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.

Beeber Middle School

Governance	DISTRICT	Report Type	Middle
Address	5925 Malvern Ave.	Enrollment	71
	Philadelphia, Pa 19131	Grade Range	'08-08'
Phone/Fax	215-581-5513 / 215-581-5694	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Beeber	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	**31.51%**	**$23,530,201**	**$74,686,398**
Building	31.31 %	$22,941,639	$73,269,838
Grounds	41.55 %	$588,562	$1,416,560

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$2,095,582
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.16 %	$9,687	$6,085,420
Windows (Shows functionality of exterior windows)	60.39 %	$1,796,427	$2,974,600
Exterior Doors (Shows condition of exterior doors)	108.45 %	$218,576	$201,550
Interior Doors (Classroom doors)	07.41 %	$36,177	$487,890
Interior Walls (Paint and Finishes)	08.65 %	$202,183	$2,336,590
Plumbing Fixtures	13.69 %	$257,247	$1,879,280
Boilers	65.54 %	$1,700,963	$2,595,130
Chillers/Cooling Towers	51.32 %	$1,746,308	$3,402,720
Radiators/Unit Ventilators/HVAC	52.97 %	$3,165,158	$5,975,610
Heating/Cooling Controls	132.68 %	$2,489,685	$1,876,500
Electrical Service and Distribution	90.92 %	$1,225,914	$1,348,300
Lighting	03.05 %	$146,948	$4,820,520
Communications and Security (Cameras, Pa System and Fire Alarm)	14.77 %	$266,692	$1,805,610

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

S410001;Beeber

Final

Site Assessment Report

January 30, 2017

PARSONS

Table of Contents

Site Executive Summary

The organization of this report, as displayed in the Table of Contents, follows the structure of the associated eCOMET database. The overall node for each school campus begins with the letter "S", which indicates the "Site" label. Each Site is comprised of separate "Building" and "Grounds" nodes; their asset names begin with the letters "B" and "G" respectively. Information rolls up to the Site node from the Building and Grounds nodes. This Site report combines facility information with subsections for the Buildings And Grounds nodes.

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

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

Gross Area (SF):	80,000
Year Built:	1931
Last Renovation:	
Replacement Value:	$74,686,398
Repair Cost:	$23,530,201.34
Total FCI:	31.51 %
Total RSLI:	60.36 %

Description:

Facility Assessment
October 6th, 2015

School District of Philadelphia
Beeber Middle School
5295 Malvern Avenue
Philadelphia, PA 19131

139,000 SF / 1092 Students / LN 02

Mr. Richard Toohey, Facility Area Coordinator provided input to the Parsons Assessment team on current problems mainly in the mechanical systems, and Mr. Shawn Baldwin Building Engineer accompanied us on our tour of the school and provided us with detailed information on the building systems and maintenance history. Mr. Shawn Baldwin has been 3 years in the school.

This school has two principals. Principal Khary Moody is in charge of the Beeber School which occupy the first floor and half of the second floor. Principal Chris Johnson is in charge of SLA (Science Leadership Academy) which occupy the third floor and half of the second floor.

The 4 story, 139,000 square foot building was originally constructed in 1931. The building has a multi-level basement and sub-basement.

STRUCTURAL / EXTERIOR CLOSURE

The main building rests on concrete foundations and bearing walls that are not showing signs of settlement damage. The main structure consists typically of cast-in-place concrete columns, beams and one way ribbed slab in basement with major damage in the previous coal and ash areas with cracked and falling concrete and exposed steel reinforcement. This damage is due to grade level manholes used for coal and ash that were not properly sealed and now allow water intrusion, and heavy traffic over the area. Locker rooms and showers have been abandoned and are in need of complete rehabilitation of all systems. The main roof structure consists of concrete one-way slab supported by main structural frame with steel truss construction over gymnasia. The building envelope is masonry with face brick. Elevations are enhanced with stonework around entrances. In general, masonry is in good condition with some cracks at mechanical penthouse level. The windows were replaced in early 1990s with extruded aluminum, double hung windows, Lexan Plexiglas with insect/security screens. Most windows are generally in poor condition with heavy hazing while windows facing interior open courts have been replaced with glazing and in good condition. Exterior doors are hollow metal in poor condition, rusted and failing. Main roofing is built up application in good condition. Roofing on gymnasia is asphalt shingle in good condition.

Main building partition wall types include plastered ceramic hollow blocks with small amounts of CMU and wood partitions added at a later date. Interior doors are generally hollow metal frames with solid core wood doors with lites in poor condition and beyond service life. Doors leading to exit stairways are hollow metal doors and frames in good condition. Half of the interior doors have lever type handles. Fittings include: toilet accessories in good condition; composite plastic and marble toilet partitions, in fair condition and not meeting ADA requirements; fixed metal wall lockers in corridors in fair condition; and handrails and ornamental metals, in fair condition. Interior identifying signage is typically directly painted on wall or door surfaces in fair condition. Main stair construction is concrete with terrazzo in good condition. Utility stairs are metal in good condition. Stair railings are cast iron balusters and wood railing in good condition.

Interior wall finishes include: painted plaster throughout with marble wainscot in stairways, corridors, main entry, lockers and toilets in fair condition with some cracked areas; glazed brick tile wainscot in cafeteria, kitchen, gyms, basement, and classrooms facing the interior open court in good condition; and wood panel wainscot in auditorium and balcony in good condition. Generally, paint is in good condition with some plaster deterioration areas throughout in need of repair. Flooring includes: patterned and bare concrete in lockers and basement service areas in good condition; terrazzo tile in corridors, stairways, and cafeteria in fair conditions with some cracking areas; hardwood in most classrooms, auditorium, stage, balcony, and gymnasia in fair condition with some refinishing needed; vinyl tile in some classrooms and office areas in good condition; tile in kitchen in good condition; and stone tile in front entry, front stairs, and front hall in good condition. Ceilings finishes include: suspended acoustic tile in classrooms and corridors in poor condition and beyond service life in corridors; direct mounted acoustic tiles in cafeteria in good condition; painted steel structure in gymnasia in fair condition; and painted plaster and structural concrete in all other areas generally in good condition with some small repairs needed.

The building has one elevator serving 3 stories and is ADA compliant.

Commercial and institutional equipment includes: stage equipment, generally in fair condition and gym equipment in poor condition and beyond service life. Other equipment includes food preparation and food service equipment in good

condition.

Fixed furnishings include: fixed casework in classrooms, corridors and library, generally in fair to good condition; window shades/blinds, generally in fair condition; and fixed auditorium seating generally in poor condition with some damaged and missing seats and failing veneer.

MECHANICAL SYSTEMS

Toilet room plumbing fixtures include both floor and wall mounts for water closets, urinals, and lavatories. Most fixtures are vitreous china, but some replacement lavatories are enameled cast iron. Vintage water closets exist throughout the building, and many are in excellent condition despite their age. There are still floor level urinals in some boys' toilets. These are well beyond their service life, and several of them are out of service. District should budget to replace 25% of water closets and 100% of urinals.

The cafeteria kitchen has a triple basin, dual drain board, floor standing, stainless steel, commercial scullery sink with sanitization chemical injection system and grease trap. It does not have a disposal. There is also a service sink installed for hand washing with separate hot and cold spouts. Kitchen sinks are in good condition and will not need replacement in 10 – 15 years.

Service sinks are located in cleaning closets adjacent to toilet rooms on each floor. They are enameled cast iron with integral backsplash and trap and mixing hot and cold faucets with short necks and vacuum breakers. Service sinks are lightly stained but in fair condition otherwise and will remain serviceable for at least 5 years.

Third floor science rooms were remodeled in 2015 including new lab sinks, open front cabinets with exhaust fans, and safety shower and eye wash. There is no floor drain for the safety shower, and one should be installed when sanitary drain pipes are remediated.

There are boys and girls showers are located in the basement between the gymnasiums. They are the original facilities and have not been used in years (or perhaps decades). The doors have been fastened shut to prevent access. Shower facilities should be completely remodeled.

Drinking fountains are a mixture of types, styles, and ages. Typically, they are not accessible, not chilled, and beyond their service life. They should be upgraded to accessible type fountains with integral chillers on each floor.

Domestic water distribution pipe is mostly soldered copper, but sections of red brass pipe and also threaded copper pipe with bronze fittings still exist. Iron valves in the domestic water system are heavily rusted. Cuprous pipes are corroded in many areas. The water distribution pipe has exceeded it service life and should be replaced. Municipal water service enters the boiler room under the stairs at the back of the building through a 4 inch pipe. There is a compound meter with a bypass line and then a double backflow preventer without bypass. The backflow preventer is not a reduced pressure zone device. There is a reduced pressure zone backflow preventer for the boiler water supply line. The water entry pipe, valves, and meter are in good condition and should last 5 years or longer. There is no pressure booster system. A Bradford White 75 gallon water heater was installed in 2013. It has 8 years expected life left. There is a hot water circulation pump (3/4 HP) with aquastat and timer, but it has an electrical fault that causes the pump's circuit breaker to trip. The circulation pump system should be repaired or replaced.

Sanitary drain piping is threaded galvanized steel pipe. Precise age is unknown, but it has certainly surpassed its expected lifespan and flows poorly. The sanitary drain pipes should be inspected in detail and repaired or replaced as needed. The building has a sewage ejector located in a sump in the basement mechanical room at the front of the building. The sump is flooded with water and appears to have an electric submerged sump pump to prevent overflow. The sewage ejector appears to be pneumatically operated and there is one air pump in the sump room and a second

motor but no second compressor. The system seemed operational because there was no visible effluent (in the water in the sump) and no noticeable odor. This could merely be because the basement toilet rooms and showers have not been used in recent years. Sewage ejector should be inspected and repaired as needed during renovation of sanitary drain pipes or shower facilities.

Rain water drain pipes are threaded galvanized steel fed from cast iron roof drains. Drain pipes run inside the building. There are no overflow drains on the roof. Roof drains appear to have been recently replaced, likely in 2005 when the roof was last replaced. The pipe appears older than 10 years. There are drainage problems throughout the building and especially at basement level stairwells where there is ponding. The rain water drain system should be inspected in detail and repaired where needed.

The building was originally heated and ventilated by forced air from three basement air handlers and multiple exhaust fans. Currently only steam radiators are used throughout.

Three Smith brand, model 6500A-S-19, 7,691 MBH (230 HP) cast iron steam boilers are in the boiler room. Two of them were not operational at the time of the inspection. Boilers should be replaced due to age and chronic repair needs. Power Flame oil fueled burners were manufactured in 2005. The 12,000 oil tank is behind the building. The two oil circulation pumps do not run well, and should be replaced. Boiler feedwater tank has three pumps for the three boilers and a fourth spare pump. Feed pumps are 1 HP. There is a condensate vacuum system with two 5 HP pumps located above the feedwater tank. The boiler chemical injection tank and pump are located next to the feedwater tank. There is a water softener for boiler makeup water. Combustion make up air enters through ceiling level automatic louvers. Boiler exhausts have draft fans. The building has a 1 inch natural gas supply line for the boiler pilot lights, water heater, and kitchen appliance. It enters the building from 59th Street in the basement north east mechanical room.

There is no central cooling generating equipment in the building. Twelve window unit air conditioners are installed in offices, the IMC, and a few classrooms. The units in the IMC do not work. Window units should be removed and replaced with a central cooling plant to air condition the entire building, 350 ton estimated capacity.

The original three air handlers are still installed in mechanical rooms in the basement. They each consist of primary steam heating coils, air washers, fans, and secondary heat coils. Two units have 25 HP fans and ventilated the east and west sides of the building. The third unit has a 15 HP fan and served the gyms and locker rooms. The gym unit intakes 100% outside air. (The other two units had inaccessible intake sections). They are all obsolete and should be replaced with modern units including cooling and humidification and dehumidification sections.

