

## 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.

### Stanton, E M School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	1700 Christian St. Philadelphia, Pa 19146	Enrollment	267
Phone/Fax	215-875-3185 / 215-875-3711	Grade Range	'00-08'
Website	Www.Philasd.Org/Schools/Emstanton	Admissions Category	Neighborhood
		Turnaround Model	N/A

### Building/System FCI Tiers

<b>Facility Condition Index (FCI) = <math>\frac{\text{Cost of Assessed Deficiencies}}{\text{Replacement Value}}</math></b>				
<b>&lt; 15%</b>	<b>15 to 25%</b>	<b>25 to 45%</b>	<b>45 to 60%</b>	<b>&gt; 60%</b>
<b>Buildings</b>				
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.
<b>Systems</b>				
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
<b>Overall</b>	<b>36.08%</b>	<b>\$7,598,751</b>	<b>\$21,062,283</b>
Building	36.42 %	\$7,514,715	\$20,633,634
Grounds	19.60 %	\$84,036	\$428,649

### Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
<b>Roof</b> (Shows physical condition of roof)	00.46 %	\$2,035	\$440,454
<b>Exterior Walls</b> (Shows condition of the structural condition of the exterior facade)	01.52 %	\$22,460	\$1,476,400
<b>Windows</b> (Shows functionality of exterior windows)	122.58 %	\$883,075	\$720,400
<b>Exterior Doors</b> (Shows condition of exterior doors)	12.05 %	\$6,987	\$58,000
<b>Interior Doors</b> (Classroom doors)	17.44 %	\$24,489	\$140,400
<b>Interior Walls</b> (Paint and Finishes)	09.19 %	\$58,256	\$633,600
<b>Plumbing Fixtures</b>	36.28 %	\$196,199	\$540,800
<b>Boilers</b>	43.91 %	\$655,797	\$1,493,600
<b>Chillers/Cooling Towers</b>	49.20 %	\$481,782	\$979,200
<b>Radiators/Unit Ventilators/HVAC</b>	38.88 %	\$668,626	\$1,719,600
<b>Heating/Cooling Controls</b>	119.18 %	\$643,563	\$540,000
<b>Electrical Service and Distribution</b>	177.43 %	\$688,438	\$388,000
<b>Lighting</b>	37.96 %	\$526,622	\$1,387,200
<b>Communications and Security</b> (Cameras, Pa System and Fire Alarm)	53.84 %	\$279,772	\$519,600

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  
**S245001;Stanton, E M**  
Final  
**Site Assessment Report**  
January 30, 2017



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## Site Executive Summary

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

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

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

Gross Area (SF):	80,000
Year Built:	1925
Last Renovation:	
Replacement Value:	\$21,062,283
Repair Cost:	\$7,598,750.59
Total FCI:	36.08 %
Total RSLI:	64.30 %



### Description:

Facility Assessment

August 19<sup>th</sup>, 2015

*School District of Philadelphia*

*Edwin M. Stanton Elementary School*

*1700 Christian Street*

*Philadelphia, PA 19146*

40,000 SF / 437 Students / LN 01

GENERAL

Mr. Dave Loftus FAC, provided input to the assessment team on current problems. Mr. Charles Camillari Building Engineer accompanied us on our



## Site Assessment Report - S245001;Stanton, E M

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tour of the school and provided us with detailed information on the building systems and maintenance history. Mr. Camillari has been in this school for 15 years.

The 4 story, 40,000 square foot building was originally constructed in 1925. The building has a multi-level basement.

### ARCHITECTURAL/STRUCTURAL SYSTEMS

The building typically rests on concrete foundations and bearing walls that are not showing signs of settlement damage. The main structure typically consists of cast-in-place concrete columns, beams, and concrete one way ribbed slab. The main roof structure consists of concrete one-way slab supported by main structural frame. Main roofing is built up application in fair condition with patched areas and trapped water near roof drains needing repair. The building envelope is typically masonry and concrete with face brick in good condition. Elevations are enhanced greatly with decorative stonework and tile around entrances. Parapet wall capstone joints are cracked and causing water intrusion. Fire tower landings have metal grates in exterior openings that are rusted and failing and brickwork is damaged due to prolonged exposure to outside elements. The original windows were replaced in the early 1990s with extruded aluminum, double hung sliding and single hung tilt windows, Lexan Plexiglas with insect/security screens. All windows are generally in fair condition with slight hazing. Exterior doors are typically hollow metal in good condition. Public access doors have granite stoops and stairs. The building is not accessible per ADA requirements due to first floor grade separation with no access ramp.

Partition walls are plastered ceramic hollow blocks in good condition with some CMU added at a later date. Interior doors are generally wood frame and rail and stile wood doors with glazing and transoms in fair condition. Doors leading to exit stairways are hollow metal frame and metal rail and stile doors with embedded metal glazing in good condition. Most interior doors do not have lever type handles. Fittings include: toilet accessories in good condition; marble and composite plastic toilet partitions in good condition; and handrails and ornamental metals, generally in fair condition. Toilet partitions and accessories are not ADA accessible. Interior identifying signage is typically painted on wall and door surfaces in poor condition. Stair construction is generally concrete with cast iron nosing in poor condition with multiple areas of spalling causing the nosing to separate and create trip hazards. Stair railings are cast iron balusters and wood railing in fair condition.

The interior wall finishes include: painted plaster with glazed brick wainscot in corridors, cafeteria, toilets, fire towers, and basement areas in good condition. A few toilet areas are currently under construction with replacement of wall tile. Paint is generally in good condition with damaged plaster areas throughout building due to water intrusion. Flooring includes patterned or bare concrete in stairways, corridors, toilets, storage, and basement service areas in good condition; hardwood in library and some classrooms in good condition; and vinyl flooring in office areas and some classrooms in fair condition with some damaged areas. Flooring in cafeteria and kitchen areas are currently under construction and will be finished with vinyl tile. Ceiling finishes include: suspended acoustic tile system in classrooms, corridors, cafeteria, and office areas in good condition; and painted plaster or structural concrete in toilets, stairways, and basement areas in good condition.

The building has no elevator.

Other equipment includes: food service equipment in good condition.

Fixed furnishings include: fixed casework in classrooms, corridors and library, generally in fair to good condition.

### MECHANICAL SYSTEMS

Toilet room plumbing fixtures include wall water closets, lavatories, and urinals. Very few original fixtures remain, and most have been replaced at various times during the past century. Gang toilets in the basement have flush valves located in pipe chases, and individual facilities on upper floors have exposed valves. Lavatories have a wide variety of faucets, including mixing and non-mixing spouts, momentary action or constant flow valves, and various types of handles. Fixtures are generally in fair condition despite their age, however the district should budget to replace 8 water closets, 10 lavatories, and 3 urinals due to rust, chipped enamel, stains, etc.

The building kitchen is located in the basement and does not have a lavatory. A lavatory should be installed for food service workers to comply with sanitation codes. The kitchen does not have any fuel burning appliances and does not have an exhaust hood or fire suppression system.

Service sinks are cast iron with stainless steel rim, built in backsplash and trap. They have supply valves with long neck faucets. These sinks are in good condition and can be expected to last 10 years or more.

Vitreous china drinking fountains are located in the hallways on each floor as well as some classrooms. They are non-accessible without coolers. Fountains have exceeded their expected lifespan and should be replaced with accessible fountains including integral coolers.

There was originally a shower room in the basement, however the water supply piping and shower heads have been recently removed and the space is being used for storage. The shower room does not need to be restored since this is an elementary school and has no need.

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Domestic water piping is soldered copper. Visible areas of pipe at different locations in the building show pipe of different age and condition indicating multiple repairs and renovations over the history of the building. Some areas are excessively corroded from age and could fail imminently while other areas look like they have been replaced within the past 5 years. The domestic water distribution piping should be surveyed in detail and repaired or replaced as needed. There is a two pump domestic water pressure booster system with hydro-pneumatic storage tank. The water heater is a gas burning, A. O. Smith, model BT 80 112, 74 gallon, vertical tank, and was manufactured in 2004. The water heater is visibly in good condition and can be expected to last 5 more years. The domestic hot water circulation system has an Armstrong pump which is also in good condition. Water service enters the boiler room from the Christian St. side of the property through a 4 inch line with non-compound water meter and 2 double back flow preventers (mainline and bypass).

Sanitary drain piping is mainly cast iron with hub and spigot connections, but includes galvanized steel vent stack pipes, copper sink drain connections, and hubless cast iron pipe with banded coupling for spot repairs. Due to age and appearance including external rust, the entire sanitary drain piping system should be inspected and repaired as needed.

Rain water drain pipes are galvanized steel running inside the building. Connections to roof drains were leaking and allowing water entry into the roofing material layers. The system appears original to the building and has greatly exceeded its expected lifespan, and it should be entirely replaced. There is a groundwater sump in the basement boiler room with two pumps. The engineer did not report any problems with the pumps and they can be expected to last 10 years.

Originally the building was primarily heated by forced air from a basement air handler to the classrooms with cast iron radiators to heat smaller spaces like closets and toilets and as secondary heat for classrooms.

The building has 2 Peerless, cast iron, model 210-25-S, steam boilers installed in 1966. Each boiler has a maximum steam output of 4,032 MBH (120 HP). The boilers are in fair condition, but they have greatly exceeded their useful life expectancy and should be replaced. They have integral burners for gas only. The boiler feedwater comes from a single feed water tank with two pumps that connect to a single line which supplies both boilers. When the boilers are replaced, each boiler should be supplied independently.

There is no central cooling generating system for the school. There are 14 window unit air-conditioners for classrooms and offices generating approximately 28 tons of cooling. The building should be converted to central air by installing a 100 ton capacity system, utilizing the existing ductwork.

Distribution system in the building consists of ducts and steam pipes. The original sheet metal ducts in the basement should be replaced with insulated ducts as part of converting to air-conditioning. The basement ducts lead from a single air handler to built-in clay tile block ducts leading to the classrooms. Exhaust ducts lead from the classrooms to the attic which serves as the exhaust plenum and discharges up through gravity vents in the roof or back down to the basement fan room through a large (approx. 2 feet by 8 feet) return duct. Built-in ducts are in good condition and with renovation they will not need additional maintenance for 20 years. The duct openings in the classrooms are approximately 2 feet by 2 feet in size and do not have diffusers or grills preventing entry into the ducts and they should be installed during renovation. The basement air handler is original to the building including primary and secondary steam heating coils, air washer, and fan. It is not operational because the fan drive belts have failed. The fan motor is 10 HP, 1,200 RPM, two phase, 220VAC. There are dampers to control outside air intake and attic plenum recirculation. The air handler is obsolete and should be replaced with a new unit including filtration, heating, cooling, humidification, and dehumidification sections. Steam and condensate pipe are threaded steel. The piping was in the process of being replaced in the basement during the assessment, i.e. workmen were in the basement cafeteria dining room installing new pipes and finned tube radiators on the day of the inspection. There is a single hot tank that collects condensate and also holds boiler feedwater. The steam trap system should be surveyed in detail and repaired as needed.

The building's original cast iron and threaded steel radiators have surpassed their expected useful life. Some areas of the building have already had them replaced with copper finned tube units, and the basement was having new units installed. The remaining steel and iron radiators, approximately 65% of the building, should be replaced as well.

The building HVAC controls are pneumatic with thermostats in the classrooms and steam flow control valves on the radiators. Ducts have manually operated dampers for air flow control. The controls are inoperative and obsolete. Pneumatics should be replaced with direct digital controls when systems are renovated, replaced, or installed.

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

### ELECTRICAL SYSTEMS

Most probably an underground lateral service from a pole mounted transformer serves this school. The electrical equipment is located in the fan room. The fan room houses the utility main disconnect switch, utility metering 229MU12322 and PECO 47 127915267 and 400A 120/240V

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distribution section. The existing service has no extra capacity for expansion or new Heating, Ventilation, Air Conditioning (HVAC) system. The electrical service entrance needs to be upgraded. The new service will be 120/208V, 3 phase power, approximate 1200 Amperes and will be located in the vicinity of the existing electrical service. The new electrical service would feed a Motor Control Center (MCC) and HVAC (Heating, Ventilation and Air Conditioning) equipment, receptacles, lighting and other smaller loads.

