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.

Solis-Cohen School

Governance	DISTRICT	Report Type	Elementary
Address	7001 Horrocks St. Philadelphia, Pa 19149	Enrollment Grade Range	1227 '00-05'
Phone/Fax	215-728-5012 / 215-728-5982	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Solis-Cohen	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**37.79%**	**$25,632,010**	**$67,826,066**
Building	52.43 %	$24,653,934	$47,026,216
Grounds	16.31 %	$969,766	$5,944,756

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	99.88 %	$3,130,369	$3,134,286
Exterior Walls (Shows condition of the structural condition of the exterior facade)	10.66 %	$357,990	$3,358,810
Windows (Shows functionality of exterior windows)	117.03 %	$1,918,026	$1,638,910
Exterior Doors (Shows condition of exterior doors)	490.86 %	$647,686	$131,950
Interior Doors (Classroom doors)	204.45 %	$653,025	$319,410
Interior Walls (Paint and Finishes)	43.85 %	$527,080	$1,202,110
Plumbing Fixtures	82.78 %	$1,018,469	$1,230,320
Boilers	125.19 %	$2,126,921	$1,698,970
Chillers/Cooling Towers	54.07 %	$1,204,455	$2,227,680
Radiators/Unit Ventilators/HVAC	72.82 %	$2,848,883	$3,912,090
Heating/Cooling Controls	130.97 %	$1,608,907	$1,228,500
Electrical Service and Distribution	168.03 %	$1,483,203	$882,700
Lighting	55.91 %	$1,764,359	$3,155,880
Communications and Security (Cameras, Pa System and Fire Alarm)	78.84 %	$931,904	$1,182,090

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

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Solis-Cohen PEC School

Governance	DISTRICT	Report Type	Elementary
Address	7001 Horrocks St. Philadelphia, Pa 19149	Enrollment Grade Range	'00-05'
Phone/Fax	215-728-5012 / 215-728-5982	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Solis-Cohen	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**37.79%**	**$25,632,010**	**$67,826,066**
Building	00.06 %	$8,310	$14,855,094
Grounds	16.31 %	$969,766	$5,944,756

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$1,335,443
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.04 %	$337	$759,427
Windows (Shows functionality of exterior windows)	00.00 %	$0	$331,550
Exterior Doors (Shows condition of exterior doors)	10.59 %	$4,302	$40,623
Interior Doors (Classroom doors)	04.01 %	$3,671	$91,462
Interior Walls (Paint and Finishes)	00.00 %	$0	$408,903
Plumbing Fixtures	00.00 %	$0	$768,184
Boilers	00.00 %	$0	$454,148
Chillers/Cooling Towers	00.00 %	$0	$595,476
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$1,045,732
Heating/Cooling Controls	00.00 %	$0	$328,388
Electrical Service and Distribution	00.00 %	$0	$235,953
Lighting	00.00 %	$0	$843,591
Communications and Security (Cameras, Pa System and Fire Alarm)	00.00 %	$0	$315,982

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

S834001;Solis-Cohen

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):	91,000
Year Built:	1946
Last Renovation:	
Replacement Value:	$67,826,066
Repair Cost:	$25,632,010.21
Total FCI:	37.79 %
Total RSLI:	73.60 %

Description:

Facility Condition Assessment
August 2015

School District of Philadelphia FCA
Solis-Cohen Elementary School
7001 Horrocks Street
Philadelphia, PA 19149

91,000sf; 1400 students; LN 08

Solis-Cohen Primary Education Center
7001 Horrocks Street
Philadelphia, PA 19149

24,325sf; 258 students; LN 08

General

Solis-Cohen Elementary School is located at 7001 Horrocks Street. The Main Building was constructed in 1946, has 91,000 square feet, and is 1 and 2 stories tall. The main student entrance, main parking lot, and school bus drop off of this facility faces Horrocks Street. The school is comprised of a 8 "wings" constructed off of a central circulation / congregation spline. Wing C is a two-story addition was added to the rear of the spline shortly after completion of the Main Building. Wing H is a two-story addition connected to the spline that was added in 1952. Wing D is a one-story addition also called "the annex", added to wing E in 1954. The Primary Education Center (PEC) is a stand-alone one-story facility that was built on this property in 2009, with 24,325 square feet and its own front entrance facing Princeton Avenue. The PEC resembles the Little School Houses facilities found on other school district properties. The play area of the PEC connects to the rear play area of the main building. Mary Costello, the Acting Building Engineer accompanied the team during the building inspection. The inspection team met with Principal Serianni at the time of inspection. She indicated that critical items needing improvement were the heating system which lacks controlled and adequate heat output, roofing system which leaks, windows which are difficult to operate and leak (air) badly in cold weather, and classroom and interior lighting which is inadequate when there is not enough daylight.

Architectural/Structural

Foundations in the Main Building are constructed of concrete and concrete block seen in the mechanical equipment rooms in the basement. Wall surfaces are in poor condition with extensive peeling paint and some cracking near basement windows observed. There are crawlspaces for access to spaces and utilities under the Wings but there was no lighting available and it was thought that there was asbestos inside, therefore no inspections was made into these spaces and their construction type and condition could not be ascertained. Foundations in the Primary Education Center (PEC) could not be seen, but are believed to be constructed of concrete blocks with concrete footings.

Floor slabs in the mechanical basement in the Main Building are in fair condition. First floor and Upper floor slabs in two-story wings are constructed of poured concrete slabs with concrete beams. The few columns, beams, and floor deck that could be seen appeared to be in good condition. There are some vinyl asbestos tiles and vinyl composition tile rooms with cracking and broken tiles observed indicating some cracking of the floor slabs. One room in particular, room 9A, surface cracking and settlement of the slab was observed. Floor slabs in the PEC mechanical room were dirty and needed cleaning/sealing, but in general seemed to be in good condition.

Roof systems in all wings of the Main Building except Wing D are believed to be constructed of concrete decks on concrete structures. Wing D is a metal wall and steel structure building; this roof is a standing seam metal roof on a steel structure. Roofs are only accessible by extension ladder and not all roofs were accessible at the time of inspection; not all structural systems were seen, however assumptions were made based on the systems that were visible at the time of inspection. The edges of concrete roof slabs are cracking in many places in many of the Wings, seen from the ground during the inspection. Rusted reinforcing bars in these roof decks are visible in many places. The roof system over the gym consists of longspan concrete tapered beams with smaller concrete T sections spanning between the concrete beams. Some cracks were seen in the roof deck over the gym. One section of roof in wing E spans over an outside space forming a covered outside "porch" of sorts. The concrete T's supporting this roof deck are substantially spalled and have many rusted reinforcing rods exposed; this roof deck is very weathered and probably in seriously weakened condition. The roof of the PEC is constructed of steel bar joists with metal deck, insulation, and a standing seem roofing system above, all in good condition.

Exterior walls of the Main Building and connected additions are constructed of brick and are in very poor condition with joint cracking and spalling brickwork in many locations. It appears as if some joints had been repaired in past years, but many more are cracked. Wing D of the Main Building was constructed around 1960 and has insulated metal siding, dented, paint peeling and in very poor condition. All walls are probably constructed using a cavity wall system construction with a painted block or metal stud and painted gypsum board finish on the interior. There are many locations were exterior masonry and metal walls have been repainted to hide graffiti, but these areas are worn and need another coat of repaint or complete replacement. Large graphics consisting of trees and fields have been painted on the building to hide some of the graffiti and give the building a friendlier, more child-oriented look, but these graphics are overwhelmed by the poor general condition of the exterior. Cracks extend into the adjacent brickwork from most uninvent louvers. Most steel lintels over univents and windows are rusting and in need of replacement. Univent louvers are dented and need to be replaced. Aluminum fascias extending down from roofing are worn, dirty, bent and discolored, in need of replacing. The exterior walls of the PEC are also constructed of brick but are in good condition with no graffiti or cracking of brickwork observed. The metal panel clerestory unit on the PEC roof has graffiti on the panels and glass; the glass should be cleaned and the panels repainted.

Exterior windows in the Main Building consist of single pane glass or plexiglass glazing in bronze anodized aluminum, clear anodized aluminum, or steel frames. These appear to be the original windows as judge by their worn, faded, and poor condition. First floor windows have security screens which are damaged, worn and in need of replacement. There used to be rows of clerestory windows above the corridor walls of classrooms of the single story wings A, B, E, F, G; these windows would have let in light and could have

let out warm air if opened, however they have been sealed or painted over giving the building a "boarded-up and abandoned" appearance, eliminating a source of natural light and ventilation in the classrooms. Windows in the Main Building and additions do not seal tightly and are sources of cold air leakage during the winter. Basement windows in the mechanical room are broken and open to the outside air. Windows in the PEC are insulated glass units in painted aluminum frames in good condition.

Exterior doors are hollow metal steel doors and frames. All doors and frames are in bad condition with rusted frames, dented panels, and peeling paint. Double doors do not have astragals or weatherstripping to prevent cold air leakage in winter. Entrance doors and some other doors have narrow or half vision panels with wired glass and external galvanized steel security screens, but this gives the building an ominous appearance not unlike a prison. Exterior doors on the PEC are either painted hollow metal with painted steel frames or FRP (fiberglass reinforced plastic) doors, with vision panels. Some rusting is observed on door frames which can be remedied with proper preparation and repainting.

Roof coverings on the flat roofs of the Main Building consist of a fully adhered rolled asphalt sheet system, painted silver. Flashing consists of the same type of membrane, secured to brick walls or aluminum coping and sealed with excessive amounts of caulking. Coping is less than 12" above the roof deck - there is no parapet. Roofs are accessed by ladders and since none were available their condition could not be fully inspected, however some of the lower roofs and connections to the masonry could be seen from grade. What could be seen from grade is old and in poor condition; flashing has been recaulked over and over and coping along the edges of the roof appear to have been repaired or partially replaced at times. Roof membranes that could be seen are painted silver but worn; some flashing was wrinkled. The entire roofing system appeared to be beyond its normal service life and appeared to be in poor and failing condition. There are no visible gutters or vertical leaders, but there is an internal system constructed at the edge of the low points of the eaves designed to collect and drain some roof surfaces into internal vertical drains to a storm system below grade. The roof views from "Bing Maps" more or less confirms this assumption of silver painted membranes and internal roof drains along the low edges of roof surfaces behind low, raised coping pieces. The physical appearance of this system could be inspected, however there were many locations within the building where water staining was visible on ceiling tiles or above windows, indicating the possibility of roof leaks. Wing D roof surfaces simply drained over the low edge to asphalt grade. This type of drainage could lead to creating icy areas in the parking lot. The Acting Building Engineer believed that the drainage between wings was poor and that the grassy areas between the wings has been settling. The PEC has a standing seam metal roof with external gutters and vertical leaders on the low sides of the eaves. Only one leader was detached from the gutter above and should be reattached; all others were connected, although their operation could not be tested.

Partitions in the mechanical areas, gymnasium, classrooms, offices, cafeteria, library, and other special rooms are constructed of painted concrete masonry units (block), or painted concrete (basement mechanical rooms) which are in fair condition, in need of repainting. Wing D has painted gypsum board and metal stud partitions and painted metal panel corridor walls, in poor condition. . The auditorium has painted vertically corrugated, sound attenuating metal panels and decorative wood paneling, in surprisingly good condition considering the condition of other materials in the building. Toilet rooms have painted block walls. All block has been repainted by maintenance or by teachers and is not in good condition. The PEC has painted block in classrooms, corridors, offices, multipurpose room (or limited use of gypsum board in some locations) and is in good condition.

Interior doors in the Main Building on stairways, classrooms, offices, and specialized rooms are mostly the original solid core oak veneer wood doors. Some have glass vision panels of varying sizes; some glass is wired glass and some of the original glass is not wired or tempered. Replacement doors have narrow lite vision panels with wired glass. Mechanical area interior doors are wood in hollow metal frames or steel. Most frames are rusting and many are beyond repair. Almost all wood doors are damaged and should be replaced. Classroom and office doors do not have lever locksets with updated security locking feature that allows for locking from inside the room. Each Wing is isolated from the spline and other Wings by a sliding wood horizontal fire door. These doors should be normally closed, unless they have automatically releasing door holders that allow the doors to close in case of a fire. These doors should be replaced with steel sliding fire doors with hold opens tied to the fire alarm system, releasing the doors in the case of a fire. Most exit hardware in stairways needs adjustment or replacement provide closing and latching. Doors in the PEC are stained solid core oak veneer with narrow lite vision panels, in need of minor repair. Hardware in the PEC complies with requirements for security hardware that can be used in a lockdown, lockable from the inside of the classroom.

Interior fittings/hardware include blackboards or whiteboards in all classrooms. Toilet room partitions are a mixture of newer solid plastic partitions and doors and plywood wall extensions and doors on old marble partitions. Toilet room accessories (toilet paper dispensers, soap, paper towel or dryers, grab bars, door latches) are located in all toilet rooms, however some were broken. Some toilet rooms have special grab bars mounted to toilets which provide some accessibility however wrist-blade faucets, drain pipe protection and other accessible toilet room accessories were absent. The library has plastic laminate book cases. A computer room was not seen. Classrooms in the PEC have built-in plastic laminate shelfing and storage units, whiteboards, and smartboards.

Stair construction consists of concrete treads, risers, and stringers with painted steel handrails and guards 36" high. Stairs have industrial balusters and do not have 42" guards, as required by today's building codes. Steel handrails and guards need to be replaced with updated handrails, guards, and balusters. Treads and platforms are exposed concrete that is in need of cleaning and

painting.

Wall finishes in Main Building corridors, offices, classrooms, and cafeteria consist of painted block. Many walls have areas of minor surface damage. Toilet rooms have plaster walls. The condition of the walls in the Main Building is poor and are in need of repainting. Walls in the PEC are also painted block but are in good condition.

Floor finishes in the Main Building consist of 9" x 9" VAT (vinyl asbestos tile) in most classrooms, offices, corridors, the auditorium, and the cafeteria. Where flooring had been damaged by water or cracks, it was replaced with 12"x12" VCT (vinyl composition tile). There are a number of cracks in existing VAT surfaces and most floors have ground in dirt under the wax coating. All VAT should be tested for asbestos then properly removed with new VCT reinstalled in its place. Floor finish in the auditorium and on the stage is VAT, which also needs to be tested then removed. The gymnasium floor is an oak parquet floor. Sections of this floor have buckled and delaminated due to a steam leak in the basement; parquet flooring needs to be replaced where damaged. The kitchen and cafeteria have VCT, which is in fair condition, having areas of cracked a broken tiles. The main building entrance lobby is VCT, also in fair condition. Toilet rooms in the Main Building are terrazzo which is dirty and in one location cracked and "sinking" in Room 9A, Wing C; the condition of the slab below needs to be investigated. Floors in the PEC are VCT in good condition requiring cleaning and waxing as per normal maintenance. Toilet rooms in the PEC are epoxy or urethane coated with an integral cove base on the walls.

Ceiling finishes in classrooms, corridors, library, cafeteria, and offices are 2x4 suspended acoustical tile ceiling system with recessed or surface mounted 2x4 fluorescent lighting fixtures throughout the building. Most 2x4 ceilings and lighting fixtures are in fair to poor condition, requiring replacement. The auditorium has a 2x4 suspended acoustical tile ceiling with surface mounted fluorescent fixtures. The Gymnasium and has an exposed concrete beam ceiling with a concrete roof deck above and suspended fluorescent lighting fixtures. Cracks in the concrete deck are evident and should be investigated as the structural integrity of the roof deck could be at risk.

Furnishings in the building include dark oak plywood veneer folding seating for almost 700 people in the auditorium. Seating finish and operation are in poor condition. Some broken seats were removed leaving gaps in the aisles. Other broken seats are labeled as "not useable". Seats need to be repaired and refinished. The cafeteria has a food preparation kitchen and food service counters. Folding tables are used for children's seating.

The front door and all other doors into the Main building are not fully ADA accessible, however a small ramped surface has been provided to allow easy wheelchair access up to two of the four pair of entrance doors; since the doors are only 30 inches wide, both need to be opened to allow passage of a wheelchair. The handicap parking is a long way from accessible entrances; a properly graded and paved accessible routes, with ADA accessible doors and hardware at the main entrance door should be provided. The PEC has accessible building entrances and handicap parking spaces. Exterior doors in the PEC are fiberglass reinforced plastic (FRP) in very good condition.

There is no elevator in the Main Building or the Primary Education Center, however since most classrooms and all special (auditorium, cafeteria, library) rooms are on the main floor, an elevator is not required.

An automatic sprinkler system is not provided in the Main Building, but is provided in the PEC.

Mechanical

Plumbing Fixtures – The building is equipped with wall hung urinals (flush valve type), a combination of floor mounted and wall hung water closets (flush valve type), and wall hung lavatories with wheel handle and single knob faucets. Many of the original plumbing fixtures remain in service, however, these fixtures have reached the end of their service life and should be replaced. New fixtures will provide lower water consumption and provide savings on water heating costs. The bathrooms were not equipped with floor drains. In the Primary Education Center the bathrooms are equipped with floor drains. The water closets, lavatories and urinals were installed in 2009 are ADA compliant and do not need to be replaced.

Drinking fountains in the corridors and at the restrooms are wall hung fountains. There is a combination of drinking fountains and electric integral water coolers. Drinking fountains are typically located at the bathroom groups. Most appear to be the original installed equipment. The replacement of all drinking fountains is recommended as the equipment is approximately 65 years old and beyond its service life. The drinking fountains in the Primary Education Center are high/low configuration and are ADA compliant, were installed in 2009 when the building was constructed and do not need to be replaced.

Wall hung service sinks are original and are available throughout the building for use by the janitorial staff. Service sinks are typically located in the vicinity of the bathroom groups. The sinks appear have exceeded their service life, and should be replaced. The Cafeteria's food prep/kitchen is equipped with one, three compartment stainless steel sink with 4" lever handle operated faucet. The

sanitary line penetrates the floor and no signs of grease interceptor was present. The kitchen is also equipped with a hand sink with 4" lever handles. The triple wash sink (with wheel handles) and hand sink (with lever handles) show signs of normal usage. Chemicals are injected manually into the sanitizing basin. The Primary Education Center fixtures were installed in 2009 when the building was constructed and do not need to be replaced.

Domestic Water Distribution – It appears that the 4" domestic water service piping is mostly soldered copper. Water service enters the building in the basement. No double check backflow preventer (RPZA – reduced pressure zone assembly) could be located. The water meter appears to be new. The distribution piping appears to be original and is at the end of its service life and is recommended to be inspected and repaired.