The cafeteria kitchen has an exhaust hood with fire suppression system. Lunchroom and kitchen exhaust fans (3 HP and ¾ HP) are located in a third floor mechanical room above the auditorium stage. Newly remodeled science rooms have two open front draft cabinets with roof top exhaust fans, 1/3 and 1/6 HP. Toilet room exhaust fans are located in attic mechanical rooms. They were not running at the time of the inspection. These are the original equipment and should be replaced due to age. Classroom exhaust ducts are plaster lined clay block tile, and they lead to penthouse plenums with backdraft dampers and fixed exhaust louvers. Exhaust ducts are in good condition and could be returned to service. Steam and condensate pipe is threaded steel of unknown age. The principal said there were steam leaks in classrooms last year. Steam and condensate pipe should be inspected and repaired or replaced as needed. The building engineer said there were many failed steam traps in the building. The entire building steam traps should be inspected and repaired.

Pneumatic valves control steam flow to AHU coils and radiators. Some radiators have manual globe valves. Some air lines are disconnected. Overall, the system is inoperable and obsolete. The pneumatic control system should be completely upgraded to DDC when other HVAC renovations are done. There are three duplex air compressors for the pneumatic controls. Two of them appear abandoned in place. The operable compressor has a refrigerated filter dryer.

The building has dry stand pipes, but it does not have sprinklers. A fire sprinkler system should be installed to increase occupant safety, including a fire pump if needed.

ELECTRICAL SYSTEMS

A 1,200A, 120/240V service entrance switchboard serves this building. The service entrance switchboard and the utility metering PECO 225MU 39 are located in the basement electrical room. The service entrance switchboard is manufactured by B&K Electrical Products and the floor mounted line up is composed pull section, pressure contact switch section and distribution section. The service entrance switchboard is approximately 40 years old and has exceeded its useful service life. It has no extra capacity for expansion or new Heating, Ventilation, Air Conditioning (HVAC) system. The new Service Entrance Switchboard will be 480V/277V, 3 phase power, approximate 2000 Amperes and could be located in the same footprint of the existing one. The new Service Entrance Switchboard will feed a 480V Motor Control Center (MCC) and HVAC equipment and a 480V 3 phase to 120V/208V 3 phase 500 KVA step-down transformer to feed receptacles, lighting and other smaller loads.

There are 120/240V panel-boards in each floor for lighting and receptacles. These panelboards and associated wiring have exceeded the end of their useful life and are undersized to absorb new loads. The entire distribution system needs to be replaced with new 208/120 volt, 3 phase panelboards and new wiring. The raceway is mainly conduits run above the ceiling.

There number of receptacles in 50% of the classrooms are inadequate. Teachers use extension cords. The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two duplex outlets each, when feasible.

Classrooms, corridors and cafeteria are illuminated with recessed mounted fluorescent fixtures. The auditorium is illuminated with pendant mounted architectural fixtures with compact fluorescent lamps. The gymnasium is illuminated with pendant HID fixtures. The stairs and mechanical rooms are illuminated with surface mounted fluorescent fixtures. Fluorescent fixtures are old but have been retrofitted by the Building Engineer and are provided with T-8 lamps.

The Fire Alarm system is manufactured by Edwards EST2. The fire alarm system is composed of smoke detector in front of the elevator cab, audio/visual devices in public areas and classrooms and pull station at each exit door. The system is approximately 5 years old and is expected to provide 10 more years of useful service life.

The present telephone system is adequate. During the assessment, randomly, we verified that each wall mounted handset is provided with dial tone

An independent and separate PA system does not exist. School uses the telephone systems for public announcement. This system is working adequately for most part.

The clock system is by Primex, wireless, synchronized, battery operated. The system is approximately 5 years old and is expected to provide 10 more years of useful service life.

There is not television system.

There is not security system in this school. Provide surveillance CCTV cameras for a complete coverage of the school building interior

There is not emergency power system in this school. Provide an outdoor diesel powered generator rated 150KW.

There is adequate UPS in the IT room.

The emergency lighting is obtained with wall mounted fixtures with battery backup in the auditorium and boiler room. Corridors, stairways and gymnasiums are not provided with wall mounted battery backup fixtures. Provide wall mounted lighting fixtures with battery backup

The school is not provided with lightning protection system. A study needs to be conducted to determine if the school requires a lighting protection system.

The school is provided with a tractor power elevator. The controller is microprocessor type and the motor and cables appear not more than 10 years old. It is expected to provide 10 more years of useful service life.

The auditorium is provided with one row of pendant mounted theatrical lighting which are controlled from an old dimming panel. Modern school auditorium requires front, upstage, high side, back, theatrical lighting. Provide stage theatrical lighting and dimming control system.

The auditorium sound system is manufactured by Bogen. System is approximately 30 years old and has reached its useful service life. Provide the auditorium with new sound system.

GROUNDS SYSTEMS

The site surrounds the building on all four sides which is set back from the street. Yard areas on east and west sides are asphalt paving in good condition. Yard area on north side is concrete paving with some cracked and spalling area needing replaced. Parking for staff vehicles is allowed in some areas on site and accessible from 59th St. Public access doors and service doors have concrete stoops and stairs. The building is accessible per ADA requirements. Site is surrounded by metal and chain link fence on a concrete and brick retaining wall in poor condition. Fencing is beyond service life and failing and retaining wall on southwest corner is cracked and falling outward. Landscaping consists of grass areas on south sides with many mature trees surrounding site. Trees and roots are causing damage to sidewalks and paved yard area and need to be addressed.

Accessibility: the building does have an accessible entrance, and accessible routes. Toilets are not equipped with accessible fixtures, partitions and accessories, such as grab bars and accessible partitions. Most doors in the building do not have ADA required door handles.

The school perimeter is illuminated with wall mounted HID fixtures providing good illumination.

There is not outdoor security system. Provide outdoor surveillance CCTV cameras to provide a complete coverage of the building perimeter.

Outdoor loud speaker is not provided and is not required.

RECOMMENDATIONS

- Rehabilitate all systems in locker rooms and shower areas
- Repair masonry cracks on exterior wall
- Replace Plexiglas windows – hazed and not energy efficient (80% of Ext. windows)
- Replace exterior metal doors – rusted, failing, and beyond service life
- Replace interior door hardware with lever type handles for accessibility
- Install accessible toilet partitions to meet building code
- Repair and paint interior plaster walls – water damaged (10% of plaster wall area)
- Repair cracked terrazzo flooring
- Refinish wood flooring (20% of wood floor area)

- Replace suspended acoustic ceiling system – rusted & beyond service life (90% of suspended ceiling area)
- Replace gymnasium equipment – damaged and beyond service life
- Replace auditorium seats – beyond service life and failing veneer
- Replace concrete paving – spalling and cracking (10% of concrete paving area)
- Replace site fencing rusted, damaged, and failing
- Repair perimeter wall – SW corner failing
- Replace concrete sidewalks – damaged by trees and roots
- Replace all floor standing urinals, 38
- Replace 25% of water closets, 15
- Completely remodel boys' and girls' showers
- Install accessible fountains with integral chillers on each floor
- Replace obsolete and failing domestic water distribution piping
- Repair or replace inoperative hot water circulation pump
- Inspect and repair sanitary drain system due to age and appearance
- Inspect and repair rain water drain system due to ponding and age
- Replace boilers due to age and chronic repair needs
- Replace failing oil pumps
- Survey and repair steam traps
- Install 350 ton cooling system
- Replace original AHUs due to age and lack of cooling
- Replace exhaust fans for toilet rooms, lunchroom, etc.
- Repair or replace steam and condensate pipe due to reported leaks
- Upgrade pneumatic HVAC control system to DDC
- Install fire suppression sprinkler system with pump if needed
- Provide new service 480V/277V, 3 phase power, approximate 2000 Amperes.
- Replace the entire distribution system with new panels and new wiring/conduits. Approximate (30) 208/120V.
- The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two duplex outlets each. Approximate 400 receptacles.
- Provide indoor surveillance CCTV cameras for a complete coverage of the school building interior. Approximate 60
- Provide an outdoor diesel powered generator. Approximate 150KW
- Provide wall mounted emergency lighting fixtures with battery backup. Approximate 20
- Prepare a study to determine if lightning protection system is required.
- Provide the auditorium with dimming and theatrical lighting.
- Provide the auditorium with a sound system.
- Provide outdoor surveillance CCTV cameras to provide a complete coverage of the building perimeter. Approximate 15

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 3 / Tm 3
Status:	Accepted by SDP	Team:	Tm 3
Site ID:	S410001		

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	16.00 %	0.00 %	$0.00
A20 - Basement Construction	16.00 %	16.99 %	$340,361.64
B10 - Superstructure	16.00 %	20.74 %	$2,744,988.75
B20 - Exterior Enclosure	24.91 %	21.86 %	$2,024,689.84
B30 - Roofing	50.07 %	0.00 %	$0.00
C10 - Interior Construction	14.22 %	27.19 %	$927,381.28
C20 - Stairs	16.00 %	0.00 %	$0.00
C30 - Interior Finishes	77.28 %	7.38 %	$654,664.47
D10 - Conveying	28.57 %	0.00 %	$0.00
D20 - Plumbing	63.73 %	76.42 %	$2,128,590.98
D30 - HVAC	107.77 %	58.87 %	$9,102,115.12
D40 - Fire Protection	96.05 %	177.49 %	$1,988,458.48
D50 - Electrical	110.11 %	23.29 %	$1,903,016.76
E10 - Equipment	71.85 %	16.69 %	$369,306.89
E20 - Furnishings	105.00 %	256.04 %	$758,065.10
G20 - Site Improvements	60.47 %	28.71 %	$311,995.84
G40 - Site Electrical Utilities	46.31 %	83.88 %	$276,566.19
Totals:	**60.36 %**	**31.51 %**	**$23,530,201.34**

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)
B410001;Beeber	139,000	31.31	$2,481,996.33	$7,907,940.62	$5,792,664.09	$2,432,426.12	$4,326,612.15
G410001;Grounds	75,800	41.55	$0.00	$0.00	$342,175.48	$246,386.55	$0.00
Total:		**31.51**	**$2,481,996.33**	**$7,907,940.62**	**$6,134,839.57**	**$2,678,812.67**	**$4,326,612.15**

Deficiencies By Priority

- 1 - Response Time (< 2 yr) - $2,481,996.33
- 2 - Response Time (2-3 yrs) - $7,907,940.62
- 3 - Response Time (3-4 yrs) - $6,134,839.57
- 4 - Response Time (4-5 yrs) - $2,678,812.67
- 5 - Response Time (> 5 yrs) - $4,326,612.15

Budget Estimate Total: $23,530,201.34

Executive Summary

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

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

Function:	Middle School
Gross Area (SF):	139,000
Year Built:	1931
Last Renovation:	
Replacement Value:	$73,269,838
Repair Cost:	$22,941,639.31
Total FCI:	31.31 %
Total RSLI:	60.42 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B410001
Sewage Ejector:	Yes	Status:	Accepted by SDP
Site ID:	S410001		

