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.

Parkway West High (Sulzberger) School

Governance	DISTRICT	Report Type	High
Address	4725 Fairmount Ave.	Enrollment	259
	Philadelphia, Pa 19139	Grade Range	'09-12'
Phone/Fax	215-581-5510 / 215-581-5600	Admissions Category	Special Admit
Website	Www.Philasd.Org/Schools/Parkwaywest	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	**26.55%**	**$15,943,084**	**$60,042,790**
Building	25.06 %	$14,772,358	$58,940,304
Grounds	106.19 %	$1,170,726	$1,102,486

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	76.87 %	$1,450,349	$1,886,704
Exterior Walls (Shows condition of the structural condition of the exterior facade)	01.25 %	$65,628	$5,253,600
Windows (Shows functionality of exterior windows)	00.00 %	$0	$2,565,600
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$174,000
Interior Doors (Classroom doors)	07.23 %	$30,442	$421,200
Interior Walls (Paint and Finishes)	00.69 %	$13,483	$1,954,800
Plumbing Fixtures	00.00 %	$0	$1,436,400
Boilers	00.00 %	$0	$1,984,800
Chillers/Cooling Towers	51.84 %	$1,349,302	$2,602,800
Radiators/Unit Ventilators/HVAC	48.71 %	$2,225,181	$4,568,400
Heating/Cooling Controls	132.01 %	$1,892,958	$1,434,000
Electrical Service and Distribution	114.64 %	$1,073,070	$936,000
Lighting	04.24 %	$142,013	$3,350,400
Communications and Security (Cameras, Pa System and Fire Alarm)	14.04 %	$176,189	$1,255,200

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

S112001;Sulzberger

Final

Site Assessment Report

February 2, 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):	120,000
Year Built:	1924
Last Renovation:	
Replacement Value:	$60,042,790
Repair Cost:	$15,943,084.11
Total FCI:	26.55 %
Total RSLI:	66.08 %

Description:

Facility Assessment

June 2015

School District of Philadelphia

Mayer Sulzberger School housing the Parkway West High School & Middle Years Alternative School

4725 Fairmount Avenue

Philadelphia, PA 19139

120,000 SF / 1,202 Students / LN 02

General

The Mayer Sulzberger Junior High School building is located at 4725 Fairmount Avenue in Philadelphia, PA. The 3 story, 120,000

square foot building was originally constructed in 1924. There have been no additions. The building has a one level basement. This building is listed on the National Register of Historic Places.

Mr. Richard Toohey, Facility Area Coordinator, Ms. Shakae Dupre, the MYA School Principal, and Dr. Kathleen McCladdie, the Parkway West High School Principal, provided input to the Parsons assessment team on current problems and planned renovation/addition projects. Mr. Anthony Greene, the Building Engineer, accompanied the team on its tour of the school and provided information on building systems and maintenance history.

Architectural/Structural Systems

The building rests on concrete foundations and bearing walls that are not showing signs of settlement or damage. The basement floor is slab on grade. The main structure consists of cast-in-place concrete columns, beams and concrete, with one way ribbed slabs. The roof structure consists of concrete one-way slab supported by main structural frame. The roof structure over gym is concrete roof panels supported by steel purlins and trusses. Some spalling of concrete and exposed, rusty rebar was noted where visible at the roof access areas and at the basement along the east wall. The building envelope is masonry with face brick. Elevations are enhanced with decorative stonework around entrances with stone base at sidewalk level and stone window sills and headers. In general, masonry is in good condition with evidence of repairs/maintenance. There is some apparent displacement or rotation of face brick at the east elevation, south end, above second level, and some distress at the west elevation, north end. Elevations facing streets are face brick; elevations facing interior atria (above first floor) are painted with some paint peeling off at roof level. Original windows were replaced in 2012 with bronze colored extruded aluminum double hung windows double glazed with insect screens. All windows are generally in good condition. Exterior doors are typically hollow metal with glazing, in fair condition. Roofing is mechanically fastened single ply in poor condition with some water ponding observed. All roofing and flashing is in poor condition; several leaks were reported and evidence of roof leaks was observed at the interior. Roof access is via interior steep stairs to half-door openings to the roof level at the upper roof. Lower roofs are accessed via window openings and/or portable ladders. Generally, the building is not accessible per ADA requirements due to first floor- grade separation with no ramps or lifts.

Partition wall types include plastered ceramic hollow blocks and drywall on metal studs. The interior wall finishes are generally painted plaster or brick with glazed brick wainscot in stairways, corridors and toilets. A few classrooms have moveable wall panels in inoperable condition. Interior classroom and office doors are generally flush wood veneer solid core with lites and some transoms. Some doors have damaged casings. Most doors have lever hardware. Interior doors were replaced approximately 10 years ago. Doors leading to exit stairways are hollow metal doors and frames in good condition.

Fittings include: re-painted lockers along the corridor walls, in operable condition; toilet accessories in fair condition; toilet partitions are plastic in student facilities, baked enamel in locker rooms, and are marble and wood in faculty restrooms, generally in poor to fair condition; handrails and ornamental metals, are generally in fair condition but are not in compliance with modern building codes; interior identifying signage is typically directly painted on wall or door surfaces and are inadequate.

Stair construction is generally concrete with cast iron non-slip treads in fair condition. The main grand entrance stair has marble treads in fair condition. There is only one stair/exit door to each lower level gym.

Paint is in generally fair condition with some deterioration in stairways, auditorium and water damaged areas. Marble wainscot is used at the grand main entry and up the stairwell to the auditorium. Flooring in classrooms includes hardwood and VCT. Hardwood floors typically have small areas of damage, often near radiators. VCT is used in classrooms where the wood floors were beyond repair. The main office and cafeteria have VCT tile, generally in fair condition. Some 9" VAT was seen in storage areas. The auditorium has hardwood flooring in worn condition with carpeted aisles. The wood stage flooring is buckled. The IMC has carpet tiles in good condition. The main entry and auditorium lobby area has terrazzo flooring in worn condition, with some cracking/settlement on the 2nd floor. Typical corridors and restrooms have sealed patterned concrete floors. The gyms, locker rooms, and kitchen have painted concrete floors in worn condition.

Most classroom, corridor and office ceilings are ten year old 2x4 suspended acoustical panels in generally good condition. Some broken/perforated tile and some water damaged tile were observed. The auditorium, main entry, and exit stairwells have plaster ceilings in generally poor condition with some water damage and peeling paint. Cafeterias have painted 12" acoustical tiles and the gym has applied painted acoustical panels in aged condition that does not perform as intended due to paint. Services areas have exposed, painted structure.

The building has no passenger / service elevators or dumbwaiters.

Institutional and Commercial equipment includes: stage light bar; auditorium sound system; stage draperies, generally beyond their expected service life; Smartboards/Promethean boards; TV monitors hanging in many classrooms are abandoned in place; a limited

amount of scientific casework; basketball backstops are in poor condition. Other equipment includes kitchen equipment, generally in fair condition.

Furnishings include: fixed casework in classrooms, corridors and library, generally in fair to poor condition; window shades, generally in good condition; window drapes at the auditorium have failed track hardware; fixed auditorium seating is original, generally in poor to fair condition with some damaged seats – balcony seats have been scavenged to replace main floor seating beyond repair – there are many missing seats in the balcony.

Mechanical Systems

Plumbing fixtures are a mixture of original and replacement equipment, are in serviceable condition, and generally should not need replacement within ten years. Lavatories include both floor and wall mounted with flush valves either exposed or embedded in walls. Wall hung urinals have also have flush valves exposed or embedded in walls. Embedded valves are difficult to maintain. Bathroom lavatories have single taps for premixed temperate water. The mixing valve is in the basement near the water heaters, and it takes time for warm water to arrive at the lavatories because there is no recirculation system. The principal stated the school gets cited by the health department because of this. The kitchen includes a stainless steel, three basin dish washing sink with grease trap and chemical sanitation system. Multiple classrooms have a variety of laboratory sinks for teacher and student use. The drain pipe for one sink in room 201 does not have a clean-out. Housekeeping closets on each floor have single basin service sinks. The gymnasium locker rooms had shower facilities, but the fixtures have been removed. There is an emergency shower and eye wash in one of the third floor classrooms, but the supply piping is too small. Drinking fountains are accessible and in good condition.

Domestic water distribution piping is soldered copper and is in good condition. Water service enters the building in the basement with backflow preventers on the main line and the water meter bypass line also. Two gas fired tank water heaters are installed in the basement, but one of them has the exhaust vent disconnected. There is a leaking trap primer in the basement that needs replacement.

Sanitary waste piping is threaded galvanized steel pipe with extensive repairs made with banded couplings. The waste system should be inspected internally and repaired or replaced as needed.

Rain water discharge piping is threaded galvanized steel pipe. Areas where the pipe is visible show rust. Roof mounted strainers are damaged and missing. The system should be replaced at the same time as the roof.

All the rooms and hallways in the building are heated by radiators. Most radiators are cast iron, but some spaces had threaded steel pipe fabricated units. They are equipped with manually adjustable thermostats or angle globe valves and thermostatic steam traps. The thermostats are of contemporary design and in good condition, however they should be replaced with digital remote control thermostats as part of a complete system instrumentation and control upgrade. Radiators were originally the secondary heating system with primary heat supplied to each room by plenums and built-in ductwork. The school principals stated the heat was sufficient throughout the entire building.

The building has two 157 horsepower (5,585 MBH) cast iron sectional boilers for supplying steam to all the radiators. These are heated by gas fired burners. There is no fuel oil system. There are two primary boiler feed water pumps with a third pump as spare. Two pressure gauges on the pumps are damaged and need replacement. Make up water comes from a water softener system.

The building does not have a functioning central air conditioning system. There are three air handlers in the basement boiler and fan rooms. None of these are operational. Two are original equipment and include air cooler and cast iron steam coil sections. The air coolers are severely corroded. The original air handlers are obsolete and should be removed and replaced with modern equipment including direct expansion refrigeration coils supplied by air cooled condensing units with 300 ton total capacity. The third air hander is a modern unit but it has never been used. The building engineer stated the control system was not commissioned.
The kitchen exhaust system covers the fuel burning appliances and includes a fire extinguisher system.
Steam distribution and condensate return piping is steel including threaded, welded, and flanged connections. Pipes run from the basement to radiators on all floors. The piping age is unknown, but the system functions acceptably. Piping insulation in the boiler room was replaced during asbestos abatement.

Multiple classrooms have window air conditioners. Some of these are damaged and nonfunctional. The principals stated the electrical system was inadequate for these and they would cause power failures which effected computer equipment used for academic testing. These window units should be removed and replaced by a central air conditioning system using the built in ducts and plenums throughout the building. The computer network room on the second floor is cooled by a 3 ton split air conditioning unit

which works very well.

There is no existing control system for overall HVAC operation. There is no evidence of a pneumatic control system. A building automation system should be installed as part of overall system upgrades to integrate all components.

The building does not have a fire suppression system. Installing a sprinkler system with quick response type heads should reduce insurance costs by providing protection for the property investment. A fire pump may be required depending on the available city water pressure.

Electrical Systems

Site Electrical Service- The original electrical service is from a Medium voltage overhead line on a wooden poles along Aspen St. There is a transformer pit with quantity and size of transformers not determined since the pit was filled with water and the visibility was very limited. The transformer pit and the service entrance are on 47th street. The electrical service entrance is located in the boiler room near the center of the school, which houses the utility main disconnect switch and utility metering (225MU30620). Many other electrical distribution equipment is also housed in the boiler room, including the Fire Alarm Panel, two phase convertor transformers, building main power distribution panelboard, and several safety switches. Our observation indicates the existing service is too old and has far exceeded its 30 year useful life. It has no extra capacity for expansion or new Heating, Ventilation, Air Conditioning (HVAC) systems. The electrical service entrance should be upgraded, using the present utility pole, and adding a new transformer in a vault outside the building on 47th street. The new service will be 480V/277V, 3 phase power, approximate 2000 Amperes and will occupy the same space of the existing fusible service entrance switchboard. The switchboard would feed a 480V Motor Control Center (MCC) and HVAC equipment, 277V for lighting fixtures and a 480V 3 phase to 120V/208V 3 phase step-down transformer to feed receptacles, and other smaller loads.

