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.

Spruance School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	6401 Horrocks St.	Enrollment	1521
	Philadelphia, Pa 19149	Grade Range	'00-08'
Phone/Fax	215-537-2514 / 215-537-2933	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Spruance	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	**33.74%**	**$23,520,656**	**$69,713,003**
Building	45.14 %	$23,171,369	$51,335,274
Grounds	07.01 %	$254,446	$3,629,433

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	09.02 %	$222,288	$2,463,199
Exterior Walls (Shows condition of the structural condition of the exterior facade)	01.92 %	$72,241	$3,770,098
Windows (Shows functionality of exterior windows)	179.66 %	$3,305,087	$1,839,595
Exterior Doors (Shows condition of exterior doors)	08.87 %	$13,140	$148,107
Interior Doors (Classroom doors)	122.60 %	$439,540	$358,522
Interior Walls (Paint and Finishes)	07.86 %	$106,093	$1,349,309
Plumbing Fixtures	51.54 %	$711,760	$1,380,973
Boilers	59.79 %	$1,140,278	$1,907,010
Chillers/Cooling Towers	65.60 %	$1,640,351	$2,500,461
Radiators/Unit Ventilators/HVAC	186.10 %	$8,172,082	$4,391,128
Heating/Cooling Controls	158.90 %	$2,191,180	$1,378,931
Electrical Service and Distribution	37.60 %	$372,503	$990,787
Lighting	03.58 %	$126,727	$3,542,319
Communications and Security (Cameras, Pa System and Fire Alarm)	54.14 %	$718,374	$1,326,838

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

Facility Condition Assessment Summary Report

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

Spruance LSH School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	6401 Horrocks St.	Enrollment	
	Philadelphia, Pa 19149	Grade Range	'00-08'
Phone/Fax	215-537-2514 / 215-537-2933	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Spruance	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	**33.74%**	**$23,520,656**	**$69,713,003**
Building	00.64 %	$94,842	$14,748,296
Grounds	07.01 %	$254,446	$3,629,433

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$1,030,080
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.62 %	$4,843	$781,000
Windows (Shows functionality of exterior windows)	00.23 %	$768	$340,968
Exterior Doors (Shows condition of exterior doors)	08.58 %	$3,584	$41,777
Interior Doors (Classroom doors)	11.89 %	$11,188	$94,060
Interior Walls (Paint and Finishes)	02.30 %	$7,604	$330,461
Plumbing Fixtures	00.00 %	$0	$790,005
Boilers	00.00 %	$0	$467,049
Chillers/Cooling Towers	00.00 %	$0	$612,392
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$1,075,438
Heating/Cooling Controls	00.00 %	$0	$337,716
Electrical Service and Distribution	00.00 %	$0	$242,655
Lighting	03.18 %	$27,551	$867,555
Communications and Security (Cameras, Pa System and Fire Alarm)	00.00 %	$0	$324,958

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

S835001;Spruance

Final

Site Assessment Report

January 31, 2017

PARSONS

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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):	127,159
Year Built:	1949
Last Renovation:	2001
Replacement Value:	$69,713,003
Repair Cost:	$23,520,655.83
Total FCI:	33.74 %
Total RSLI:	67.48 %

Description:

Facility Condition Assessment
October 2015

School District of Philadelphia FCA
Gilbert Spruance Elementary School
6401 Horrocks Street
Philadelphia, PA 19149

102,143sf; 1100 students; LN 08

Spruance Elementary School is located at 6401 Horrocks Street. The main building was constructed in 1949, has 102,143 square feet, and has 2 stories with a partial basement and extensive crawlspace. The main student entrance is oriented on a 45 degree angle at the apex of the intersection of two sections of the building, facing the intersection of Horrocks and Levick Streets. The exterior of the building is constructed of two shades of buff brick with colorful blue, white and green supergraphics painted on the lower and accent walls around the building. The main building is comprised of Element 1, the original building, and Element 3, an addition which is added on to the northeast end of the original building a few years after the completion of the main building. The overall form of the building resembles a Times Roman style "J". Element 2 consisted of portable buildings that were demolished when the Little School House was constructed in 2001. Located to the north of the main building, the 25,016 square foot, one-story Little School House has

its main entrance on Hellerman Street. The asphalt playground area is shared by both buildings, as is typical of most Little School House arrangements in Philadelphia. The Little School House (LSH) building is almost identical to the other LSH facilities of the same size at other Philadelphia schools. A dedicated faculty and staff parking lot is shared by both facilities, located in the northwest corner of the site, separated from the playground by an internal roadway and a fence. Vehicular drop off is either on Levick or Horrocks Streets; no vehicles are permitted within the fenced-in site. Stanley Hamlin, the Building Engineer, accompanied the team during the building inspection.

The inspection team met with Vice-Principals Ms. Petersen and Ken Christy at the time of inspection. They indicated that there is a problem with poorly draining surface water in the school yard near the main building; puddles were evident at the time of inspection. The auditorium lighting in the main building is inadequate. Temperature controls in the main building do not work – boilers must be started and stopped manually. There are roof leaks in the main building. The building alarm system does not work. Automatic temperature controls in the Little School House do not work properly. Clocks in the LSH do not work.

ARCHITECTURAL/STRUCTURAL SYSTEMS

Foundations are constructed of concrete and concrete block seen in the mechanical equipment rooms and the crawl spaces in the basement. The main mechanical area in the basement is under the bottom section the "J" of the building (the most northern section of the underground areas. To access this area, after proceeding down Stairway A, a pathway is taken around the 45 degree section of the building (the bottom of the "J") through the edge of the open crawlspace area. What could be seen of wall surfaces and concrete columns in the crawl space areas are in good condition. The stairway down to the basement/crawlspace from Stairway A is seriously spalled. Some areas in the boiler room are in poor condition with spalling concrete floors, extensive peeling wall paint and peeling ceiling paint observed. Other rooms in the basement had been previously used for coal and ash storage when coal was the fuel source, but now this space is mostly open and used for storage of miscellaneous maintenance supplies. All areas of the basement whether in use with equipment or unused are dirty and should be cleaned. Most of the crawl spaces under the other areas of the building were not easily accessed, not well lit and were not inspected. The Building Engineer indicated there were pipe leaks in the crawlspace and that some of the pipes in the crawlspace have rusted, failed and were repaired. Some steam and hot water pipes are wrapped in asbestos. Plans for asbestos abatement should be considered, as this area is open to anyone who needs to go to the mechanical room. There is adequate space for present operating building mechanical equipment in the mechanical areas of the basement.

Floor slabs in the mechanical basement in the Main Building are in fair condition with some spalled areas possibly due to steam leaks but no major cracks or settlement seen. Basement slabs are spalled, dirty, and stained with rust and dirt, requiring patching, cleaning, and resealing or painting for better appearance and maintenance. First and second floor slabs in the two-story section are constructed of poured concrete slabs with concrete beam supporting structure. Raised slabs appeared to be level and in good condition. Floor slabs in the Little School House have cracks at many column control joints in the Multi-Purpose Room, corridors, and classrooms. This is a typical problem observed in all Little School Houses. The floor finish removed and the cracks patched on both sides of the control joint with leveling compound, before new flooring is laid over the area.

Roof system over the Main Building is constructed of a structural concrete deck on concrete supporting beams and columns (assumed). The beams appear to be in good condition when they can be seen in classrooms where the beams are exposed. In some second floor locations (Room 200, Math Office), there is some cracking between the exterior block wall and the bottom of the concrete roof beams; these cracks are not visible outside. Similar cracks appear under the roof beam in the northeast stairway of Element 3; these cracks, however are visible on the exterior wall. The roof system over the gym consists of steel beams and purlins, with a concrete deck on top. The steel structure exposed to view appeared to be in good condition with no cracks or settlement in this area. The roof system over the LSH consists of a steel beam system where beams, joists, and wood deck are exposed in classrooms and the mechanical area, in good condition.

Exterior walls of the Main Building are constructed of brick. Brick walls are in fair to poor condition and appear to have been recently repointed in some locations. There are many horizontal joint cracks above window lintels and along the beam line below the roof and there are some walls with vertical cracks. Masonry is cracked above and adjacent to many univents. The vertical expansion joints in Element 3 need to be recaulked. Many of the joints adjacent to the univent louvers are losing mortar and need to be repointed. The Little School House has two tone tan bricks as the main exterior material. The entrance area has yellow brick accent enclosures with the Little School House logo on the wall. At the three brick and window triangular elements facing the playground, bricks are damaged at the corners of the walls and need replacement.

Exterior windows in the Main Building consist of aluminum frame units a single sheet of plexiglass glazing. These are replacement units installed sometime in the 1980s. Frames do not operate easily getting stuck or slamming closed if opened, windows do not close tightly and leak in cold weather, the plexiglass is scratched and cloudy, and frames are fading. First and second floor windows facing the playground and first floor windows on other sides of the main building have heavy, galvanized steel window screens (security screens) attached to the outside. The screens are in fair condition, but some of their masonry bolts appear to have loosened or have

been replaced. A few rooms have window air-conditioning units installed. The LSH windows are painted aluminum framed insulating glass units in good condition. These windows have heavy duty bug/security screens; a few have graffiti and need to be replaced.

Exterior doors in the main building are painted hollow metal steel doors and frame units, some with narrow lite vision panels with security grating. The paint on all doors and frames is in poor condition with rust forming on most door frames and bottoms of some door panels. Doors and frames should be repainted to minimize further deterioration. Exit hardware and door closers are in poor condition, damaged, and either need adjustment or should be replaced since they are past their normal service life. Exit doors in the LSH are glass and aluminum frame units in good condition at personnel exits. Exterior doors in the mechanical area consist of flush hollow metal doors and frames, in poor condition in need of repainting.

Roof coverings on the main building consist of a fully adhered, black, single ply EPDM ("rubber") roofing system with aluminum coping. Roofs are accessed by a rusted steel stair up from a mechanical closet through a brick structure on the main roof deck. Ladders attached to the brick walls provide access to upper and lower roofs. There are no external gutters or vertical leaders. Roof drainage is provided by an internal roof drain system draining by internal vertical leaders to a storm system below grade. There are no overflow scuppers; they are not required when there is no parapet and when the roof structure is designed to support the amount of water that would be contained by flooded roof drains. The main roof deck is flat with less than the code required ¼" per foot slope causing the existence of a number of pondning, poorly draining flat areas. The EPDM membrane, however appears to be in good condition, although it is approximately 15 years old. The EPDM membrane should be lifted and additional tapered insulation added to provide better slope of all ponding areas. Leaks have been reported in a few areas, corresponding roughly to the location of severely rusted rooftop gravity vent structures (Room 215A is one location with heavy leaks). Rusted rooftop structures should be replaced to prevent ongoing leaks and to prevent future leaks. The LSH has a residential-style two color asphalt shingle roof with a hidden gutter system and internal vertical roof leaders. Clerestory units and decorative roofs over the yellow brick entrance area have green standing seam metal roofs. No leaks were reported or observed.

Partitions in the main building are constructed of concrete block. Except at stairways, there are no vision panels in any of the corridor walls, preserving a fire-rated construction which is required by today's codes in a non-sprinklered Educational building. Stairway doors and walls have full height, subdivided wired glass vision panels in steel frames, with subdivided steel framed transoms above the doors and vision panels. Although these vision panels let in copious amounts of light (which is good), they do not comply with today's code-allowed sizes of fire-rated wired glass vision panels. The doors, glazing, vision panels, and transoms need to be replaced with UL approved, fire rated glazing and doors. Block walls on the second floor of Element 1 (rooms 205, 206, 207, 208, and 11) and the first floor of Element 1 (rooms 102-110, 112, 113, 114, 115) have cracks on the corridor walls. The stair at the northeast end of Element 3 is also cracked. The district should investigate as to why these walls are cracking. The LSH partitions are all block and in good condition.

Interior doors in the main building classrooms, offices, and other rooms are mostly the original solid core oak veneer wood doors with wood frames. Classrooms with the original doors have half-height, divided glass vision panels; although the glass is wired, the mullions and door do not have UL approved fire rating labels and therefore the doors cannot be considered fire rated. Many door panels are damaged and some glass panels are broken or replaced with other types of glass. Doors do not have lever locksets with updated security locking feature that allows for locking from inside the room, required as one of today's security features. Stairway doors are steel with full height wired glass and full height sidelights and transoms and steel frames. Door hardware is non-latching push-pull hardware which is not code compliant and door glazing exceeds the allowable limit for wired glass in a 1 hour fire rated door. All interior doors and hardware need replacement for improved operation, security and safety. Little School House doors are solid core wood doors with steel frames; they are not required to be fire rated since the building is sprinklered. Piano hinges are used for added durability. It was not known if the glazing is safety glazing. Lever locksets are used on all doors, but they lack the security lock-down feature to lock the doors from the inside of the room in a security situation. Hollow metal exit doors from the multipurpose room and mechanical area require repainting. All LSH door frames need to be repainted

Interior fittings/hardware include oak framed blackboards in all classrooms in the main building. Some classroom blackboards have been replaced or covered with whiteboards. Some corridors have tack strips on one side and bulletin boards in random locations. Some of the toilet room partitions are the original marble partitions, lacking doors. Most main building partitions are HDPE (plastic) replacement partitions with HDPE doors. Toilet room accessories (toilet paper dispensers, soap, paper towel or dryers, grab bars, door latches) are not present or operational in all toilet rooms. Accessible toilet rooms and accessible toilet room accessories such as wrist-blade faucets, drain pipe protection, grab bars, and hand-dryers mounted at handicap accessible height, etc. were absent and need to be provided in the main building. The LSH has fully accessible toilet rooms with HDPE partitions and plastic toilet room accessories. Handicap accessories and toilet compartments are provided.

Stair construction in the main building consists of concrete-filled treads with steel risers and stringers, stairs with concrete treads, risers, stringers, and stairs with quarry tile treads. Handrails are 27" high, guards 36" high, and balusters are solid concrete in most cases. Steel handrails and guards need to be replaced with the correct 36" height handrails and guards 42" high on open sides of stairways; some platforms have concrete guards 42" high. Stairs to basement are seriously spalled and need to be replaced. Stairs

to the roof are rusted steel and need to be replaced. Main building stairs' concrete surfaces to be cleaned and re-sealed. There are no stairs in the LSH.

Wall finishes in the corridors, offices, classrooms, toilet rooms, stairways, cafeteria, and gymnasium consist of painted block. Many corridor walls have areas of minor surface damages and are in need of repainting. The auditorium has a wood panel wainscot approximately 7 feet tall with painted block above. The LSH also has painted block partitions in good condition. Classrooms in the LSH have painted sound attenuating block partitions on at least two walls to improve acoustics.

Floor finishes consist of the original 9" x 9" VAT (vinyl asbestos tile) in most classrooms, most corridors, and some offices. Some classrooms and the Element 3 second floor corridor have been refinished with VCT (vinyl composition tile). The auditorium has cracked VAT in the hallway outside the entrance, worn VAT in the aisles between and around seating, and dirty sealed concrete under seating. VAT should be removed and replaced with VCT and sealed concrete should be re-sealed. The stage floor is wood parquet, which should be refinished. Although the remaining VAT appears to be in surprisingly good condition, there are a number of locations where tile colors and patterns don't match and most floors have ground in dirt under years of wax coatings. This is not a good material to maintain due to the asbestos material contained in the tiles. All VAT should be tested for asbestos then properly removed with VCT reinstalled in its place. The gymnasium has a wood floor which should be refinished. The cafeteria has a sealed concrete floor finish which is dirty and should be cleaned and re-sealed. There are isolated spaces and rooms that have carpet which is in fair condition but dirty and should be replaced. The main entrance vestibule floor is terrazzo, which is in good condition. The cafeteria and kitchen have sealed concrete floors which should be cleaned and resealed. Little School House floors are all VCT, except for sealed concrete mechanical rooms and parts of classrooms with area rugs where children sit on the floor. Cracks are evident in corridors, multipurpose room, and classrooms which seem to be typical of all LSH buildings in the District. VCT needs to be removed, the damaged concrete underneath needs to be repaired, and new VCT installed over the repaired slabs.

Ceiling finishes in the auditorium are plastered ceilings with pendant mounted lighting fixtures; plaster is stained from roof leaks which are said to have been repaired. The cafeteria and some corridors have 2x4 suspended acoustical tile ceilings. Classroom and office ceilings have exposed concrete beams with either 12x12 acoustical tile glued to the deck between beams or painted exposed concrete deck. The gymnasium has exposed steel beams with plaster between beams. There are a number of ceilings that need to be repainted from being water damaged and peeling. Some 12x12 and some 2'x4' ceilings are also damaged from water or by age. Ceilings in the LSH are either exposed wood deck as seen in the classrooms or 2x4 suspended acoustical tile ceilings. Most are in good condition with some minor water damage to corridor ceiling tiles from sprinkler heads or utility piping leaks.

Furnishings in the main building include oak plywood veneer folding seating for almost 500 people in the auditorium. Seating finish and operation are in fair condition, however there are some seats that need to be repaired and some need to be refinished. The cafeterias in the main building and the LSH have food prep warm-up kitchens and food service counters. Folding tables are used for children's seating.

The front door into the Main Building has a stairway up to the vestibule at the first floor level. An accessible entrance is provided from the playground behind the school, where there are ramped entrances into the main building at Stairway A and Element 3 at the north end stairway door. The LSH has accessible entrances at the front, side, and playground doors.

There is no elevator in the main building. In order to provide full accessibility to all classrooms and specialized school spaces, a two stop elevator should be provided, serving the two school floors. Since both floors of Element 3 are 6 risers below the corresponding floors of Element 1, the main building floor, accessibility to the first floor of Element 3 can only be provided by exiting the building into the play area and re-entering at grade; accessibility to the second floor is problematic and could probably be avoided by providing equal teaching facilities on accessible floors. Serving the basement mechanical floor is also problematic, since the second floor section of the building where the elevator would be located is not directly over the mechanical area in the basement. The Little School House is a one story building and does not need an elevator

An automatic sprinkler system is not provided in the main building. Automatic sprinklers are provided in all spaces in the Little School House.

MECHANICAL SYSTEMS

Plumbing Fixtures – The Main Building is equipped with wall hung urinals (flush valve type), wall hung water closets (flush valve type), and wall hung lavatories with wheel handle faucets. Many of the original plumbing fixtures remain in service, however, these fixtures have reached the end of their service life and should be replaced. New fixtures will provide lower water consumption and provide savings on water heating costs. The bathrooms are also equipped with floor drains. The Little School House is equipped with wall hung urinals (flush valve type), floor mount water closets (flush valve type), and wall hung lavatories with short lever handle faucets. These fixtures were installed in 2001 and are nearing the end of their service life and should be replaced in about the next ten years. Hand sinks are provided in each classroom. The bathrooms are also equipped with floor drains.

In the Main Building drinking fountains in the corridors and at the restrooms are wall hung fountains. There are also vertical floor standing and wall hung electric water coolers. . Most of the fixtures appear to be the original installed equipment. The replacement of all drinking fountains is recommended as the equipment is approximately 67 years old and beyond its service life. In the Little School House there are wall hung electric water coolers (EWC) in the corridor located at the restroom locations. In addition, there drinking fountains in each classroom at the counter hand sink. These fixtures were installed in 2001 and are nearing the end of their service life and should be replaced in about the next ten years.

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

The Little School House is equipped with a triple compartment sink (short lever handles) which is connected to a below floor grease interceptor. Chemicals are injected manually into the sanitizing basin. The kitchen is also equipped with a hand sink (short lever handles). Floor set service/mop sinks are available throughout the building for use by the janitorial staff. Service sinks are located in the vicinity of the bathroom groups. These fixtures were installed in 1998 and are nearing the end of their service life and should be replaced in about the next ten years. There is also an emergency shower/eyewash located in the main boiler mechanical equipment room.

Domestic Water Distribution – For the Main Building it appears that the 4" domestic water service piping is mostly soldered copper. Water service enters the building in the basement, with a 4" double check backflow preventer (RPZA – reduced pressure zone assembly) and a 4" water meter on the main line upon entering the building. The water meter appears to be new. The piping is copper with soldered joints. The distribution piping appears to be original and is at the end of its service life and is recommended to be inspected and repaired as needed. The Little School House water supply is consists of a 3" service line with a BFP (RPZA) and a 3" water meter, although the meter has been removed. The piping is copper with soldered joints. These fixtures were installed in 2001 and are nearing the end of their service life and should be replaced in about the next ten years.

The Main Building domestic water system is produced by a natural gas fired vertical tank, Weben Jarco, model AJHW8 18 and is located in the main boiler mechanical equipment room. The hot water system is equipped with a recirculation pump which circulates water into an existing original domestic hot water storage tank. The water heater appears to be in satisfactory condition and should not need to be replaced for 5 – 10 years. A water softener is located in the boiler room for treating the boiler make up water system, is manufactured by Kisco, and should be replaced. The Little School House domestic hot water is provided by two, PVI, natural gas fired vertical nickel shield, tank type heaters, model 27N125A-G, 270,000 btuh input and a recovery rate of 324 GPH. The system is not equipped with an expansion tank but is equipped with a circulating pump and P/T relief.