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	16.00 %	0.00 %	$0.00
A20 - Basement Construction	16.00 %	16.99 %	$340,361.64
B10 - Superstructure	16.00 %	20.74 %	$2,744,988.75
B20 - Exterior Enclosure	24.91 %	21.86 %	$2,024,689.84
B30 - Roofing	50.07 %	0.00 %	$0.00
C10 - Interior Construction	14.22 %	27.19 %	$927,381.28
C20 - Stairs	16.00 %	0.00 %	$0.00
C30 - Interior Finishes	77.28 %	7.38 %	$654,664.47
D10 - Conveying	28.57 %	0.00 %	$0.00
D20 - Plumbing	63.73 %	76.42 %	$2,128,590.98
D30 - HVAC	107.77 %	58.87 %	$9,102,115.12
D40 - Fire Protection	96.05 %	177.49 %	$1,988,458.48
D50 - Electrical	110.11 %	23.29 %	$1,903,016.76
E10 - Equipment	71.85 %	16.69 %	$369,306.89
E20 - Furnishings	105.00 %	256.04 %	$758,065.10
Totals:	**60.42 %**	**31.31 %**	**$22,941,639.31**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$23.16	S.F.	139,000	100	1931	2031		16.00 %	0.00 %	16			$3,219,240
A1030	Slab on Grade	$5.17	S.F.	139,000	100	1931	2031		16.00 %	0.00 %	16			$718,630
A2010	Basement Excavation	$4.36	S.F.	139,000	100	1931	2031		16.00 %	0.00 %	16			$606,040
A2020	Basement Walls	$10.05	S.F.	139,000	100	1931	2031		16.00 %	24.36 %	16		$340,361.64	$1,396,950
B1010	Floor Construction	$85.94	S.F.	139,000	100	1931	2031		16.00 %	22.98 %	16		$2,744,988.75	$11,945,660
B1020	Roof Construction	$9.26	S.F.	139,000	100	1931	2031		16.00 %	0.00 %	16			$1,287,140
B2010	Exterior Walls	$43.78	S.F.	139,000	100	1931	2031		16.00 %	0.16 %	16		$9,686.84	$6,085,420
B2020	Exterior Windows	$21.40	S.F.	139,000	40	1990	2030		37.50 %	60.39 %	15		$1,796,427.30	$2,974,600
B2030	Exterior Doors	$1.45	S.F.	139,000	25	1990	2015	2042	108.00 %	108.45 %	27		$218,575.70	$201,550
B3010105	Built-Up	$37.76	S.F.	43,995	20	2005	2025		50.00 %	0.00 %	10			$1,661,251
B3010120	Single Ply Membrane	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.		30				0.00 %	0.00 %				$0
B3010140	Shingle & Tile	$38.73	S.F.	10,999	20	2005	2025		50.00 %	0.00 %	10			$425,991
B3020	Roof Openings	$0.06	S.F.	139,000	30	2005	2035		66.67 %	0.00 %	20			$8,340
C1010	Partitions	$17.91	S.F.	139,000	100	1931	2031		16.00 %	35.25 %	16		$877,514.29	$2,489,490
C1020	Interior Doors	$3.51	S.F.	139,000	40	1975	2015		0.00 %	7.41 %	0		$36,177.02	$487,890
C1030	Fittings	$3.12	S.F.	139,000	40	1983	2023		20.00 %	3.16 %	8		$13,689.97	$433,680
C2010	Stair Construction	$1.41	S.F.	139,000	100	1931	2031		16.00 %	0.00 %	16			$195,990

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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.	139,000	10	2012	2022		70.00 %	11.01 %	7		$202,182.99	$1,836,190
C3010231	Vinyl Wall Covering	$0.97	S.F.	139,000	15				0.00 %	0.00 %				$134,830
C3010232	Wall Tile	$2.63	S.F.	139,000	30	1990	2020	2030	50.00 %	0.00 %	15			$365,570
C3020411	Carpet	$7.30	S.F.		10				0.00 %	0.00 %				$0
C3020412	Terrazzo & Tile	$75.52	S.F.	20,850	50	1975	2025		20.00 %	1.03 %	10		$16,263.56	$1,574,592
C3020413	Vinyl Flooring	$9.68	S.F.	34,750	20	1990	2010	2020	25.00 %	0.00 %	5			$336,380
C3020414	Wood Flooring	$22.27	S.F.	76,450	25	1990	2015	2042	108.00 %	9.68 %	27		$164,734.18	$1,702,542
C3020415	Concrete Floor Finishes	$0.97	S.F.	6,950	50	1983	2033		36.00 %	0.00 %	18			$6,742
C3030	Ceiling Finishes	$20.97	S.F.	139,000	25	1983	2008	2042	108.00 %	9.31 %	27		$271,483.74	$2,914,830
D1010	Elevators and Lifts	$1.53	S.F.	139,000	35	1990	2025		28.57 %	0.00 %	10			$212,670
D2010	Plumbing Fixtures	$13.52	S.F.	139,000	35	1933	1968	2030	42.86 %	13.69 %	15		$257,246.75	$1,879,280
D2020	Domestic Water Distribution	$1.68	S.F.	139,000	25	1933	1958	2042	108.00 %	256.28 %	27		$598,458.21	$233,520
D2030	Sanitary Waste	$2.52	S.F.	139,000	30	1933	1963	2047	106.67 %	168.52 %	32		$590,278.39	$350,280
D2040	Rain Water Drainage	$2.32	S.F.	139,000	30	1933	1963	2047	106.67 %	211.67 %	32		$682,607.63	$322,480
D3020	Heat Generating Systems	$18.67	S.F.	139,000	35	1933	1968	2052	105.71 %	65.54 %	37		$1,700,963.45	$2,595,130
D3030	Cooling Generating Systems	$24.48	S.F.	139,000	30			2047	106.67 %	51.32 %	32		$1,746,308.01	$3,402,720
D3040	Distribution Systems	$42.99	S.F.	139,000	25	1933	1958	2042	108.00 %	52.97 %	27		$3,165,158.46	$5,975,610
D3050	Terminal & Package Units	$11.60	S.F.	139,000	20	1933	1953	2037	110.00 %	0.00 %	22			$1,612,400
D3060	Controls & Instrumentation	$13.50	S.F.	139,000	20	1960	1980	2037	110.00 %	132.68 %	22		$2,489,685.20	$1,876,500
D4010	Sprinklers	$7.05	S.F.	139,000	35			2052	105.71 %	202.91 %	37		$1,988,458.48	$979,950
D4020	Standpipes	$1.01	S.F.	139,000	35	1933	1968	2025	28.57 %	0.00 %	10			$140,390
D5010	Electrical Service/Distribution	$9.70	S.F.	139,000	30	1933	1963	2047	106.67 %	90.92 %	32		$1,225,913.54	$1,348,300
D5020	Lighting and Branch Wiring	$34.68	S.F.	139,000	20	1933	1953	2037	110.00 %	3.05 %	22		$146,948.40	$4,820,520
D5030	Communications and Security	$12.99	S.F.	139,000	15	1933	1948	2032	113.33 %	14.77 %	17		$266,691.93	$1,805,610
D5090	Other Electrical Systems	$1.41	S.F.	139,000	30	1933	1963	2047	106.67 %	134.43 %	32		$263,462.89	$195,990
E1020	Institutional Equipment	$4.82	S.F.	139,000	35	1975	2010	2052	105.71 %	55.12 %	37		$369,306.89	$669,980
E1090	Other Equipment	$11.10	S.F.	139,000	35	2000	2035		57.14 %	0.00 %	20			$1,542,900
E2010	Fixed Furnishings	$2.13	S.F.	139,000	40	1975	2015	2057	105.00 %	256.04 %	42		$758,065.10	$296,070
								Total	**60.42 %**	**31.31 %**			**$22,941,639.31**	**$73,269,838**

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: 85% - Paint & Covering
15% - Wall Tile (glazed brick)

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

Note: 15% - Terrazzo & Tile
25% - Vinyl Flooring
55% - Wood Flooring
5% - Concrete Floor Finishes

System: D5010 - Electrical Service/Distribution

Note: (2)50KVA phase converters 240V- 120/208V

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:	**$22,941,639**	**$0**	**$0**	**$0**	**$0**	**$428,952**	**$0**	**$2,484,110**	**$604,310**	**$0**	**$5,935,249**	**$32,394,261**
*** 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	$340,362	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$340,362**
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	$2,744,989	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,744,989**
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	$9,687	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$9,687**
B2020 - Exterior Windows	$1,796,427	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,796,427**
B2030 - Exterior Doors	$218,576	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$218,576**
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	$2,455,841	**$2,455,841**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$629,746	**$629,746**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$877,514	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$877,514**

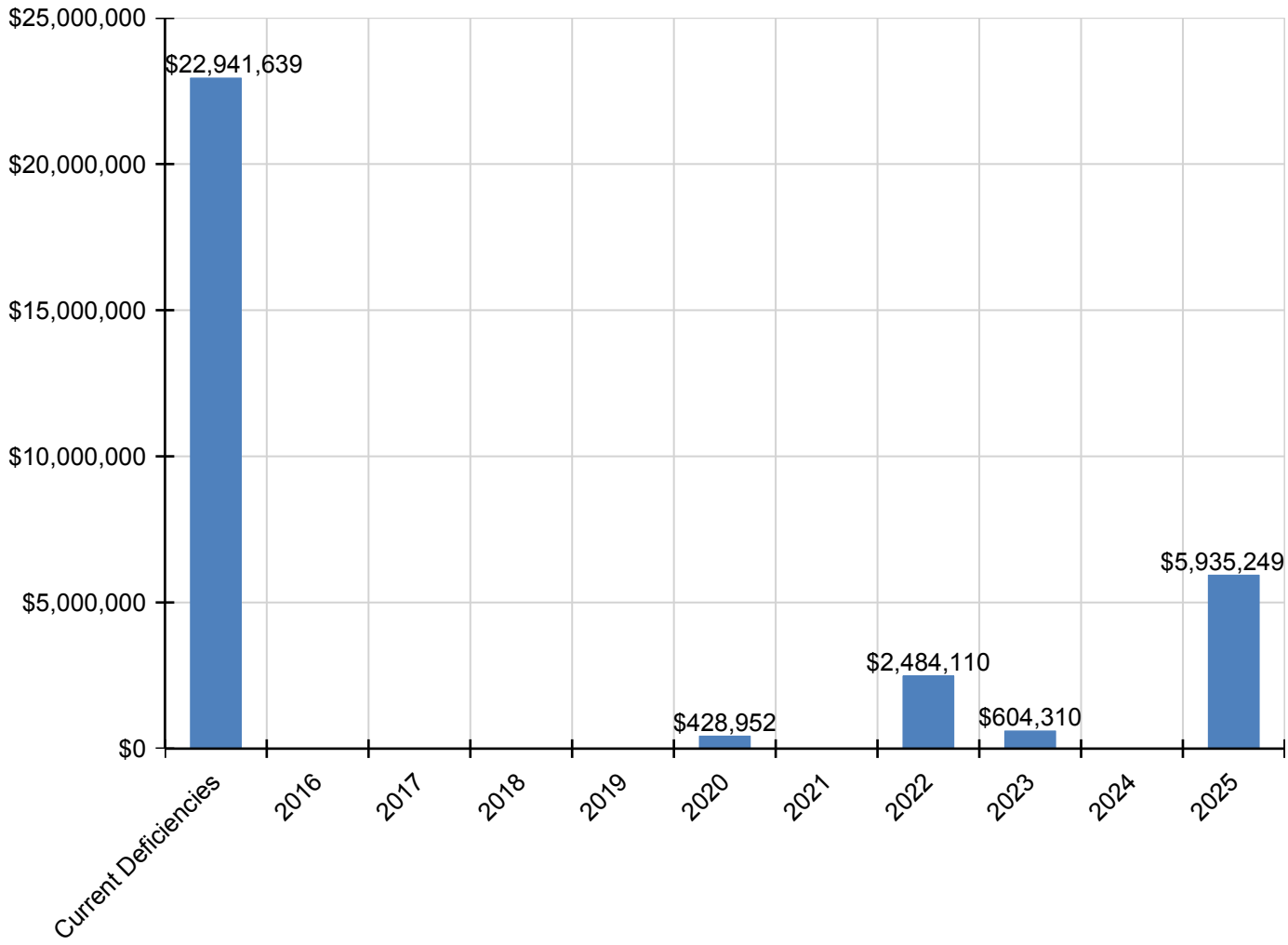
C1020 - Interior Doors	$36,177	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$36,177**
C1030 - Fittings	$13,690	$0	$0	$0	$0	$0	$0	$0	$604,310	$0	$0	**$618,000**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$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	$202,183	$0	$0	$0	$0	$0	$0	$2,484,110	$0	$0	$0	**$2,686,293**
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	$16,264	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,327,732	**$2,343,995**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$428,952	$0	$0	$0	$0	$0	**$428,952**
C3020414 - Wood Flooring	$164,734	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$164,734**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$271,484	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$271,484**
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	$314,392	**$314,392**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$257,247	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$257,247**
D2020 - Domestic Water Distribution	$598,458	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$598,458**
D2030 - Sanitary Waste	$590,278	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$590,278**
D2040 - Rain Water Drainage	$682,608	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$682,608**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$1,700,963	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,700,963**
D3030 - Cooling Generating Systems	$1,746,308	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,746,308**
D3040 - Distribution Systems	$3,165,158	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,165,158**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$2,489,685	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,489,685**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,988,458	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,988,458**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$207,540	**$207,540**