There are 120/240V panel-boards in each floor for lighting and receptacles. These panel-boards and associated wiring have exceeded the end of their useful life and are undersized to absorb additional loads. They need to be replaced. There are (1) 15KVA phase converters from 240V to 120/208V which normally feeds newest mechanical equipment. Panel-board's doors at corridors are not locked and represent a potential hazard for students. As a safety issue all panel-boards at corridor or in areas where students are present must be provided with lockable devices.

There number of receptacles in 80% of the classrooms are inadequate. Teachers use extension cords. The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two duplex outlets each, when feasible.

Most of the classrooms, corridors, stairways and gymnasium are illuminated with recessed mounted fluorescent fixtures. Remodeled classrooms are illuminated with recessed, up/down, modern fluorescent fixtures. Fluorescent lighting fixtures in remodeled areas use T-8 lamps. Fluorescent fixtures in non-remodeled areas use T-12 lamps. Building Engineer replaced burned T-12 lamps with T-8 when ballast/time allows. Approximately 90% of the fixtures need to be replaced.

The Fire Alarm system is manufactured by S.H. Couch Co Inc. The system is approximately 30 years old. The present Fire Alarm system does not meet current code and needs to be replaced. Fire alarm system is tested every day in the morning.

The present telephone system is adequate.

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

The present clocks are old and difficult to find parts and repair. Replace clock system with wireless, battery operated clock system.

There is not television system.

The security system consists of CCTV cameras at corridors, stairways and building exterior. The building interior is fully covered with the existing CCTV cameras

The emergency power system consists of a gas powered generator, manufactured by ONAN 15KW ( estimated), 120/240V. The present emergency power system serves the corridor, exit signs and stair ways. The gas powered generator looks that has already exceeded its useful service life. Provide 50KW, outdoor, diesel powered generator

There is adequate UPS in the IT room.

Emergency Lighting System / Exit Lighting- The emergency lighting is obtained with dedicated fixtures connected to the emergency generator. Exit signs are located at each exit door and corridors and are connected to the school emergency system.

The lightning protection is obtained with air terminals mounted on the school chimney. A study should be conducted to determine if the existing lightning system provide the proper protection to the school building.

### GROUNDS SYSTEMS

The site surrounds the building on all four sides which is set back from the street. Play yard on south side is concrete paving in good condition. Parking area on the east side is concrete and asphalt paving in fair condition with some cracked asphalt and is accessible via Christian St. Metal and chain link fence surrounding yard area is in fair condition, however lacking vehicle security gate. Landscaping is limited to a few mature trees along public sidewalks in good condition.

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



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The school perimeter is illuminated with wall mounted fixtures. Provide additional 4 wall mounted fixtures to create a safer environment.

Two CCTV cameras are provided on the building perimeter. To provide a complete coverage of the building 4 more cameras are required.

There are two wall mounted loud speakers facing the parking lot/playground area.

### RECOMMENDATIONS

- Re-caulk capstone joints on parapet wall – allowing water intrusion
  - Repair stonework on fire tower and replace metal grating – rusted and failing
  - Replace Plexiglas window – hazed
  - Provide ADA compliant exterior door hardware at one entrance
  - Repair roofing near drains – trapped water
  - Replace interior door handles with lever type handles and latch sets
  - Provide new toilet partitions and toilet accessories including grab bars for accessibility
  - Provide interior ID signage
  - Repair stairs and nosing – failing and hazard to safety
  - Repair and paint interior plaster walls – damaged (10% of plaster area)
  - Replace VCT tiles – damaged (5% of vinyl floor area)
  - Install elevator for accessibility
  - Provide ADA compliant ramp at one entrance (location TBD)
  - Install vehicle access gate
- 
- Replace 8 water closets due to age.
- 
- Replace 5 urinals due to age.
- 
- Replace 10 lavatories due to age.
- 
- Install lavatory in kitchen for food service personnel for code compliance.
- 
- Replace 4 drinking fountains with accessible ones including integral chillers throughout building.
- 
- Inspect and repair domestic potable water distribution piping due to visible corrosion.
- 
- Inspect and repair sanitary drain piping due to age and corrosion.
- 
- Replace rainwater drain system due to age and leaks at roof.
- 
- Replace boilers due to age.

- Install 100 ton central air-conditioning system.
- Replace obsolete radiators and air handler including filter, heating, cooling, dehumidification, and humidification sections.
- Survey and repair steam traps.
- Install direct digital control system to replace obsolete pneumatics.
- Install fire sprinkler system with pump if needed.
- Provide a new electrical service 120/208V, 3 phase power, approximate 1200 Amperes and will be located in the vicinity of the existing electrical service.
- Replace the entire distribution system with new panels and new wiring/conduits. Approximate (8) 208/120V panel boards.
- Provide (2)25FT of surface raceways with receptacles spaced 24" on center/classroom and 4 wall mount receptacles/classroom. Approximate 320 receptacles.
- Replace 90% of the existing lighting fixtures with up/down, recessed fluorescent fixtures with T8 lamps. Approximate 480 fixtures.
- Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms. Approximate 54 devices
- Replace clock and bell system with wireless, battery operated, clock system. Approximate 40 clocks.
- Provide 50KW, outdoor, diesel powered generator.
- Prepare a study to determine if the existing lightning system provide the proper protection to the school building.

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- Provide 4 additional wall mounted lighting fixtures around the building perimeter to create a safer environment.
- Provide CCTV cameras to the building exterior for full coverage of the perimeter. Approximate 4 CCTV cameras.

### Attributes:

#### General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 2 / Tm 3
Status:	Accepted by SDP	Team:	Tm 3
Site ID:	S245001		

## 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 %	0.00 %	\$0.00
B20 - Exterior Enclosure	58.70 %	40.47 %	\$912,522.07
B30 - Roofing	60.00 %	0.46 %	\$2,034.58
C10 - Interior Construction	33.44 %	4.67 %	\$45,857.52
C20 - Stairs	37.00 %	17.49 %	\$9,863.78
C30 - Interior Finishes	44.85 %	3.59 %	\$69,071.90
D10 - Conveying	105.71 %	262.06 %	\$1,012,601.25
D20 - Plumbing	47.23 %	92.60 %	\$756,368.49
D30 - HVAC	107.48 %	47.14 %	\$2,449,766.95
D40 - Fire Protection	105.71 %	177.49 %	\$572,219.29
D50 - Electrical	65.87 %	71.64 %	\$1,684,408.85
E10 - Equipment	54.29 %	0.00 %	\$0.00
E20 - Furnishings	35.00 %	0.00 %	\$0.00
G20 - Site Improvements	56.60 %	10.25 %	\$31,601.34
G40 - Site Electrical Utilities	33.33 %	43.60 %	\$52,434.57
<b>Totals:</b>	<b>64.30 %</b>	<b>36.08 %</b>	<b>\$7,598,750.59</b>

### 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)
B245001;Stanton, E M	40,000	36.42	\$133,278.89	\$3,476,437.33	\$1,214,301.26	\$896,620.84	\$1,794,076.36
G245001;Grounds	20,700	19.60	\$25,981.81	\$5,619.53	\$52,434.57	\$0.00	\$0.00
<b>Total:</b>		<b>36.08</b>	<b>\$159,260.70</b>	<b>\$3,482,056.86</b>	<b>\$1,266,735.83</b>	<b>\$896,620.84</b>	<b>\$1,794,076.36</b>

### Deficiencies By Priority



- 1 - Response Time (< 2 yr) - \$159,260.70
- 2 - Response Time (2-3 yrs) - \$3,482,056.86
- 3 - Response Time (3-4 yrs) - \$1,266,735.83
- 4 - Response Time (4-5 yrs) - \$896,620.84
- 5 - Response Time (> 5 yrs) - \$1,794,076.36

**Budget Estimate Total: \$7,598,750.59**



**Executive Summary**

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

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

Function:	Elementary School
Gross Area (SF):	40,000
Year Built:	1925
Last Renovation:	
Replacement Value:	\$20,633,634
Repair Cost:	\$7,514,714.68
Total FCI:	36.42 %
Total RSLI:	64.59 %



**Description:**

**Attributes:**

**General Attributes:**

Active:	Open	Bldg ID:	B245001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S245001		

## 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 %	0.00 %	\$0.00
B20 - Exterior Enclosure	58.70 %	40.47 %	\$912,522.07
B30 - Roofing	60.00 %	0.46 %	\$2,034.58
C10 - Interior Construction	33.44 %	4.67 %	\$45,857.52
C20 - Stairs	37.00 %	17.49 %	\$9,863.78
C30 - Interior Finishes	44.85 %	3.59 %	\$69,071.90
D10 - Conveying	105.71 %	262.06 %	\$1,012,601.25
D20 - Plumbing	47.23 %	92.60 %	\$756,368.49
D30 - HVAC	107.48 %	47.14 %	\$2,449,766.95
D40 - Fire Protection	105.71 %	177.49 %	\$572,219.29
D50 - Electrical	65.87 %	71.64 %	\$1,684,408.85
E10 - Equipment	54.29 %	0.00 %	\$0.00
E20 - Furnishings	35.00 %	0.00 %	\$0.00
<b>Totals:</b>	<b>64.59 %</b>	<b>36.42 %</b>	<b>\$7,514,714.68</b>

## 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 remainder 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.

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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 \$
A1010	Standard Foundations	\$18.40	S.F.	40,000	100	1925	2025	2052	37.00 %	0.00 %	37			\$736,000
A1030	Slab on Grade	\$7.73	S.F.	40,000	100	1925	2025	2052	37.00 %	0.00 %	37			\$309,200
A2010	Basement Excavation	\$6.55	S.F.	40,000	100	1925	2025	2052	37.00 %	0.00 %	37			\$262,000
A2020	Basement Walls	\$12.70	S.F.	40,000	100	1925	2025	2052	37.00 %	0.00 %	37			\$508,000
B1010	Floor Construction	\$75.10	S.F.	40,000	100	1925	2025	2052	37.00 %	0.00 %	37			\$3,004,000
B1020	Roof Construction	\$13.88	S.F.	40,000	100	1925	2025	2052	37.00 %	0.00 %	37			\$555,200
B2010	Exterior Walls	\$36.91	S.F.	40,000	100	1925	2025	2052	37.00 %	1.52 %	37		\$22,459.57	\$1,476,400
B2020	Exterior Windows	\$18.01	S.F.	40,000	40	1992	2032	2057	105.00 %	122.58 %	42		\$883,075.22	\$720,400
B2030	Exterior Doors	\$1.45	S.F.	40,000	25	1999	2024		36.00 %	12.05 %	9		\$6,987.28	\$58,000
B3010105	Built-Up	\$37.76	S.F.	11,601	20	2007	2027		60.00 %	0.46 %	12		\$2,034.58	\$438,054
B3020	Roof Openings	\$0.06	S.F.	40,000	20	2007	2027		60.00 %	0.00 %	12			\$2,400
C1010	Partitions	\$17.91	S.F.	40,000	100	1925	2025	2052	37.00 %	0.00 %	37			\$716,400
C1020	Interior Doors	\$3.51	S.F.	40,000	40	1979	2019	2025	25.00 %	17.44 %	10		\$24,489.06	\$140,400
C1030	Fittings	\$3.12	S.F.	40,000	40	1979	2019	2024	22.50 %	17.12 %	9		\$21,368.46	\$124,800
C2010	Stair Construction	\$1.41	S.F.	40,000	100	1925	2025	2052	37.00 %	17.49 %	37		\$9,863.78	\$56,400
C3010230	Paint & Covering	\$13.46	S.F.	40,000	10	2011	2021		60.00 %	10.82 %	6		\$58,256.12	\$538,400
C3010232	Wall Tile	\$2.38	S.F.	40,000	30	2015	2045		100.00 %	0.00 %	30			\$95,200
C3020413	Vinyl Flooring	\$9.68	S.F.	18,000	20	1999	2019	2020	25.00 %	6.21 %	5		\$10,815.78	\$174,240
C3020414	Wood Flooring	\$22.27	S.F.	12,000	25	1999	2024		36.00 %	0.00 %	9			\$267,240
C3020415	Concrete Floor Finishes	\$0.97	S.F.	10,000	50	1979	2029		28.00 %	0.00 %	14			\$9,700
C3030	Ceiling Finishes	\$20.97	S.F.	40,000	25	1999	2024		36.00 %	0.00 %	9			\$838,800
D1010	Elevators and Lifts	\$9.66	S.F.	40,000	35			2052	105.71 %	262.06 %	37		\$1,012,601.25	\$386,400
D2010	Plumbing Fixtures	\$13.52	S.F.	40,000	35	1926	1961	2027	34.29 %	36.28 %	12		\$196,198.60	\$540,800
D2020	Domestic Water Distribution	\$1.68	S.F.	40,000	25	1926	1951	2032	68.00 %	301.63 %	17		\$202,694.06	\$67,200
D2030	Sanitary Waste	\$2.90	S.F.	40,000	25	1926	1951	2027	48.00 %	169.16 %	12		\$196,229.92	\$116,000
D2040	Rain Water Drainage	\$2.32	S.F.	40,000	30	1926	1956	2047	106.67 %	173.76 %	32		\$161,245.91	\$92,800
D3020	Heat Generating Systems	\$18.67	S.F.	40,000	35	1966	2001	2052	105.71 %	87.81 %	37		\$655,796.89	\$746,800
D3020	Heat Generating Systems (1)	\$18.67	S.F.	40,000	35	1966	2001	2052	105.71 %	0.00 %	37			\$746,800
D3030	Cooling Generating Systems	\$24.48	S.F.	40,000	30			2047	106.67 %	49.20 %	32		\$481,781.82	\$979,200
D3040	Distribution Systems	\$42.99	S.F.	40,000	25	1926	1951	2042	108.00 %	38.88 %	27		\$668,625.50	\$1,719,600
D3050	Terminal & Package Units	\$11.60	S.F.	40,000	20	1926	1946	2037	110.00 %	0.00 %	22			\$464,000
D3060	Controls & Instrumentation	\$13.50	S.F.	40,000	20	1965	1985	2037	110.00 %	119.18 %	22		\$643,562.74	\$540,000
D4010	Sprinklers	\$7.05	S.F.	40,000	35			2052	105.71 %	202.91 %	37		\$572,219.29	\$282,000
D4020	Standpipes	\$1.01	S.F.	40,000	35	1965	2000	2052	105.71 %	0.00 %	37			\$40,400
D5010	Electrical Service/Distribution	\$9.70	S.F.	40,000	30	1926	1956	2047	106.67 %	177.43 %	32		\$688,437.67	\$388,000
D5020	Lighting and Branch Wiring	\$34.68	S.F.	40,000	20	1926	1946	2027	60.00 %	37.96 %	12		\$526,621.88	\$1,387,200
D5030	Communications and Security	\$12.99	S.F.	40,000	15	1926	1941	2022	46.67 %	53.84 %	7		\$279,772.44	\$519,600
D5090	Other Electrical Systems	\$1.41	S.F.	40,000	30	1926	1956	2047	106.67 %	336.13 %	32		\$189,576.86	\$56,400
E1090	Other Equipment	\$11.10	S.F.	40,000	35	1999	2034		54.29 %	0.00 %	19			\$444,000
E2010	Fixed Furnishings	\$2.13	S.F.	40,000	40	1979	2019	2029	35.00 %	0.00 %	14			\$85,200
<b>Total</b>									<b>64.59 %</b>	<b>36.42 %</b>			<b>\$7,514,714.68</b>	<b>\$20,633,634</b>