Sanitary Waste - The sanitary waste piping system in the Main 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 duplex sewage ejector located in the main boiler mechanical equipment room. The Little School House is a gravity sanitary system. The sanitary piping system is within its service life and should not need inspection at this time.

Rain Water Drainage - The rain water drains from the roof are routed through mechanical chases in the building and connect to the underground site drainage system. There are no overflow scuppers for the building since the roof does not have parapets. There is also a duplex sump pump in the main boiler mechanical equipment room for collection of any foundation drainage. The Little School House storm drainage consists of gutters and conductors. The conductor piping is no hub, cast iron.

Energy Supply - - Duplex fuel oil supply pumps provide the required fuel to the boilers when operating on fuel oil. The 10,000 gallon fuel storage tank is located underground beneath the concrete pavement of the school yard near Horrocks Street. The fuel pumps and controls appear to have exceeded their service life and should be replaced. The 6" natural gas enters the building in the basement into the main boiler mechanical equipment room. The gas service has a booster system installed. The natural gas main is welded, black steel piping while the branches are threaded, black steel. For the Little School House the 3" gas service enters the main boiler mechanical equipment room in the vicinity of the location within the enclosure for the air cooled chiller. In addition, the backup fuel supply for the boilers consist of two 250 gallon number 2 fuel oil storage tanks which are located in the main boiler mechanical equipment room. The tanks have remote monitoring.

Heat Generating Systems – Low pressure steam is generated at 15 llbs.in or less by two Weil McLain 4,961 MBH, cast iron, sectional boilers, model 2394 with dual fuel burners. Both 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 early to mid 1990's. Both boilers are approaching the end of their service life and should be replaced. There is draft control on the both boiler flues. There were combustion air dampers and louvers which would serve the boiler room to provide combustion air for the boiler operation. Burner oil pumps are driven by independent motors. The oil supply to the burner is equipped with dual solenoid valves and strainer/disposable media filter. The Little School House heating system consists of two Smith, cast iron, sectional natural gas fired water boilers, water IBR 924.0 MBH, model 19 series S/W-8 with dual fuel burners. Both boilers are equipped with Power Flame dual fuel burners, natural gas and number 2 fuel oil, model CR2-GO-15HBS-8. The boilers and burners are part of the 2001 original construction. The boiler mechanical equipment room is equipped with high low combustion air dampers operated via electric actuators. There are two, end suction base mounted, centrifugal, constant volume heating water pumps for the hot water system. The pumps are manufactured by Thrush, model number was illegible. Both pumps are nearing the end of their service life and should be replaced within the next five years.

Cooling Generating Systems - In the Main Building, there are a few areas which are served by window air conditioning units, but predominantly the building does not have cooling systems. The Little School House is provided cooling with an air cooled chiller, installed in 2001, York, model YCAL0080SC17 which has scroll compressors 80.0 tons which utilizes R22 as a refrigerant. The chilled water system is treated with 30% glycol for freeze protection. The constant volume, end suction, Thrush chilled water pumps could not have name plate data collected due to being illegible by wear.. Both pumps are nearing the end of their service life and should be replaced within the next five years.

Distribution Systems – For the Main Building the steam distribution piping is black steel with welded fittings. The condensate piping is Schedule 80 black steel with threaded fittings. The piping has been in use beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes. The District should hire a qualified contractor to examine the distribution piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 5 years. The Little School House chilled water and heating water supply and return piping consists of black steel with welded fittings. The piping system has service life remaining, however, the District should hire a qualified contractor to examine the distribution piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years.

In the Main Building 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 is returned directly to the boiler feedwater tank and then pumped back to the boiler as there are no condensate receiver tanks. The condensate return piping is black steel with threaded joints. The boiler feedwater assembly is equipped with three pumps and a pump control panel. Some steam traps have been replaced, however others have failed as per the building engineer. 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.

Ventilation and additional heating for the building was provided by a house fan in the basement which is operational but is not used as the radiation and convection systems are sufficient for meeting the heating needs. The air was pushed into the various rooms of the building through ducts built into the walls. The air was exhausted from other ducts built into the walls, up through the attic space, and out through roof mounted vents.

The building uses unit ventilators (manufactured by Nesbitt) with steam coils in the classrooms and a combination of steam convectors, and console unit ventilators without outside air connections in the hallways, steam convectors on mid landings of stairwells and wall mount convectors for bathrooms. This equipment currently is the sole source of heat for these areas.

For the Main Building, fresh air is admitted into the building through the unit ventilators (manufactured by Nesbitt) and outside air intakes to air handling equipment. Ventilation air is induced into the spaces through the outside air intake grilles located in the building exterior wall which are ducted to the unit ventilators. The existing unit ventilators have surpassed their service life as they are part of the original building installation, so they should be replaced. The new unit ventilators should be designed for quiet operation and equipped with hot water and chilled water coils, and integral heat exchangers. Ventilation air is provided via operable windows in the auditorium and gymnasium. Ventilation is also provided through the air handling unit systems serving the cafeteria, gymnasium and auditorium, however, the inability to access the building automation system is preventing some of these systems from being operated.

The Main Building uses unit ventilators with steam coils and steam convection in the classrooms and steam console style, sloped top convectors in the hallways, wall mounted heating water convectors in bathrooms and recessed convectors at stairwell entrances to the outdoors. Currently these units are the sole source of heat for these areas. The classrooms are also configured such that over pressurization is mitigated by providing a transfer duct between the classroom space and the corridor. The air is relieved into the corridor and then is transferred to foul air duct risers which terminate at the roof. Foul air risers are located at the end of the corridors. For the Little School House a ceiling mounted air handler with heating, cooling coils and ventilation air serves two classrooms with overhead supply sir distribution and a common return duct system between the two classes. A common return air

sensor controls the units operation. The arrangement is typical of each pair set of classrooms.

The gymnasium in the Main Building is served by a heating and ventilating unit with a steam heating coil. The H & V unit and convectors are part of the original building construction, has exceeded its life expectancy and should be replaced. The H&V unit supplies air to the space through supply diffuser and a low return grille. Additional heating is provided by recessed steam convectors just below the windows. Windows can also be opened for natural ventilation. It is recommended to replace these systems with a roof top mounted unit with an overhead supply air distribution system and return air ductwork and low return intake grilles which would be protected from damage.

The cafeteria in the Main Building is served by unit ventilators with a steam heating coil. The unit ventilators are part of the original building construction, has exceeded its life expectancy and should be replaced. A roof top mounted unit could be provided with heating and cooling coils as well as ventilation to meet the outside air ventilation requirements for the cafeteria seating area. The kitchen is provided with two exhaust hoods. There is no make up air unit to serve the exhaust fans. 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 Little School House multipurpose room is served by an air handler equipped with heating and cooling coils and is located in the main boiler mechanical equipment room. Supply air is distributed by 2x2 louver face diffusers and ducted return air grilles in a lay in ceiling tile.

The auditorium in the Main Building is served by a heating and ventilating unit with a steam heating coil. The H & V unit is part of the original building construction, has exceeded its life expectancy and should be replaced. The H&V unit supplies air to the space through an overhead ducted supply system with concentric round diffusers and low return grilles. Additional heating is provided by wall mounted steam convectors just below the windows. Windows can also be opened for natural ventilation. It is recommended to replace these systems with a roof top mounted unit with a similar overhead supply air distribution system and return air ductwork and low return intake grille.

The IMC in the Main Building is served by a unit ventilators just as the typical classroom is served.

Terminal & Package Units – In the Main Building, there are a few areas which are served by window air conditioning units but predominantly the building does not have cooling systems. There are roof mounted exhaust fans which serve the restrooms. The fans should be replaced. The kitchen hood exhaust fan is also located on the roof. Make up air for the toilet exhaust is transferred via a door grille or transfer duct between the bathroom and the corridor. In the Little School House the restrooms are served by roof mounted exhaust fans.

Controls & Instrumentation – In the Main Building the original pneumatic systems still provide basic control functions. Pneumatic room thermostats drive the unit ventilators, the damper actuators and control valves. There are two simplex reciprocating air compressor, which generate control air for the temperature control system which are located in the boiler room. A commom refrigerated air dryer serves the compressors. The maintenance staff reports temperature control is generally lacking throughout the facility. Potential problems with oil, moisture or dirt in the pneumatic copper tubing can be one source of problems. The small rubber gaskets and tubing connections at control devices can become brittle over time and fail to compound control problems. The pneumatic systems are beyond their service life and require too much attention from the maintenance staff. The original control valves, dampers and pneumatic actuators are over 65 years old and should be replaced. These controls should be converted to DDC. The Little School House control system is DDC.

A new building automation system (BAS) with modern DDC modules and communications network should be installed to serve the HVAC systems in the Main Building to improve reliability and energy efficiency. An interface should be provided with the preferred system in use throughout the District.

Sprinklers - The school building is NOT covered by an automatic sprinkler system, neither the Main Building nor the Annex. Installing a sprinkler system with quick response type heads should reduce insurance costs by providing protection for the property investment. A fire pump may be required depending on the available city water pressure. The kitchen hood in the cafeteria is equipped with an Ansul fire suppression system. The Little School House is sprinklered. The 6” fire service enters through the main boiler mechanical equipment room. The incoming service piping is galvanized,

ELECTRICAL SYSTEMS

MAIN BUILDING

Site Electrical Service is from medium voltage overhead lines on wooden poles along Horrocks St. One pit mounted utility transformer

with medium voltage primary (Voltage level unknown at this time) and 240/120VAC, secondary and at an estimated available power of 150 KVA is installed outside the building for supplying power to facility.

The service entrance to the facility consist of a disconnect switch, utility meter and an old open bus, open switch style distribution panel estimated at 600 ampere is located in the boiler room in the basement of the building. Our observation shows that the existing service entrance and main distribution panel are obsolete, unsafe and does not meet current standard and should be replaced.

Power distribution is accomplished with several lighting/receptacle and power panels located throughout the building. Nine panel boards in corridors and three in Boiler Room. It appears that panel boards with their respective branch circuit breakers have out-lived their useful lives thus are ready candidates for upgrade/replacement.

LITTLE SCHOOL HOUSE

Electrical service and distribution system for the LSH is by 800A, 208/120V, 3PH, 4wire, distribution power panel located in electrical room. This distribution panel, which feeds all of the loads in LSH, is fed from a pad mounted utility transformer located outside of the building near the utility power pole on Horrocks St . The utility meter is located adjacent to the utility transformer. Overall, the distribution system of LSH is in good condition thus no need for upgrading or replacement.

Other assessment

In general there is one receptacle is installed in each corner of the classrooms in main building. Recommendation is to have a minimum of two receptacles on classroom walls but the current installations fall short of this recommendation. In computer room, receptacles are installed on the vertical wire-mold power poles for providing power to the tables located in the middle of the room. The receptacles in LSH classrooms are not of tamper-resistant type. This is in violation of the electrical codes that receptacles that are subject to child access be of either tamper proof or GFCI.

Corridors, classrooms, offices, cafeteria, kitchen and gymnasium in the main building are provided by fluorescent fixtures with T8 lamps and generally are in good condition. However some of the fixture in classrooms are damaged and need to be repaired or replaced in order to make the system fully operational. Boiler Room utilized by industrial fluorescent fixtures with T12 lamps. These fluorescent fixtures are outdated and required to be upgraded. Vapor tight incandescent lighting fixtures are used in crawl space below the building. Our observation shows that the Light guard of the fixtures is removed and has not been replaced. This can be a safety hazard as the exposed bulb is vulnerable to breakage. Auditorium illuminated with pendent mounted cylindrical lighting fixtures with metal halide lamp which have high energy consumption and are difficult to re-lamp thus replacement is required.

Corridors, classrooms and offices in the LSH are provided by fluorescent fixtures with T8 lamps and are in good condition thus no need for replacement. LSH Boiler Room illuminated by industrial fluorescent fixtures with outdated T12 lamps and required to be upgraded.

Fire Alarm System in the main building is of a manual fire alarm system connected to 120V power. The system does not meet the current fire alarm codes therefore it should be replaced. Present Fire Alarm system in LSH is new and complies with minimum requirement of fire alarm code.

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

Separate PA system does not exist. School uses the telephone systems for public announcement. This system is working adequately in both building.

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

Clock and Program system is provided in the both building of the school and functioning properly. 12 inches round type battery clocks are used in the Classrooms, offices, kitchen, gymnasium and other public areas. The clocks are controlled by a wireless clock controller. Batteries on Some clocks are dead and should be replaced with the new batteries.

Television System is not provided in both building.

Main building is provided with security intrusion and video surveillance system and is functioning properly. Our observation shows that the number of the security cameras is not enough for protecting the entire Corridors, kitchen, dining area, library, building entrances and other critical zones. More video surveillance cameras are required to be added to the existing system for monitoring all the areas considered as a critical zone such as the ones mentioned above.

LSH is also provided with security intrusion system and interior building is monitored by adequate video surveillance system. Camera is not provided on LSH exterior walls.

Emergency power system is provided in Main building. One 20KW, 120/208 volts diesel generator made by "Generac" installed in the boiler room. Diesel generator is new and in good condition.

An Uninterruptible Power System (UPS) is provided in IT room.

Emergency Lighting System / Exit Lighting are provided in the main building. Numbers of the lighting fixtures in the corridors are fed by existing backup generator. LSH is provided with emergency battery pack lighting fixtures which are installed in the corridors and at exit doors. Most of the exit sings in both building are not of the battery pack type and should be replaced.

Lightning Protection System at main building is accomplished with a few air terminals mounted on the chimney on the roof and connected to the ground system. Further study is needed to verify that the air terminals provide the proper coverage. Lightning Protection System is not provided in LSH and is not required.

Elevator is not provided in the school

Existing theater lighting and dimming system is accomplished with two rows of spot lights that are turned on and off by branch circuit breakers in a lighting panel located in stage area and not by dimmer. Theater lighting and controller are old and not meet the modern theatrical lighting system. In modern school auditorium, Stage requires front, upstage, high side, backlighting, scenery lighting and controllers by automatic dimmer bank controller. In addition to the stage lights, supplemental fluorescent lighting is also requires to be provided in stage area for lectures and testing. These supplemental lighting could be also turned off automatically by dimmer bank controls during performance.

Sound System in Auditorium is old and not comply with modern multipurpose auditorium sound system requirements recommended by ECE40020 (standard for reinforcement system design) and required to be replaced.

Site Lighting System is adequate. There are sufficient numbers of flood lights are provided around the building. No major deficiencies observed. Building engineer also indicated that they do not have any issue with the exterior lighting system.

Site Video Surveillance system is provided only for main building.

Site Paging System is not provided in the school. School announcement cannot be heard at school play ground.

GROUNDS

The main school is situated on the corners of Horrocks, Eastwood, and Levick Streets; the Little School House is located on Hellerman Street. Children arrive by yellow school bus or they are dropped off by car at the sidewalk or in a circular drop-off driveway located off of Horrock and Hellerman Streets. Using the drop off driveway, students walk across the large asphalt playground into either building. The inspection team was told that due to poor drainage near the main building, puddles form in warm weather and ice forms during winter; puddles were seen during inspection. Drainage needs to be improved near the main building by adding catch basins with repaving to improve sloping of grading to drain water from the building. Some of the concrete sidewalks are cracked or broken and need to be replaced.

The faculty parking area is located on the left side of the drop-off driveway and separated from play areas by a fence. The asphalt pavement is in good condition, but there is minor cracking and a puddle forming in the row of parking between the eastern catch basins; clean out drains and regrade asphalt to prevent puddles and ice from forming. The number of required parking spaces for school staff and faculty is unknown, but the lot was full at the time of inspection.

A steel picket fence encloses the rear playground and parts of the LSH property. The fence and gates are in good condition.

RECOMMENDATIONS

MAIN BUILDING

- Clean and reseal/repaint concrete floor slabs in mechanical rooms, and (3) 2-story stairways, toilet rooms, cafeteria, kitchen (10,000sf)
- Repaint basement walls and ceilings in area of mechanical equipment (3,000sf)
- Repair/repoint cracked masonry exterior walls and failing along lines of lintels joints along first and second floor windows (1,200ft - pointing along lintels)
- Repair exterior vertical masonry expansion joints in Element 3 missing the required caulking (60ft)
- Repair broken and spalling masonry around univents in Element 1; repair masonry cracks (1,200sf)
- Repaint all exterior doors, frames, and replace broken hardware (22) 3'x7'
- Replace rusted gravity vent housings on roof; patch and repair roof as needed (10)
- Rebuild flat areas of roof with ponded water not pitched properly– improve slope (5,000sf)
- Replace all windows with double glazed units (550) 3.5'x7'
- Replace old, broken wood interior doors with new solid core oak doors with safety glass vision panels (for classrooms at corridors) and wood frames with lever handle hardware sets (90) 3'x7'
- Provide security hardware for classrooms and offices locking from inside of room (90 each)
- Provide fire rated walls, doors, and glass in place of non-rated glass walls at stairways including transoms (10 doors and 1,000sf glazing)
- Replace stairway railings with code compliant railings and guards in stairways (250ft)
- Replace flight of stairs to basement with handrails (1)
- Patch, repair, repaint plaster ceilings in auditorium and classrooms where damaged by water (1,000sf)
- Replace VAT with VCT; properly remove and dispose after testing to confirm presence of asbestos in VAT (76,043sf)
- Replace damaged VCT (1000sf)
- Refinish wood floors in gymnasium and stage (3,700sf)
- Repair and repaint damaged corridor and classroom walls (10,000sf)
- Replace marble toilet room partitions without doors (approx. 8 toilet compartments)
- Repair scratched and damaged folding wood auditorium seats (120 chairs)

LITTLE SCHOOL HOUSE

- Repaint rusted steel roof beams in mechanical area (800sf)
- Repaint exterior hollow metal doors (6 3x7)
- Reseal concrete floors in mechanical area (1,400sf)
- Replace cracked and damaged VCT with new VCT; patch concrete slab before replacement (1,200sf)
- Provide security hardware for classrooms and offices, locking from the inside of the room (17)
- Replace broken or vandalilzed exterior security screens on windows (5)
- Repair broken masonry corners at windows at 3 multi-purpose room corners (150sf)
- Replace traffic mats at doors (40sf)
- Repair masonry cracks in classroom wall and outside mechanical area (100sf)
- Repaint all interior door frames (approx. 20 frames = 400sf)
- Replace carpet in offices (1,400sf)

MECHANICAL

- In the Main Building replace all lavatories in the building with lower flow fixtures, as the fixtures are original.
- In the Main Building replace all water closets in the building with lower flow fixtures, as the fixtures are original.
- In the Main Building replace all urinals in the building with lower flow fixtures, as the fixtures are original. In the Main Building replace all urinals in the building with lower flow fixtures, as the fixtures are original.
- In the Main Building 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.
- In the Main Building replace service sinks (janitor sinks) in the building.
- In the Main 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.
- In the Main Building replace the underground storage tank (UST) installed before 2000.
- In the Main Building Add automatic sanitizing chemicals to the stainless steel sink in the cafeteria.
- In the Main Building replace natural gas fired boiler and storage tank with vertical tank type water heaters.
- In the Main Building inspect and replace the original as needed the domestic water piping in the building.
- In the Main Building hire a qualified contractor to examine the steam and condensate piping in service for 54 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.

- In the Annex hire a qualified contractor to examine the heating and chilled water piping in service for 18 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.
- In the Main Building replace duplex fuel oil pumps.
- In the Main Building replace the boiler feedwater system
- In the Main Building replace the two HB Smith 4,850 MBH, steam, cast iron, sectional boilers, model 640 estimated to have been in service since the mid 1990's.
- In the Main Building replace the steam convectors.
- In the Main Building replace exhaust fans.
- In the Main Building 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 exchanger.
- In the Main Building remove the window air conditioning units and install a 250 ton air-cooled chiller on the roof with chilled water distribution piping and pumps located in a mechanical room on the basement level to supply more reliable air conditioning for the building with a much longer service life.
- In the Main Building provide ventilation, heating and cooling for the gymnasium by installing a packaged roof top unit.
- In the Main Building provide ventilation for the corridors at one basement and nine first floor entryways (10 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
- In the Main Building provide ventilation, heating and cooling for the Cafeteria by removing the existing unit ventilators and installing a package rooftop constant volume air handling unit with distribution ductwork and registers.
- In the Main Building provide ventilation, heating and cooling for the Auditorium by removing the existing unit ventilators and installing a package rooftop constant volume air handling unit with distribution ductwork and registers.
- In the Main Building replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency.
- In the Main Building provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- In the Main Building and Annex 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.
- In the Main Building install a new sprinkler system throughout the building.