Distribution System and Raceway System- The distribution system is both 120V single phase and 120V/208V three phase. There are 120/240V panelboards in each floor for lighting and receptacles. These panelboards and associated wiring have exceeded their useful life and are undersized to absorb the computer room. 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.

The number of receptacles in classrooms, multi-purpose room, computer room, etc. is inadequate. Teachers use extension cords. Two receptacles should be added in each wall of classrooms and other purpose rooms. To prevent branch circuit overload, (4) receptacles per branch circuit must be used.

Most of the classrooms are illuminated with surface mounted fluorescent fixtures with T-8 lamps. The corridors and kitchen are illuminated with recessed fluorescent fixtures with T-8 lamps. The lighting level is good and in most of the cases exceed the minimum required.

The Fire Alarm system is manufactured by Edward System Technology model EST 2. The system is approximately 8 years old. The present Fire Alarm system does meet current code. The pull stations, audible and visual notification appliances meet ADA. Fire alarm system is tested every day in the morning.

Telephone/LAN – The present telephone system is adequate.

An independent and separate Public Address system does not exist, or is not working. School uses the telephone systems for public announcement. This system is working adequately for most part. The obsolete, non-functional devices should be removed from all rooms.

The present clocks are functioning properly. Each classroom is provided with 12” round clock, wireless, battery operated. The present bell system is working.

The present television system does not work, monitors are abandoned in place however new state-of-the-art flat panel monitors are recommended.

The security system consists of motion detectors in the second floor corridors and exterior windows on the second floor east side. The first floor is provided with CCTV cameras at the main entrance doors. School principals indicated that additional CCTV cameras are required inside and outside the school. Since the school has two principals an intercom with camera is required at the visitor entrance, with the signal and control at each main office.

The emergency power system consists of a gas powered generator, manufactured by Generac. The present emergency power system

serves the corridor floodlights, exit signs and dedicated receptacles. The gas powered generator looks approximately 5 years old and it is tested once a week.

There was an adequate UPS in the IT room.

Emergency lighting is obtained via floodlights mounted at the corridors and fluorescent fixtures in the stairs. Exit signs are located at each exit door and corridors and are connected to the school emergency system. During the assessment we counted 3 damaged exit signs that need to be replaced. The first floor NE exit door needs an exit sign.

Lightning Protection System- This is accomplished with air terminals mounted on the chimney. A study needs to be conducted to verify the air terminals provide the proper coverage.

Grounds Systems

The faculty/staff parking area is elevated from the street on the east side of the building. Concrete paving, particularly at the ramp, is in poor condition. A secondary asphalt surfaced parking lot is located diagonally across the street to the southwest of the main building site. The asphalt is in poor condition with cracks, settlement, and numerous patches. Neither parking area has striping. Pedestrian paving is concrete, in poor to serviceable condition with many mismatched replacement areas. Pedestrian stairs and entrance stoops are granite in need of pointing/repair. There are no accessible entrances on the grounds.

Metal picket fence surrounds a portion of the site is in good condition. Dilapidated chain link fence surrounds the adjacent parking lot. Concrete retaining walls appear on the north, east, and south portions of the site, as the site slopes from west to east. The east retaining wall is quite high with decorative murals. It has some cracking and deteriorated control joints. Site features include bicycle racks and a flagpole. Site signage is inadequate.

Landscaping consists of grass at the south, east, and a portion of the north sides of the building to the street, with some mature trees. There is no irrigation. Volunteer vegetation occurs between the parking lot fence on the sloped surface down to the retaining wall.

The school parking lot is poorly illuminated. 4 pole mounted fixtures are required for security.

There is not Site Video Surveillance System. CCTV cameras around the building perimeter and parking lot are required

There is not Site Paging System in this school. Provide one outdoor speaker at each entrance door.

Recommendations:

- Investigate and repair spalled concrete structure
- Investigate and repair exterior walls
- Repaint exterior walls facing atrium and roofs
- Install new roofing system including insulation, flashing, counter flashing, reglets, and coping. Add fixed ladders to lower roofs.
- Reconfigure faculty/staff toilets on each floor for accessibility, provide new toilet partitions and toilet accessories including grab bars
- Replace interior door hardware with locksets lockable from the room interior.
- Provide secondary exits at lower level gyms
- Install new student lockers
- Upgrade interior signage
- Replace acoustical panels in Gym, and cafeteria ceilings
- Repair plaster ceilings
- Repair and repaint interior walls
- Repair & refinish hardwood flooring in classrooms, auditorium, stage, and galleries
- Replace auditorium seating
- Install new sound system and lighting systems in auditorium
- Install new drapery hardware at auditorium exterior windows
- Install passenger elevator
- Provide ADA compliant ramp at main/visitor entrance and at north and south student entrances
- Re-pave sidewalks and east side yard and ramp
- Replace asphalt parking lot
- Replace chain link fencing at asphalt parking lot
- Install recirculation system for lavatory temperate water supply.

- Install larger supply line to emergency shower on third floo
- Repair water heater exhaust
- Replace leaking trap primer
- Inspect and repair sanitary waste piping
- Replace rain water discharge system
- Replace two damaged gauges on boiler feed water pumps
- Conduct detailed inspection of steam and condensate piping system and repair or replace as needed. Implement preventive maintenance program for all steam traps
- Repair water softener for boiler make up water
- Remove original air handlers and replace with modern equipment
- Commission new air handler and control system
- Clean existing ducts and plenums including hazardous material abatement
- Install 300 ton capacity air-conditioning system
- Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District
- Install a fire suppression system. A fire pump may be required depending on the available city water pressure.
- The electrical service entrance must be upgraded, using the present utility pole, and adding a new transformer in a vault outside the building on 47th street. The new service will be 480V/277V, 3 phase power, approximate 2000 Amperes and will occupy the same space of the existing fusible service entrance switchboard
- Replace the entire distribution system with new panels and new wiring/conduits. Approximate (4) 208/120V and (1) 480/277V panel boards per floor
- Install minimum two receptacles in each wall of class rooms and other purpose rooms. Approximately 300 receptacles.
- Provide CCTV cameras in each corridor. Approximately 20 cameras
- Provide an intercom with camera at the visitor entrance with control and signal from each principal office
- Replace (3) damaged exit signs and add (1) to the NE exit door
- Prepare a study to determine if the air terminals installed in the chimney provide the proper coverage to the school
- The school parking lot is poorly illuminated. Provide 4 pole mounted fixtures are required for security.
- There is not Site Video Surveillance System. CCTV cameras around the building perimeter and parking lot are required. Approximately 8
- There is not Site Paging System in this school. Provide one outdoor speaker at each entrance door. Approximately 4

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 5 / Tm 3
Status:	Accepted by SDP	Team:	Tm 3
Site ID:	S112001		

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.

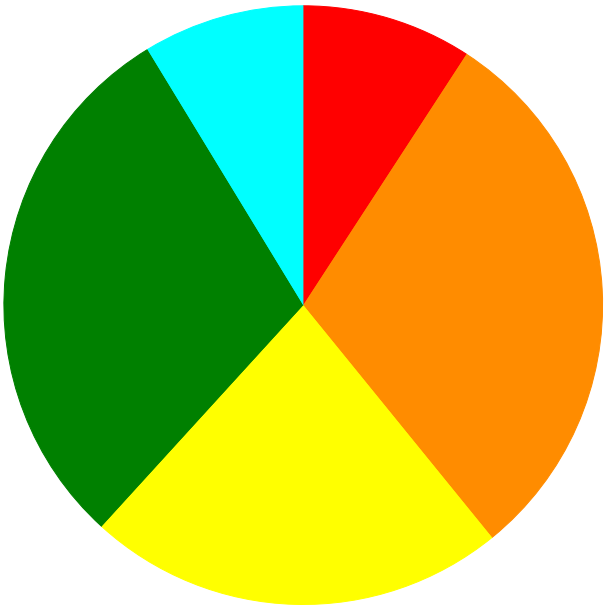
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	0.00 %	$0.00
B10 - Superstructure	37.00 %	3.03 %	$345,858.90
B20 - Exterior Enclosure	49.26 %	0.82 %	$65,627.99
B30 - Roofing	99.75 %	76.87 %	$1,450,348.84
C10 - Interior Construction	50.44 %	41.03 %	$1,208,391.23
C20 - Stairs	37.00 %	105.52 %	$176,006.16
C30 - Interior Finishes	57.00 %	7.74 %	$512,204.83
D10 - Conveying	71.43 %	249.94 %	$434,897.43
D20 - Plumbing	39.68 %	44.39 %	$944,899.11
D30 - HVAC	103.94 %	46.24 %	$5,467,440.92
D40 - Fire Protection	105.71 %	176.39 %	$1,509,207.40
D50 - Electrical	110.11 %	28.00 %	$1,590,058.65
E10 - Equipment	43.56 %	21.79 %	$407,730.08
E20 - Furnishings	100.00 %	263.03 %	$659,686.54
G20 - Site Improvements	77.09 %	108.12 %	$884,664.98
G40 - Site Electrical Utilities	106.67 %	100.62 %	$286,061.05
Totals:	**66.08 %**	**26.55 %**	**$15,943,084.11**

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)
B112001;Sulzberger	120,000	25.06	$1,464,016.47	$3,921,266.81	$3,332,667.18	$4,665,963.72	$1,388,443.90
G112001;Grounds	130,710	106.19	$0.00	$854,932.82	$274,604.32	$41,188.89	$0.00
Total:		**26.55**	**$1,464,016.47**	**$4,776,199.63**	**$3,607,271.50**	**$4,707,152.61**	**$1,388,443.90**

Deficiencies By Priority



- 1 - Response Time (< 2 yr) - $1,464,016.47
- 2 - Response Time (2-3 yrs) - $4,776,199.63
- 3 - Response Time (3-4 yrs) - $3,607,271.50
- 4 - Response Time (4-5 yrs) - $4,707,152.61
- 5 - Response Time (> 5 yrs) - $1,388,443.90

Budget Estimate Total: $15,943,084.11

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 Secondary
Gross Area (SF):	120,000
Year Built:	1924
Last Renovation:	
Replacement Value:	$58,940,304
Repair Cost:	$14,772,358.08
Total FCI:	25.06 %
Total RSLI:	65.73 %

Description:

Middle Secondary School

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B112001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S112001		

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	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	0.00 %	$0.00
B10 - Superstructure	37.00 %	3.03 %	$345,858.90
B20 - Exterior Enclosure	49.26 %	0.82 %	$65,627.99
B30 - Roofing	99.75 %	76.87 %	$1,450,348.84
C10 - Interior Construction	50.44 %	41.03 %	$1,208,391.23
C20 - Stairs	37.00 %	105.52 %	$176,006.16
C30 - Interior Finishes	57.00 %	7.74 %	$512,204.83
D10 - Conveying	71.43 %	249.94 %	$434,897.43
D20 - Plumbing	39.68 %	44.39 %	$944,899.11
D30 - HVAC	103.94 %	46.24 %	$5,467,440.92
D40 - Fire Protection	105.71 %	176.39 %	$1,509,207.40
D50 - Electrical	110.11 %	28.00 %	$1,590,058.65
E10 - Equipment	43.56 %	21.79 %	$407,730.08
E20 - Furnishings	100.00 %	263.03 %	$659,686.54
Totals:	**65.73 %**	**25.06 %**	**$14,772,358.08**

