## 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.*

## Girard School

| | | | |
|---|---|---|---|
| Governance | DISTRICT | Report Type | Elementary |
| Address | 1800 Snyder Ave. | Enrollment | 589 |
| | Philadelphia, Pa 19145 | Grade Range | '00-04' |
| Phone/Fax | 215-952-8554 / 215-952-6397 | Admissions Category | Neighborhood |
| Website | Www.Philasd.Org/Schools/Girard | 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** | **37.95%** | **$13,010,399** | **$34,284,037** |
| Building | 36.78 % | $12,168,038 | $33,084,097 |
| Grounds | 70.20 % | $842,361 | $1,199,940 |

## Major Building Systems

| Building System | System FCI | Repair Costs | Replacement Cost |
|---|---|---|---|
| **Roof** (Shows physical condition of roof) | 00.00 % | $0 | $976,887 |
| **Exterior Walls** (Shows condition of the structural condition of the exterior facade) | 00.00 % | $0 | $2,461,343 |
| **Windows** (Shows functionality of exterior windows) | 111.34 % | $1,337,228 | $1,200,997 |
| **Exterior Doors** (Shows condition of exterior doors) | 07.23 % | $6,987 | $96,693 |
| **Interior Doors** (Classroom doors) | 13.08 % | $30,611 | $234,064 |
| **Interior Walls** (Paint and Finishes) | 15.11 % | $169,347 | $1,120,975 |
| **Plumbing Fixtures** | 13.92 % | $125,543 | $901,581 |
| **Boilers** | 02.69 % | $33,500 | $1,245,009 |
| **Chillers/Cooling Towers** | 65.60 % | $1,070,907 | $1,632,449 |
| **Radiators/Unit Ventilators/HVAC** | 144.12 % | $4,131,501 | $2,866,788 |
| **Heating/Cooling Controls** | 158.90 % | $1,430,530 | $900,248 |
| **Electrical Service and Distribution** | 150.66 % | $974,509 | $646,845 |
| **Lighting** | 06.35 % | $146,948 | $2,312,636 |
| **Communications and Security** (Cameras, Pa System and Fire Alarm) | 18.93 % | $164,001 | $866,238 |

*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

# S232001;Girard

Final

## Site Assessment Report

January 30, 2017

PARSONS

# Table of Contents

## Site Executive Summary

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

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

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

| | |
|---|---|
| Gross Area (SF): | 66,685 |
| Year Built: | 1957 |
| Last Renovation: | |
| Replacement Value: | $34,284,037 |
| Repair Cost: | $13,010,398.82 |
| Total FCI: | 37.95 % |
| Total RSLI: | 64.11 % |

**Description:**

Facility Assessment

July 15th, 2015

***School District of Philadelphia***

***Girard Elementary School***

***1800 Snyder Avenue***

***Philadelphia, PA 19145***

66,685 SF / 696 Students / LN 01

GENERAL

Mr. Richard Toohey, Facility Area Coordinator provided input to the Parsons Assessment team on current problems mainly in the mechanical

systems, and Mr. Gregory Brady Building Engineer accompanied us on our tour of the school and provided us with detailed information on the building systems and maintenance history.

The 4 story, 66,685 square foot building was originally constructed in 1901 and completely re-built in 1957 for unknown reason. The building has a one level basement.

ARCHITECHURAL/STRUCTURAL SYSTEMS

The main building rests on concrete foundations and bearing walls that are not showing signs of settlement or damage. The main structure consists typically 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 the main building structure. Main roofing is built up application in good condition. The building envelope is masonry with face brick. Elevations are enhanced minimally with stonework around entrances. All elevations are masonry brick is in good condition. Original windows were replaced in 1990 with extruded aluminum, double hung windows, double glazed with insect/security screens. All windows are generally in good condition but are approaching the end of their useful life. Exterior doors are hollow metal in good condition. Public access and service doors have concrete stoops and stairs. Generally, the building is not accessible per ADA requirements.

Main building partition wall types include CMU in very good condition. Interior doors are hollow metal frames and solid core wood doors in very good condition with hardware not meeting ADA requirements. Doors leading to exit stairways are hollow metal doors and frames in good condition. Fittings include: toilet accessories in good condition; composite plastic toilet partitions, generally in very good condition; handrails and ornamental metals, generally in good condition. Interior identifying signage is typically directly painted on the wall or door in fair condition. Main stair construction is concrete with cast iron nosing and tread in very good condition. Stair railings are painted metal in good condition.

The interior wall finishes are generally painted CMU with glazed brick in stairways and toilets in very good condition and wood panel wainscoting in auditorium in good condition. Generally, paint is in good condition with damaged areas in the basement and utility/storage rooms. Flooring finishes are VCT in classrooms, corridors, and cafeteria generally in good condition with some mismatched areas needing replacement; carpet in one office and IMC in fair condition; concrete in toilets and stairways in good condition. Ceilings are generally painted structural concrete in classrooms, corridors, stairways, toilets, gym, and service/storage areas in good condition and direct mounted acoustic tile in kindergarten classes, IMC, offices, and auditorium in good condition.

The building has one elevator serving 3 main floors and basement.