D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$1,225,914	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,225,914**
D5020 - Lighting and Branch Wiring	$146,948	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$146,948**
D5030 - Communications and Security	$266,692	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$266,692**
D5090 - Other Electrical Systems	$263,463	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$263,463**
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	$369,307	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$369,307**
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	$758,065	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$758,065**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

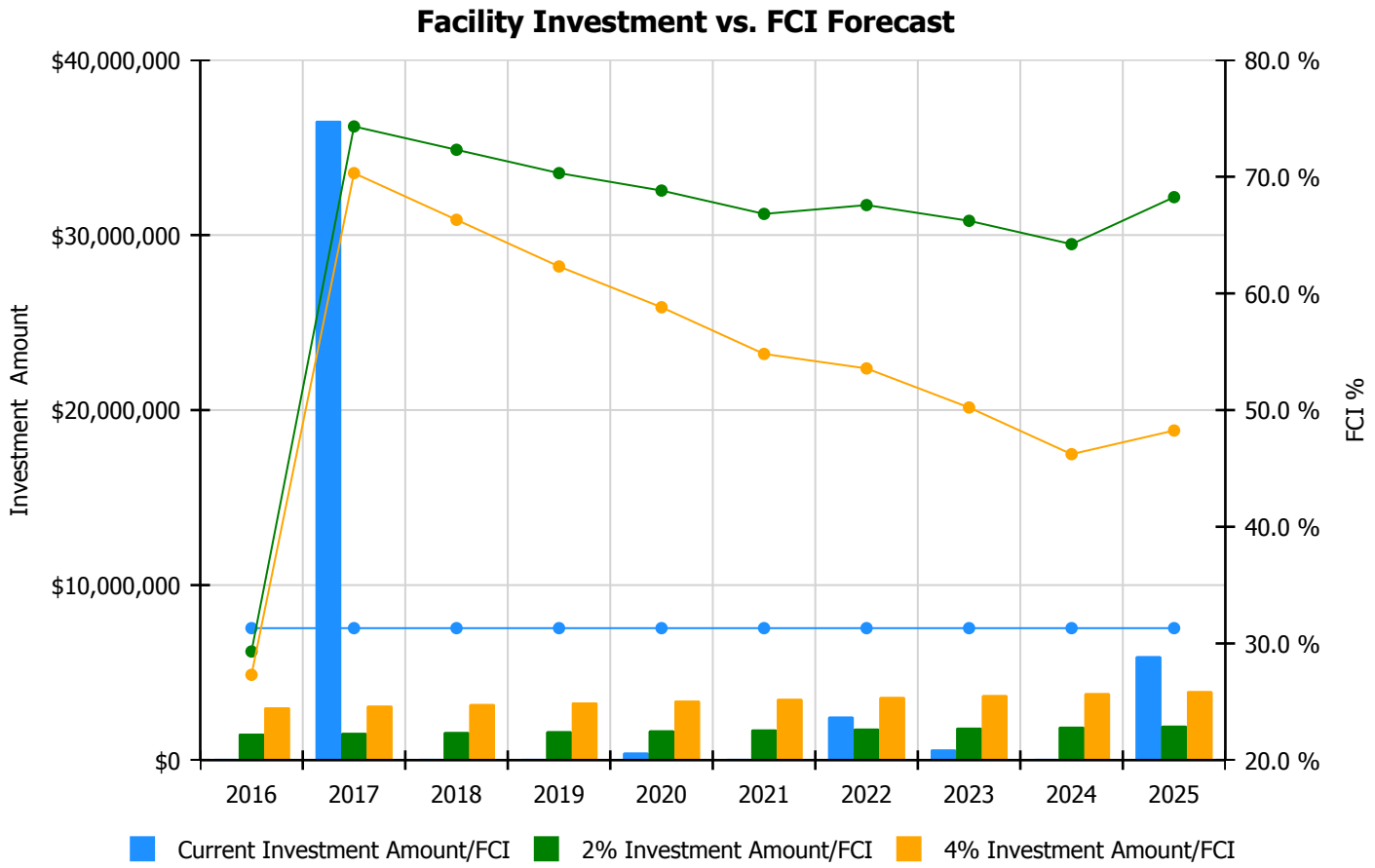
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

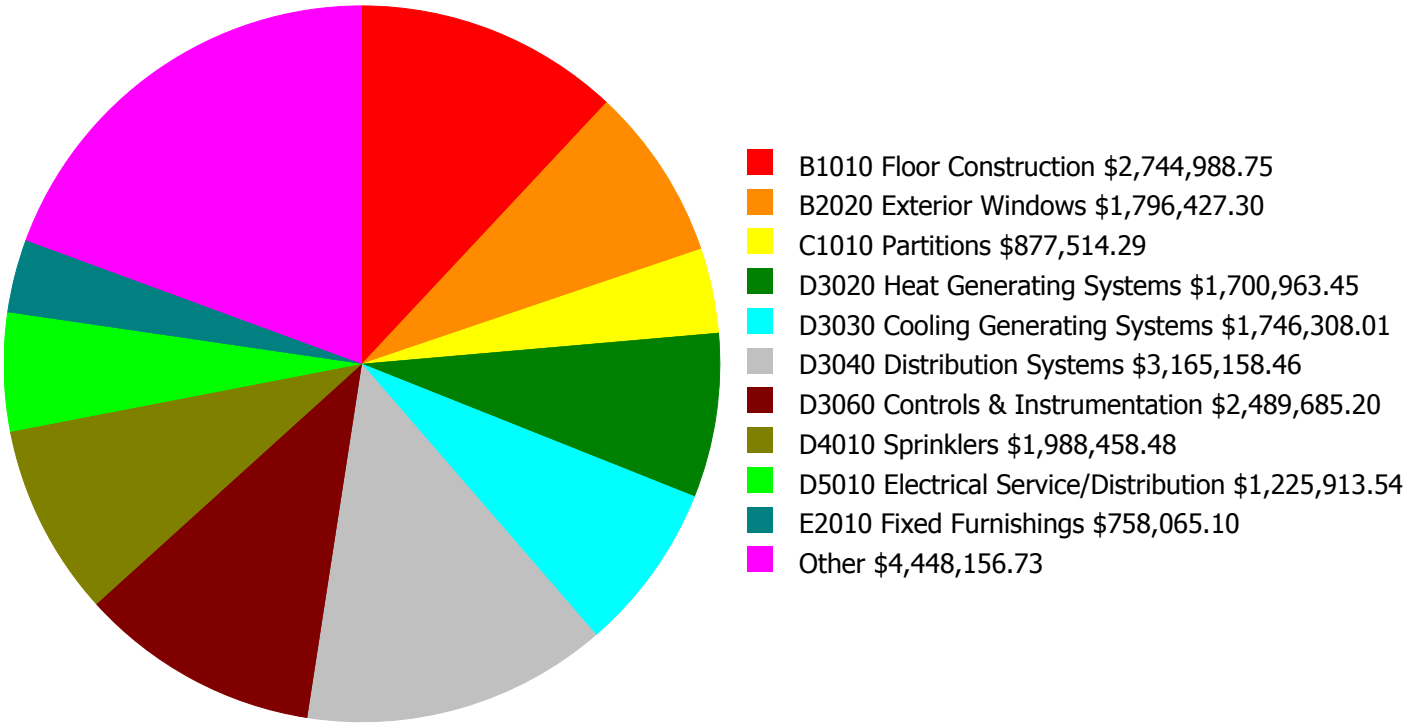
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 31.31%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,509,359.00	29.31 %	$3,018,717.00	27.31 %
2017	$36,531,434	$1,554,639.00	74.31 %	$3,109,279.00	70.31 %
2018	$0	$1,601,279.00	72.31 %	$3,202,557.00	66.31 %
2019	$0	$1,649,317.00	70.31 %	$3,298,634.00	62.31 %
2020	$428,952	$1,698,796.00	68.81 %	$3,397,593.00	58.81 %
2021	$0	$1,749,760.00	66.81 %	$3,499,521.00	54.81 %
2022	$2,484,110	$1,802,253.00	67.57 %	$3,604,506.00	53.57 %
2023	$604,310	$1,856,321.00	66.22 %	$3,712,642.00	50.22 %
2024	$0	$1,912,010.00	64.22 %	$3,824,021.00	46.22 %
2025	$5,935,249	$1,969,371.00	68.25 %	$3,938,741.00	48.25 %
Total:	**$45,984,056**	**$17,303,105.00**		**$34,606,211.00**	

Deficiency Summary by System

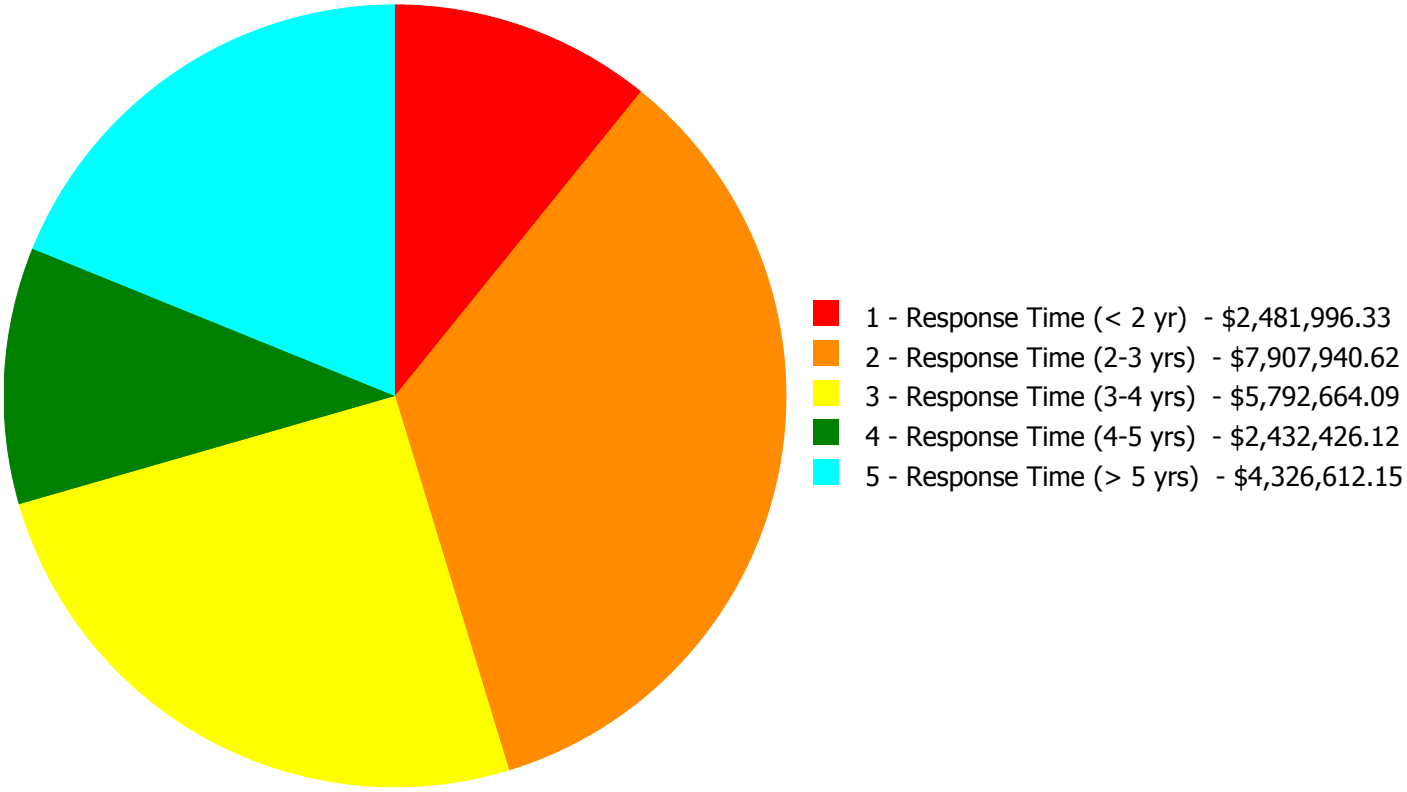
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $22,941,639.31