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.	120,000	100	1924	2024	2052	37.00 %	0.00 %	37			$2,779,200
A1030	Slab on Grade	$5.17	S.F.	120,000	100	1924	2024	2052	37.00 %	0.00 %	37			$620,400
A2010	Basement Excavation	$4.36	S.F.	120,000	100	1924	2024	2052	37.00 %	0.00 %	37			$523,200
A2020	Basement Walls	$10.05	S.F.	120,000	100	1924	2024	2052	37.00 %	0.00 %	37			$1,206,000
B1010	Floor Construction	$85.94	S.F.	120,000	100	1924	2024	2052	37.00 %	3.35 %	37		$345,858.90	$10,312,800
B1020	Roof Construction	$9.26	S.F.	120,000	100	1924	2024	2052	37.00 %	0.00 %	37			$1,111,200
B2010	Exterior Walls	$43.78	S.F.	120,000	100	1924	2024	2052	37.00 %	1.25 %	37		$65,627.99	$5,253,600
B2020	Exterior Windows	$21.38	S.F.	120,000	40	2005	2045		75.00 %	0.00 %	30			$2,565,600
B2030	Exterior Doors	$1.45	S.F.	120,000	25	2000	2025		40.00 %	0.00 %	10			$174,000
B3010105	Built-Up	$37.76	S.F.	49,775	20	1924	1944	2035	100.00 %	77.17 %	20		$1,450,348.84	$1,879,504
B3010120	Single Ply Membrane	$33.54	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$46.94	S.F.		30				0.00 %	0.00 %				$0
B3010140	Shingle & Tile	$33.54	S.F.		20				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.06	S.F.	120,000	30	1995	2025		33.33 %	0.00 %	10			$7,200
C1010	Partitions	$17.91	S.F.	120,000	100	1924	2024	2052	37.00 %	8.46 %	37		$181,794.48	$2,149,200
C1020	Interior Doors	$3.51	S.F.	120,000	40	2005	2045		75.00 %	7.23 %	30		$30,441.78	$421,200
C1030	Fittings	$3.12	S.F.	120,000	40	1960	2000	2055	100.00 %	266.07 %	40		$996,154.97	$374,400
C2010	Stair Construction	$1.39	S.F.	120,000	100	1924	2024	2052	37.00 %	105.52 %	37		$176,006.16	$166,800

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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.	120,000	10	2008	2018	2020	50.00 %	0.85 %	5		$13,482.88	$1,585,200
C3010231	Vinyl Wall Covering	$0.83	S.F.	120,000	15	1924	1939	2030	100.00 %	0.00 %	15			$99,600
C3010232	Wall Tile	$2.25	S.F.	120,000	30	1924	1954	2030	50.00 %	0.00 %	15			$270,000
C3020411	Carpet	$6.24	S.F.		10				0.00 %	0.00 %				$0
C3020412	Terrazzo & Tile	$64.54	S.F.	20,000	30	1924	1954	2030	50.00 %	0.00 %	15			$1,290,800
C3020413	Vinyl Flooring	$8.27	S.F.	80,000	20	1924	1944	2027	60.00 %	0.00 %	12			$661,600
C3020414	Wood Flooring	$19.04	S.F.	10,000	25	1924	1949	2040	100.00 %	82.63 %	25		$157,321.26	$190,400
C3020415	Concrete Floor Finishes	$0.83	S.F.		50				0.00 %	0.00 %				$0
C3030	Ceiling Finishes	$20.97	S.F.	120,000	25	2005	2030		60.00 %	13.57 %	15		$341,400.69	$2,516,400
D1010	Elevators and Lifts	$1.45	S.F.	120,000	35			2040	71.43 %	249.94 %	25		$434,897.43	$174,000
D2010	Plumbing Fixtures	$11.97	S.F.	120,000	35	1924	1959	2025	28.57 %	0.00 %	10			$1,436,400
D2020	Domestic Water Distribution	$1.49	S.F.	120,000	25	1924	1949	2025	40.00 %	12.58 %	10		$22,488.39	$178,800
D2030	Sanitary Waste	$2.23	S.F.	120,000	25	1924	1949	2042	108.00 %	169.11 %	27		$452,549.98	$267,600
D2040	Rain Water Drainage	$2.05	S.F.	120,000	30	1924	1954	2024	30.00 %	191.00 %	9		$469,860.74	$246,000
D3020	Heat Generating Systems	$16.54	S.F.	120,000	35	2009	2044		82.86 %	0.00 %	29			$1,984,800
D3030	Cooling Generating Systems	$21.69	S.F.	120,000	30	1924	1954	2047	106.67 %	51.84 %	32		$1,349,302.39	$2,602,800
D3040	Distribution Systems	$38.07	S.F.	120,000	25	1924	1949	2042	108.00 %	48.71 %	27		$2,225,180.84	$4,568,400
D3050	Terminal & Package Units	$10.28	S.F.	120,000	20	1924	1944	2037	110.00 %	0.00 %	22			$1,233,600
D3060	Controls & Instrumentation	$11.95	S.F.	120,000	20	1924	1944	2037	110.00 %	132.01 %	22		$1,892,957.69	$1,434,000
D4010	Sprinklers	$6.24	S.F.	120,000	35			2052	105.71 %	201.55 %	37		$1,509,207.40	$748,800
D4020	Standpipes	$0.89	S.F.	120,000	35			2052	105.71 %	0.00 %	37			$106,800
D5010	Electrical Service/Distribution	$7.80	S.F.	120,000	30	1924	1954	2047	106.67 %	114.64 %	32		$1,073,069.69	$936,000
D5020	Lighting and Branch Wiring	$27.92	S.F.	120,000	20	1924	1944	2037	110.00 %	4.24 %	22		$142,013.23	$3,350,400
D5030	Communications and Security	$10.46	S.F.	120,000	15	1924	1939	2032	113.33 %	14.04 %	17		$176,188.58	$1,255,200
D5090	Other Electrical Systems	$1.14	S.F.	120,000	30	1924	1954	2047	106.67 %	145.31 %	32		$198,787.15	$136,800
E1020	Institutional Equipment	$4.73	S.F.	120,000	35	1924	1959	2040	71.43 %	71.83 %	25		$407,730.08	$567,600
E1090	Other Equipment	$10.86	S.F.	120,000	35	1924	1959	2026	31.43 %	0.00 %	11			$1,303,200
E2010	Fixed Furnishings	$2.09	S.F.	120,000	40	1924	1964	2055	100.00 %	263.03 %	40		$659,686.54	$250,800
								Total	**65.73 %**	**25.06 %**			**$14,772,358.08**	**$58,940,304**

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: D5010 - Electrical Service/Distribution

Note: There are (3) phase converters from 240V single phase to 120/208V three phase system. The KVA rating of the phase converters are: (1)MAGNETRAN 75KVA, PMI(1)150KVA and (1) OLSUN 150KVA

Renewal Schedule

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

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$14,772,358**	**$0**	**$0**	**$0**	**$0**	**$2,021,449**	**$0**	**$0**	**$0**	**$353,072**	**$2,655,633**	**$19,802,512**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A10 - Foundations**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A20 - Basement Construction**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$345,859	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$345,859**
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	$65,628	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$65,628**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$257,226	**$257,226**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$1,450,349	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,450,349**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,644	**$10,644**
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	$181,794	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$181,794**

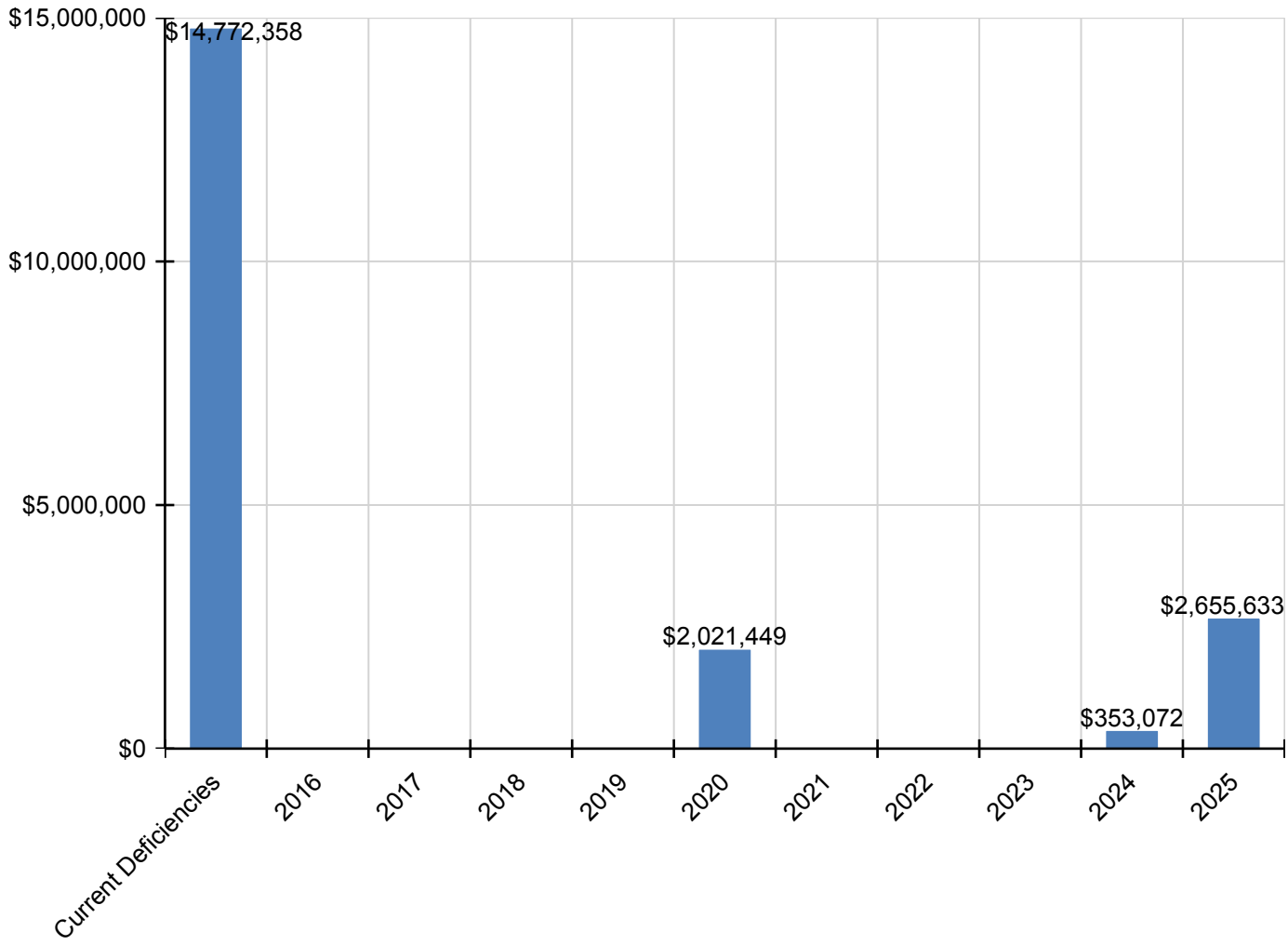
C1020 - Interior Doors	$30,442	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$30,442**
C1030 - Fittings	$996,155	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$996,155**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$176,006	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$176,006**
C30 - Interior Finishes	$0	$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	$13,483	$0	$0	$0	$0	$2,021,449	$0	$0	$0	$0	$0	**$2,034,932**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020414 - Wood Flooring	$157,321	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$157,321**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$341,401	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$341,401**
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	$434,897	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$434,897**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,123,442	**$2,123,442**
D2020 - Domestic Water Distribution	$22,488	$0	$0	$0	$0	$0	$0	$0	$0	$0	$264,321	**$286,810**
D2030 - Sanitary Waste	$452,550	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$452,550**
D2040 - Rain Water Drainage	$469,861	$0	$0	$0	$0	$0	$0	$0	$0	$353,072	$0	**$822,932**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$1,349,302	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,349,302**
D3040 - Distribution Systems	$2,225,181	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,225,181**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,892,958	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,892,958**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,509,207	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,509,207**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$1,073,070	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,073,070**
D5020 - Lighting and Branch Wiring	$142,013	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$142,013**
D5030 - Communications and Security	$176,189	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$176,189**
D5090 - Other Electrical Systems	$198,787	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$198,787**
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	$407,730	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$407,730**
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	$659,687	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$659,687**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