Institutional and Commercial equipment includes: stage equipment, generally in good condition; gym equipment – basketball backstops, etc. in good condition. Other equipment includes kitchen equipment (heat and serve only), generally in good condition.

Fixed furnishings include: fixed casework in classrooms generally in good condition; window shades/blinds, generally in good condition; fixed auditorium seating is original, generally in good condition with some damaged and missing seats.

MECHANICAL SYSTEMS

Plumbing fixtures throughout the school include floor mounted and wall hung water closets, wall hung urinals, and wall hung lavatories. Flush valves are exposed or embedded in walls depending on location. Faucets have mixing valves with lever handles. Fixtures are not low-flow and consequently are at least 20 years old. They are in good condition and valves are in good repair. They can be expected to last 10 years without needing replacement. The cafeteria has a stainless steel two basin kitchen sink. The teacher's lounge has the original single basin enameled steel kitchen sink with a replacement single lever faucet. Multiple classrooms have laboratory sinks. Janitor closets on each floor have floor level rim mounted service sinks with vacuum breaker faucets. All sinks are functional and will not need replacement in 5 years at least. Water fountains are wall mounted in hallway alcoves and not cooled and not accessible. They should be replaced with accessible type fountains with integral coolers.

City water supply enters the building in the boiler room in a 4" line. There is a heavily rusted gate valve before the meter. It is dripping constantly from the valve body and failure is imminent. It should be replaced immediately. The water meter line and meter-bypass line do not have backflow preventers and those should be installed. Domestic hot and cold water distribution piping is insulated soldered copper of unknown age, and should be inspected more thoroughly to determine condition and remaining lifespan.

Sanitary waste pipe is mostly threaded galvanized pipe which appears to be original to the building but also includes some sections of iron pipe with banded couplers. The building engineer did not report any problems with it, but due to age it should be inspected internally and externally to determine repair requirements. The building has a sewage ejector system with dual pumps. The sump cover is not sealed and the sump room is not ventilated. A slight odor was present. The sump room should have an exhaust fan installed.

Rain water drainage pipe runs inside the building through galvanized threaded pipe. There are no overflow drains for the roof. Due to age the

drainage pipe should be inspected to determine remaining life, even though no problems were reported and no leaks were observed.

The building heating supply comes from 3 HB Smith model 450 Mills 20 section cast iron boilers with a 2782.1 MBH (83 HP) output capacity each. They are equipped with Power Flame dual fuel burners and installed in 1995. The building engineer reported boiler #3 has been inoperable since March 2012, but one boiler alone has enough capacity to heat the building. The inoperable boiler should be repaired and returned to service. The boilers should not need replacement in the next 10 years. Boiler make-up water is provided by a water softener installed before 2000. Fuel oil is stored in a 600 gallon tank in the boiler room and has dual belt-drive pumps. The condensate return piping discharges into the feedwater supply tank with two pumps discharging into one single line to all three boilers. The feedwater supply line pipes are rusted and corroded and in need of replacement. The original condensate collection tank is abandoned in place behind the new tank.

The teacher lounge, nurse's office, and principal's office have window unit air conditioners. They are outdated and should be removed. The second floor network equipment room is cooled by a split unit air conditioner with a dedicated sump pump for condensate discharge. A 165 ton capacity roof top air-cooled chiller should be installed to cool the entire building.

There are three air handlers which serve the auditorium and gym/lunch room. They were installed before 1978 and should be replaced due to age by new air handlers with heating, cooling, humidification, and dehumidification sections.

The kitchen does not have any fuel burning appliances and has no exhaust hood or built-in fire suppression system. It has an exhaust vent in the ceiling.

The classrooms receive fresh air and heat from unit ventilators and discharge excess air through transfer ducts into the hallways. Unit ventilators include finned tube steam coils. Toilet rooms, hallways, and other rooms are heated by finned tube, natural convection, steam units. They appear to be original to the school, are beyond their expected lifespan, and many are cosmetically damaged. They should be replaced, and new ventilators should include cooling coils.

The building HVAC controls are pneumatic. Some controls malfunction, resulting in pressurization of the auditorium when the fans run. All building controls should be replaced by DDC when unit ventilators and air handlers are replaced and a building automation system installed to integrate all building HVAC systems.

The building does not have a sprinkler system nor standpipes. A sprinkler system should be installed including an engine driven fire pump system if required due to local fire water supply system.

ELECTRICAL SYSTEMS

A medium voltage overhead line most probable on S. Dorrance Street and a transformer with secondary voltage of 120/240 serves this building. The electrical service entrance is located in the basement electrical room which houses the utility main disconnect switch, utility metering 222 MUC 38320 and fusible distribution section. Many other electrical distribution equipment is also housed in the electrical room, including the Fire Alarm Panel and phase convertor transformer. The existing service is too old and has far exceeded its 30 year useful life. It has no extra capacity for expansion or new Heating, Ventilation, Air Conditioning (HVAC) system. The electrical service entrance should be upgraded, using the utility overhead lines and adding a new transformer in a pit outside the building. The new service will be 480V/277V, 3 phase power, approximate 1000 Amperes and will occupy the same space of the existing fusible distribution section. The switchboard would feed a 480V Motor Control Center (MCC) and HVAC equipment, and a 480V 3 phase to 120V/208V 3 phase, 250KVA step-down transformer to feed receptacles, lighting and other smaller loads.

