Unit of Measure: S.F.
Estimate: $636,593.78
Assessor Name: Craig Anding
Date Created: 02/08/2016

Notes: Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property.

System: E1090 - Other Equipment

Location: Kitchen
Distress: Building / MEP Codes
Category: 2 - Code Compliance
Priority: 5 - Response Time (> 5 yrs)
Correction: Replace kitchen exhaust hood (10 ft)
Qty: 1.00
Unit of Measure: Ea.
Estimate: $87,912.14
Assessor Name: Craig Anding
Date Created: 02/09/2016

Notes: Add kitchen exhaust hood.

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
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 300 kVA & below, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	1.00	Ea.	Main Electrical Room					30	1974	2017	$42,600.60	$46,860.66
												Total:	**$46,860.66**

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):	108,600
Year Built:	1974
Last Renovation:	
Replacement Value:	$1,630,023
Repair Cost:	$234,323.63
Total FCI:	14.38 %
Total RSLI:	40.94 %

Description:

Attributes:

General Attributes:

Bldg ID:	S832001	Site ID:	S832001

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	50.85 %	20.24 %	$234,323.63
G40 - Site Electrical Utilities	16.67 %	0.00 %	$0.00
Totals:	**40.94 %**	**14.38 %**	**$234,323.63**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30	1974	2004	2047	106.67 %	0.00 %	32			$0
G2020	Parking Lots	$7.65	S.F.	51,500	30	1974	2004	2047	106.67 %	38.68 %	32		$152,382.57	$393,975
G2030	Pedestrian Paving	$11.52	S.F.	9,600	40	1974	2014	2020	12.50 %	43.71 %	5		$48,344.72	$110,592
G2040	Site Development	$4.36	S.F.	108,600	25	1974	1999	2020	20.00 %	7.10 %	5		$33,596.34	$473,496
G2050	Landscaping & Irrigation	$3.78	S.F.	47,500	15	1974	1989	2020	33.33 %	0.00 %	5			$179,550
G4020	Site Lighting	$3.58	S.F.	108,600	30	1974	2004	2020	16.67 %	0.00 %	5			$388,788
G4030	Site Communications & Security	$0.77	S.F.	108,600	30	1974	2004	2020	16.67 %	0.00 %	5			$83,622
								Total	**40.94 %**	**14.38 %**			**$234,323.63**	**$1,630,023**

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.