## 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.

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

**Note:** 85% - Paint & Coverings  
15% - Wall Tile

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

**Note:** 45% - Vinyl Flooring  
30% - Wood Flooring  
25% - Concrete Floor Finishes

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**System:** D5010 - Electrical Service/Distribution



**Note:** (1) 15KVA phase converter

## 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
<b>Total:</b>	<b>\$7,514,715</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$222,191</b>	<b>\$707,166</b>	<b>\$702,947</b>	<b>\$0</b>	<b>\$1,849,808</b>	<b>\$207,554</b>	<b>\$11,204,381</b>
<b>* A - Substructure</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>A10 - Foundations</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>A1010 - Standard Foundations</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>A1030 - Slab on Grade</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>A20 - Basement Construction</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>A2010 - Basement Excavation</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>A2020 - Basement Walls</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>B - Shell</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>B10 - Superstructure</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>B1010 - Floor Construction</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>B1020 - Roof Construction</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>B20 - Exterior Enclosure</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>B2010 - Exterior Walls</b>	\$22,460	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,460
<b>B2020 - Exterior Windows</b>	\$883,075	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$883,075
<b>B2030 - Exterior Doors</b>	\$6,987	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$83,245	\$0	\$90,232
<b>B30 - Roofing</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>B3010 - Roof Coverings</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>B3010105 - Built-Up</b>	\$2,035	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,035
<b>B3020 - Roof Openings</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>C - Interiors</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>C10 - Interior Construction</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>C1010 - Partitions</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>C1020 - Interior Doors</b>	\$24,489	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$207,554	\$232,044
<b>C1030 - Fittings</b>	\$21,368	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$179,119	\$0	\$200,488
<b>C20 - Stairs</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

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C2010 - Stair Construction	\$9,864	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,864
C30 - Interior Finishes	\$0	\$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	\$0
C3010230 - Paint & Covering	\$58,256	\$0	\$0	\$0	\$0	\$0	\$707,166	\$0	\$0	\$0	\$0	\$0	\$765,422
C3010232 - Wall Tile	\$0	\$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	\$0
C3020413 - Vinyl Flooring	\$10,816	\$0	\$0	\$0	\$0	\$222,191	\$0	\$0	\$0	\$0	\$0	\$0	\$233,007
C3020414 - Wood Flooring	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$383,556	\$0	\$0	\$383,556
C3020415 - Concrete Floor Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C3030 - Ceiling Finishes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,203,888	\$0	\$1,203,888
D - Services	\$0	\$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	\$0
D1010 - Elevators and Lifts	\$1,012,601	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,012,601
D20 - Plumbing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D2010 - Plumbing Fixtures	\$196,199	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$196,199
D2020 - Domestic Water Distribution	\$202,694	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$202,694
D2030 - Sanitary Waste	\$196,230	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$196,230
D2040 - Rain Water Drainage	\$161,246	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$161,246
D30 - HVAC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3020 - Heat Generating Systems	\$655,797	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$655,797
D3020 - Heat Generating Systems (1)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3030 - Cooling Generating Systems	\$481,782	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$481,782
D3040 - Distribution Systems	\$668,626	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$668,626
D3050 - Terminal & Package Units	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3060 - Controls & Instrumentation	\$643,563	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$643,563
D40 - Fire Protection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D4010 - Sprinklers	\$572,219	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$572,219
D4020 - Standpipes	\$0	\$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	\$0
D5010 - Electrical Service/Distribution	\$688,438	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$688,438
D5020 - Lighting and Branch Wiring	\$526,622	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$526,622
D5030 - Communications and Security	\$279,772	\$0	\$0	\$0	\$0	\$0	\$0	\$702,947	\$0	\$0	\$0	\$0	\$982,719
D5090 - Other Electrical Systems	\$189,577	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$189,577

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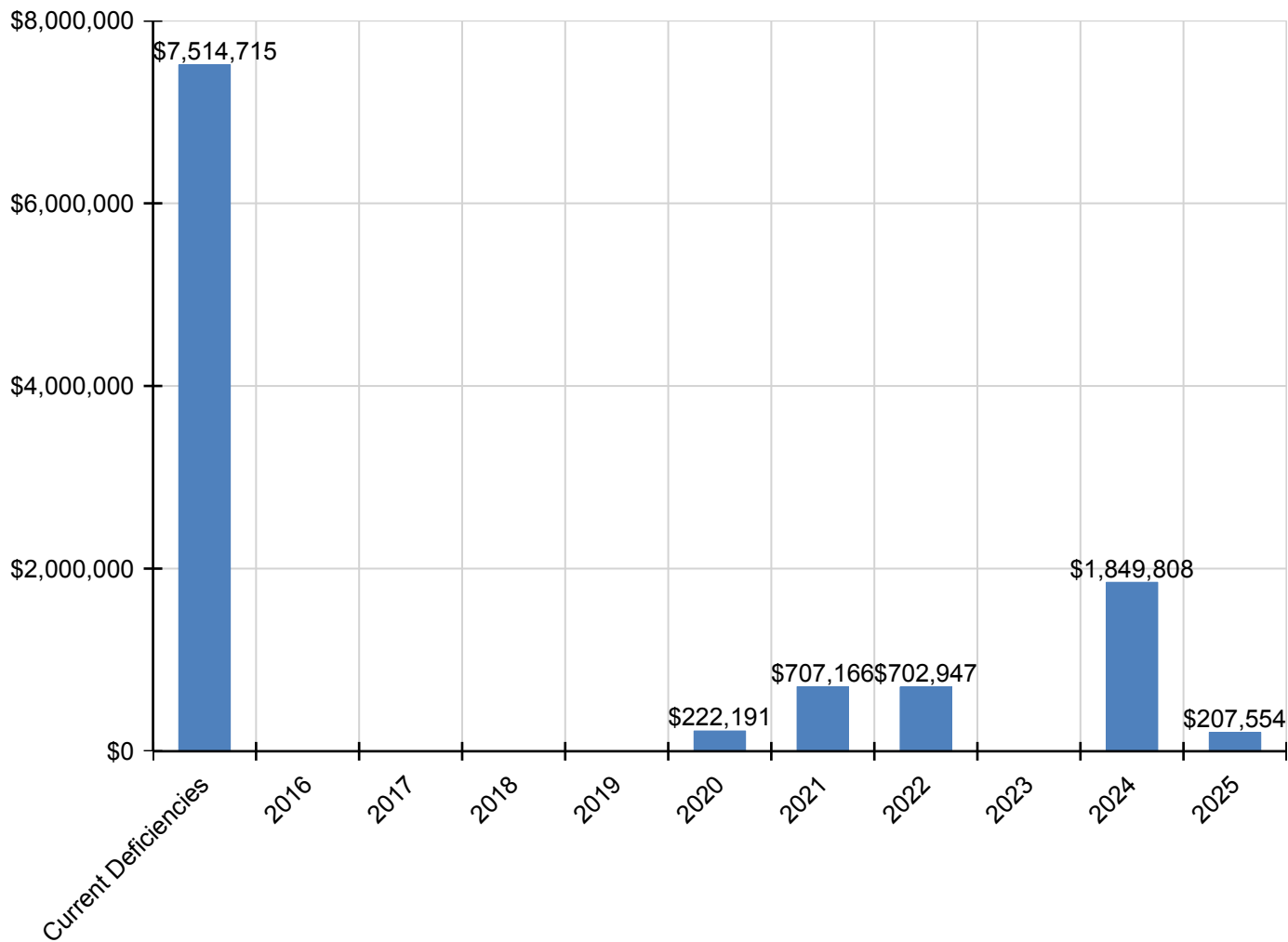
<b>E - Equipment &amp; Furnishings</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>E10 - Equipment</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>E1090 - Other Equipment</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>E20 - Furnishings</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>E2010 - Fixed Furnishings</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