There are 120/240V panel-boards in each floor for lighting and receptacles. These panelboards and associated wiring have exceeded the end of their useful life and are undersized to absorb new loads. The entire distribution system needs to be replaced with new 208/120 volt, 3 phase panelboards and new wiring. The raceway is mainly conduits run above the ceiling. Panel-board's doors are corridor are not locked and represent a potential hazard for students. As a safety issue all panel-boards at corridor on in areas where students are present must be provided with lockable devices.

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

Classrooms are illuminated with pendant mounted fluorescent fixtures with T-8 lamps. Stairways, corridors and restrooms are illuminated with surface mounted commercial/industrial fluorescent fixtures with T-8 lamps. The auditorium is illuminated with pendant, round up light HID fixture. The gymnasium/cafeteria is illuminated with pendant, downlight HID fixture.

The fire alarm control panel (FACP) is manufactured by General Electric EST Quick Start model. The fire alarm system is composed of audio/visual

devices at corridors and classrooms, pull station at exit doors and smoke detectors at corridors. The Fire alarm system is tested every day in the morning. The fire alarm system is approximate 5 years old and is expected to provide 10 more years of useful service life.

The present telephone system is adequate.

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

The present clock system is old and manufactured by Simplex, Time Control Center. Parts for this system are not available or are very expensive. A new clock should be provided, wireless, battery operated. The present bell system is working.

There is not television system.

The security system consists of CCTV cameras at stairways and in front of the elevator. The surveillance monitor is located in the principal's office.

The emergency power system consists of a gas powered generator, manufactured by Onan. The present emergency power system serves selected lighting fixtures at the corridor, stairways, auditorium and the gymnasium, it serves the exit signs too. The gas powered generator, already exceeds its useful service life and should be replaced with an outdoor diesel powered generator.

There is adequate UPS in the IT room.

The emergency lighting is obtained via selected lighting fixtures in corridors and stairs. Exit signs are located at each exit door and corridors and are connected to the school emergency system.

Lightning protection system is accomplished with air terminals mounted on the chimney. A study needs to be conducted to verify the air terminals provide the proper coverage.

The school is provided with a traction power elevator. The elevator machine roof is located on the roof. The elevator controller and the elevator motor appears that have been replaced in the last 10 years and is expected to provide 5 more years of useful service life.

The stage lighting dimming control panel is old and has exceeded its service life. Theatrical lighting are ON/OFF from local panel-board. Provide a new dimming control panel.

Auditorium sound system is portable type. Provide a permanent installed sound system sound system

GROUNDS SYSTEMS

The site surrounds the building on all four sides which is set back from the street. Play yard on North side is asphalt paving in poor condition with cracks and large depressions in need of resurfacing. Parking is street side on West side of building in good condition. Chain link fence surrounding play yard is in fair condition. Landscaping covers about 20% of the site and is mature and in good condition.

Accessibility: the building has no accessible entrance, toilets fittings or ADA required door handles

The school parking lot is poorly illuminated. Provide 6 pole mounted fixtures for security

Provide additional (3) CCTV cameras for complete coverage around the building perimeter and parking lot.

Provide two loud speakers for complete coverage of the parking lot and playground.

RECOMMENDATIONS

- Replace windows - past useful life
- Provide ADA compliant exterior door hardware at one entrance
- Provide ADA lever handle lock/latchsets on interior doors
- Provide new toilet partitions and toilet accessories including grab bars for accessibility
- Install new ID signage
- Repaint walls in basement
- Replace damaged and mismatched VCT floor tiles (10% of VCT areas)

- Replace stained and worn carpet (100% of carpeted area)
- Replace  broken/missing auditorium seats (20% of capacity)
- Resurface play yard due to large depressed areas and cracks in asphalt paving
- Provide ADA compliant ramp at one entrance (location TBD)
- Replace drinking fountains with accessible fountains with integral coolers.
- Replace failed 4" gate valve on city water entrance line, and install double backflow preventers on water meter and meter-bypass lines.
- Inspect domestic water distribution pipes to determine remaining lifespan.
- Inspect sanitary waste piping to determine condition and repair as needed.
- Install exhaust fan in sewage sump room and seal sump pit cover.
- Inspect rain water drainage pipes.
- Repair inoperable boiler.
- Replace rusted and corroded boiler feedwater supply lines.
- Remove window unit air conditioners.
- Install 165 ton capacity roof top air-cooled chiller.
- Replace air handlers due to age and lack of cooling coils.
- Replace unit ventilators and radiators due to age, damage, and lack of cooling coils.
- Remove pneumatic controls and replace with DDC and BAS.
- The electrical service entrance must be upgraded. The new service will be 480V/277V, 3 phase power, approximate 1000 Amperes and will occupy the same space of the existing fusible distribution section.
- Replace the entire distribution system with new panels and new wiring/conduits. Approximate (14) 208/120V.
- Provide (2)25FT of surface raceways with 24" receptacles on center and two-duplex wall mount receptacles. Approximate 400 receptacles.
- Provide a clock system with wireless, battery operated clocks. Approximate 40 clocks.
- Provide an outdoor diesel powered generator. Approximate 75KW
- Prepare a study to determine if the air terminals installed in the chimney provide the proper coverage to the school.
- The stage lighting controller is old and has exceeded its service life. Theatrical lighting are ON/OFF from local panel-board. Provide a new dimming control panel.
- The auditorium sound system is local/portable amplifier. Provide an up to date sound system
- The school parking lot is poorly illuminated. Provide 6 pole mounted fixtures for security
- Provide additional (3) CCTV cameras for complete coverage around the building perimeter and parking lot.
- Provide two loud speakers for complete coverage of the parking lot and playground.