ELECTRICAL

MAIN BUILDING

- Upgrade the existing electrical service with a new service. Replace the existing switchboard with new 1600A, 480/277V, 3PH, 4 wire switchboards. Provide 225KVA, 480V to 208/120V transformer and 800KVA low voltage distribution panel.
- Install minimum two receptacles on each wall in class rooms. Total 80 receptacles.
- Replace all lighting fixtures with T12 lamps and other damaged fixtures with new fluorescent lighting fixtures with T8 lamps. Estimates 100 lighting fixtures total.
- Replace existing fire alarm system with an automatic fire alarm system including smoke detectors in corridors and other recommended areas per NEC. Install horn/strobes in class rooms, corridors, offices, toilets, library and other recommended areas per codes.
- Replace existing exit sign with battery pack exit signs. Total 30 exit sign.
- Provide lightning protection studies to ascertain adequacy of existing systems.
- Provide new modern stage lighting with automatic dimmer bank controller in the Auditorium
- Provide new sound system per ECE-40020 (standard for reinforcement system design) including a freestanding 19" rack backstage with mixer per amplifiers, digital media recording with playback capability, AM-FM radio, graphic or parametric equalizer, and receivers for wireless microphone.
- Provide additional surveillance cameras where required. Estimated 10 cameras

LITTLE SCHOOL HOUSE

- Replace all existing receptacles with GFCI type receptacle in areas subject to kid access. Estimated 30each.
- Replace existing exit signs with the new exit signs with battery. Total 7 exit sign.

GROUNDS

- Repave damaged sections of concrete walkway at front and rear building entrances (500sf)
- Add catch basins and connect piping to existing underground storm system in playground area and repair and repave sunken

sections of asphalt faculty parking and asphalt play area (2,000sf +6,000sf = 8,000sf)

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 4 / Tm 2
Status:	Accepted by SDP	Team:	Tm 2
Site ID:	S835001		

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	48.14 %	0.00 %	$0.00
A20 - Basement Construction	50.36 %	0.00 %	$0.00
B10 - Superstructure	46.61 %	0.03 %	$3,834.27
B20 - Exterior Enclosure	60.03 %	49.12 %	$3,399,662.41
B30 - Roofing	26.80 %	6.36 %	$222,287.80
C10 - Interior Construction	48.60 %	17.79 %	$547,306.69
C20 - Stairs	34.00 %	62.31 %	$89,736.14
C30 - Interior Finishes	58.72 %	24.47 %	$1,392,786.88
D10 - Conveying	105.71 %	0.00 %	$0.00
D20 - Plumbing	88.97 %	50.57 %	$1,569,115.50
D30 - HVAC	104.91 %	92.92 %	$13,143,890.79
D40 - Fire Protection	95.89 %	139.34 %	$1,461,201.90
D50 - Electrical	95.30 %	16.96 %	$1,267,394.79
E10 - Equipment	41.64 %	5.19 %	$105,028.21
E20 - Furnishings	38.89 %	23.62 %	$63,964.92
G20 - Site Improvements	46.58 %	9.33 %	$254,445.53
G40 - Site Electrical Utilities	16.67 %	0.00 %	$0.00
Totals:	**67.48 %**	**33.74 %**	**$23,520,655.83**

Condition Deficiency Priority

Facility Name	Gross Area (S.F.)	FCI %	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)
B835001;Spruance	102,143	45.14	$6,282,264.98	$8,475,770.13	$2,642,946.38	$161,631.72	$5,608,755.47
B835002;Spruance LSH	25,016	0.64	$22,079.00	$67,290.94	$5,471.68	$0.00	$0.00
G835001;Grounds	207,300	7.01	$0.00	$254,445.53	$0.00	$0.00	$0.00
Total:		**33.74**	**$6,304,343.98**	**$8,797,506.60**	**$2,648,418.06**	**$161,631.72**	**$5,608,755.47**

Deficiencies By Priority

- 1 - Response Time (< 2 yr) - $6,304,343.98
- 2 - Response Time (2-3 yrs) - $8,797,506.60
- 3 - Response Time (3-4 yrs) - $2,648,418.06
- 4 - Response Time (4-5 yrs) - $161,631.72
- 5 - Response Time (> 5 yrs) - $5,608,755.47

Budget Estimate Total: $23,520,655.83

Executive Summary

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

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

Function:	Elementary School
Gross Area (SF):	102,143
Year Built:	1949
Last Renovation:	
Replacement Value:	$51,335,274
Repair Cost:	$23,171,368.68
Total FCI:	45.14 %
Total RSLI:	70.92 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B835001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S835001		

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	34.00 %	0.00 %	$0.00
A20 - Basement Construction	34.00 %	0.00 %	$0.00
B10 - Superstructure	34.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	56.32 %	58.88 %	$3,390,467.91
B30 - Roofing	25.21 %	9.02 %	$222,287.80
C10 - Interior Construction	41.74 %	21.39 %	$536,118.83
C20 - Stairs	34.00 %	62.31 %	$89,736.14
C30 - Interior Finishes	61.77 %	30.23 %	$1,349,712.57
D10 - Conveying	105.71 %	0.00 %	$0.00
D20 - Plumbing	104.48 %	75.23 %	$1,569,115.50
D30 - HVAC	119.44 %	115.68 %	$13,143,890.79
D40 - Fire Protection	105.71 %	177.49 %	$1,461,201.90
D50 - Electrical	109.31 %	20.65 %	$1,239,844.11
E10 - Equipment	37.14 %	6.46 %	$105,028.21
E20 - Furnishings	32.50 %	29.40 %	$63,964.92
Totals:	**70.92 %**	**45.14 %**	**$23,171,368.68**

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.	102,143	100	1949	2049		34.00 %	0.00 %	34			$1,879,431
A1030	Slab on Grade	$7.73	S.F.	102,143	100	1949	2049		34.00 %	0.00 %	34			$789,565
A2010	Basement Excavation	$6.55	S.F.	102,143	100	1949	2049		34.00 %	0.00 %	34			$669,037
A2020	Basement Walls	$12.70	S.F.	102,143	100	1949	2049		34.00 %	0.00 %	34			$1,297,216
B1010	Floor Construction	$75.10	S.F.	102,143	100	1949	2049		34.00 %	0.00 %	34			$7,670,939
B1020	Roof Construction	$13.88	S.F.	102,143	100	1949	2049		34.00 %	0.00 %	34			$1,417,745
B2010	Exterior Walls	$36.91	S.F.	102,143	100	1949	2049		34.00 %	1.92 %	34		$72,240.80	$3,770,098
B2020	Exterior Windows	$18.01	S.F.	102,143	40	1949	1989	2057	105.00 %	179.66 %	42		$3,305,087.49	$1,839,595
B2030	Exterior Doors	$1.45	S.F.	102,143	25	1949	1974	2020	20.00 %	8.87 %	5		$13,139.62	$148,107
B3010105	Built-Up	$37.76	S.F.		20				0.00 %	0.00 %				$0
B3010120	Single Ply Membrane	$38.73	S.F.	63,441	20	2000	2020		25.00 %	8.68 %	5		$213,160.49	$2,457,070
B3010130	Preformed Metal Roofing	$54.22	S.F.		30				0.00 %	0.00 %				$0
B3010140	Shingle & Tile	$38.73	S.F.		25				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.06	S.F.	102,143	20	1949	1969	2037	110.00 %	148.92 %	22		$9,127.31	$6,129
C1010	Partitions	$17.91	S.F.	102,143	100	1949	2049		34.00 %	3.86 %	34		$70,595.69	$1,829,381
C1020	Interior Doors	$3.51	S.F.	102,143	40	1949	1989	2057	105.00 %	122.60 %	42		$439,539.80	$358,522
C1030	Fittings	$3.12	S.F.	102,143	40	1949	1989	2021	15.00 %	8.15 %	6		$25,983.34	$318,686
C2010	Stair Construction	$1.41	S.F.	102,143	100	1949	2049		34.00 %	62.31 %	34		$89,736.14	$144,022

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$13.21	S.F.	102,143	10	1949	1959	2020	50.00 %	7.86 %	5		$106,093.09	$1,349,309
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.	400	10	1949	1959	2027	120.00 %	0.00 %	12			$2,920
C3020412	Terrazzo & Tile	$75.52	S.F.	600	50	1949	1999	2020	10.00 %	0.00 %	5			$45,312
C3020413	Vinyl Flooring	$9.68	S.F.	85,143	20	1949	1969	2037	110.00 %	141.39 %	22		$1,165,336.47	$824,184
C3020414	Wood Flooring	$22.27	S.F.	4,000	25	1949	1974	2028	52.00 %	44.72 %	13		$39,837.68	$89,080
C3020415	Concrete Floor Finishes	$0.97	S.F.	12,000	50	1949	1999	2050	70.00 %	330.29 %	35		$38,445.33	$11,640
C3030	Ceiling Finishes	$20.97	S.F.	102,143	25	1949	1974	2028	52.00 %	0.00 %	13			$2,141,939
D1010	Elevators and Lifts	$1.53	S.F.	102,143	35	1949	1984	2052	105.71 %	0.00 %	37			$156,279
D2010	Plumbing Fixtures	$13.52	S.F.	102,143	35	1949	1984	2055	114.29 %	51.54 %	40		$711,760.08	$1,380,973
D2020	Domestic Water Distribution	$1.68	S.F.	102,143	25	1949	1974	2045	120.00 %	246.85 %	30		$423,594.25	$171,600
D2030	Sanitary Waste	$2.90	S.F.	102,143	25	1949	1974	2045	120.00 %	146.43 %	30		$433,761.17	$296,215
D2040	Rain Water Drainage	$2.32	S.F.	102,143	30	1949	1979	2020	16.67 %	0.00 %	5			$236,972
D3020	Heat Generating Systems	$18.67	S.F.	102,143	35	1949	1984	2055	114.29 %	59.79 %	40		$1,140,277.51	$1,907,010
D3030	Cooling Generating Systems	$24.48	S.F.	102,143	30	1949	1979	2050	116.67 %	65.60 %	35		$1,640,351.06	$2,500,461
D3040	Distribution Systems	$42.99	S.F.	102,143	25	1949	1974	2045	120.00 %	186.10 %	30		$8,172,081.82	$4,391,128
D3050	Terminal & Package Units	$11.60	S.F.	102,143	20	1949	1969	2040	125.00 %	0.00 %	25			$1,184,859
D3060	Controls & Instrumentation	$13.50	S.F.	102,143	20	1949	1969	2040	125.00 %	158.90 %	25		$2,191,180.40	$1,378,931
D4010	Sprinklers	$7.05	S.F.	102,143	35			2052	105.71 %	202.91 %	37		$1,461,201.90	$720,108
D4020	Standpipes	$1.01	S.F.	102,143	35			2052	105.71 %	0.00 %	37			$103,164
D5010	Electrical Service/Distribution	$9.70	S.F.	102,143	30	1949	1979	2047	106.67 %	37.60 %	32		$372,503.16	$990,787
D5020	Lighting and Branch Wiring	$34.68	S.F.	102,143	20	1949	1969	2037	110.00 %	3.58 %	22		$126,727.08	$3,542,319
D5030	Communications and Security	$12.99	S.F.	102,143	15	1949	1964	2032	113.33 %	54.14 %	17		$718,373.75	$1,326,838
D5090	Other Electrical Systems	$1.41	S.F.	102,143	30	1949	1979	2037	73.33 %	15.44 %	22		$22,240.12	$144,022
E1020	Institutional Equipment	$4.82	S.F.	102,143	35	1949	1984	2028	37.14 %	21.33 %	13		$105,028.21	$492,329
E1090	Other Equipment	$11.10	S.F.	102,143	35	1949	1984	2028	37.14 %	0.00 %	13			$1,133,787
E2010	Fixed Furnishings	$2.13	S.F.	102,143	40	1949	1989	2028	32.50 %	29.40 %	13		$63,964.92	$217,565
								Total	**70.92 %**	**45.14 %**			**$23,171,368.68**	**$51,335,274**

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: paint >99%
wood wainscot <1%

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

Note: Concrete – 12,000 (12%)
VCT - 9,000 (9%)
VAT 76,143 (74%)
Carpet 400 (.4%)
Terrazzo/QT 600 (.6%)
Wood 4,000 (4%)

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

Note: Acoustical tile – suspended 2x4 or glued to deck 12x12 40,800 (40%)
exposed painted conc deck or plaster (gym (steel framing), mech, storage, stairs, toilets, classrooms) 61,343 (60%)

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:	**$23,171,369**	**$0**	**$0**	**$0**	**$0**	**$5,402,735**	**$418,581**	**$0**	**$0**	**$0**	**$0**	**$28,992,685**
*** 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	$72,241	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$72,241**
B2020 - Exterior Windows	$3,305,087	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,305,087**
B2030 - Exterior Doors	$13,140	$0	$0	$0	$0	$188,867	$0	$0	$0	$0	$0	**$202,006**
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	$213,160	$0	$0	$0	$0	$3,133,259	$0	$0	$0	$0	$0	**$3,346,420**
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	$9,127	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$9,127**
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	$70,596	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$70,596**

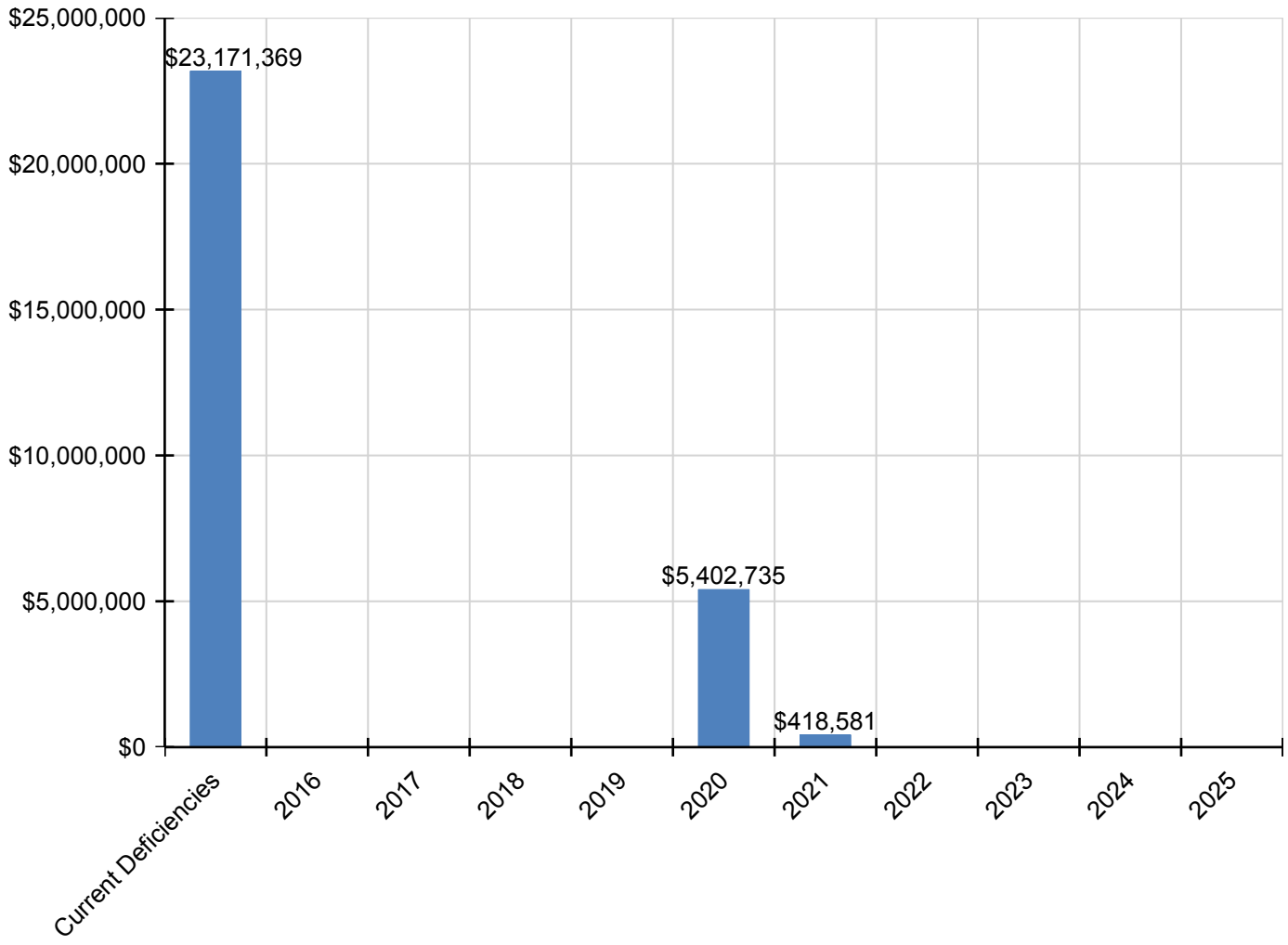
C1020 - Interior Doors	$439,540	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$439,540**
C1030 - Fittings	$25,983	$0	$0	$0	$0	$0	$418,581	$0	$0	$0	$0	**$444,564**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$89,736	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$89,736**
C30 - Interior Finishes	$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	$106,093	$0	$0	$0	$0	$1,720,641	$0	$0	$0	$0	$0	**$1,826,734**
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	$0	$0	$0	$0	$0	$57,782	$0	$0	$0	$0	$0	**$57,782**
C3020413 - Vinyl Flooring	$1,165,336	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,165,336**
C3020414 - Wood Flooring	$39,838	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$39,838**
C3020415 - Concrete Floor Finishes	$38,445	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$38,445**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$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	$711,760	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$711,760**
D2020 - Domestic Water Distribution	$423,594	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$423,594**
D2030 - Sanitary Waste	$433,761	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$433,761**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$302,187	$0	$0	$0	$0	$0	**$302,187**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$1,140,278	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,140,278**
D3030 - Cooling Generating Systems	$1,640,351	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,640,351**
D3040 - Distribution Systems	$8,172,082	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$8,172,082**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$2,191,180	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,191,180**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,461,202	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,461,202**
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	$372,503	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$372,503**
D5020 - Lighting and Branch Wiring	$126,727	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$126,727**
D5030 - Communications and Security	$718,374	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$718,374**
D5090 - Other Electrical Systems	$22,240	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$22,240**
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	$105,028	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$105,028**
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	$63,965	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$63,965**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

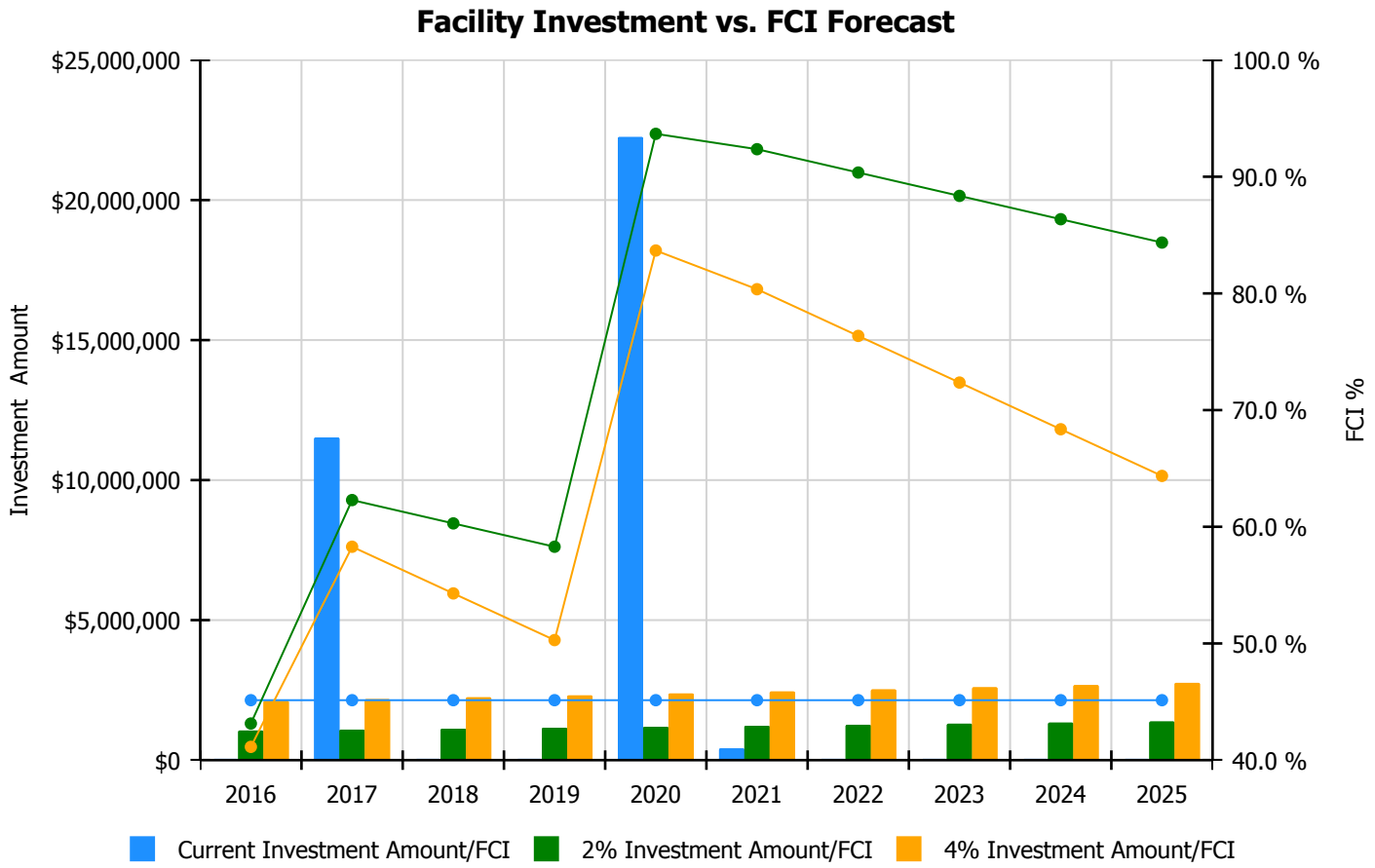
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