\* Indicates non-renewable system



## Forecasted Sustainment Requirement

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

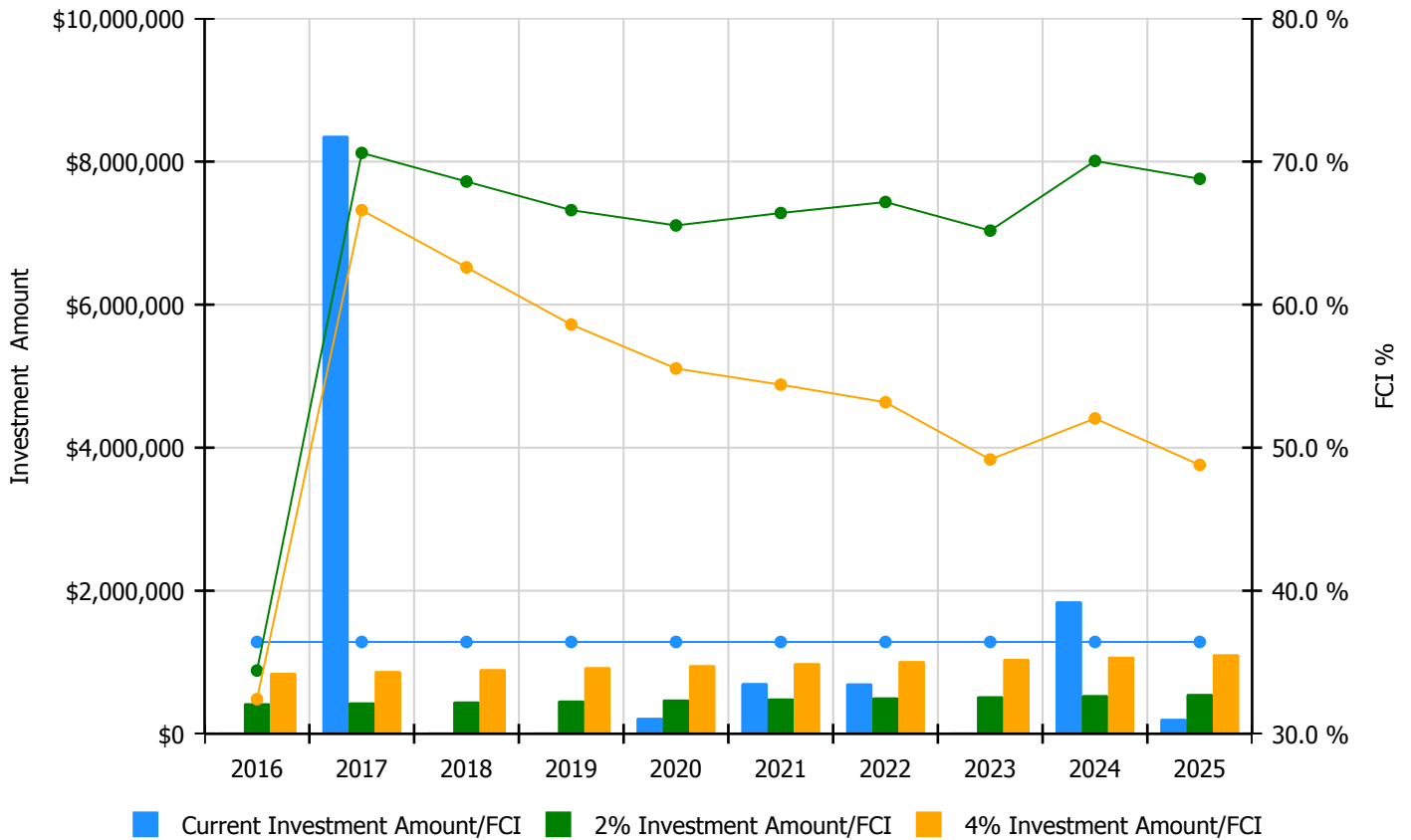


## 10 Year FCI Forecast by Investment Scenario

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

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

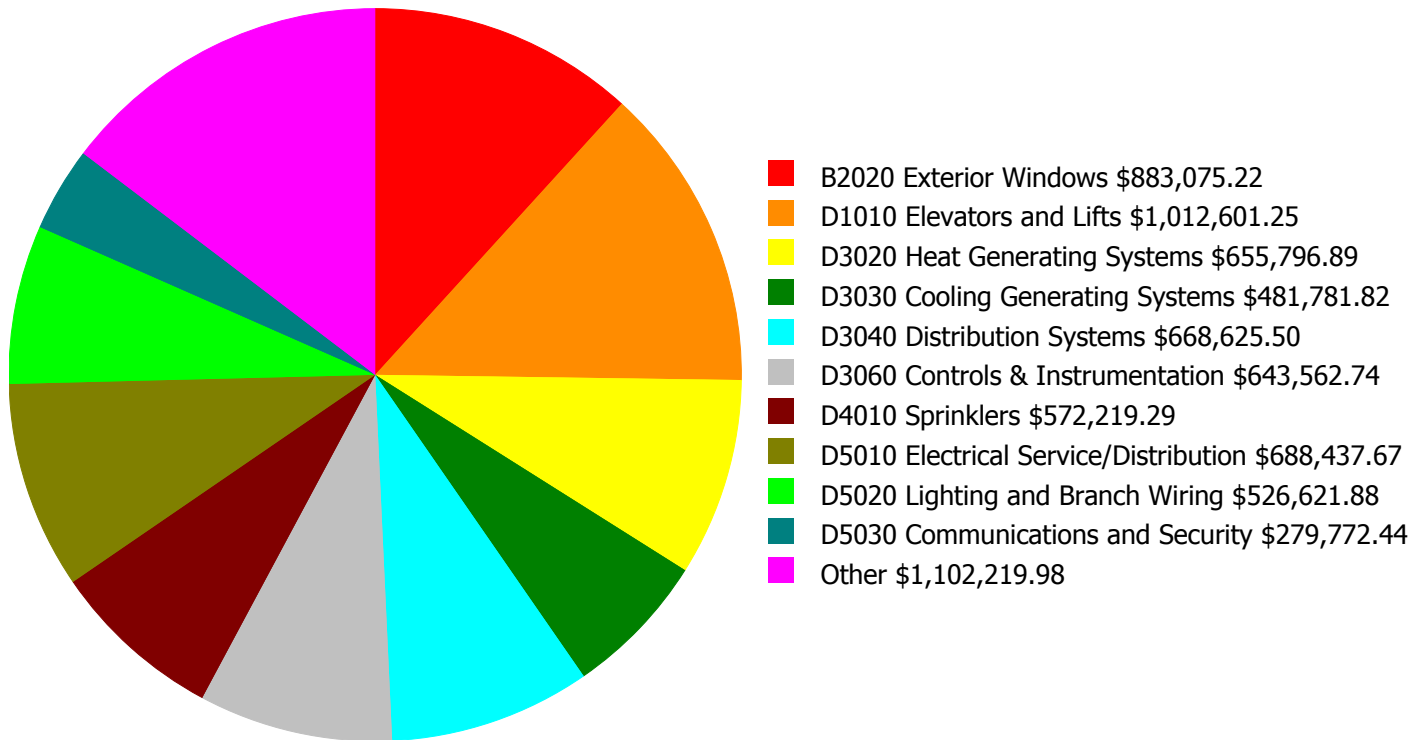
**Facility Investment vs. FCI Forecast**



Year	Investment Amount Current FCI - 36.42%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	\$0	\$425,053.00	34.42 %	\$850,106.00	32.42 %
2017	\$8,358,916	\$437,804.00	70.61 %	\$875,609.00	66.61 %
2018	\$0	\$450,939.00	68.61 %	\$901,877.00	62.61 %
2019	\$0	\$464,467.00	66.61 %	\$928,933.00	58.61 %
2020	\$222,191	\$478,401.00	65.53 %	\$956,801.00	55.53 %
2021	\$707,166	\$492,753.00	66.40 %	\$985,506.00	54.40 %
2022	\$702,947	\$507,535.00	67.17 %	\$1,015,071.00	53.17 %
2023	\$0	\$522,761.00	65.17 %	\$1,045,523.00	49.17 %
2024	\$1,849,808	\$538,444.00	70.05 %	\$1,076,888.00	52.05 %
2025	\$207,554	\$554,598.00	68.79 %	\$1,109,195.00	48.79 %
<b>Total:</b>	<b>\$12,048,582</b>	<b>\$4,872,755.00</b>		<b>\$9,745,509.00</b>	

## Deficiency Summary by System

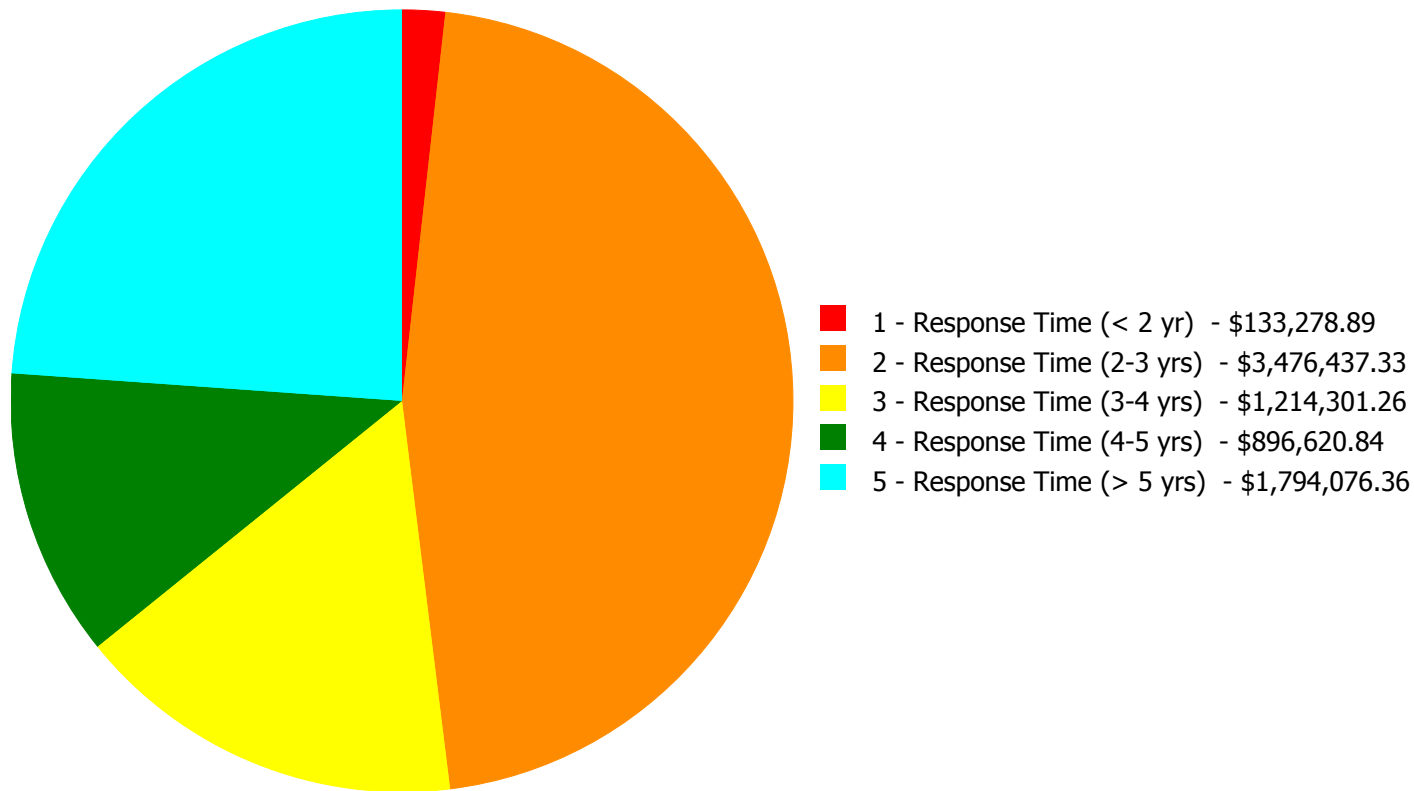
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