The previous domestic water generation system has been decommissioned with some components remaining which have been abandoned in place. There are two instantaneous natural gas fired tankless water heaters, Paloma Model PH24-M-DN, at this facility which are located in the boiler mechanical room. Each heater is rated for a maximum gas input of 178,500 btuh, minimum 37,700 btuh. The hot water system is not equipped with a recirculation pump. All water heaters appear to be in satisfactory condition and should not need replacement within the next 10 years. The Primary Education Center water service is splits within the boiler mechanical equipment room to serve the domestic waster system and the fire protection system. The domestic water system has a 4" meter installed and a double check backflow preventer (RPZA – reduced pressure zone assembly). The Primary Education Center plumbing fixtures are served by a natural gas fired vertical tank style, 150 gallon, 193 gallon/hour rate of recovery water heater equipped with a recirculating pump and expansion tank.

Sanitary Waste - The sanitary waste piping system in the original building is extra heavy cast iron with lead and oakum seals and appears to be the original piping installed in the building. It is therefore recommended to inspect this piping and repair or replace sections as needed. The sanitary system leaves the building by a self priming centrifugal ejector pump that removes waste from a sanitary pit located in the boiler mechanical equipment room. The Primary Education Center sanitary appears to leave the facility by gravity.

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. Other roofs shed water directly with no roof drainage system. The Primary Education Center roof drainage system consist of downspouts and gutters which discharge to a below ground stormwater management system.

Energy Supply - Duplex fuel oil supply pumps provide the required fuel to the boilers when operating on fuel oil. There is an underground fuel storage tank appears to be located in the paved area between two wings toward Princeton Avenue. The fuel pumps and controls are original vintage, are beyond their serviceable life and therefore should be replaced. Natural gas enters the building in the basement and is equipped with a gas booster system. The natural gas main is welded, black steel piping while the branches are threaded, black steel. The Primary Education Center is served with a 4" gas service, 3" meter and a gas booster system.

Heat Generating Systems – Low pressure steam is generated at 15 lbs/sq. in. or less by four 4,6505 MBH Weil McLain 94 series steam boilers with dual fuel burners. All boilers are equipped with Power Flame dual fuel burners, natural gas and number 2 fuel oil, model CR4-GO-30. The boilers appear to have been installed in the 1970's and are at the end of their service life and should be replaced, however the boiler trim assemblies appear to have been recently replaced. Each boiler is equipped draft control. Combustion air louvers serve the boiler room to provide combustion air for the boiler operation. 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 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. The Primary Education Center heating system consists of two Buderus Model GE515, Net IBR Rating 877 Mbtu/hr, cast iron hot water boilers. The hot water boilers are part of a four pipe system which serves the air handling units, fan coil units and unit ventilators. The burners are Power Flame Model LNIC2-GO-15, low NOx burners with natural gas or #2 fuel oil as a source of fuel. Presently, the burners are only using natural gas as a source of fuel. Each boiler is equipped with draft control on the flue. High and low combustion air outside air ventilation dampers provide fresh air into the boiler mechanical room when the boiler(s) are in operation. There are two heating water pumps, one operates as standby. The pumps characteristics are as follows: end suction, 3HP, 150GPM, 35 FT head, 1800RPM. The pumping system is constant volume.

Cooling Systems – The Primary Education Center is served by a Carrier 130 ton Air Cooled chiller with scroll compressors and R410A refrigerant. The chilled water system is part of a four pipe distribution system which serves air handlers, fan coil units and unit ventilators. There are two chilled water pumps, one operates as standby. The pumps characteristics are as follows: end suction, 5HP, 220GPM, 45 FT head, 1800RPM. The pumping system is constant volume.

Distribution Systems – The building steam distribution piping is black steel with welded fittings. The condensate piping is Schedule 80 black steel with threaded fittings. The piping has been in use beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes. The District should hire a qualified contractor to examine the

distribution piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. There are steam leaks in the boiler distribution line in the mechanical room which have heated and warped the parquet floor in the gymnasium in one location. The District should budget for replacing this piping over the next 5 years.

The boiler feed water is collected by a boiler feedwater pad mounted system and is treated with a combination of chemicals by a water treatment controller. The condensate receiver system returns the condensate from its receiver tank to the boiler feedwater tank which then pumps the water back to the boiler. The condensate return piping is black steel with threaded joints. The boiler feedwater assembly is equipped with four pumps and a pump control panel. It is recommended that the District conduct a steam trap survey to determine the quantity and condition of all steam taps. The boiler feed tank, pumps and associated components are nearing the end of their service life and should be replaced. The condensate return pumps and tanks show significant rust and corrosion, has surpassed its service life and should be replaced. It was reported by the engineering staff that the boiler make up solenoid had malfunctioned on occasions that required make up water to be added manually.

Fresh air is admitted into the building through the unit ventilators and by opening windows particularly for the gymnasium and cafeteria. 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 unit ventilators, fan coil units and air handling units are fitted with outside air connections to provide conditioned ventilation and supply air to the classrooms, cafetorium and office spaces.

The building uses unit ventilators with steam coils in the classrooms and electric convectors in the hallways, mounted 6'-0" above the finished floor level. At entryways into the school there are horizontally mounted unit ventilators with steam heating coils.

Bathrooms as well as some interior areas are served by cast iron manifold type steam radiators without guards or enclosures, these units should be replaced with finned tube convectors to protect students from exposure to the hot surfaces. The bathrooms in the Primary Education Center are equipped with exhaust fans, upblast style mounted is a sidewall configuration for ventilation.

The gymnasium is served by electric convectors. Ventilation is provided by opening windows. It is recommended to replace the electric convector heating system with a roof top mounted unit with an overhead supply air distribution system and return air ductwork and low return intake grilles which would be protected from damage.

The cafeteria is served by unit electric convectors. Ventilation is provided by opening windows. It is recommended to replace the electric convector heating system with a roof top mounted unit which could be provided with heating and cooling coils as well as ventilation to meet the outside air ventilation requirements for the cafeteria seating area. The kitchen is provided with heating and ventilation as well as a general exhaust 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. The Primary Education Center kitchen is equipped with a hood but no dedicated make up air system is present. The Primary Education Center cafetorium is served by an air handling unit with hydronic heating and cooling coils with a duct supply and return air system. The return diffusers are perforated style while the supply air diffusers are circular concentric.

The auditorium is served by finned tube steam convectors (concealed behind decorative openings) on the wall which has an exterior while the other wall is equipped with electric finned convection heaters. It is recommended to replace the electric convector and steam convector heating system with a roof top mounted unit with an overhead supply air distribution system and ducted return air system The roof top unit would be equipped with heating, cooling and ventilation requirements for the space.

Terminal & Package Units - The front office and principal's office have window air conditioning units but the remainder of the building does not have cooling systems. There are four roof mounted exhaust fans of which three serve the restrooms while one serves the general exhaust from the kitchen.

Controls & Instrumentation - The original pneumatic systems still provide basic control functions. Pneumatic room thermostats drive the unit ventilators, the damper actuators and control valves. There is one duplex air compressor which generates control air for the temperature control system which is located in the boiler room. A refrigerated air dryer serves the duplex air compressor. There is a pneumatic zone controller located in the boiler mechanical equipment room. The maintenance staff reports temperature control is generally a problem as the zone controllers to do not provide enough flexibility to control various areas in the facility. Potential problems with oil, moisture or dirt in the pneumatic copper tubing can be an additional source of problems of a system of this age. The small rubber gaskets and tubing connections at control devices can become brittle over time and fail to compound control problems. The pneumatic systems are beyond their service life and require too much attention from the maintenance staff. The original control valves, dampers and pneumatic actuators are over 65 years old and should be replaced. These controls should be converted to DDC. The Primary Education Center is equipped with a DDC Honeywell system with electric actuators (there is no compressed air system). The front end system is located in the engineer's office in the Primary Education Center. The MMI (man machine interface) consists of DDC software which the system can be monitored and commanded.

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 main 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 Primary Education Center is fully sprinklered with fully recessed concealed sprinkler heads in areas with drop ceiling acoustical tiles. The boiler mechanical room is covered by upright heads.

Electrical

The site electrical service for the main building is from medium voltage overhead lines on wooden poles along Princeton Ave. The incoming power from the utility is via a main pad mounted power transformer with 240/120VAC secondary located in the transformer room in the basement of the building (Boiler Room area). The transformer capacity is estimated at 300KVA; the primary side is of medium voltage is 2400VAC.

The service entrance to the main building consists of a disconnect switch and utility meter located in electrical room in the basement of the building (Boiler Room area). The main 600A distribution panel is also located in the electrical room. Service entrance including the switchboard has exceed its useful life and should be replaced.

Power distribution is achieved through lighting/receptacle panel boards throughout the main building. It appears that panel boards and branch circuit breakers have out-lived their useful lives and should be replaced. There is one 100KVA phase converter transformer for converting 240VAC to 120/208VAC, three phase for powering the boilers and kitchen equipment.

Electrical service and distribution system for the Primary Education Center (PEC) is by 800A, 208, 3PH, 4wire, distribution panel located in building electrical room. This distribution panel board, which feeds all of the loads in PEC, is fed from a pad mounted utility transformer located outside of the building close to the HVAC unit. The utility meter is located adjacent to the utility transformer. The distribution system of PEC is installed in 2008 and is in good condition.

In general there are not enough receptacles are installed in the class rooms and corridors of the main building. There is a mix of grounding type as well as non-grounding type receptacles. Recommendations indicate a minimum of two receptacles on each classroom wall; the current installation falls short of this recommendation. The computer room should have receptacles at three feet on center on each wall. Recommendations indicate the use of surge protective type receptacles for computers.

Receptacles in PEC Building are not tamper-resistant type. Electrical codes indicate that receptacles subject to child access be of either tamper proof or GFCI type.

Lighting in the main building classrooms and corridors is generally provided by 2x4, (4) lamp lay-in fluorescent fixtures or 1x4 surface mounted fixtures with outdated T12 lamps. Lighting fixtures in the corridors of wing C, E, and F have been upgraded to T8 type. Lighting levels in most spaces do not meet IES (Illuminating Engineering Society) standards. Lighting in the PEC classrooms and corridors are provided by 2x4 fluorescent lay in grid type with T8 lamps. Lighting throughout this building is controlled by wall switched and motion sensors and all are relatively in a good condition.

Fire Alarm System in the main building is old and does not meet current fire alarm codes and should be replaced. The PEC fire alarm system is meets today's fire alarm code standards and includes monitoring of fire by duct detectors and pull-stations at building egress points. There are sufficient numbers of horn/strobes installed throughout the PEC in classrooms, corridors, offices, and other areas of occupancy. No major deficiencies were observed.

Telephone and /LAN system in the main building and PEC are working properly. The LAN switches and PBX (private branch exchange) are installed in an air conditioned closed in main office of the main building.

Public address / Music systems are not provided in either building. The telephone system is used for public announcements.

Intercom and paging systems in both buildings are functional. The paging system consists of one way communication system from the office to each classroom. Two way communications are provided by wall mounted phones in classrooms and other areas.

Clock and Program system in the main building is not working properly. A wireless clock control system is provided in PEC and the

system is working properly.

Television System is not provided in either building.

Security Systems, access control, and video surveillance system is not provided in the main building. The PEC has an adequate security system with a sufficient number of cameras installed in critical areas. They are controlled by a Closed Circuit Television system (CCTV) which is working properly.

Emergency Power System is provided in the main building. A 30KW, 240/120V, 1PH, 3W diesel generator manufactured by Generac is installed in the Boiler Room in 1995. The emergency power distribution is accomplished with a transfer switch and an emergency distribution panel. Emergency lighting fixtures and all other critical loads are fed by this emergency panel. The emergency distribution system is in good condition and working properly. There is no emergency power system in the PEC.

UPS (uninterruptable Power System) is provided for the IT racks (LAN switches) in the main building.

Elevator is not provided in either building.

Emergency lighting, including exit lights are provided in both buildings. Corridors, library, and egress pathways in the main building are fed by the emergency distribution panel board. Emergency battery pack lighting fixtures are provided in PEC corridors and egress pathways.

Lightning protection is not required or provided for either building.

Grounding system is present in both buildings and is adequate.

Campus parking areas and building perimeters are adequately lighted for personnel safety and property security.

Theater lighting and dimming controls in main building are old and inadequate. Lights are turned on and off by circuit breakers which is dangerous and should be replaced with a local switching system.

Sound System in main building auditorium is old and should be replaced.

Grounds

Front, side and rear concrete walkways are overgrown with weeds, cracked, broken and in poor condition. All asphalt in all parking areas and roadways is riddled with cracks and potholes, exposing the gravel base in many locations. These surfaces are not only rough to drive on but are hazardous to walk on. Existing crumbling and weed-ridden concrete walks connecting parking lots, bus drop off areas, and front doors need to be removed and replaced with new concrete walks. These include proper ADA compliant handicap accessible routes, curb cuts, parking markings, and signage.

Cracks have formed and weeds are growing in all asphalt surfaces crossing lengthwise and widthwise in parking and playground areas. Front drop off bus parking areas have large potholes and areas without asphalt paving, creating safety hazards for vehicles and pedestrians. Grading in bus drop off and parking areas needs adjusting to allow water to drain into catch basins. A thorough inspection of the storm drain system is required to clean out debris and repaint any broken or disconnected underground pipes. It is thought that some of the yards are sinking and not draining properly; this could be caused by blocked or broken storm drain piping. The number of required parking spaces for school staff and faculty is unknown, however there seems to be adequate space for faculty and staff parking. These areas should be restriped with the number of the parking spaces required by zoning and needed by the school. The trash dumpster area has little pavement that is not broken. When this area is repaved, extra heavy concrete should be provided to improve durability in this area. There is chain link fence surrounding the property. Some sections are broken, rusted, leaning and require replacement. Gates that seal off the site are broken and non-functioning; they also need to be replaced.

RECOMMENDATIONS

Architectural

Main Building

- Clean and reseal/repaint concrete floor slab mechanical rooms and stair treads (6000sf)
- Repaint basement walls in area of mechanical equipment (3000sf)
- Repair cracked basement walls around louvers
- Replace all windows, failing throughout the building (400 ea)
- Repair cracked precast concrete window sills and heads (500ft)
- Repair/repoint masonry cracks in exterior walls and damaged masonry (500sf)
- Replace dented, damaged insulated metal panels on Wing D (4000sf)
- Replace steel lintels over univents (20 each, 64" long)
- Replace uninvent exterior louvers (45 each)
- Repair spalling/cracked edge of roof concrete (200ft)
- Remove and replace roof (79,000sf roofing)
- Remove and replace coping (5000lf)
- Remove and replace standing seam metal roof (8000sf)
- Replace old, broken wood interior doors with new solid core oak doors and steel frames (120) 3'x7'
- Replace all interior door hardware with lever handle hardware (120 sets)
- Provide security hardware for classrooms and offices locking from inside of room (60 each)
- Replace exterior doors and hardware (80) 3'x7'
- Replace stair handrails and guards with code compliant systems (100ft) and guards/balusters (50sf)
- Replace damaged and cracked VCT floors in cafeteria and other rooms (8000sf)
- Replace VAT after testing to confirm presence of asbestos (60,000sf)
- Repair damaged section of parquet gymnasium floor (1000sf)
- Investigate cause for sinking slab in areas of classroom 9A toilet room and repair area (100sf)
- Strip and polish bathroom terrazzo floors (5000sf)
- Replace all acoustical tile ceilings (73,000sf)
- Repaint approximately one-third of interior walls (100,000sf)
- Replace all toilet room partitions (approx. 40 toilet compartments; 25 urinals)
- Replace broken or missing toilet room accessories (approx. 12 sets)
- Repair scratched and damaged folding wood auditorium chairs (700 chairs)
- Replace sliding pocket fire doors with metal fire doors on magnetic hold-open (8 doors)

Primary Educational Center

- Provide security hardware for classrooms and offices locking from inside of room (16 each)
- Clean graffiti from clerestory panels and glass (50sf)
- Repaint rusted exterior door frames (8) 3'x7'

Mechanical

Main Building

- 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.
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the underground fuel oil storage tank (UST) underground located in the paved area between two wings toward Princeton Avenue.
- Add automatic sanitizing chemicals to the stainless steel sink in the cafeteria.
- Replace two instantaneous natural gas fired tankless water heaters.
- Inspect and replace the original as needed the domestic water piping in the building
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system.
- Hire a qualified contractor to examine the steam and condensate piping in service for 65 years and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years.

- Replace duplex fuel oil pumps.
- Replace four 4,650 MBH Weil McLain 94 series steam boilers with new dual fuel burners
- Replace the steam radiator units and any of the original radiant heating (manifold) terminals fashioned from welded piping still present in the building with finned tube elements to protect students from exposure to the hot surfaces.
- Replace the existing unit ventilators throughout the building with new units designed to provide adequate ventilation per ASHRAE Std. 62. The new units shall be equipped with hot water / chilled water coils and integral heat recovery wheels. Install steam converters in the existing boiler room with circulating pumps, distribution piping and controls to provide heating hot water for the new coils.
- Remove the window air conditioning units for the office/principal suite and install a 250 ton air-cooled chiller on the roof with chilled water distribution piping and pumps located in a mechanical room on the basement level to supply more reliable air conditioning for the building with a much longer service life. As part of the new installation, verify the reserve roof loading capacity to ensure it can carry the weight of the new chiller.
- Provide ventilation, heating and cooling for the gymnasium by installing a packaged roof top unit.
- Provide ventilation for the corridors first floor entryways (18 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. Remove and replace electric convection heaters.
- Provide ventilation, heating and cooling for the Cafeteria by removing the electric convection heaters and installing a package rooftop constant volume air handling unit with distribution ductwork and registers for supply and return air.
- Provide ventilation, heating and cooling for the Auditorium by removing the existing steam convectors and electric convection heaters and installing a package rooftop constant volume air handling unit with distribution ductwork and registers.
- Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency.
- Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.
- Remove existing steam boilers and steam distribution system. Install hot water boilers and hot water distribution system.

Mechanical

Primary Education Center

- Continue proper maintenance of mechanical equipment to ensure equipment performs/lasts throughout expected service life.
- Provide a dedicated make up air unit for the kitchen hood exhaust.