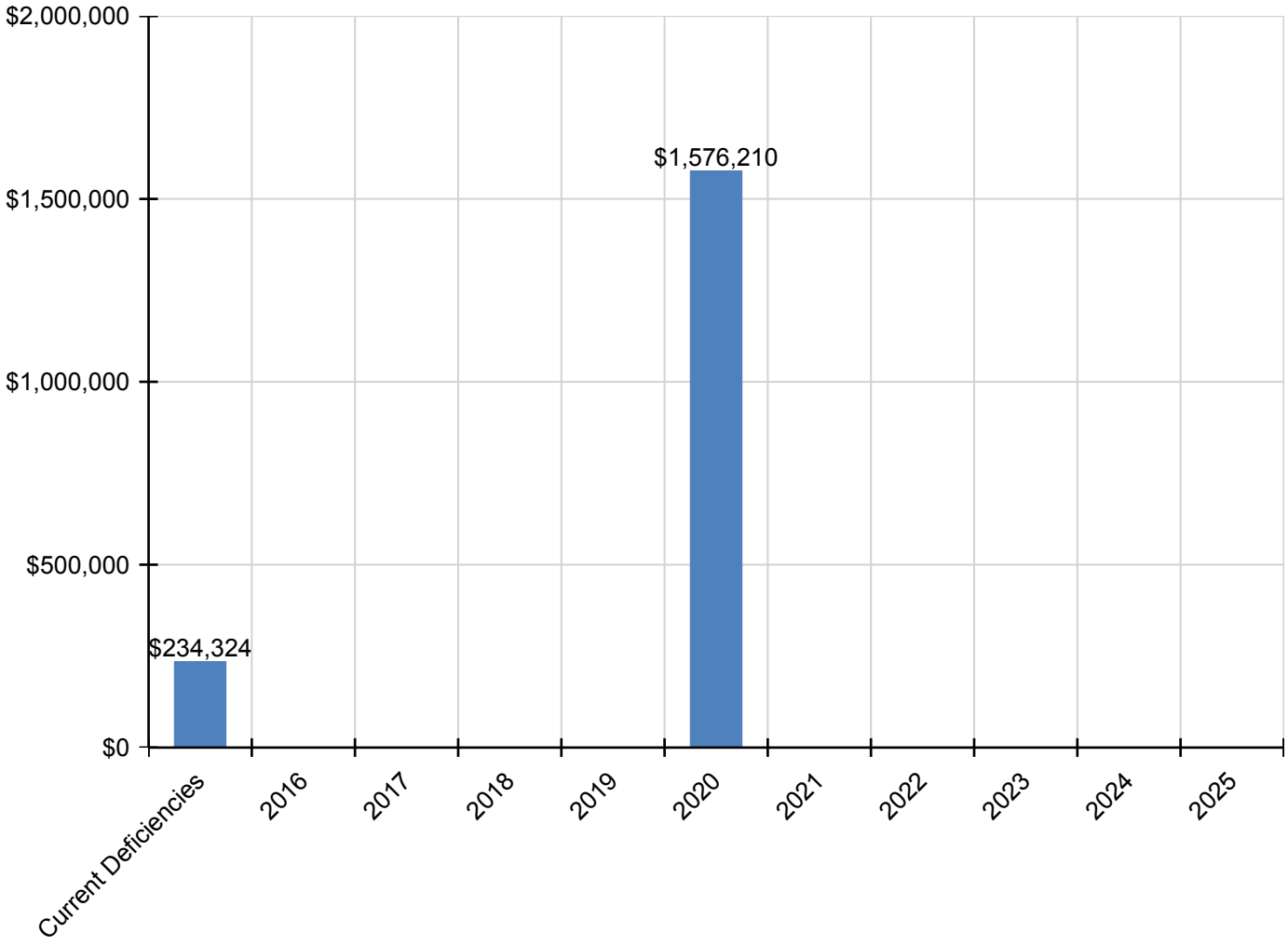
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$234,324**	**$0**	**$0**	**$0**	**$0**	**$1,576,210**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,810,534**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$152,383	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$152,383**
G2030 - Pedestrian Paving	$48,345	$0	$0	$0	$0	$141,027	$0	$0	$0	$0	$0	**$189,372**
G2040 - Site Development	$33,596	$0	$0	$0	$0	$603,803	$0	$0	$0	$0	$0	**$637,400**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$228,962	$0	$0	$0	$0	$0	**$228,962**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$495,783	$0	$0	$0	$0	$0	**$495,783**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$106,635	$0	$0	$0	$0	$0	**$106,635**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

