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.

Meredith School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	725 S. 5Th St.	Enrollment	609
	Philadelphia, Pa 19147	Grade Range	'00-08'
Phone/Fax	215-351-7360 / 215-351-7190	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Meredith	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**30.38%**	**$8,546,973**	**$28,137,019**
Building	30.33 %	$8,419,475	$27,757,427
Grounds	33.59 %	$127,498	$379,592

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$625,195
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$2,046,180
Windows (Shows functionality of exterior windows)	88.45 %	$883,075	$998,420
Exterior Doors (Shows condition of exterior doors)	79.31 %	$63,751	$80,384
Interior Doors (Classroom doors)	13.16 %	$25,602	$194,584
Interior Walls (Paint and Finishes)	04.39 %	$38,552	$878,122
Plumbing Fixtures	23.49 %	$176,043	$749,508
Boilers	00.00 %	$0	$1,035,009
Chillers/Cooling Towers	49.70 %	$674,495	$1,357,098
Radiators/Unit Ventilators/HVAC	21.64 %	$515,794	$2,383,237
Heating/Cooling Controls	158.90 %	$1,189,241	$748,400
Electrical Service and Distribution	142.18 %	$764,537	$537,739
Lighting	38.76 %	$745,152	$1,922,555
Communications and Security (Cameras, Pa System and Fire Alarm)	38.79 %	$279,342	$720,127

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

S238001;Meredith

Final

Site Assessment Report

January 31, 2017

PARSONS

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Site Executive Summary

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

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

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

Gross Area (SF):	68,076
Year Built:	1930
Last Renovation:	
Replacement Value:	$28,137,019
Repair Cost:	$8,546,972.99
Total FCI:	30.38 %
Total RSLI:	66.80 %

Description:

Facility Assessment

August 17th, 2015

School District of Philadelphia

Wm. M. Meredith Elementary School

725 S 5th Street

Philadelphia, PA 19147

55,437 SF / 477 Students / LN 01

GENERAL

Mr. Dave Loftus FAC, and Principal Cindy Farlino provided input to the assessment team on current problems. Mr. Mark DiGiambatista Building Engineer accompanied us on our tour of the school and provided us with detailed information on the building systems and maintenance history. Mr. DiGiambatista knows the

building very well.

The 4 story, 55,437 square foot building was originally constructed in 1930. 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 good condition, having been replaced in the last five to ten years. The building envelope is typically masonry and concrete with face brick in good condition. Elevations are enhanced minimally with decorative stonework around entrances and windows. The original windows were replaced in the early 1990s with extruded aluminum, double hung sliding windows, Lexan Plexiglas with insect/security screens. All windows are generally in poor condition with heavy hazing. Exterior doors are typically hollow metal in poor condition and beyond service life. 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. Interior doors are generally wood frame with rail and stile wood and glass doors with transoms in fair condition. Doors leading to exit stairways are hollow metal frame with rail and stile metal doors with embedded metal glazing in good condition. Most interior doors do not have lever type handles. Fittings include: toilet accessories in good condition; composite plastic toilet partitions in good condition; fixed metal lockers in good condition, and handrails and ornamental metals, generally in fair condition. Some toilet partitions and accessories are ADA accessible. Interior identifying signage is typically vinyl stickers on wall or door surfaces in poor condition. Stair construction is generally concrete in good condition. Stair railings are cast iron balusters and wood railing in good condition.

The interior wall finishes include: painted plaster with marble wainscot in corridors in good condition; wood panel wainscot in auditorium in good condition; and glazed brick wainscot in gym, cafeteria, and basement areas in good condition. Floor to ceiling ceramic tile in toilets are in good condition. Paint is generally in good condition with some damaged area in auditorium and kinder rooms. Flooring includes patterned or bare concrete in stairways, corridors, lounges, storage, and basement service areas in good condition; carpet in one partial classroom in fair condition; hardwood in most classrooms, auditorium, and stage in good condition; vinyl in office areas, cafeteria, and some classrooms in fair condition; and ceramic tile in toilets in good condition. Protective painted concrete in gym is in good condition. Ceiling finishes include: suspended acoustic tile system in classrooms, corridors, and office areas in varying condition with some new and some beyond service life and in need of replacement; direct mounted acoustic ceiling tiles in cafeteria in very good condition; and painted plaster or structural concrete in toilets, stairways, auditorium, gym, and basement areas in good condition.

The building has no elevator and is not accessible.

Commercial and Institutional equipment includes: stage equipment in good condition, and gym equipment in fair condition. 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; and fixed auditorium seating for 231 generally in fair condition with some damaged seats.

MECHANICAL SYSTEMS

Toilet room fixtures throughout the entire building have been replaced with contemporary pieces with wall hung water closets, urinals and lavatories. The plumbing supplying the flush valves is built in behind the walls. Children's lavatories have separate hot and cold faucets with momentary action knobs. Flush and faucet valves are in good condition and leak free. Valves can be expected to last 5 more years minimum. First floor kindergarten rooms have stainless steel, cabinet mounted lavatories with lever knob mixing faucets circa 1965. They are in poor condition and should be replaced including cabinets. Science classroom has lab sinks for instructor at front of room and students along the inside wall. They appear less than 10 years old and will last 10 – 15 more years.

The basement cafeteria kitchen has a stainless steel, three basin, floor standing, commercial, dish washing sink with two faucets and without chemical sanitization injection system. The cafeteria sink does not have a grease trap. The sink is in poor condition and should be replaced. There is a porcelain lavatory in fair condition which can be expected to last more than 5 years.

Service sinks are located in cleaning closets on each floor. They are floor level molded plastic. Faucets are knob handle operated with long neck mixing spout including vacuum breaker. Service sinks were replaced at the same time toilet rooms were renovated within the past 20 years. They are stained but they will last at least 5 more years.

Hallways have stainless steel wall mounted fountains without coolers. They should all be upgraded to accessible fountains with integrated coolers.

Domestic water distribution piping is soldered copper. Age is unknown is estimated 20 years old, and piping should last 10 more years without replacement. Water service enters the building in the boiler room from Fitzwater St. The building has a single 4" gate valve to shut off the entire supply, and then it goes to a bronze compound 4" meter with bypass line and block valves. There are two parallel 4" double backflow preventers with block valves and Y-strainers. The water entry is in excellent condition and should last 10 years or longer. The domestic water pressure booster consists of two end suction, close coupled, 7.5 HP pumps. One pump has a leaky seal which needs replacement. There is no pressurized storage tank, and one should be added to reduce pump cycle frequency. The domestic water connection to the steam system has a double backflow preventer leading to a water softener. There are two Paloma tankless gas fired water heaters. Heaters are

in good condition, but the circulation pump does not work and the first floor teacher's lounge required the water to run for a minute before it got warm. The hot water circulation pump should be repaired.

Sanitary waste and roof drain piping is threaded galvanized steel pipe and hub and spigot cast iron with hubless banded cast iron and PVC repairs. Lavatories and sinks have copper traps. Due to age, material, and history of recent failure of both systems described by the building engineer and principal, the sanitary and rainwater drain pipe systems should be replaced. There is a ground water sump at the west end of the basement hallway with two pumps, and they both run.

The building was originally heated using a combination of forced air from a single air handler and radiators.

There are two H.B. Smith model 450 Mills, 13 section, cast iron, steam boilers with 3,290 MBH (98 HP) capacity each. They are equipped with PowerFlame gas only burners. They were installed in 2002. All new gas pipe was installed then also. There is a condensate sump with two pumps is the boiler room next to the feed water supply tank with 3 pumps. The feed pumps work well. There is a chemical injection system and a water softener. Combustion intake air enters the boiler room from outside through automatically controlled louvers on the south side of the building. The boilers will not need replacement for 20 years. Gas service enters the basement from Fitzwater St. There is no gas booster.

There is no central cooling generating system. Classrooms and offices are equipped with a total of 32 window unit air-conditioners. There are two split unit air conditioners for computer network equipment rooms. Total cooling capacity is estimated at 65 tons. These units are insufficient, so a central cooling system with 150 ton capacity should be installed to replace them.

There is one air handling unit located built into the basement mechanical room. It is original to the building and includes intake filter, 15 HP fan, and steam heating coils. The filter section is 6 feet wide and 8 feet tall and is heavily coated with dust. The entire air supply comes from outside through a pneumatically controlled dampers on the west side of the building; there is no recirculation of building air. The air handler it is obsolete and should be replaced with a new unit including cooling coils, humidification, and dehumidification sections and also new insulated ductwork throughout the basement. Room exhaust air discharges through clay block vertical ducts to the attic plenum and exits the building through gravity vents in the roof. Toilet rooms have new exhaust ducts. The cafeteria does not have any fuel burning appliances, and there is no fume hood.

Steam distribution and condensate return piping is threaded steel of unknown age. The building engineer repairs steam traps as needed and reported no problem with passing steam into the condensate system.

Classrooms, offices, gymnasium, toilet rooms, and stairways in the building have cast iron radiators with thermostatic steam traps and manually adjustable thermostats. They are beyond their expected lifespan should all be replaced with convection units.

Classroom and stairway radiators have manual thermostat steam flow control valves. The control system is obsolete and should be completely replaced with a modern digital control system when other HVAC upgrades are implemented.

The building does not have sprinklers or stand pipes. A sprinkler system should be added including a fire pump if needed.

ELECTRICAL SYSTEMS

A pole mounted transformer and overhead secondary conductors on Fitzwater Street serves this school. The electrical room is located in the basement approximate on the SW corner of the building. The electrical room houses the utility main disconnect switch, utility metering PECO Y6G004200001 and 600A 120/240V distribution section. Electrical service was upgraded in year 2000. 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, using the present utility pole. The new service will be 480V/277V, 3 phase power, approximate 800 Amperes and will be located in the vicinity of the existing electrical service. The new electrical service would feed a 480V Motor Control Center (MCC) and HVAC (Heating, Ventilation and Air Conditioning) equipment, and a 480V 3 phase to 120V/208V 3 phase 250 KVA step-down transformer to feed receptacles, lighting and other smaller loads.

In each floor, there are original 120/240V panel-boards for lighting and receptacles and new ones for window type air conditioning units. The original panel-boards and associated wiring have exceeded the end of their useful life and the new panel-boards are not sized to absorb additional HVAC loads. They need to be replaced. There are (1) 75KVA and (1) 50KVA 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 classrooms are inadequate. The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two-duplex outlets each, when feasible.

Classrooms, corridors are illuminated with recessed mounted fluorescent fixtures, with T-12 lamps. The auditorium is illuminated with pendant mounted architectural fixture with 330w mogul based incandescent lamps. The Gymnasium and cafeteria are illuminated with surface mounted fixtures with T-12 lamps. Approximately 90% of the fixtures need to be replaced

The Fire Alarm system is manufactured by S.H. Couch 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. The system is working adequately for most part.

The present clock system does not work. Replace clock system with wireless, battery operated, clock system.

There is not television system.

The school is not provided with CCTV security system. Provide a CCTV system for complete coverage of the interior and exterior of the building.

The emergency power system consists of a gas powered generator, manufactured by Generac 15KW, 120/240V. The present emergency power system serves the corridor, exit signs, auditorium, stair ways, Boiler room and fire alarm panel. The gas powered generator is approximately 30 years old and has exceeded its useful service life. Generator is tested once a week. Provide 50KW, outdoor, diesel powered generator.

There was an adequate UPS in the IT room.

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.

The stage theatrical lighting is composed of ceiling mounted one single row of downlights that are ON/OFF from local panel-board. Provide a dimming panel and additional theatrical lighting.

The Auditorium sound system is portable type. It is approximately 5 years old. The present sound system is adequate.

GROUNDS SYSTEMS

The site surrounds the building on all four sides which is set back from the street. Yard area on the north side is concrete paving in fair condition with some cracks developing. Parking for staff vehicles is asphalt paving in fair condition on the far north side and is accessible via Monroe St. Metal and chain link fence surrounding and separating yard and parking area is in fair condition. Landscaping is limited to a few mature trees in good condition.

Accessibility: the building does have an accessible entrance, and accessible routes. Some of the toilets are 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.