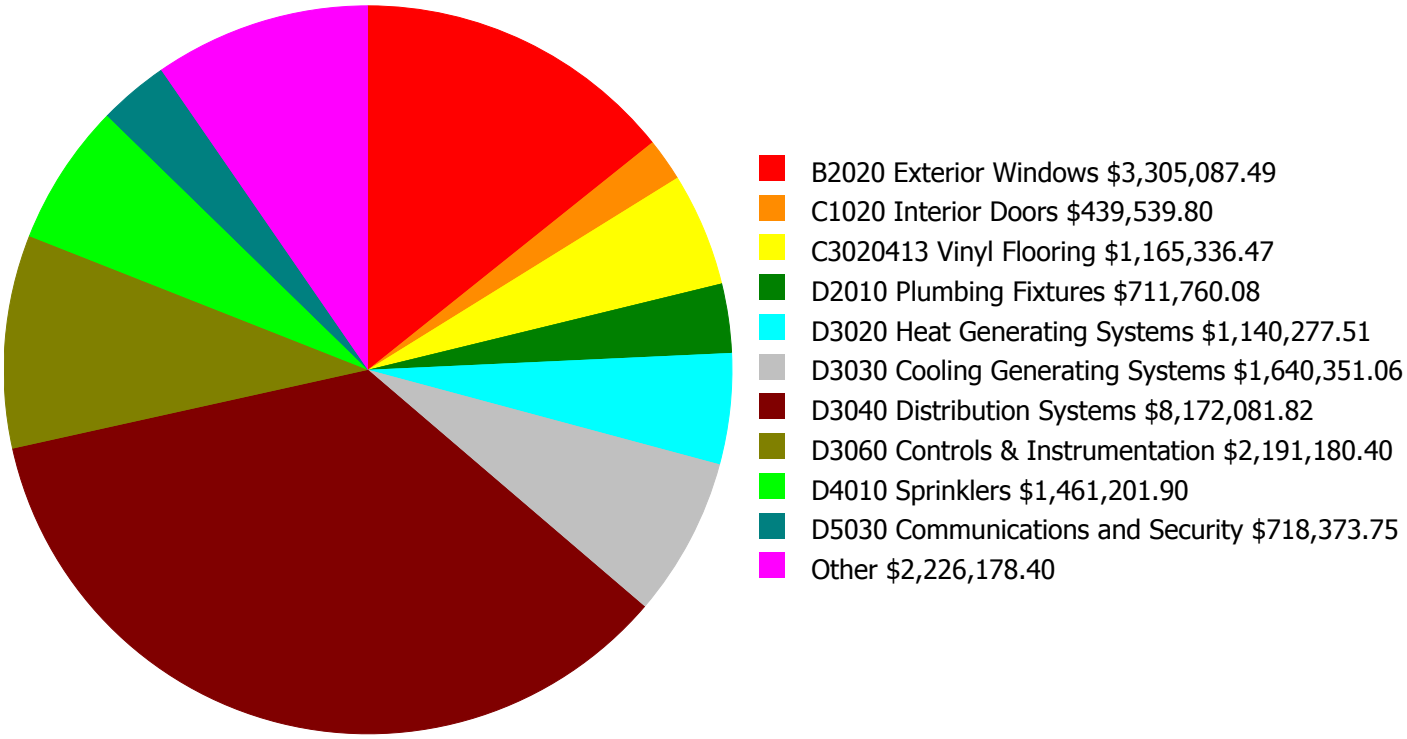
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 45.14%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,057,507.00	43.14 %	$2,115,013.00	41.14 %
2017	$11,519,178	$1,089,232.00	62.29 %	$2,178,464.00	58.29 %
2018	$0	$1,121,909.00	60.29 %	$2,243,818.00	54.29 %
2019	$0	$1,155,566.00	58.29 %	$2,311,132.00	50.29 %
2020	$22,249,647	$1,190,233.00	93.68 %	$2,380,466.00	83.68 %
2021	$418,581	$1,225,940.00	92.36 %	$2,451,880.00	80.36 %
2022	$0	$1,262,718.00	90.36 %	$2,525,436.00	76.36 %
2023	$0	$1,300,600.00	88.36 %	$2,601,200.00	72.36 %
2024	$0	$1,339,618.00	86.36 %	$2,679,236.00	68.36 %
2025	$0	$1,379,806.00	84.36 %	$2,759,613.00	64.36 %
Total:	**$34,187,406**	**$12,123,129.00**		**$24,246,258.00**	

Deficiency Summary by System

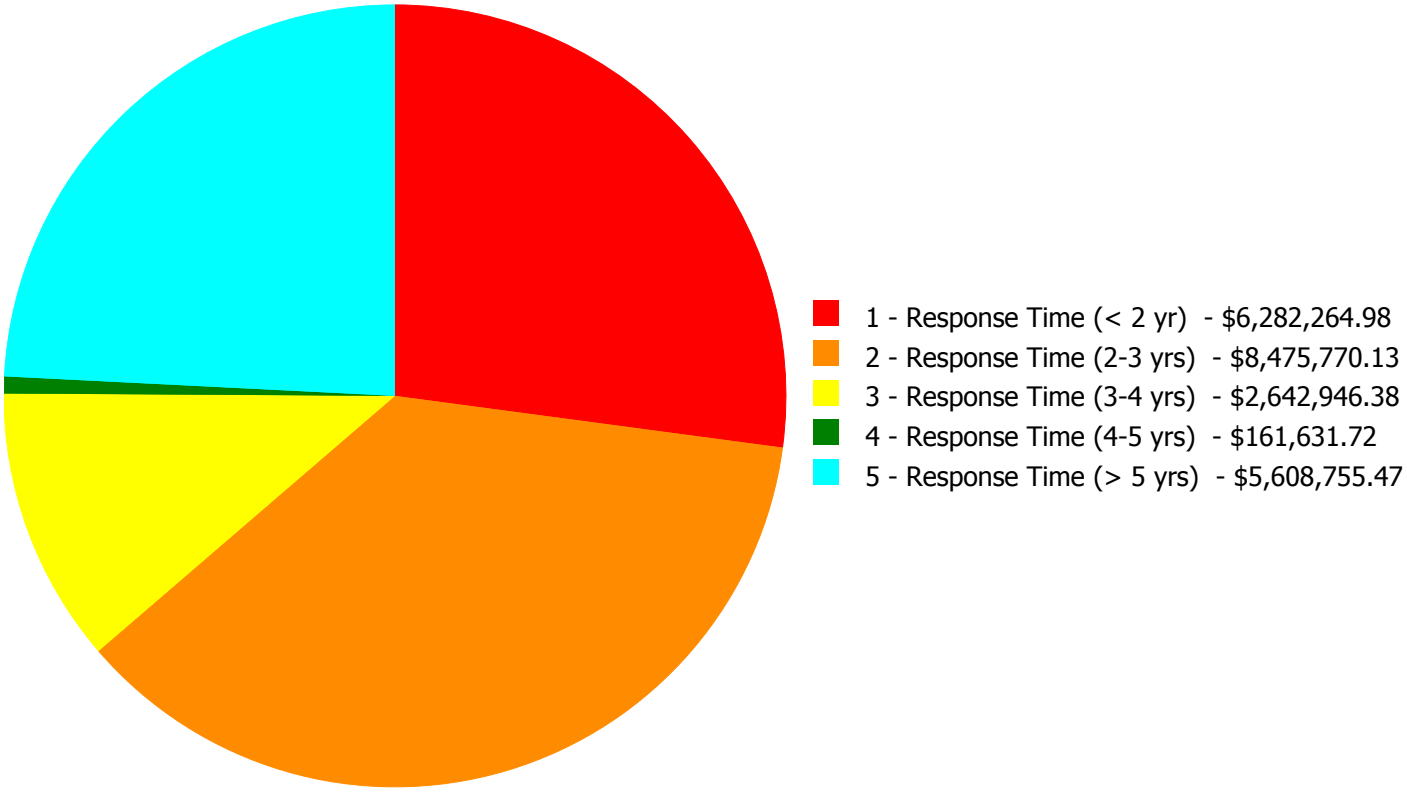
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $23,171,368.68

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: $23,171,368.68

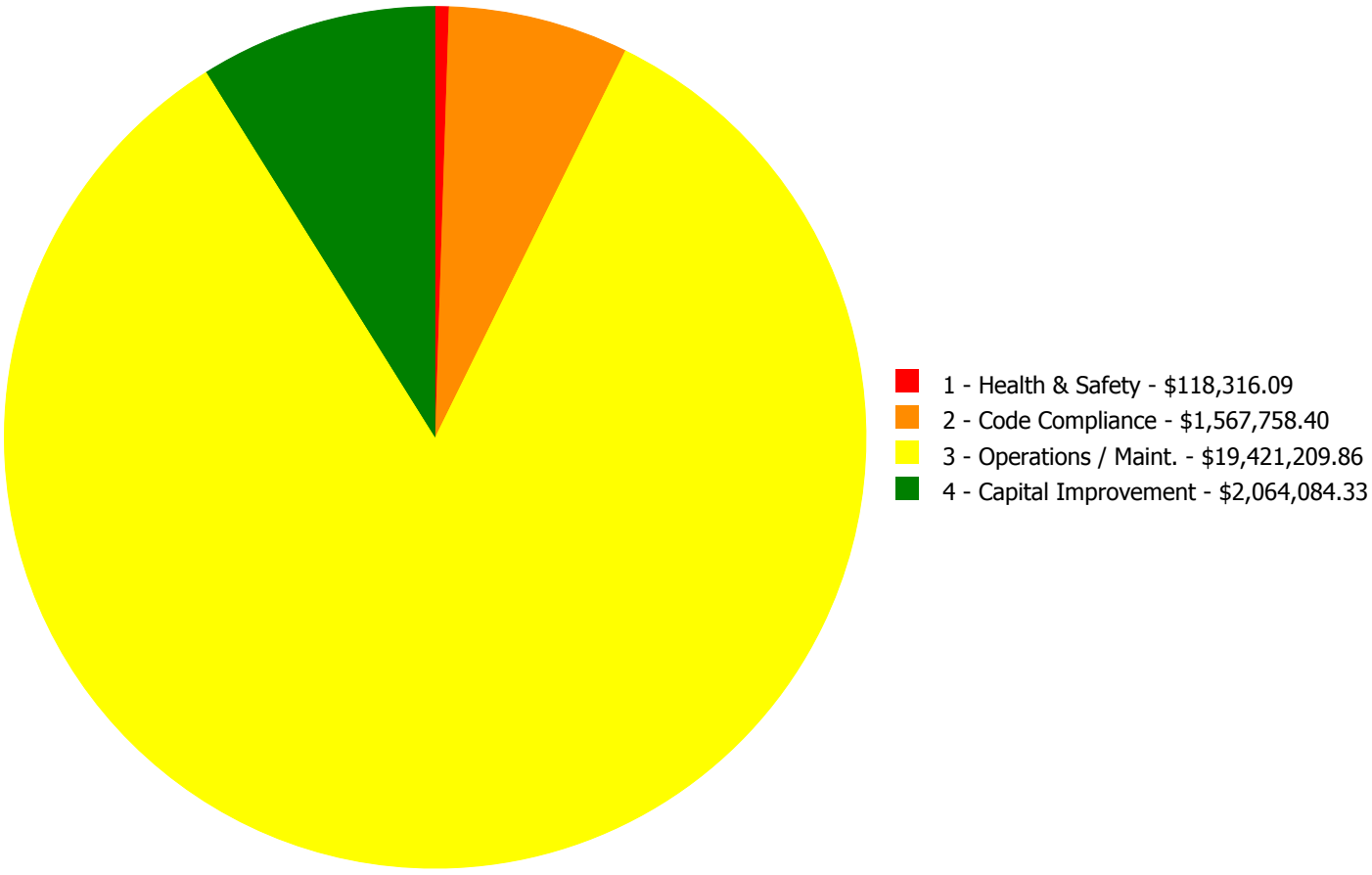
Deficiency By Priority Investment Table

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	$1,203.96	$71,036.84	$0.00	$0.00	$0.00	$72,240.80
B2020	Exterior Windows	$0.00	$3,305,087.49	$0.00	$0.00	$0.00	$3,305,087.49
B2030	Exterior Doors	$0.00	$13,139.62	$0.00	$0.00	$0.00	$13,139.62
B3010120	Single Ply Membrane	$0.00	$213,160.49	$0.00	$0.00	$0.00	$213,160.49
B3020	Roof Openings	$0.00	$0.00	$9,127.31	$0.00	$0.00	$9,127.31
C1010	Partitions	$70,595.69	$0.00	$0.00	$0.00	$0.00	$70,595.69
C1020	Interior Doors	$0.00	$439,539.80	$0.00	$0.00	$0.00	$439,539.80
C1030	Fittings	$0.00	$25,983.34	$0.00	$0.00	$0.00	$25,983.34
C2010	Stair Construction	$35,960.81	$53,775.33	$0.00	$0.00	$0.00	$89,736.14
C3010230	Paint & Covering	$0.00	$106,093.09	$0.00	$0.00	$0.00	$106,093.09
C3020413	Vinyl Flooring	$0.00	$1,165,336.47	$0.00	$0.00	$0.00	$1,165,336.47
C3020414	Wood Flooring	$0.00	$39,837.68	$0.00	$0.00	$0.00	$39,837.68
C3020415	Concrete Floor Finishes	$0.00	$38,445.33	$0.00	$0.00	$0.00	$38,445.33
D2010	Plumbing Fixtures	$0.00	$711,760.08	$0.00	$0.00	$0.00	$711,760.08
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$0.00	$423,594.25	$423,594.25
D2030	Sanitary Waste	$0.00	$0.00	$433,761.17	$0.00	$0.00	$433,761.17
D3020	Heat Generating Systems	$0.00	$101,394.17	$1,012,205.26	$0.00	$26,678.08	$1,140,277.51
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,640,351.06	$1,640,351.06
D3040	Distribution Systems	$4,927,299.00	$0.00	$1,187,852.64	$0.00	$2,056,930.18	$8,172,081.82
D3060	Controls & Instrumentation	$0.00	$2,191,180.40	$0.00	$0.00	$0.00	$2,191,180.40
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$1,461,201.90	$1,461,201.90
D5010	Electrical Service/Distribution	$372,503.16	$0.00	$0.00	$0.00	$0.00	$372,503.16
D5020	Lighting and Branch Wiring	$126,727.08	$0.00	$0.00	$0.00	$0.00	$126,727.08
D5030	Communications and Security	$642,947.07	$0.00	$0.00	$75,426.68	$0.00	$718,373.75
D5090	Other Electrical Systems	$0.00	$0.00	$0.00	$22,240.12	$0.00	$22,240.12
E1020	Institutional Equipment	$105,028.21	$0.00	$0.00	$0.00	$0.00	$105,028.21
E2010	Fixed Furnishings	$0.00	$0.00	$0.00	$63,964.92	$0.00	$63,964.92
	Total:	$6,282,264.98	$8,475,770.13	$2,642,946.38	$161,631.72	$5,608,755.47	$23,171,368.68

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: $23,171,368.68

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: vertical expansion joints

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 60.00

Unit of Measure: L.F.

Estimate: $1,203.96

Assessor Name: System

Date Created: 02/01/2016

Notes: Repair exterior vertical masonry expansion joints in Element 3 missing the required caulking (60ft)

System: C1010 - Partitions

Location: fire rated stair vestibules

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: $70,595.69

Assessor Name: System

Date Created: 02/01/2016

Notes: Provide fire rated walls, doors, and glass in place of non-rated glass walls at stairways including transoms (10 doors and 1,000sf glazing)

System: C2010 - Stair Construction

Location: 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: 250.00

Unit of Measure: L.F.

Estimate: $35,960.81

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace stairway railings with code compliant railings and guards in stairways (250ft)

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 102,143.00

Unit of Measure: S.F.

Estimate: $4,927,299.00

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building 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 exchanger.

System: D5010 - Electrical Service/Distribution

Location: Boiler Room

Distress: Beyond Service Life

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Switchboard

Qty: 1.00

Unit of Measure: Ea.

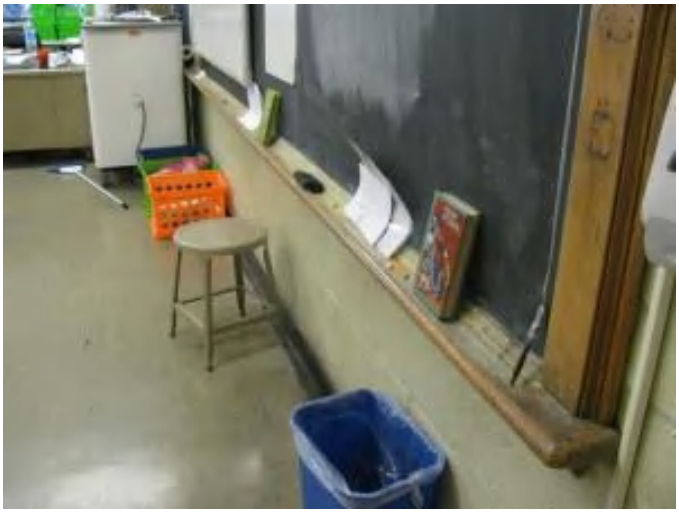
Estimate: $372,503.16

Assessor Name: System

Date Created: 12/29/2015

Notes: Upgrade the existing electrical service with a new service. Replace the existing switchboard with new 1600A, 480/277V, 3PH, 4 wire switchboards. Provide 225KVA, 480V to 208/120V transformer and 800KVA low voltage distribution panel.

System: D5020 - Lighting and Branch Wiring



Location: B835001;Spruance

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add receptacles and branch circuits

Qty: 1.00

Unit of Measure: Ea.

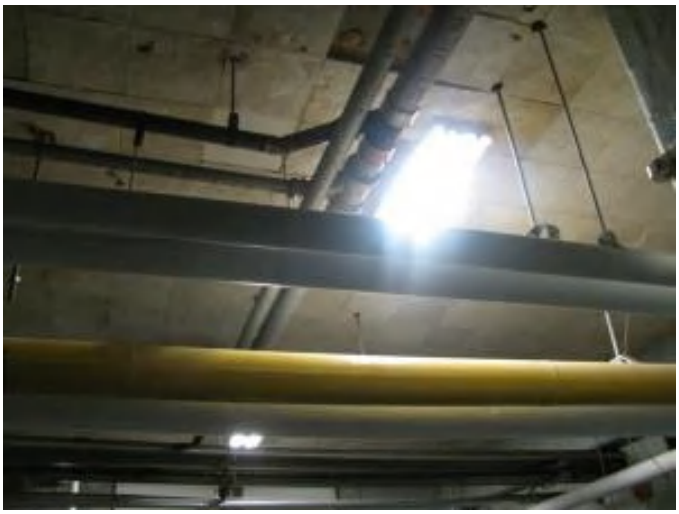
Estimate: $52,046.92

Assessor Name: System

Date Created: 12/29/2015

Notes: Install minimum two receptacles on each wall in class rooms. Total 80 receptacles.

System: D5020 - Lighting and Branch Wiring



Location: Entire Building
Distress: Beyond Service Life
Category: 4 - Capital Improvement
Priority: 1 - Response Time (< 2 yr)
Correction: Replace lighting fixtures
Qty: 1.00
Unit of Measure: Ea.
Estimate: $51,230.11
Assessor Name: System
Date Created: 12/29/2015

Notes: Replace all lighting fixtures with T12 lamps and other damaged fixtures with new fluorescent lighting fixtures with T8 lamps. Estimates 100 lighting fixtures total.