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: $22,941,639.31

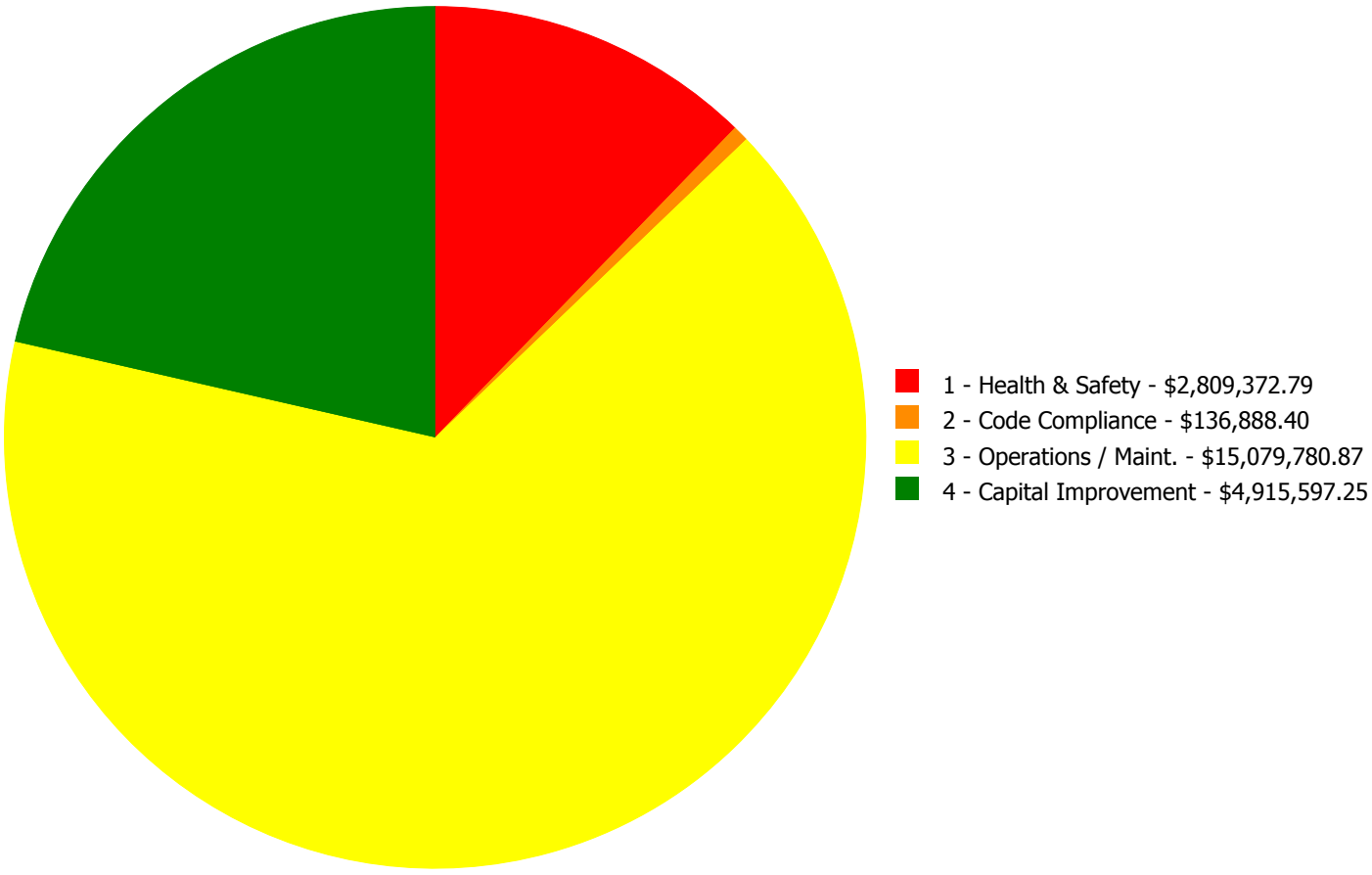
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
A2020	Basement Walls	$340,361.64	$0.00	$0.00	$0.00	$0.00	$340,361.64
B1010	Floor Construction	$0.00	$2,744,988.75	$0.00	$0.00	$0.00	$2,744,988.75
B2010	Exterior Walls	$0.00	$9,686.84	$0.00	$0.00	$0.00	$9,686.84
B2020	Exterior Windows	$0.00	$0.00	$0.00	$1,796,427.30	$0.00	$1,796,427.30
B2030	Exterior Doors	$0.00	$0.00	$218,575.70	$0.00	$0.00	$218,575.70
C1010	Partitions	$0.00	$877,514.29	$0.00	$0.00	$0.00	$877,514.29
C1020	Interior Doors	$0.00	$36,177.02	$0.00	$0.00	$0.00	$36,177.02
C1030	Fittings	$0.00	$13,689.97	$0.00	$0.00	$0.00	$13,689.97
C3010230	Paint & Covering	$0.00	$0.00	$202,182.99	$0.00	$0.00	$202,182.99
C3020412	Terrazzo & Tile	$0.00	$16,263.56	$0.00	$0.00	$0.00	$16,263.56
C3020414	Wood Flooring	$0.00	$0.00	$164,734.18	$0.00	$0.00	$164,734.18
C3030	Ceiling Finishes	$0.00	$0.00	$271,483.74	$0.00	$0.00	$271,483.74
D2010	Plumbing Fixtures	$0.00	$257,246.75	$0.00	$0.00	$0.00	$257,246.75
D2020	Domestic Water Distribution	$0.00	$22,015.51	$0.00	$0.00	$576,442.70	$598,458.21
D2030	Sanitary Waste	$0.00	$0.00	$590,278.39	$0.00	$0.00	$590,278.39
D2040	Rain Water Drainage	$0.00	$682,607.63	$0.00	$0.00	$0.00	$682,607.63
D3020	Heat Generating Systems	$1,685,560.49	$0.00	$0.00	$0.00	$15,402.96	$1,700,963.45
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,746,308.01	$1,746,308.01
D3040	Distribution Systems	$456,074.20	$0.00	$2,709,084.26	$0.00	$0.00	$3,165,158.46
D3060	Controls & Instrumentation	$0.00	$2,489,685.20	$0.00	$0.00	$0.00	$2,489,685.20
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$1,988,458.48	$1,988,458.48
D5010	Electrical Service/Distribution	$0.00	$0.00	$1,225,913.54	$0.00	$0.00	$1,225,913.54
D5020	Lighting and Branch Wiring	$0.00	$0.00	$146,948.40	$0.00	$0.00	$146,948.40
D5030	Communications and Security	$0.00	$0.00	$0.00	$266,691.93	$0.00	$266,691.93
D5090	Other Electrical Systems	$0.00	$0.00	$263,462.89	$0.00	$0.00	$263,462.89
E1020	Institutional Equipment	$0.00	$0.00	$0.00	$369,306.89	$0.00	$369,306.89
E2010	Fixed Furnishings	$0.00	$758,065.10	$0.00	$0.00	$0.00	$758,065.10
	Total:	$2,481,996.33	$7,907,940.62	$5,792,664.09	$2,432,426.12	$4,326,612.15	$22,941,639.31

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: $22,941,639.31

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: A2020 - Basement Walls

Location: Basement

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Remove the lid for coal ash bunkers, fill in the bunker and replace the lid with concrete paving - estimate based on SF of lid and CY of fill at 2,000 SF and 15' of depth and a 20 LF fill in basement wall - adjust the BCY of fill if the fill is deeper - moving oil supply tank is a separate cost

Qty: 2,000.00

Unit of Measure: S.F.

Estimate: $340,361.64

Assessor Name: System

Date Created: 11/04/2015

Notes: Abandon/fill coal ash rooms in basement and replace decking to address failing concrete

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 3.00

Unit of Measure: Ea.

Estimate: $1,685,560.49

Assessor Name: System

Date Created: 01/11/2016

Notes: Replace boilers due to age and chronic repair needs

System: D3040 - Distribution Systems

Location: Entire building

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 139,000.00

Unit of Measure: S.F.

Estimate: $456,074.20

Assessor Name: System

Date Created: 01/08/2016

Notes: Survey and repair steam traps

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

System: B1010 - Floor Construction

Location: Locker rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Rehabilitate abandoned portion of building - all systems

Qty: 4,500.00

Unit of Measure: S.F.

Estimate: $2,744,988.75

Assessor Name: System

Date Created: 11/04/2015

Notes: Rehabilitate all systems in locker rooms and shower areas

System: B2010 - Exterior Walls

Location: Ext. walls

Distress: Building Envelope Integrity

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: 300.00

Unit of Measure: S.F.

Estimate: $9,686.84

Assessor Name: System

Date Created: 11/04/2015

Notes: Repair masonry cracks on exterior wall

System: C1010 - Partitions

Location: Locker rooms

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Remodel and refurbish shower room - based on approximately 8 showers

Qty: 4.00

Unit of Measure: Ea.

Estimate: $877,514.29

Assessor Name: System

Date Created: 01/08/2016

Notes: Completely remodel boys' and girls' showers

System: C1020 - Interior Doors

Location: Throughout

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Replace door knobs with compliant lever type

Qty: 65.00

Unit of Measure: Ea.

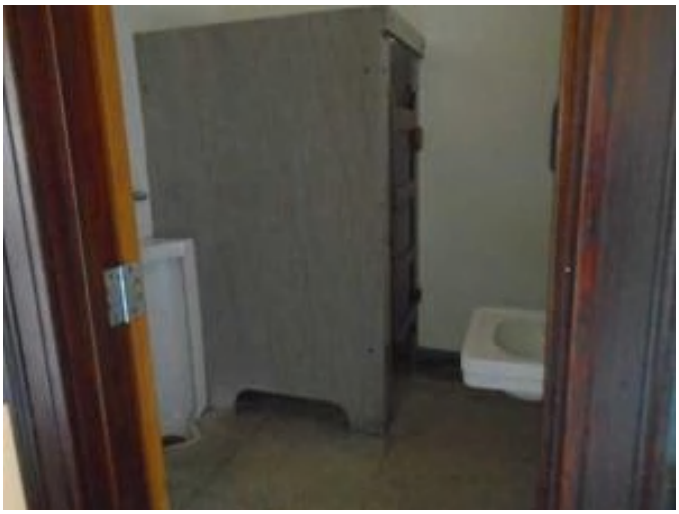
Estimate: $36,177.02

Assessor Name: System

Date Created: 11/04/2015

Notes: Replace interior door hardware with lever type handles for accessibility

System: C1030 - Fittings



Location: Toilets

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Remove and replace damaged toilet paritions - handicap units

Qty: 14.00

Unit of Measure: Ea.

Estimate: $13,689.97

Assessor Name: System

Date Created: 11/04/2015

Notes: Install accessible toilet partitions to meet building code

System: C3020412 - Terrazzo & Tile

Location: Various

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 150.00

Unit of Measure: S.F.

Estimate: $16,263.56

Assessor Name: System

Date Created: 11/04/2015

Notes: Repair cracked terrazzo flooring

System: D2010 - Plumbing Fixtures

Location: Boys' toilets

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 38.00

Unit of Measure: Ea.

Estimate: $137,554.98

Assessor Name: System

Date Created: 01/08/2016

Notes: Replace all floor standing urinals

System: D2010 - Plumbing Fixtures

Location: Corridors

Distress: Accessibility

Category: 2 - Code Compliance

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: 01/08/2016

Notes: Install accessible fountains with integral chillers on each floor

System: D2010 - Plumbing Fixtures

Location: Toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 15.00

Unit of Measure: Ea.

Estimate: $56,920.18

Assessor Name: System

Date Created: 01/08/2016

Notes: Replace 25% water closets

System: D2020 - Domestic Water Distribution

Location: Boiler room

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace domestic water circulation pump (to 1 HP)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $22,015.51

Assessor Name: System

Date Created: 01/07/2016

Notes: Repair or replace inoperative hot water circulation pump

System: D2040 - Rain Water Drainage

Location: Entire building

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace rain water drainage piping - based on +- 30 KSF roof area on 3-4 story building - insert the SF of roof area to be drained

Qty: 50,800.00

Unit of Measure: S.F.