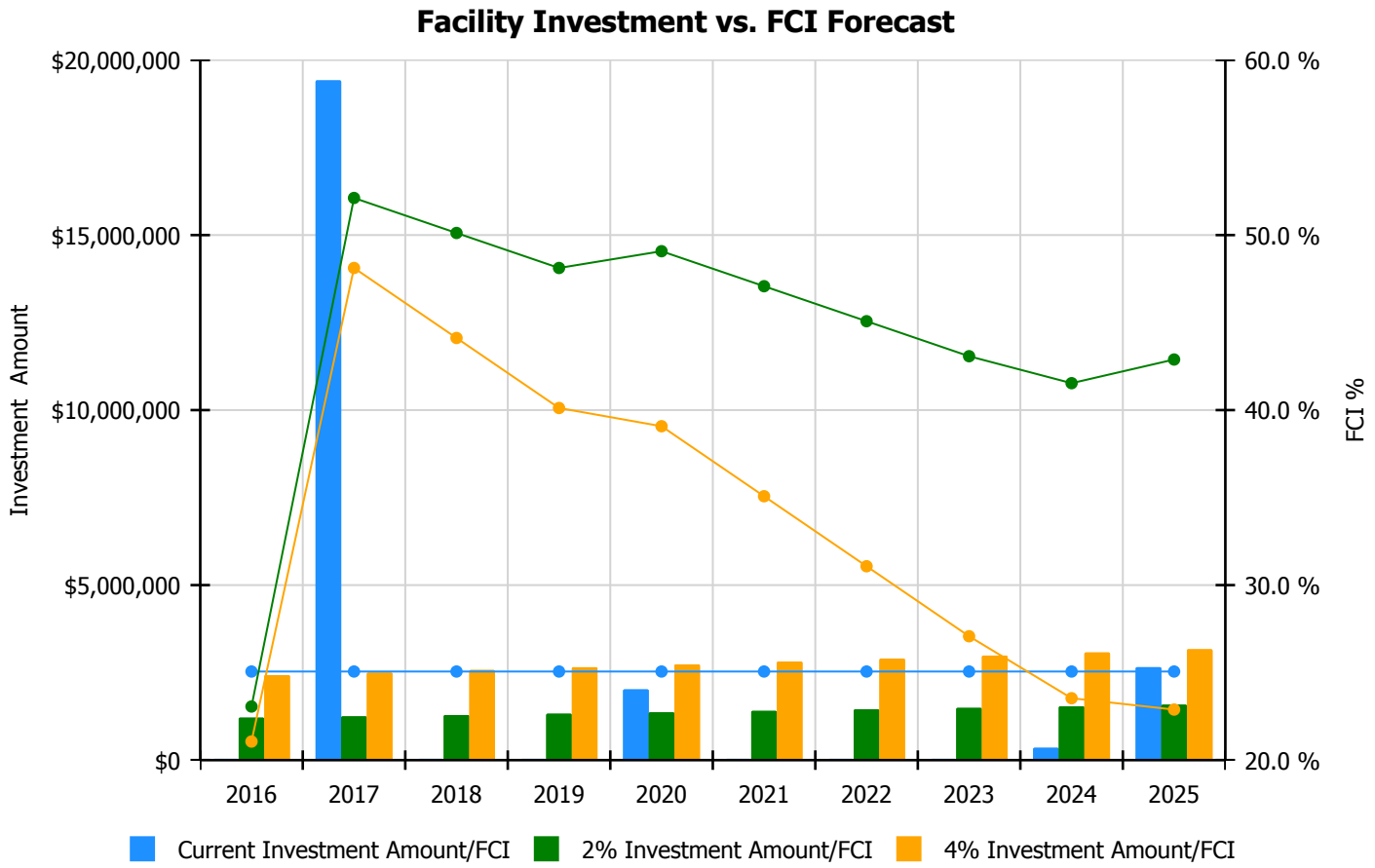
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

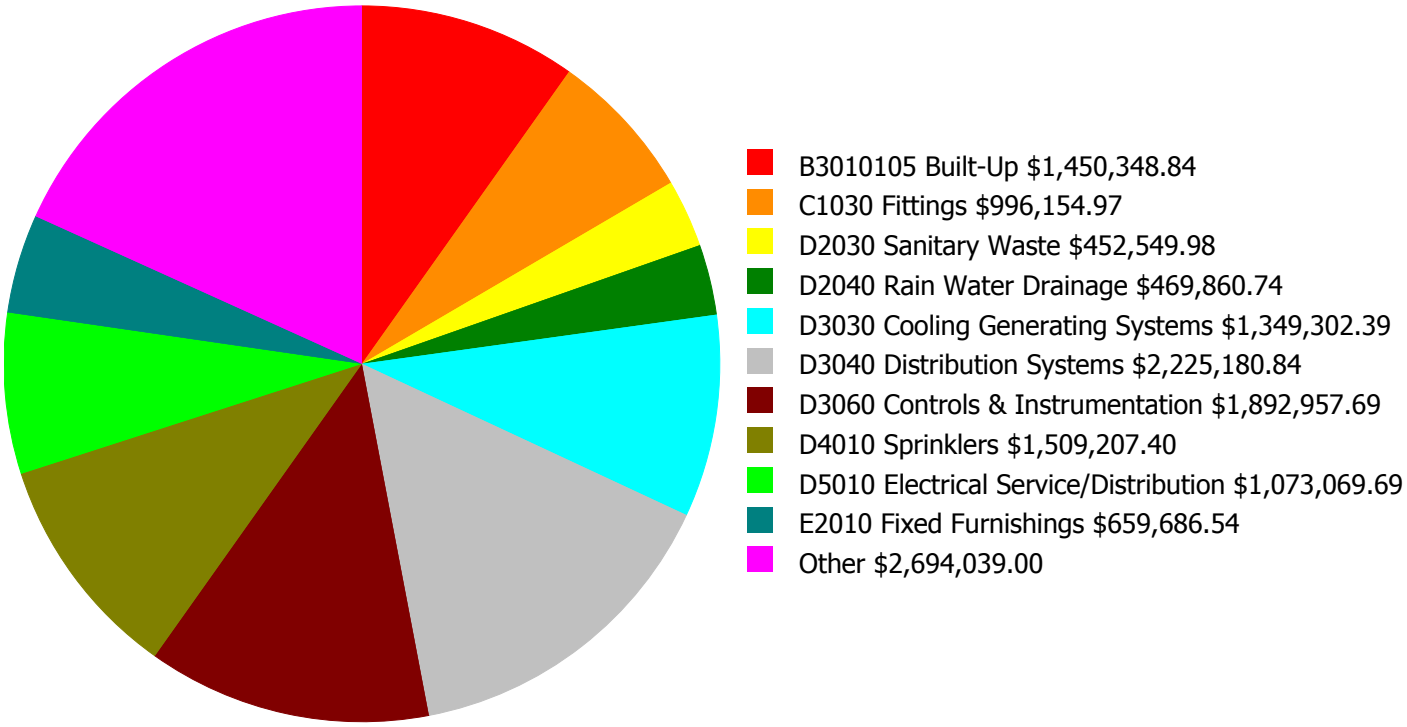
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 25.06%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,214,170.00	23.06 %	$2,428,341.00	21.06 %
2017	$19,419,180	$1,250,595.00	52.12 %	$2,501,191.00	48.12 %
2018	$0	$1,288,113.00	50.12 %	$2,576,226.00	44.12 %
2019	$0	$1,326,757.00	48.12 %	$2,653,513.00	40.12 %
2020	$2,021,449	$1,366,559.00	49.08 %	$2,733,119.00	39.08 %
2021	$0	$1,407,556.00	47.08 %	$2,815,112.00	35.08 %
2022	$0	$1,449,783.00	45.08 %	$2,899,566.00	31.08 %
2023	$0	$1,493,276.00	43.08 %	$2,986,553.00	27.08 %
2024	$353,072	$1,538,075.00	41.54 %	$3,076,149.00	23.54 %
2025	$2,655,633	$1,584,217.00	42.89 %	$3,168,434.00	22.89 %
Total:	**$24,449,334**	**$13,919,101.00**		**$27,838,204.00**	

Deficiency Summary by System

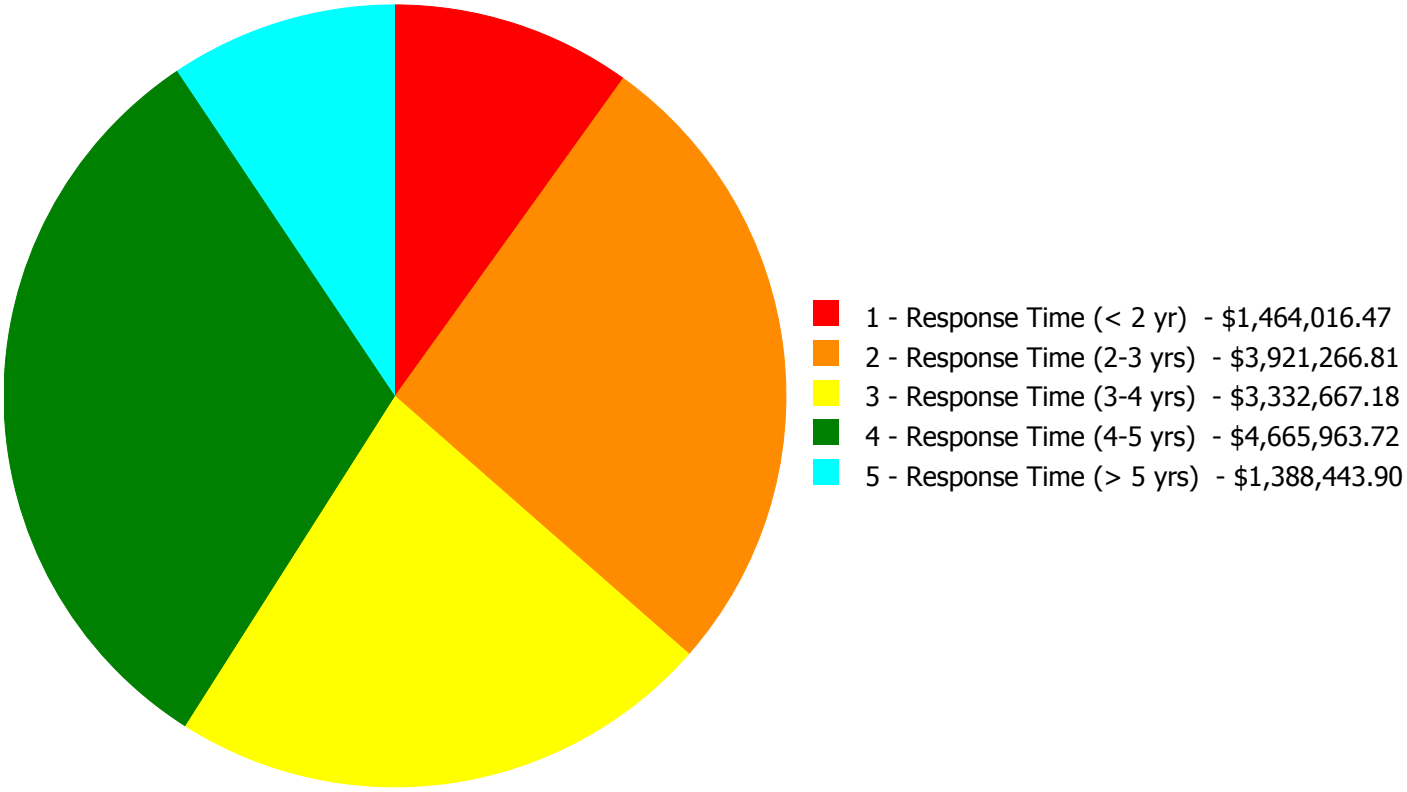
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $14,772,358.08