System: D5020 - Lighting and Branch Wiring

Location: Entire Building
Distress: Inadequate
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Replace lighting fixtures
Qty: 1.00
Unit of Measure: Ea.
Estimate: $23,450.05
Assessor Name: System
Date Created: 12/29/2015

Notes: Replace existing exit sign with battery pack exit signs. Total 30 exit sign.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $597,385.95

Assessor Name: System

Date Created: 12/29/2015

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

System: D5030 - Communications and Security

Location: Auditorium

Distress: Inadequate

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Sound System

Qty: 1.00

Unit of Measure: LS

Estimate: $45,561.12

Assessor Name: System

Date Created: 12/29/2015

Notes: Provide new sound system per ECE-40020 (standard for reinforcement system design) including a freestanding 19” rack backstage with mixer per amplifiers, digital media recording with playback capability, AM-FM radio, graphic or parametric equalizer, and receivers for wireless microphone.

System: E1020 - Institutional Equipment

Location: Auditorium

Distress: Inadequate

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $105,028.21

Assessor Name: System

Date Created: 12/29/2015

Notes: Provide new modern stage lighting with automatic dimmer bank controller in the Auditorium

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

System: B2010 - Exterior Walls

Location: univent masonry joints

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 1,200.00

Unit of Measure: S.F.

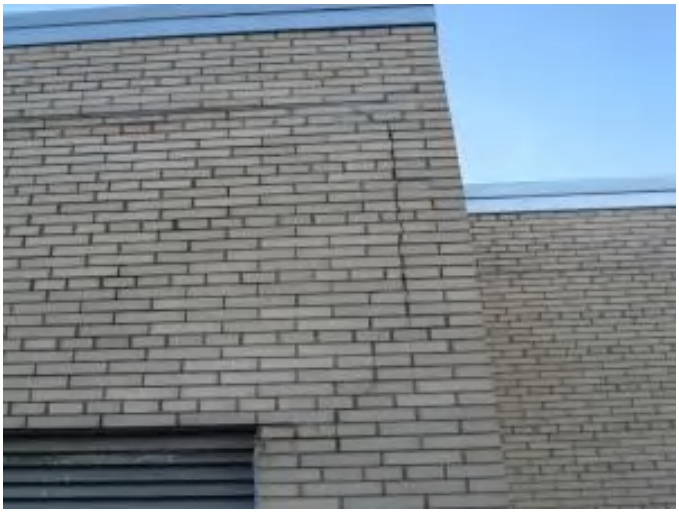
Estimate: $38,747.37

Assessor Name: System

Date Created: 02/01/2016

Notes: Repair broken and spalling masonry around univents in Element 1; repair masonry cracks (1,200sf)

System: B2010 - Exterior Walls



Location: exterior walls above windows

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $32,289.47

Assessor Name: System

Date Created: 02/01/2016

Notes: Repair/repoint cracked masonry exterior walls and failing along lines of lintels joints along first and second floor windows (1,200ft- pointing along lintels)

System: B2020 - Exterior Windows

Location: exterior windows

Distress: Inadequate

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: 550.00

Unit of Measure: Ea.

Estimate: $3,305,087.49

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace all windows with double glazed units (550) 3.5'x7'

System: B2030 - Exterior Doors

Location: exterior doors

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Refinish and repaint exterior doors - per leaf

Qty: 22.00

Unit of Measure: Ea.

Estimate: $13,139.62

Assessor Name: System

Date Created: 02/01/2016

Notes: Repaint all exterior doors, frames, and replace broken hardware (22) 3'x7'

System: B3010120 - Single Ply Membrane

Location: roof

Distress: Inadequate

Category: 3 - Operations / Maint.

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

Correction: Remove and replace membrane roofing

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $213,160.49

Assessor Name: System

Date Created: 02/01/2016

Notes: Rebuild flat areas of roof with ponded water not pitched properly– improve slope (5,000sf)

System: C1020 - Interior Doors

Location: interior doors

Distress: Inadequate

Category: 3 - Operations / Maint.

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

Correction: Remove and replace interior doors - wood doors with wood frame - per leaf

Qty: 90.00

Unit of Measure: Ea.

Estimate: $418,890.51

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace old, broken wood interior doors with new solid core oak doors with safety glass vision panels (for classrooms at corridors) and wood frames with lever handle hardware sets (90) 3'x7'

System: C1020 - Interior Doors

Location: interior corridor doors

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Provide security hardware for classroom and office doors

Qty: 90.00

Unit of Measure: Ea.

Estimate: $20,649.29

Assessor Name: System

Date Created: 02/01/2016

Notes: Provide security hardware for classrooms and offices locking from inside of room (90 each)

System: C1030 - Fittings

Location: toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace damaged toilet paritions - handicap units

Qty: 8.00

Unit of Measure: Ea.

Estimate: $25,983.34

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace marble toilet room partitions without doors (approx. 8 toilet compartments)

System: C2010 - Stair Construction

Location: basement stairs

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace exterior enclosed stair tower egress stairs - per flight of stairs - stairs only

Qty: 1.00

Unit of Measure: Flight

Estimate: $53,775.33

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace flight of stairs to basement with handrails (1)

System: C3010230 - Paint & Covering

Location: corridor walls

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 10,000.00

Unit of Measure: S.F.

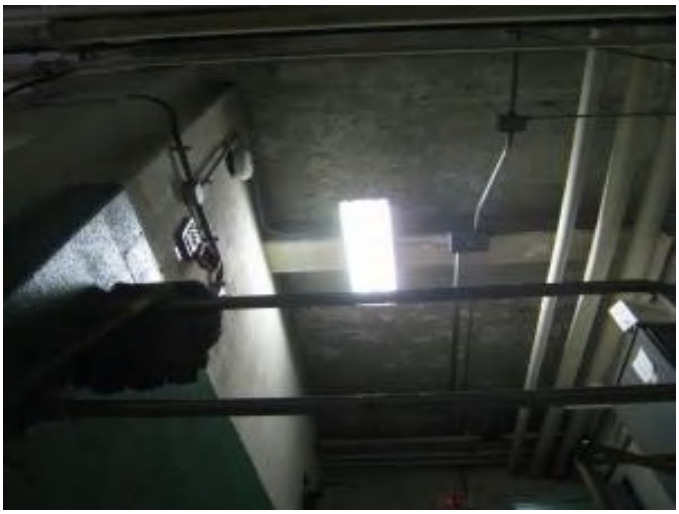
Estimate: $75,020.01

Assessor Name: System

Date Created: 02/01/2016

Notes: Repair and repaint damaged corridor and classroom walls (10,000sf)

System: C3010230 - Paint & Covering



Location: mechanical rooms

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 3,000.00

Unit of Measure: S.F.

Estimate: $22,506.00

Assessor Name: System

Date Created: 02/01/2016

Notes: Repaint basement walls and ceilings in area of mechanical equipment (3,000sf)

System: C3010230 - Paint & Covering

Location: ceilings

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 1,000.00

Unit of Measure: S.F.

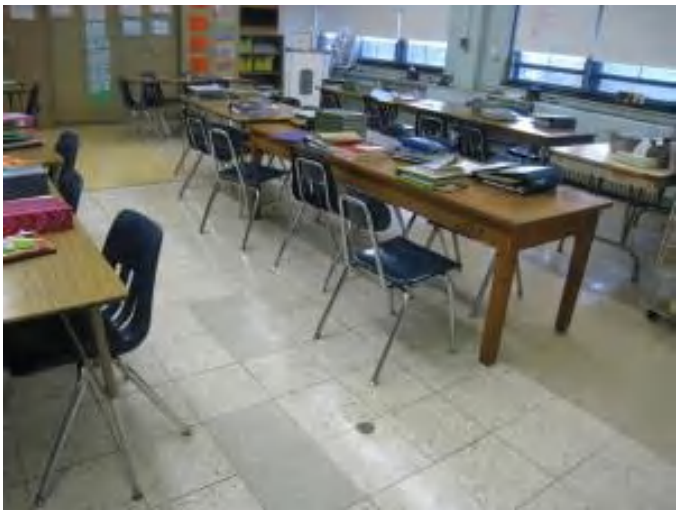
Estimate: $8,567.08

Assessor Name: System

Date Created: 02/01/2016

Notes: Patch, repair, repaint plaster ceilings in auditorium and classrooms where damaged by water (1,000sf)

System: C3020413 - Vinyl Flooring



Location: floors
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove VAT and replace with VCT - SF of area
Qty: 76,043.00
Unit of Measure: S.F.
Estimate: $1,153,318.94
Assessor Name: System
Date Created: 02/01/2016

Notes: Replace VAT with VCT; properly remove and dispose after testing to confirm presence of asbestos in VAT (76,043sf)

System: C3020413 - Vinyl Flooring

Location: floors
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace VCT
Qty: 1,000.00
Unit of Measure: S.F.
Estimate: $12,017.53
Assessor Name: System
Date Created: 02/01/2016

Notes: Replace damaged VCT (1000sf)

System: C3020414 - Wood Flooring

Location: gymnasium and stage floors

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Refinish wood floors

Qty: 3,700.00

Unit of Measure: S.F.

Estimate: $39,837.68

Assessor Name: System

Date Created: 02/01/2016

Notes: Refinish wood floors in gymnasium and stage (3,700sf)

System: C3020415 - Concrete Floor Finishes

Location: mechanical rooms, stairways, toilet rooms

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Clean and reseal concrete floors

Qty: 10,000.00

Unit of Measure: S.F.

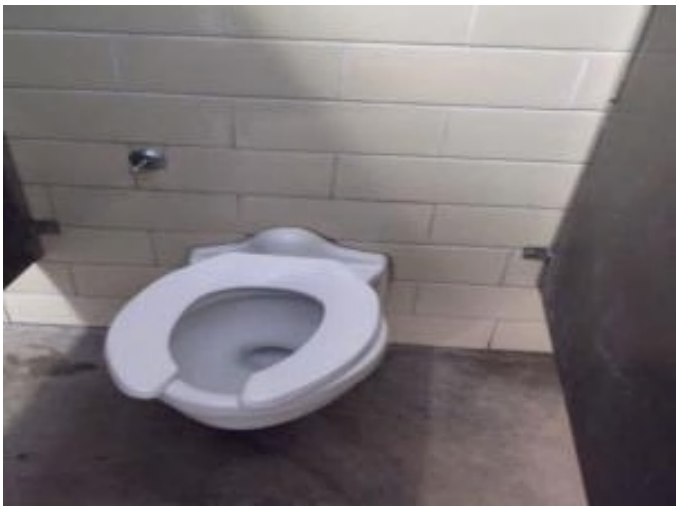
Estimate: $38,445.33

Assessor Name: System

Date Created: 02/01/2016

Notes: Clean and reseal/repaint concrete floor slabs in mechanical rooms, and (3) 2-story stairways, toilet rooms, cafeteria, kitchen (10,000sf)

System: D2010 - Plumbing Fixtures



Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 45.00

Unit of Measure: Ea.

Estimate: $335,796.65

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building replace all water closets in the building with lower flow fixtures, as the fixtures are original.

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace stall or floor type urinal

Qty: 36.00

Unit of Measure: Ea.

Estimate: $187,647.08

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building replace all urinals in the building with lower flow fixtures, as the fixtures are original. In the Main Building replace all urinals in the building with lower flow fixtures, as the fixtures are original.

System: D2010 - Plumbing Fixtures

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 24.00

Unit of Measure: Ea.

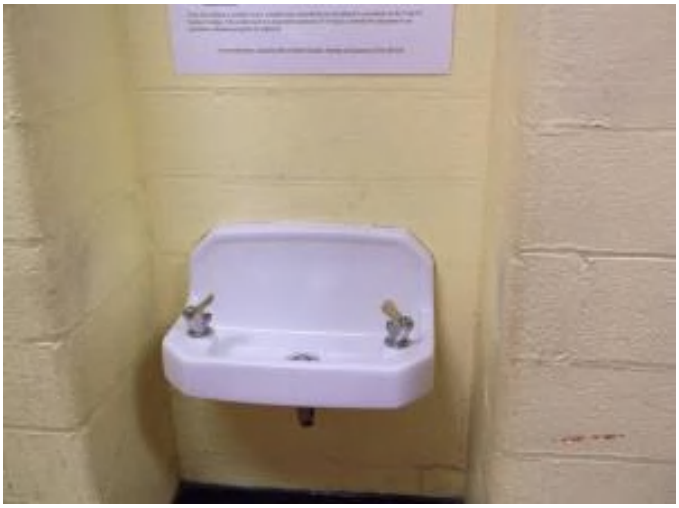
Estimate: $91,464.30

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building 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: 2 - Response Time (2-3 yrs)

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

Qty: 4.00

Unit of Measure: Ea.

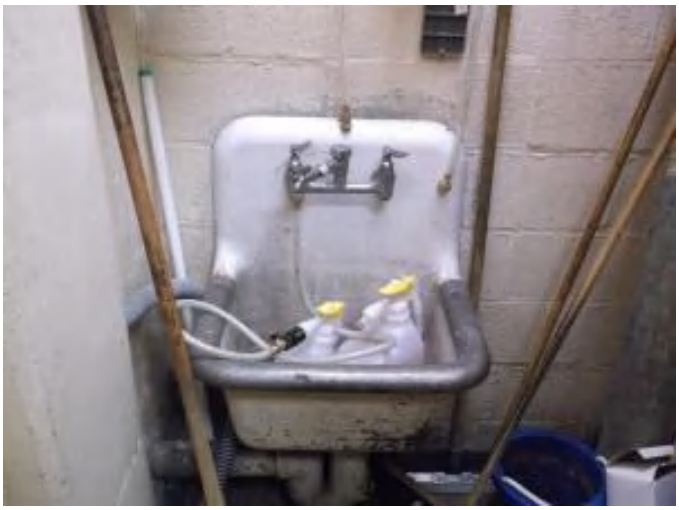
Estimate: $62,771.59

Assessor Name: System

Date Created: 02/08/2016

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

System: D2010 - Plumbing Fixtures



Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 5.00

Unit of Measure: Ea.

Estimate: $34,080.46

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building replace service sinks (janitor sinks) in the building.

System: D3020 - Heat Generating Systems

Location: Main boiler mechanical equipment room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $101,394.17

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building replace the boiler feedwater system

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: 102,143.00

Unit of Measure: S.F.

Estimate: $2,191,180.40

Assessor Name: System

Date Created: 02/08/2016

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

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

System: B3020 - Roof Openings

Location: roof

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

Correction: Remove and replace smoke hatch - select the proper size and insert quantity in the estimate

Qty: 10.00

Unit of Measure: Ea.

Estimate: $9,127.31

Assessor Name: System

Date Created: 02/01/2016

Notes: Replace rusted gravity vent housings on roof; patch and repair roof as needed (10)

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. (+100KSF)

Qty: 102,143.00

Unit of Measure: S.F.

Estimate: $433,761.17

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main 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.

System: D3020 - Heat Generating Systems

Location: Main boiler mechanical equipment room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 2.00

Unit of Measure: Ea.

Estimate: $1,012,205.26

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building replace the two HB Smith 4,850 MBH, steam, cast iron, sectional boilers, model 640 estimated to have been in service since the mid 1990's

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 102,143.00

Unit of Measure: S.F.

Estimate: $966,310.69

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building hire a qualified contractor to examine the steam and condensate piping in service for 54 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

System: D3040 - Distribution Systems

Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace power roof ventilator (24" dia.)

Qty: 5.00

Unit of Measure: Ea.

Estimate: $221,541.95

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building replace exhaust fans.

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

System: D5030 - Communications and Security

Location: Entire Building
Distress: Security Issue
Category: 1 - Health & Safety
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Video Surveillance System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $75,426.68
Assessor Name: System
Date Created: 12/29/2015

Notes: Provide additional surveillance cameras where required. Estimated 10 cameras

System: D5090 - Other Electrical Systems

Location: Roof
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 4 - Response Time (4-5 yrs)
Correction: Provide Lightning Protection System
Qty: 1.00
Unit of Measure: LS
Estimate: $22,240.12
Assessor Name: System
Date Created: 12/29/2015

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

System: E2010 - Fixed Furnishings

Location: auditorium

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Refinish auditorium seating

Qty: 120.00

Unit of Measure: Ea.

Estimate: $63,964.92

Assessor Name: System

Date Created: 02/01/2016

Notes: Repair scratched and damaged folding wood auditorium seats (120 chairs)

Priority 5 - Response Time (> 5 yrs):

System: D2020 - Domestic Water Distribution

Location: Throughout the school
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Replace domestic water piping (150 KSF)
Qty: 102,143.00
Unit of Measure: S.F.
Estimate: $423,594.25
Assessor Name: System
Date Created: 02/08/2016

Notes: In the Main Building inspect and replace the original as needed the domestic water piping in the

System: D3020 - Heat Generating Systems

Location: Main 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: 02/08/2016

Notes: In the Main Building replace duplex fuel oil pumps.

System: D3030 - Cooling Generating Systems

Location: Adjacent to 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: 102,143.00

Unit of Measure: S.F.

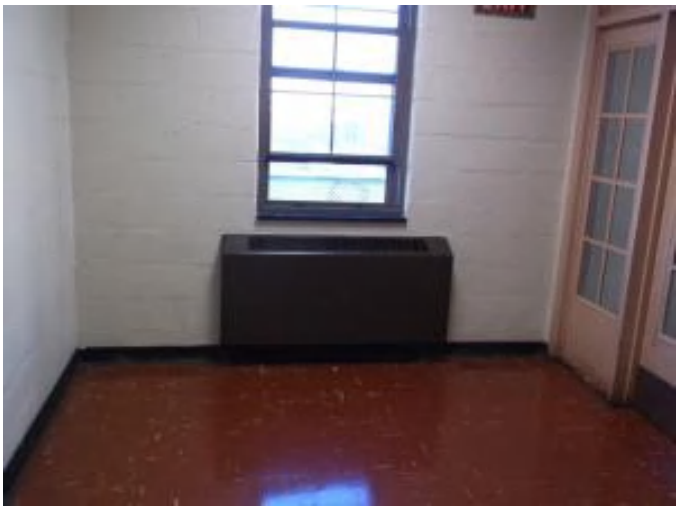
Estimate: $1,640,351.06

Assessor Name: System

Date Created: 02/08/2016

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

System: D3040 - Distribution Systems



Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 10.00

Unit of Measure: C

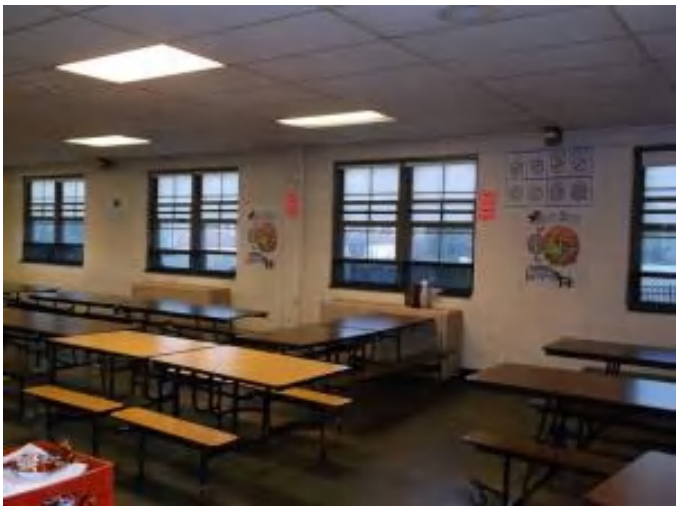
Estimate: $830,609.93

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building provide ventilation for the corridors at one basement and nine first floor entryways (10 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

System: D3040 - Distribution Systems



Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 850.00

Unit of Measure: Student

Estimate: $434,958.00

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building provide ventilation, heating and cooling for the Cafeteria by removing the existing unit ventilators and installing a package rooftop constant volume air handling unit with distribution ductwork and registers.

System: D3040 - Distribution Systems

Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $344,860.27

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building provide ventilation, heating and cooling for the gymnasium by installing a packaged roof top unit.

System: D3040 - Distribution Systems

Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 200.00

Unit of Measure: Seat

Estimate: $285,085.41

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building provide ventilation, heating and cooling for the Auditorium by removing the existing unit ventilators and installing a package rooftop constant volume air handling unit with distribution ductwork and registers.

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace finned tube radiation terminals (per 100 LF)

Qty: 400.00

Unit of Measure: L.F.

Estimate: $161,416.57

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building replace the steam convectors.

System: D4010 - Sprinklers

Location: Throughout the building

Distress: Life Safety / NFPA / PFD

Category: 2 - Code Compliance

Priority: 5 - Response Time (> 5 yrs)

Correction: Install a fire protection sprinkler system

Qty: 102,143.00

Unit of Measure: S.F.