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Active: | Open | Bldg Lot Tm: | Lot 1 / Tm 3 |
| Status: | Accepted by SDP | Team: | Tm 3 |
| Site ID: | S232001 | | |

## 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.

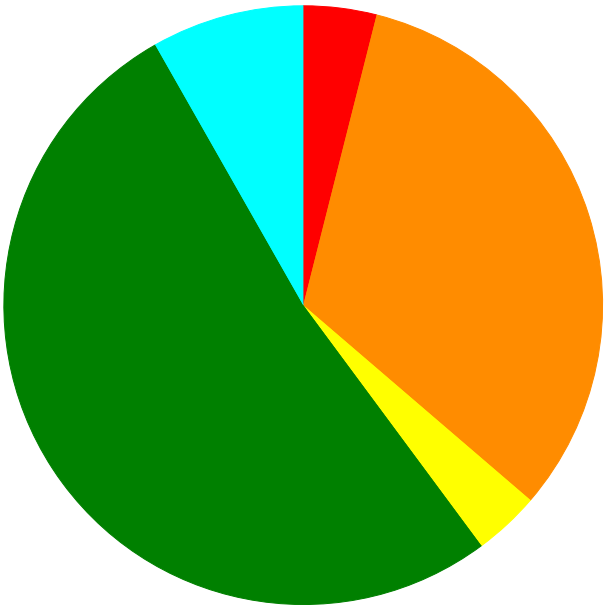
### Current Investment Requirement and Condition by Uniformat Classification

| UNIFORMAT Classification | RSLI% | FCI % | Current Repair |
|---|---|---|---|
| A10 - Foundations | 42.00 % | 0.00 % | $0.00 |
| A20 - Basement Construction | 42.00 % | 0.00 % | $0.00 |
| B10 - Superstructure | 42.00 % | 0.00 % | $0.00 |
| B20 - Exterior Enclosure | 43.99 % | 35.76 % | $1,344,215.47 |
| B30 - Roofing | 50.00 % | 0.00 % | $0.00 |
| C10 - Interior Construction | 44.16 % | 3.23 % | $52,810.35 |
| C20 - Stairs | 42.00 % | 0.00 % | $0.00 |
| C30 - Interior Finishes | 50.06 % | 8.23 % | $256,380.62 |
| D10 - Conveying | 42.86 % | 0.00 % | $0.00 |
| D20 - Plumbing | 29.12 % | 80.26 % | $1,092,906.56 |
| D30 - HVAC | 97.22 % | 89.94 % | $6,671,798.95 |
| D40 - Fire Protection | 105.71 % | 177.49 % | $953,957.97 |
| D50 - Electrical | 110.11 % | 36.53 % | $1,431,835.53 |
| E10 - Equipment | 52.82 % | 27.66 % | $293,594.70 |
| E20 - Furnishings | 12.50 % | 49.66 % | $70,538.17 |
| G20 - Site Improvements | 59.25 % | 74.39 % | $686,850.60 |
| G40 - Site Electrical Utilities | 33.33 % | 56.21 % | $155,509.90 |
| **Totals:** | **64.11 %** | **37.95 %** | **$13,010,398.82** |

### 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) |
|---|---|---|---|---|---|---|---|
| B232001;Girard | 66,685 | 36.78 | $493,547.80 | $3,385,245.45 | $464,244.14 | $6,754,094.01 | $1,070,906.92 |
| G232001;Grounds | 63,600 | 70.20 | $19,486.34 | $822,874.16 | $0.00 | $0.00 | $0.00 |
| **Total:** | | **37.95** | **$513,034.14** | **$4,208,119.61** | **$464,244.14** | **$6,754,094.01** | **$1,070,906.92** |

### Deficiencies By Priority



- 1 - Response Time (< 2 yr) - $513,034.14
- 2 - Response Time (2-3 yrs) - $4,208,119.61
- 3 - Response Time (3-4 yrs) - $464,244.14
- 4 - Response Time (4-5 yrs) - $6,754,094.01
- 5 - Response Time (> 5 yrs) - $1,070,906.92

**Budget Estimate Total: $13,010,398.82**

## 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): | 66,685 |
| Year Built: | 1957 |
| Last Renovation: | |
| Replacement Value: | $33,084,097 |
| Repair Cost: | $12,168,038.32 |
| Total FCI: | 36.78 % |
| Total RSLI: | 64.51 % |

**Description:**

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Active: | Open | Bldg ID: | B232001 |
| Sewage Ejector: | Yes | Status: | Accepted by SDP |
| Site ID: | S232001 | | |