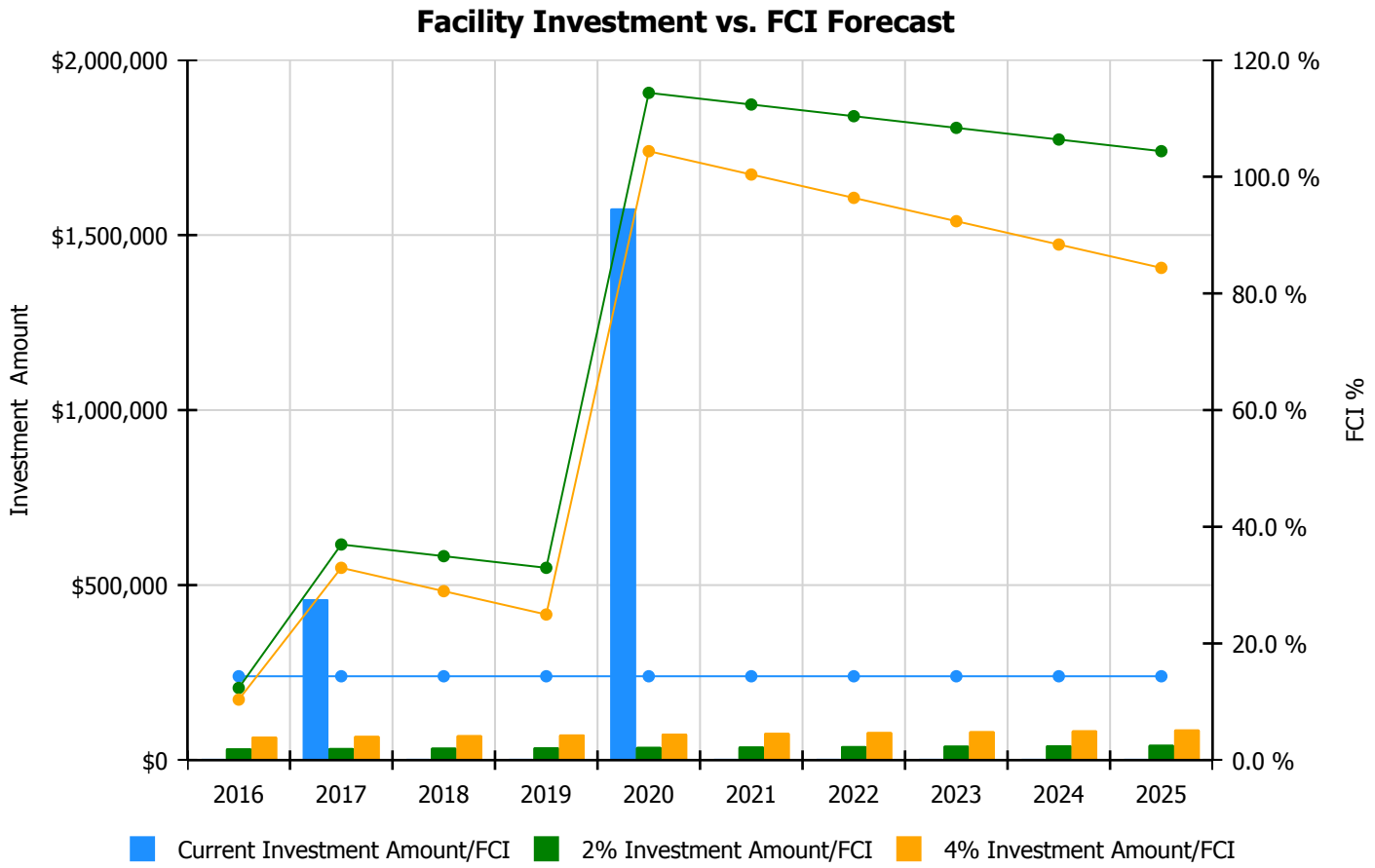
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