**Budget Estimate Total: \$7,514,714.68**

## Deficiency Summary by Priority

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



**Budget Estimate Total: \$7,514,714.68**

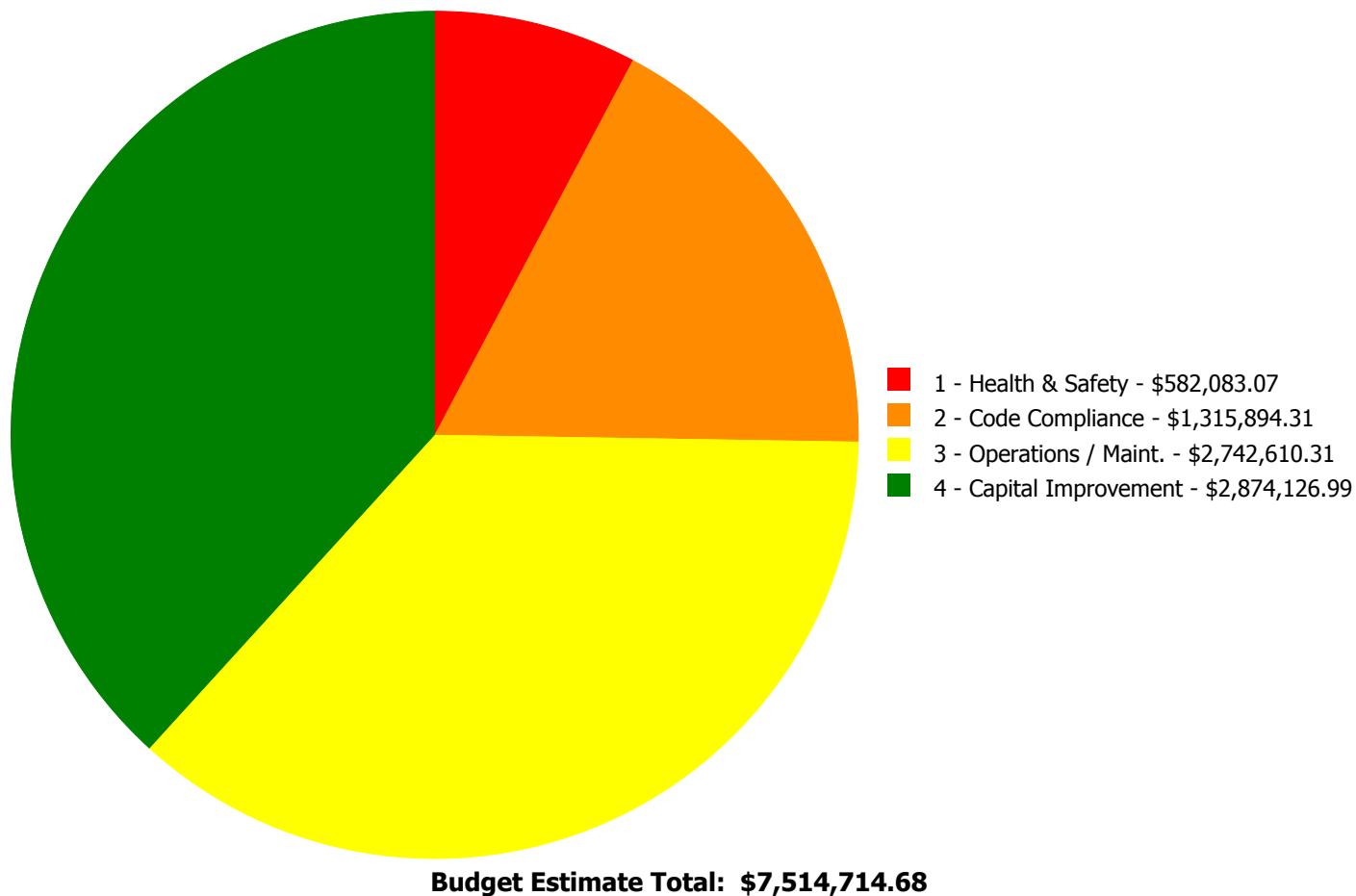
## Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2010	Exterior Walls	\$0.00	\$22,459.57	\$0.00	\$0.00	\$0.00	\$22,459.57
B2020	Exterior Windows	\$0.00	\$0.00	\$0.00	\$883,075.22	\$0.00	\$883,075.22
B2030	Exterior Doors	\$0.00	\$6,987.28	\$0.00	\$0.00	\$0.00	\$6,987.28
B3010105	Built-Up	\$2,034.58	\$0.00	\$0.00	\$0.00	\$0.00	\$2,034.58
C1020	Interior Doors	\$0.00	\$24,489.06	\$0.00	\$0.00	\$0.00	\$24,489.06
C1030	Fittings	\$0.00	\$7,822.84	\$0.00	\$13,545.62	\$0.00	\$21,368.46
C2010	Stair Construction	\$0.00	\$9,863.78	\$0.00	\$0.00	\$0.00	\$9,863.78
C3010230	Paint & Covering	\$0.00	\$0.00	\$58,256.12	\$0.00	\$0.00	\$58,256.12
C3020413	Vinyl Flooring	\$0.00	\$0.00	\$10,815.78	\$0.00	\$0.00	\$10,815.78
D1010	Elevators and Lifts	\$0.00	\$1,012,601.25	\$0.00	\$0.00	\$0.00	\$1,012,601.25
D2010	Plumbing Fixtures	\$0.00	\$183,660.83	\$12,537.77	\$0.00	\$0.00	\$196,198.60
D2020	Domestic Water Distribution	\$0.00	\$0.00	\$0.00	\$0.00	\$202,694.06	\$202,694.06
D2030	Sanitary Waste	\$0.00	\$0.00	\$196,229.92	\$0.00	\$0.00	\$196,229.92
D2040	Rain Water Drainage	\$0.00	\$161,245.91	\$0.00	\$0.00	\$0.00	\$161,245.91
D3020	Heat Generating Systems	\$0.00	\$0.00	\$655,796.89	\$0.00	\$0.00	\$655,796.89
D3030	Cooling Generating Systems	\$0.00	\$0.00	\$0.00	\$0.00	\$481,781.82	\$481,781.82
D3040	Distribution Systems	\$131,244.31	\$0.00	\$0.00	\$0.00	\$537,381.19	\$668,625.50
D3060	Controls & Instrumentation	\$0.00	\$643,562.74	\$0.00	\$0.00	\$0.00	\$643,562.74
D4010	Sprinklers	\$0.00	\$0.00	\$0.00	\$0.00	\$572,219.29	\$572,219.29
D5010	Electrical Service/Distribution	\$0.00	\$688,437.67	\$0.00	\$0.00	\$0.00	\$688,437.67
D5020	Lighting and Branch Wiring	\$0.00	\$526,621.88	\$0.00	\$0.00	\$0.00	\$526,621.88
D5030	Communications and Security	\$0.00	\$167,212.22	\$112,560.22	\$0.00	\$0.00	\$279,772.44
D5090	Other Electrical Systems	\$0.00	\$21,472.30	\$168,104.56	\$0.00	\$0.00	\$189,576.86
	<b>Total:</b>	\$133,278.89	\$3,476,437.33	\$1,214,301.26	\$896,620.84	\$1,794,076.36	\$7,514,714.68

## Deficiency Summary by Category

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



## Deficiency Details by Priority

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

### Priority 1 - Response Time (< 2 yr):

#### System: B3010105 - Built-Up



**Location:** Roof

**Distress:** Damaged

**Category:** 3 - Operations / Maint.

**Priority:** 1 - Response Time (< 2 yr)

**Correction:** Blister or membrane repair - partial areas

**Qty:** 100.00

**Unit of Measure:** S.F.

**Estimate:** \$2,034.58

**Assessor Name:** System

**Date Created:** 09/17/2015

**Notes:** Repair roofing near drains – trapped water

---

#### System: D3040 - Distribution Systems



**Location:** Entire building

**Distress:** Maintenance Required

**Category:** 3 - Operations / Maint.

**Priority:** 1 - Response Time (< 2 yr)

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

**Qty:** 40,000.00

**Unit of Measure:** S.F.

**Estimate:** \$131,244.31

**Assessor Name:** System

**Date Created:** 11/17/2015

**Notes:** Survey and repair steam traps.

---

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

**System: B2010 - Exterior Walls**



**Location:** Fire tower

**Distress:** Failing

**Category:** 3 - Operations / Maint.

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

**Correction:** Repoint masonry at masonry to steel picket connection, refinish steel picket and repoint masonry - insert LF of masonry pointing and SF of picket

**Qty:** 36.00

**Unit of Measure:** L.F.

**Estimate:** \$12,225.90

**Assessor Name:** System

**Date Created:** 09/17/2015

**Notes:** Repair stonework on fire tower and replace metal grating – rusted and failing

---

**System: B2010 - Exterior Walls**



**Location:** Parapet walls

**Distress:** Maintenance Required

**Category:** 3 - Operations / Maint.

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

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

**Qty:** 510.00

**Unit of Measure:** L.F.

**Estimate:** \$10,233.67

**Assessor Name:** System

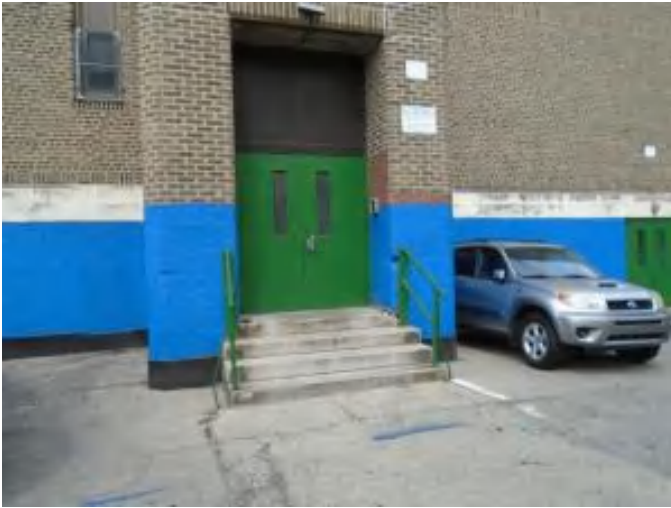
**Date Created:** 09/17/2015

**Notes:** Re-caulk capstone joints on parapet wall – allowing water intrusion

---



**System: B2030 - Exterior Doors**



**Location:** Entrance

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Replace hardware with compliant hardware, paint and weatherstrip - per leaf

**Qty:** 2.00

**Unit of Measure:** Ea.

**Estimate:** \$6,987.28

**Assessor Name:** System

**Date Created:** 09/17/2015

**Notes:** Provide ADA compliant exterior door hardware at one entrance

---

**System: C1020 - Interior Doors**



**Location:** Throughout

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Replace door knobs with compliant lever type

**Qty:** 44.00

**Unit of Measure:** Ea.

**Estimate:** \$24,489.06

**Assessor Name:** System

**Date Created:** 09/17/2015

**Notes:** Replace interior door handles with lever type handles and latch sets

---

**System: C1030 - Fittings**



**Location:** Toilets  
**Distress:** Accessibility  
**Category:** 2 - Code Compliance  
**Priority:** 2 - Response Time (2-3 yrs)  
**Correction:** Remove and replace damaged toilet partitions - handicap units  
**Qty:** 8.00  
**Unit of Measure:** Ea.  
**Estimate:** \$7,822.84  
**Assessor Name:** System  
**Date Created:** 09/17/2015

**Notes:** Provide new toilet partitions and toilet accessories including grab bars for accessibility

---

**System: C2010 - Stair Construction**



**Location:** Stairs  
**Distress:** Health Hazard / Risk  
**Category:** 1 - Health & Safety  
**Priority:** 2 - Response Time (2-3 yrs)  
**Correction:** Regrout joints between stone treads and risers - LF of grout  
**Qty:** 660.00  
**Unit of Measure:** L.F.  
**Estimate:** \$9,863.78  
**Assessor Name:** System  
**Date Created:** 09/17/2015

**Notes:** Repair stairs and nosing – failing and hazard to safety

---

**System: D1010 - Elevators and Lifts**



**Location:** TBD

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Add external 4 stop elevator - adjust the electrical run lengths to hook up the elevator

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** \$1,012,601.25

**Assessor Name:** System

**Date Created:** 09/17/2015

**Notes:** Install elevator for accessibility

---

**System: D2010 - Plumbing Fixtures**



**Location:** Hallways

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

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

**Qty:** 4.00

**Unit of Measure:** Ea.

**Estimate:** \$62,771.59

**Assessor Name:** System

**Date Created:** 11/17/2015

**Notes:** Replace 4 drinking fountains with accessible ones including integral chillers throughout building.

---

**System: D2010 - Plumbing Fixtures**



**Location:** Toilet rooms

**Distress:** Beyond Service Life

**Category:** 3 - Operations / Maint.

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

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

**Qty:** 4.00

**Unit of Measure:** Ea.

**Estimate:** \$57,221.17

**Assessor Name:** System

**Date Created:** 11/17/2015

**Notes:** Replace 8 water closets due to age.

---

**System: D2010 - Plumbing Fixtures**



**Location:** Toilet rooms

**Distress:** Beyond Service Life

**Category:** 3 - Operations / Maint.

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

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

**Qty:** 5.00

**Unit of Measure:** Ea.

**Estimate:** \$46,405.82

**Assessor Name:** System

**Date Created:** 11/17/2015

**Notes:** Replace 10 lavatories due to age.

---

**System: D2010 - Plumbing Fixtures**



**Location:** Toilet rooms  
**Distress:** Beyond Service Life  
**Category:** 3 - Operations / Maint.  
**Priority:** 2 - Response Time (2-3 yrs)  
**Correction:** Remove and replace or replace wall hung urinals  
**Qty:** 5.00  
**Unit of Measure:** Ea.  
**Estimate:** \$17,262.25  
**Assessor Name:** System  
**Date Created:** 11/17/2015

**Notes:** Replace 5 urinals due to age.

---

**System: D2040 - Rain Water Drainage**



**Location:** Entire building  
**Distress:** Beyond Service Life  
**Category:** 3 - Operations / Maint.  
**Priority:** 2 - Response Time (2-3 yrs)  
**Correction:** Remove and replace rain water drainage piping - based on +- 30 KSF roof area on 3-4 story building - insert the SF of roof area to be drained  
**Qty:** 12,000.00  
**Unit of Measure:** S.F.  
**Estimate:** \$161,245.91  
**Assessor Name:** System  
**Date Created:** 11/17/2015

**Notes:** Replace rainwater drain system due to age and leaks at roof.

---

**System: D3060 - Controls & Instrumentation**



**Location:** Entire building  
**Distress:** Obsolete  
**Category:** 3 - Operations / Maint.  
**Priority:** 2 - Response Time (2-3 yrs)  
**Correction:** Replace pneumatic controls with DDC (75KSF)  
**Qty:** 30,000.00  
**Unit of Measure:** S.F.  
**Estimate:** \$643,562.74  
**Assessor Name:** System  
**Date Created:** 11/17/2015

**Notes:** Install direct digital control system to replace obsolete pneumatics.

---

**System: D5010 - Electrical Service/Distribution**



**Location:** Entire Building  
**Distress:** Inadequate  
**Category:** 4 - Capital Improvement  
**Priority:** 2 - Response Time (2-3 yrs)  
**Correction:** Replace Panelboard  
**Qty:** 8.00  
**Unit of Measure:** Ea.  
**Estimate:** \$345,497.39  
**Assessor Name:** System  
**Date Created:** 10/21/2015

**Notes:** Replace the entire distribution system with new panels and new wiring/conduits. Approximate (8) 208/120V panel boards.