## 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 | 42.00 % | 0.00 % | $0.00 |
| A20 - Basement Construction | 42.00 % | 0.00 % | $0.00 |
| B10 - Superstructure | 42.00 % | 0.00 % | $0.00 |
| B20 - Exterior Enclosure | 43.99 % | 35.76 % | $1,344,215.47 |
| B30 - Roofing | 50.00 % | 0.00 % | $0.00 |
| C10 - Interior Construction | 44.16 % | 3.23 % | $52,810.35 |
| C20 - Stairs | 42.00 % | 0.00 % | $0.00 |
| C30 - Interior Finishes | 50.06 % | 8.23 % | $256,380.62 |
| D10 - Conveying | 42.86 % | 0.00 % | $0.00 |
| D20 - Plumbing | 29.12 % | 80.26 % | $1,092,906.56 |
| D30 - HVAC | 97.22 % | 89.94 % | $6,671,798.95 |
| D40 - Fire Protection | 105.71 % | 177.49 % | $953,957.97 |
| D50 - Electrical | 110.11 % | 36.53 % | $1,431,835.53 |
| E10 - Equipment | 52.82 % | 27.66 % | $293,594.70 |
| E20 - Furnishings | 12.50 % | 49.66 % | $70,538.17 |
| **Totals:** | **64.51 %** | **36.78 %** | **$12,168,038.32** |