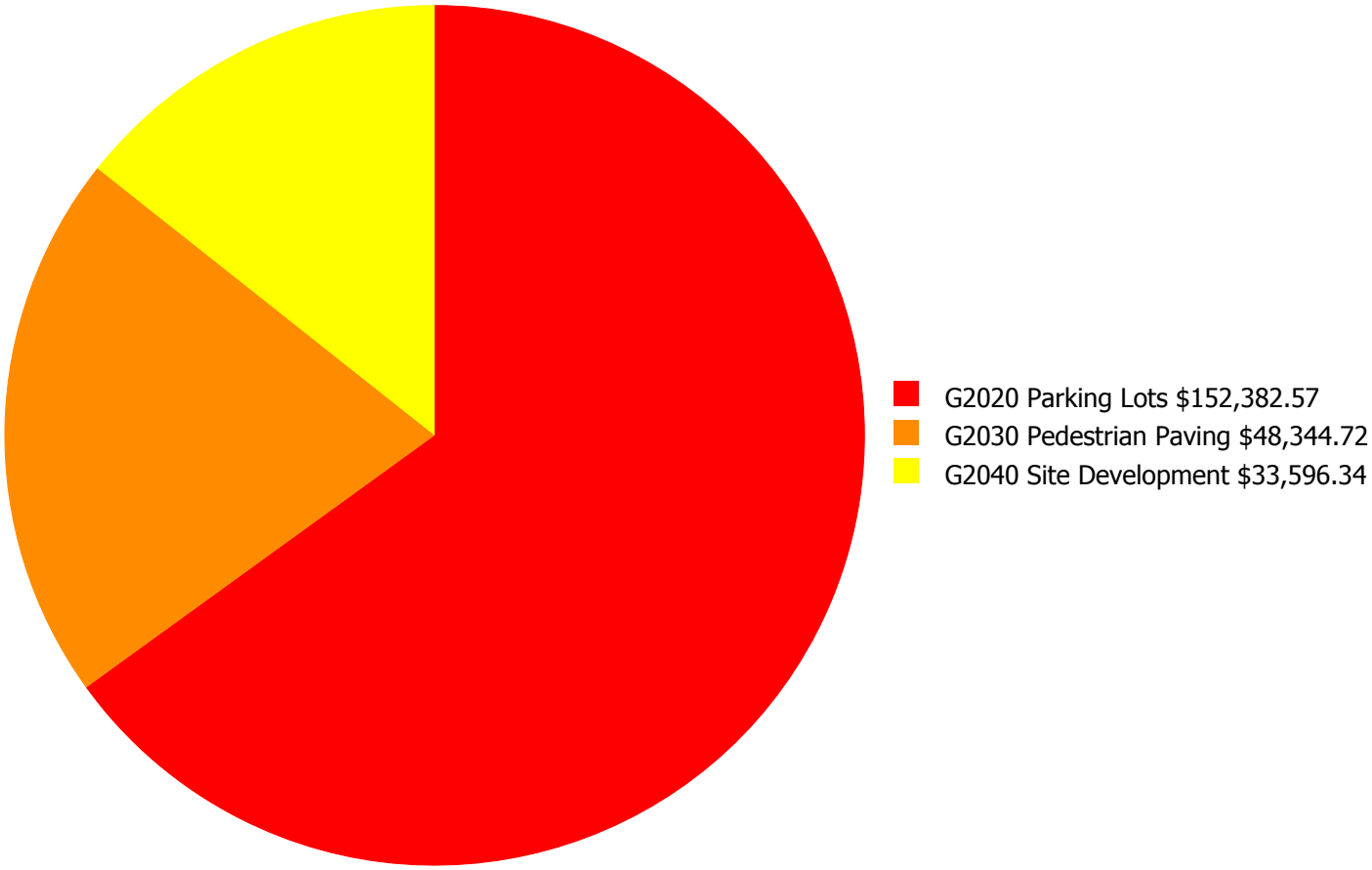
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 14.38%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$33,578.00	12.38 %	$67,157.00	10.38 %
2017	$459,765	$34,586.00	36.96 %	$69,172.00	32.96 %
2018	$0	$35,623.00	34.96 %	$71,247.00	28.96 %
2019	$0	$36,692.00	32.96 %	$73,384.00	24.96 %
2020	$1,576,210	$37,793.00	114.38 %	$75,586.00	104.38 %
2021	$0	$38,927.00	112.38 %	$77,853.00	100.38 %
2022	$0	$40,094.00	110.38 %	$80,189.00	96.38 %
2023	$0	$41,297.00	108.38 %	$82,595.00	92.38 %
2024	$0	$42,536.00	106.38 %	$85,072.00	88.38 %
2025	$0	$43,812.00	104.38 %	$87,625.00	84.38 %
Total:	**$2,035,976**	**$384,938.00**		**$769,880.00**	