Deficiency Summary by Priority

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



Budget Estimate Total: $14,772,358.08

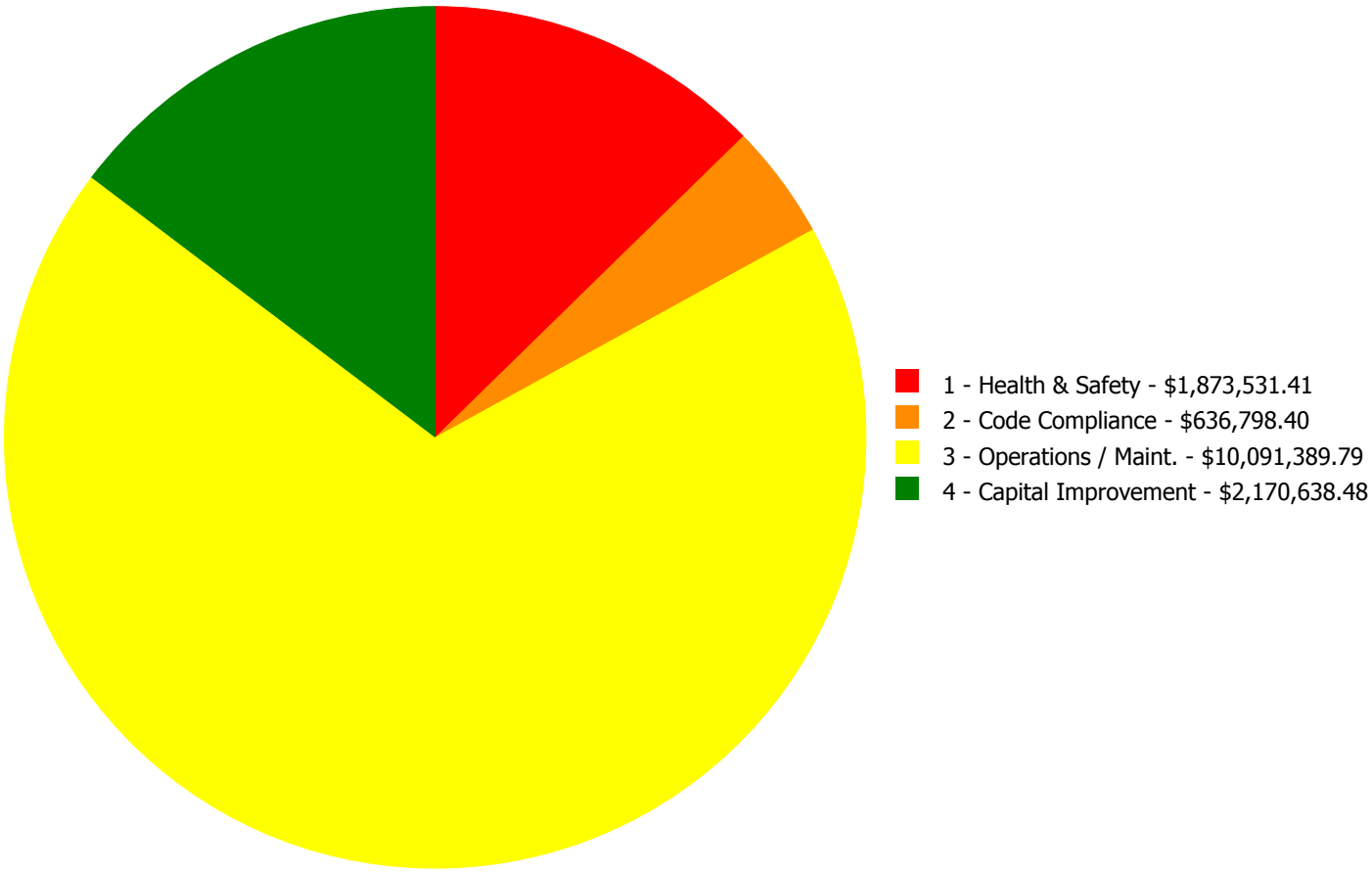
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B1010	Floor Construction	$0.00	$345,858.90	$0.00	$0.00	$0.00	$345,858.90
B2010	Exterior Walls	$0.00	$65,627.99	$0.00	$0.00	$0.00	$65,627.99
B3010105	Built-Up	$1,450,348.84	$0.00	$0.00	$0.00	$0.00	$1,450,348.84
C1010	Partitions	$0.00	$181,794.48	$0.00	$0.00	$0.00	$181,794.48
C1020	Interior Doors	$0.00	$30,441.78	$0.00	$0.00	$0.00	$30,441.78
C1030	Fittings	$0.00	$996,154.97	$0.00	$0.00	$0.00	$996,154.97
C2010	Stair Construction	$0.00	$176,006.16	$0.00	$0.00	$0.00	$176,006.16
C3010230	Paint & Covering	$0.00	$13,482.88	$0.00	$0.00	$0.00	$13,482.88
C3020414	Wood Flooring	$0.00	$157,321.26	$0.00	$0.00	$0.00	$157,321.26
C3030	Ceiling Finishes	$0.00	$206,597.05	$134,803.64	$0.00	$0.00	$341,400.69
D1010	Elevators and Lifts	$0.00	$434,897.43	$0.00	$0.00	$0.00	$434,897.43
D2020	Domestic Water Distribution	$586.57	$21,901.82	$0.00	$0.00	$0.00	$22,488.39
D2030	Sanitary Waste	$0.00	$0.00	$452,549.98	$0.00	$0.00	$452,549.98
D2040	Rain Water Drainage	$0.00	$469,860.74	$0.00	$0.00	$0.00	$469,860.74
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,349,302.39	$1,349,302.39
D3040	Distribution Systems	$0.00	$0.00	$1,224,994.08	$1,000,186.76	$0.00	$2,225,180.84
D3060	Controls & Instrumentation	$160.73	$0.00	$0.00	$1,853,655.45	$39,141.51	$1,892,957.69
D4010	Sprinklers	$0.00	$0.00	$0.00	$1,509,207.40	$0.00	$1,509,207.40
D5010	Electrical Service/Distribution	$0.00	$0.00	$1,073,069.69	$0.00	$0.00	$1,073,069.69
D5020	Lighting and Branch Wiring	$0.00	$0.00	$142,013.23	$0.00	$0.00	$142,013.23
D5030	Communications and Security	$12,920.33	$142,114.89	$0.00	$21,153.36	$0.00	$176,188.58
D5090	Other Electrical Systems	$0.00	$19,519.92	$179,267.23	$0.00	$0.00	$198,787.15
E1020	Institutional Equipment	$0.00	$0.00	$125,969.33	$281,760.75	$0.00	$407,730.08
E2010	Fixed Furnishings	$0.00	$659,686.54	$0.00	$0.00	$0.00	$659,686.54
	Total:	$1,464,016.47	$3,921,266.81	$3,332,667.18	$4,665,963.72	$1,388,443.90	$14,772,358.08

Deficiency Summary by Category

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



Budget Estimate Total: $14,772,358.08

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: B3010105 - Built-Up

Location: All roofs
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Remove and Replace Built Up Roof
Qty: 49,775.00
Unit of Measure: S.F.
Estimate: $1,450,348.84
Assessor Name: System
Date Created: 07/17/2015

Notes: Install new roofing system including insulation, flashing, counter flashing, reglets, and coping. Add fixed ladders to lower roofs.

System: D2020 - Domestic Water Distribution

Location: Basement
Distress: Building / MEP Codes
Category: 2 - Code Compliance
Priority: 1 - Response Time (< 2 yr)
Correction: Repair water heater (enter estimate)
Qty: 5.00
Unit of Measure: Ea.
Estimate: $586.57
Assessor Name: System
Date Created: 07/10/2015

Notes: Repair water heater exhaust.

System: D3060 - Controls & Instrumentation

Location: Basement

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace temperature, pressure gauges (enter estimate)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $160.73

Assessor Name: System

Date Created: 07/10/2015

Notes: Replace leaking trap primer.

System: D5030 - Communications and Security

Location: Entrance

Distress: Security Issue

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Video Surveillance System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $12,920.33

Assessor Name: System

Date Created: 07/10/2015

Notes: Provide and intercom with camera at the visitor entrance with control and signal from each principal office.

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

System: B1010 - Floor Construction

Location: Roof accesses, basement

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair rebar and epoxy grout exposed rebar on the underside of floors and floor beams

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $345,858.90

Assessor Name: System

Date Created: 07/20/2015

Notes: Investigate and repair spalled concrete structure observed at roof access areas and basement exposed structure.

System: B2010 - Exterior Walls

Location: Lightcourts and walls at roofs.

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Repaint exterior walls - CMU

Qty: 10,000.00

Unit of Measure: S.F.

Estimate: $51,704.55

Assessor Name: System

Date Created: 07/20/2015

Notes: Repaint exterior walls facing atrium and roofs

System: B2010 - Exterior Walls

Location: East wall, south end 2nd floor. West wall

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 500.00

Unit of Measure: S.F.

Estimate: $13,923.44

Assessor Name: System

Date Created: 07/20/2015

Notes: Investigate and repair exterior brick walls.

System: C1010 - Partitions

Location: Faculty/staff toilet rooms

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Build new single restroom to meet code requirements

Qty: 3.00

Unit of Measure: Ea.

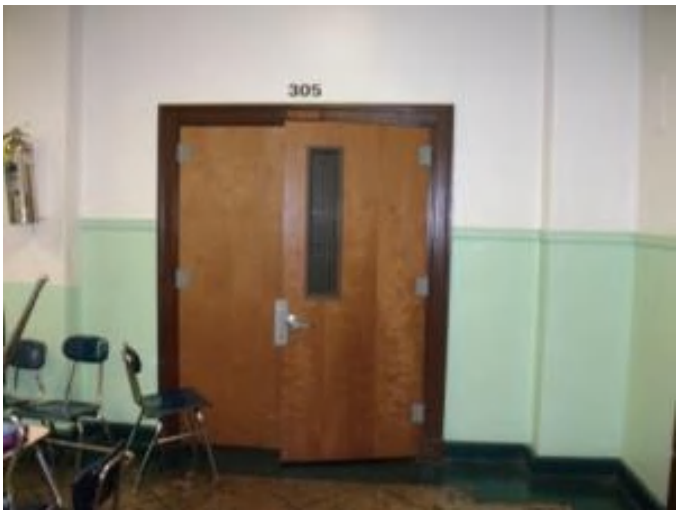
Estimate: $181,794.48

Assessor Name: System

Date Created: 07/20/2015

Notes: Reconfigure faculty/staff toilets on each floor for accessibility, provide new toilet partitions and toilet accessories including grab bars

System: C1020 - Interior Doors



Location: Classrooms

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Replace door knobs with compliant lever type

Qty: 60.00

Unit of Measure: Ea.

Estimate: $30,441.78

Assessor Name: System

Date Created: 07/20/2015

Notes: Provide locksets at Classroom doors that are lockable from the interior.

System: C1030 - Fittings

Location: Corridors, locker rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace lockers - select size

Qty: 1,500.00

Unit of Measure: Ea.

Estimate: $944,043.75

Assessor Name: System

Date Created: 07/20/2015

Notes: Install new student lockers

System: C1030 - Fittings

Location: Building wide

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace missing or damaged signage - insert the number of rooms

Qty: 200.00

Unit of Measure: Ea.

Estimate: $52,111.22

Assessor Name: System

Date Created: 07/20/2015

Notes: Upgrade interior signage.

System: C2010 - Stair Construction

Location: Gyms

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Add egress stairways from lower levels - per flight including below level concrete basement and doors - add for additional doors if required

Qty: 4.00

Unit of Measure: Flight

Estimate: $176,006.16

Assessor Name: System

Date Created: 07/20/2015

Notes: Provide secondary exits at lower level gyms

System: C3010230 - Paint & Covering

Location: Galleries, 3rd floor rooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 2,500.00

Unit of Measure: S.F.

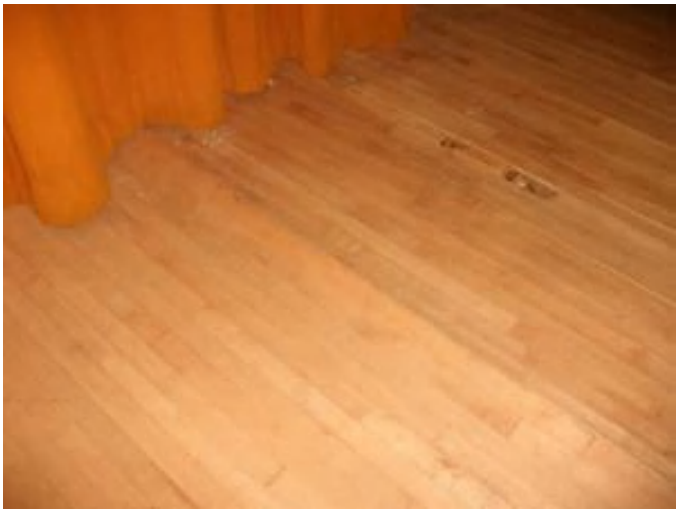
Estimate: $13,482.88

Assessor Name: System

Date Created: 07/20/2015

Notes: Repair and repaint water damaged interior walls

System: C3020414 - Wood Flooring



Location: B112001;Sulzberger

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace wood flooring

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $157,321.26

Assessor Name: System

Date Created: 11/30/2015

Notes:
Repair refinish hardwood flooring auditorium (including balcony) and stage, and at classrooms where occurs.