## 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.

# Site Assessment Report - B232001;Girard

| 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. | 66,685 | 100 | 1957 | 2057 | | 42.00 % | 0.00 % | 42 | | | $1,227,004 |
| A1030 | Slab on Grade | $7.73 | S.F. | 66,685 | 100 | 1957 | 2057 | | 42.00 % | 0.00 % | 42 | | | $515,475 |
| A2010 | Basement Excavation | $6.55 | S.F. | 66,685 | 100 | 1957 | 2057 | | 42.00 % | 0.00 % | 42 | | | $436,787 |
| A2020 | Basement Walls | $12.70 | S.F. | 66,685 | 100 | 1957 | 2057 | | 42.00 % | 0.00 % | 42 | | | $846,900 |
| B1010 | Floor Construction | $75.10 | S.F. | 66,685 | 100 | 1957 | 2057 | | 42.00 % | 0.00 % | 42 | | | $5,008,044 |
| B1020 | Roof Construction | $13.88 | S.F. | 66,685 | 100 | 1957 | 2057 | | 42.00 % | 0.00 % | 42 | | | $925,588 |
| B2010 | Exterior Walls | $36.91 | S.F. | 66,685 | 100 | 1957 | 2057 | | 42.00 % | 0.00 % | 42 | | | $2,461,343 |
| B2020 | Exterior Windows | $18.01 | S.F. | 66,685 | 40 | 1995 | 2035 | | 50.00 % | 111.34 % | 20 | | $1,337,228.19 | $1,200,997 |
| B2030 | Exterior Doors | $1.45 | S.F. | 66,685 | 25 | 1995 | 2020 | | 20.00 % | 7.23 % | 5 | | $6,987.28 | $96,693 |
| B3010105 | Built-Up | $37.76 | S.F. | 25,765 | 20 | 2005 | 2025 | | 50.00 % | 0.00 % | 10 | | | $972,886 |
| B3020 | Roof Openings | $0.06 | S.F. | 66,685 | 20 | 2005 | 2025 | | 50.00 % | 0.00 % | 10 | | | $4,001 |
| C1010 | Partitions | $17.91 | S.F. | 66,685 | 100 | 1957 | 2057 | | 42.00 % | 0.00 % | 42 | | | $1,194,328 |
| C1020 | Interior Doors | $3.51 | S.F. | 66,685 | 40 | 1995 | 2035 | | 50.00 % | 13.08 % | 20 | | $30,611.32 | $234,064 |
| C1030 | Fittings | $3.12 | S.F. | 66,685 | 40 | 1995 | 2035 | | 50.00 % | 10.67 % | 20 | | $22,199.03 | $208,057 |
| C2010 | Stair Construction | $1.41 | S.F. | 66,685 | 100 | 1957 | 2057 | | 42.00 % | 0.00 % | 42 | | | $94,026 |
| C3010230 | Paint & Covering | $14.29 | S.F. | 66,685 | 10 | 2010 | 2020 | | 50.00 % | 17.77 % | 5 | | $169,346.93 | $952,929 |
| C3010232 | Wall Tile | $2.52 | S.F. | 66,685 | 30 | 1959 | 1989 | 2030 | 50.00 % | 0.00 % | 15 | | | $168,046 |
| C3020411 | Carpet | $7.30 | S.F. | 1,334 | 10 | 1995 | 2005 | 2027 | 120.00 % | 153.30 % | 12 | | $14,928.50 | $9,738 |
| C3020413 | Vinyl Flooring | $9.68 | S.F. | 60,017 | 20 | 2000 | 2020 | | 25.00 % | 12.41 % | 5 | | $72,105.19 | $580,965 |
| C3020415 | Concrete Floor Finishes | $0.97 | S.F. | 5,335 | 50 | 1995 | 2045 | | 60.00 % | 0.00 % | 30 | | | $5,175 |
| C3030 | Ceiling Finishes | $20.97 | S.F. | 66,685 | 25 | 2005 | 2030 | | 60.00 % | 0.00 % | 15 | | | $1,398,384 |
| D1010 | Elevators and Lifts | $1.53 | S.F. | 66,685 | 35 | 1995 | 2030 | | 42.86 % | 0.00 % | 15 | | | $102,028 |
| D2010 | Plumbing Fixtures | $13.52 | S.F. | 66,685 | 35 | 1959 | 1994 | 2025 | 28.57 % | 13.92 % | 10 | | $125,543.18 | $901,581 |
| D2020 | Domestic Water Distribution | $1.68 | S.F. | 66,685 | 25 | 1959 | 1984 | 2023 | 32.00 % | 346.75 % | 8 | | $388,468.33 | $112,031 |
| D2030 | Sanitary Waste | $2.90 | S.F. | 66,685 | 25 | 1959 | 1984 | 2023 | 32.00 % | 146.43 % | 8 | | $283,185.05 | $193,387 |
| D2040 | Rain Water Drainage | $2.32 | S.F. | 66,685 | 30 | 1959 | 1989 | 2023 | 26.67 % | 191.14 % | 8 | | $295,710.00 | $154,709 |
| D3020 | Heat Generating Systems | $18.67 | S.F. | 66,685 | 35 | 1995 | 2030 | | 42.86 % | 2.69 % | 15 | | $33,499.67 | $1,245,009 |
| D3030 | Cooling Generating Systems | $24.48 | S.F. | 66,685 | 30 | | | 2047 | 106.67 % | 65.60 % | 32 | | $1,070,906.92 | $1,632,449 |
| D3040 | Distribution Systems | $42.99 | S.F. | 66,685 | 25 | 1959 | 1984 | 2042 | 108.00 % | 144.12 % | 27 | | $4,131,500.70 | $2,866,788 |
| D3050 | Terminal & Package Units | $11.60 | S.F. | 66,685 | 20 | 1959 | 1979 | 2037 | 110.00 % | 0.69 % | 22 | | $5,361.41 | $773,546 |
| D3060 | Controls & Instrumentation | $13.50 | S.F. | 66,685 | 20 | 1959 | 1979 | 2037 | 110.00 % | 158.90 % | 22 | | $1,430,530.25 | $900,248 |
| D4010 | Sprinklers | $7.05 | S.F. | 66,685 | 35 | | | 2052 | 105.71 % | 202.91 % | 37 | | $953,957.97 | $470,129 |
| D4020 | Standpipes | $1.01 | S.F. | 66,685 | 35 | | | 2052 | 105.71 % | 0.00 % | 37 | | | $67,352 |
| D5010 | Electrical Service/Distribution | $9.70 | S.F. | 66,685 | 30 | 1959 | 1989 | 2047 | 106.67 % | 150.66 % | 32 | | $974,508.52 | $646,845 |
| D5020 | Lighting and Branch Wiring | $34.68 | S.F. | 66,685 | 20 | 1959 | 1979 | 2037 | 110.00 % | 6.35 % | 22 | | $146,948.40 | $2,312,636 |
| D5030 | Communications and Security | $12.99 | S.F. | 66,685 | 15 | 1959 | 1974 | 2032 | 113.33 % | 18.93 % | 17 | | $164,000.96 | $866,238 |
| D5090 | Other Electrical Systems | $1.41 | S.F. | 66,685 | 30 | 1959 | 1989 | 2047 | 106.67 % | 155.68 % | 32 | | $146,377.65 | $94,026 |
| E1020 | Institutional Equipment | $4.82 | S.F. | 66,685 | 35 | 1995 | 2030 | | 42.86 % | 91.34 % | 15 | | $293,594.70 | $321,422 |
| E1090 | Other Equipment | $11.10 | S.F. | 66,685 | 35 | 2000 | 2035 | | 57.14 % | 0.00 % | 20 | | | $740,204 |
| E2010 | Fixed Furnishings | $2.13 | S.F. | 66,685 | 40 | 1980 | 2020 | | 12.50 % | 49.66 % | 5 | | $70,538.17 | $142,039 |
| | | | | | | | | **Total** | **64.51 %** | **36.78 %** | | | **$12,168,038.32** | **$33,084,097** |

## System Notes

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

| | | |
|---|---|---|
| **System:** | C3010 - Wall Finishes | This system contains no images |
| **Note:** | 85% - Paint & Covering<br>15% - Wall Tile (glazed brick) | |
| **System:** | C3020 - Floor Finishes | This system contains no images |
| **Note:** | 2% - Carpet<br>90% - Vinyl Flooring<br>8% - Concrete Floor finishes | |
| **System:** | D5010 - Electrical Service/Distribution | This system contains no images |
| **Note:** | Phase converter (1) 50KVA 240V-120/208V | |

## Renewal Schedule

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

*Inflation Rate: 3%*

| System | Current Deficiencies | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total:** | **$12,168,038** | **$0** | **$0** | **$0** | **$0** | **$2,260,456** | **$0** | **$0** | **$641,162** | **$0** | **$2,776,955** | **$17,846,610** |
| *** 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** | $1,337,228 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$1,337,228** |
| **B2030 - Exterior Doors** | $6,987 | $0 | $0 | $0 | $0 | $123,304 | $0 | $0 | $0 | $0 | $0 | **$130,291** |
| **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 | $1,438,226 | **$1,438,226** |
| **B3020 - Roof Openings** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $5,915 | **$5,915** |
| **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** | $30,611 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$30,611** |
| **C1030 - Fittings** | $22,199 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$22,199** |
| **C20 - Stairs** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |

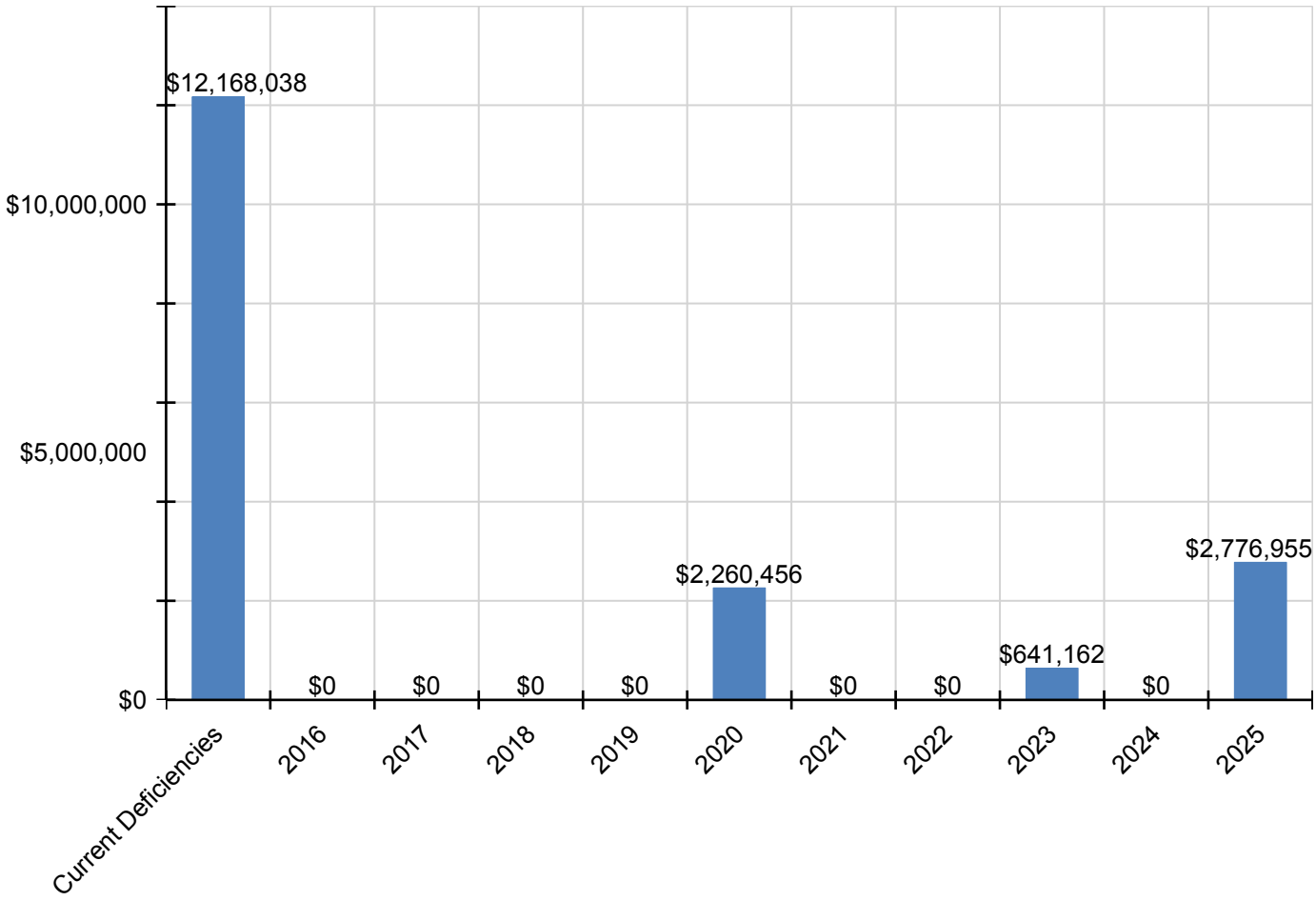
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **C2010 - Stair Construction** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C30 - Interior Finishes** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3010 - Wall Finishes** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3010230 - Paint & Covering** | $169,347 | $0 | $0 | $0 | $0 | $1,215,177 | $0 | $0 | $0 | $0 | $0 | **$1,384,524** |
| **C3010232 - Wall Tile** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020 - Floor Finishes** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020411 - Carpet** | $14,929 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$14,929** |
| **C3020413 - Vinyl Flooring** | $72,105 | $0 | $0 | $0 | $0 | $740,847 | $0 | $0 | $0 | $0 | $0 | **$812,952** |
| **C3020415 - Concrete Floor Finishes** | $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 | $0 | **$0** |
| **D - Services** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D10 - Conveying** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D1010 - Elevators and Lifts** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D20 - Plumbing** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D2010 - Plumbing Fixtures** | $125,543 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $1,332,814 | **$1,458,357** |
| **D2020 - Domestic Water Distribution** | $388,468 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $156,109 | $0 | $0 | **$544,577** |
| **D2030 - Sanitary Waste** | $283,185 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $269,474 | $0 | $0 | **$552,659** |
| **D2040 - Rain Water Drainage** | $295,710 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $215,579 | $0 | $0 | **$511,289** |
| **D30 - HVAC** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D3020 - Heat Generating Systems** | $33,500 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$33,500** |
| **D3030 - Cooling Generating Systems** | $1,070,907 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$1,070,907** |
| **D3040 - Distribution Systems** | $4,131,501 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$4,131,501** |
| **D3050 - Terminal & Package Units** | $5,361 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$5,361** |
| **D3060 - Controls & Instrumentation** | $1,430,530 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$1,430,530** |
| **D40 - Fire Protection** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D4010 - Sprinklers** | $953,958 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$953,958** |
| **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** | $974,509 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$974,509** |
| **D5020 - Lighting and Branch Wiring** | $146,948 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$146,948** |
| **D5030 - Communications and Security** | $164,001 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$164,001** |
| **D5090 - Other Electrical Systems** | $146,378 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$146,378** |
| **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** | $293,595 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$293,595** |
| **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** | $70,538 | $0 | $0 | $0 | $0 | $181,128 | $0 | $0 | $0 | $0 | $0 | **$251,667** |