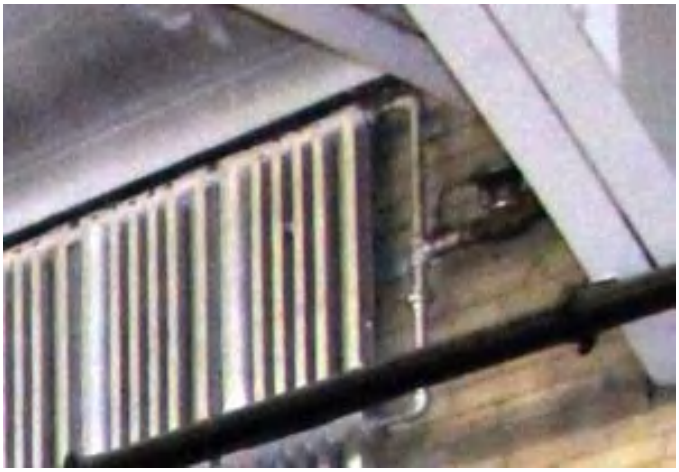
Estimate: $682,607.63

Assessor Name: System

Date Created: 01/07/2016

Notes: Inspect and repair rain water drain system due to ponding and age

System: D3060 - Controls & Instrumentation



Location: Entire building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (150KSF)

Qty: 139,000.00

Unit of Measure: S.F.

Estimate: $2,489,685.20

Assessor Name: System

Date Created: 01/11/2016

Notes: Upgrade pneumatic HVAC control system to DDC

System: E2010 - Fixed Furnishings

Location: Auditorium/balcony

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 957.00

Unit of Measure: Ea.

Estimate: $758,065.10

Assessor Name: System

Date Created: 11/04/2015

Notes: Replace auditorium seats – beyond service life and failing veneer

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

System: B2030 - Exterior Doors

Location: Throughout

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 24.00

Unit of Measure: Ea.

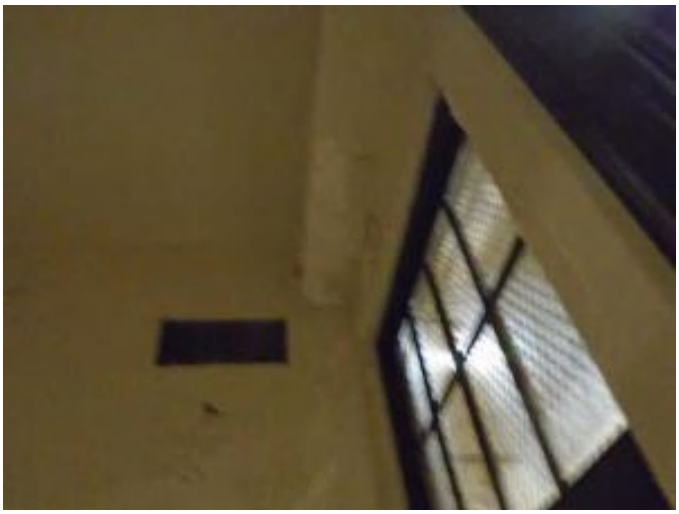
Estimate: $218,575.70

Assessor Name: System

Date Created: 11/04/2015

Notes: Replace exterior metal doors – rusted, failing, and beyond service life

System: C3010230 - Paint & Covering



Location: Throughout

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 23,600.00

Unit of Measure: S.F.

Estimate: $202,182.99

Assessor Name: System

Date Created: 11/04/2015

Notes: Repair and paint interior plaster walls – water damaged (10% of plaster wall area)

System: C3020414 - Wood Flooring

Location: Various

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Refinish wood floors

Qty: 15,300.00

Unit of Measure: S.F.

Estimate: $164,734.18

Assessor Name: System

Date Created: 11/04/2015

Notes: Refinish wood flooring (20% of wood floor area)

System: C3030 - Ceiling Finishes

Location: Throughout

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 18,000.00

Unit of Measure: S.F.

Estimate: $271,483.74

Assessor Name: System

Date Created: 11/04/2015

Notes: Replace suspended acoustic ceiling system – rusted beyond service life (90% of suspended ceiling area)

System: D2030 - Sanitary Waste

Location: Entire 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: 139,000.00

Unit of Measure: S.F.

Estimate: $590,278.39

Assessor Name: System

Date Created: 01/07/2016

Notes: Inspect and repair sanitary drainage system based on age and appearance

System: D3040 - Distribution Systems

Location: Entire building

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 139,000.00

Unit of Measure: S.F.

Estimate: $1,314,991.87

Assessor Name: System

Date Created: 01/11/2016

Notes: Repair or replace steam and condensate pipe due to reported leaks

System: D3040 - Distribution Systems

Location: Entire buidling

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Install / replace HVAC unit for Auditorium (800 seat).

Qty: 800.00

Unit of Measure: Seat

Estimate: $1,252,195.12

Assessor Name: System

Date Created: 01/11/2016

Notes: Replace original AHUs due to age and lack of cooling

System: D3040 - Distribution Systems

Location: Attic mechanical rooms

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Replace utility set exhaust fan (5 HP)

Qty: 3.00

Unit of Measure: Ea.

Estimate: $141,897.27

Assessor Name: System

Date Created: 01/11/2016

Notes: Replace exhaust fans for toilet rooms, lunchroom, etc.

System: D5010 - Electrical Service/Distribution

Location: Entire Building
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Electrical Distribution System (U)
Qty: 1.00
Unit of Measure: Ea.
Estimate: $621,928.47
Assessor Name: System
Date Created: 12/29/2015

Notes: Replace the entire distribution system with new panels and new wiring/conduits. Approximate (30) 208/120V.

System: D5010 - Electrical Service/Distribution

Location: Basement
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Switchboard
Qty: 1.00
Unit of Measure: Ea.
Estimate: $603,985.07
Assessor Name: System
Date Created: 12/29/2015

Notes: Provide new service 480V/277V, 3 phase power, approximate 2000 Amperes.

System: D5020 - Lighting and Branch Wiring

Location: Entire Building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add wiring device

Qty: 400.00

Unit of Measure: Ea.

Estimate: $146,948.40

Assessor Name: System

Date Created: 12/29/2015

Notes: The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two duplex outlets each. Approximate 400 receptacles.

System: D5090 - Other Electrical Systems

This deficiency has no image.

Location: Outdoor

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Add Standby Generator System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $203,312.30

Assessor Name: System

Date Created: 12/29/2015

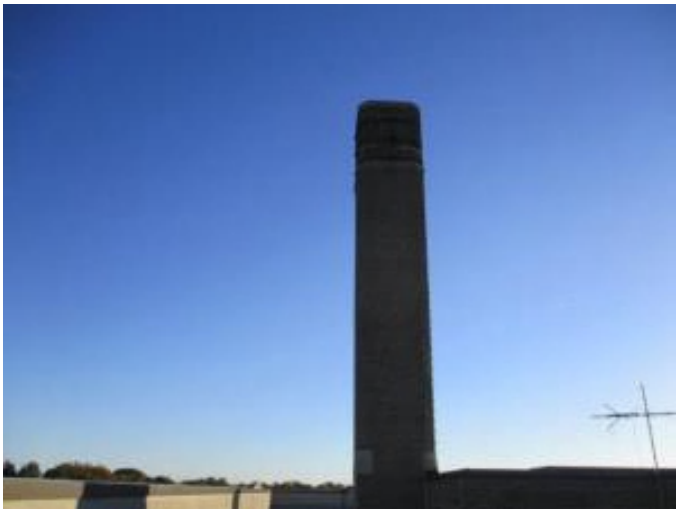
Notes: Provide an outdoor diesel powered generator. Approximate 150KW

System: D5090 - Other Electrical Systems

Location: Entire Building
Distress: Health Hazard / Risk
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Add Emergency/Exit Lighting
Qty: 20.00
Unit of Measure: Ea.
Estimate: $35,900.77
Assessor Name: System
Date Created: 12/29/2015

Notes: Provide wall mounted emergency lighting fixtures with battery backup. Approximate 20

System: D5090 - Other Electrical Systems



Location: Roof
Distress: Building / MEP Codes
Category: 2 - Code Compliance
Priority: 3 - Response Time (3-4 yrs)
Correction: Repair Lightning Protection System
Qty: 1.00
Unit of Measure: Job
Estimate: $24,249.82
Assessor Name: System
Date Created: 12/29/2015

Notes: Prepare a study to determine if lightning protection system is required.

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

System: B2020 - Exterior Windows

Location: Throughout
Distress: Energy Efficiency
Category: 4 - Capital Improvement
Priority: 4 - Response Time (4-5 yrs)
Correction: Remove and replace double slider windows
Qty: 356.00
Unit of Measure: Ea.
Estimate: $1,796,427.30
Assessor Name: System
Date Created: 11/04/2015

Notes: Replace Plexiglas windows – hazed and not energy efficient (80% of Ext. windows)

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: $241,339.60
Assessor Name: System
Date Created: 12/29/2015

Notes: Provide indoor surveillance CCTV cameras for a complete coverage of the school building interior. Approximate 60

System: D5030 - Communications and Security

Location: Auditorium
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Sound System
Qty: 1.00
Unit of Measure: LS
Estimate: $25,352.33
Assessor Name: System
Date Created: 12/29/2015

Notes: Provide the auditorium with a sound system.

System: E1020 - Institutional Equipment

Location: Auditorium
Distress: Obsolete
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Stage Theatrical Lighting System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $293,594.70
Assessor Name: System
Date Created: 12/29/2015

Notes: Provide the auditorium with dimming and theatrical lighting

System: E1020 - Institutional Equipment

Location: Gyms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or install basketball backstop and hoop - pick the appropriate style of backstop

Qty: 12.00

Unit of Measure: Ea.

Estimate: $75,712.19

Assessor Name: System

Date Created: 11/04/2015

Notes: Replace gymnasium equipment – damaged and beyond service life

Priority 5 - Response Time (> 5 yrs):

System: D2020 - Domestic Water Distribution

Location: Entire bulding
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Replace domestic water piping (150 KSF)
Qty: 139,000.00
Unit of Measure: S.F.
Estimate: $576,442.70
Assessor Name: System
Date Created: 01/07/2016

Notes: Replace obsolete and failing domestic water distribution piping

System: D3020 - Heat Generating Systems

Location: Boiler room
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Replace fuel oil pumps
Qty: 1.00
Unit of Measure: Ea.
Estimate: $15,402.96
Assessor Name: System
Date Created: 01/08/2016

Notes: Replace failing oil pumps

System: D3030 - Cooling Generating Systems

Location: Entire building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Install chilled water system with distribution piping and pumps. (+150KSF)

Qty: 105,000.00

Unit of Measure: S.F.

Estimate: $1,746,308.01

Assessor Name: System

Date Created: 01/08/2016

Notes: Install 350 ton cooling system

System: D4010 - Sprinklers

Location: Entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Install a fire protection sprinkler system

Qty: 139,000.00

Unit of Measure: S.F.