Electrical

Main Building

- Upgrade the existing electrical service with a new service. Replace the existing switchboard with new 2000A, 480/277, 3PH, 4 wire switchboards. Provide a 225KVA, 480VAC to 120/208VAC transformer for lighting/receptacles and kitchen loads.
- Upgrade existing distribution system by replacing new panel boards and new feeders. Provide arc flash label on all panel boards. Estimated total 16 panel boards.
- Install minimum of two receptacles on each wall in classrooms.
- Provide a surface mounted raceway with two-compartment unit (data and power) to be installed in the computer lab. Provide surge protective receptacles for computer use.
- Replace lighting fixtures with new fluorescent lighting fixtures with T-5 or compact fluorescent lamps. Estimated 85% of the lighting fixtures require replacement.
- Replace existing fire alarm system with a new automatic Fire Alarm System including control panel, initiated devices in corridors, air ducts, electrical and LAN rooms, library, and computer rooms. Provide notification devices in class rooms, offices, auditorium, corridors, other area recommended by codes.
- Replace existing master clock system with new wireless clock system.
- Provide a video surveillance system including camera and Closed Circuit Television (CCTV) system. Cameras should installed in the corridors, school entrance doors and on walls around the building.
- Replace existing back up power system with a new emergency power system including 100KW diesel generator and auto transfer switch.
- Provide new stage lighting and controller system in the auditorium.
- Provide new sound system in the auditorium 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 (8000sf)
- Repave asphalt parking and play surfaces; including re-striping(70,000sf)
- Repave drop off roadway and severly damaged parking; including re-striping (40,000sf)
- Replace damaged chain link fencing (200lf x 8ft tall)

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 2 / Tm 2
Status:	Accepted by SDP	Team:	Tm 2
Site ID:	S834001		

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	50.66 %	0.00 %	$0.00
A20 - Basement Construction	53.36 %	0.87 %	$22,907.96
B10 - Superstructure	48.80 %	0.00 %	$0.00
B20 - Exterior Enclosure	63.86 %	46.77 %	$2,928,341.86
B30 - Roofing	100.68 %	70.03 %	$3,130,369.20
C10 - Interior Construction	50.68 %	32.25 %	$899,023.38
C20 - Stairs	44.91 %	9.54 %	$15,217.02
C30 - Interior Finishes	78.79 %	43.11 %	$2,445,289.52
D10 - Conveying	0.00 %	0.00 %	$0.00
D20 - Plumbing	97.76 %	61.20 %	$1,742,548.79
D30 - HVAC	101.22 %	60.72 %	$7,789,165.65
D40 - Fire Protection	90.26 %	112.63 %	$1,072,908.49
D50 - Electrical	101.58 %	65.12 %	$4,414,568.89
E10 - Equipment	28.75 %	5.23 %	$96,089.13
E20 - Furnishings	27.79 %	43.08 %	$105,814.23
G20 - Site Improvements	55.18 %	24.06 %	$969,766.09
G40 - Site Electrical Utilities	36.67 %	0.00 %	$0.00
Totals:	**73.60 %**	**37.79 %**	**$25,632,010.21**

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)
B834001;Solis-Cohen	91,000	52.43	$7,411,024.47	$7,976,981.93	$1,583,761.20	$2,100,243.31	$5,581,923.04
B834002;Solis-Cohen PEC	24,325	0.06	$336.95	$7,973.22	$0.00	$0.00	$0.00
G834001;Grounds	439,900	16.31	$565,636.24	$137,460.36	$266,669.49	$0.00	$0.00
Total:		**37.79**	**$7,976,997.66**	**$8,122,415.51**	**$1,850,430.69**	**$2,100,243.31**	**$5,581,923.04**

Deficiencies By Priority

- 1 - Response Time (< 2 yr) - $7,976,997.66
- 2 - Response Time (2-3 yrs) - $8,122,415.51
- 3 - Response Time (3-4 yrs) - $1,850,430.69
- 4 - Response Time (4-5 yrs) - $2,100,243.31
- 5 - Response Time (> 5 yrs) - $5,581,923.04

Budget Estimate Total: $25,632,010.21

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):	91,000
Year Built:	1946
Last Renovation:	
Replacement Value:	$47,026,216
Repair Cost:	$24,653,933.95
Total FCI:	52.43 %
Total RSLI:	73.57 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B834001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S834001		

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	33.00 %	0.00 %	$0.00
A20 - Basement Construction	33.00 %	1.31 %	$22,907.96
B10 - Superstructure	33.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	57.93 %	57.00 %	$2,923,702.67
B30 - Roofing	109.54 %	99.88 %	$3,130,369.20
C10 - Interior Construction	40.69 %	40.09 %	$895,352.40
C20 - Stairs	33.00 %	11.86 %	$15,217.02
C30 - Interior Finishes	81.30 %	56.49 %	$2,445,289.52
D10 - Conveying	0.00 %	0.00 %	$0.00
D20 - Plumbing	106.34 %	93.78 %	$1,742,548.79
D30 - HVAC	107.77 %	76.95 %	$7,789,165.65
D40 - Fire Protection	92.47 %	146.28 %	$1,072,908.49
D50 - Electrical	110.11 %	82.53 %	$4,414,568.89
E10 - Equipment	14.29 %	6.63 %	$96,089.13
E20 - Furnishings	12.50 %	54.59 %	$105,814.23
Totals:	**73.57 %**	**52.43 %**	**$24,653,933.95**

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.	91,000	100	1948	2048		33.00 %	0.00 %	33			$1,674,400
A1030	Slab on Grade	$7.73	S.F.	91,000	100	1948	2048		33.00 %	0.00 %	33			$703,430
A2010	Basement Excavation	$6.55	S.F.	91,000	100	1948	2048		33.00 %	0.00 %	33			$596,050
A2020	Basement Walls	$12.70	S.F.	91,000	100	1948	2048		33.00 %	1.98 %	33		$22,907.96	$1,155,700
B1010	Floor Construction	$75.10	S.F.	91,000	100	1948	2048		33.00 %	0.00 %	33			$6,834,100
B1020	Roof Construction	$13.88	S.F.	91,000	100	1948	2048		33.00 %	0.00 %	33			$1,263,080
B2010	Exterior Walls	$36.91	S.F.	91,000	100	1948	2048		33.00 %	10.66 %	33		$357,990.44	$3,358,810
B2020	Exterior Windows	$18.01	S.F.	91,000	40	1948	1988	2057	105.00 %	117.03 %	42		$1,918,025.79	$1,638,910
B2030	Exterior Doors	$1.45	S.F.	91,000	25	1948	1973	2042	108.00 %	490.86 %	27		$647,686.44	$131,950
B3010105	Built-Up	$37.76	S.F.	71,392	20	1948	1968	2037	110.00 %	103.06 %	22		$2,778,364.62	$2,695,762
B3010120	Single Ply Membrane	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.	8,000	30	1960	1990	2047	106.67 %	81.15 %	32		$352,004.58	$433,760
B3010140	Shingle & Tile	$38.73	S.F.		25				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.06	S.F.	79,392	20	1948	1968	2037	110.00 %	0.00 %	22			$4,764
C1010	Partitions	$17.91	S.F.	91,000	100	1948	2048		33.00 %	6.55 %	33		$106,784.81	$1,629,810
C1020	Interior Doors	$3.51	S.F.	91,000	40	1948	1988	2057	105.00 %	204.45 %	42		$653,024.98	$319,410
C1030	Fittings	$3.12	S.F.	91,000	40	1948	1988	2020	12.50 %	47.74 %	5		$135,542.61	$283,920
C2010	Stair Construction	$1.41	S.F.	91,000	100	1948	2048		33.00 %	11.86 %	33		$15,217.02	$128,310

Site Assessment Report - B834001;Solis-Cohen

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.	91,000	10	1948	1958	2020	50.00 %	43.85 %	5		$527,080.44	$1,202,110
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.	1,000	10	1948	1958	2027	120.00 %	0.00 %	12			$7,300
C3020412	Terrazzo & Tile	$75.52	S.F.	5,000	50	1948	1998	2020	10.00 %	7.46 %	5		$28,160.49	$377,600
C3020413	Vinyl Flooring	$9.68	S.F.	74,000	20	1948	1968	2037	110.00 %	103.64 %	22		$742,389.03	$716,320
C3020414	Wood Flooring	$22.27	S.F.	5,000	25	1948	1973	2020	20.00 %	26.18 %	5		$29,152.07	$111,350
C3020415	Concrete Floor Finishes	$0.97	S.F.	6,000	50	1948	1998	2020	10.00 %	300.52 %	5		$17,490.08	$5,820
C3030	Ceiling Finishes	$20.97	S.F.	91,000	25	1948	1973	2042	108.00 %	57.70 %	27		$1,101,017.41	$1,908,270
D1010	Elevators and Lifts	$1.53	S.F.	91,000	35				0.00 %	0.00 %				$139,230
D2010	Plumbing Fixtures	$13.52	S.F.	91,000	35	1948	1983	2052	105.71 %	82.78 %	37		$1,018,468.88	$1,230,320
D2020	Domestic Water Distribution	$1.68	S.F.	91,000	25	1948	1973	2042	108.00 %	280.61 %	27		$428,999.06	$152,880
D2030	Sanitary Waste	$2.90	S.F.	91,000	25	1948	1973	2042	108.00 %	111.82 %	27		$295,080.85	$263,900
D2040	Rain Water Drainage	$2.32	S.F.	91,000	30	1948	1978	2047	106.67 %	0.00 %	32			$211,120
D3020	Heat Generating Systems	$18.67	S.F.	91,000	35	1948	1983	2052	105.71 %	125.19 %	37		$2,126,921.39	$1,698,970
D3030	Cooling Generating Systems	$24.48	S.F.	91,000	30	1948	1978	2047	106.67 %	54.07 %	32		$1,204,454.53	$2,227,680
D3040	Distribution Systems	$42.99	S.F.	91,000	25	1948	1973	2042	108.00 %	72.82 %	27		$2,848,882.88	$3,912,090
D3050	Terminal & Package Units	$11.60	S.F.	91,000	20	1948	1968	2037	110.00 %	0.00 %	22			$1,055,600
D3060	Controls & Instrumentation	$13.50	S.F.	91,000	20	1948	1968	2037	110.00 %	130.97 %	22		$1,608,906.85	$1,228,500
D4010	Sprinklers	$7.05	S.F.	91,000	35			2052	105.71 %	167.24 %	37		$1,072,908.49	$641,550
D4020	Standpipes	$1.01	S.F.	91,000	35				0.00 %	0.00 %				$91,910
D5010	Electrical Service/Distribution	$9.70	S.F.	91,000	30	1948	1978	2047	106.67 %	168.03 %	32		$1,483,203.27	$882,700
D5020	Lighting and Branch Wiring	$34.68	S.F.	91,000	20	1948	1968	2037	110.00 %	55.91 %	22		$1,764,359.48	$3,155,880
D5030	Communications and Security	$12.99	S.F.	91,000	15	1948	1963	2032	113.33 %	78.84 %	17		$931,903.94	$1,182,090
D5090	Other Electrical Systems	$1.41	S.F.	91,000	30	1948	1978	2047	106.67 %	183.23 %	32		$235,102.20	$128,310
E1020	Institutional Equipment	$4.82	S.F.	91,000	35	1948	1983	2020	14.29 %	21.91 %	5		$96,089.13	$438,620
E1090	Other Equipment	$11.10	S.F.	91,000	35	1948	1983	2020	14.29 %	0.00 %	5			$1,010,100
E2010	Fixed Furnishings	$2.13	S.F.	91,000	40	1948	1988	2020	12.50 %	54.59 %	5		$105,814.23	$193,830
								Total	**73.57 %**	**52.43 %**			**$24,653,933.95**	**$47,026,216**

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: C3010230 - Paint & Covering — This system contains no images

Note: painted block 100%

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

Note: Concrete – 6000
Wood (parquet) – 5000
VCT - 14000
VAT 60000
Carpet 1000
Terrazzo 5000

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

Note: acoustical tile 73000 (80%)
exposed (gym, mech, storage, stairs, toilets) 18000 (20%)

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

Note: 1-100KVA phase converter transformer

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:	**$24,653,934**	**$0**	**$0**	**$0**	**$0**	**$4,620,501**	**$0**	**$0**	**$0**	**$0**	**$0**	**$29,274,435**
*** 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	$22,908	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$22,908**
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	$357,990	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$357,990**
B2020 - Exterior Windows	$1,918,026	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,918,026**
B2030 - Exterior Doors	$647,686	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$647,686**
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	$2,778,365	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,778,365**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$352,005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$352,005**
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	$106,785	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$106,785**

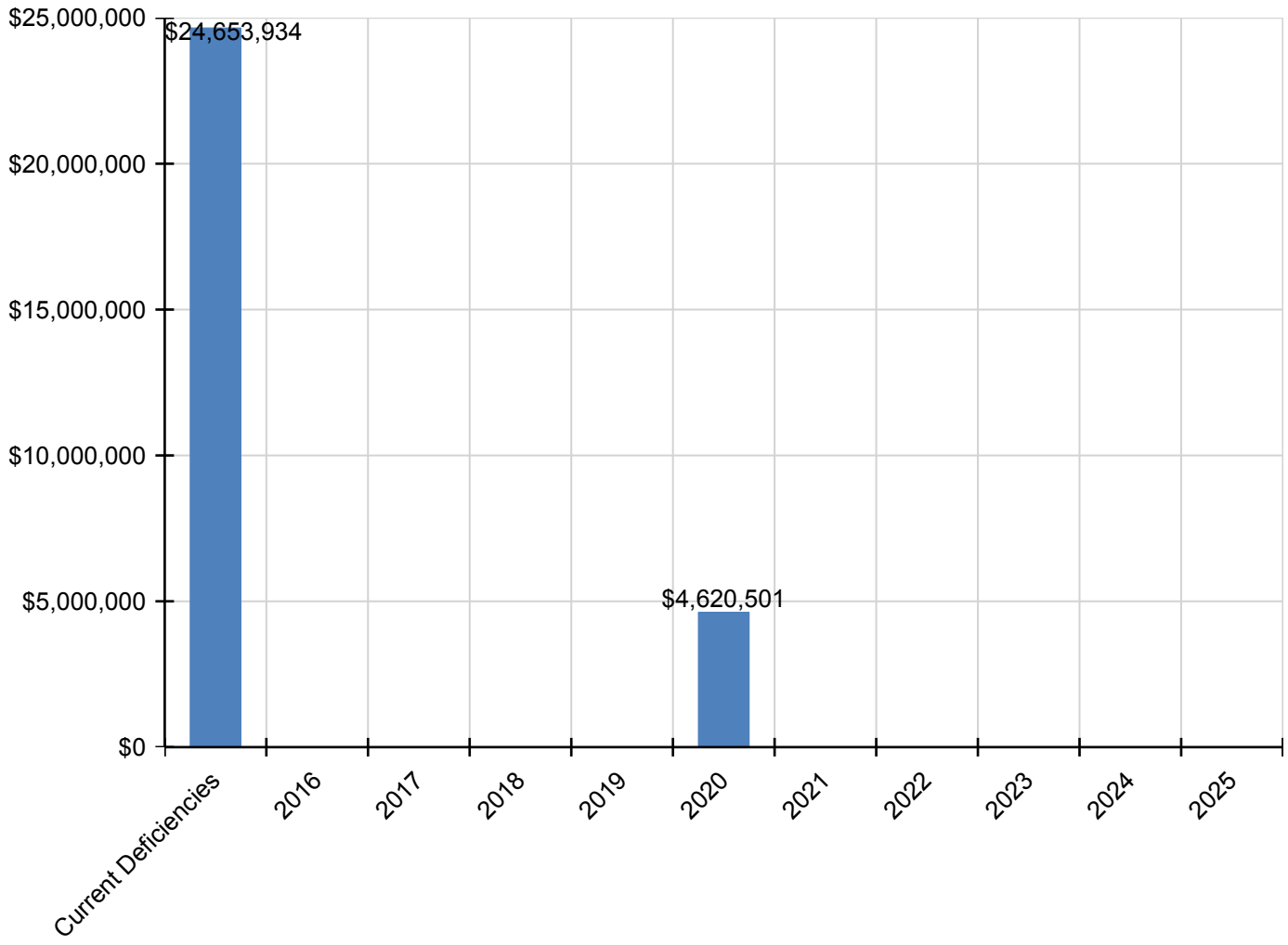
C1020 - Interior Doors	$653,025	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$653,025**
C1030 - Fittings	$135,543	$0	$0	$0	$0	$362,055	$0	$0	$0	$0	$0	**$497,598**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$15,217	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$15,217**
C30 - Interior Finishes	$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	$527,080	$0	$0	$0	$0	$1,532,932	$0	$0	$0	$0	$0	**$2,060,013**
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	$28,160	$0	$0	$0	$0	$481,516	$0	$0	$0	$0	$0	**$509,677**
C3020413 - Vinyl Flooring	$742,389	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$742,389**
C3020414 - Wood Flooring	$29,152	$0	$0	$0	$0	$141,994	$0	$0	$0	$0	$0	**$171,146**
C3020415 - Concrete Floor Finishes	$17,490	$0	$0	$0	$0	$7,422	$0	$0	$0	$0	$0	**$24,912**
C3030 - Ceiling Finishes	$1,101,017	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,101,017**
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	$1,018,469	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,018,469**
D2020 - Domestic Water Distribution	$428,999	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$428,999**
D2030 - Sanitary Waste	$295,081	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$295,081**
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	$2,126,921	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,126,921**
D3030 - Cooling Generating Systems	$1,204,455	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,204,455**
D3040 - Distribution Systems	$2,848,883	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,848,883**
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	$1,072,908	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,072,908**
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	$1,483,203	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,483,203**
D5020 - Lighting and Branch Wiring	$1,764,359	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,764,359**
D5030 - Communications and Security	$931,904	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$931,904**
D5090 - Other Electrical Systems	$235,102	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$235,102**
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	$96,089	$0	$0	$0	$0	$559,329	$0	$0	$0	$0	$0	**$655,418**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$1,288,081	$0	$0	$0	$0	$0	**$1,288,081**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$105,814	$0	$0	$0	$0	$247,172	$0	$0	$0	$0	$0	**$352,987**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