System: C3030 - Ceiling Finishes

Location: Main entry, auditorium, 3rd floor soffits

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair and resurface plaster ceilings - 2 coats plaster

Qty: 20,000.00

Unit of Measure: S.F.

Estimate: $206,597.05

Assessor Name: System

Date Created: 07/20/2015

Notes: Repair water damaged plaster ceilings in main entry, auditorium, and soffits at 3rd floor.

System: D1010 - Elevators and Lifts

This deficiency has no image.

Location: B112001;Sulzberger

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Add interior hydraulic elevator - 3 floors - adjust the electrical run lengths to hook up the elevator

Qty: 1.00

Unit of Measure: Ea.

Estimate: $434,897.43

Assessor Name: System

Date Created: 07/21/2015

Notes: Building

System: D2020 - Domestic Water Distribution

Location: Basement

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $19,060.97

Assessor Name: System

Date Created: 07/10/2015

Notes: Install recirculation system for lavatory temperate water supply.

System: D2020 - Domestic Water Distribution

Location: Science classroom

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace pipe and fittings

Qty: 1.00

Unit of Measure: L.F.

Estimate: $2,840.85

Assessor Name: System

Date Created: 07/10/2015

Notes: Install larger supply line to emergency shower on third floor.

System: D2040 - Rain Water Drainage

Location: B112001;Sulzberger

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 120,000.00

Unit of Measure: S.F.

Estimate: $469,860.74

Assessor Name: System

Date Created: 07/10/2015

Notes: Replace rain water discharge system.

System: D5030 - Communications and Security

Location: Entire Building

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add/Replace Video Surveillance System

Qty: 50.00

Unit of Measure: Ea.

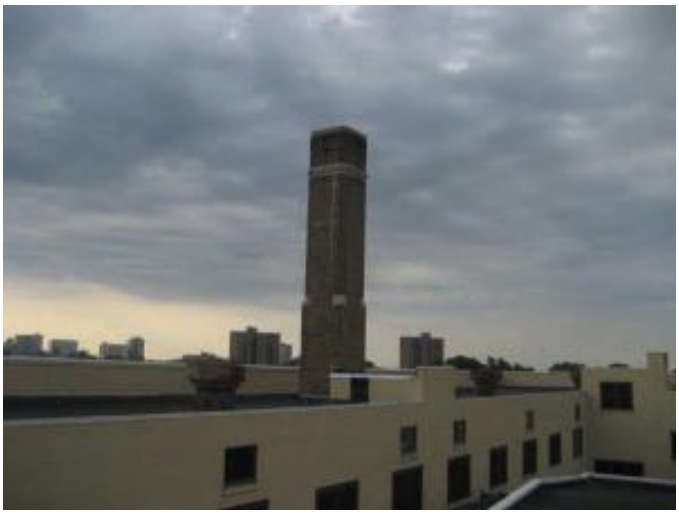
Estimate: $142,114.89

Assessor Name: System

Date Created: 07/10/2015

Notes: Provide surveillance CCTV cameras for complete coverage of the interior of the school. Approximate 50 cameras.

System: D5090 - Other Electrical Systems



Location: Roof

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Repair Lightning Protection System

Qty: 1.00

Unit of Measure: Job

Estimate: $19,519.92

Assessor Name: System

Date Created: 07/27/2015

Notes: Prepare a study to determine if the air terminals installed in the chimney provide the proper coverage to the school.

System: E2010 - Fixed Furnishings

Location: Auditorium, including 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: 760.00

Unit of Measure: Ea.

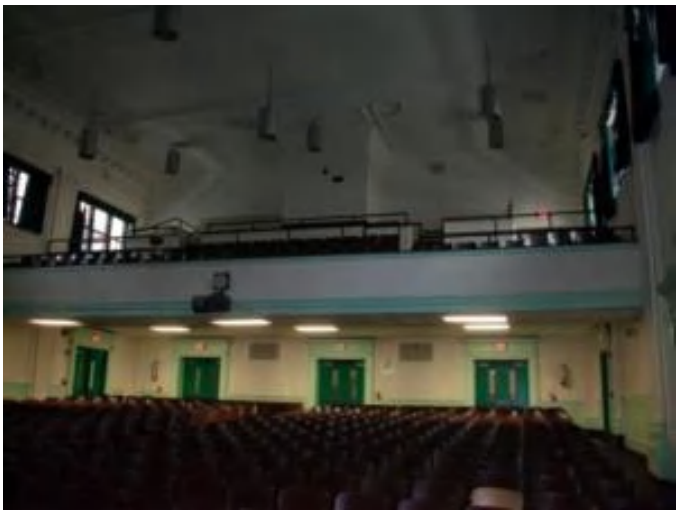
Estimate: $653,746.91

Assessor Name: System

Date Created: 07/20/2015

Notes: Replace auditorium seating

System: E2010 - Fixed Furnishings



Location: Auditorium

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace or add drapery hardware

Qty: 120.00

Unit of Measure: L.F.

Estimate: $5,939.63

Assessor Name: System

Date Created: 07/20/2015

Notes: Install new drapery hardware at auditorium exterior windows

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

System: C3030 - Ceiling Finishes

Location: Cafeterias, gyms

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: 4,500.00

Unit of Measure: S.F.

Estimate: $134,803.64

Assessor Name: System

Date Created: 07/20/2015

Notes: Replace acoustical panels in gym, and cafeteria ceilings

System: D2030 - Sanitary Waste

Location: B112001;Sulzberger

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: 120,300.00

Unit of Measure: S.F.

Estimate: $452,549.98

Assessor Name: System

Date Created: 07/10/2015

Notes: Inspect and repair sanitary waste piping.

System: D3040 - Distribution Systems

Location: Basement fan rooms

Distress: Beyond Service Life

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: $780,859.74

Assessor Name: System

Date Created: 01/21/2016

Notes: Remove original air handlers and replace with modern equipment.

System: D3040 - Distribution Systems

Location: B112001;Sulzberger

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 1,600.00

Unit of Measure: Seat

Estimate: $444,134.34

Assessor Name: System

Date Created: 07/10/2015

Notes: Replace uninsulated ducts with insulated.

System: D5010 - Electrical Service/Distribution

Location: Basement-boiler room
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Switchboard
Qty: 1.00
Unit of Measure: Ea.
Estimate: $610,304.44
Assessor Name: System
Date Created: 07/09/2015

Notes: Provide a new electrical service rated 480V/277V, 3 phase power, 2000 Amperes and a 500KVA step-down transformer.

System: D5010 - Electrical Service/Distribution

Location: Entire building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Electrical Distribution System (U)
Qty: 1.00
Unit of Measure: Ea.
Estimate: $462,765.25
Assessor Name: System
Date Created: 07/09/2015

Notes: Replace the entire distribution system with new panels and new wiring/conduits. Approximate (16) 208/120V

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: 480.00
Unit of Measure: Ea.
Estimate: $142,013.23
Assessor Name: System
Date Created: 07/09/2015

Notes: Provide (2)25FT of surface raceways with receptacles spaced 24” on center and 4 wall mount receptacles per classroom. Approximate 480 receptacles.

System: D5090 - Other Electrical Systems

Location: Outdoor
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 3 - Response Time (3-4 yrs)
Correction: Add Standby Generator System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $179,267.23
Assessor Name: System
Date Created: 02/05/2016

Notes: Provide an outdoor, 100KW diesel powered generator.

System: E1020 - Institutional Equipment

Location: Stage

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $125,969.33

Assessor Name: System

Date Created: 07/20/2015

Notes: Install new sound system and lighting system in auditorium

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

System: D3040 - Distribution Systems

Location: B112001;Sulzberger

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 120,000.00

Unit of Measure: S.F.

Estimate: $1,000,186.76

Assessor Name: System

Date Created: 07/10/2015

Notes: Conduct detailed inspection of steam and condensate piping system and repair or replace as needed. Implement preventive maintenance program for all steam traps.

System: D3060 - Controls & Instrumentation

Location: Entire building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (150KSF)

Qty: 120,000.00

Unit of Measure: S.F.

Estimate: $1,853,519.89

Assessor Name: System

Date Created: 07/10/2015

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

System: D3060 - Controls & Instrumentation

Location: Basement

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace temperature, pressure gauges (enter estimate)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $135.56

Assessor Name: System

Date Created: 07/10/2015

Notes: Replace two damaged gauges on boiler feed water pumps.

System: D4010 - Sprinklers

This deficiency has no image.

Location: B112001;Sulzberger

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install a fire protection sprinkler system

Qty: 120,000.00

Unit of Measure: S.F.

Estimate: $1,509,207.40

Assessor Name: System

Date Created: 07/10/2015

Notes: Install a fire suppression system. A fire pump may be required depending on the available city water pressure.

System: D5030 - Communications and Security

Location: Auditorium
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Sound System
Qty: 1.00
Unit of Measure: LS
Estimate: $21,153.36
Assessor Name: System
Date Created: 02/05/2016

Notes: The stage sound system is portable type. Provide a permanent installed sound system

System: E1020 - Institutional Equipment

Location: Auditorium
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Stage Theatrical Lighting System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $281,760.75
Assessor Name: System
Date Created: 02/05/2016

Notes: Provide theatrical lighting and dimming control system.

Priority 5 - Response Time (> 5 yrs):

System: D3030 - Cooling Generating Systems

This deficiency has no image.

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: 90,000.00

Unit of Measure: S.F.

Estimate: $1,349,302.39

Assessor Name: System

Date Created: 07/10/2015

Notes: Install 300 ton capacity air-conditioning system.

System: D3060 - Controls & Instrumentation

Location: Basement

Distress: Maintenance Required

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Recommission DDC Building Management System

Qty: 15,000.00

Unit of Measure: S.F.

Estimate: $39,141.51

Assessor Name: System

Date Created: 07/10/2015

Notes: Commission new air handler and control 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, gas fired, natural or propane, cast iron, steam, gross output, 5660 MBH, includes standard controls and insulated jacket, packaged	2.00	Ea.	Boiler room					35	2009	2044	$103,500.00	$227,700.00
D3040 Distribution Systems	AHU, field fabricated, built up, cool/heat coils, filters, constant volume, 40,000 CFM	2.00	Ea.	Basement					25	1924	2042	$134,200.00	$295,240.00
D5010 Electrical Service/Distribution	Switchboards, main fusible switch, 3 pole, 4 wire, 120/208, 120/240 V, 600 amp, incl fuse	1.00	Ea.	Boiler Room					30	1924	2047	$5,625.00	$6,187.50
												Total:	**$529,127.50**

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):	130,710
Year Built:	1924
Last Renovation:	
Replacement Value:	$1,102,486
Repair Cost:	$1,170,726.03
Total FCI:	106.19 %
Total RSLI:	84.72 %

Description:

Attributes:

General Attributes:

Bldg ID:	S112001	Site ID:	S112001

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	77.09 %	108.12 %	$884,664.98
G40 - Site Electrical Utilities	106.67 %	100.62 %	$286,061.05
Totals:	**84.72 %**	**106.19 %**	**$1,170,726.03**

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.	0	30				0.00 %	0.00 %				$0
G2020	Parking Lots	$7.65	S.F.	29,806	30	1970	2000	2047	106.67 %	113.15 %	32		$257,988.93	$228,016
G2030	Pedestrian Paving	$11.52	S.F.	22,074	40	1970	2010	2057	105.00 %	223.42 %	42		$568,145.86	$254,292
G2040	Site Development	$4.36	S.F.	65,355	25	1970	1995	2022	28.00 %	20.54 %	7		$58,530.19	$284,948
G2050	Landscaping & Irrigation	$3.78	S.F.	13,475	15	2002	2017	2027	80.00 %	0.00 %	12			$50,936
G4020	Site Lighting	$3.58	S.F.	65,355	30	1924	1954	2047	106.67 %	39.16 %	32		$91,618.86	$233,971
G4030	Site Communications & Security	$0.77	S.F.	65,355	30	1924	1954	2047	106.67 %	386.39 %	32		$194,442.19	$50,323
								Total	**84.72 %**	**106.19 %**			**$1,170,726.03**	**$1,102,486**

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.