Estimate: $1,461,201.90

Assessor Name: System

Date Created: 02/08/2016

Notes: In the Main Building and Annex 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. In the Main Building install a new sprinkler system throughout the building.

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, steam, gross output, 4720 MBH, includes standard controls and insulated jacket, packaged	2.00	Ea.	Main boiler mechanical equipment room	Weil McLain	2394			35			$103,881.00	$228,538.20
												Total:	**$228,538.20**

Executive Summary

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

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

Function:	Little School House
Gross Area (SF):	25,016
Year Built:	2001
Last Renovation:	
Replacement Value:	$14,748,296
Repair Cost:	$94,841.62
Total FCI:	0.64 %
Total RSLI:	62.49 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B835002
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S835001		

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	86.00 %	0.00 %	$0.00
A20 - Basement Construction	86.00 %	0.00 %	$0.00
B10 - Superstructure	86.00 %	0.13 %	$3,834.27
B20 - Exterior Enclosure	78.34 %	0.79 %	$9,194.50
B30 - Roofing	30.61 %	0.00 %	$0.00
C10 - Interior Construction	78.75 %	1.96 %	$11,187.86
C20 - Stairs	0.00 %	0.00 %	$0.00
C30 - Interior Finishes	47.63 %	3.51 %	$43,074.31
D20 - Plumbing	57.18 %	0.00 %	$0.00
D30 - HVAC	45.58 %	0.00 %	$0.00
D40 - Fire Protection	60.00 %	0.00 %	$0.00
D50 - Electrical	38.09 %	1.87 %	$27,550.68
E10 - Equipment	60.00 %	0.00 %	$0.00
E20 - Furnishings	65.00 %	0.00 %	$0.00
Totals:	**62.49 %**	**0.64 %**	**$94,841.62**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$24.32	S.F.	25,016	100	2001	2101		86.00 %	0.00 %	86			$608,389
A1030	Slab on Grade	$15.51	S.F.	25,016	100	2001	2101		86.00 %	0.00 %	86			$387,998
A2010	Basement Excavation	$13.07	S.F.	25,016	100	2001	2101		86.00 %	0.00 %	86			$326,959
A2020	Basement Walls	$23.02	S.F.	25,016	100	2001	2101		86.00 %	0.00 %	86			$575,868
B1010	Floor Construction	$92.20	S.F.	25,016	100	2001	2101		86.00 %	0.17 %	86		$3,834.27	$2,306,475
B1020	Roof Construction	$24.11	S.F.	25,016	100	2001	2101		86.00 %	0.00 %	86			$603,136
B2010	Exterior Walls	$31.22	S.F.	25,016	100	2001	2101		86.00 %	0.62 %	86		$4,843.44	$781,000
B2020	Exterior Windows	$13.63	S.F.	25,016	40	2001	2041		65.00 %	0.23 %	26		$767.53	$340,968
B2030	Exterior Doors	$1.67	S.F.	25,016	25	2001	2026		44.00 %	8.58 %	11		$3,583.53	$41,777
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.	500	30	2001	2031		53.33 %	0.00 %	16			$27,110
B3010140	Shingle & Tile	$38.73	S.F.	25,441	20	2001	2021		30.00 %	0.00 %	6			$985,330
B3020	Roof Openings	$0.68	S.F.	25,941	20	2001	2021		30.00 %	0.00 %	6			$17,640
C1010	Partitions	$14.93	S.F.	25,016	100	2001	2101		86.00 %	0.00 %	86			$373,489
C1020	Interior Doors	$3.76	S.F.	25,016	40	2001	2041		65.00 %	11.89 %	26		$11,187.86	$94,060
C1030	Fittings	$4.12	S.F.	25,016	40	2001	2041		65.00 %	0.00 %	26			$103,066
C2010	Stair Construction	$1.28	S.F.		100				0.00 %	0.00 %				$0

Site Assessment Report - B835002;Spruance LSH

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$13.21	S.F.	25,016	10	2001	2011	2020	50.00 %	2.30 %	5		$7,603.86	$330,461
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	2001	2011	2027	120.00 %	214.62 %	12		$15,667.06	$7,300
C3020412	Terrazzo & Tile	$75.52	S.F.	2,200	50	2001	2051		72.00 %	0.00 %	36			$166,144
C3020413	Vinyl Flooring	$9.68	S.F.	20,416	20	2001	2021		30.00 %	7.30 %	6		$14,421.04	$197,627
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	1,400	50	2001	2051		72.00 %	396.34 %	36		$5,382.35	$1,358
C3030	Ceiling Finishes	$20.97	S.F.	25,016	25	2001	2026		44.00 %	0.00 %	11			$524,586
D2010	Plumbing Fixtures	$31.58	S.F.	25,016	35	2001	2036		60.00 %	0.00 %	21			$790,005
D2020	Domestic Water Distribution	$2.90	S.F.	25,016	25	2001	2026		44.00 %	0.00 %	11			$72,546
D2030	Sanitary Waste	$2.90	S.F.	25,016	25	2001	2026		44.00 %	0.00 %	11			$72,546
D2040	Rain Water Drainage	$3.29	S.F.	25,016	30	2001	2031		53.33 %	0.00 %	16			$82,303
D3020	Heat Generating Systems	$18.67	S.F.	25,016	35	2001	2036		60.00 %	0.00 %	21			$467,049
D3030	Cooling Generating Systems	$24.48	S.F.	25,016	30	2001	2031		53.33 %	0.00 %	16			$612,392
D3040	Distribution Systems	$42.99	S.F.	25,016	25	2001	2026		44.00 %	0.00 %	11			$1,075,438
D3050	Terminal & Package Units	$11.60	S.F.	25,016	20	2001	2021		30.00 %	0.00 %	6			$290,186
D3060	Controls & Instrumentation	$13.50	S.F.	25,016	20	2001	2021		30.00 %	0.00 %	6			$337,716
D4010	Sprinklers	$8.02	S.F.	25,016	35	2001	2036		60.00 %	0.00 %	21			$200,628
D4020	Standpipes	$0.99	S.F.	25,016	35	2001	2036		60.00 %	0.00 %	21			$24,766
D5010	Electrical Service/Distribution	$9.70	S.F.	25,016	30	2001	2031		53.33 %	0.00 %	16			$242,655
D5020	Lighting and Branch Wiring	$34.68	S.F.	25,016	20	2001	2021		30.00 %	3.18 %	6		$27,550.68	$867,555
D5030	Communications and Security	$12.99	S.F.	25,016	15	2001	2016	2022	46.67 %	0.00 %	7			$324,958
D5090	Other Electrical Systems	$1.41	S.F.	25,016	30	2001	2031		53.33 %	0.00 %	16			$35,273
E1020	Institutional Equipment	$4.82	S.F.	25,016	35	2001	2036		60.00 %	0.00 %	21			$120,577
E1090	Other Equipment	$11.10	S.F.	25,016	35	2001	2036		60.00 %	0.00 %	21			$277,678
E2010	Fixed Furnishings	$2.13	S.F.	25,016	40	2001	2041		65.00 %	0.00 %	26			$53,284
								Total	**62.49 %**	**0.64 %**			**$94,841.62**	**$14,748,296**

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: paint 100%

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

Note: VCT 20,416sf - 82%
CAR 1,000sf (area rugs in classrooms not included) 4%
Conc1,400sf - 6%
CT/QT2,200sf - 8%

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

Note: corridors all ACT = 8,016sf - 32%
Wood deck = 15,600sf - 62%
No ceiling = 1,400sf - 6%

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:	**$94,842**	**$0**	**$0**	**$0**	**$0**	**$421,404**	**$3,541,152**	**$439,623**	**$0**	**$0**	**$0**	**$4,497,021**
*** 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	$3,834	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,834**
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	$4,843	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,843**
B2020 - Exterior Windows	$768	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$768**
B2030 - Exterior Doors	$3,584	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,584**
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	$1,294,189	$0	$0	$0	$0	**$1,294,189**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$23,169	$0	$0	$0	$0	**$23,169**
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**

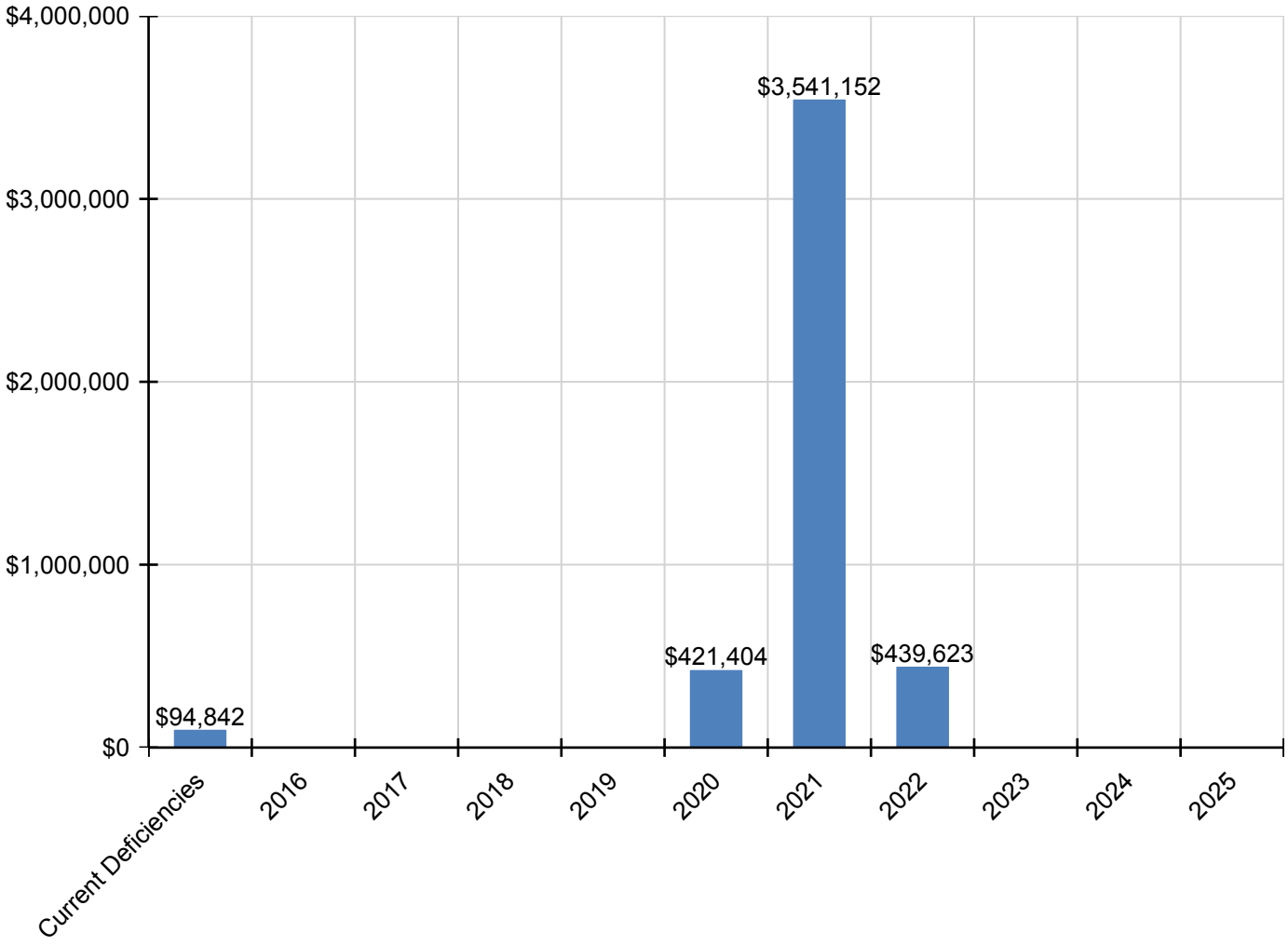
C1020 - Interior Doors	$11,188	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$11,188**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$7,604	$0	$0	$0	$0	$421,404	$0	$0	$0	$0	$0	**$429,008**
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	$15,667	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$15,667**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$14,421	$0	$0	$0	$0	$0	$259,575	$0	$0	$0	$0	**$273,996**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$5,382	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$5,382**
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	$381,146	$0	$0	$0	$0	**$381,146**
D3060 - Controls & Instrumentation	$0	$0	$0	$0	$0	$0	$443,576	$0	$0	$0	$0	**$443,576**
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	$27,551	$0	$0	$0	$0	$0	$1,139,496	$0	$0	$0	$0	**$1,167,047**
D5030 - Communications and Security	$0	$0	$0	$0	$0	$0	$0	$439,623	$0	$0	$0	**$439,623**
D5090 - Other Electrical Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

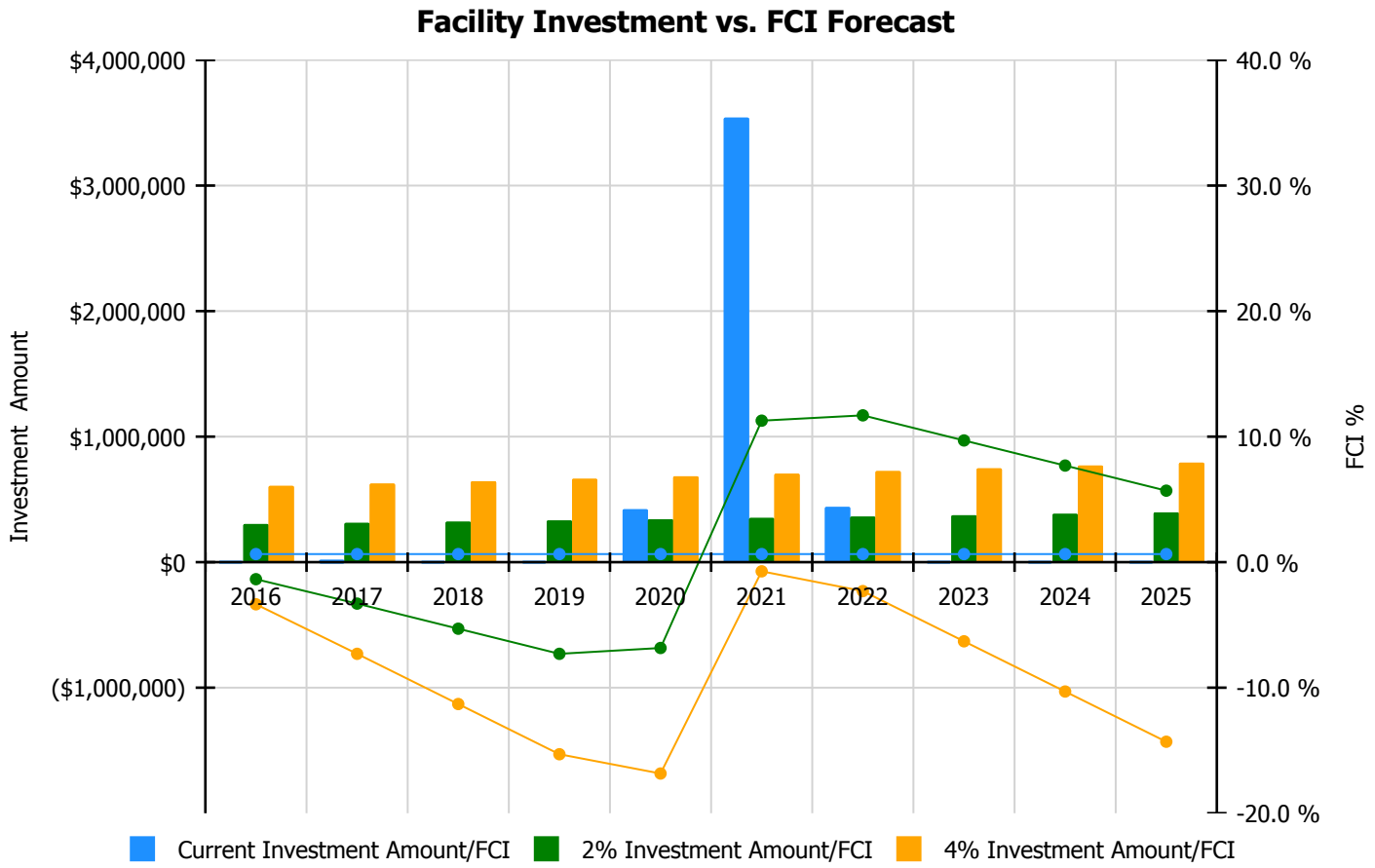
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

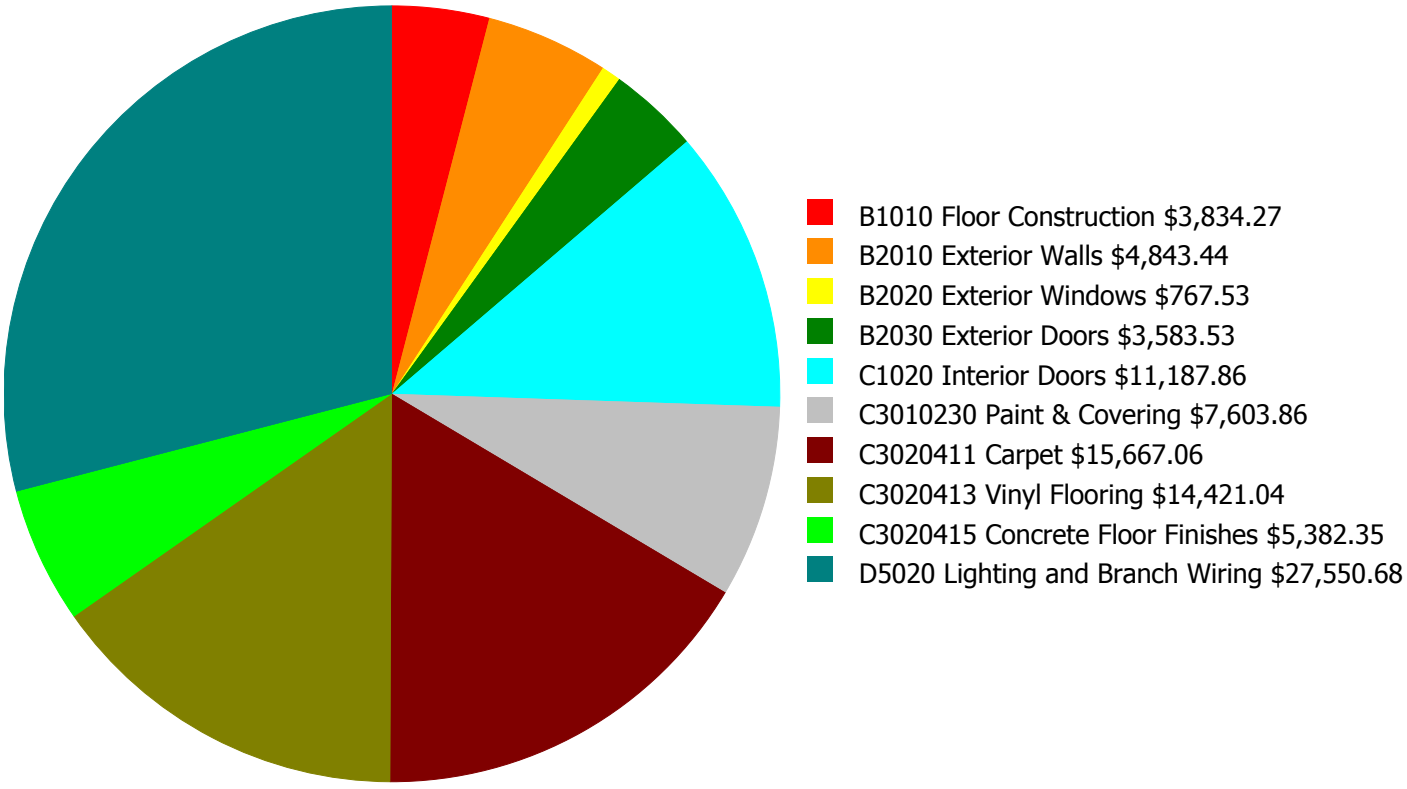
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 0.64%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$303,815.00	-1.36 %	$607,630.00	-3.36 %
2017	$8,519	$312,929.00	-3.30 %	$625,859.00	-7.30 %
2018	$0	$322,317.00	-5.30 %	$644,634.00	-11.30 %
2019	$0	$331,987.00	-7.30 %	$663,973.00	-15.30 %
2020	$421,404	$341,946.00	-6.84 %	$683,893.00	-16.84 %
2021	$3,541,152	$352,205.00	11.27 %	$704,409.00	-0.73 %
2022	$439,623	$362,771.00	11.69 %	$725,542.00	-2.31 %
2023	$0	$373,654.00	9.69 %	$747,308.00	-6.31 %
2024	$0	$384,864.00	7.69 %	$769,727.00	-10.31 %
2025	$0	$396,410.00	5.69 %	$792,819.00	-14.31 %
Total:	**$4,410,699**	**$3,482,898.00**		**$6,965,794.00**	