The school perimeter is illuminated with wall and roof mounted lighting fixtures. There were no indication of additional fixtures are needed.

CCTV cameras around the building perimeter and playground are not provided.

There is a wall mounted loud speaker facing the playground area.

RECOMMENDATIONS

- Replace Plexiglas window – hazed
- Replace exterior doors – beyond service life and failing
- Install accessible door hardware on at least one entrance door
- Replace interior door handles with lever type handles and latch sets
- Repair and paint interior plaster walls – damaged (5% of plaster area)
- Replace suspended acoustic tile ceiling system – beyond service life (50% of suspended ceiling)
- Install elevator for accessibility
- install accessible ramp on at least one entrance
- Repair or replace auditorium seats – damaged
- Replace kindergarten classroom sinks.
- Replace 3 basin kitchen sink.
- Replace drinking fountains with refrigerated, accessible fountains.
- Repair domestic hot water circulation pump and install pneumatic storage tank.
- Replace sanitary drain piping due to age, severe rust, and failure.

- Replace roof drain piping due to age and prior failure.
- Install 140 ton air-conditioning system to replace inadequate window units.
- Replace obsolete air handler including uninsulated ductwork and replace cast iron radiators with finned tube units due to age and rust.
- Upgrade control system to digital.
- Install fire sprinkler system with fire pump if needed.
- Provide a new electrical service 480V/277V, 3 phase power, approximate 800 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 (16) 208/120V panel boards.
- Provide (2)25FT of surface raceways with 24" receptacles on center and two-duplex wall mount receptacles. Approximate 480
- Replace 90% of the existing lighting fixtures with up/down, recessed fluorescent fixtures with T8 lamps in classroom/offices and corridors. Approximate 660 fixtures
- Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms.
- Add CCTV cameras to provide a full coverage of the building interior. Approximate 22 CCTV cameras
- Provide 50KW, outdoor, diesel powered generator.
- Prepare a study to determine if the existing lightning system provide the proper protection to the school building.
- Provide a dimming system and additional theatrical lighting.
- Provide outdoor CCTV cameras around the building perimeter. Approximate 12

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 2 / Tm 3
Status:	Accepted by SDP	Team:	Tm 3
Site ID:	S238001		

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.

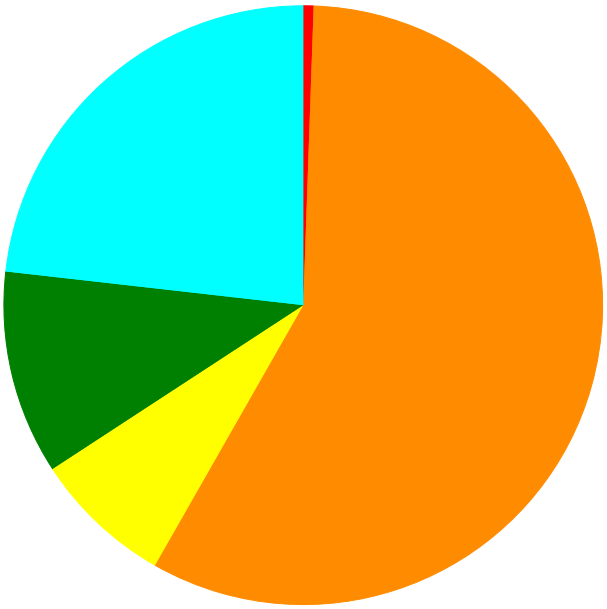
Current Investment Requirement and Condition by Uniformat Classification

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	45.74 %	30.30 %	$946,826.47
B30 - Roofing	75.00 %	0.00 %	$0.00
C10 - Interior Construction	32.41 %	1.88 %	$25,602.20
C20 - Stairs	37.00 %	0.00 %	$0.00
C30 - Interior Finishes	53.00 %	8.63 %	$242,164.65
D10 - Conveying	105.71 %	326.18 %	$1,012,601.25
D20 - Plumbing	57.48 %	62.82 %	$711,110.79
D30 - HVAC	100.58 %	38.59 %	$2,379,529.50
D40 - Fire Protection	105.71 %	177.49 %	$793,053.20
D50 - Electrical	110.11 %	60.36 %	$1,966,784.17
E10 - Equipment	73.84 %	36.60 %	$323,055.06
E20 - Furnishings	32.50 %	15.88 %	$18,748.01
G20 - Site Improvements	64.50 %	17.07 %	$47,345.49
G40 - Site Electrical Utilities	73.34 %	78.38 %	$80,152.20
Totals:	**66.80 %**	**30.38 %**	**$8,546,972.99**

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)
B238001;Meredith	55,437	30.33	$0.00	$4,851,030.69	$644,728.30	$940,375.07	$1,983,341.24
G238001;Grounds	17,600	33.59	$47,345.49	$80,152.20	$0.00	$0.00	$0.00
Total:		**30.38**	**$47,345.49**	**$4,931,182.89**	**$644,728.30**	**$940,375.07**	**$1,983,341.24**

Deficiencies By Priority



- 1 - Response Time (< 2 yr) - $47,345.49
- 2 - Response Time (2-3 yrs) - $4,931,182.89
- 3 - Response Time (3-4 yrs) - $644,728.30
- 4 - Response Time (4-5 yrs) - $940,375.07
- 5 - Response Time (> 5 yrs) - $1,983,341.24

Budget Estimate Total: $8,546,972.99

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):	55,437
Year Built:	1930
Last Renovation:	
Replacement Value:	$27,757,427
Repair Cost:	$8,419,475.30
Total FCI:	30.33 %
Total RSLI:	66.80 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B238001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S238001		

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	45.74 %	30.30 %	$946,826.47
B30 - Roofing	75.00 %	0.00 %	$0.00
C10 - Interior Construction	32.41 %	1.88 %	$25,602.20
C20 - Stairs	37.00 %	0.00 %	$0.00
C30 - Interior Finishes	53.00 %	8.63 %	$242,164.65
D10 - Conveying	105.71 %	326.18 %	$1,012,601.25
D20 - Plumbing	57.48 %	62.82 %	$711,110.79
D30 - HVAC	100.58 %	38.59 %	$2,379,529.50
D40 - Fire Protection	105.71 %	177.49 %	$793,053.20
D50 - Electrical	110.11 %	60.36 %	$1,966,784.17
E10 - Equipment	73.84 %	36.60 %	$323,055.06
E20 - Furnishings	32.50 %	15.88 %	$18,748.01
Totals:	**66.80 %**	**30.33 %**	**$8,419,475.30**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$18.40	S.F.	55,437	100	1930	2030	2052	37.00 %	0.00 %	37			$1,020,041
A1030	Slab on Grade	$7.73	S.F.	55,437	100	1930	2030	2052	37.00 %	0.00 %	37			$428,528
A2010	Basement Excavation	$6.55	S.F.	55,437	100	1930	2030	2052	37.00 %	0.00 %	37			$363,112
A2020	Basement Walls	$12.70	S.F.	55,437	100	1930	2030	2052	37.00 %	0.00 %	37			$704,050
B1010	Floor Construction	$75.10	S.F.	55,437	100	1930	2030	2052	37.00 %	0.00 %	37			$4,163,319
B1020	Roof Construction	$13.88	S.F.	55,437	100	1930	2030	2052	37.00 %	0.00 %	37			$769,466
B2010	Exterior Walls	$36.91	S.F.	55,437	100	1930	2030	2052	37.00 %	0.00 %	37			$2,046,180
B2020	Exterior Windows	$18.01	S.F.	55,437	40	1989	2029	2040	62.50 %	88.45 %	25		$883,075.22	$998,420
B2030	Exterior Doors	$1.45	S.F.	55,437	25	2002	2027	2030	60.00 %	79.31 %	15		$63,751.25	$80,384
B3010105	Built-Up	$37.76	S.F.	16,469	20	2010	2030		75.00 %	0.00 %	15			$621,869
B3020	Roof Openings	$0.06	S.F.	55,437	20	2010	2030		75.00 %	0.00 %	15			$3,326
C1010	Partitions	$17.91	S.F.	55,437	100	1930	2030	2052	37.00 %	0.00 %	37			$992,877
C1020	Interior Doors	$3.51	S.F.	55,437	40	1983	2023		20.00 %	13.16 %	8		$25,602.20	$194,584
C1030	Fittings	$3.12	S.F.	55,437	40	1983	2023		20.00 %	0.00 %	8			$172,963
C2010	Stair Construction	$1.41	S.F.	55,437	100	1930	2030	2052	37.00 %	0.00 %	37			$78,166
C3010230	Paint & Covering	$13.94	S.F.	55,437	10	2011	2021		60.00 %	4.99 %	6		$38,551.84	$772,792
C3010232	Wall Tile	$1.90	S.F.	55,437	30	1989	2019	2024	30.00 %	0.00 %	9			$105,330
C3020411	Carpet	$7.30	S.F.	554	10	2003	2013	2020	50.00 %	0.00 %	5			$4,044

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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 $
C3020412	Terrazzo & Tile	$75.52	S.F.	1,109	50	1989	2039		48.00 %	0.00 %	24			$83,752
C3020413	Vinyl Flooring	$9.68	S.F.	3,881	20	1998	2018	2020	25.00 %	0.00 %	5			$37,568
C3020414	Wood Flooring	$22.27	S.F.	27,719	25	2003	2028		52.00 %	0.00 %	13			$617,302
C3020415	Concrete Floor Finishes	$0.97	S.F.	22,175	50	1998	2048		66.00 %	0.00 %	33			$21,510
C3030	Ceiling Finishes	$20.97	S.F.	55,437	25	2003	2028		52.00 %	17.51 %	13		$203,612.81	$1,162,514
D1010	Elevators and Lifts	$5.60	S.F.	55,437	35			2052	105.71 %	326.18 %	37		$1,012,601.25	$310,447
D2010	Plumbing Fixtures	$13.52	S.F.	55,437	35	1995	2030		42.86 %	23.49 %	15		$176,042.79	$749,508
D2020	Domestic Water Distribution	$1.68	S.F.	55,437	25	1995	2020		20.00 %	18.55 %	5		$17,276.41	$93,134
D2030	Sanitary Waste	$2.90	S.F.	55,437	25	1931	1956	2042	108.00 %	169.16 %	27		$271,960.12	$160,767
D2040	Rain Water Drainage	$2.32	S.F.	55,437	30	1931	1961	2047	106.67 %	191.14 %	32		$245,831.47	$128,614
D3020	Heat Generating Systems	$18.67	S.F.	55,437	35	2002	2037		62.86 %	0.00 %	22			$1,035,009
D3030	Cooling Generating Systems	$24.48	S.F.	55,437	30			2047	106.67 %	49.70 %	32		$674,494.53	$1,357,098
D3040	Distribution Systems	$42.99	S.F.	55,437	25	1931	1956	2042	108.00 %	21.64 %	27		$515,793.51	$2,383,237
D3050	Terminal & Package Units	$11.60	S.F.	55,437	20	1931	1951	2037	110.00 %	0.00 %	22			$643,069
D3060	Controls & Instrumentation	$13.50	S.F.	55,437	20	1931	1951	2037	110.00 %	158.90 %	22		$1,189,241.46	$748,400
D4010	Sprinklers	$7.05	S.F.	55,437	35			2052	105.71 %	202.91 %	37		$793,053.20	$390,831
D4020	Standpipes	$1.01	S.F.	55,437	35			2052	105.71 %	0.00 %	37			$55,991
D5010	Electrical Service/Distribution	$9.70	S.F.	55,437	30	1931	1961	2047	106.67 %	142.18 %	32		$764,536.84	$537,739
D5020	Lighting and Branch Wiring	$34.68	S.F.	55,437	20	1931	1951	2037	110.00 %	38.76 %	22		$745,152.03	$1,922,555
D5030	Communications and Security	$12.99	S.F.	55,437	15	1931	1946	2032	113.33 %	38.79 %	17		$279,341.91	$720,127
D5090	Other Electrical Systems	$1.41	S.F.	55,437	30	1931	1961	2047	106.67 %	227.40 %	32		$177,753.39	$78,166
E1020	Institutional Equipment	$4.82	S.F.	55,437	35	1989	2024	2052	105.71 %	120.90 %	37		$323,055.06	$267,206
E1090	Other Equipment	$11.10	S.F.	55,437	35	2001	2036		60.00 %	0.00 %	21			$615,351
E2010	Fixed Furnishings	$2.13	S.F.	55,437	40	1983	2023	2028	32.50 %	15.88 %	13		$18,748.01	$118,081
								Total	**66.80 %**	**30.33 %**			**$8,419,475.30**	**$27,757,427**

System Notes

The facility description in the site executive summary contains an overview of each system. The notes listed below provide additional information on select systems found within the facility.