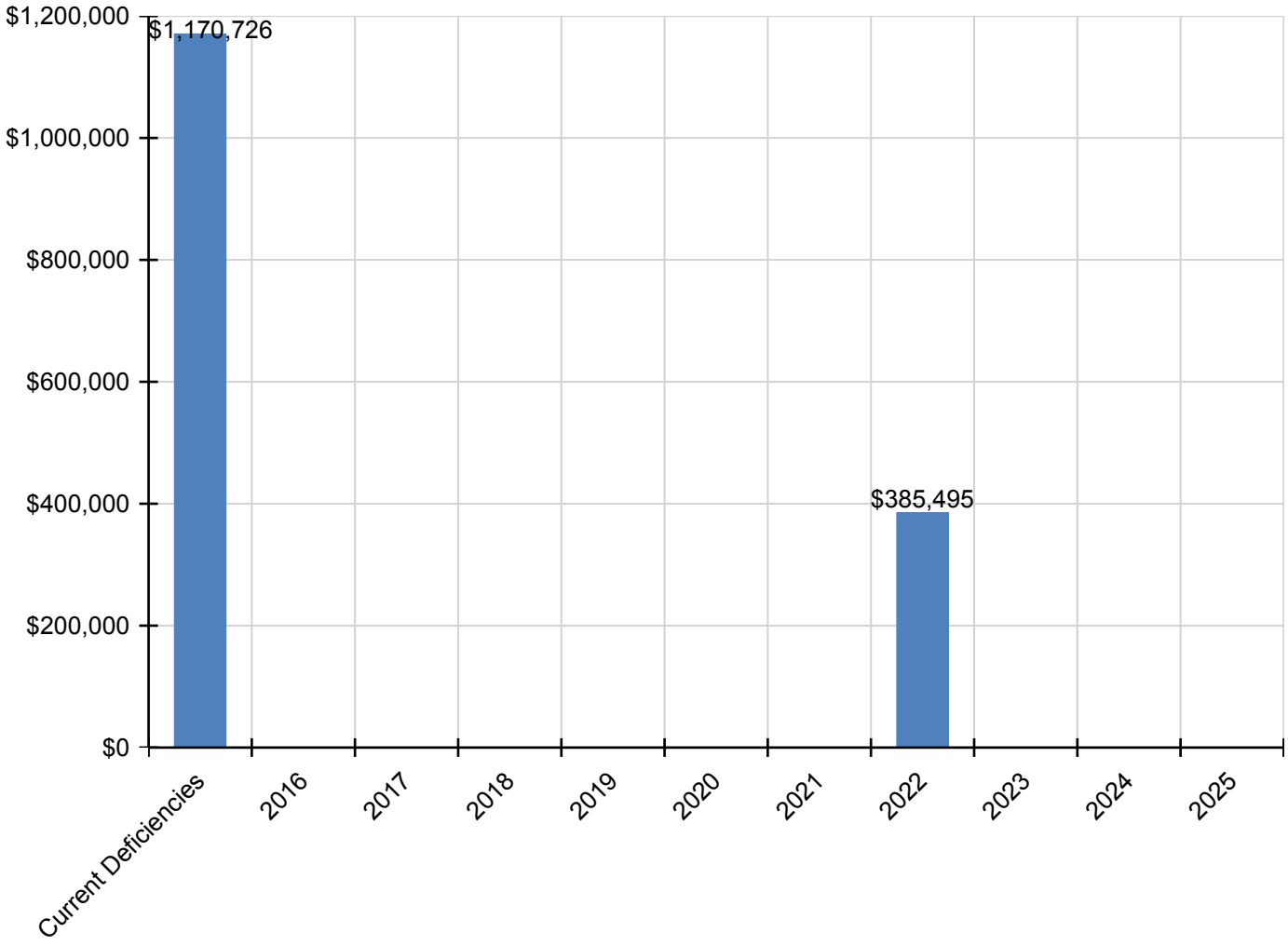
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$1,170,726**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$385,495**	**$0**	**$0**	**$0**	**$1,556,221**
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	$257,989	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$257,989**
G2030 - Pedestrian Paving	$568,146	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$568,146**
G2040 - Site Development	$58,530	$0	$0	$0	$0	$0	$0	$385,495	$0	$0	$0	**$444,026**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$91,619	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$91,619**
G4030 - Site Communications & Security	$194,442	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$194,442**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

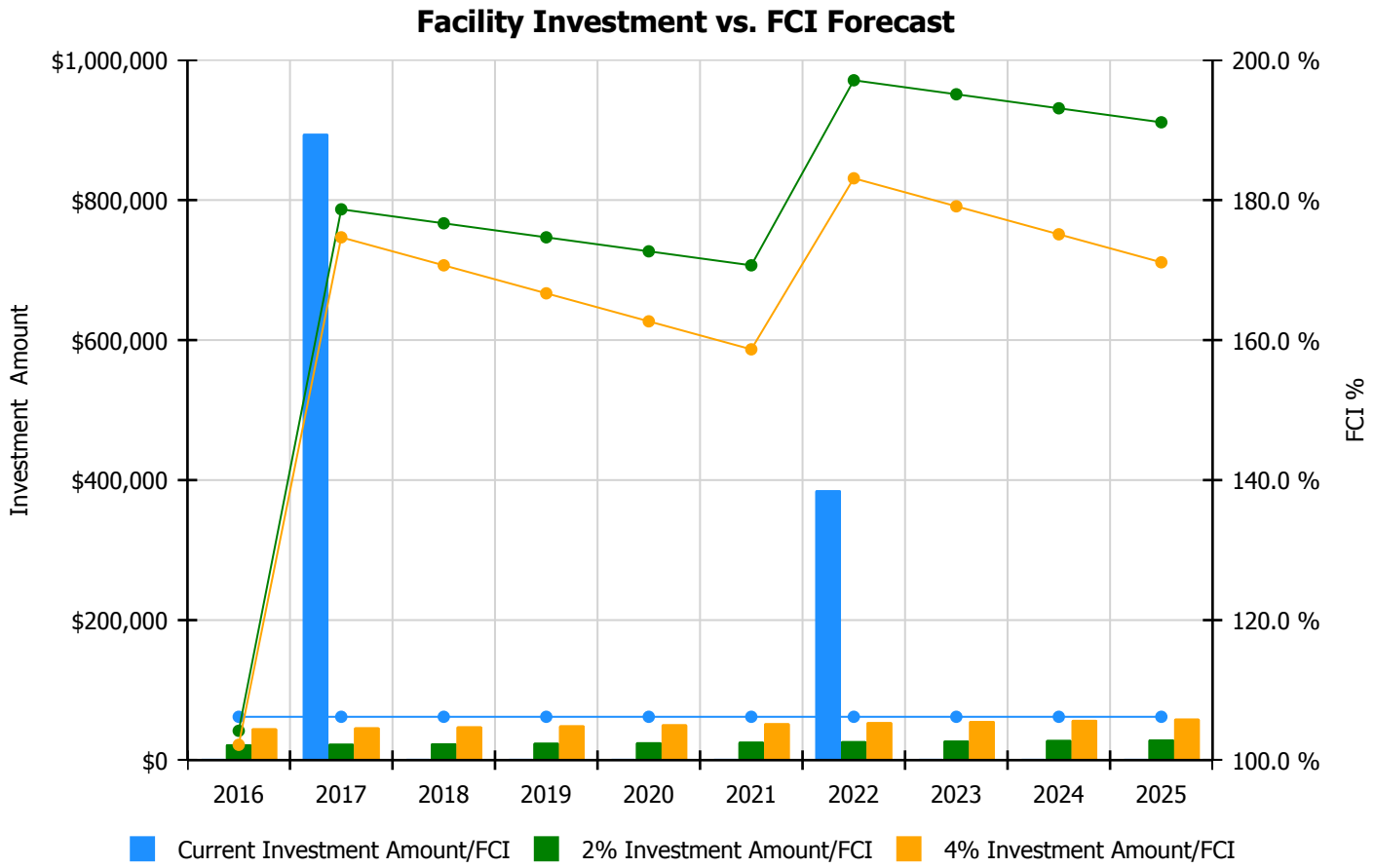
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

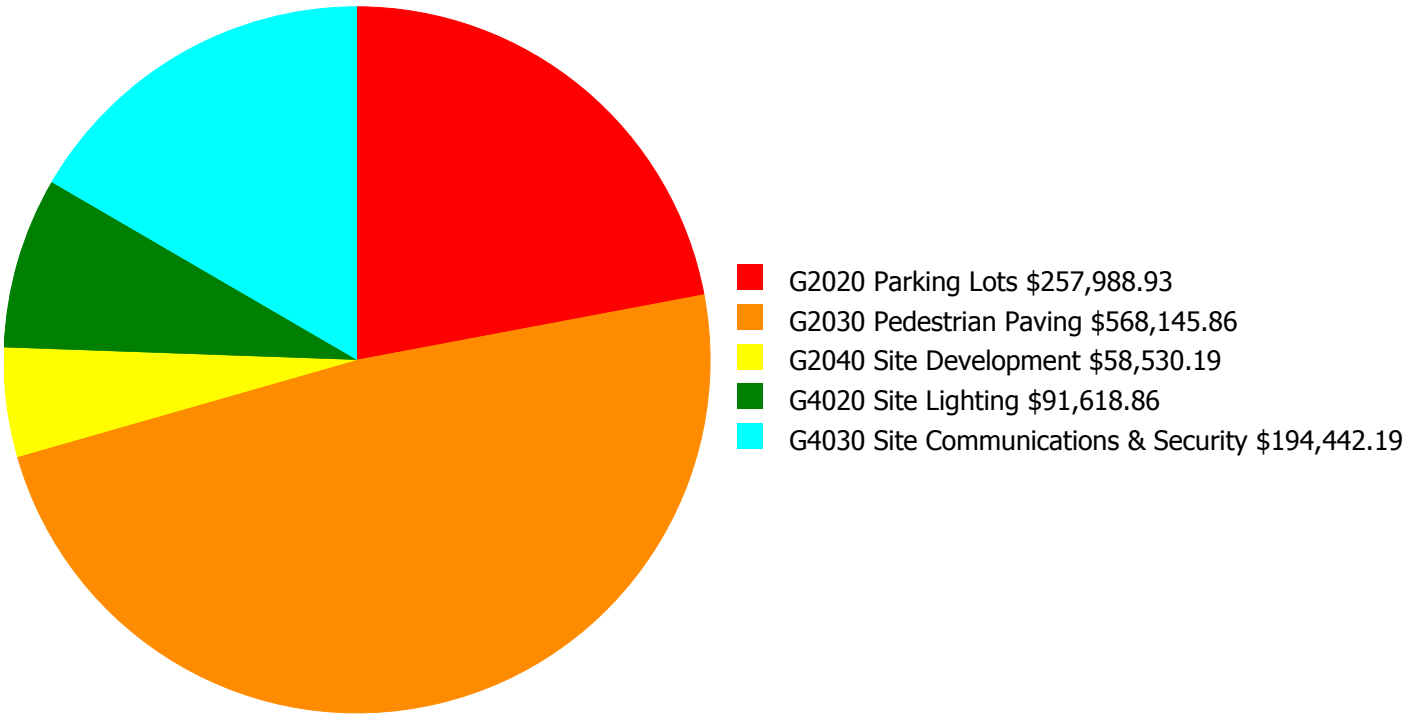
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 106.19%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$22,711.00	104.19 %	$45,422.00	102.19 %
2017	$894,618	$23,393.00	178.68 %	$46,785.00	174.68 %
2018	$0	$24,094.00	176.68 %	$48,189.00	170.68 %
2019	$0	$24,817.00	174.68 %	$49,634.00	166.68 %
2020	$0	$25,562.00	172.68 %	$51,123.00	162.68 %
2021	$0	$26,329.00	170.68 %	$52,657.00	158.68 %
2022	$385,495	$27,118.00	197.11 %	$54,237.00	183.11 %
2023	$0	$27,932.00	195.11 %	$55,864.00	179.11 %
2024	$0	$28,770.00	193.11 %	$57,540.00	175.11 %
2025	$0	$29,633.00	191.11 %	$59,266.00	171.11 %
Total:	**$1,280,113**	**$260,359.00**		**$520,717.00**	