Estimate: $1,988,458.48

Assessor Name: System

Date Created: 01/07/2016

Notes: Install fire suppression sprinkler system

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, oil fired, flame retention burner, cast iron, steam, gross output, 6970 MBH, includes standard controls and insulated flush jacket, packaged	3.00	Ea.	Boiler room					35	1975	2052	$158,614.00	$523,426.20
D3040 Distribution Systems	AHU, field fabricated, built up, cool/heat coils, filters, constant volume, 40,000 CFM	1.00	Ea.	Basement mechanical rooms					25	1933	2042	$151,511.80	$166,662.98
D3040 Distribution Systems	AHU, field fabricated, built up, cool/heat coils, filters, constant volume, 60,000 CFM	2.00	Ea.	Basement mechanical rooms					25	1933	2042	$161,221.20	$354,686.64
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 1200 amp, excl breakers	1.00	Ea.	Base,emt Electrical Room					30	1933	2047	$6,551.55	$7,206.71
												Total:	**$1,051,982.53**

Executive Summary

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

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

Function:	
Gross Area (SF):	75,800
Year Built:	1931
Last Renovation:	
Replacement Value:	$1,416,560
Repair Cost:	$588,562.03
Total FCI:	41.55 %
Total RSLI:	57.17 %

Description:

Attributes:

General Attributes:

Bldg ID:	S410001	Site ID:	S410001

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	60.47 %	28.71 %	$311,995.84
G40 - Site Electrical Utilities	46.31 %	83.88 %	$276,566.19
Totals:	**57.17 %**	**41.55 %**	**$588,562.03**

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.		30	1990	2020		16.67 %	0.00 %	5			$0
G2030	Pedestrian Paving	$11.52	S.F.	60,700	40	1990	2030		37.50 %	6.05 %	15		$42,286.90	$699,264
G2040	Site Development	$4.36	S.F.	75,800	25	1975	2000	2042	108.00 %	81.61 %	27		$269,708.94	$330,488
G2050	Landscaping & Irrigation	$3.78	S.F.	15,100	15	2010	2025		66.67 %	0.00 %	10			$57,078
G4020	Site Lighting	$3.58	S.F.	75,800	30	1995	2025		33.33 %	0.00 %	10			$271,364
G4030	Site Communications & Security	$0.77	S.F.	75,800	30	1933	1963	2047	106.67 %	473.85 %	32		$276,566.19	$58,366
								Total	**57.17 %**	**41.55 %**			**$588,562.03**	**$1,416,560**

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.

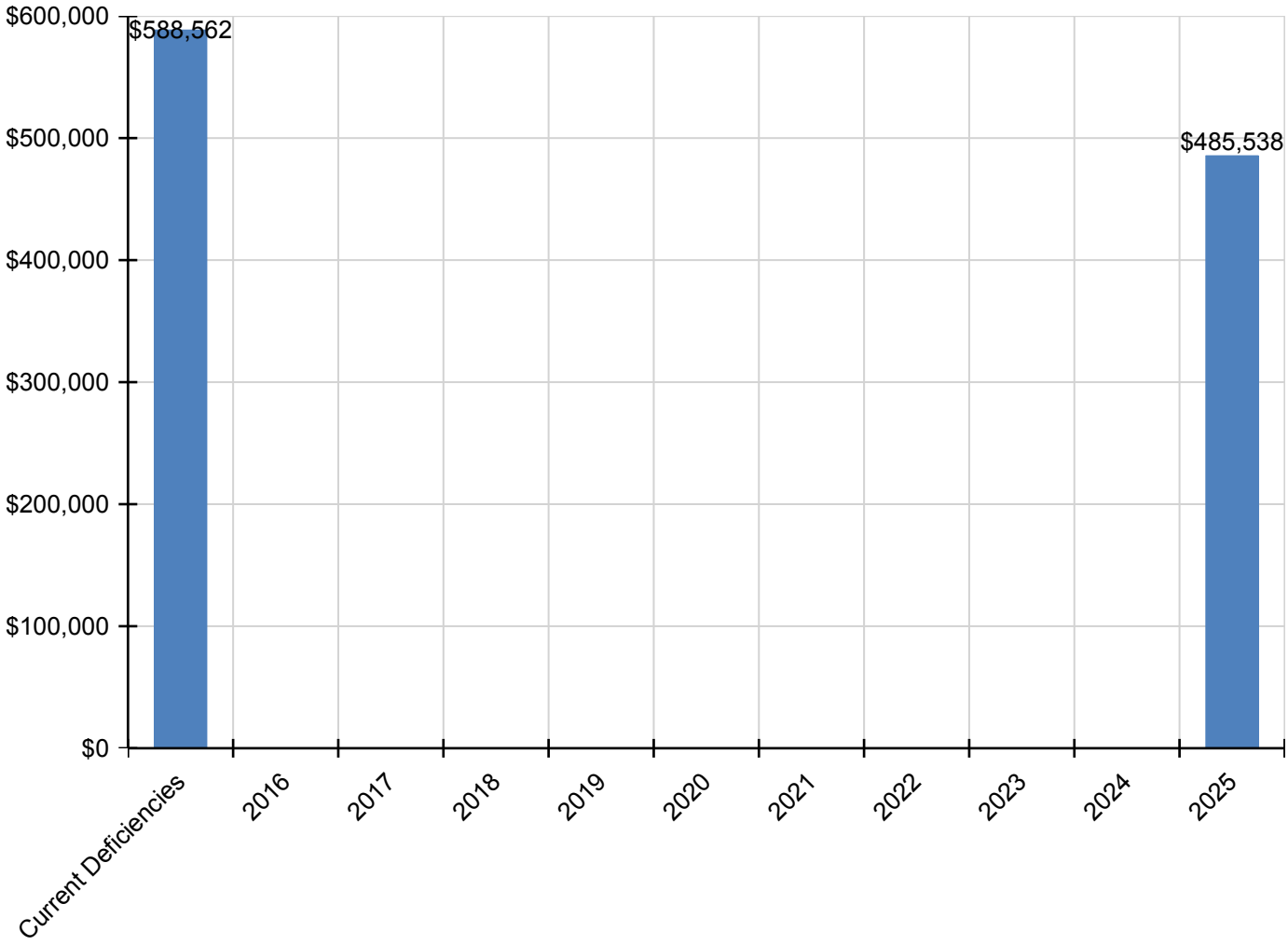
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$588,562**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$485,538**	**$1,074,100**
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	$42,287	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$42,287**
G2040 - Site Development	$269,709	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$269,709**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$84,379	**$84,379**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$401,159	**$401,159**
G4030 - Site Communications & Security	$276,566	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$276,566**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

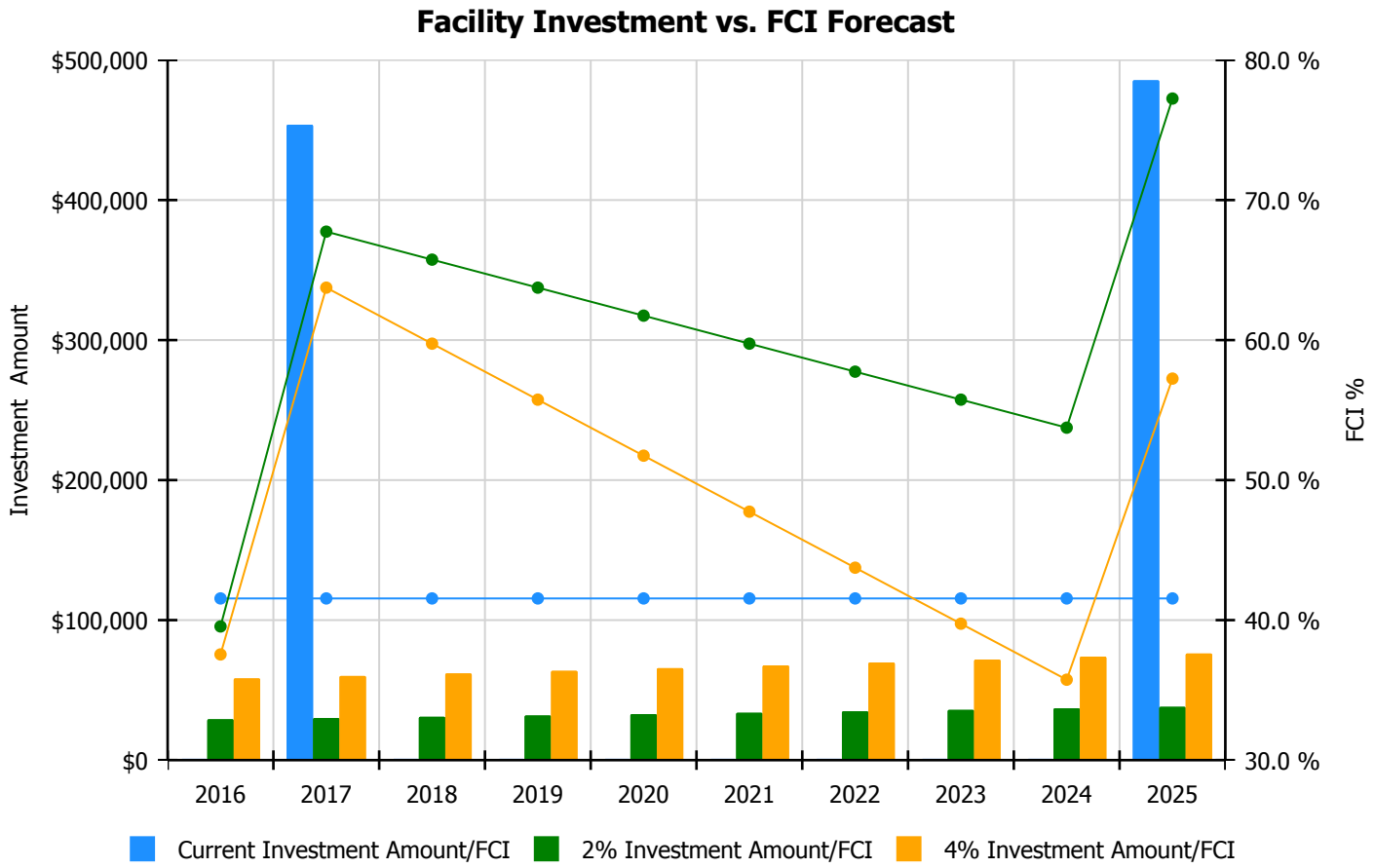
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

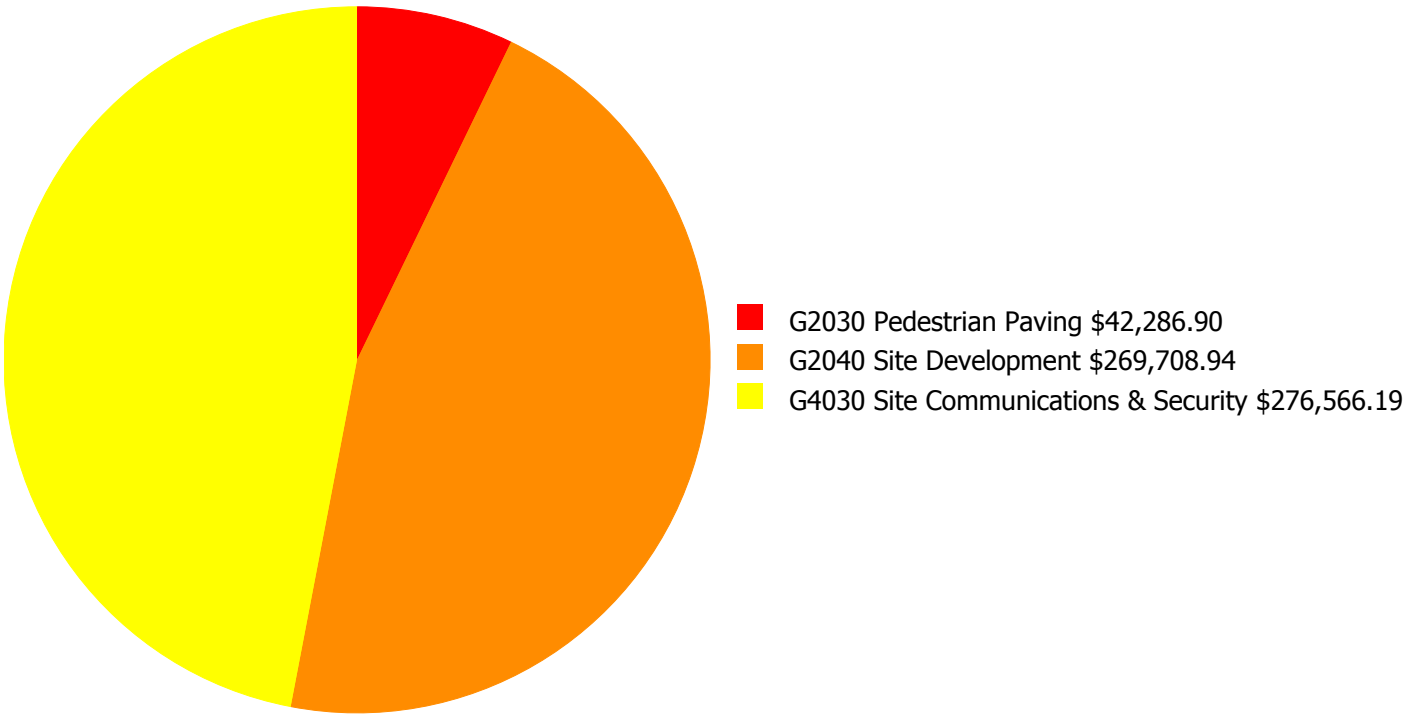
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 41.55%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$29,181.00	39.55 %	$58,362.00	37.55 %
2017	$453,789	$30,057.00	67.74 %	$60,113.00	63.74 %
2018	$0	$30,958.00	65.74 %	$61,917.00	59.74 %
2019	$0	$31,887.00	63.74 %	$63,774.00	55.74 %
2020	$0	$32,844.00	61.74 %	$65,687.00	51.74 %
2021	$0	$33,829.00	59.74 %	$67,658.00	47.74 %
2022	$0	$34,844.00	57.74 %	$69,688.00	43.74 %
2023	$0	$35,889.00	55.74 %	$71,778.00	39.74 %
2024	$0	$36,966.00	53.74 %	$73,932.00	35.74 %
2025	$485,538	$38,075.00	77.25 %	$76,150.00	57.25 %
Total:	**$939,328**	**$334,530.00**		**$669,059.00**	