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

Note: 88% - Paint & Coverings
12% - Wall Tile (10% glazed brick, 2% ceramic tile)

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

Note: 1% - Carpet
2% - Terrazzo & Tile (ceramic)
7% - Vinyl Flooring
50% - Wood Flooring
40% - Concrete Floor Finishes

System: D5010 - Electrical Service/Distribution

Note: (1)75KVA and (1) 50KVA phase converters from 240V to 120/208V

Renewal Schedule

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

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$8,419,475**	**$0**	**$0**	**$0**	**$0**	**$171,830**	**$1,015,029**	**$0**	**$512,158**	**$151,175**	**$0**	**$10,269,667**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A10 - Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A20 - Basement Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2020 - Exterior Windows	$883,075	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$883,075**
B2030 - Exterior Doors	$63,751	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$63,751**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1020 - Interior Doors	$25,602	$0	$0	$0	$0	$0	$0	$0	$271,142	$0	$0	**$296,744**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$241,016	$0	$0	**$241,016**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

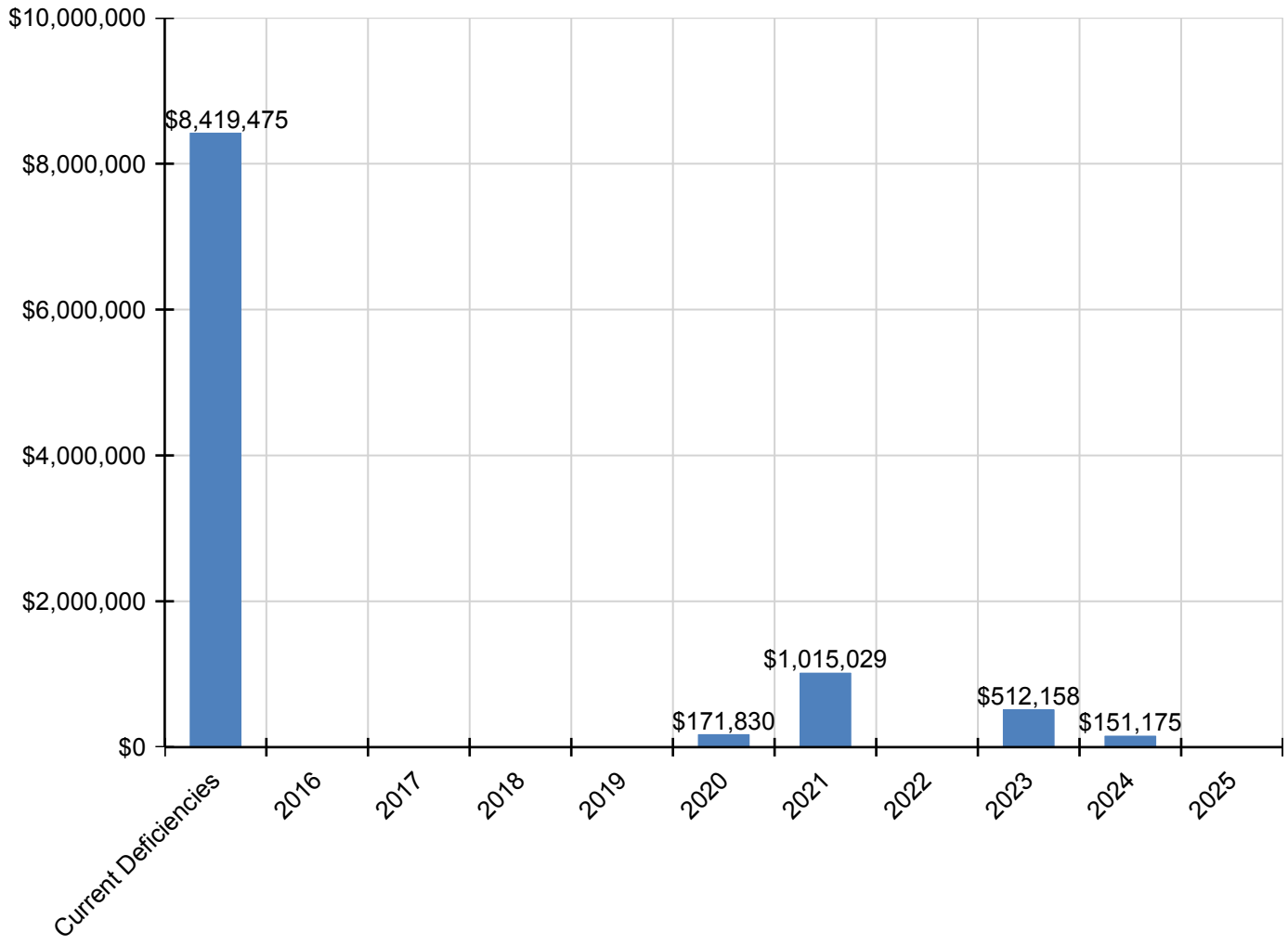
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$38,552	$0	$0	$0	$0	$0	$1,015,029	$0	$0	$0	$0	**$1,053,581**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$151,175	$0	**$151,175**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$5,158	$0	$0	$0	$0	$0	**$5,158**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$47,907	$0	$0	$0	$0	$0	**$47,907**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$203,613	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$203,613**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$1,012,601	$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**
D2010 - Plumbing Fixtures	$176,043	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$176,043**
D2020 - Domestic Water Distribution	$17,276	$0	$0	$0	$0	$118,765	$0	$0	$0	$0	$0	**$136,042**
D2030 - Sanitary Waste	$271,960	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$271,960**
D2040 - Rain Water Drainage	$245,831	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$245,831**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$674,495	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$674,495**
D3040 - Distribution Systems	$515,794	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$515,794**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,189,241	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,189,241**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$793,053	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$793,053**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$764,537	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$764,537**
D5020 - Lighting and Branch Wiring	$745,152	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$745,152**
D5030 - Communications and Security	$279,342	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$279,342**

D5090 - Other Electrical Systems	$177,753	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$177,753**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$323,055	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$323,055**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$18,748	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$18,748**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

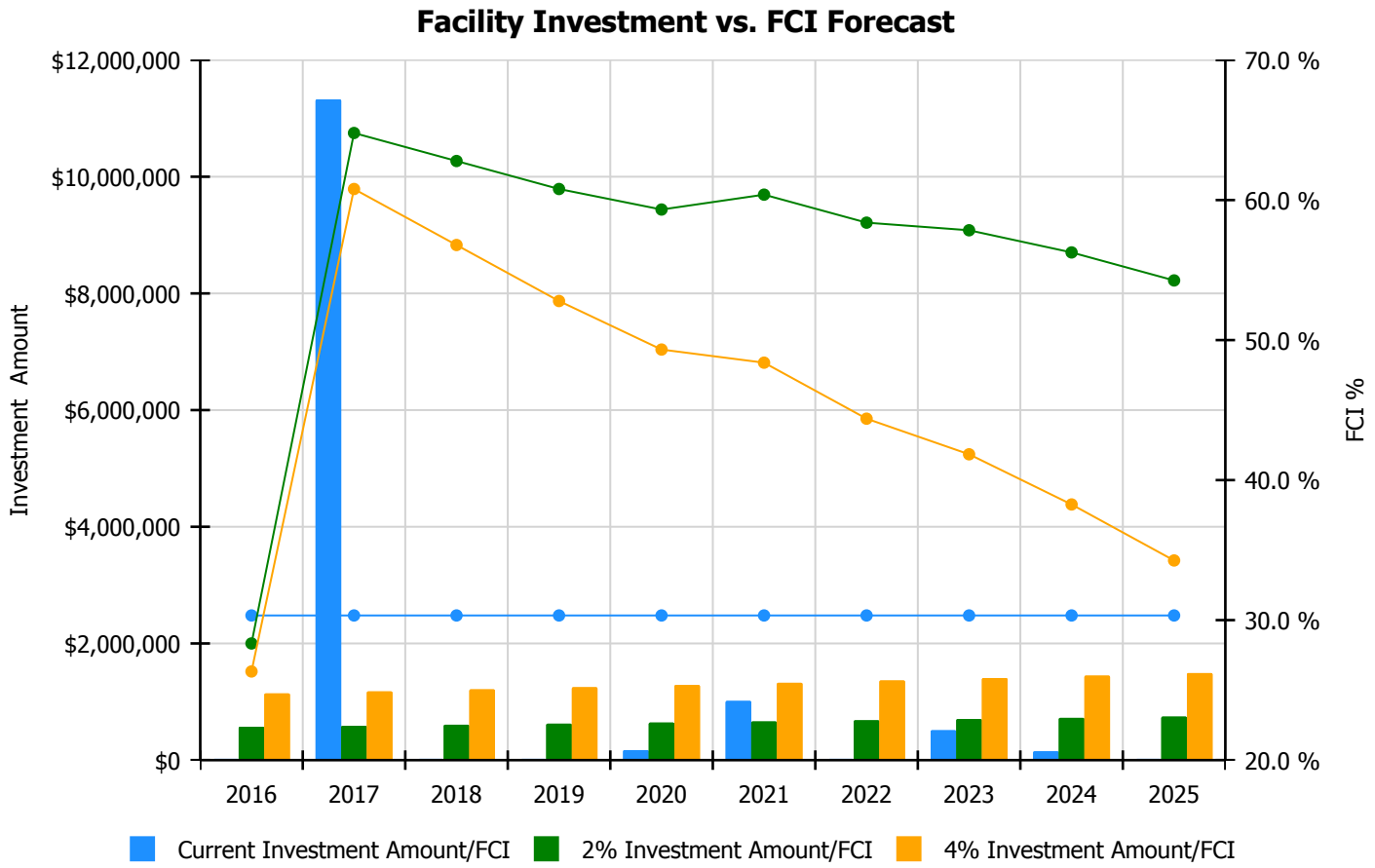
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