---



**System: D5010 - Electrical Service/Distribution**

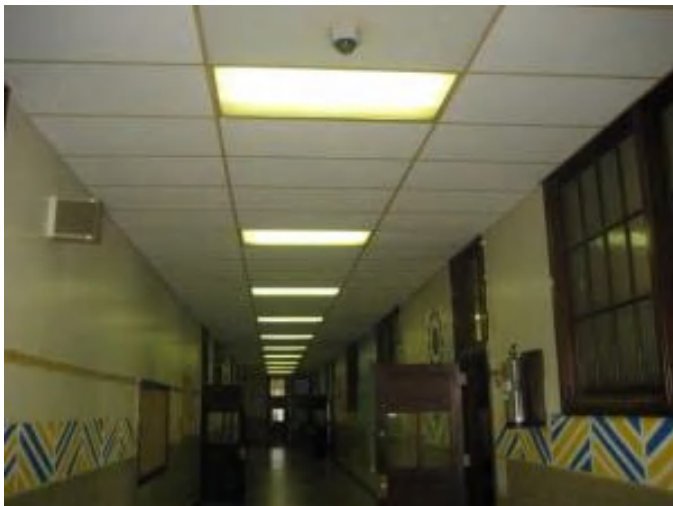


**Location:** Basement  
**Distress:** Inadequate  
**Category:** 4 - Capital Improvement  
**Priority:** 2 - Response Time (2-3 yrs)  
**Correction:** Replace Switchboard  
**Qty:** 1.00  
**Unit of Measure:** Ea.  
**Estimate:** \$342,940.28  
**Assessor Name:** System  
**Date Created:** 10/21/2015

**Notes:** Provide a new electrical service 120/208V, 3 phase power, approximate 1200 Amperes and will be located in the vicinity of the existing electrical service

---

**System: D5020 - Lighting and Branch Wiring**



**Location:** Entire Building  
**Distress:** Energy Efficiency  
**Category:** 4 - Capital Improvement  
**Priority:** 2 - Response Time (2-3 yrs)  
**Correction:** Replace lighting fixtures  
**Qty:** 480.00  
**Unit of Measure:** Ea.  
**Estimate:** \$409,063.16  
**Assessor Name:** System  
**Date Created:** 10/21/2015

**Notes:** Replace 90% of the existing lighting fixtures with up/down, recessed fluorescent fixtures with T8 lamps. Approximate 480 fixtures.

---

**System: D5020 - Lighting and Branch Wiring**



**Location:** Classrooms  
**Distress:** Inadequate  
**Category:** 4 - Capital Improvement  
**Priority:** 2 - Response Time (2-3 yrs)  
**Correction:** Add wiring device  
**Qty:** 320.00  
**Unit of Measure:** Ea.  
**Estimate:** \$117,558.72  
**Assessor Name:** System  
**Date Created:** 10/21/2015

**Notes:** Provide (2)25FT of surface raceways with receptacles spaced 24" on center/classroom and 4 wall mount receptacles/classroom. Approximate 320 receptacles.

---

**System: D5030 - Communications and Security**



**Location:** Entire Building  
**Distress:** Building / MEP Codes  
**Category:** 2 - Code Compliance  
**Priority:** 2 - Response Time (2-3 yrs)  
**Correction:** Replace fire alarm system  
**Qty:** 1.00  
**Unit of Measure:** S.F.  
**Estimate:** \$167,212.22  
**Assessor Name:** System  
**Date Created:** 10/21/2015

**Notes:** Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms. Approximate 54 devices

---



**System: D5090 - Other Electrical Systems**



**Location:** Roof

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

**Correction:** Provide Lightning Protection System

**Qty:** 1.00

**Unit of Measure:** LS

**Estimate:** \$21,472.30

**Assessor Name:** System

**Date Created:** 10/21/2015

**Notes:** Prepare a study to determine if the existing lightning system provide the proper protection to the school building.

---

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

**System: C3010230 - Paint & Covering**



**Location:** Various

**Distress:** Damaged

**Category:** 3 - Operations / Maint.

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

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

**Qty:** 6,800.00

**Unit of Measure:** S.F.

**Estimate:** \$58,256.12

**Assessor Name:** System

**Date Created:** 09/17/2015

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

---

**System: C3020413 - Vinyl Flooring**



**Location:** Various

**Distress:** Damaged

**Category:** 3 - Operations / Maint.

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

**Correction:** Remove and replace VCT

**Qty:** 900.00

**Unit of Measure:** S.F.

**Estimate:** \$10,815.78

**Assessor Name:** System

**Date Created:** 09/17/2015

**Notes:** Replace VCT tiles – damaged (5% of vinyl floor area)

---

**System: D2010 - Plumbing Fixtures**

This deficiency has no image.

**Location:** Kitchen  
**Distress:** Building / MEP Codes  
**Category:** 2 - Code Compliance  
**Priority:** 3 - Response Time (3-4 yrs)  
**Correction:** Replace lavatory - with finishes  
**Qty:** 1.00  
**Unit of Measure:** Ea.  
**Estimate:** \$12,537.77  
**Assessor Name:** System  
**Date Created:** 11/17/2015

**Notes:** Install lavatory in kitchen for food service personnel for code compliance.

---

**System: D2030 - Sanitary Waste**



**Location:** Entire building  
**Distress:** Beyond Service Life  
**Category:** 3 - Operations / Maint.  
**Priority:** 3 - Response Time (3-4 yrs)  
**Correction:** Inspect sanitary waste piping and replace damaged sections. (+50KSF)  
**Qty:** 40,000.00  
**Unit of Measure:** S.F.  
**Estimate:** \$196,229.92  
**Assessor Name:** System  
**Date Created:** 11/17/2015

**Notes:** Inspect and repair sanitary drain piping due to age and corrosion.

---

**System: D3020 - Heat Generating Systems**



**Location:** Boiler room.

**Distress:** Beyond Service Life

**Category:** 3 - Operations / Maint.

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

**Correction:** Replace boiler, cast iron sectional (100 HP)

**Qty:** 2.00

**Unit of Measure:** Ea.

**Estimate:** \$655,796.89

**Assessor Name:** System

**Date Created:** 11/17/2015

**Notes:** Replace boilers due to age.

---

**System: D5030 - Communications and Security**



**Location:** Entire Building

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

**Correction:** Add/Replace Clock System or Components

**Qty:** 40.00

**Unit of Measure:** Ea.

**Estimate:** \$112,560.22

**Assessor Name:** System

**Date Created:** 10/21/2015

**Notes:** Replace clock and bell system with wireless, battery operated, clock system. Approximate 40 clocks.

---

**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:** \$168,104.56

**Assessor Name:** System

**Date Created:** 10/21/2015

**Notes:** Provide 50KW, outdoor, diesel powered generator.

---

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

**System: B2020 - Exterior Windows**



**Location:** Windows

**Distress:** Energy Efficiency

**Category:** 4 - Capital Improvement

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

**Correction:** Remove and replace double slider windows

**Qty:** 175.00

**Unit of Measure:** Ea.

**Estimate:** \$883,075.22

**Assessor Name:** System

**Date Created:** 09/17/2015

**Notes:** Replace Plexiglas window – hazed

---

**System: C1030 - Fittings**



**Location:** Throughout

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

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

**Qty:** 50.00

**Unit of Measure:** Ea.

**Estimate:** \$13,545.62

**Assessor Name:** System

**Date Created:** 09/17/2015

**Notes:** Provide interior ID signage

---

**Priority 5 - Response Time (> 5 yrs):**

**System: D2020 - Domestic Water Distribution**



**Location:** Entire building

**Distress:** Beyond Service Life

**Category:** 3 - Operations / Maint.

**Priority:** 5 - Response Time (> 5 yrs)

**Correction:** Replace domestic water piping (75 KSF)

**Qty:** 40,000.00

**Unit of Measure:** S.F.

**Estimate:** \$202,694.06

**Assessor Name:** System

**Date Created:** 11/17/2015

**Notes:** Inspect and repair domestic potable water distribution piping due to visible corrosion.

---

**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. (+75KSF)

**Qty:** 30,000.00

**Unit of Measure:** S.F.

**Estimate:** \$481,781.82

**Assessor Name:** System

**Date Created:** 11/17/2015

**Notes:** Install 100 ton central air-conditioning system.

---



**System: D3040 - Distribution Systems**



**Location:** Basement

**Distress:** Beyond Service Life

**Category:** 3 - Operations / Maint.

**Priority:** 5 - Response Time (> 5 yrs)

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

**Qty:** 200.00

**Unit of Measure:** Seat

**Estimate:** \$537,381.19

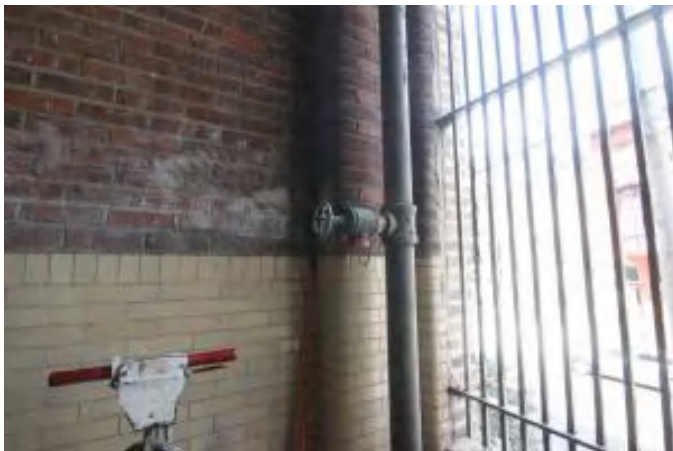
**Assessor Name:** System

**Date Created:** 01/19/2016

**Notes:** Replace obsolete radiators and air handler including filter, heating, cooling, dehumidification, and humidification sections.