Deficiency Summary by System

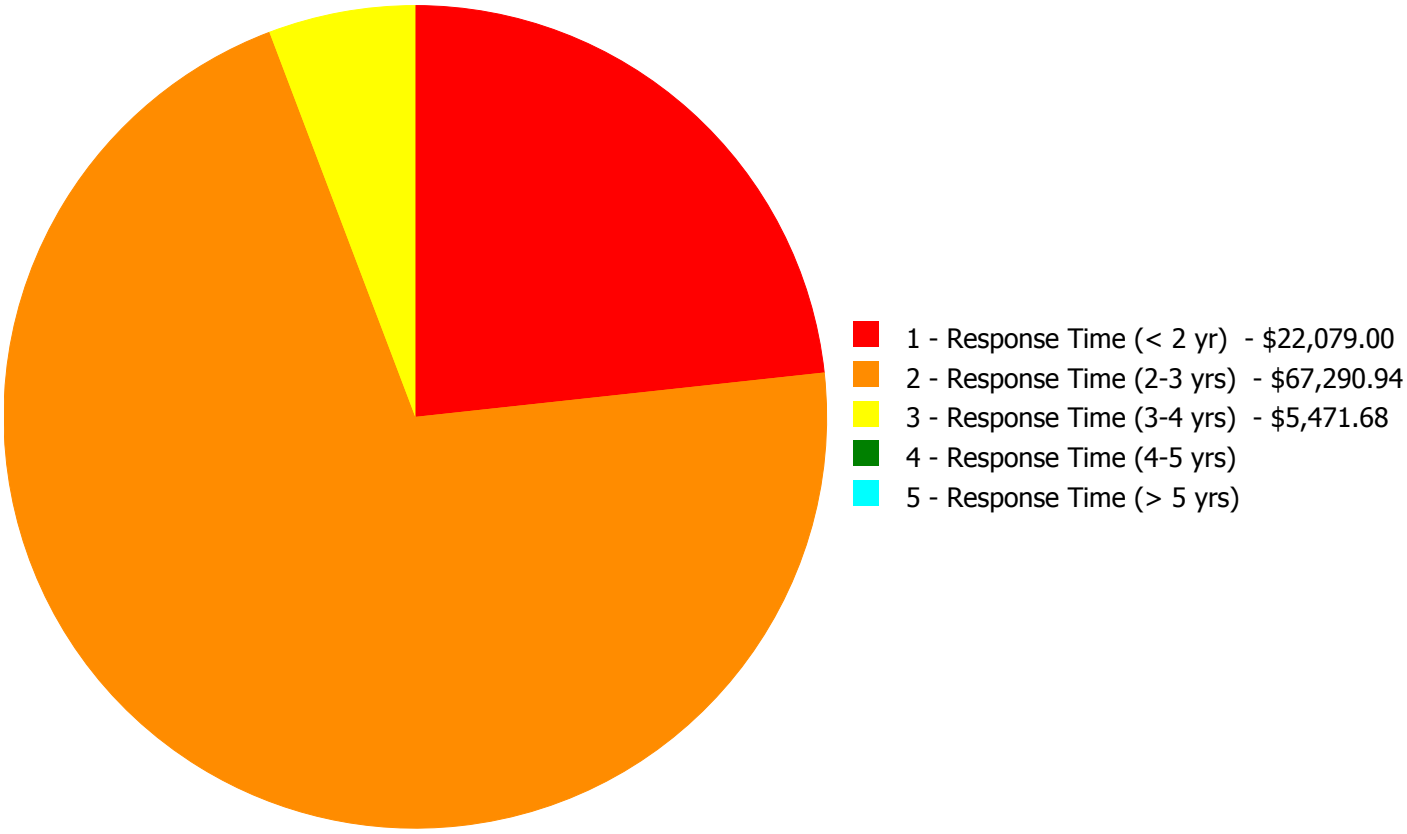
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $94,841.62

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: $94,841.62

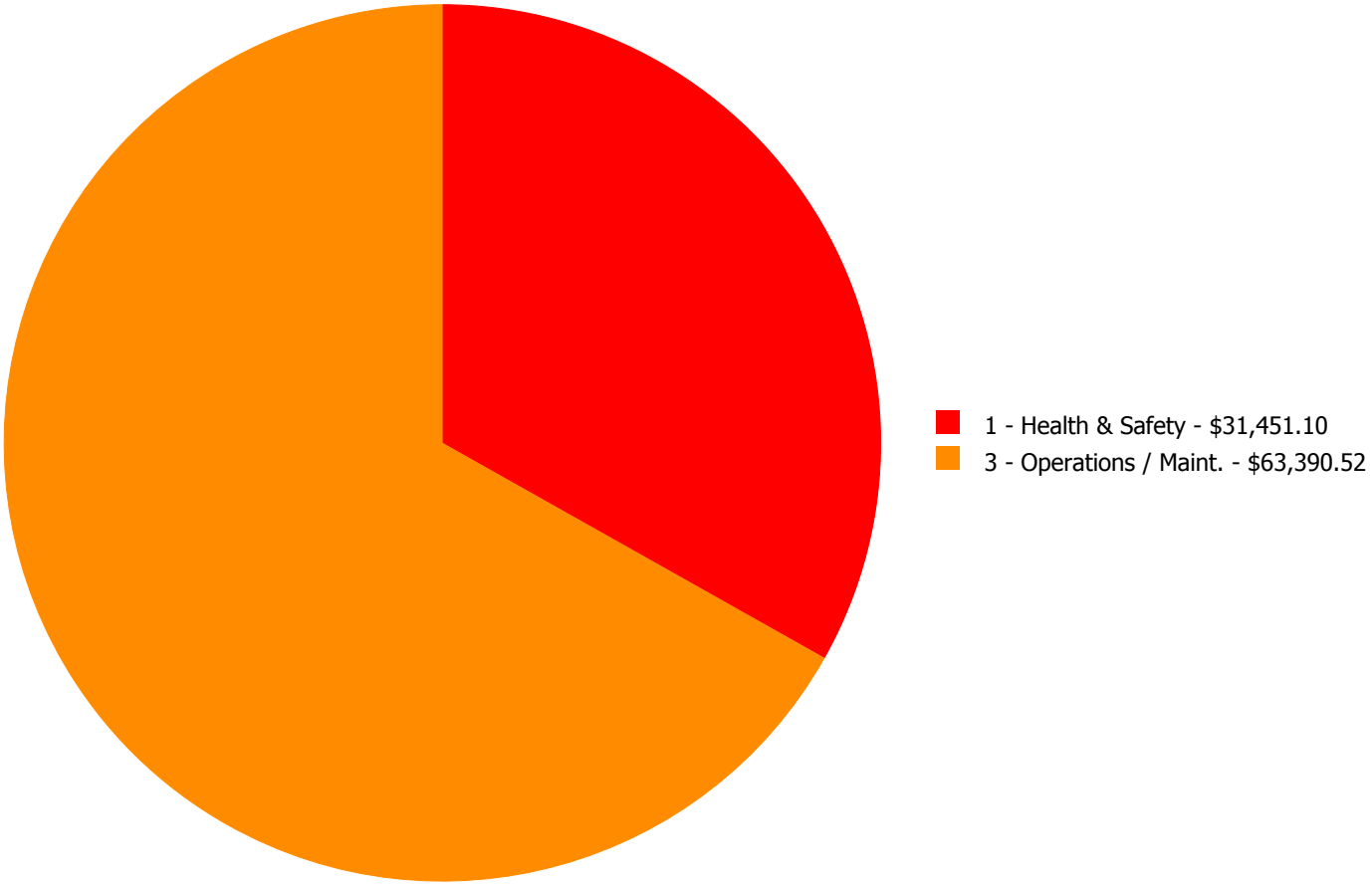
Deficiency By Priority Investment Table

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
B1010	Floor Construction	$0.00	$3,834.27	$0.00	$0.00	$0.00	$3,834.27
B2010	Exterior Walls	$0.00	$4,843.44	$0.00	$0.00	$0.00	$4,843.44
B2020	Exterior Windows	$0.00	$767.53	$0.00	$0.00	$0.00	$767.53
B2030	Exterior Doors	$0.00	$3,583.53	$0.00	$0.00	$0.00	$3,583.53
C1020	Interior Doors	$0.00	$11,187.86	$0.00	$0.00	$0.00	$11,187.86
C3010230	Paint & Covering	$0.00	$7,603.86	$0.00	$0.00	$0.00	$7,603.86
C3020411	Carpet	$0.00	$15,667.06	$0.00	$0.00	$0.00	$15,667.06
C3020413	Vinyl Flooring	$0.00	$14,421.04	$0.00	$0.00	$0.00	$14,421.04
C3020415	Concrete Floor Finishes	$0.00	$5,382.35	$0.00	$0.00	$0.00	$5,382.35
D5020	Lighting and Branch Wiring	$22,079.00	$0.00	$5,471.68	$0.00	$0.00	$27,550.68
	Total:	$22,079.00	$67,290.94	$5,471.68	$0.00	$0.00	$94,841.62

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: $94,841.62

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: D5020 - Lighting and Branch Wiring

Location: Classrooms

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Add wiring device

Qty: 1.00

Unit of Measure: Ea.

Estimate: $22,079.00

Assessor Name: Craig Anding

Date Created: 12/29/2015

Notes: Replace all existing receptacles with GFCI type receptacle in areas subject to kid access. Estimated 30each.

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

System: B1010 - Floor Construction

Location: vestibule floor grating

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace metal floor grate or traffic mat

Qty: 40.00

Unit of Measure: S.F.

Estimate: $3,834.27

Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Replace traffic mats at doors (40sf)

System: B2010 - Exterior Walls

Location: brick below MPR windows

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: 150.00

Unit of Measure: S.F.

Estimate: $4,843.44

Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Repair broken masonry corners at windows at 3 multi-purpose room corners (150sf)

System: B2020 - Exterior Windows

Location: exterior windows - security screens

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace security screens

Qty: 5.00

Unit of Measure: S.F.

Estimate: $767.53

Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Replace broken or vandalilzed exterior security screens on windows (5)

System: B2030 - Exterior Doors

Location: exterior doors

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Refinish and repaint exterior doors - per leaf

Qty: 6.00

Unit of Measure: Ea.

Estimate: $3,583.53

Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Repaint exterior hollow metal doors (6 3x7)

System: C1020 - Interior Doors

Location: interior door frames

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Repair and repaint HM door frames - per frame

Qty: 20.00

Unit of Measure: Ea.

Estimate: $7,287.44

Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Repaint all interior door frames (approx. 20 frames = 400sf)

System: C1020 - Interior Doors

Location: corridor doors

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Provide security hardware for classroom and office doors

Qty: 17.00

Unit of Measure: Ea.

Estimate: $3,900.42

Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Provide security hardware for classrooms and offices, locking from the inside of the room (17)

System: C3010230 - Paint & Covering

Location: beams in mechanical area

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 800.00

Unit of Measure: S.F.

Estimate: $6,853.66

Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Repaint rusted steel roof beams in mechanical area (800sf)

System: C3010230 - Paint & Covering

Location: block wall in mechanical area

Distress: Damaged

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: 100.00

Unit of Measure: S.F.

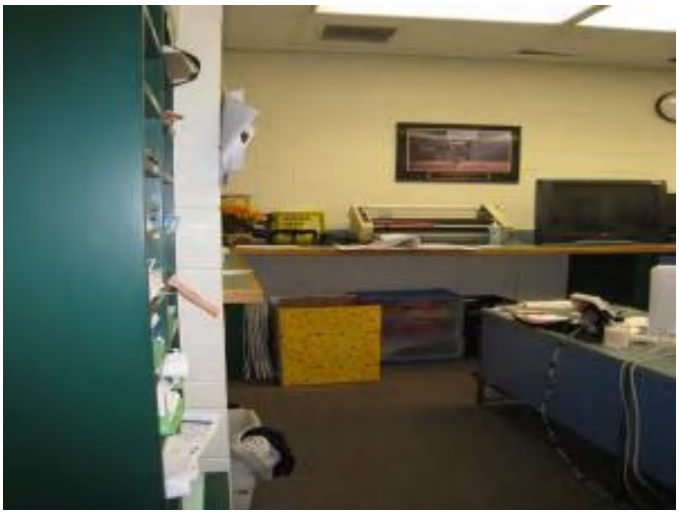
Estimate: $750.20

Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Repair masonry cracks in classroom wall and outside mechanical area (100sf)

System: C3020411 - Carpet



Location: offices

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace carpet

Qty: 1,400.00

Unit of Measure: S.F.

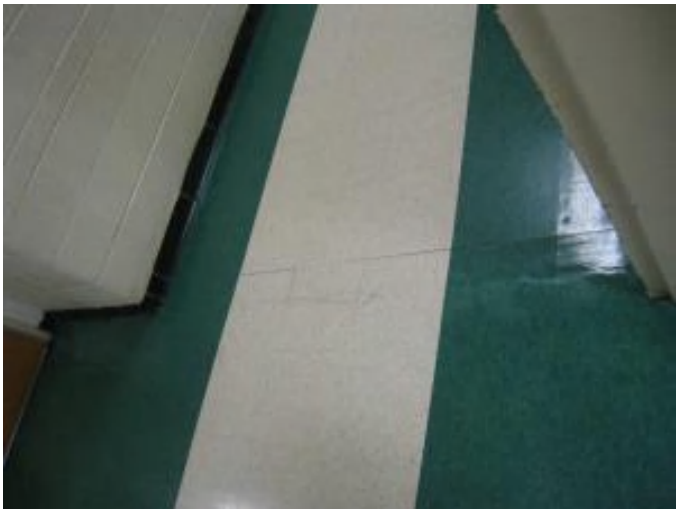
Estimate: $15,667.06

Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Replace carpet in offices (1,400sf)

System: C3020413 - Vinyl Flooring



Location: floors

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace VCT

Qty: 1,200.00

Unit of Measure: S.F.

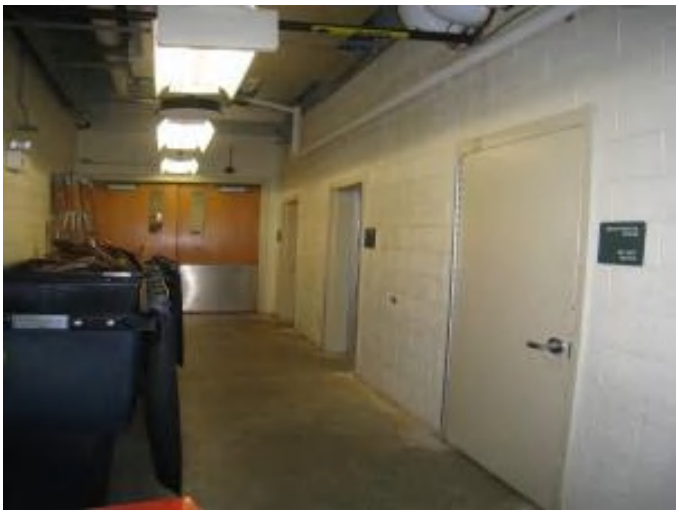
Estimate: $14,421.04

Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Replace cracked and damaged VCT with new VCT; patch concrete slab before replacement (1,200sf)

System: C3020415 - Concrete Floor Finishes



Location: mechanical area floors

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Clean and reseal concrete floors

Qty: 1,400.00

Unit of Measure: S.F.

Estimate: $5,382.35

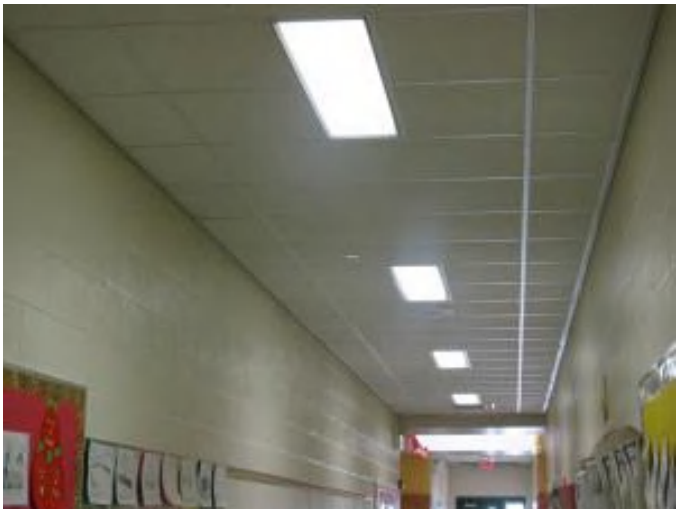
Assessor Name: Craig Anding

Date Created: 02/01/2016

Notes: Reseal concrete floors in mechanical area (1,400sf)

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

System: D5020 - Lighting and Branch Wiring



Location: Entire Building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace lighting fixtures

Qty: 1.00

Unit of Measure: Ea.

Estimate: $5,471.68

Assessor Name: Craig Anding

Date Created: 12/29/2015

Notes: Replace existing exit sign with battery pack exit signs. Total 7 exit sign.

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 1460 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Main boiler mechanical equipment room	Weil McLain	19s/w8			35			$55,514.90	$122,132.78
D3030 Cooling Generating Systems	Chiller, reciprocating, air cooled, standard controls, 80 ton	1.00	Ea.	Adjacent to building	York	YCAL0080SC17			30			$90,207.10	$99,227.81
												Total:	**$221,360.59**

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):	207,300
Year Built:	1949
Last Renovation:	2001
Replacement Value:	$3,629,433
Repair Cost:	$254,445.53
Total FCI:	7.01 %
Total RSLI:	39.14 %

Description:

Attributes:

General Attributes:

Bldg ID:	S835001	Site ID:	S835001

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	46.58 %	9.33 %	$254,445.53
G40 - Site Electrical Utilities	16.67 %	0.00 %	$0.00
Totals:	**39.14 %**	**7.01 %**	**$254,445.53**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$7.65	S.F.	29,200	30	2001	2031		53.33 %	0.00 %	16			$223,380
G2030	Pedestrian Paving	$11.52	S.F.	119,800	40	2001	2041		65.00 %	0.52 %	26		$7,191.43	$1,380,096
G2040	Site Development	$4.36	S.F.	207,300	25	1949	1974	2020	20.00 %	27.36 %	5		$247,254.10	$903,828
G2050	Landscaping & Irrigation	$3.78	S.F.	58,300	15	1949	1964	2020	33.33 %	0.00 %	5			$220,374
G4020	Site Lighting	$3.58	S.F.	207,300	30	1949	1979	2020	16.67 %	0.00 %	5			$742,134
G4030	Site Communications & Security	$0.77	S.F.	207,300	30	1949	1979	2020	16.67 %	0.00 %	5			$159,621
								Total	**39.14 %**	**7.01 %**			**$254,445.53**	**$3,629,433**

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.