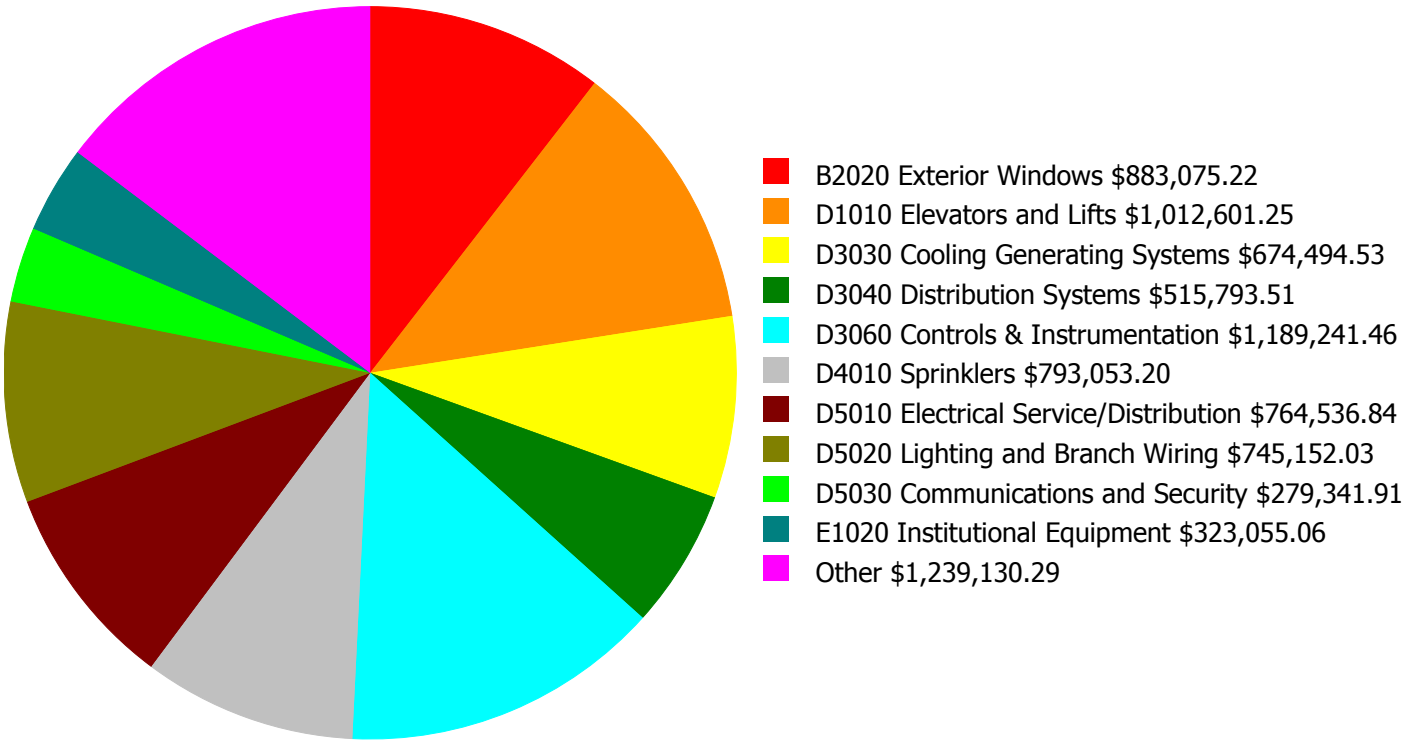
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 30.33%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$571,803.00	28.33 %	$1,143,606.00	26.33 %
2017	$11,324,760	$588,957.00	64.79 %	$1,177,914.00	60.79 %
2018	$0	$606,626.00	62.79 %	$1,213,252.00	56.79 %
2019	$0	$624,825.00	60.79 %	$1,249,649.00	52.79 %
2020	$171,830	$643,569.00	59.32 %	$1,287,139.00	49.32 %
2021	$1,015,029	$662,876.00	60.39 %	$1,325,753.00	48.39 %
2022	$0	$682,763.00	58.39 %	$1,365,525.00	44.39 %
2023	$512,158	$703,246.00	57.84 %	$1,406,491.00	41.84 %
2024	$151,175	$724,343.00	56.26 %	$1,448,686.00	38.26 %
2025	$0	$746,073.00	54.26 %	$1,492,146.00	34.26 %
Total:	**$13,174,951**	**$6,555,081.00**		**$13,110,161.00**	

Deficiency Summary by System

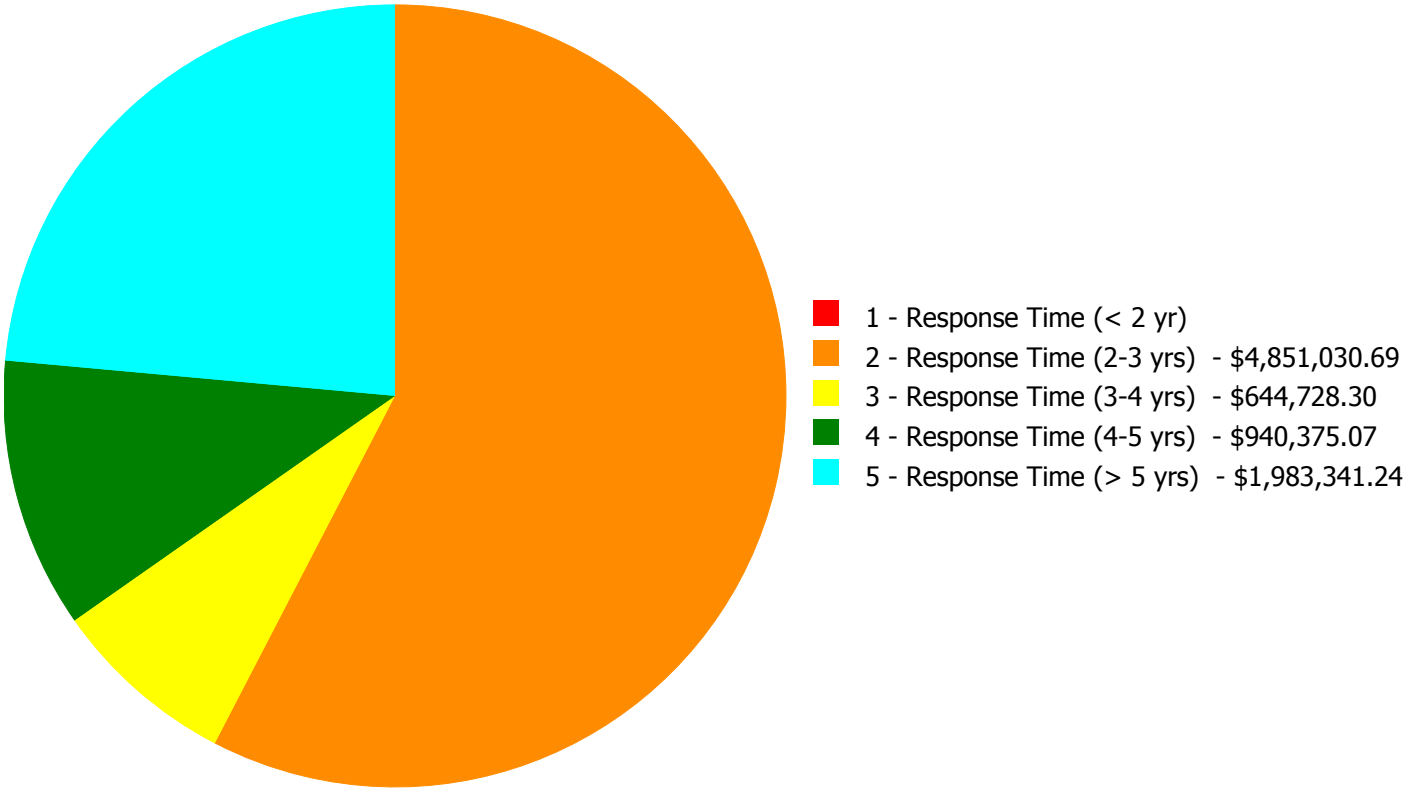
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $8,419,475.30

Deficiency Summary by Priority

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



Budget Estimate Total: $8,419,475.30

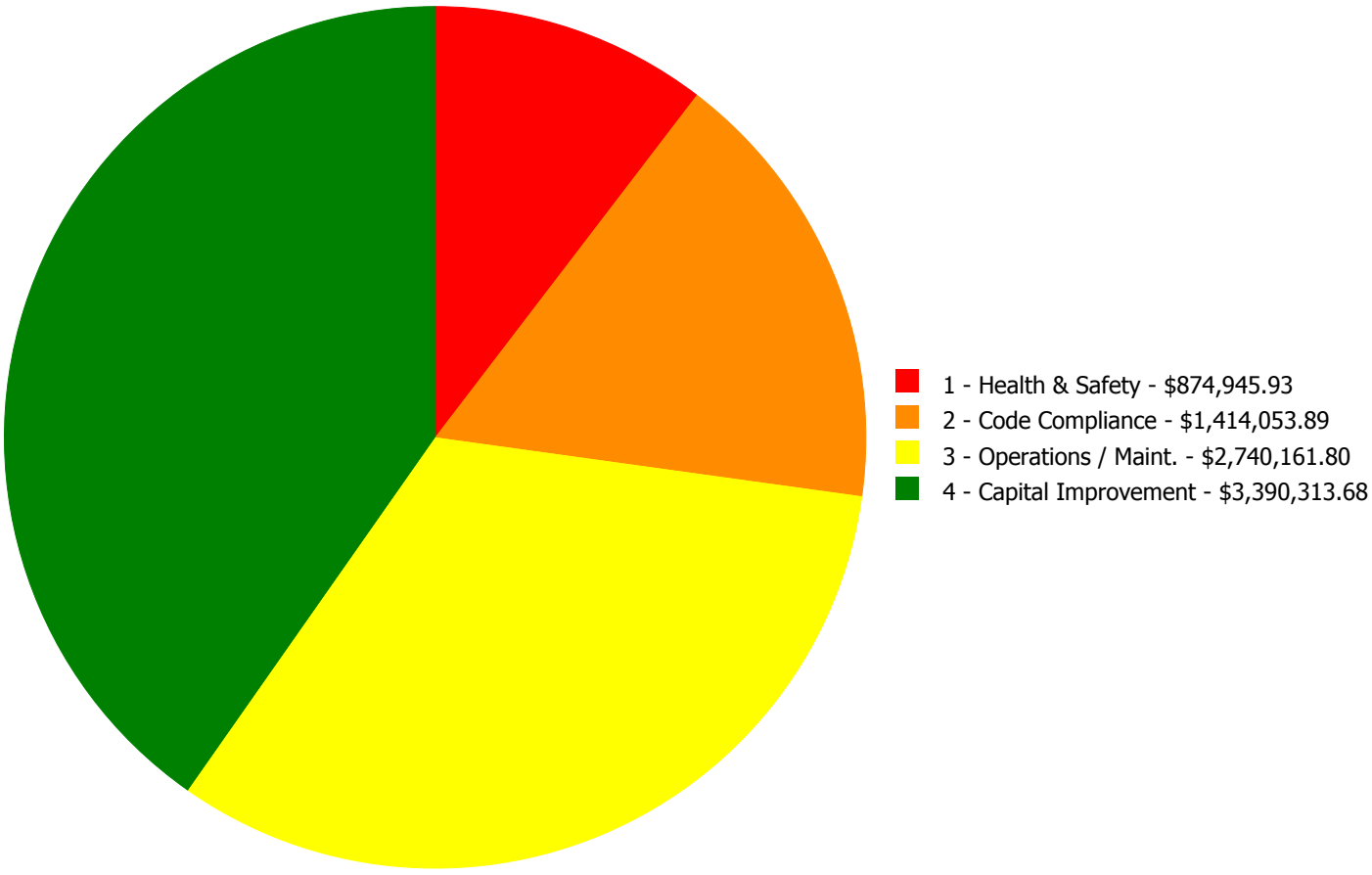
Deficiency By Priority Investment Table

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
B2020	Exterior Windows	$0.00	$0.00	$0.00	$883,075.22	$0.00	$883,075.22
B2030	Exterior Doors	$0.00	$63,751.25	$0.00	$0.00	$0.00	$63,751.25
C1020	Interior Doors	$0.00	$25,602.20	$0.00	$0.00	$0.00	$25,602.20
C3010230	Paint & Covering	$0.00	$0.00	$0.00	$38,551.84	$0.00	$38,551.84
C3030	Ceiling Finishes	$0.00	$0.00	$203,612.81	$0.00	$0.00	$203,612.81
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	$176,042.79	$0.00	$0.00	$0.00	$176,042.79
D2020	Domestic Water Distribution	$0.00	$17,276.41	$0.00	$0.00	$0.00	$17,276.41
D2030	Sanitary Waste	$0.00	$271,960.12	$0.00	$0.00	$0.00	$271,960.12
D2040	Rain Water Drainage	$0.00	$245,831.47	$0.00	$0.00	$0.00	$245,831.47
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$674,494.53	$674,494.53
D3040	Distribution Systems	$0.00	$0.00	$0.00	$0.00	$515,793.51	$515,793.51
D3060	Controls & Instrumentation	$0.00	$1,189,241.46	$0.00	$0.00	$0.00	$1,189,241.46
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$793,053.20	$793,053.20
D5010	Electrical Service/Distribution	$0.00	$323,421.35	$441,115.49	$0.00	$0.00	$764,536.84
D5020	Lighting and Branch Wiring	$0.00	$745,152.03	$0.00	$0.00	$0.00	$745,152.03
D5030	Communications and Security	$0.00	$279,341.91	$0.00	$0.00	$0.00	$279,341.91
D5090	Other Electrical Systems	$0.00	$177,753.39	$0.00	$0.00	$0.00	$177,753.39
E1020	Institutional Equipment	$0.00	$323,055.06	$0.00	$0.00	$0.00	$323,055.06
E2010	Fixed Furnishings	$0.00	$0.00	$0.00	$18,748.01	$0.00	$18,748.01
	Total:	$0.00	$4,851,030.69	$644,728.30	$940,375.07	$1,983,341.24	$8,419,475.30