---

**System: D4010 - Sprinklers**



**Location:** Entire building

**Distress:** Life Safety / NFPA / PFD

**Category:** 1 - Health & Safety

**Priority:** 5 - Response Time (> 5 yrs)

**Correction:** Install a fire protection sprinkler system

**Qty:** 40,000.00

**Unit of Measure:** S.F.

**Estimate:** \$572,219.29

**Assessor Name:** System

**Date Created:** 11/17/2015

**Notes:** Install fire sprinkler system with pump if needed.

---



## 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, hot water, gross output, 4488 MBH, includes standard controls and insulated jacket, packaged	2.00	Ea.	Boiler Room	Peerless	210-25-S	210-2460		35	1966	2052	\$68,695.50	\$151,130.10
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, hot water, gross output, 4488 MBH, includes standard controls and insulated jacket, packaged	2.00	Ea.	Boiler Room	Peerless	210-25-S	210-2459		35	1966	2052	\$68,695.50	\$151,130.10
D5010 Electrical Service/Distribution	Panelboards, 3 pole 3 wire, main lugs, 240 V, 400 amp, no main breaker	1.00	Ea.	Basement					30	1926	2047	\$2,297.70	\$2,527.47
<b>Total:</b>												<b>\$304,787.67</b>	

## 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):	20,700
Year Built:	1925
Last Renovation:	
Replacement Value:	\$428,649
Repair Cost:	\$84,035.91
Total FCI:	19.60 %
Total RSLI:	50.07 %



### Description:

### Attributes:

#### General Attributes:

Bldg ID:	S245001	Site ID:	S245001
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## 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	56.60 %	10.25 %	\$31,601.34
G40 - Site Electrical Utilities	33.33 %	43.60 %	\$52,434.57
<b>Totals:</b>	<b>50.07 %</b>	<b>19.60 %</b>	<b>\$84,035.91</b>

## 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 \$
G2020	Parking Lots	\$8.50	S.F.	9,600	30	1992	2022		23.33 %	0.00 %	7			\$81,600
G2030	Pedestrian Paving	\$12.30	S.F.	11,100	40	1992	2032		42.50 %	19.03 %	17		\$25,981.81	\$136,530
G2040	Site Development	\$4.36	S.F.	20,700	25	1992	2017	2042	108.00 %	6.23 %	27		\$5,619.53	\$90,252
G2050	Landscaping & Irrigation	\$4.36	S.F.		15	1925	1940	2030	100.00 %	0.00 %	15			\$0
G4020	Site Lighting	\$4.84	S.F.	20,700	30	1995	2025		33.33 %	19.56 %	10		\$19,593.89	\$100,188
G4030	Site Communications & Security	\$0.97	S.F.	20,700	30	1995	2025		33.33 %	163.56 %	10		\$32,840.68	\$20,079
<b>Total</b>									<b>50.07 %</b>	<b>19.60 %</b>			<b>\$84,035.91</b>	<b>\$428,649</b>

## 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.

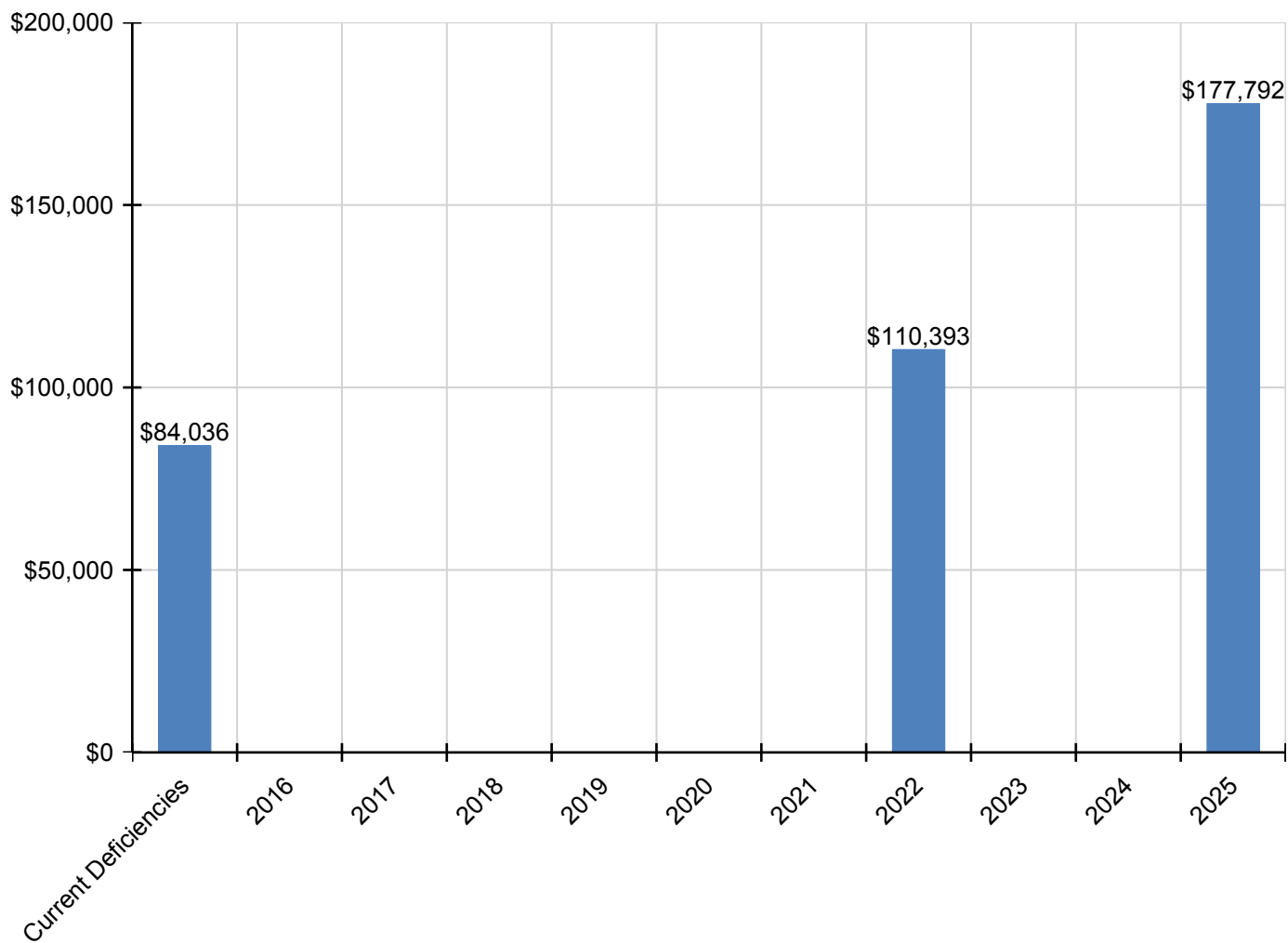
*Inflation Rate: 3%*

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
<b>Total:</b>	\$84,036	\$0	\$0	\$0	\$0	\$0	\$0	\$110,393	\$0	\$0	\$177,792	\$372,221
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
G2020 - Parking Lots	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$110,393	\$0	\$0	\$0	\$110,393
G2030 - Pedestrian Paving	\$25,982	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,982
G2040 - Site Development	\$5,620	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,620
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	\$19,594	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$148,109	\$167,703
G4030 - Site Communications & Security	\$32,841	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29,683	\$62,524

*\* Indicates non-renewable system*

## Forecasted Sustainment Requirement

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



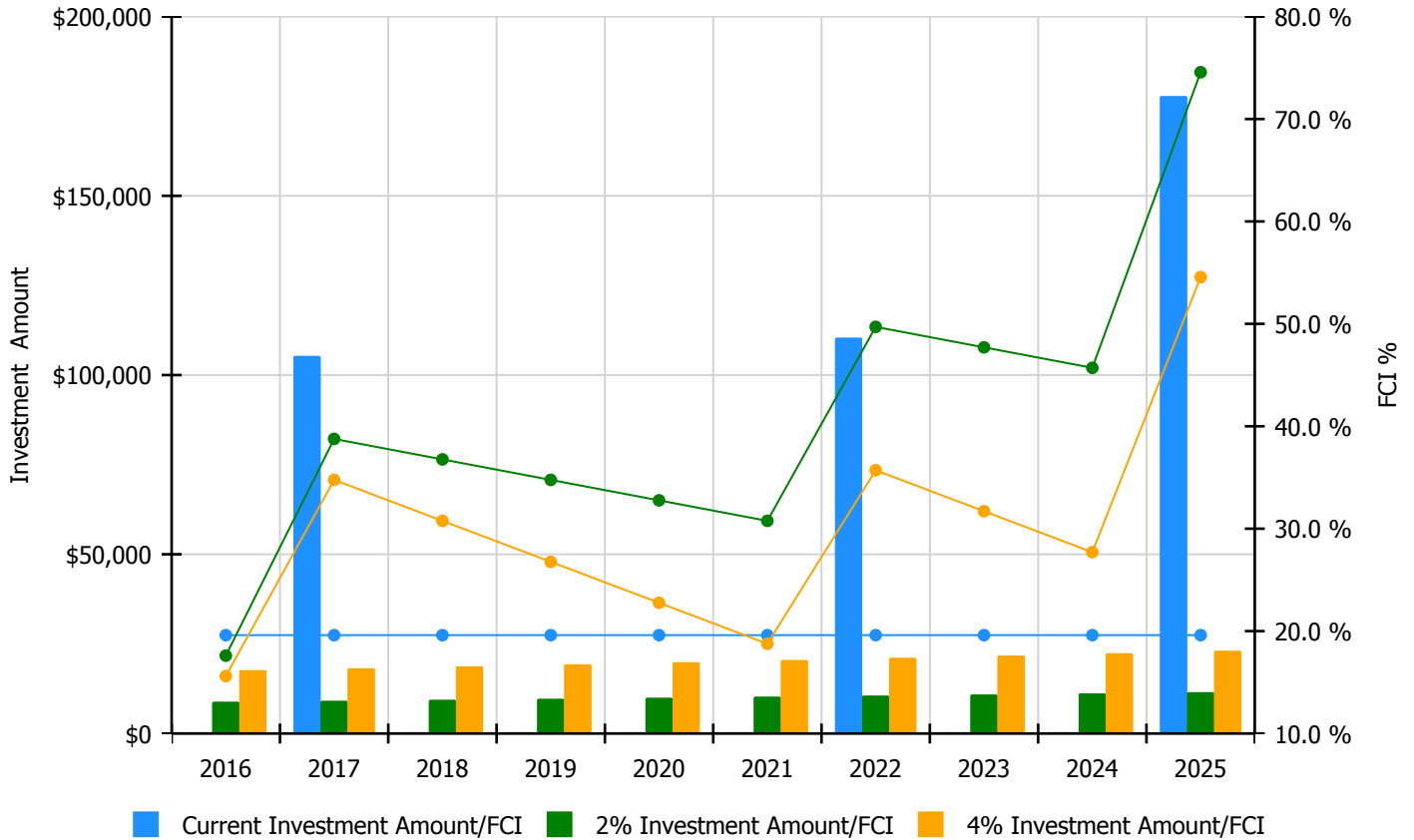


## 10 Year FCI Forecast by Investment Scenario

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

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

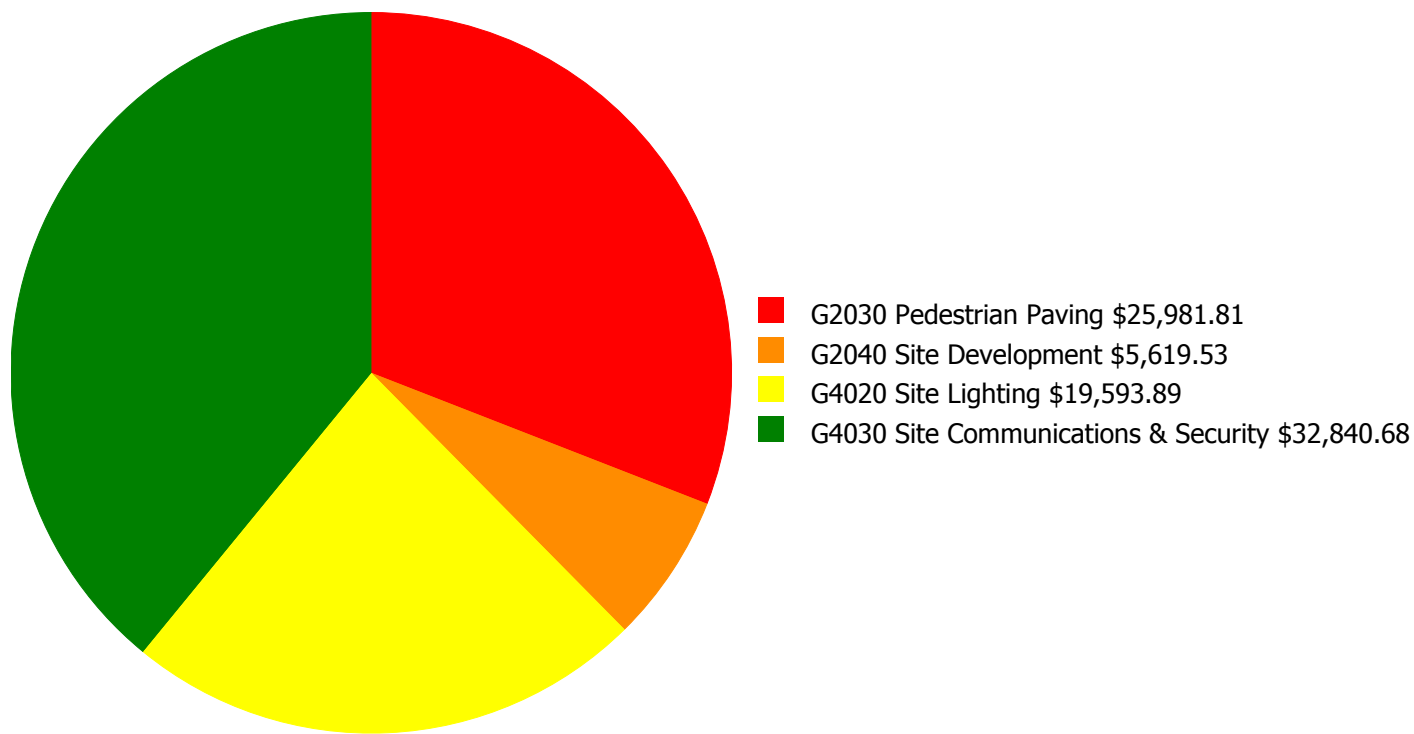
**Facility Investment vs. FCI Forecast**