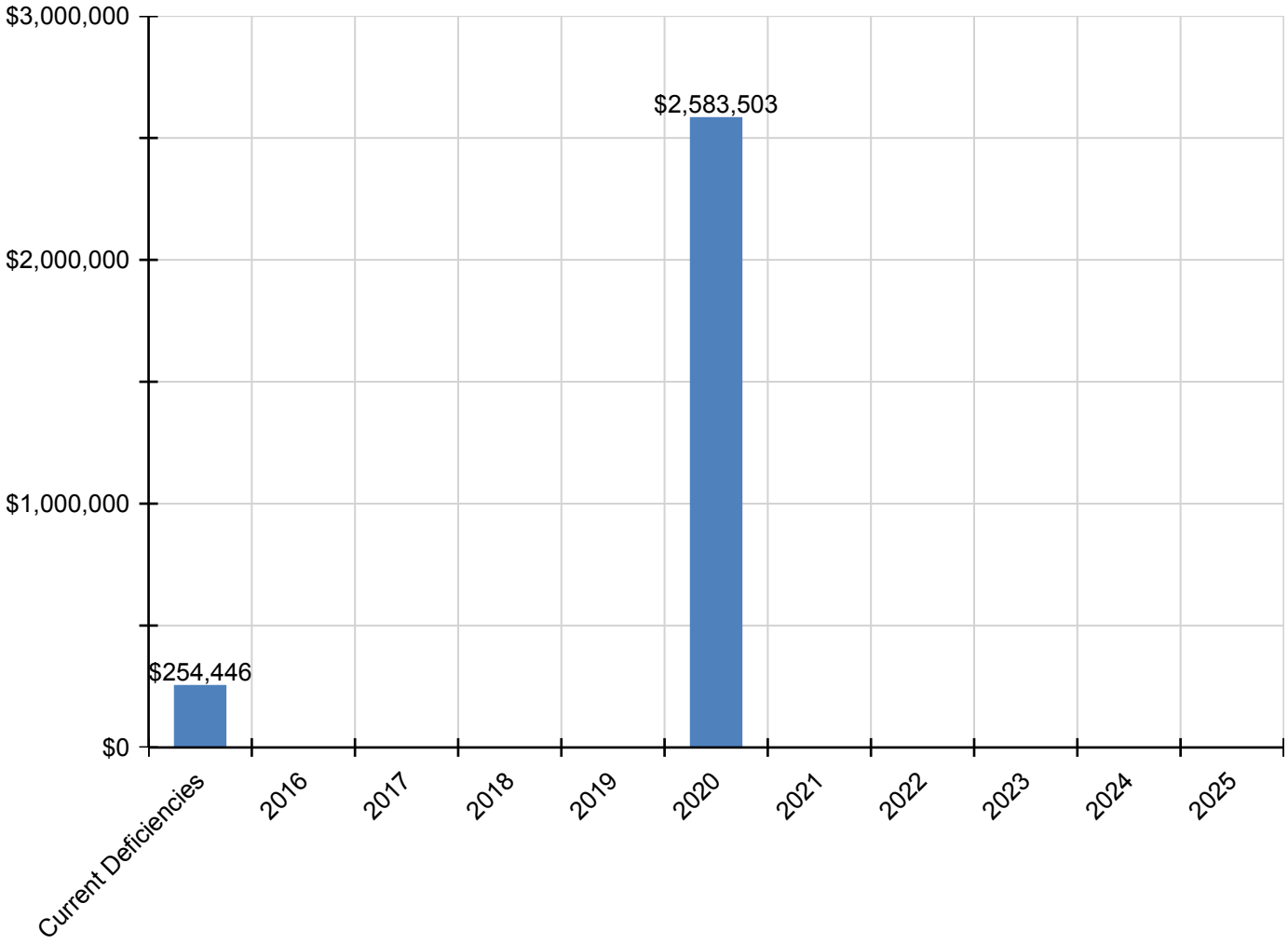
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$254,446**	**$0**	**$0**	**$0**	**$0**	**$2,583,503**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,837,948**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2030 - Pedestrian Paving	$7,191	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$7,191**
G2040 - Site Development	$247,254	$0	$0	$0	$0	$1,152,563	$0	$0	$0	$0	$0	**$1,399,817**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$281,021	$0	$0	$0	$0	$0	**$281,021**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$946,370	$0	$0	$0	$0	$0	**$946,370**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$203,549	$0	$0	$0	$0	$0	**$203,549**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

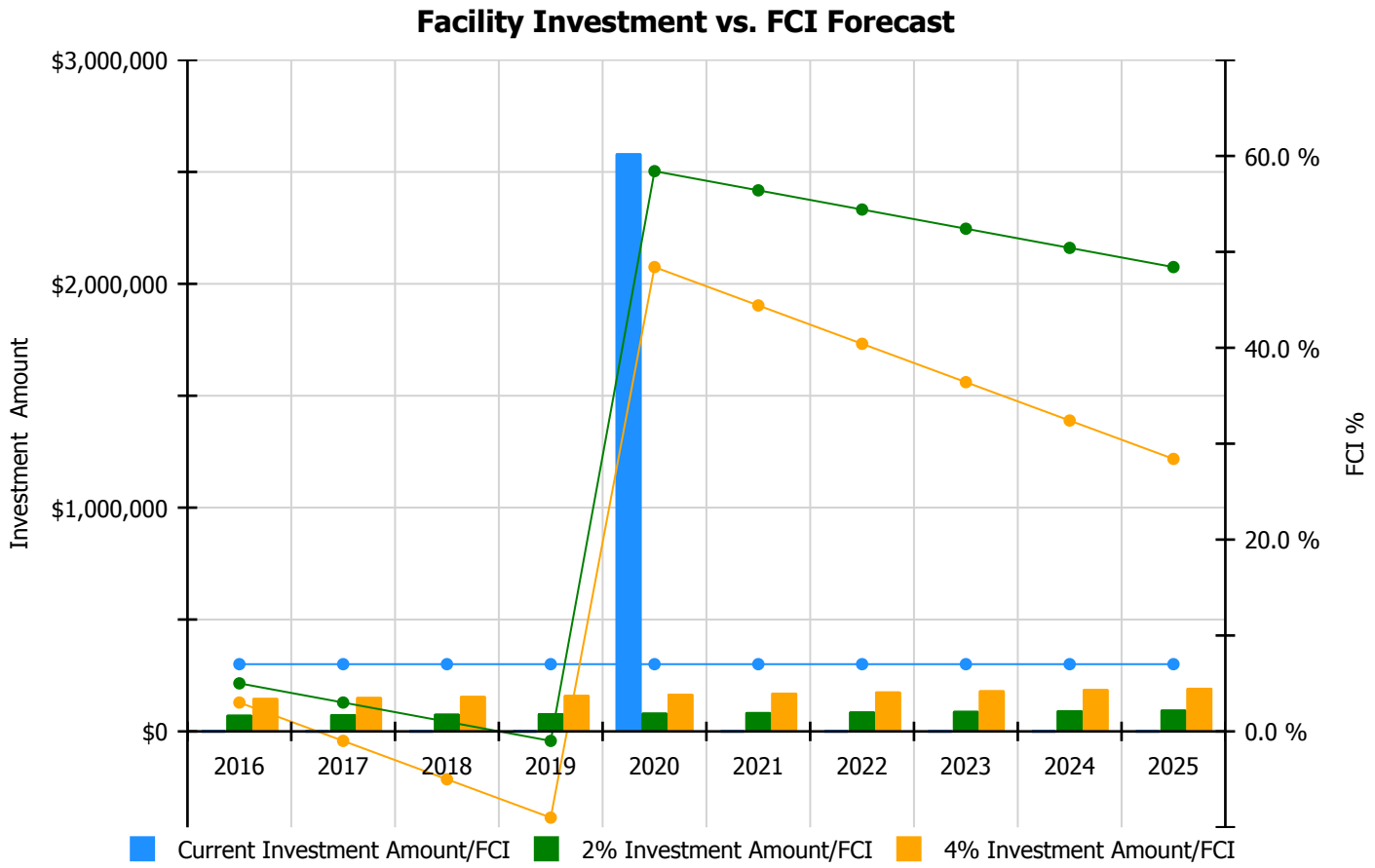
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

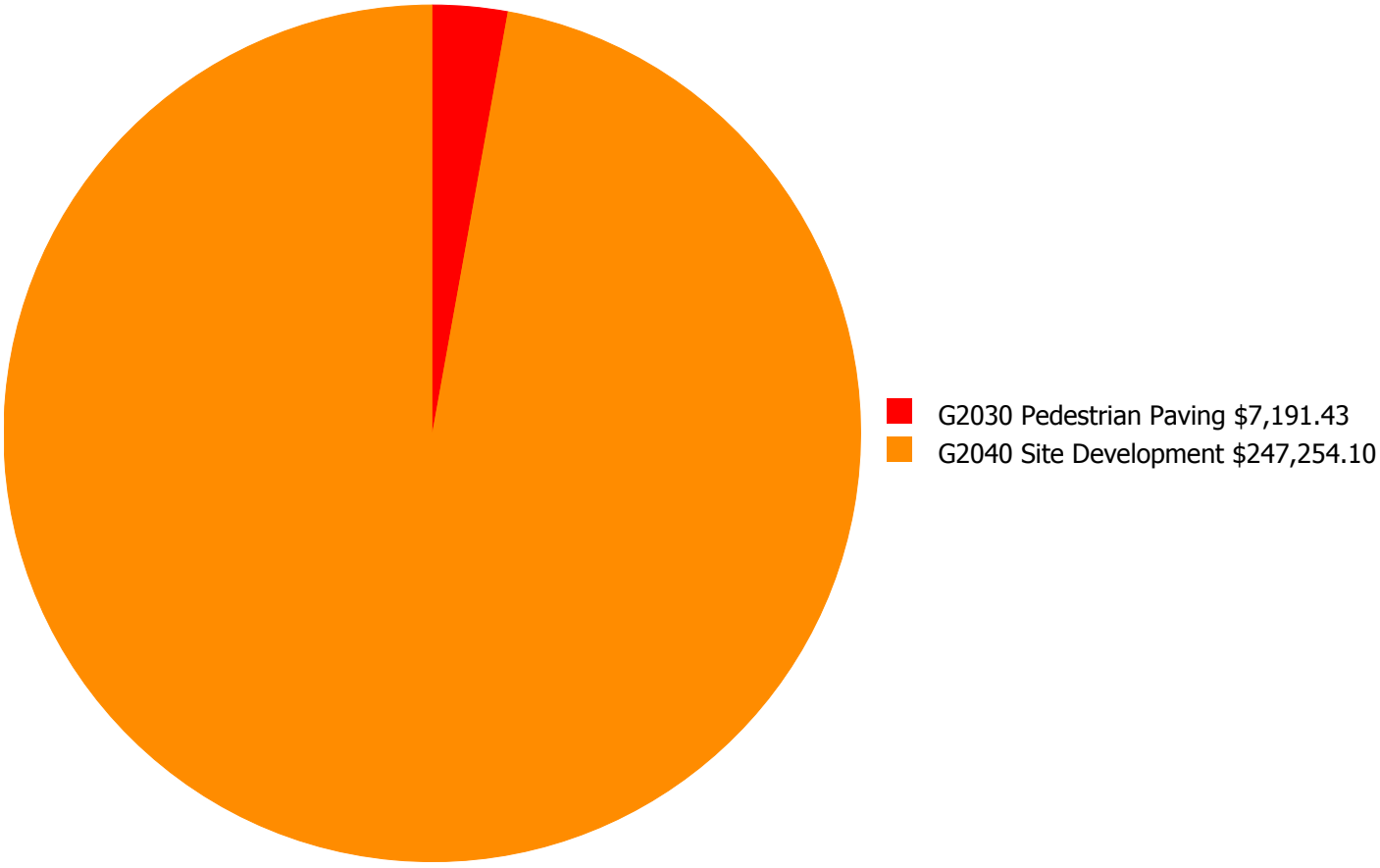
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 7.01%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$74,766.00	5.01 %	$149,533.00	3.01 %
2017	$0	$77,009.00	3.01 %	$154,019.00	-0.99 %
2018	$0	$79,320.00	1.01 %	$158,639.00	-4.99 %
2019	$0	$81,699.00	-0.99 %	$163,398.00	-8.99 %
2020	$2,583,503	$84,150.00	58.41 %	$168,300.00	48.41 %
2021	$0	$86,675.00	56.41 %	$173,349.00	44.41 %
2022	$0	$89,275.00	54.41 %	$178,550.00	40.41 %
2023	$0	$91,953.00	52.41 %	$183,906.00	36.41 %
2024	$0	$94,712.00	50.41 %	$189,423.00	32.41 %
2025	$0	$97,553.00	48.41 %	$195,106.00	28.41 %
Total:	**$2,583,503**	**$857,112.00**		**$1,714,223.00**	

Deficiency Summary by System

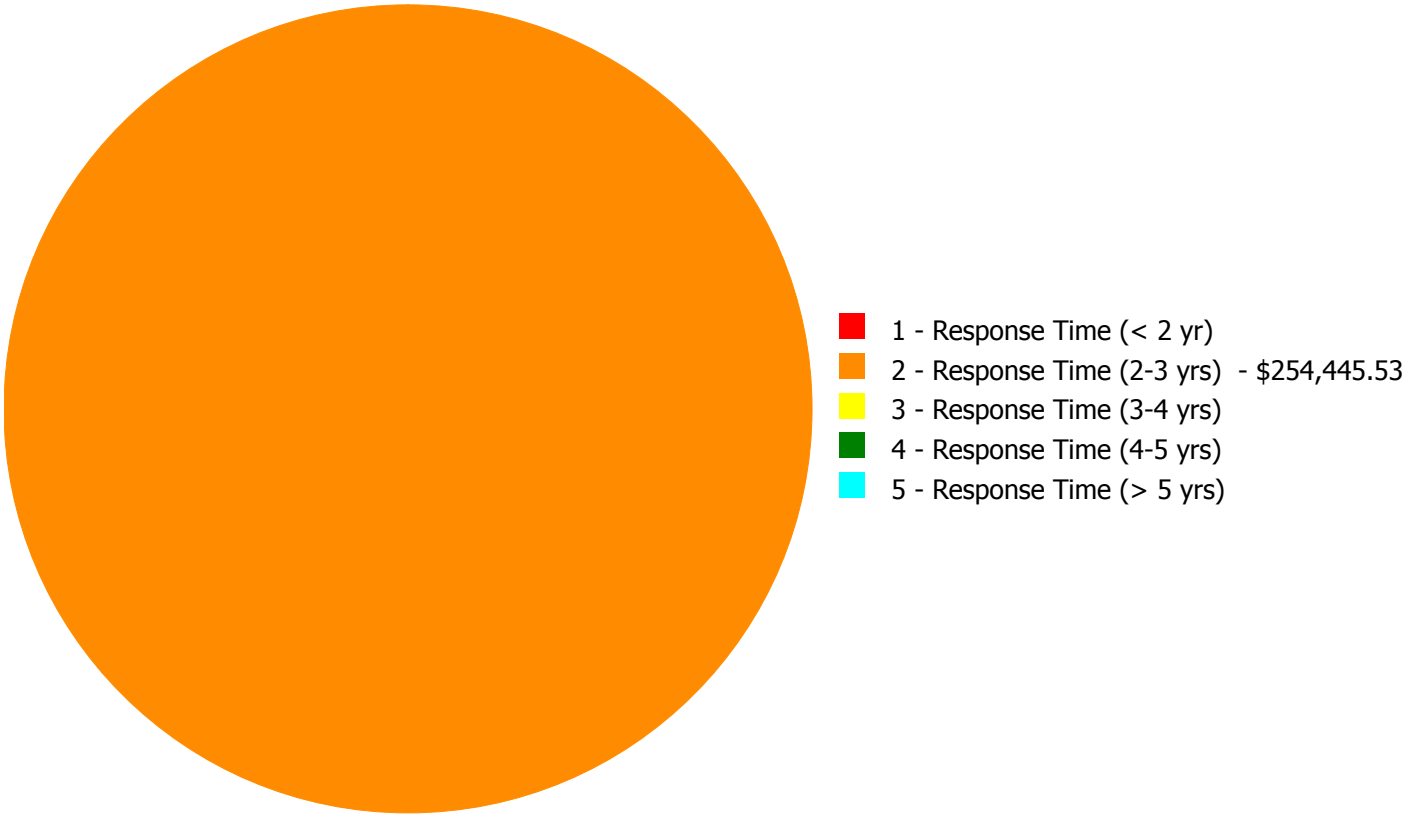
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $254,445.53

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: $254,445.53

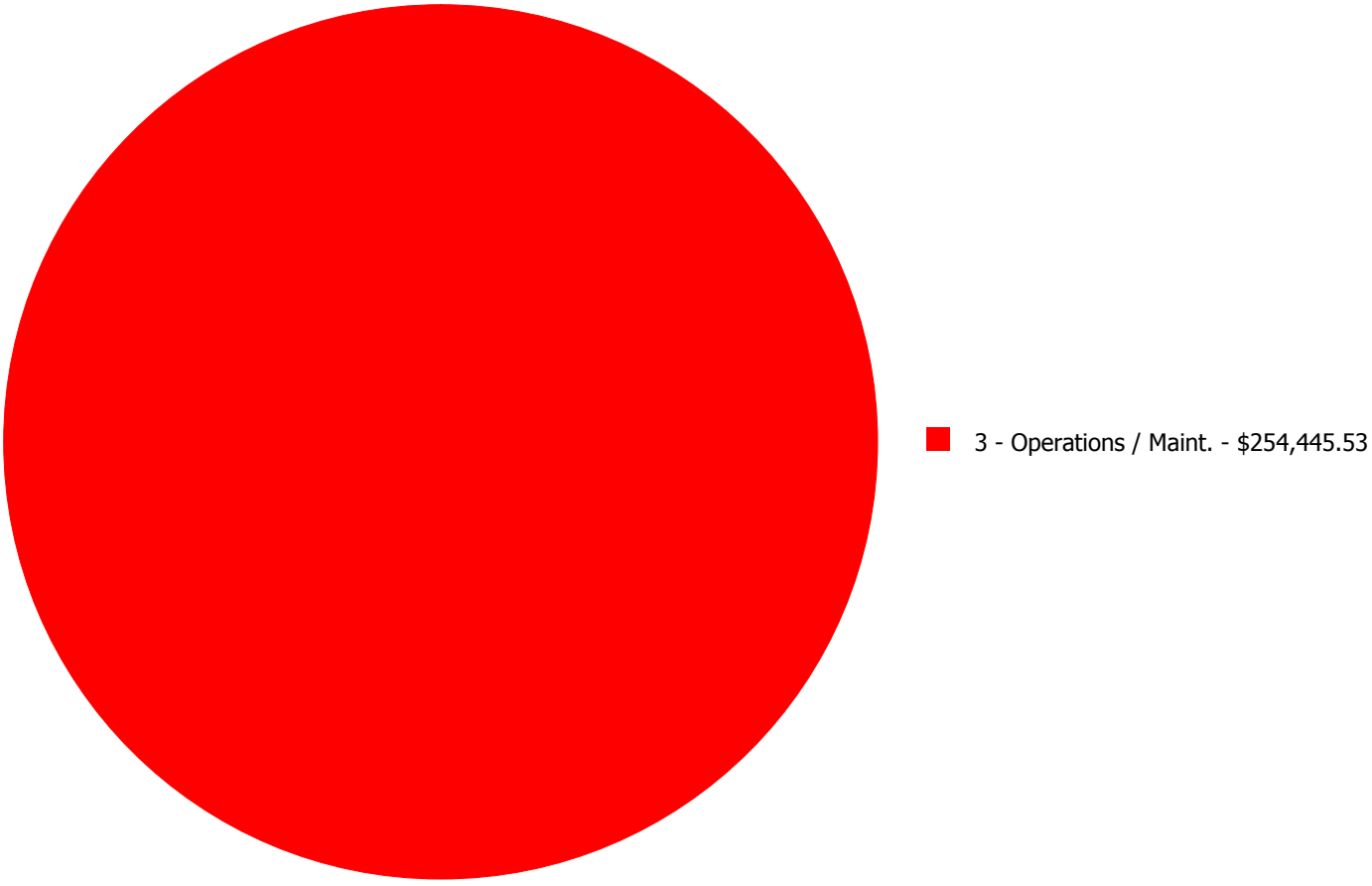
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2030	Pedestrian Paving	$0.00	$7,191.43	$0.00	$0.00	$0.00	$7,191.43
G2040	Site Development	$0.00	$247,254.10	$0.00	$0.00	$0.00	$247,254.10
	Total:	$0.00	$254,445.53	$0.00	$0.00	$0.00	$254,445.53

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:



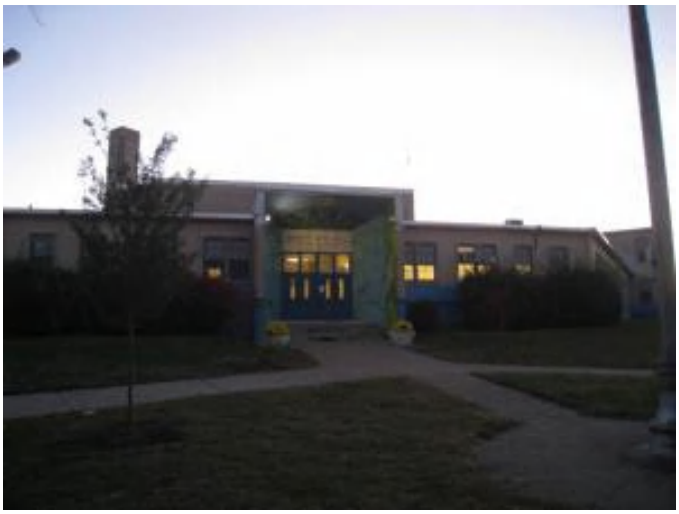
Budget Estimate Total: $254,445.53

Deficiency Details by Priority

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

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

System: G2030 - Pedestrian Paving



Location: sidewalks - LSH and main bldg

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: 500.00

Unit of Measure: S.F.

Estimate: $7,191.43

Assessor Name: Steven Litman

Date Created: 02/01/2016

Notes: Repave damaged sections of concrete walkway at front and rear building entrances (500sf)

System: G2040 - Site Development

Location: playground near entrance to main building and faculty parking lot

Distress: Inadequate

Category: 3 - Operations / Maint.

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

Correction: Repair drepressed areas in parking or pedestrian paving caused by subrade subsidence - per SF base on approximately 100 SF or more

Qty: 8,000.00

Unit of Measure: S.F.

Estimate: $247,254.10

Assessor Name: Steven Litman

Date Created: 02/01/2016

Notes: Add catch basins and connect piping to existing underground storm system in playground area and repair and repave sunken sections of asphalt faculty parking and asphalt play area (2,000sf +6,000sf = 8,000sf)

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