Deficiency Summary by Category

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



Budget Estimate Total: $8,419,475.30

Deficiency Details by Priority

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

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

System: B2030 - Exterior Doors

Location: Exterior doors
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace exterior doors - per leaf
Qty: 7.00
Unit of Measure: Ea.
Estimate: $63,751.25
Assessor Name: System
Date Created: 09/15/2015

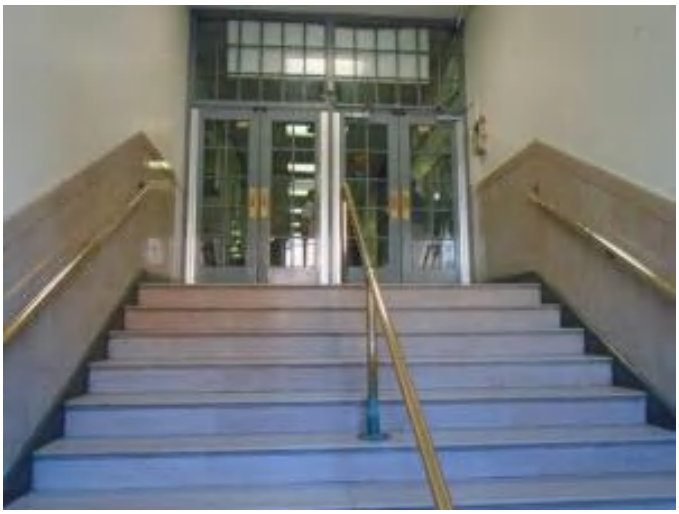
Notes: Replace exterior doors – beyond service life and failing

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: 46.00
Unit of Measure: Ea.
Estimate: $25,602.20
Assessor Name: System
Date Created: 09/15/2015

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

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.

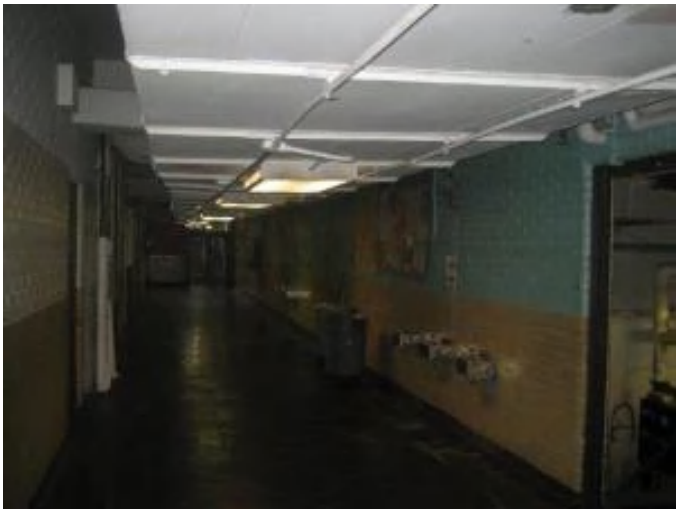
Estimate: $1,012,601.25

Assessor Name: System

Date Created: 09/16/2015

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: 10.00

Unit of Measure: Ea.

Estimate: $156,928.96

Assessor Name: System

Date Created: 10/19/2015

Notes: Replace drinking fountains with refrigerated, accessible fountains.

System: D2010 - Plumbing Fixtures

Location: Cafeteria kitchen

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: 1.00

Unit of Measure: Ea.

Estimate: $14,396.52

Assessor Name: System

Date Created: 10/19/2015

Notes: Replace 3 basin kitchen sink.

System: D2010 - Plumbing Fixtures

Location: Kindergarten 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: 2.00

Unit of Measure: Ea.

Estimate: $4,717.31

Assessor Name: System

Date Created: 10/19/2015

Notes: Replace kindergarten classroom sinks.

System: D2020 - Domestic Water Distribution

Location: Boiler room

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace duplex domestic booster pump set (5 HP)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $17,276.41

Assessor Name: System

Date Created: 10/19/2015

Notes: Repair domestic hot water circulation pump and install pneumatic storage tank.

System: D2030 - Sanitary Waste

Location: Entire building

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Inspect sanitary waste piping and replace damaged sections. (+50KSF)

Qty: 55,437.00

Unit of Measure: S.F.

Estimate: $271,960.12

Assessor Name: System

Date Created: 10/19/2015

Notes: Replace sanitary drain piping due to age, severe rust, and failure.

System: D2040 - Rain Water Drainage

Location: Entire building

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 55,437.00

Unit of Measure: S.F.

Estimate: $245,831.47

Assessor Name: System

Date Created: 10/19/2015

Notes: Replace roof drain piping due to age and prior failure.

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: 55,437.00

Unit of Measure: S.F.

Estimate: $1,189,241.46

Assessor Name: System

Date Created: 10/19/2015

Notes: Upgrade control system to digital.

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.

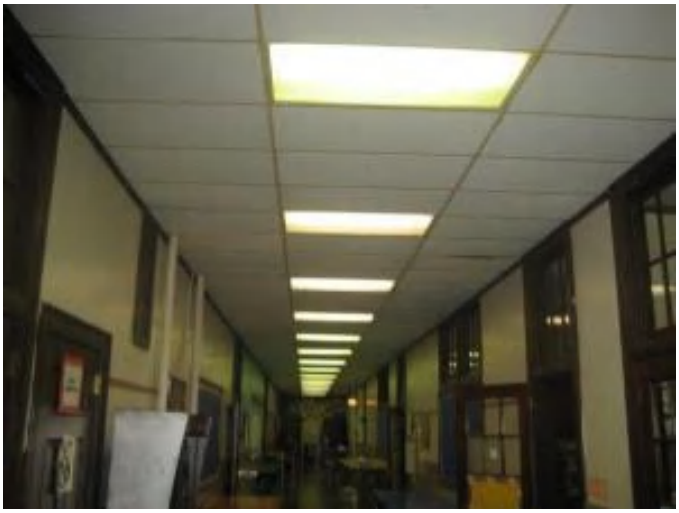
Estimate: $323,421.35

Assessor Name: System

Date Created: 10/19/2015

Notes: Provide a new electrical service 480V/277V, 3 phase power, approximate 800 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: Add Lighting Fixtures

Qty: 660.00

Unit of Measure: Ea.

Estimate: $568,813.95

Assessor Name: System

Date Created: 10/19/2015

Notes: Replace 90% of the existing lighting fixtures with up/down, recessed fluorescent fixtures with T8 lamps in classroom/offices and corridors. Approximate 660 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: 480.00

Unit of Measure: Ea.

Estimate: $176,338.08

Assessor Name: System

Date Created: 10/19/2015

Notes: Provide (2)25FT of surface raceways with 24" receptacles on center and two-duplex wall mount receptacles. Approximate 480

System: D5030 - Communications and Security

Location: Entire School

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace fire alarm system

Qty: 74.00

Unit of Measure: S.F.

Estimate: $197,449.18

Assessor Name: System

Date Created: 10/19/2015

Notes: Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms. Approximate 74 devices

System: D5030 - Communications and Security

Location: Entire School
Distress: Security Issue
Category: 1 - Health & Safety
Priority: 2 - Response Time (2-3 yrs)
Correction: Add/Replace Video Surveillance System
Qty: 22.00
Unit of Measure: Ea.
Estimate: $81,892.73
Assessor Name: System
Date Created: 10/19/2015

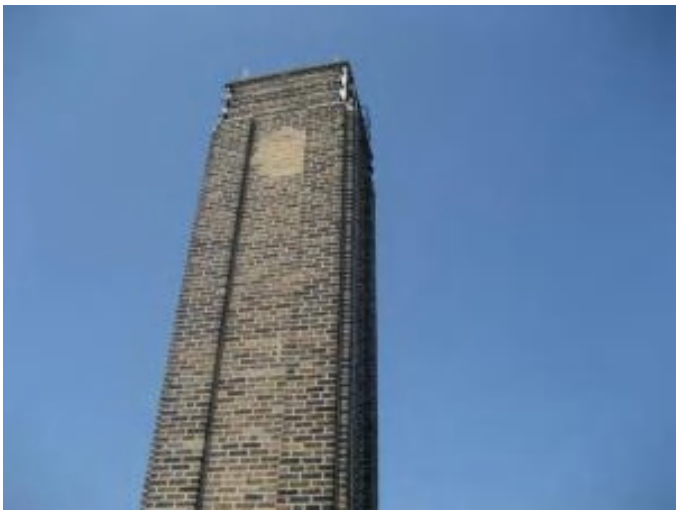
Notes: Add CCTV cameras to provide a full coverage of the building interior. Approximate 22 CCTV cameras

System: D5090 - Other Electrical Systems

Location: Outdoor
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Add Standby Generator System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $156,281.09
Assessor Name: System
Date Created: 10/19/2015

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

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: 10/19/2015

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

System: E1020 - Institutional Equipment

Location: Auditorium

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $323,055.06

Assessor Name: System

Date Created: 10/19/2015

Notes: Provide a dimming system and additional theatrical lighting.

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

System: C3030 - Ceiling Finishes

Location: Throughout

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 13,500.00

Unit of Measure: S.F.

Estimate: $203,612.81

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace suspended acoustic tile ceiling system – beyond service life (50% of suspended ceiling)

System: D5010 - Electrical Service/Distribution

Location: Entire Building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace Panelboard

Qty: 16.00

Unit of Measure: Ea.

Estimate: $441,115.49

Assessor Name: System

Date Created: 10/19/2015

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

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: 09/15/2015

Notes: Replace Plexiglas window – hazed

System: C3010230 - Paint & Covering

Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 4,500.00

Unit of Measure: S.F.

Estimate: $38,551.84

Assessor Name: System

Date Created: 09/15/2015

Notes: Repair and paint interior plaster walls – damaged (5% of plaster area)

System: E2010 - Fixed Furnishings

Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 23.00

Unit of Measure: Ea.

Estimate: $18,748.01

Assessor Name: System

Date Created: 09/16/2015

Notes: Repair or replace auditorium seats - damaged

Priority 5 - Response Time (> 5 yrs):

System: D3030 - Cooling Generating Systems

Location: Entire building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 42,000.00

Unit of Measure: S.F.

Estimate: $674,494.53

Assessor Name: System

Date Created: 10/19/2015

Notes: Install 140 ton air-conditioning system to replace inadequate window units.

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: $515,793.51

Assessor Name: System

Date Created: 01/21/2016

Notes: Replace obsolete air handler including uninsulated ductwork and replace cast iron radiators with finned tube units due to age and rust.

System: D4010 - Sprinklers

This deficiency has no image.