Year	Investment Amount Current FCI - 19.6%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	\$0	\$8,830.00	17.60 %	\$17,660.00	15.60 %
2017	\$105,323	\$9,095.00	38.77 %	\$18,190.00	34.77 %
2018	\$0	\$9,368.00	36.77 %	\$18,736.00	30.77 %
2019	\$0	\$9,649.00	34.77 %	\$19,298.00	26.77 %
2020	\$0	\$9,938.00	32.77 %	\$19,877.00	22.77 %
2021	\$0	\$10,237.00	30.77 %	\$20,473.00	18.77 %
2022	\$110,393	\$10,544.00	49.71 %	\$21,087.00	35.71 %
2023	\$0	\$10,860.00	47.71 %	\$21,720.00	31.71 %
2024	\$0	\$11,186.00	45.71 %	\$22,372.00	27.71 %
2025	\$177,792	\$11,521.00	74.57 %	\$23,043.00	54.57 %
<b>Total:</b>	<b>\$393,509</b>	<b>\$101,228.00</b>		<b>\$202,456.00</b>	

## Deficiency Summary by System

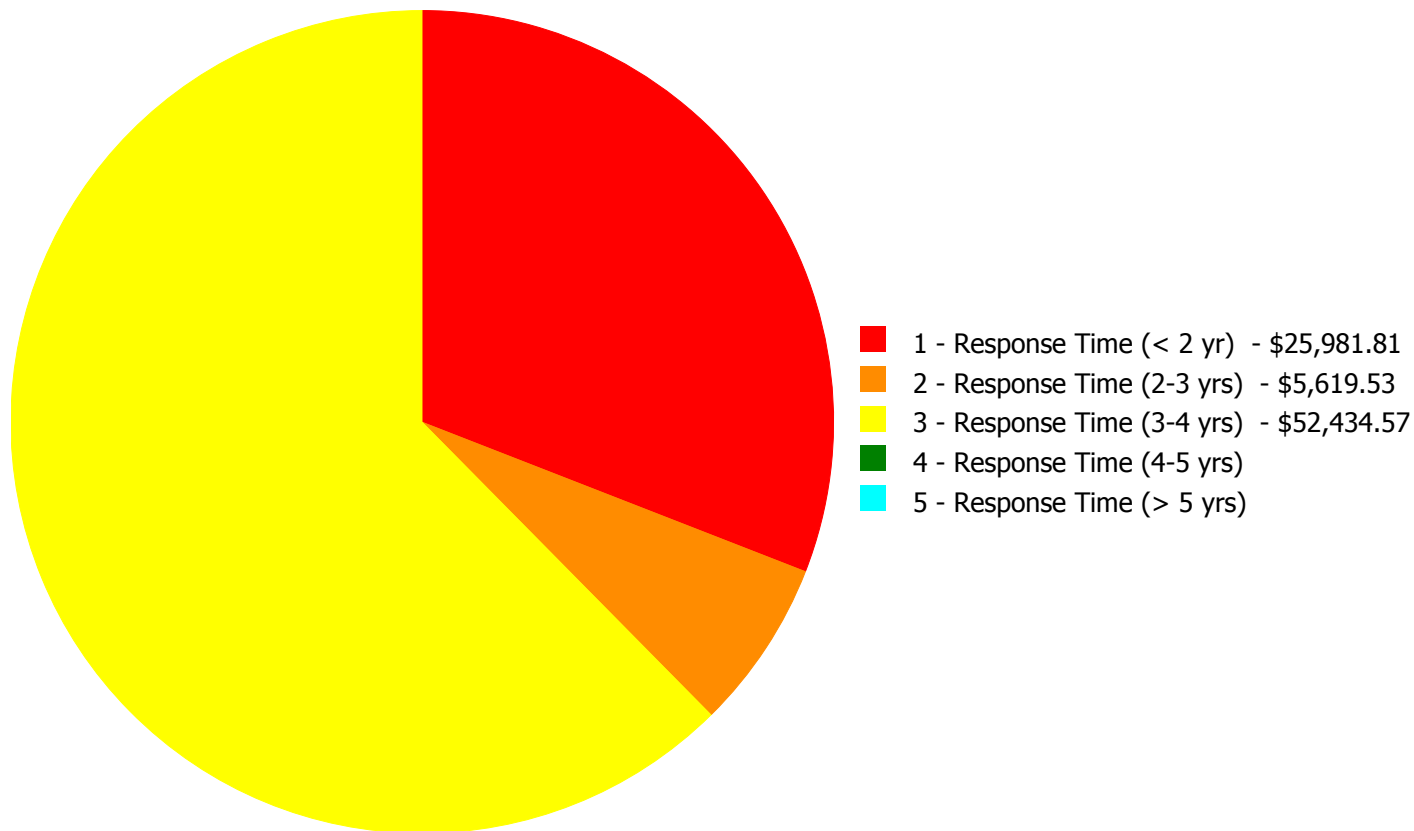
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



**Budget Estimate Total: \$84,035.91**

## 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: \$84,035.91**

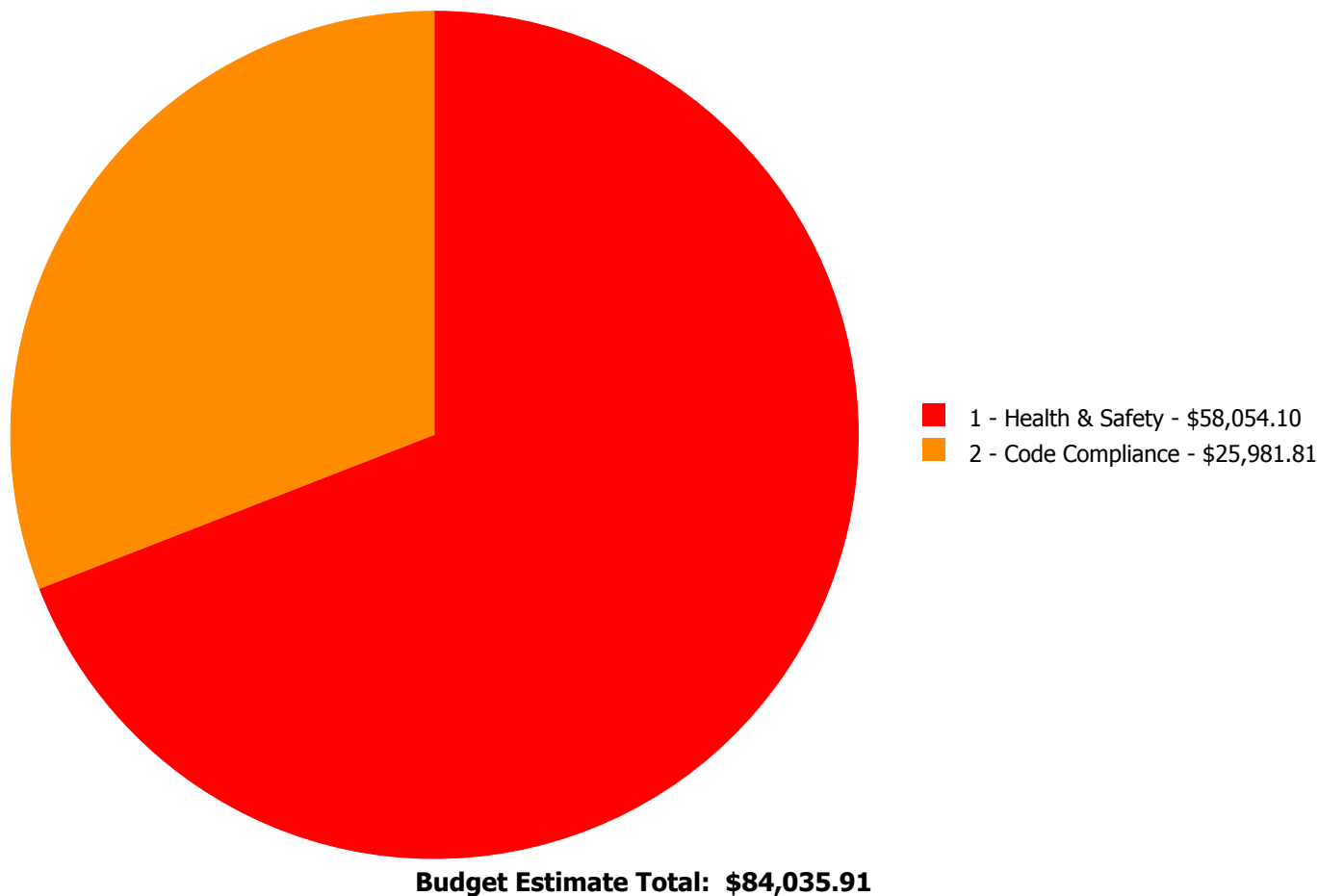
## Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2030	Pedestrian Paving	\$25,981.81	\$0.00	\$0.00	\$0.00	\$0.00	\$25,981.81
G2040	Site Development	\$0.00	\$5,619.53	\$0.00	\$0.00	\$0.00	\$5,619.53
G4020	Site Lighting	\$0.00	\$0.00	\$19,593.89	\$0.00	\$0.00	\$19,593.89
G4030	Site Communications & Security	\$0.00	\$0.00	\$32,840.68	\$0.00	\$0.00	\$32,840.68
	<b>Total:</b>	\$25,981.81	\$5,619.53	\$52,434.57	\$0.00	\$0.00	\$84,035.91

### 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:



## Deficiency Details by Priority

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

### Priority 1 - Response Time (< 2 yr):

#### System: G2030 - Pedestrian Paving



**Location:** Entrance

**Distress:** Accessibility

**Category:** 2 - Code Compliance

**Priority:** 1 - Response Time (< 2 yr)

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

**Qty:** 20.00

**Unit of Measure:** L.F.

**Estimate:** \$25,981.81

**Assessor Name:** Craig Anding

**Date Created:** 09/17/2015

**Notes:** Provide ADA compliant ramp at one entrance (location TBD)

---

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

**System: G2040 - Site Development**



**Location:** Parking lot

**Distress:** Security Issue

**Category:** 1 - Health & Safety

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

**Correction:** Remove and replace chain link gate - 8' high

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** \$5,619.53

**Assessor Name:** Craig Anding

**Date Created:** 09/17/2015

**Notes:** Install vehicle access gate

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

**System: G4020 - Site Lighting**



**Location:** Outdoor

**Distress:** Security Issue

**Category:** 1 - Health & Safety

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

**Correction:** Add site lighting fixtures

**Qty:** 4.00

**Unit of Measure:** Ea.

**Estimate:** \$19,593.89

**Assessor Name:** Craig Anding

**Date Created:** 10/21/2015

**Notes:** Provide 4 additional wall mounted lighting fixtures around the building perimeter to create a safer environment.

---

**System: G4030 - Site Communications & Security**



**Location:** Outdoor

**Distress:** Security Issue

**Category:** 1 - Health & Safety

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

**Correction:** Add Video Surveillance System

**Qty:** 4.00

**Unit of Measure:** Ea.

**Estimate:** \$32,840.68

**Assessor Name:** Craig Anding

**Date Created:** 10/21/2015

**Notes:** Provide CCTV cameras to the building exterior for full coverage of the perimeter. Approximate 4 CCTV cameras.

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## 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 <a href="http://www.abma.com/">http://www.abma.com/</a>
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

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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

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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

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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.

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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

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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

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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.



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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	Photovoltaic system

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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

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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

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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