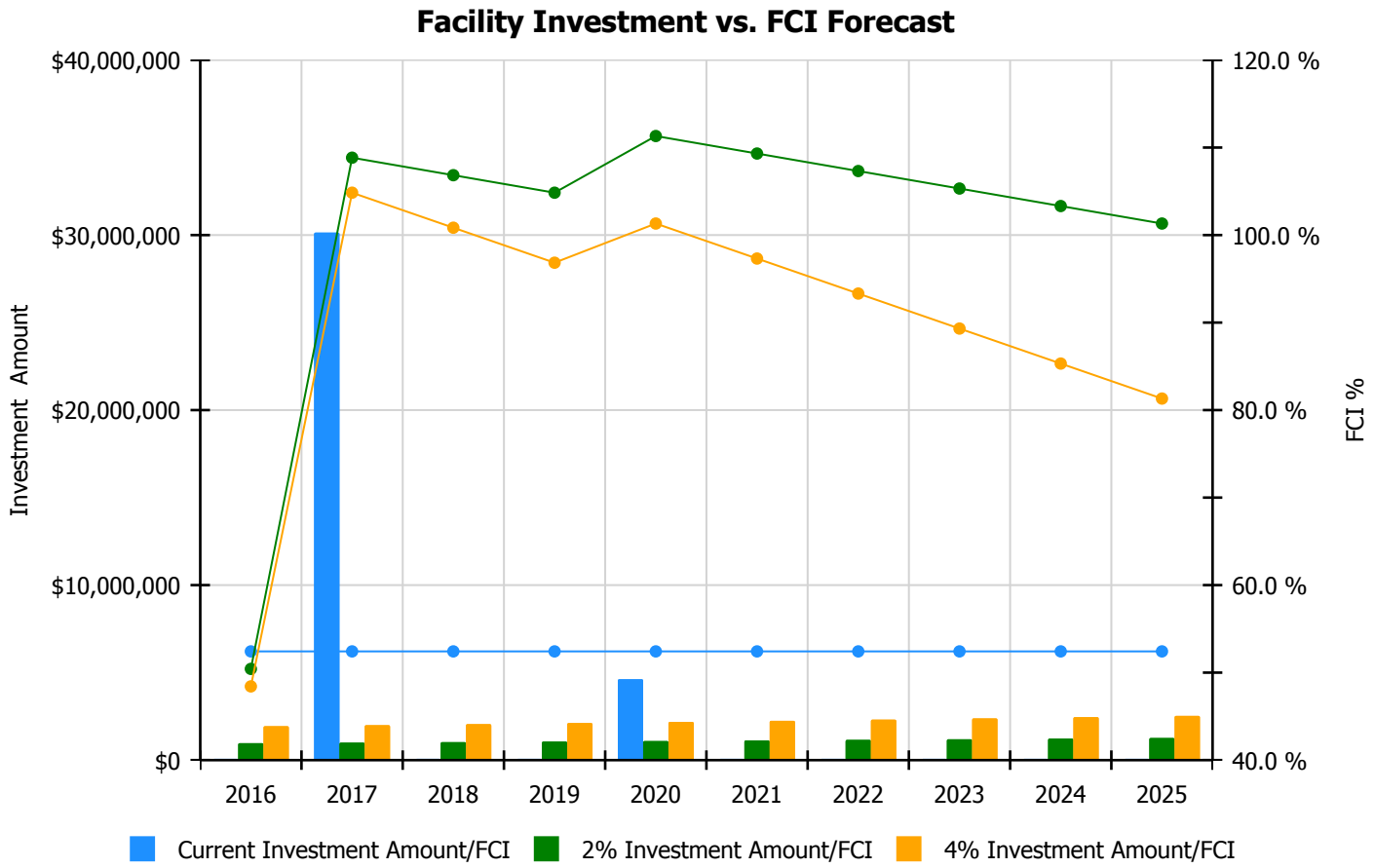
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

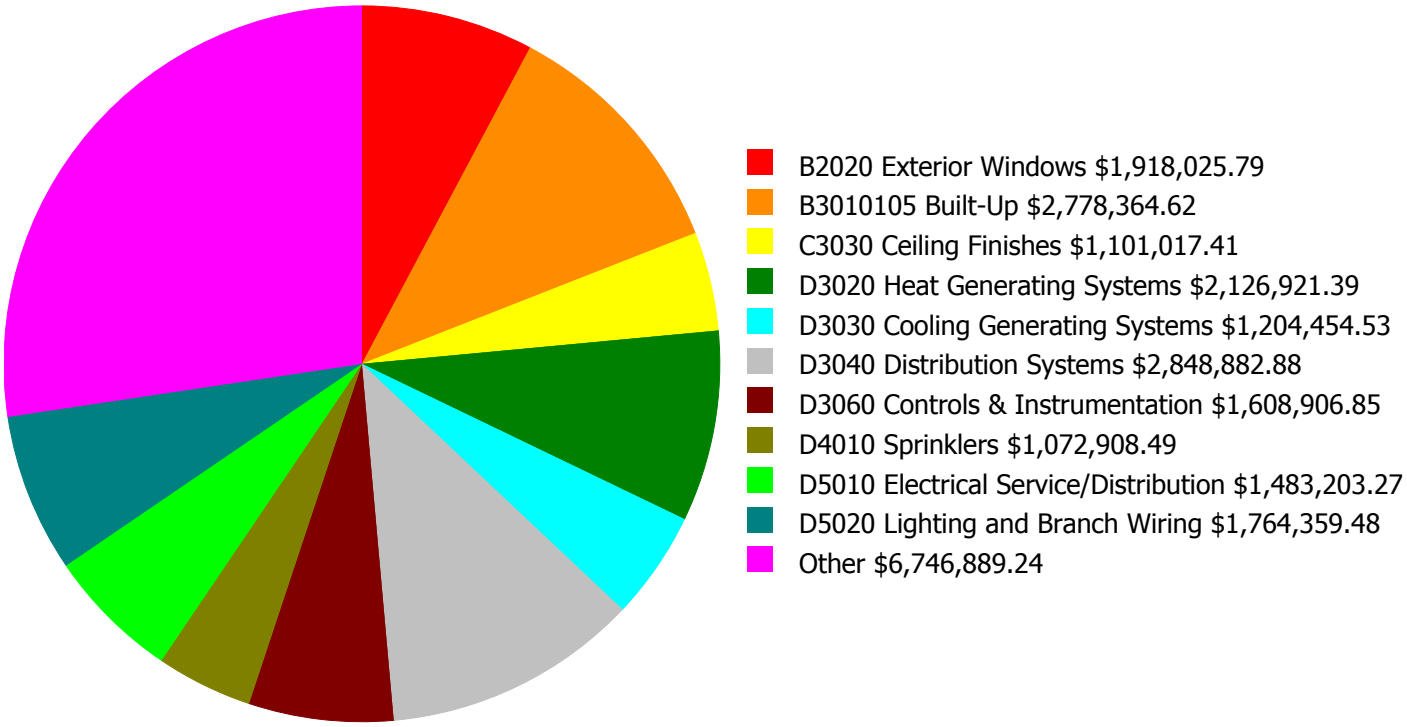
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 52.43%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$968,740.00	50.43 %	$1,937,480.00	48.43 %
2017	$30,141,059	$997,802.00	108.84 %	$1,995,605.00	104.84 %
2018	$0	$1,027,736.00	106.84 %	$2,055,473.00	100.84 %
2019	$0	$1,058,568.00	104.84 %	$2,117,137.00	96.84 %
2020	$4,620,501	$1,090,325.00	111.32 %	$2,180,651.00	101.32 %
2021	$0	$1,123,035.00	109.32 %	$2,246,070.00	97.32 %
2022	$0	$1,156,726.00	107.32 %	$2,313,453.00	93.32 %
2023	$0	$1,191,428.00	105.32 %	$2,382,856.00	89.32 %
2024	$0	$1,227,171.00	103.32 %	$2,454,342.00	85.32 %
2025	$0	$1,263,986.00	101.32 %	$2,527,972.00	81.32 %
Total:	**$34,761,560**	**$11,105,517.00**		**$22,211,039.00**	

Deficiency Summary by System

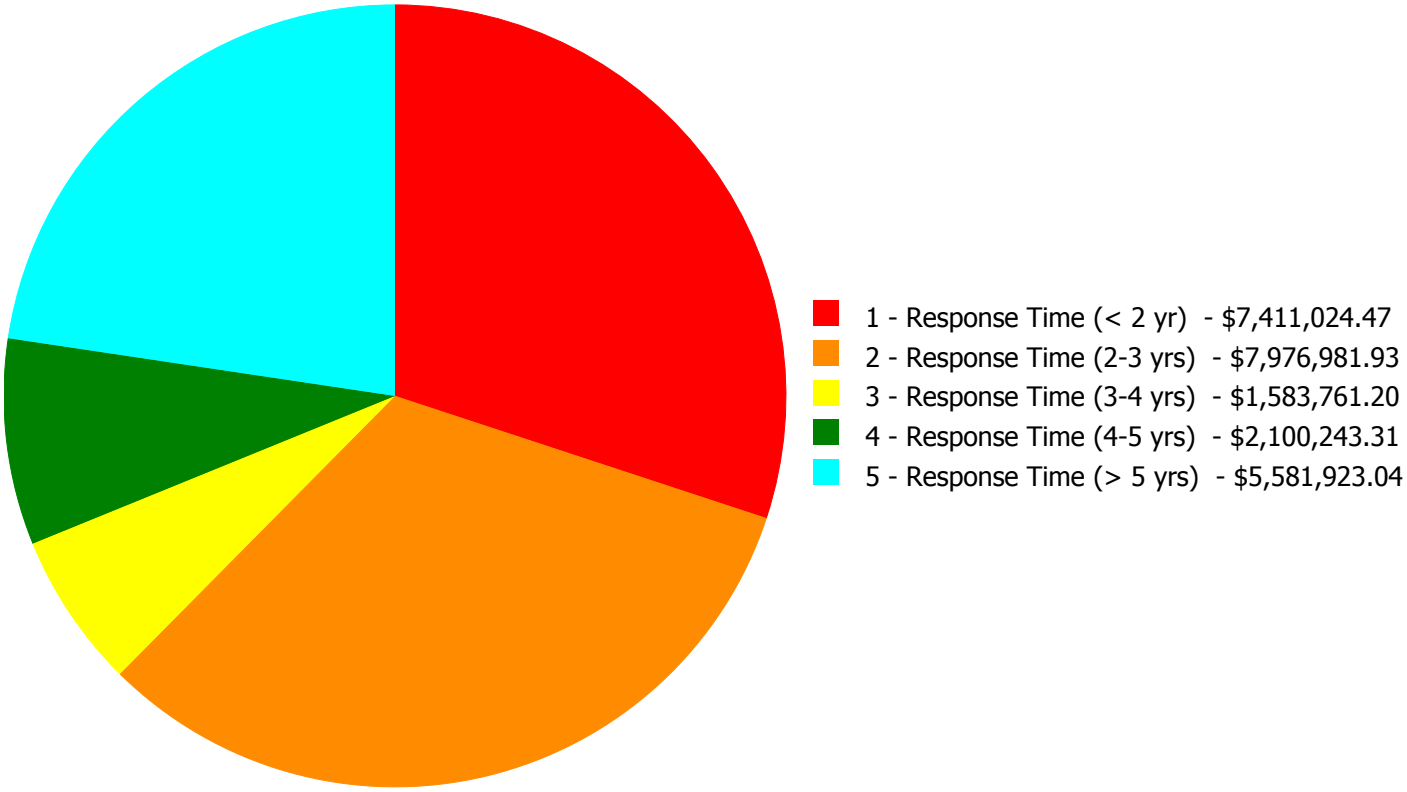
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $24,653,933.95

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: $24,653,933.95

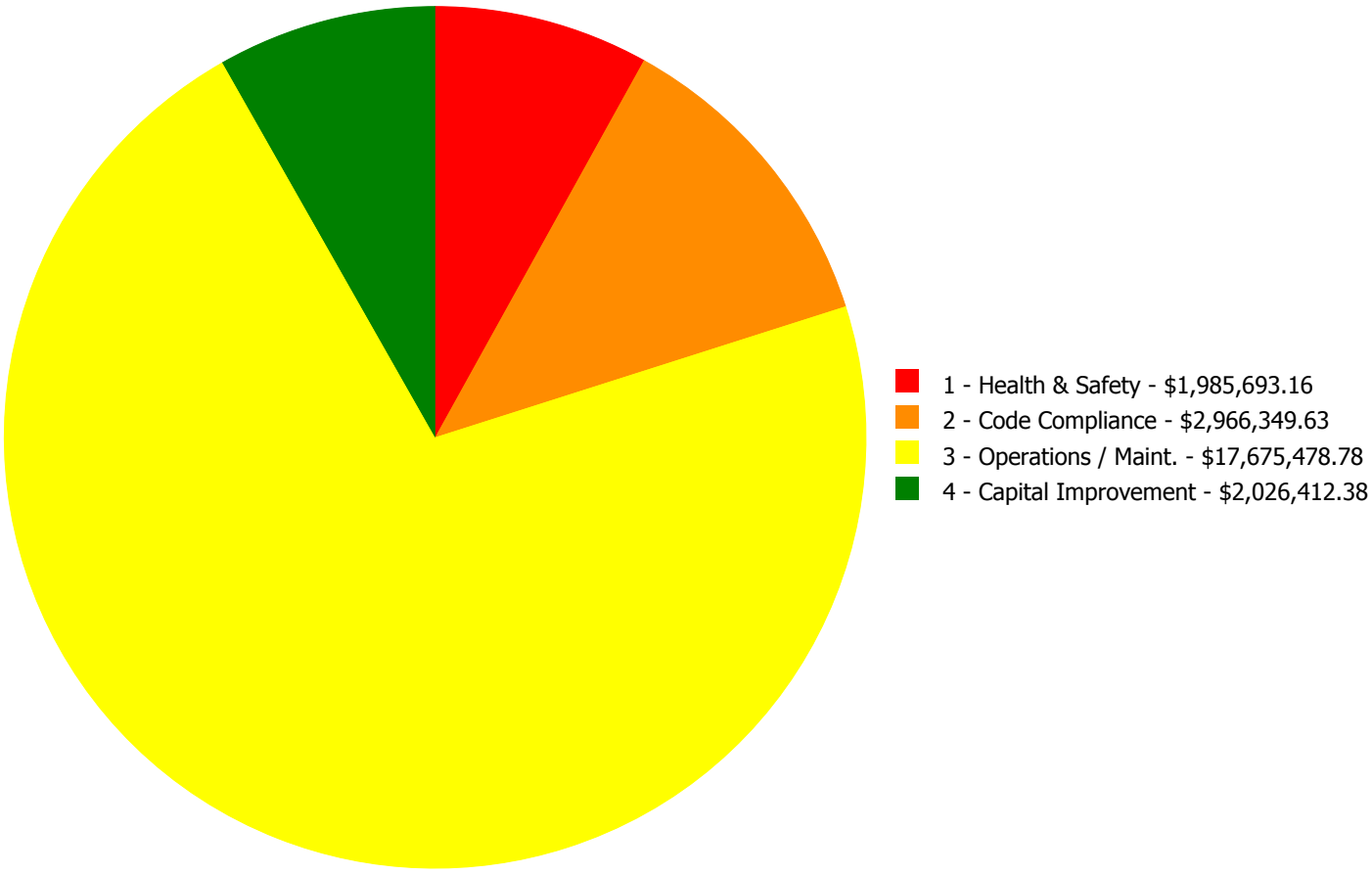
Deficiency By Priority Investment Table

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
A2020	Basement Walls	$0.00	$22,907.96	$0.00	$0.00	$0.00	$22,907.96
B2010	Exterior Walls	$0.00	$357,990.44	$0.00	$0.00	$0.00	$357,990.44
B2020	Exterior Windows	$0.00	$1,918,025.79	$0.00	$0.00	$0.00	$1,918,025.79
B2030	Exterior Doors	$0.00	$647,686.44	$0.00	$0.00	$0.00	$647,686.44
B3010105	Built-Up	$2,778,364.62	$0.00	$0.00	$0.00	$0.00	$2,778,364.62
B3010130	Preformed Metal Roofing	$0.00	$0.00	$352,004.58	$0.00	$0.00	$352,004.58
C1010	Partitions	$106,784.81	$0.00	$0.00	$0.00	$0.00	$106,784.81
C1020	Interior Doors	$0.00	$653,024.98	$0.00	$0.00	$0.00	$653,024.98
C1030	Fittings	$0.00	$135,542.61	$0.00	$0.00	$0.00	$135,542.61
C2010	Stair Construction	$15,217.02	$0.00	$0.00	$0.00	$0.00	$15,217.02
C3010230	Paint & Covering	$0.00	$527,080.44	$0.00	$0.00	$0.00	$527,080.44
C3020412	Terrazzo & Tile	$0.00	$28,160.49	$0.00	$0.00	$0.00	$28,160.49
C3020413	Vinyl Flooring	$0.00	$742,389.03	$0.00	$0.00	$0.00	$742,389.03
C3020414	Wood Flooring	$0.00	$29,152.07	$0.00	$0.00	$0.00	$29,152.07
C3020415	Concrete Floor Finishes	$0.00	$17,490.08	$0.00	$0.00	$0.00	$17,490.08
C3030	Ceiling Finishes	$0.00	$1,101,017.41	$0.00	$0.00	$0.00	$1,101,017.41
D2010	Plumbing Fixtures	$0.00	$81,793.11	$936,675.77	$0.00	$0.00	$1,018,468.88
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$0.00	$428,999.06	$428,999.06
D2030	Sanitary Waste	$0.00	$0.00	$295,080.85	$0.00	$0.00	$295,080.85
D3020	Heat Generating Systems	$0.00	$0.00	$0.00	$2,100,243.31	$26,678.08	$2,126,921.39
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,204,454.53	$1,204,454.53
D3040	Distribution Systems	$0.00	$0.00	$0.00	$0.00	$2,848,882.88	$2,848,882.88
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	$1,072,908.49	$1,072,908.49
D5010	Electrical Service/Distribution	$1,483,203.27	$0.00	$0.00	$0.00	$0.00	$1,483,203.27
D5020	Lighting and Branch Wiring	$1,764,359.48	$0.00	$0.00	$0.00	$0.00	$1,764,359.48
D5030	Communications and Security	$931,903.94	$0.00	$0.00	$0.00	$0.00	$931,903.94
D5090	Other Electrical Systems	$235,102.20	$0.00	$0.00	$0.00	$0.00	$235,102.20
E1020	Institutional Equipment	$96,089.13	$0.00	$0.00	$0.00	$0.00	$96,089.13
E2010	Fixed Furnishings	$0.00	$105,814.23	$0.00	$0.00	$0.00	$105,814.23
	Total:	$7,411,024.47	$7,976,981.93	$1,583,761.20	$2,100,243.31	$5,581,923.04	$24,653,933.95

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: $24,653,933.95

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: 79,000.00
Unit of Measure: S.F.
Estimate: $2,671,527.91
Assessor Name: System
Date Created: 09/15/2015

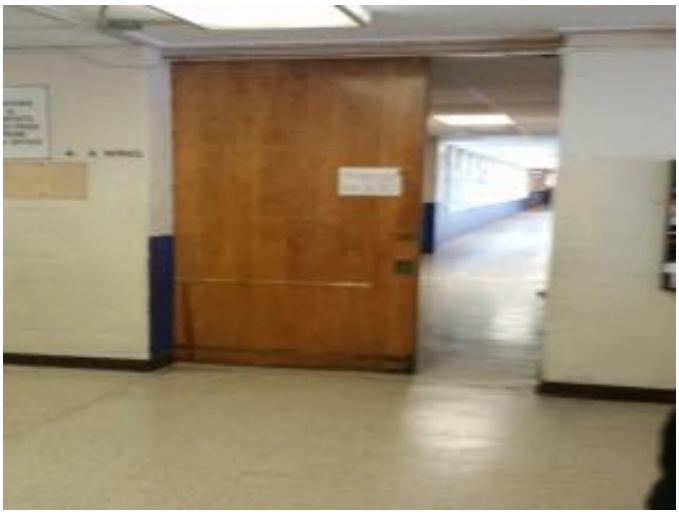
Notes: Remove and replace roof (79,000sf)

System: B3010105 - Built-Up

Location: edges of all built-up roofs
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Replace stripping (gravel stop) at the edge of roof
Qty: 5,000.00
Unit of Measure: L.F.
Estimate: $106,836.71
Assessor Name: System
Date Created: 09/15/2015

Notes: Remove and replace coping (5000lf)

System: C1010 - Partitions



Location: fire doors at beginning of each corridor

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

Correction: Install fire rated walls and door where required - insert number of doors

Qty: 1,000.00

Unit of Measure: S.F.