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:	55,437.00
Unit of Measure:	S.F.
Estimate:	$793,053.20
Assessor Name:	System
Date Created:	10/19/2015

Notes: Install fire sprinkler system with fire 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
D2020 Domestic Water Distribution	Pump, pressure booster system, 7-1/2 HP pump, includes diaphragm tank, control and pressure switch	1.00	Ea.	Boiler room					25	1995	2020	$12,198.00	$13,417.80
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, steam, gross output, 3060 MBH, includes standard controls and insulated jacket, packaged	2.00	Ea.	boiler room	Smith	450	2002-100		35	2002	2037	$52,610.70	$115,743.54
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, steam, gross output, 3060 MBH, includes standard controls and insulated jacket, packaged	2.00	Ea.	boiler room	Smith	450	2002-99		35	2002	2037	$52,610.70	$115,743.54
D3040 Distribution Systems	Air-handling unit, built-up, horizontal/vertical, constant volume, single zone, 27,000 CFM, with cooling/heating coil section, filters, mixing box	1.00	Ea.	Mechanical room					25	1931	2042	$70,587.00	$77,645.70
D5010 Electrical Service/Distribution	Panelboards, 3 pole 3 wire, main lugs, 240 V, 400 amp, no main breaker	1.00	Ea.	Baasement					30	1931	2047	$2,297.70	$2,527.47
												Total:	**$325,078.05**

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):	17,600
Year Built:	1930
Last Renovation:	
Replacement Value:	$379,592
Repair Cost:	$127,497.69
Total FCI:	33.59 %
Total RSLI:	66.88 %

Description:

Attributes:

General Attributes:

Bldg ID:	S238001	Site ID:	S238001

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	64.50 %	17.07 %	$47,345.49
G40 - Site Electrical Utilities	73.34 %	78.38 %	$80,152.20
Totals:	**66.88 %**	**33.59 %**	**$127,497.69**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$8.50	S.F.		30				0.00 %	0.00 %				$0
G2030	Pedestrian Paving	$12.30	S.F.	15,600	40	2003	2043		70.00 %	24.67 %	28		$47,345.49	$191,880
G2040	Site Development	$4.36	S.F.	17,600	25	2003	2028		52.00 %	0.00 %	13			$76,736
G2050	Landscaping & Irrigation	$4.36	S.F.	2,000	15	2003	2018	2023	53.33 %	0.00 %	8			$8,720
G4020	Site Lighting	$4.84	S.F.	17,600	30	2005	2035		66.67 %	0.00 %	20			$85,184
G4030	Site Communications & Security	$0.97	S.F.	17,600	30			2047	106.67 %	469.50 %	32		$80,152.20	$17,072
								Total	**66.88 %**	**33.59 %**			**$127,497.69**	**$379,592**

System Notes

The facility description in the site executive summary contains an overview of each system. The notes listed below provide additional information on select systems found within the facility.

No data found for this asset

Renewal Schedule

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

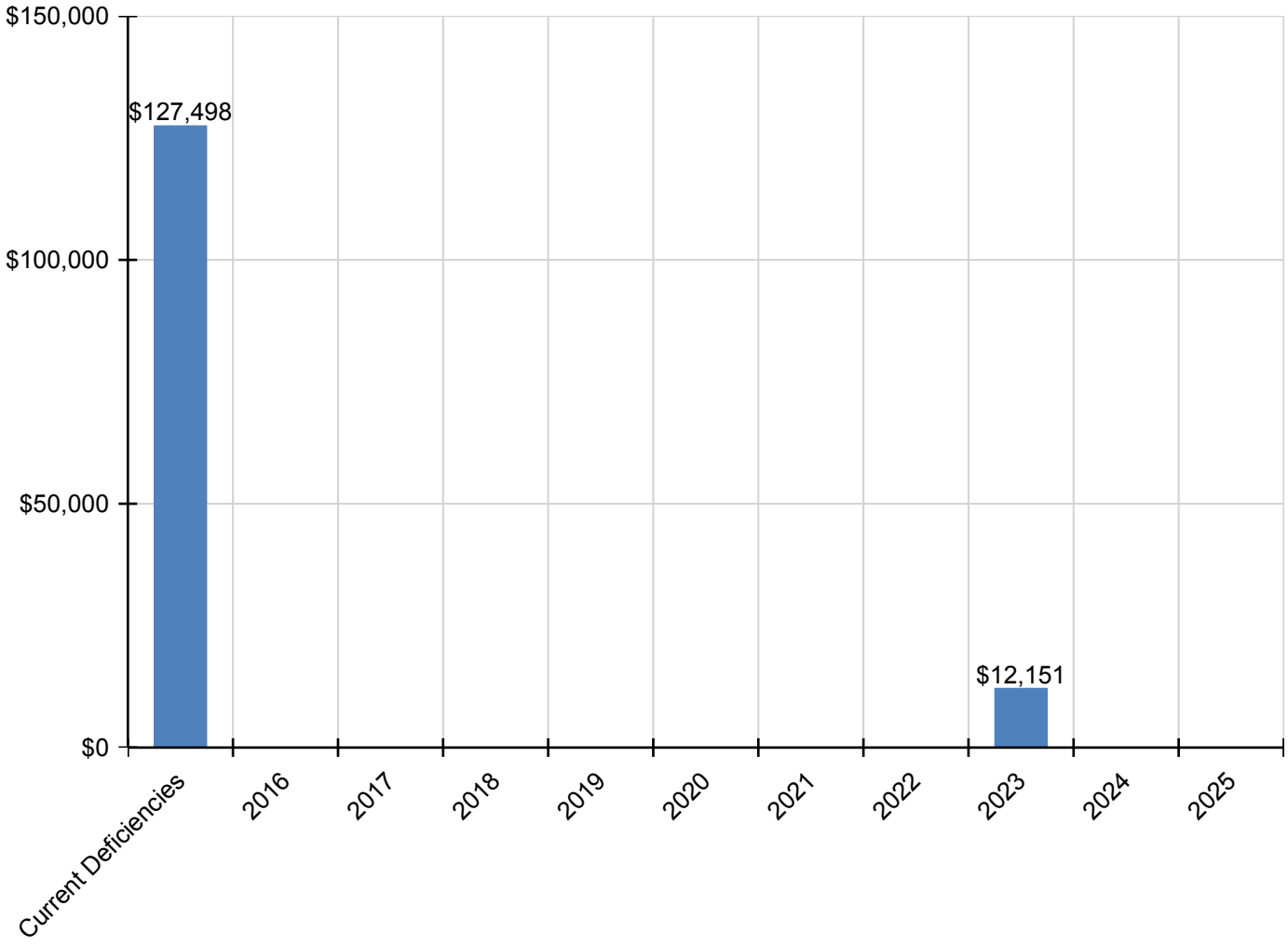
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$127,498**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$12,151**	**$0**	**$0**	**$139,649**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2030 - Pedestrian Paving	$47,345	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$47,345**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$12,151	$0	$0	**$12,151**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$80,152	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$80,152**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

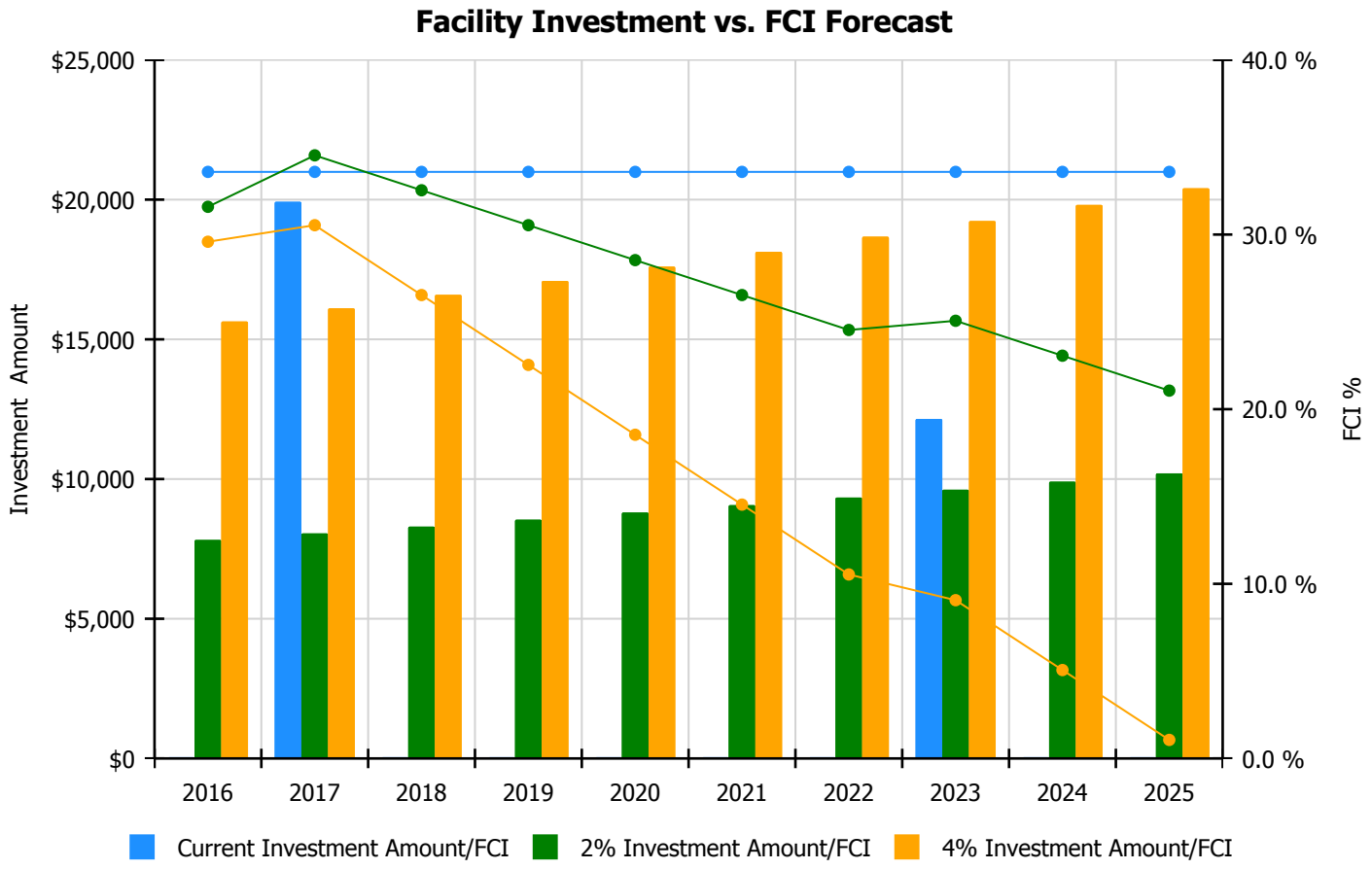
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

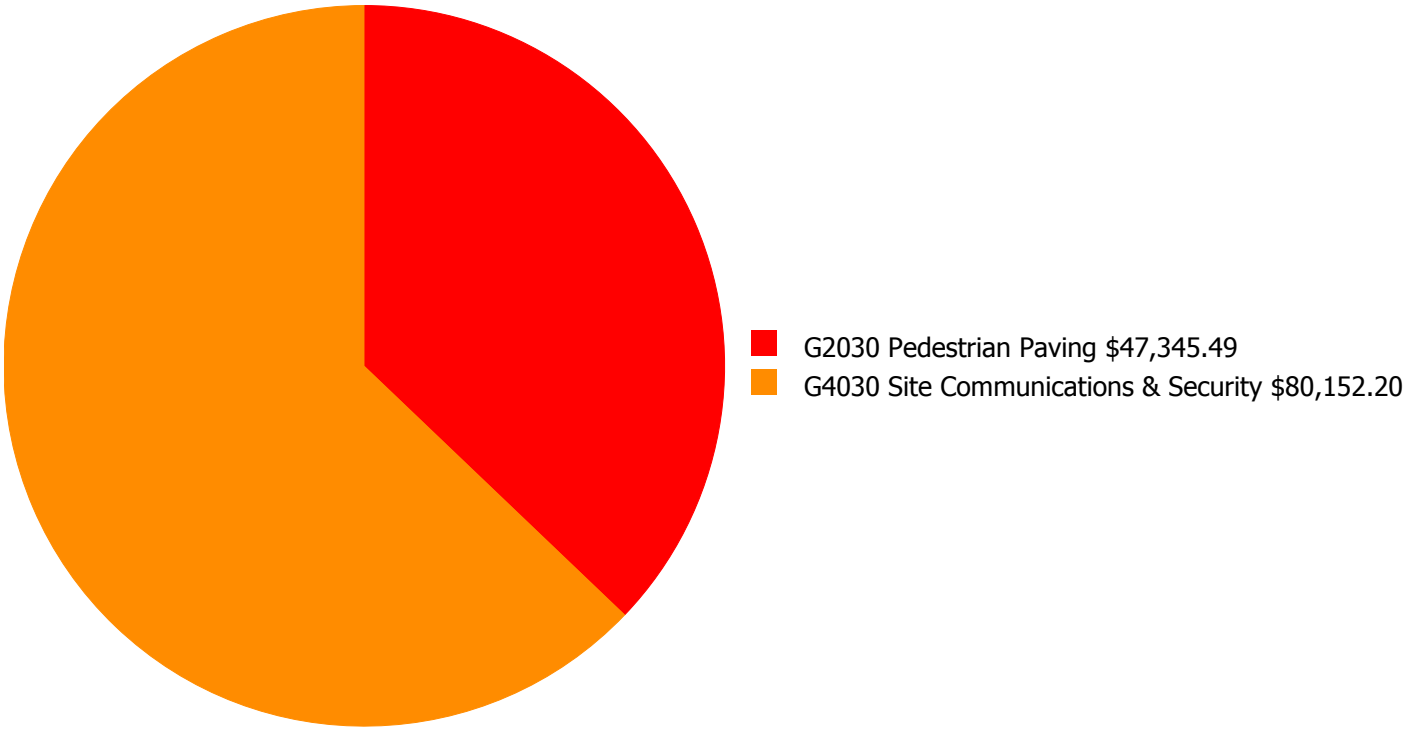
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 33.59%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$7,820.00	31.59 %	$15,639.00	29.59 %
2017	$19,923	$8,054.00	34.54 %	$16,108.00	30.54 %
2018	$0	$8,296.00	32.54 %	$16,592.00	26.54 %
2019	$0	$8,545.00	30.54 %	$17,089.00	22.54 %
2020	$0	$8,801.00	28.54 %	$17,602.00	18.54 %
2021	$0	$9,065.00	26.54 %	$18,130.00	14.54 %
2022	$0	$9,337.00	24.54 %	$18,674.00	10.54 %
2023	$12,151	$9,617.00	25.06 %	$19,234.00	9.06 %
2024	$0	$9,906.00	23.06 %	$19,811.00	5.06 %
2025	$0	$10,203.00	21.06 %	$20,406.00	1.06 %
Total:	**$32,073**	**$89,644.00**		**$179,285.00**	