Deficiency Summary by System

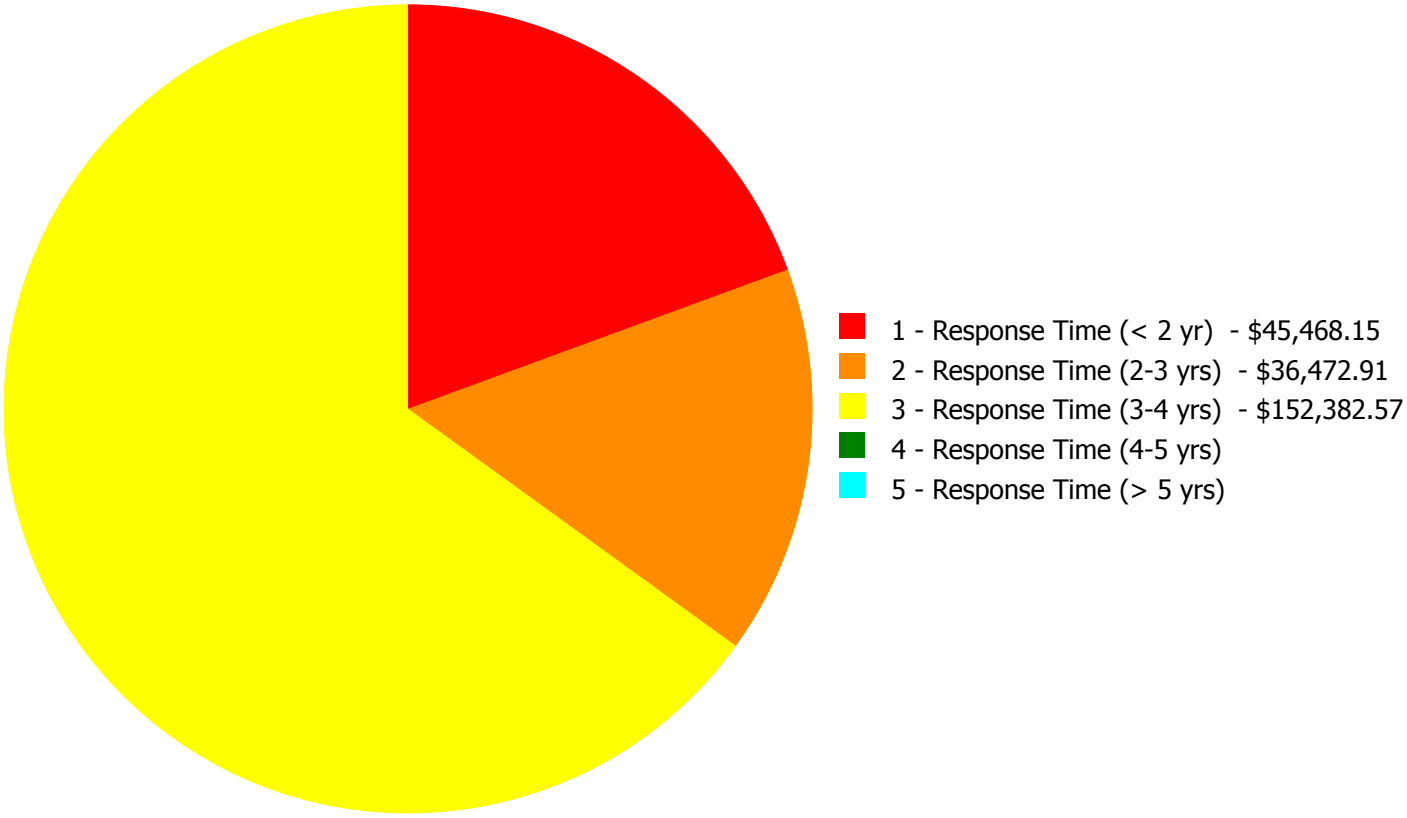
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $234,323.63