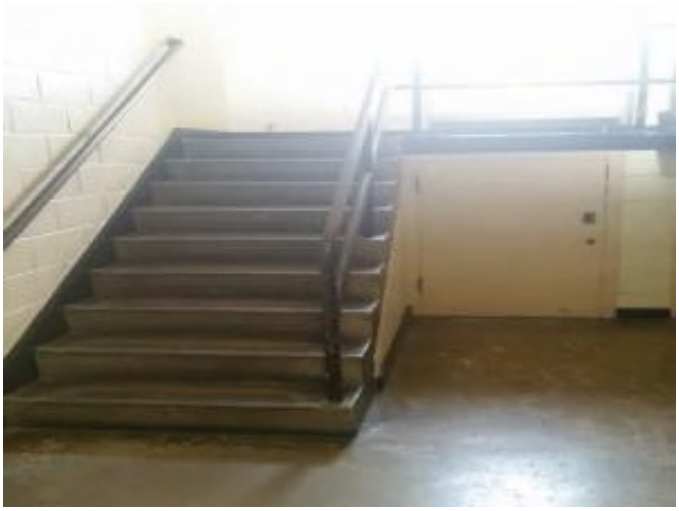
Estimate: $106,784.81

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace sliding pocket fire doors with pair of metal fire doors on magnetic hold-open (8 doors)

System: C2010 - Stair Construction



Location: interior stairways

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

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

Qty: 100.00

Unit of Measure: L.F.

Estimate: $15,217.02

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace stair handrails and guards with code compliant systems (100ft) and guards/balusters (50sf)

System: D5010 - Electrical Service/Distribution

Location: Basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add Electrical Switchgear and Distribution System

Qty: 0.00

Unit of Measure: Ea.

Estimate: $1,029,400.43

Assessor Name: System

Date Created: 08/23/2015

Notes: Upgrade the existing electrical service with a new service. Replace the existing switchboard with new 2000A, 480/277, 3PH, 4 wire switchboards. Provide a 225KVA, 480VAC to 120/208VAC transformer for lighting/receptacles and kitchen loads.

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: $453,802.84

Assessor Name: System

Date Created: 09/08/2015

Notes: Upgrade existing distribution system by replacing new panel boards and new feeders. Provide arc flush label on all panel boards. Estimated total 16 panel boards.

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: $1,300,761.38

Assessor Name: System

Date Created: 09/08/2015

Notes: Replace lighting fixtures with new fluorescent lighting fixtures with T-5 or compact fluorescent lamp. Estimated 85% of the lighting fixtures.

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: $463,598.10

Assessor Name: System

Date Created: 09/08/2015

Notes: Install minimum two receptacles on each wall in class rooms. It is recommended that a surface mounted raceway with two-compartment, for data and power, be installed in the computer lab room. Provide surge protective receptacle for computers.

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: $416,863.62

Assessor Name: System

Date Created: 09/08/2015

Notes: Replace existing fire alarm system with a new automatic Fire Alarm System including control panel, initiated devices in corridors, air ducts, electrical and LAN rooms, library, and computer rooms. Provide notification devices in class rooms, offices, auditorium, corridors, other area recommended by codes.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Video Surveillance System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $252,769.70

Assessor Name: System

Date Created: 09/08/2015

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

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: $216,559.96
Assessor Name: System
Date Created: 09/08/2015

Notes: Replace existing master clock system with new wireless clock system.

System: D5030 - Communications and Security

Location: Auditorium
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 1 - Response Time (< 2 yr)
Correction: Add/Replace Sound System
Qty: 1.00
Unit of Measure: LS
Estimate: $45,710.66
Assessor Name: System
Date Created: 09/08/2015

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.

System: D5090 - Other Electrical Systems

Location: Boiler Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add Standby Generator System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $235,102.20

Assessor Name: System

Date Created: 09/08/2015

Notes: Replace existing pack up power system with a new emergency power system including 100KW diesel generator.

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: $96,089.13

Assessor Name: System

Date Created: 09/08/2015

Notes: Provide new stage lighting and controller in Auditorium.

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

System: A2020 - Basement Walls

Location: basement

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair concrete wall in poor condition including rebar dowelling - insert the SF of wall area

Qty: 100.00

Unit of Measure: S.F.

Estimate: $22,907.96

Assessor Name: System

Date Created: 09/15/2015

Notes: Repair cracked basement walls around louvers

System: B2010 - Exterior Walls

Location: Wing D

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace insulated metal exterior wall panels

Qty: 4,000.00

Unit of Measure: S.F.

Estimate: $151,568.50

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace dented, damaged insulated metal panels on Wing D (4000sf)

System: B2010 - Exterior Walls

Location: concrete roof deck

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair spalled concrete wall structure

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $56,716.21

Assessor Name: System

Date Created: 09/15/2015

Notes: Repair spalling/cracked edge of roof concrete and roof deck (1000sf)

System: B2010 - Exterior Walls

Location: exterior walls

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior wall louvers - pick the closest size and insert the number of louvers

Qty: 45.00

Unit of Measure: Ea.

Estimate: $52,620.13

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace uninvent exterior louvers (45 each)

System: B2010 - Exterior Walls

Location: exterior walls at univents

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replacing failing steel lintels in brick wall construction

Qty: 110.00

Unit of Measure: L.F.

Estimate: $52,582.75

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace steel lintels over univents (45 each, 64” long)

System: B2010 - Exterior Walls

Location: exterior window sills and heads

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair spalled concrete wall structure

Qty: 500.00

Unit of Measure: S.F.

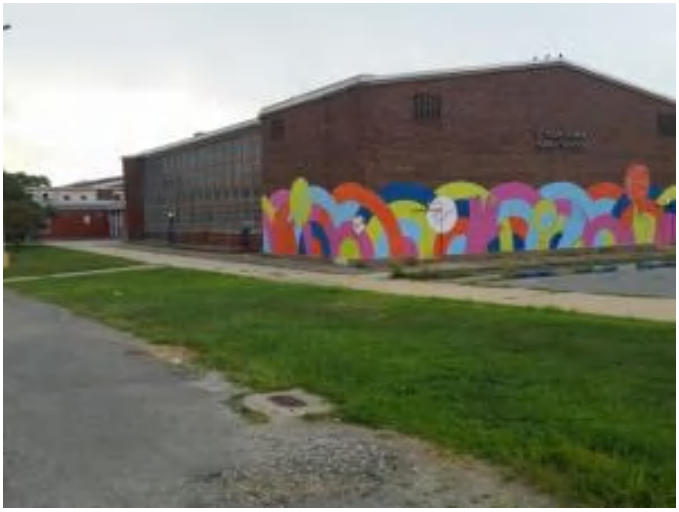
Estimate: $28,358.11

Assessor Name: System

Date Created: 09/15/2015

Notes: Repair cracked precast concrete window sills and heads (500ft)

System: B2010 - Exterior Walls



Location: exterior 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: System

Date Created: 09/15/2015

Notes: Repair/repoint masonry cracks in exterior walls and damaged masonry (500sf)

System: B2020 - Exterior Windows

Location: all exterior walls

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: 400.00

Unit of Measure: Ea.

Estimate: $1,918,025.79

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace all windows, failing throughout the building (400 ea)

System: B2030 - Exterior Doors

Location: all exterior doors

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 80.00

Unit of Measure: Ea.

Estimate: $647,686.44

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace exterior doors and hardware (80) 3'x7'

System: C1020 - Interior Doors

Location: interior doors

Distress: Damaged

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: 120.00

Unit of Measure: Ea.

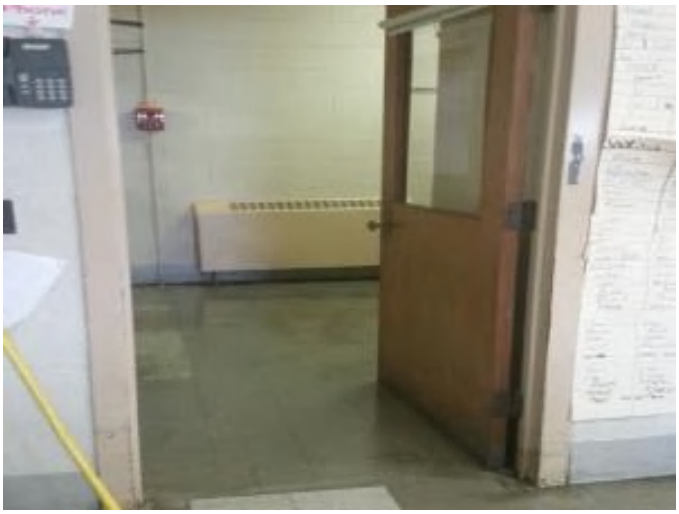
Estimate: $572,470.45

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace old, broken wood interior doors with new solid core oak doors and steel frames (120) 3'x7'

System: C1020 - Interior Doors



Location: all 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.

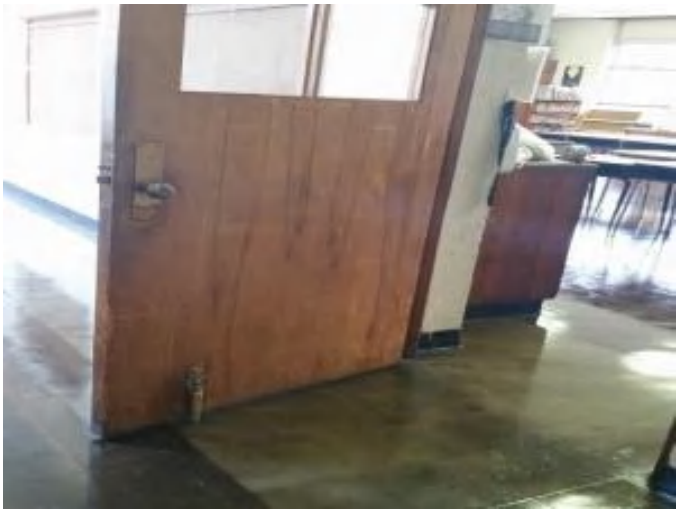
Estimate: $66,788.34

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace all interior door hardware with lever handle hardware (120 sets)

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: System

Date Created: 09/15/2015

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

System: C1030 - Fittings

Location: toilet rooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace toilet partitions

Qty: 40.00

Unit of Measure: Ea.

Estimate: $102,656.19

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace all toilet room partitions (approx. 40 toilet compartments; 25 urinals)

System: C1030 - Fittings

Location: toilet rooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace toilet accessories - select accessories and quantity

Qty: 12.00

Unit of Measure: Ea.

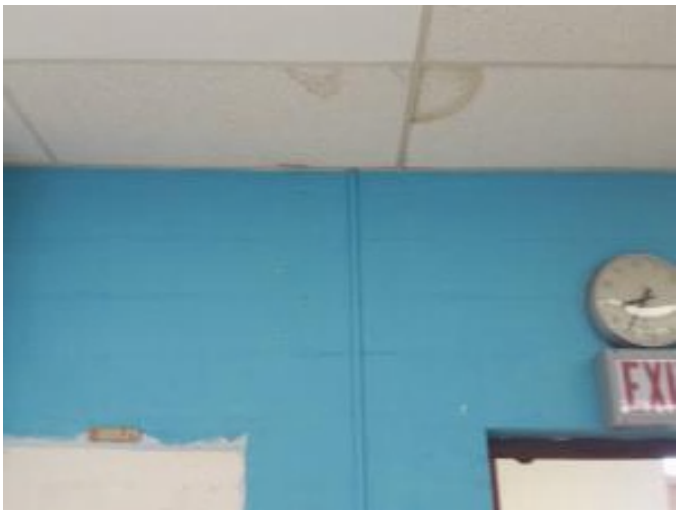
Estimate: $32,886.42

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace broken or missing toilet room accessories (approx. 12 sets)

System: C3010230 - Paint & Covering



Location: interior walls

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 100,000.00

Unit of Measure: S.F.

Estimate: $510,848.70

Assessor Name: System

Date Created: 09/15/2015

Notes: Repaint approximately one-third of interior walls (100,000sf)

System: C3010230 - Paint & Covering

Location: mechanical areas

Distress: Failing

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: $16,231.74

Assessor Name: System

Date Created: 09/15/2015

Notes: Repaint basement walls in area of mechanical equipment (3000sf)

System: C3020412 - Terrazzo & Tile

Location: toilet rooms

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Refinish terrazzo or tile flooring

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $16,169.78

Assessor Name: System

Date Created: 09/15/2015

Notes: Strip and polish bathroom terrazzo floors (5000sf)

System: C3020412 - Terrazzo & Tile

Location: Room 9A toilet room

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace terazzo or tile flooring - pick the appropriate material

Qty: 100.00

Unit of Measure: S.F.

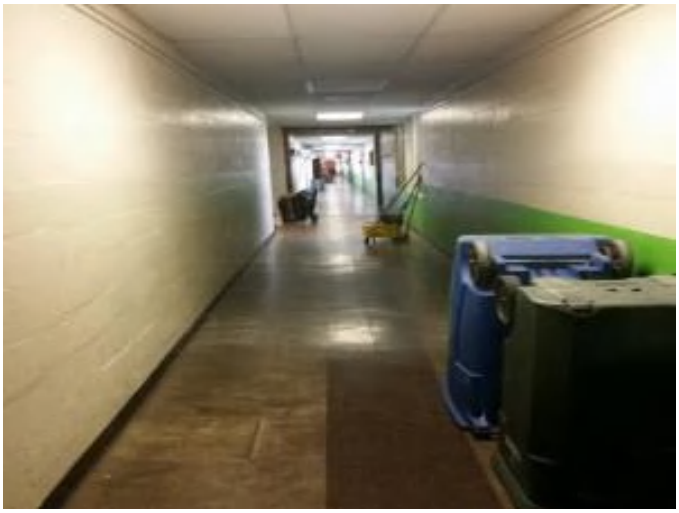
Estimate: $11,990.71

Assessor Name: System

Date Created: 09/15/2015

Notes: Investigate cause for sinking slab in areas of classroom 9A toilet room and repair area (100sf)

System: C3020413 - Vinyl Flooring



Location: floors

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: 60,000.00

Unit of Measure: S.F.

Estimate: $646,248.78

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace VAT after testing to confirm presence of asbestos (60,000sf)

System: C3020413 - Vinyl Flooring

Location: cafeteria and other rooms

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Remove and replace VCT

Qty: 8,000.00

Unit of Measure: S.F.

Estimate: $96,140.25

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace damaged and cracked VCT floors in cafeteria and other rooms (8000sf)

System: C3020414 - Wood Flooring

Location: gymnasium

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace wood flooring

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $29,152.07

Assessor Name: System

Date Created: 09/15/2015

Notes: Repair damaged section of parquet gymnasium floor (1000sf)

System: C3020415 - Concrete Floor Finishes

Location: mechanical areas and stairs

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Clean and reseal concrete floors

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $17,490.08

Assessor Name: System

Date Created: 09/15/2015

Notes: Clean and reseal/repaint concrete floor slab mechanical rooms and stair treads (6000sf)

System: C3030 - Ceiling Finishes

Location: all suspended 2x4 clgs

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 73,000.00

Unit of Measure: S.F.

Estimate: $1,101,017.41

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace all acoustical tile ceilings (73,000sf)

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 12.00

Unit of Measure: Ea.

Estimate: $81,793.11

Assessor Name: System

Date Created: 09/18/2015

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

System: D3060 - Controls & Instrumentation

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 75,000.00

Unit of Measure: S.F.

Estimate: $1,608,906.85

Assessor Name: System

Date Created: 09/21/2015

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

System: E2010 - Fixed Furnishings

Location: auditorium

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 700.00

Unit of Measure: Ea.

Estimate: $105,814.23

Assessor Name: System

Date Created: 09/15/2015

Notes: Repair scratched and damaged folding wood auditorium chairs (700 chairs)

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

System: B3010130 - Preformed Metal Roofing

Location: Wing D

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace standing seam metal roofing

Qty: 8,000.00

Unit of Measure: S.F.

Estimate: $352,004.58

Assessor Name: System

Date Created: 09/15/2015

Notes: Remove and replace standing seam metal roof (8000sf)

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 64.00

Unit of Measure: Ea.

Estimate: $477,577.46

Assessor Name: System

Date Created: 09/18/2015

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: 3 - Response Time (3-4 yrs)

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

Qty: 36.00

Unit of Measure: Ea.

Estimate: $167,520.55

Assessor Name: System

Date Created: 09/18/2015

Notes: Replace all lavatories 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: 3 - Response Time (3-4 yrs)

Correction: Remove and replace or replace wall hung urinals

Qty: 24.00

Unit of Measure: Ea.

Estimate: $166,034.58

Assessor Name: System

Date Created: 09/18/2015

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: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 8.00

Unit of Measure: Ea.

Estimate: $125,543.18

Assessor Name: System

Date Created: 09/18/2015

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

System: 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: 60,150.00

Unit of Measure: S.F.

Estimate: $295,080.85

Assessor Name: System

Date Created: 09/18/2015

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.

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

System: D3020 - Heat Generating Systems

Location: Boiler Mechanical Equipment Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace boiler, cast iron sectional (150 HP)

Qty: 4.00

Unit of Measure: Ea.

Estimate: $2,100,243.31

Assessor Name: System

Date Created: 09/18/2015

Notes: Replace four 4,650 MBH Weil McLain 94 series steam boilers with dual fuel burners estimated to have been in service since the 1970s.

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: System
Date Created: 09/18/2015

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

System: D2020 - Domestic Water Distribution

Location: Boiler Mechanical Equipment Room
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Replace instantaneous water heater
Qty: 2.00
Unit of Measure: Ea.
Estimate: $48,947.09
Assessor Name: System
Date Created: 09/18/2015

Notes: Replace two instantaneous natural gas fired tankless water heaters.

System: D3020 - Heat Generating Systems

Location: Boiler Mechanical Equipment Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace fuel oil pumps

Qty: 1.00

Unit of Measure: Ea.

Estimate: $26,678.08

Assessor Name: System

Date Created: 09/18/2015

Notes: Replace duplex fuel oil pumps.

System: D3030 - Cooling Generating Systems

This deficiency has no image.

Location: Throughout the building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Install chilled water system with distribution piping and pumps. (+75KSF)

Qty: 75,000.00

Unit of Measure: S.F.