Deficiency Summary by System

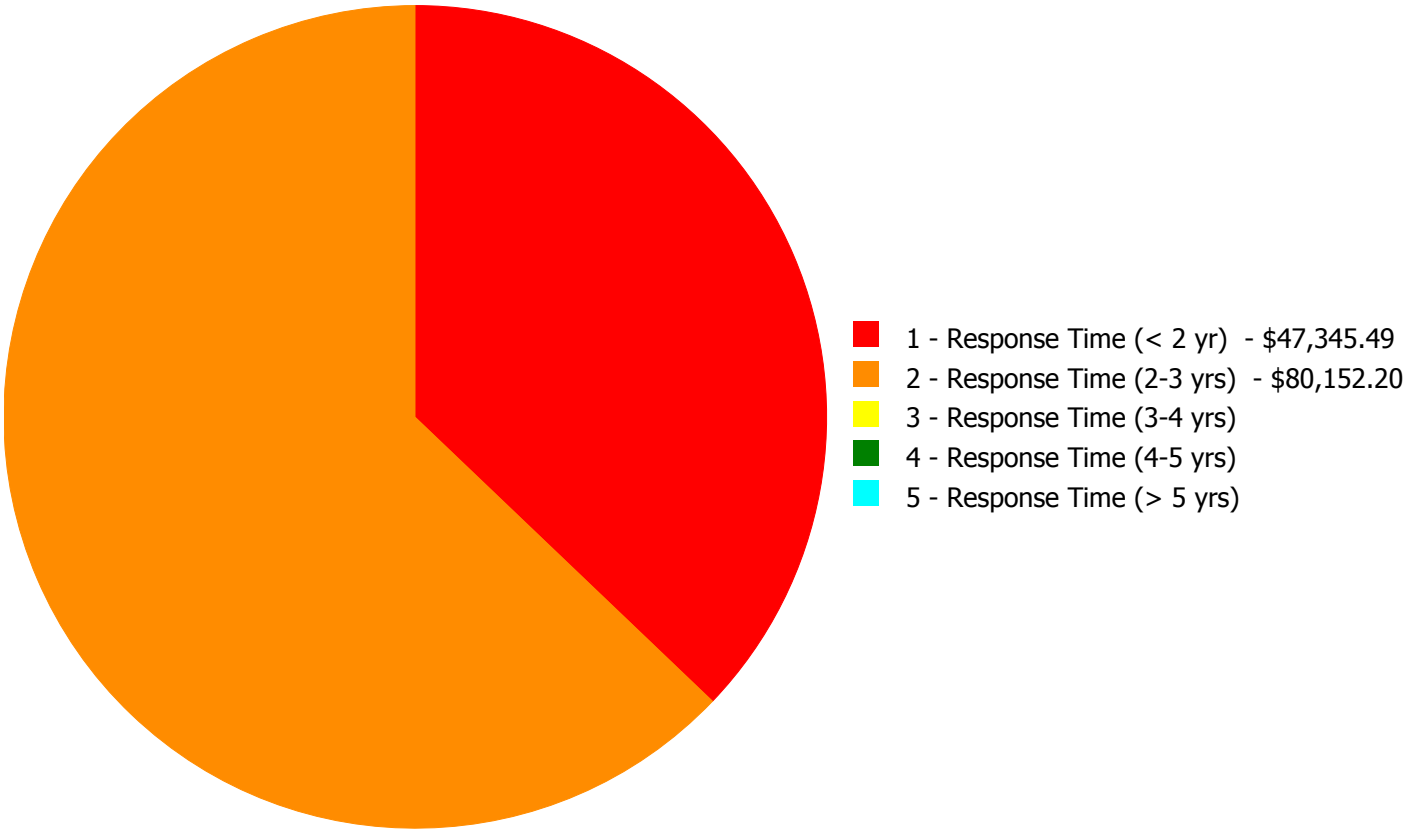
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $127,497.69

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: $127,497.69

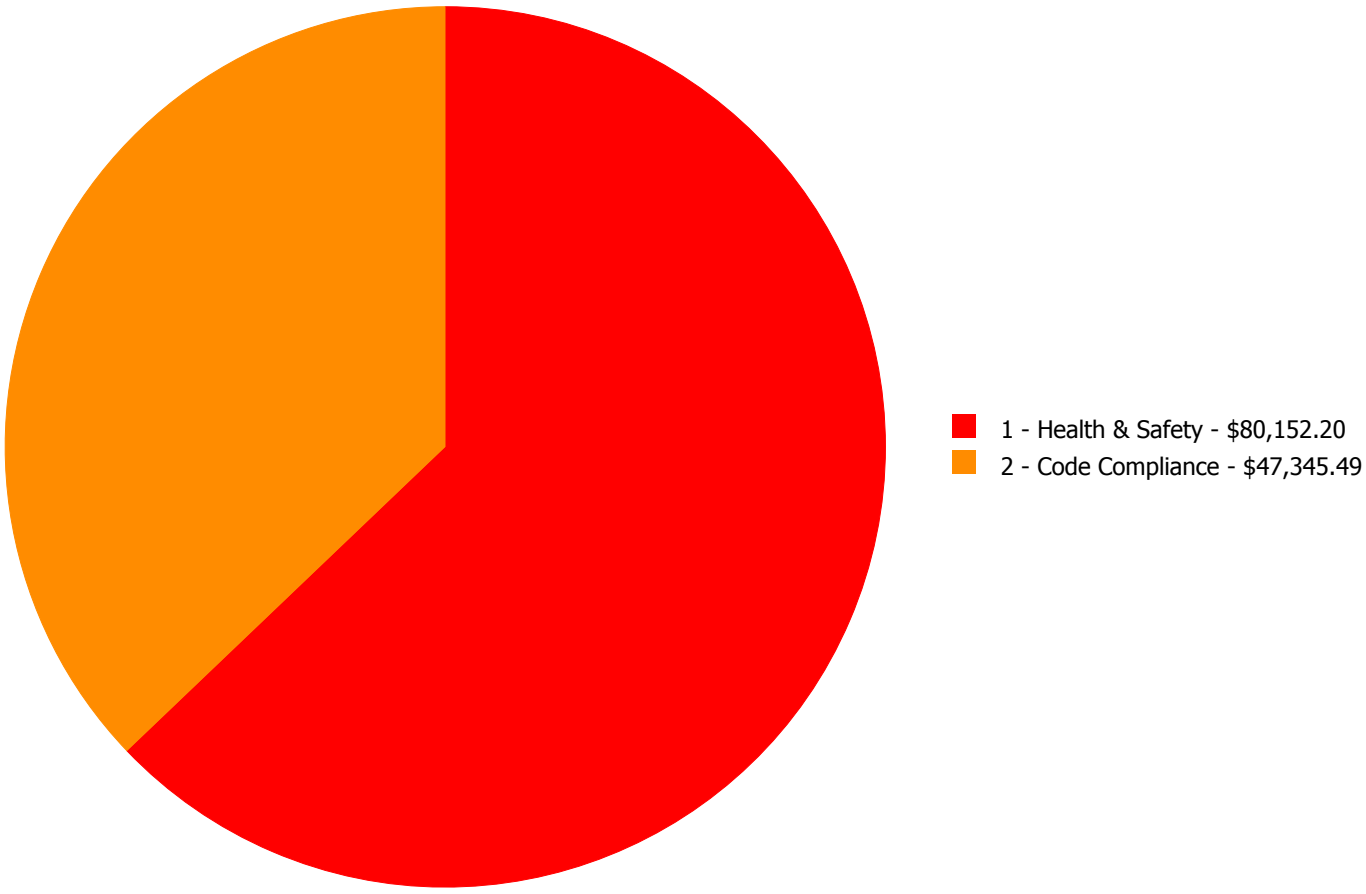
Deficiency By Priority Investment Table

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	$47,345.49	$0.00	$0.00	$0.00	$0.00	$47,345.49
G4030	Site Communications & Security	$0.00	$80,152.20	$0.00	$0.00	$0.00	$80,152.20
	Total:	$47,345.49	$80,152.20	$0.00	$0.00	$0.00	$127,497.69

Deficiency Summary by Category

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



Budget Estimate Total: $127,497.69

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 84" rise - per LF of ramp - figure 1 LF of ramp per inch of rise

Qty: 20.00

Unit of Measure: L.F.

Estimate: $47,345.49

Assessor Name: Craig Anding

Date Created: 09/16/2015

Notes: Install accessible ramp on at least one entrance

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

System: G4030 - Site Communications & Security

Location: Outdoor

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add Video Surveillance System

Qty: 12.00

Unit of Measure: Ea.

Estimate: $80,152.20

Assessor Name: Craig Anding

Date Created: 10/19/2015

Notes: Provide outdoor CCTV cameras around the building perimeter. Approximate 12

Equipment Inventory

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

No data found for this asset

Glossary

ABMA	American Boiler Manufacturers Association http://www.abma.com/
ACEEE	American Council for an Energy-Efficient Economy
ACGIH	American Council of Governmental and Industrial Hygienists
AEE	Association of Energy Engineers
AFD	Adjustable Frequency Drive
AFTC	After Tax Cash Flow
AGA	American Gas Association
AHU	Air Handling Unit
Amp	Ampere
ANSI	American National Standards Institute
ARI	Air Conditioning and Refrigeration Institute
ASD	Adjustable Speed Drive
ASHRAE	American Society of Heating Refrigerating and Air-Conditioning Engineers Inc.
ASME	American Society of Mechanical Engineers
Assessment	Visual survey of a facility to determine its condition. It involves looking at the age of systems reviewing information from local sources and visual evidence of potential problems to assign a condition rating. It does not include destructive testing of materials or testing of systems or equipment for functionality.
ATS	After Tax Savings
AW	Annual worth
BACNET	Building Automation Control Network
BAS	Building Automation System
BCR	Benefit Cost Ratio
BEP	Business Energy Professional (AEE)
BF	Ballast Factor
BHP	Boiler Horsepower (boilers)
BHP	Brake Horsepower (motors)
BLCC	Building Life Cycle Cost analysis program (FEMP)
BOCA	Building Officials and Code Administrators
BTCF	Before Tax Cash Flow