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: $234,323.63

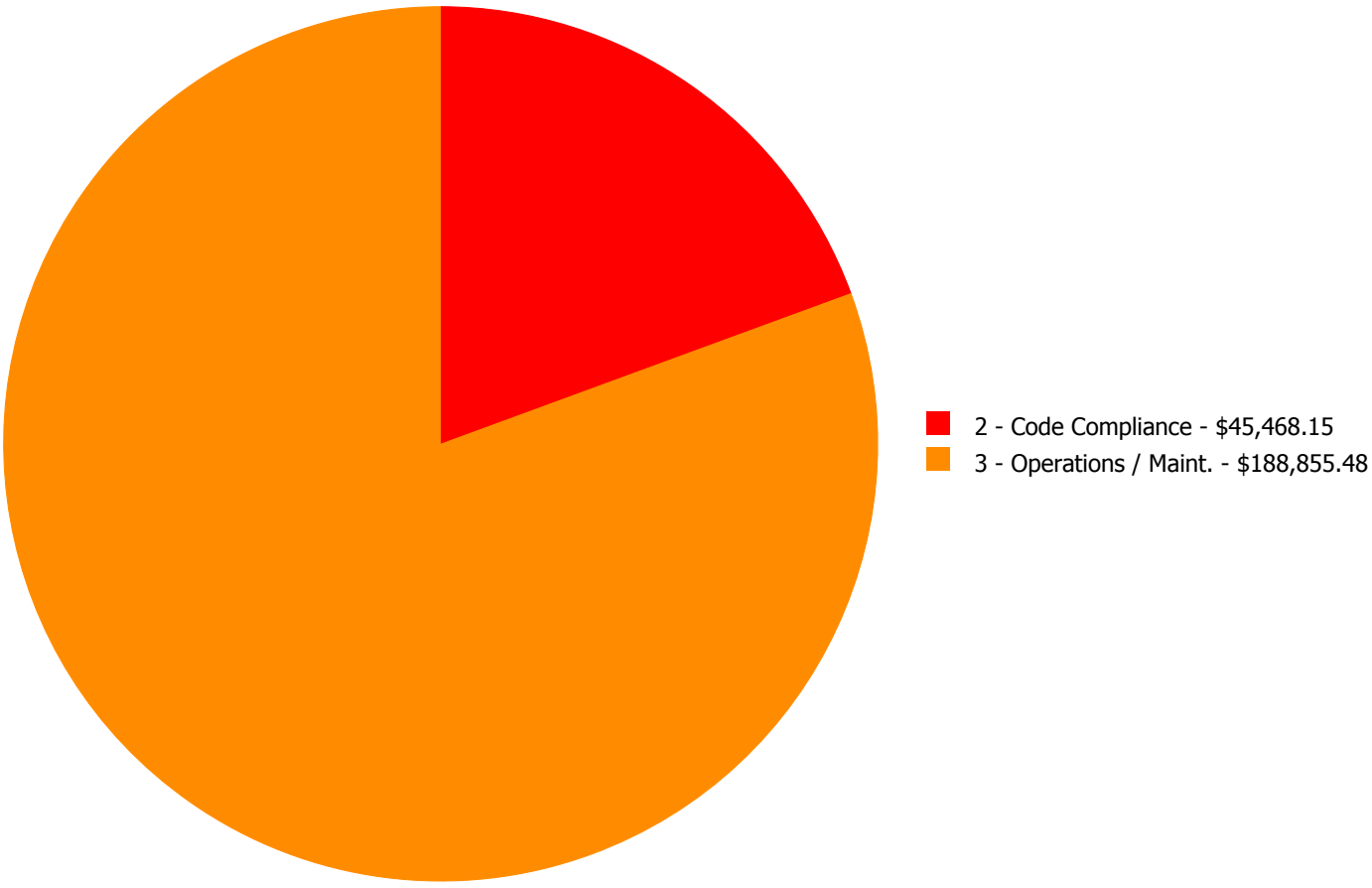
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2020	Parking Lots	$0.00	$0.00	$152,382.57	$0.00	$0.00	$152,382.57
G2030	Pedestrian Paving	$45,468.15	$2,876.57	$0.00	$0.00	$0.00	$48,344.72
G2040	Site Development	$0.00	$33,596.34	$0.00	$0.00	$0.00	$33,596.34
	Total:	$45,468.15	$36,472.91	$152,382.57	$0.00	$0.00	$234,323.63

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: $234,323.63

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: G2030 - Pedestrian Paving

Location: front entrance

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

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

Qty: 35.00

Unit of Measure: L.F.

Estimate: $45,468.15

Assessor Name: Ben Nixon

Date Created: 11/24/2015

Notes: Provide new ADA accessible wheelchair ramp into front of building (35 ft long with handrails)

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

System: G2030 - Pedestrian Paving

Location: sidewalk - front of building

Distress: Damaged

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: Ben Nixon

Date Created: 11/24/2015

Notes: Repair concrete walkways (200sf)

System: G2040 - Site Development

Location: site fence

Distress: Damaged

Category: 3 - Operations / Maint.

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: Ben Nixon

Date Created: 11/24/2015

Notes: Replace damaged sections of 8ft high site fence (300sf)

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

System: G2020 - Parking Lots

Location: parking lot

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Resurface parking lot - grind and resurface including striping

Qty: 40,000.00

Unit of Measure: S.F.

Estimate: $152,382.57

Assessor Name: Ben Nixon

Date Created: 11/24/2015

Notes: Repave parking lot and roadways, including regrading of north side paving along building to provide slope away from building (40,000sf)

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