Estimate: $1,204,454.53

Assessor Name: System

Date Created: 09/18/2015

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

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 20.00

Unit of Measure: C

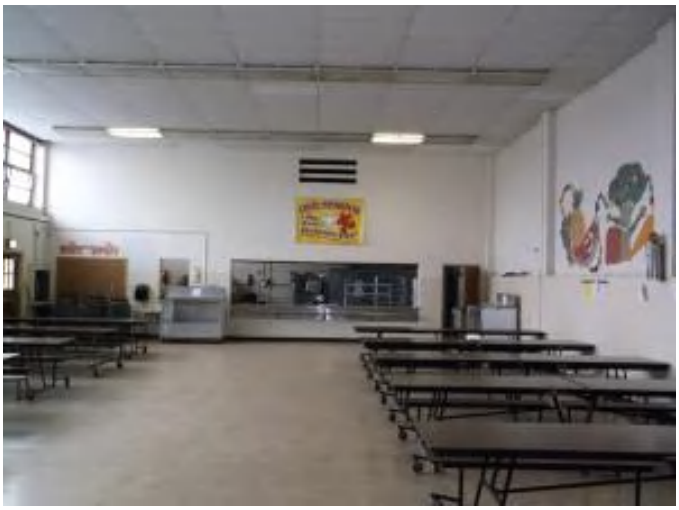
Estimate: $1,661,219.77

Assessor Name: System

Date Created: 09/18/2015

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.

System: D3040 - Distribution Systems



Location: Cafeteria

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 850.00

Unit of Measure: Pr.

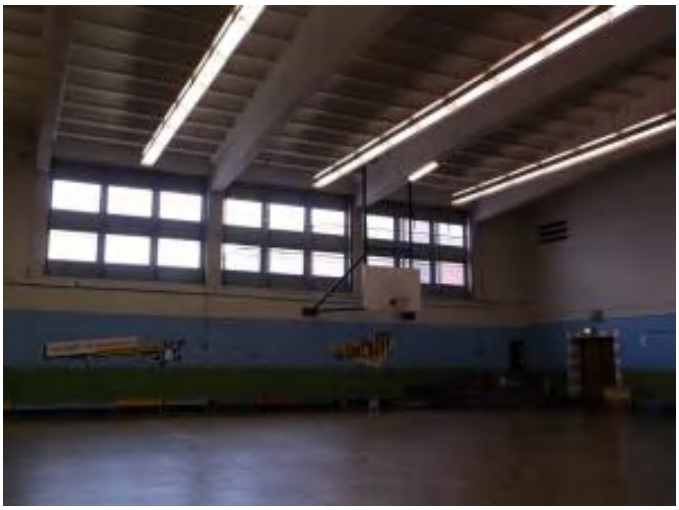
Estimate: $397,410.06

Assessor Name: System

Date Created: 09/21/2015

Notes: Provide ventilation, heating and cooling for the Cafeteria by removing the electric convection heaters and installing a package rooftop constant volume air handling unit with distribution ductwork and registers for supply and return air.

System: D3040 - Distribution Systems



Location: Gymnasium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $308,301.04

Assessor Name: System

Date Created: 09/21/2015

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

System: D3040 - Distribution Systems

Location: Auditorium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 200.00

Unit of Measure: Seat

Estimate: $285,085.41

Assessor Name: System

Date Created: 09/21/2015

Notes: Provide ventilation, heating and cooling for the Auditorium by removing the existing steam convectors and electric convection heaters and installing a package rooftop constant volume air handling unit with distribution ductwork and registers.

System: D3040 - Distribution Systems

Location: Boiler Mechanical Equipment Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 60,000.00

Unit of Measure: S.F.

Estimate: $196,866.60

Assessor Name: System

Date Created: 09/18/2015

Notes: Conduct a steam trap survey to identify and replace failed traps passing live steam into the condensate piping system. Hire a qualified contractor to examine the steam and condensate piping in service for 65 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: D4010 - Sprinklers

Location: entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Install a fire protection sprinkler system

Qty: 75,000.00

Unit of Measure: S.F.

Estimate: $1,072,908.49

Assessor Name: System

Date Created: 09/21/2015

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.

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	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 600 A, 0 stories, 0' horizontal	1.00	Ea.	Boiler Room					30	1948	2017	$10,650.15	$11,715.17
												Total:	**$11,715.17**

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:	Primary Education Center
Gross Area (SF):	24,325
Year Built:	2009
Last Renovation:	
Replacement Value:	$14,855,094
Repair Cost:	$8,310.17
Total FCI:	0.06 %
Total RSLI:	83.45 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B834002
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S834001		

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	94.00 %	0.00 %	$0.00
A20 - Basement Construction	94.00 %	0.00 %	$0.00
B10 - Superstructure	94.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	90.72 %	0.41 %	$4,639.19
B30 - Roofing	79.88 %	0.00 %	$0.00
C10 - Interior Construction	90.89 %	0.66 %	$3,670.98
C20 - Stairs	94.00 %	0.00 %	$0.00
C30 - Interior Finishes	70.70 %	0.00 %	$0.00
D20 - Plumbing	81.65 %	0.00 %	$0.00
D30 - HVAC	76.68 %	0.00 %	$0.00
D40 - Fire Protection	82.86 %	0.00 %	$0.00
D50 - Electrical	69.68 %	0.00 %	$0.00
E10 - Equipment	82.86 %	0.00 %	$0.00
E20 - Furnishings	85.00 %	0.00 %	$0.00
Totals:	**83.45 %**	**0.06 %**	**$8,310.17**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$24.32	S.F.	24,325	100	2009	2109		94.00 %	0.00 %	94			$591,584
A1030	Slab on Grade	$15.51	S.F.	24,325	100	2009	2109		94.00 %	0.00 %	94			$377,281
A2010	Basement Excavation	$13.07	S.F.	24,325	100	2009	2109		94.00 %	0.00 %	94			$317,928
A2020	Basement Walls	$23.02	S.F.	24,325	100	2009	2109		94.00 %	0.00 %	94			$559,962
B1010	Floor Construction	$92.20	S.F.	24,325	100	2009	2109		94.00 %	0.00 %	94			$2,242,765
B1020	Roof Construction	$24.11	S.F.	24,325	100	2009	2109		94.00 %	0.00 %	94			$586,476
B2010	Exterior Walls	$31.22	S.F.	24,325	100	2009	2109		94.00 %	0.04 %	94		$336.95	$759,427
B2020	Exterior Windows	$13.63	S.F.	24,325	40	2009	2049		85.00 %	0.00 %	34			$331,550
B2030	Exterior Doors	$1.67	S.F.	24,325	25	2009	2034		76.00 %	10.59 %	19		$4,302.24	$40,623
B3010105	Built-Up	$37.76	S.F.		20				0.00 %	0.00 %				$0
B3010120	Single Ply Membrane	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.	24,325	30	2009	2039		80.00 %	0.00 %	24			$1,318,902
B3010140	Shingle & Tile	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.68	S.F.	24,325	20	2009	2029		70.00 %	0.00 %	14			$16,541
C1010	Partitions	$14.93	S.F.	24,325	100	2009	2109		94.00 %	0.00 %	94			$363,172
C1020	Interior Doors	$3.76	S.F.	24,325	40	2009	2049		85.00 %	4.01 %	34		$3,670.98	$91,462
C1030	Fittings	$4.12	S.F.	24,325	40	2009	2049		85.00 %	0.00 %	34			$100,219
C2010	Stair Construction	$1.28	S.F.	24,325	100	2009	2109		94.00 %	0.00 %	94			$31,136

Site Assessment Report - B834002;Solis-Cohen PEC

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.	24,325	10	2009	2019	2020	50.00 %	0.00 %	5			$321,333
C3010231	Vinyl Wall Covering	$0.97	S.F.	24,325	15	2009	2024		60.00 %	0.00 %	9			$23,595
C3010232	Wall Tile	$2.63	S.F.	24,325	30	2009	2039		80.00 %	0.00 %	24			$63,975
C3020411	Carpet	$7.30	S.F.	1,300	10	2009	2019	2020	50.00 %	0.00 %	5			$9,490
C3020412	Terrazzo & Tile	$75.52	S.F.	3,000	50	2009	2059		88.00 %	0.00 %	44			$226,560
C3020413	Vinyl Flooring	$9.68	S.F.	19,325	20	2009	2029		70.00 %	0.00 %	14			$187,066
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	700	50	2009	2059		88.00 %	0.00 %	44			$679
C3030	Ceiling Finishes	$20.97	S.F.	24,325	25	2009	2034		76.00 %	0.00 %	19			$510,095
D2010	Plumbing Fixtures	$31.58	S.F.	24,325	35	2009	2044		82.86 %	0.00 %	29			$768,184
D2020	Domestic Water Distribution	$2.90	S.F.	24,325	25	2009	2034		76.00 %	0.00 %	19			$70,543
D2030	Sanitary Waste	$2.90	S.F.	24,325	25	2009	2034		76.00 %	0.00 %	19			$70,543
D2040	Rain Water Drainage	$3.29	S.F.	24,325	30	2009	2039		80.00 %	0.00 %	24			$80,029
D3020	Heat Generating Systems	$18.67	S.F.	24,325	35	2009	2044		82.86 %	0.00 %	29			$454,148
D3030	Cooling Generating Systems	$24.48	S.F.	24,325	30	2009	2039		80.00 %	0.00 %	24			$595,476
D3040	Distribution Systems	$42.99	S.F.	24,325	25	2009	2034		76.00 %	0.00 %	19			$1,045,732
D3050	Terminal & Package Units	$11.60	S.F.	24,325	20	2009	2029		70.00 %	0.00 %	14			$282,170
D3060	Controls & Instrumentation	$13.50	S.F.	24,325	20	2009	2029		70.00 %	0.00 %	14			$328,388
D4010	Sprinklers	$8.02	S.F.	24,325	35	2009	2044		82.86 %	0.00 %	29			$195,087
D4020	Standpipes	$0.99	S.F.	24,325	35	2009	2044		82.86 %	0.00 %	29			$24,082
D5010	Electrical Service/Distribution	$9.70	S.F.	24,325	30	2009	2039		80.00 %	0.00 %	24			$235,953
D5020	Lighting and Branch Wiring	$34.68	S.F.	24,325	20	2009	2029		70.00 %	0.00 %	14			$843,591
D5030	Communications and Security	$12.99	S.F.	24,325	15	2009	2024		60.00 %	0.00 %	9			$315,982
D5090	Other Electrical Systems	$1.41	S.F.	24,325	30	2009	2039		80.00 %	0.00 %	24			$34,298
E1020	Institutional Equipment	$4.82	S.F.	24,325	35	2009	2044		82.86 %	0.00 %	29			$117,247
E1090	Other Equipment	$11.10	S.F.	24,325	35	2009	2044		82.86 %	0.00 %	29			$270,008
E2010	Fixed Furnishings	$2.13	S.F.	24,325	40	2009	2049		85.00 %	0.00 %	34			$51,812
								Total	**83.45 %**	**0.06 %**			**$8,310.17**	**$14,855,094**

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 100%

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

Note:
VCT 19,325 - 80%
Carpet 1,300 - 5%
Concrete 700 - 3%
CT/QT 3,000 - 12%

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:	**$8,310**	**$0**	**$0**	**$0**	**$0**	**$421,867**	**$0**	**$0**	**$0**	**$487,378**	**$0**	**$917,555**
*** 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	$337	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$337**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2030 - Exterior Doors	$4,302	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,302**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$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**

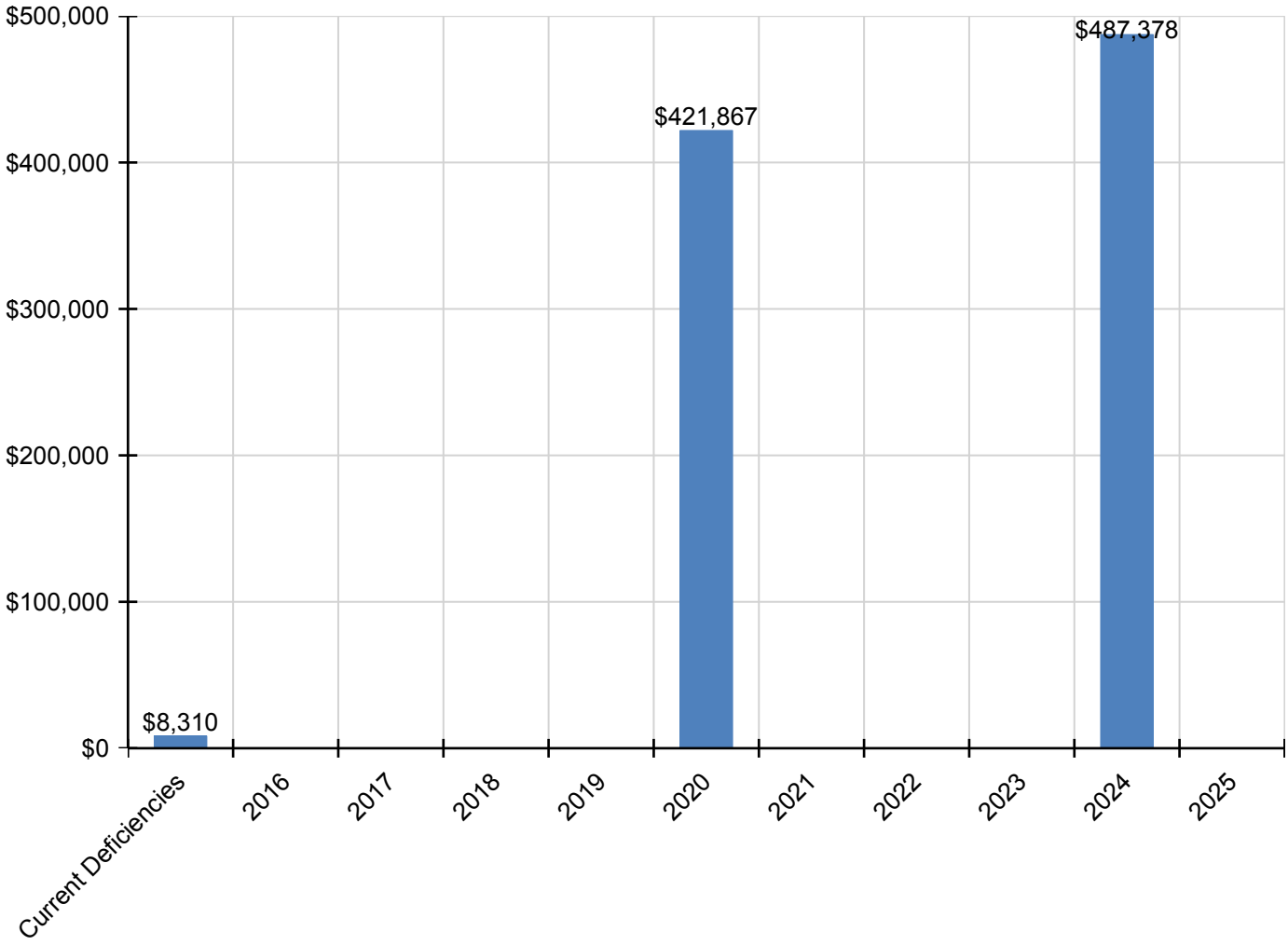
C1020 - Interior Doors	$3,671	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,671**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$409,765	$0	$0	$0	$0	$0	**$409,765**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$33,865	$0	**$33,865**
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	$12,102	$0	$0	$0	$0	$0	**$12,102**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

D5020 - Lighting and Branch Wiring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5030 - Communications and Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$453,513	$0	**$453,513**
D5090 - Other Electrical Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