Deficiency Summary by System

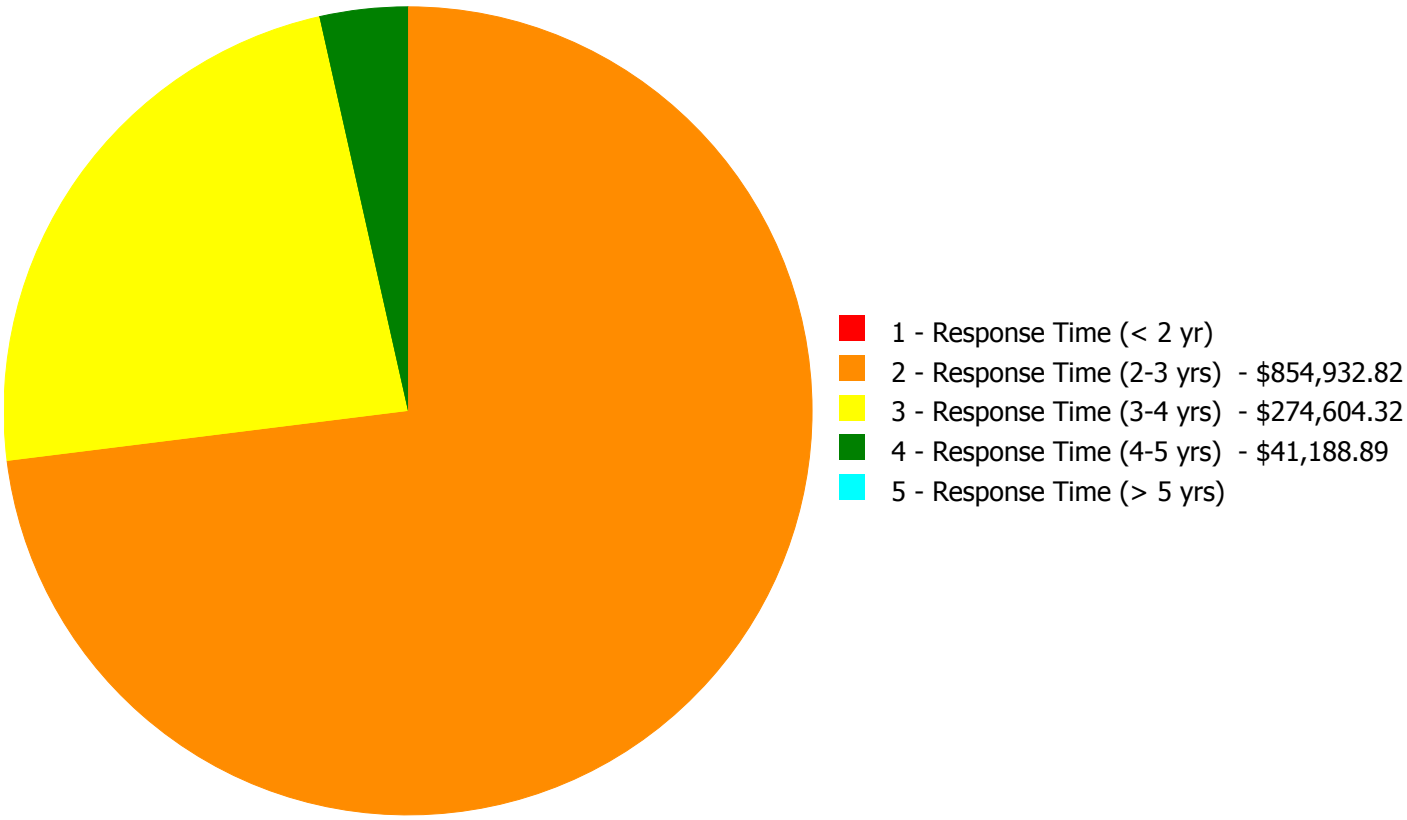
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $1,170,726.03

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: $1,170,726.03

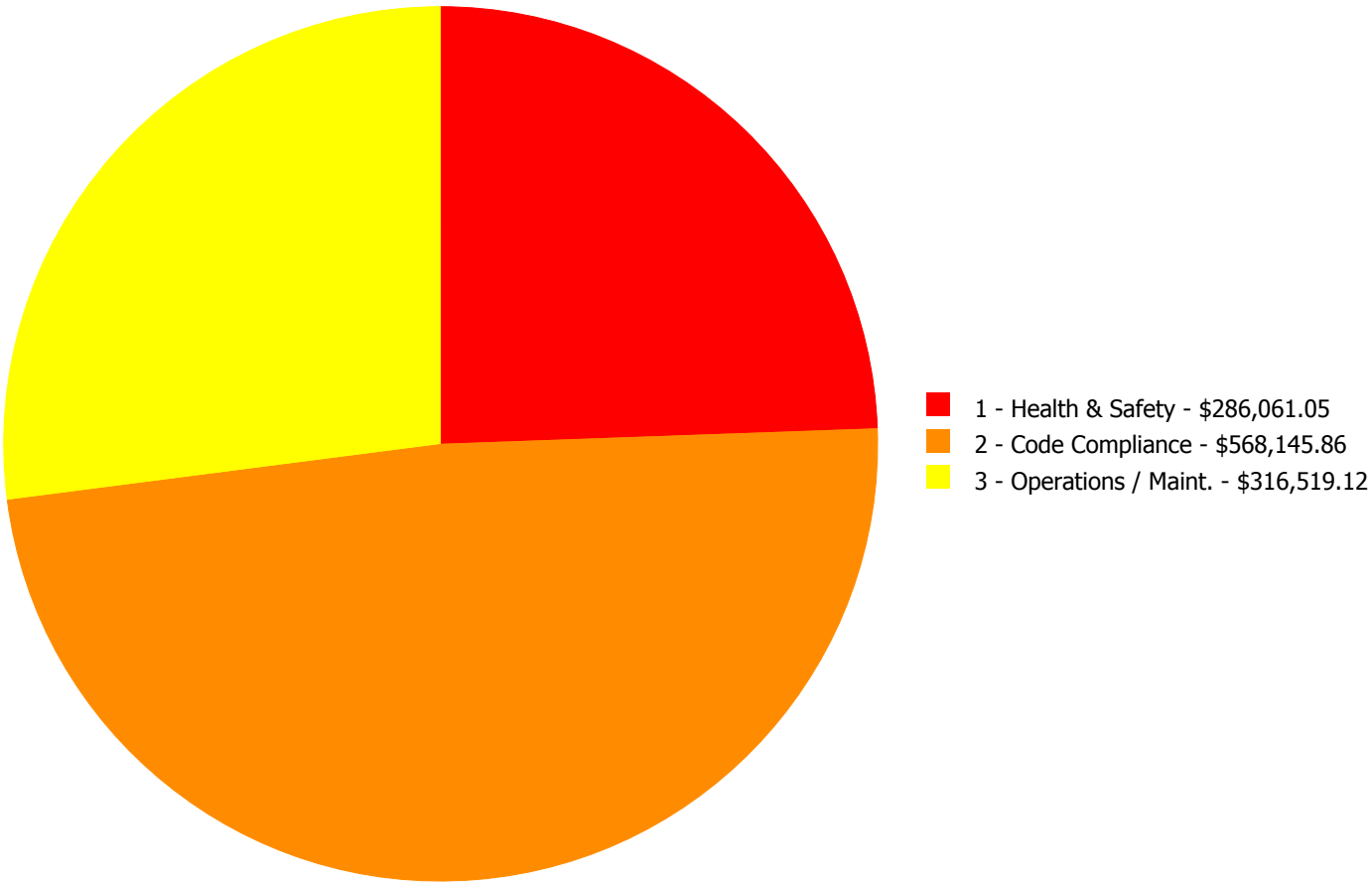
Deficiency By Priority Investment Table

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
G2020	Parking Lots	$0.00	$189,416.77	$68,572.16	$0.00	$0.00	$257,988.93
G2030	Pedestrian Paving	$0.00	$568,145.86	$0.00	$0.00	$0.00	$568,145.86
G2040	Site Development	$0.00	$0.00	$58,530.19	$0.00	$0.00	$58,530.19
G4020	Site Lighting	$0.00	$50,429.97	$0.00	$41,188.89	$0.00	$91,618.86
G4030	Site Communications & Security	$0.00	$46,940.22	$147,501.97	$0.00	$0.00	$194,442.19
	Total:	$0.00	$854,932.82	$274,604.32	$41,188.89	$0.00	$1,170,726.03

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: $1,170,726.03

Deficiency Details by Priority

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

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

System: G2020 - Parking Lots

Location: East parking lot and ramp
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace concrete paving
Qty: 9,000.00
Unit of Measure: S.F.
Estimate: $189,416.77
Assessor Name: Craig Anding
Date Created: 07/20/2015

Notes: Re-pave east side parking area and ramp

System: G2030 - Pedestrian Paving

Location: Exterior entrances
Distress: Accessibility
Category: 2 - Code Compliance
Priority: 2 - Response Time (2-3 yrs)
Correction: Install an exterior ADA ramp - based on 5' wide by the linear foot - up to 84" rise - per LF of ramp - figure 1 LF of ramp per inch of rise
Qty: 240.00
Unit of Measure: L.F.
Estimate: $568,145.86
Assessor Name: Craig Anding
Date Created: 07/20/2015

Notes: Provide ADA compliant ramps at main/visitor entrance and at north and south student entrances

System: G4020 - Site Lighting

Location: Parking Lot

Distress: Security Issue

Category: 1 - Health & Safety

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

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

Qty: 4.00

Unit of Measure: Ea.

Estimate: $50,429.97

Assessor Name: Craig Anding

Date Created: 07/27/2015

Notes: The school parking lot is poorly illuminated at least 4 pole mounted fixtures are required for security.

System: G4030 - Site Communications & Security

Location: Building Exterior

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add Site Paging System

Qty: 4.00

Unit of Measure: Ea.

Estimate: $46,940.22

Assessor Name: Craig Anding

Date Created: 07/27/2015

Notes: There is not Site Paging System in this school. Provide one outdoor speaker at each entrance door. Approximate 4

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

System: G2020 - Parking Lots

Location: Remote parking lot

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Resurface parking lot - grind and resurface including striping

Qty: 18,000.00

Unit of Measure: S.F.

Estimate: $68,572.16

Assessor Name: Craig Anding

Date Created: 07/20/2015

Notes: Replace asphalt parking lot

System: G2040 - Site Development

Location: Remote parking lot

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace chain link fence - 8' high

Qty: 530.00

Unit of Measure: L.F.

Estimate: $58,530.19

Assessor Name: Craig Anding

Date Created: 07/21/2015

Notes: Replace chain link fencing at asphalt parking lot

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: 8.00

Unit of Measure: Ea.

Estimate: $147,501.97

Assessor Name: Craig Anding

Date Created: 07/27/2015

Notes: Provide wall mounted surveillance CCTV cameras around the building perimeter. Approximate 8

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

System: G4020 - Site Lighting

Location: Building Perimeter

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add site lighting fixtures

Qty: 8.00

Unit of Measure: Ea.

Estimate: $41,188.89

Assessor Name: Craig Anding

Date Created: 02/05/2016

Notes: Provide additional wall mounted lighting fixtures along the building perimeter. Approximate 8

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