Deficiency Summary by System

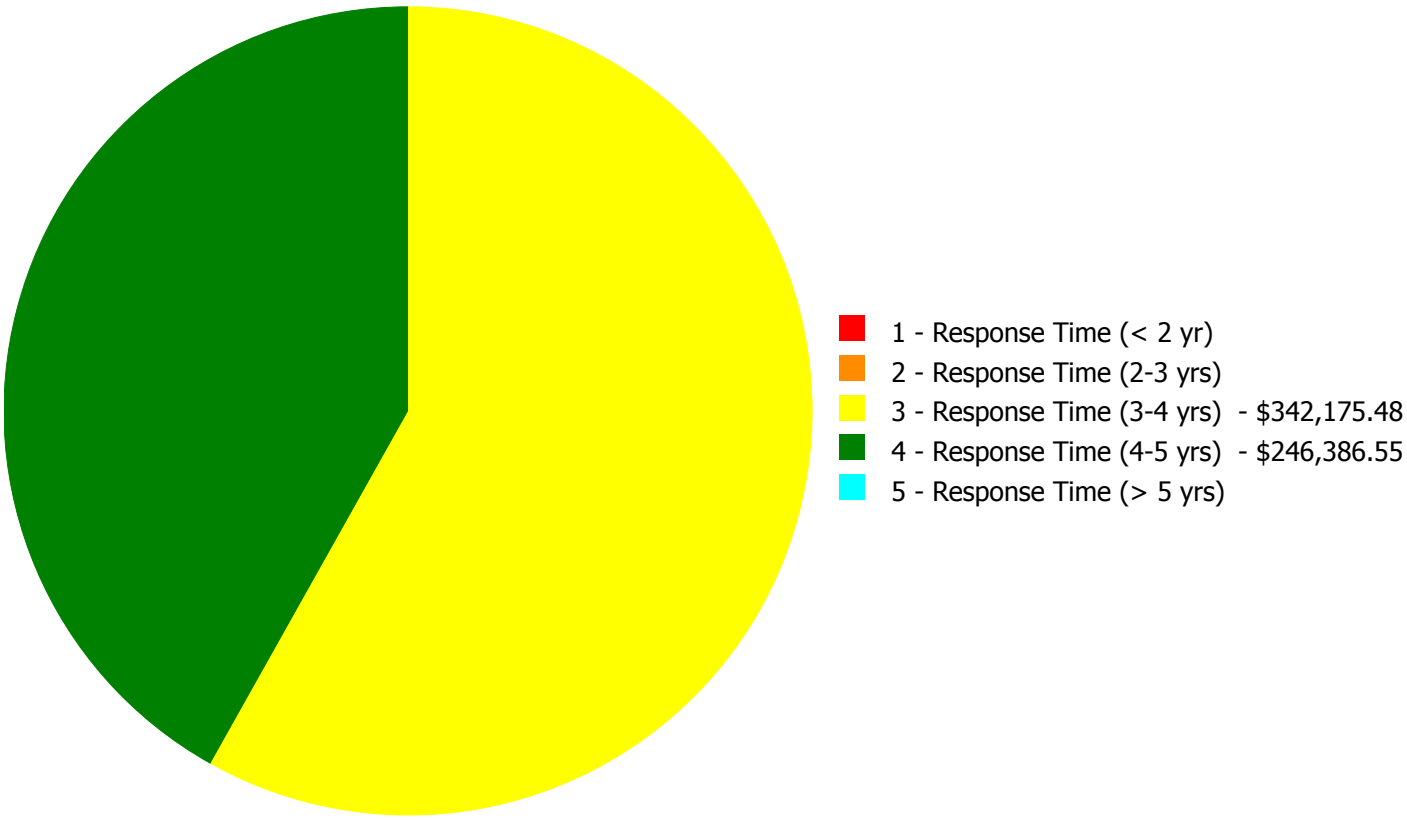
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $588,562.03

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: $588,562.03

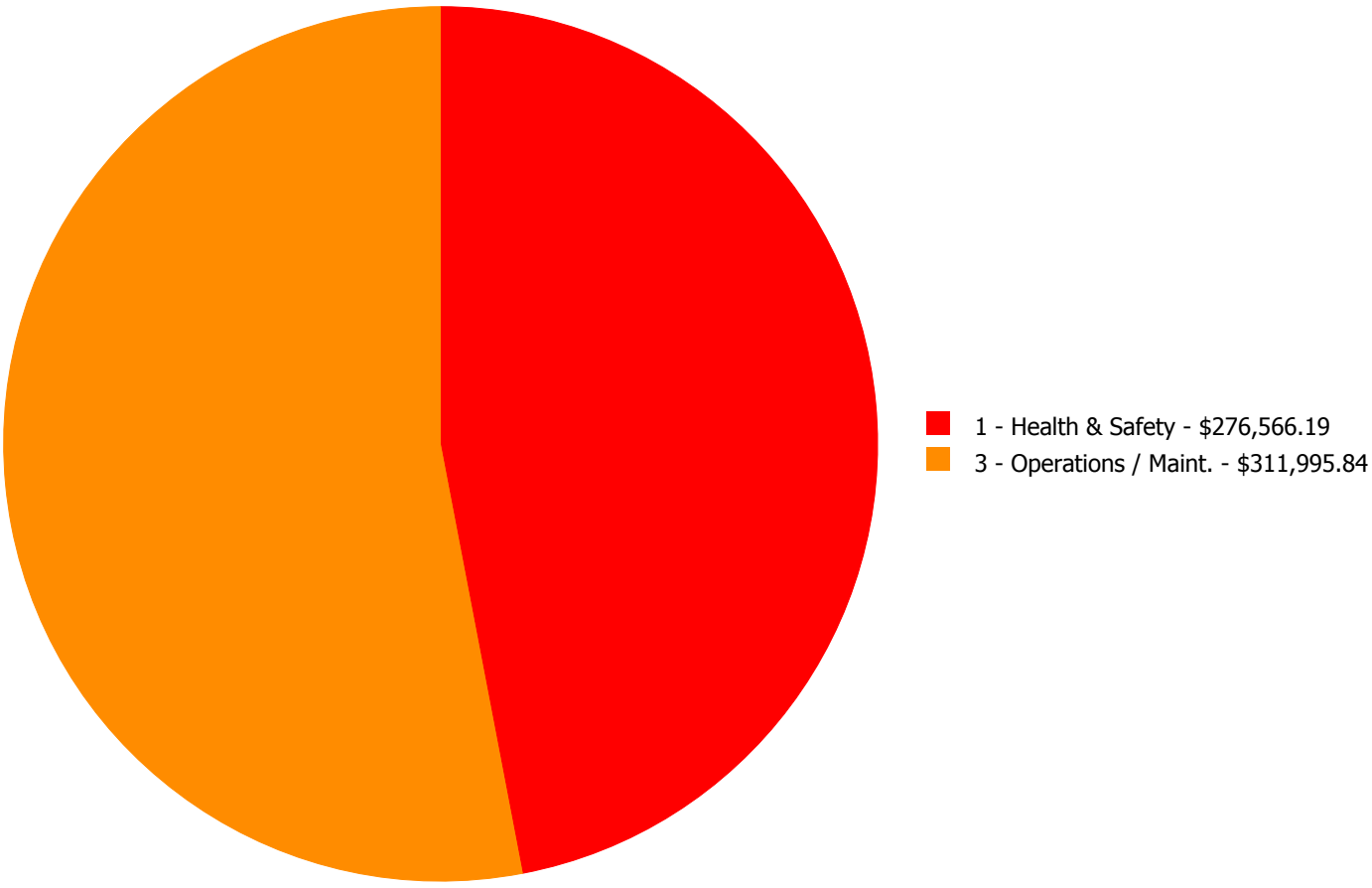
Deficiency By Priority Investment Table

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	$0.00	$42,286.90	$0.00	$0.00	$42,286.90
G2040	Site Development	$0.00	$0.00	$23,322.39	$246,386.55	$0.00	$269,708.94
G4030	Site Communications & Security	$0.00	$0.00	$276,566.19	$0.00	$0.00	$276,566.19
	Total:	$0.00	$0.00	$342,175.48	$246,386.55	$0.00	$588,562.03

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: $588,562.03

Deficiency Details by Priority

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

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

System: G2030 - Pedestrian Paving

Location: Yard

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace concrete paving - pedestrian or parking - 8" concrete thickness

Qty: 1,500.00

Unit of Measure: S.F.

Estimate: $39,410.33

Assessor Name: Eduardo Zambrano

Date Created: 11/04/2015

Notes: Replace concrete paving – spalling and cracking (10% of concrete paving area)

System: G2030 - Pedestrian Paving

Location: Sidewalks

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 200.00

Unit of Measure: S.F.

Estimate: $2,876.57

Assessor Name: Craig Anding

Date Created: 11/04/2015

Notes: Replace concrete sidewalks – damaged by trees and roots

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System: G2040 - Site Development

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair and regrout stone retaining wall - LF of wall - up to 4' tall

Qty: 50.00

Unit of Measure: L.F.

Estimate: $23,322.39

Assessor Name: Eduardo Zambrano

Date Created: 11/04/2015

Notes: Repair perimeter wall – SW corner failing

System: G4030 - Site Communications & Security

Location: Building Perimeter

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add Video Surveillance System

Qty: 15.00

Unit of Measure: Ea.

Estimate: $276,566.19

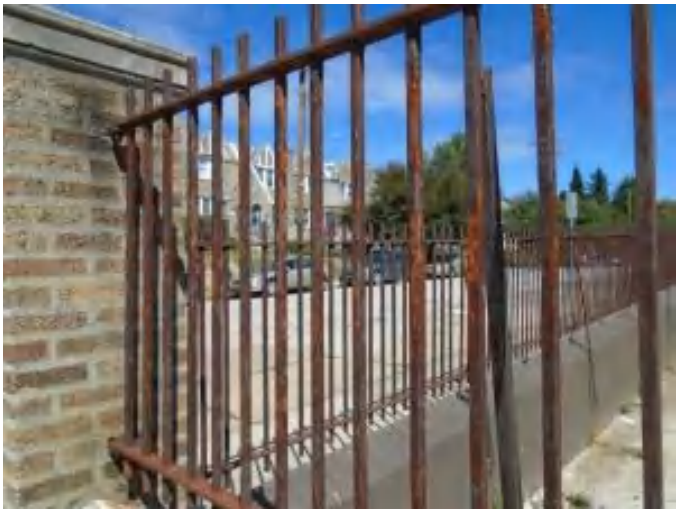
Assessor Name: Eduardo Zambrano

Date Created: 12/29/2015

Notes: Provide outdoor surveillance CCTV cameras to provide a complete coverage of the building perimeter. Approximate 15

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

System: G2040 - Site Development



Location: Site

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 1,584.00

Unit of Measure: L.F.

Estimate: $246,386.55

Assessor Name: Eduardo Zambrano

Date Created: 11/04/2015

Notes: Replace site fencing - rusted, damaged, and failing

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