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

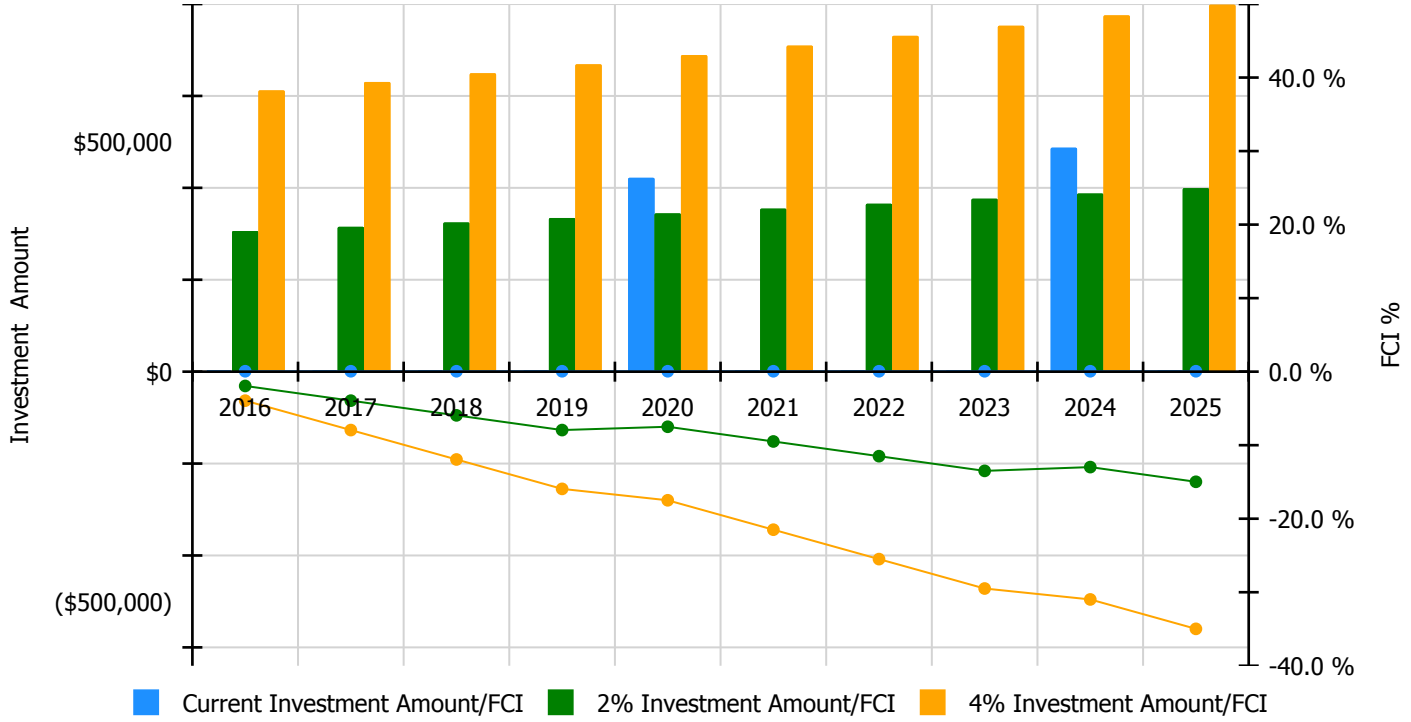


10 Year FCI Forecast by Investment Scenario

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

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

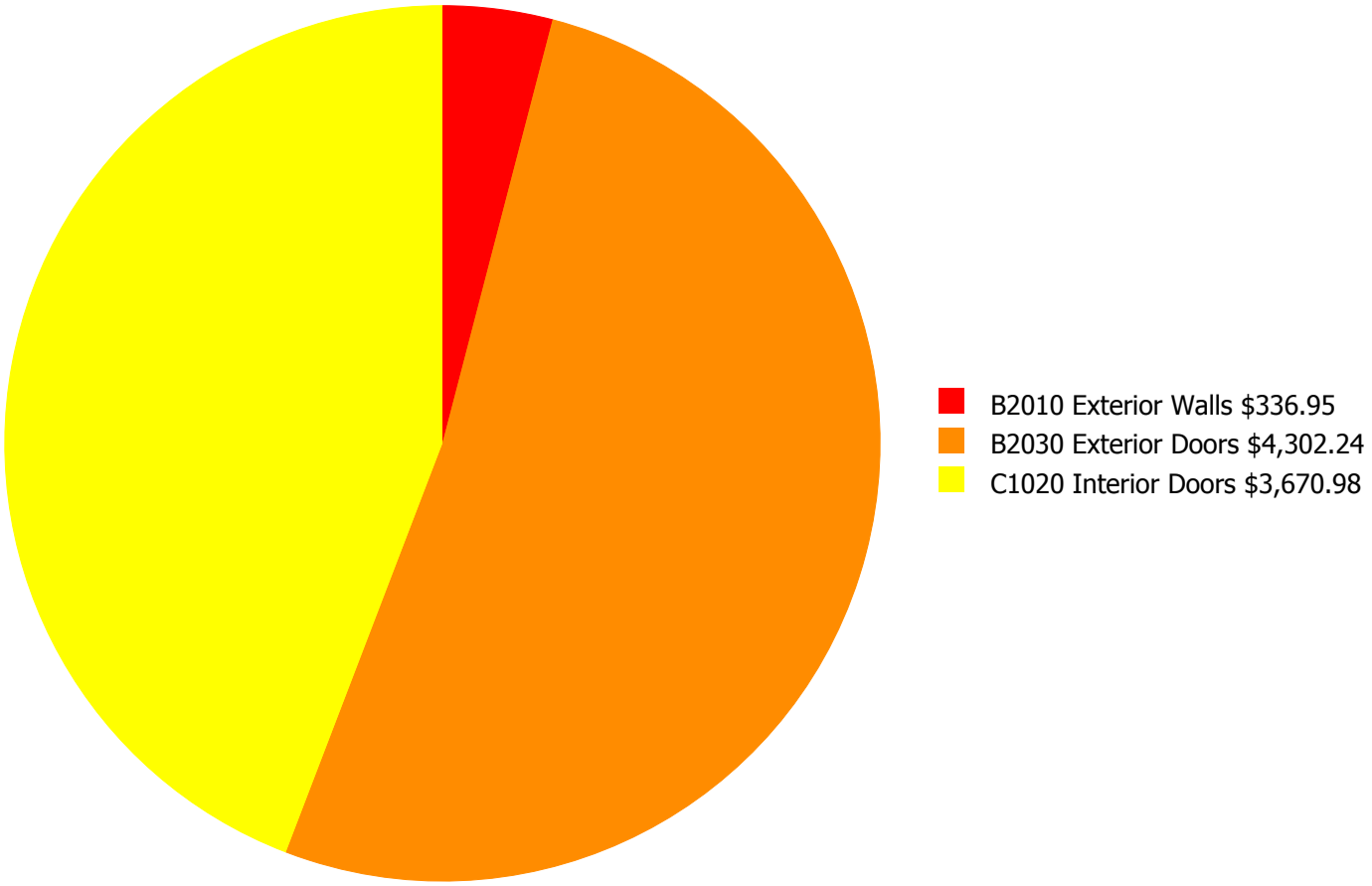
Facility Investment vs. FCI Forecast



Year	Investment Amount Current FCI - 0.06%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$306,015.00	-1.94 %	$612,030.00	-3.94 %
2017	$0	$315,195.00	-3.94 %	$630,391.00	-7.94 %
2018	$0	$324,651.00	-5.94 %	$649,302.00	-11.94 %
2019	$0	$334,391.00	-7.94 %	$668,782.00	-15.94 %
2020	$421,867	$344,423.00	-7.49 %	$688,845.00	-17.49 %
2021	$0	$354,755.00	-9.49 %	$709,510.00	-21.49 %
2022	$0	$365,398.00	-11.49 %	$730,796.00	-25.49 %
2023	$0	$376,360.00	-13.49 %	$752,720.00	-29.49 %
2024	$487,378	$387,651.00	-12.98 %	$775,301.00	-30.98 %
2025	$0	$399,280.00	-14.98 %	$798,560.00	-34.98 %
Total:	**$909,245**	**$3,508,119.00**		**$7,016,237.00**	

Deficiency Summary by System

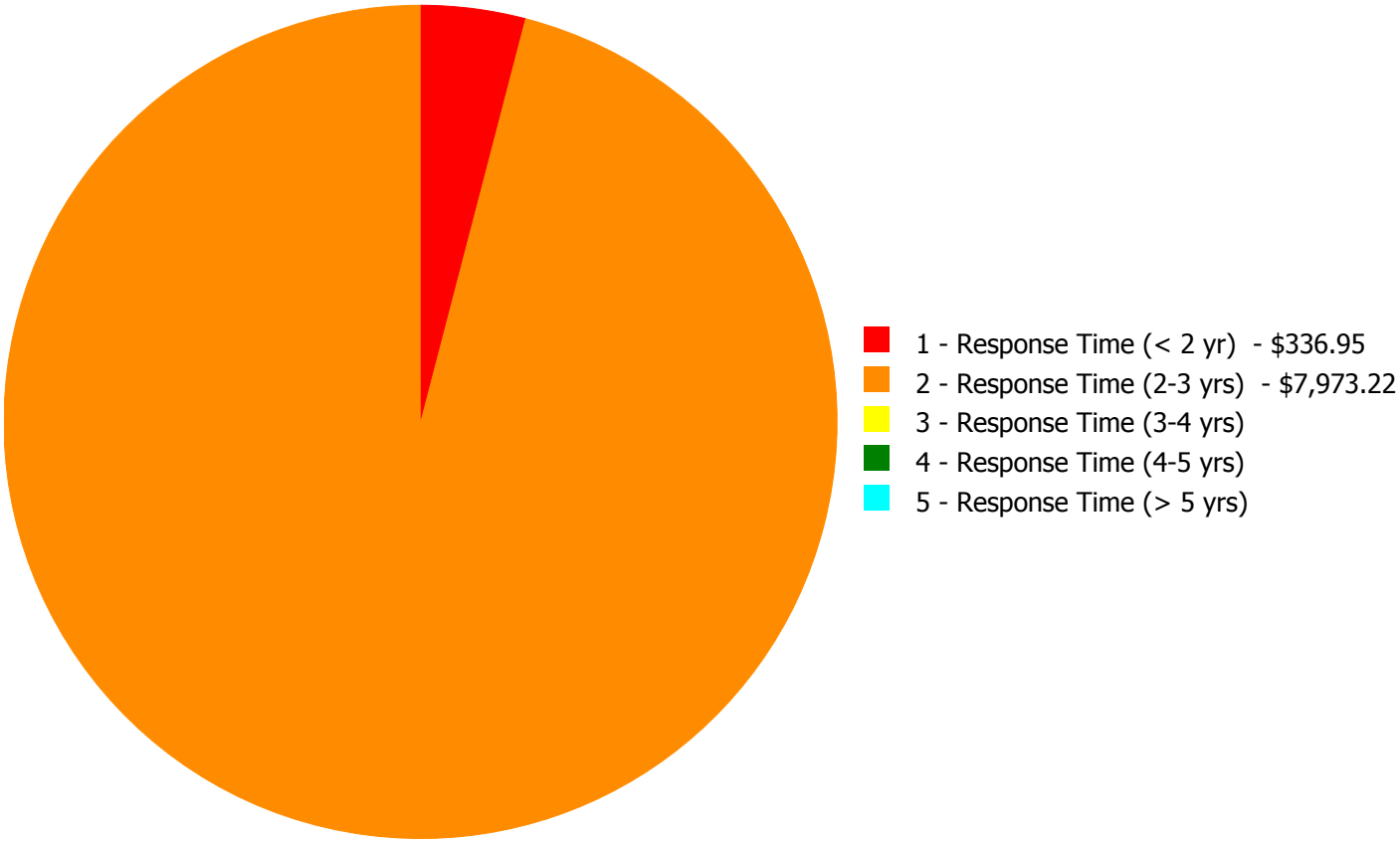
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $8,310.17

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: $8,310.17

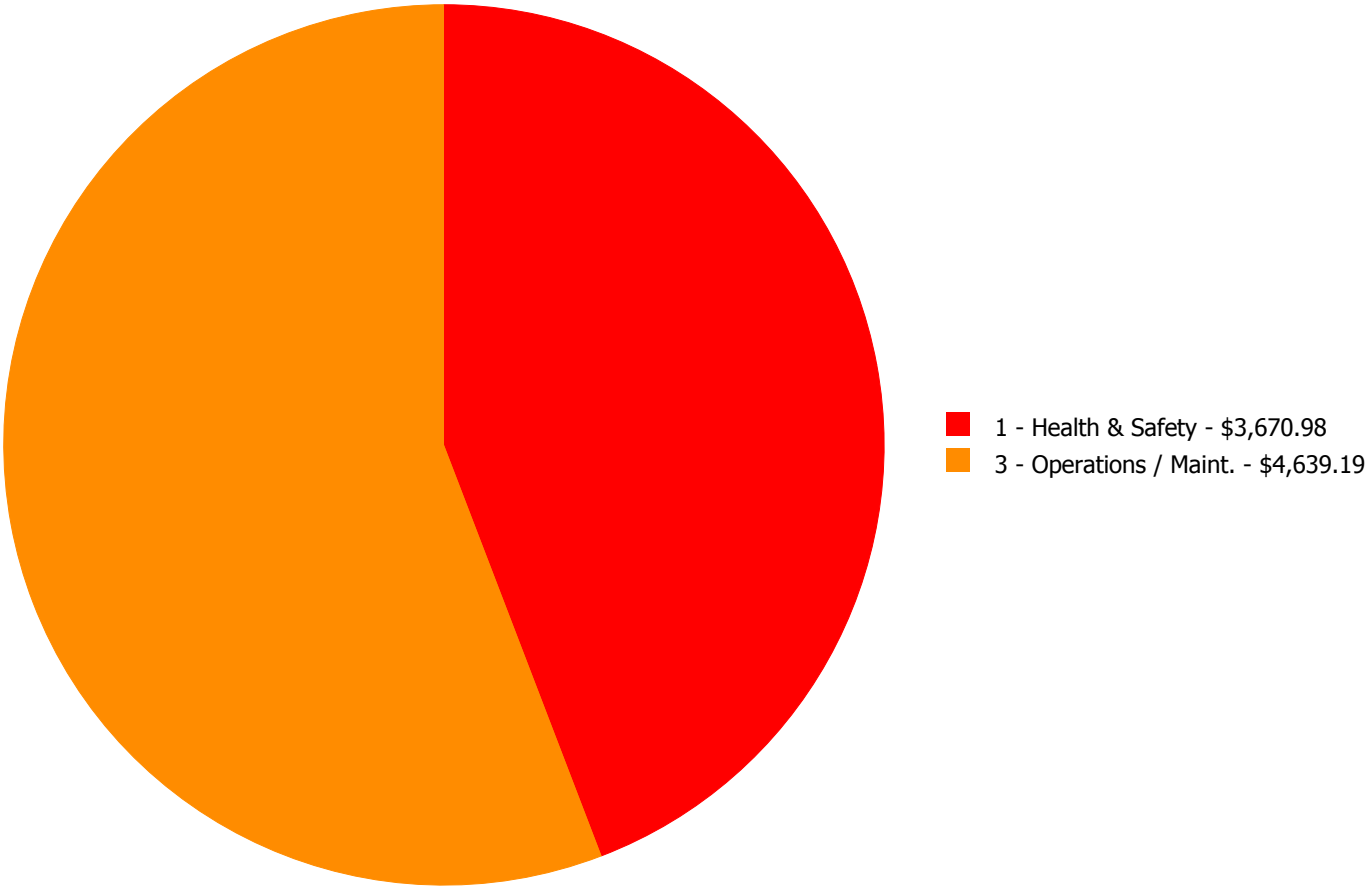
Deficiency By Priority Investment Table

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	$336.95	$0.00	$0.00	$0.00	$0.00	$336.95
B2030	Exterior Doors	$0.00	$4,302.24	$0.00	$0.00	$0.00	$4,302.24
C1020	Interior Doors	$0.00	$3,670.98	$0.00	$0.00	$0.00	$3,670.98
	Total:	$336.95	$7,973.22	$0.00	$0.00	$0.00	$8,310.17

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: $8,310.17

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: PEC clerestory unit on roof

Distress: Appearance

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Remove graffiti - power wash and paint

Qty: 50.00

Unit of Measure: S.F.

Estimate: $336.95

Assessor Name: Craig Anding

Date Created: 09/15/2015

Notes: Clean graffiti from clerestory panels and glass (50sf)

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

System: B2030 - Exterior Doors

Location: PEC exterior door frames

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Refinish and repaint exterior doors - per leaf

Qty: 8.00

Unit of Measure: Ea.

Estimate: $4,302.24

Assessor Name: Craig Anding

Date Created: 09/15/2015

Notes: Repaint rusted exterior door frames (8) 3'x7'

System: C1020 - Interior Doors

Location: PEC 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: 16.00

Unit of Measure: Ea.

Estimate: $3,670.98

Assessor Name: Craig Anding

Date Created: 09/15/2015

Notes: Provide security hardware for classrooms and offices locking from inside of room (16 each)

Equipment Inventory

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

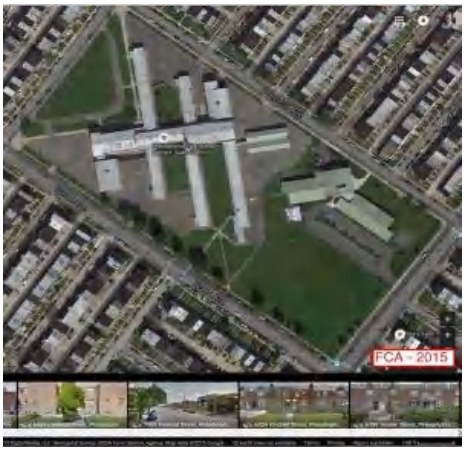
No data found for this asset

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):	439,900
Year Built:	1946
Last Renovation:	
Replacement Value:	$5,944,756
Repair Cost:	$969,766.09
Total FCI:	16.31 %
Total RSLI:	49.22 %



Description:

Attributes:

General Attributes:

Bldg ID:	S834001	Site ID:	S834001

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	55.18 %	24.06 %	$969,766.09
G40 - Site Electrical Utilities	36.67 %	0.00 %	$0.00
Totals:	**49.22 %**	**16.31 %**	**$969,766.09**

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.	11,200	30	1950	1980	2047	106.67 %	0.00 %	32			$129,024
G2020	Parking Lots	$7.65	S.F.	38,300	30	1950	1980	2047	106.67 %	284.07 %	32		$832,305.73	$292,995
G2030	Pedestrian Paving	$11.52	S.F.	130,400	40	1950	1990	2047	80.00 %	7.66 %	32		$115,062.80	$1,502,208
G2040	Site Development	$4.36	S.F.	439,900	25	1950	1975	2020	20.00 %	1.17 %	5		$22,397.56	$1,917,964
G2050	Landscaping & Irrigation	$3.78	S.F.	50,000	15	1950	1965	2030	100.00 %	0.00 %	15			$189,000
G4020	Site Lighting	$3.58	S.F.	439,900	30	1950	1980	2026	36.67 %	0.00 %	11			$1,574,842
G4030	Site Communications & Security	$0.77	S.F.	439,900	30	1950	1980	2026	36.67 %	0.00 %	11			$338,723
								Total	**49.22 %**	**16.31 %**			**$969,766.09**	**$5,944,756**

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.

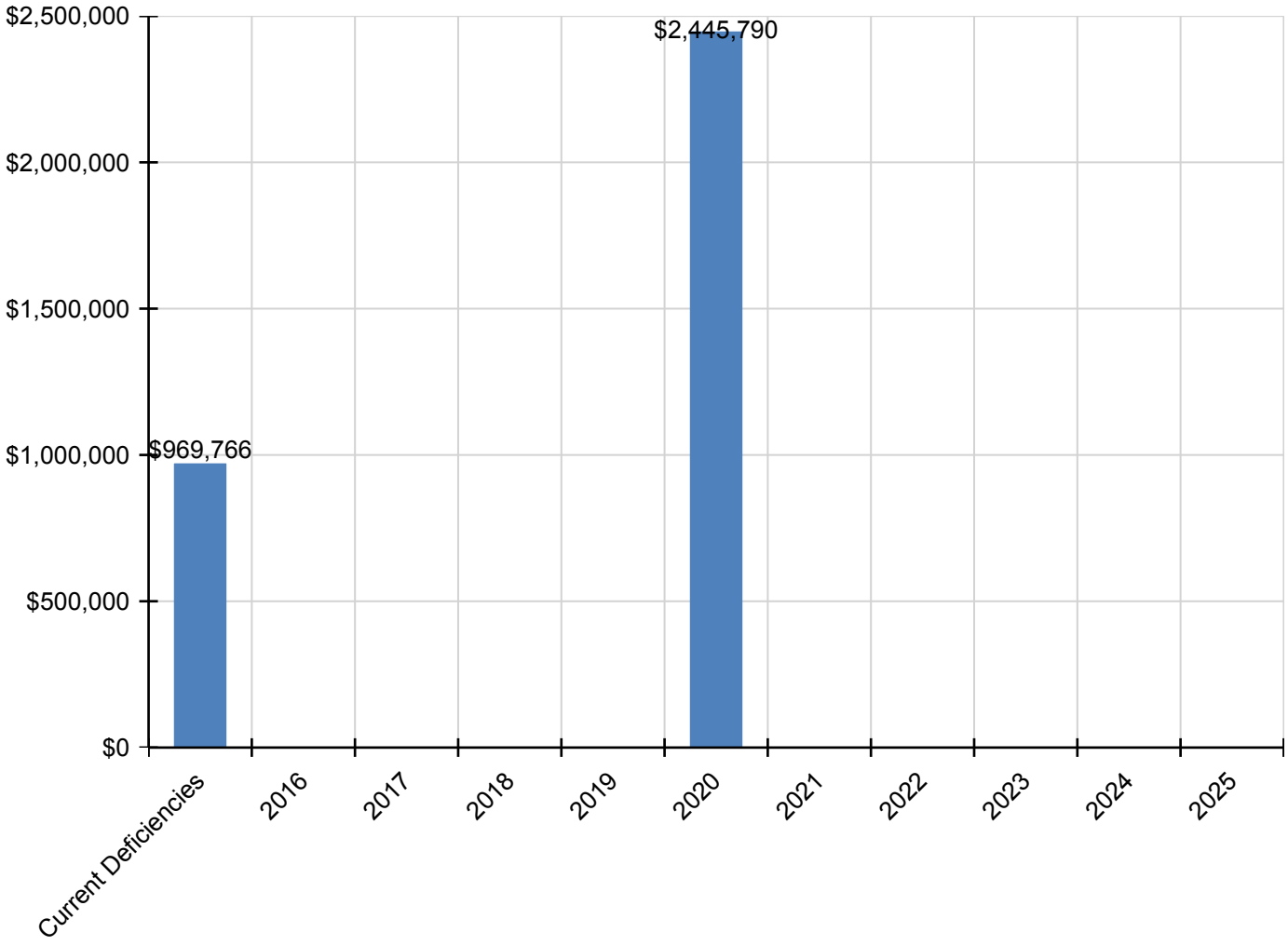
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$969,766**	**$0**	**$0**	**$0**	**$0**	**$2,445,790**	**$0**	**$0**	**$0**	**$0**	**$0**	**$3,415,556**
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	$832,306	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$832,306**
G2030 - Pedestrian Paving	$115,063	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$115,063**
G2040 - Site Development	$22,398	$0	$0	$0	$0	$2,445,790	$0	$0	$0	$0	$0	**$2,468,188**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