BTS	Before Tax Savings
Btu	British thermal unit
Building Addition	An area space or component of a building added to a building after the original building's year built date.
CAA	Clean Air Act
CAAA-90	Clean Air Act Amendments of 1990
CABO	Council of American Building Officials
CAC	Conventional Air Conditioning
CADDET	Center for the Analysis and Dissemination of Demonstrated Energy Technologies
Calculated Next Renewal	The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system.
Capital Renewal	Capital renewal is condition work (excluding suitability and energy audit work) that includes the replacement of building systems or elements (as they become obsolete or beyond their useful life) not normally included in an annual operating budget. Calculated next renewal The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system. Next renewal The assessor adjusted expected useful life of a system or element based on on-site inspection.
CDD	Cooling Degree Days
CDGP	Certified Distributed Generation Professional
CEC	California Energy Commission
CEM	Certified Energy Manager
CEP	Certified Energy Procurement Professional
CFC	Chlorofluorocarbon
CFD	Cash Flow Diagram
CFL	Compact Fluorescent Light
CFM cfm	Cubic Feet per Minute
CHP	Combined Heat and Power (a.k.a. cogeneration)
CHW	Chilled Water
Condition	Condition refers to the state of physical fitness or readiness of a facility system or system element for its intended use.
COP	Coefficient of Performance
Cp	Heat Capacity of Material
CPUC	California Public Utility Commission
CRI	Color Rendering Index
CRT	Cathode Ray Tube VDT HMI

CTC	Competitive Transition Charge
Cu	Coefficient of Utilization
Current Replacement Value (CRV)	CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition (excluding auxiliary facilities) under current codes and construction standards.
Cv	Value Coefficient
CWS	Chilled Water System
D d	Distance (usually feet)
DB	Dry Bulb
DCV	Demand Control Ventilation
DD	Degree Day
DDB	Double Declining Balance
DDC	Direct Digital Controls
Deferred maintenance	Deferred maintenance is condition work (excluding suitability and energy audit needs) deferred on a planned or unplanned basis to a future budget cycle or postponed until funds are available.
Deficiency	A deficiency is a repair item that is damaged missing inadequate or insufficient for an intended purpose.
Delta	Difference
Delta P	Pressure Difference
Delta T	Temperature Difference
DG	Distributed Generation
DOE	Department of Energy
DP	Dew Point
DR	Demand Response
DX	Direct Expansion Air Conditioner
EA	Energy Audit
EBITDA	Earnings before Interest Taxes Depreciation and Amortization
ECI	Energy Cost Index
ECM	Energy Conservation Measure
ECO	Energy Conservation Opportunity
ECPA	Energy Conservation and Production Act
ECR	Energy Conservation Recommendation
ECS	Energy Control System

EER	Energy Efficiency Ratio
EERE	Energy Efficiency and Renewable Energy division of US DOE
EIA	Energy Information Agency
EIS	Energy Information System
EMCS	Energy Management Computer System
EMO	Energy Management Opportunity
EMP	Energy Management Project
EMR	Energy Management Recommendation
EMS	Energy Management System
Energy Utilization Index (EUI)	EUI is the measure of total energy consumed in the cooling or heating of a building in a period expressed as British thermal unit (BTU) per (cooled or heated) gross square foot.
EO	Executive Order
EPA	Environmental Protection Agency
EPACT	Energy Policy Act of 1992
EPCA	Energy Production and Conservation Act of 1975
EPRI	Electric Power Research Institute
EREN	Efficiency and Renewable Energy (Division of USDOE)
ERV	Energy Recovery Ventilator
ESCO	Energy Service Company
ESPC	Energy Savings Performance Contract
EUI	Energy Use Index
EWG	Exempt Wholesale Generators
Extended Facility Condition Index (EFCI)	EFCI is calculated as the condition needs for the current year plus facility system renewal needs going out to a set time in the future divided by Current Replacement Value.
f	Frequency
F	Fahrenheit
Facility	A facility refers to site(s) building(s) or building addition(s) or combinations thereof that provide a particular service.
Facility Condition Assessment (FCA)	FCA is a process for evaluating the condition of buildings and facilities for programming and budgetary purposes through an on site inspection and evaluation process.
Facility Condition Index (FCI)	FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value of the facilities. The higher the FCI the poorer the condition of a facility. After an FCI is established for all buildings within a portfolio a building's condition can be ranked relative to other buildings. The FCI may also represent the condition of a portfolio based on the cumulative FCIs of the portfolio's facilities.

FC	Footcandle
FCA	Fuel Cost Adjustment
FEMIA	Federal Energy Management Improvement Act of 1988
FEMP	Federal Energy Management Program
FERC	Federal Energy Regulatory Commission
FESR	Fuel Energy Savings Ratio
FLA	Full Load Amps
FLF	Facility Load Factor (usually monthly)
FLRPM	Full Load Revolutions per Minute
FMS	Facility Management System
FPM fpm	Feet per Minute (velocity)
FSEC	Florida Solar Energy Center
Ft	Foot
GPM gpm	Gallons per Minute
GRI	Gas Research Institute
Gross Square Feet (GSF)	The size of the enclosed floor space of a building in square feet measured to the outside face of the enclosing wall.
GUI	Graphical User Interface
H h	Enthalpy Btu/lb
HCFC	Hydrochlorofluorocarbons
HDD	Heating Degree days
HFC	Hydrofluorocarbons
HHV	Higher Heating Value
HID	High Intensity Discharge (lamp)
HMI	Human Machine Interface
HMMI	Human Man Machine Interface
HO	High Output (lamp)
HP Hp hp	Horsepower
HPS	High Pressure Sodium (lamp)
HR	Humidity Ratio
Hr hr	Hour

HRU	Heat Recovery Unit
HVAC	Heating Ventilation and Air-Conditioning
Hz	Hertz
I	Intensity (lumen output of lamp)
I i	Interest rate or Discount rate
IAQ	Indoor Air Quality
ICA	International Cogeneration Alliance
ICBO	International Conference of Buildings Officials
ICC	International Code Council
ICP	Institutional Conservation Program
IECC	International Energy Conservation Code
IEEE	Institute of Electrical and Electronic Engineers
IESNA	Illuminating Engineering Society of North America
Install year	The year a building or system was built or the most recent major renovation date (where a minimum of 70 of the system?s Current Replacement Value (CRV) was replaced).
IRP	Integrated Resource Planning
IRR	Internal Rate of Return
ISO	Independent System Operator
ITA	Independent Tariff Administrator
k	Kilo multiple of thousands in SI system
K	Kelvins (color temperature of lamp)
K k	Thermal Conductivity of Material
KVA	Kilovolt Ampere
KVAR	Kilovolt Ampere Reactive
kW	kiloWatt
kWh	kiloWatt hour
L	Length (usually feet)
LCC	Life Cycle Costing
LDC	Local Distribution Company
LEED	Leadership in Energy and Environmental Design
LEED EB	LEED for Existing Buildings

LEED NC	LEED for new construction
LF	Load Factor
LHV	Lower Heating Value
Life cycle	The period of time that a building or site system or element can be expected to adequately serve its intended function.
LPS	Low Pressure Sodium (lamp)
Lu	Lumen Output of a Lamp or Fixture
M	Mega multiple of millions in SI system
M&V	Measurement and Verification
MACRS	Modified Accelerated Cost Recovery System
MARR	Minimum Attractive Rate of Return
Mbtu	Thousand Btu
MCF	Thousand Cubic Feet (usually of gas)
MEC	Model Energy Code
Mm	Multiple of Thousands in I/P System
MMBtu	Million Btu
MMCS	Maintenance Management Computer System
MMI	Man Machine Interface
MMS	Maintenance Management System
MSE 2000	Management System for Energy 2000 (ANSI Georgia Tech Univ)
MW	MegaWatt
MWH MWh	MegaWatt hour
NAAQS	National Ambient Air Quality Standards
NAESCO	National Association of Energy Service Companies
NAIMA	North American Insulation Manufacturers Association
NEA	National Energy Act of 1978
NECPA	National Energy Conservation Policy Act
NEMA	National Electrical Manufacturer's Association
NERC	North American Electric Reliability Council
Next Renewal	The Next Renewal date is an override of the 'Calculated Next Renewal' date and is based upon the assessor?s visual inspection.

NFPA	National Fire Protection Association
NGPA	National Gas Policy Act of 1978
NLRPM	No Load Revolutions per Minute (speed)
Nn	Equipment or Project lifetime in economic analysis
NOPR	Notice of Proposed Rule Making from FERC
NOx	Nitrogen Oxide Compounds
NPV	Net present value in economic analysis
NREL	National Renewable Energy Laboratory
NUG	Non-Utility Generator
O&M	Operation and Maintenance
OA	Outside Air
ODP	Ozone Depletion Potential
OPAC	Off-Peak Air Conditioning
P	Present value in economic analysis
PBR	Performance Based Rates
PEA	Preliminary Energy Audit
PF	Power Factor
PID	Proportional plus integral plus derivative (control system)
PM	Portfolio Manager in Energy Star rating system
PM	Preventive Maintenance
PoolCo	Power Pool Company or Organization
POU	Point of Use
PQ	Power Quality
PSC	Public Service Commission
PSIA psia	Pounds per square inch absolute (pressure)
PSIG psig	Pounds per square inch gauge (pressure)
PUC	Public Utility Commission
PUHCA	Public Utilities Holding Company Act of 1935
PURPA	Public Utilities Regulatory Policies of 1978
PV	Photovotaic system

PV	Present Value
PW	Present Worth
PX	Power Exchange
q	Rate of heat flow in Btu per hour
Q	Heat load due to conduction using degree days
QF	Qualifying Facility
R	Electrical resistance
R	Thermal Resistance
RC	Remote controller
RCR	Room Cavity Ratio
RCRA	Resource Conservation and Recovery Act
Remaining Service Life (RSL)	RSL is the number of years service remaining for a system or equipment item. It is automatically calculated based on the difference between the current year and the 'Calculated Next Renewal' date or the 'Next Renewal' date whichever one is the later date.
Remaining Service Life Index (RSLI)	RSLI is defined as a percentage ratio of the remaining service life of a system. It usually ranges from 0 to 100
REMR	Repair Evaluation Maintenance Rehabilitation (REMR) is a scale used to objectively rank systems based on their condition
Renewal Schedule	A timeline that provides the items that need repair the year in which the repair is needed and the estimated price of the renewal.
RH	Relative Humidity
RLA	Running Load Amps
RMS	Root Mean Square
RO	Reverse Osmosis
ROI	Return on Investment
RPM	Revolutions Per Minute
RTG	Regional Transmission Group
RTO	Regional Transmission Organization
RTP	Real Time Pricing
SBCCI	Southern Building Code Congress International
SC	Scheduling Coordinator
SC	Shading Coefficient
SCADA	Supervisory Control and Data Acquisition Systems

SEER	Seasonal Energy Efficiency Ratio
SHR	Sensible Heat Ratio
Site	The grounds and utilities roadways landscaping fencing and other typical land improvements needed to support the facility.
Soft Cost	An expense item that is not considered direct construction cost. Soft cost includes architectural engineering financing legal fees and other pre-and-post construction expenses.
SOx	Sulfur Oxide Compounds
SP	Static Pressure
SP SPB	Simple Payback
SPP	Simple Payback Period
SPP	Small Power Producers
STR	Stack Temperature Rise
SV	Specific Volume
System	System refers to building and related site work elements as described by ASTM Uniformat II Classification for Building Elements (E1557-97) a format for classifying major facility elements common to most buildings. Elements usually perform a given function regardless of the design specification construction method or materials used. See also Uniformat II.
T	Temperature
T	Tubular (lamps)
TAA	Technical Assistance Audit
TCP/IP	Transmission Control Protocol/Internet Protocol
TES	Thermal Energy Storage
THD	Total Harmonic Distortion
TOD	Time of Day
TOU	Time of Use
TQM	Total Quality Management
TransCo	Transmission Company
U	Thermal Conductance
UDC	Utility Distribution Company
UL	Underwriters Laboratories
UNIFORMAT II	The ASTM UNIFORMAT II Classification for Building Elements (E1557-97) a format for classifying major facility components common to most buildings.
USGBC	US Green Building Council
v	Specific Volume

V	Volts Voltage
V	Volume
VAV	Variable Air Volume
VDT	Video Display Terminal
VFD	Variable Frequency Drive
VHO	Very High Output
VSD	Variable Speed Drive
W	Watts
W	Width
WB	Wet bulb
WH Wh	Watt Hours
Year built	The year that a building or addition was originally built based on substantial completion or occupancy.
Z	Electrical Impedance