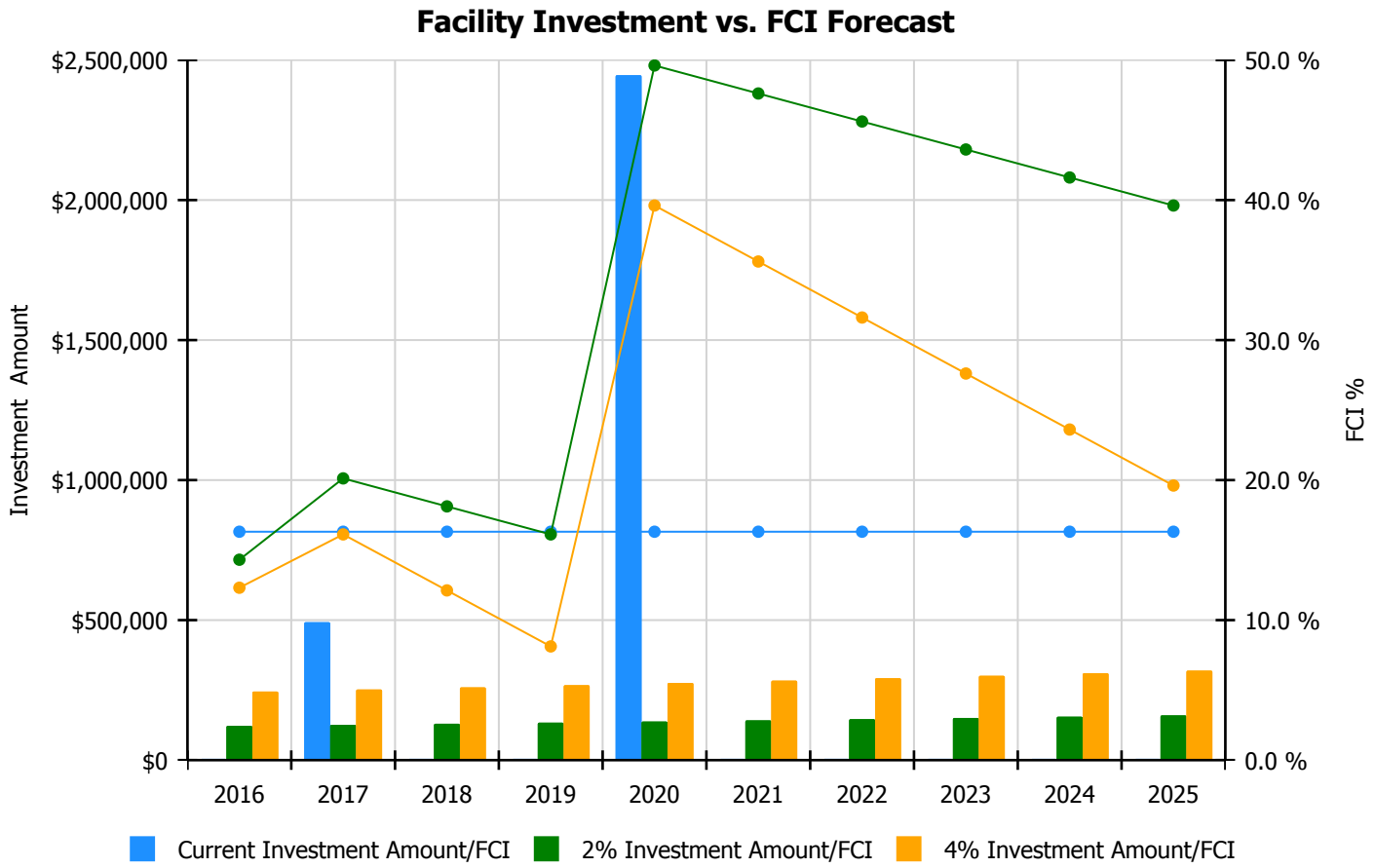
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

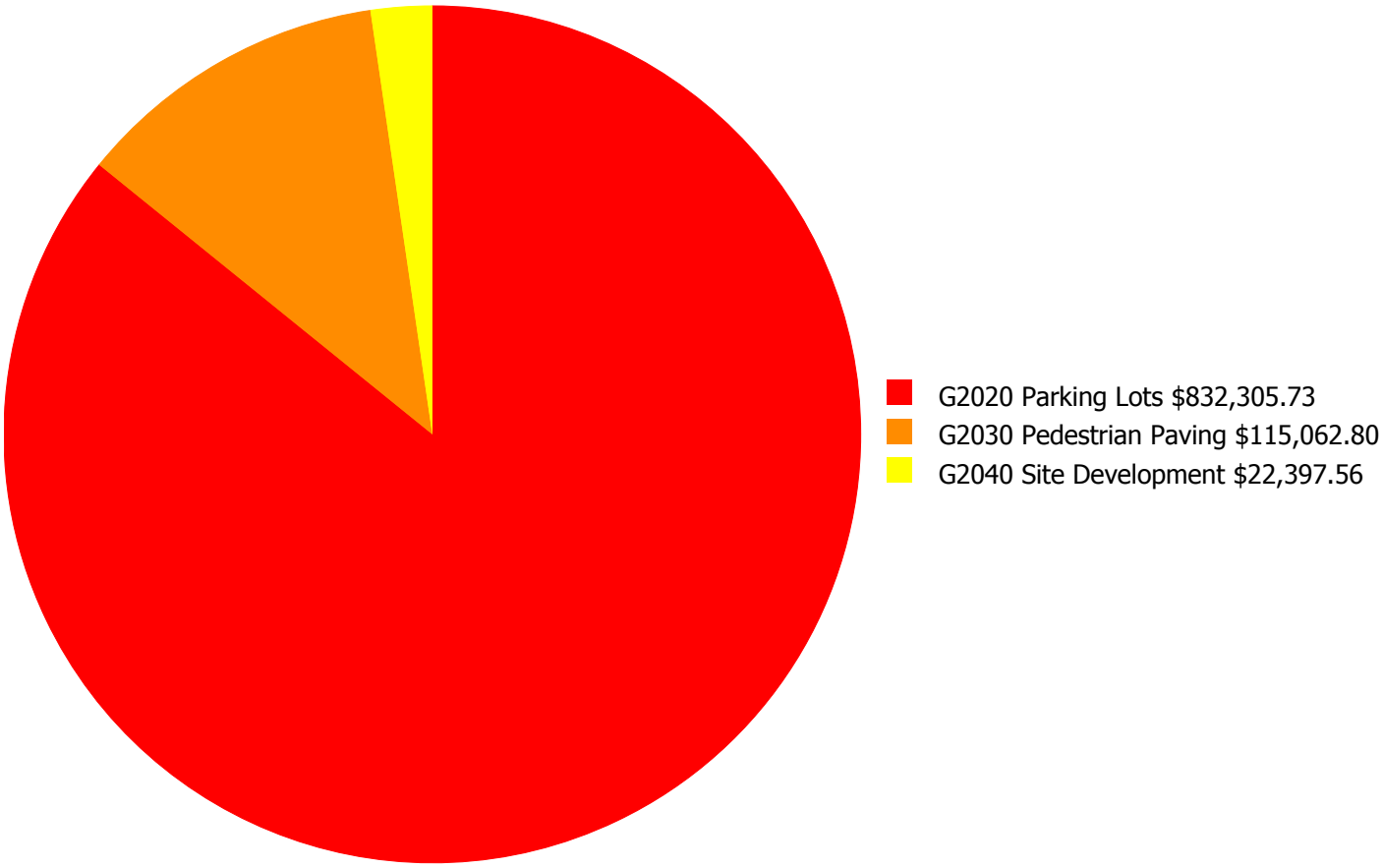
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 16.31%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$122,462.00	14.31 %	$244,924.00	12.31 %
2017	$492,492	$126,136.00	20.12 %	$252,272.00	16.12 %
2018	$0	$129,920.00	18.12 %	$259,840.00	12.12 %
2019	$0	$133,818.00	16.12 %	$267,635.00	8.12 %
2020	$2,445,790	$137,832.00	49.61 %	$275,664.00	39.61 %
2021	$0	$141,967.00	47.61 %	$283,934.00	35.61 %
2022	$0	$146,226.00	45.61 %	$292,452.00	31.61 %
2023	$0	$150,613.00	43.61 %	$301,226.00	27.61 %
2024	$0	$155,131.00	41.61 %	$310,262.00	23.61 %
2025	$0	$159,785.00	39.61 %	$319,570.00	19.61 %
Total:	**$2,938,282**	**$1,403,890.00**		**$2,807,779.00**	

Deficiency Summary by System

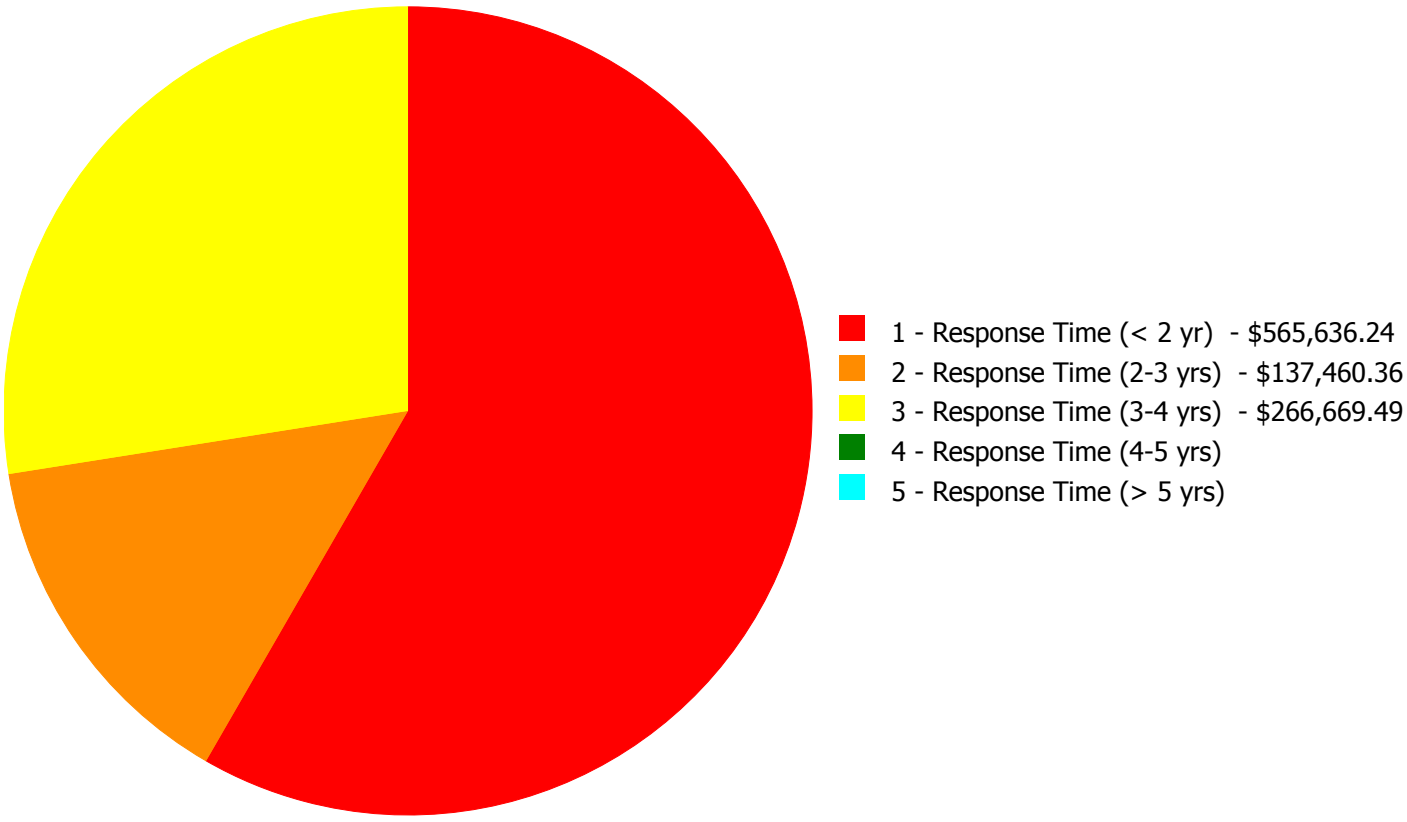
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $969,766.09

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: $969,766.09

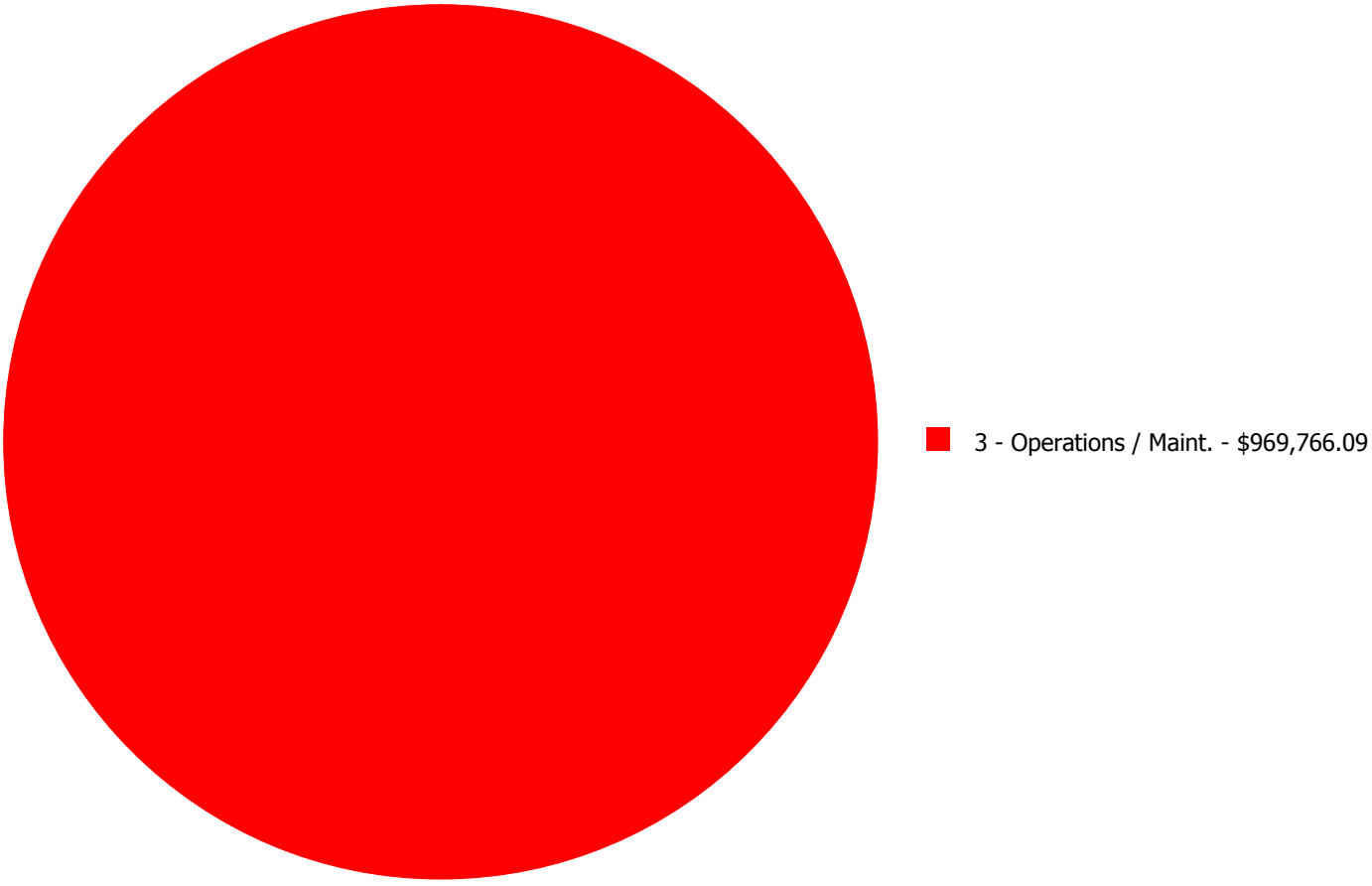
Deficiency By Priority Investment Table

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	$565,636.24	$0.00	$266,669.49	$0.00	$0.00	$832,305.73
G2030	Pedestrian Paving	$0.00	$115,062.80	$0.00	$0.00	$0.00	$115,062.80
G2040	Site Development	$0.00	$22,397.56	$0.00	$0.00	$0.00	$22,397.56
	Total:	$565,636.24	$137,460.36	$266,669.49	$0.00	$0.00	$969,766.09

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: $969,766.09

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: G2020 - Parking Lots

Location: parking and roadways

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Remove and replace AC paving parking lot

Qty: 40,000.00

Unit of Measure: S.F.

Estimate: $565,636.24

Assessor Name: Steven Litman

Date Created: 09/15/2015

Notes: Repave drop off roadway and severely damaged parking including re-striping(40,000sf)

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

System: G2030 - Pedestrian Paving

Location: front 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: 8,000.00

Unit of Measure: S.F.

Estimate: $115,062.80

Assessor Name: Steven Litman

Date Created: 09/15/2015

Notes: Repave damaged sections of concrete walkway at building entrance (8000sf)

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: 200.00

Unit of Measure: L.F.

Estimate: $22,397.56

Assessor Name: Steven Litman

Date Created: 09/15/2015

Notes: Replace damaged chain link fencing (200lf x 8ft tall)

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

System: G2020 - Parking Lots

Location: parking lots

Distress: Damaged

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: 09/15/2015

Notes: Repave asphalt parking and play surfaces; re-stripe parking (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