** Indicates non-renewable system*

## Forecasted Sustainment Requirement

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

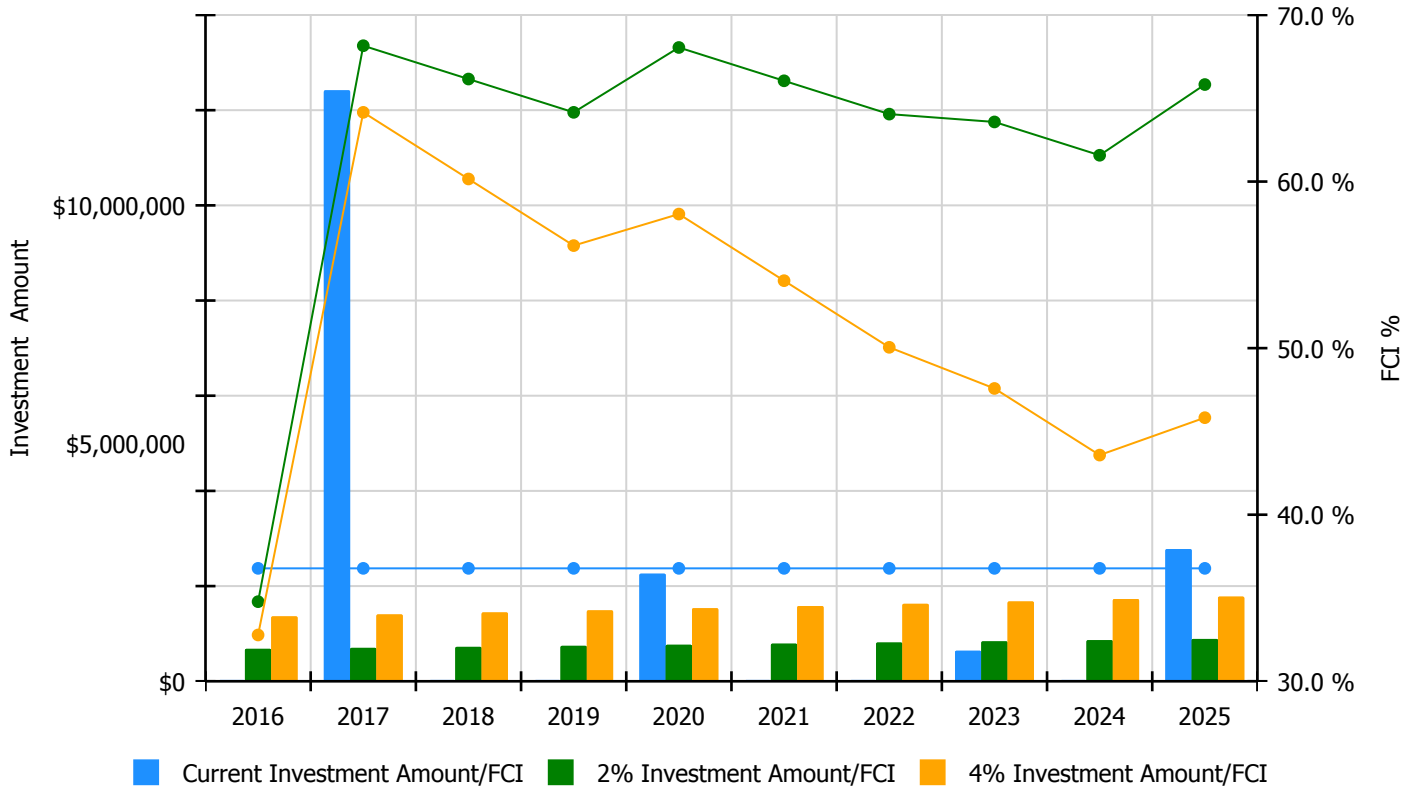


## 10 Year FCI Forecast by Investment Scenario

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

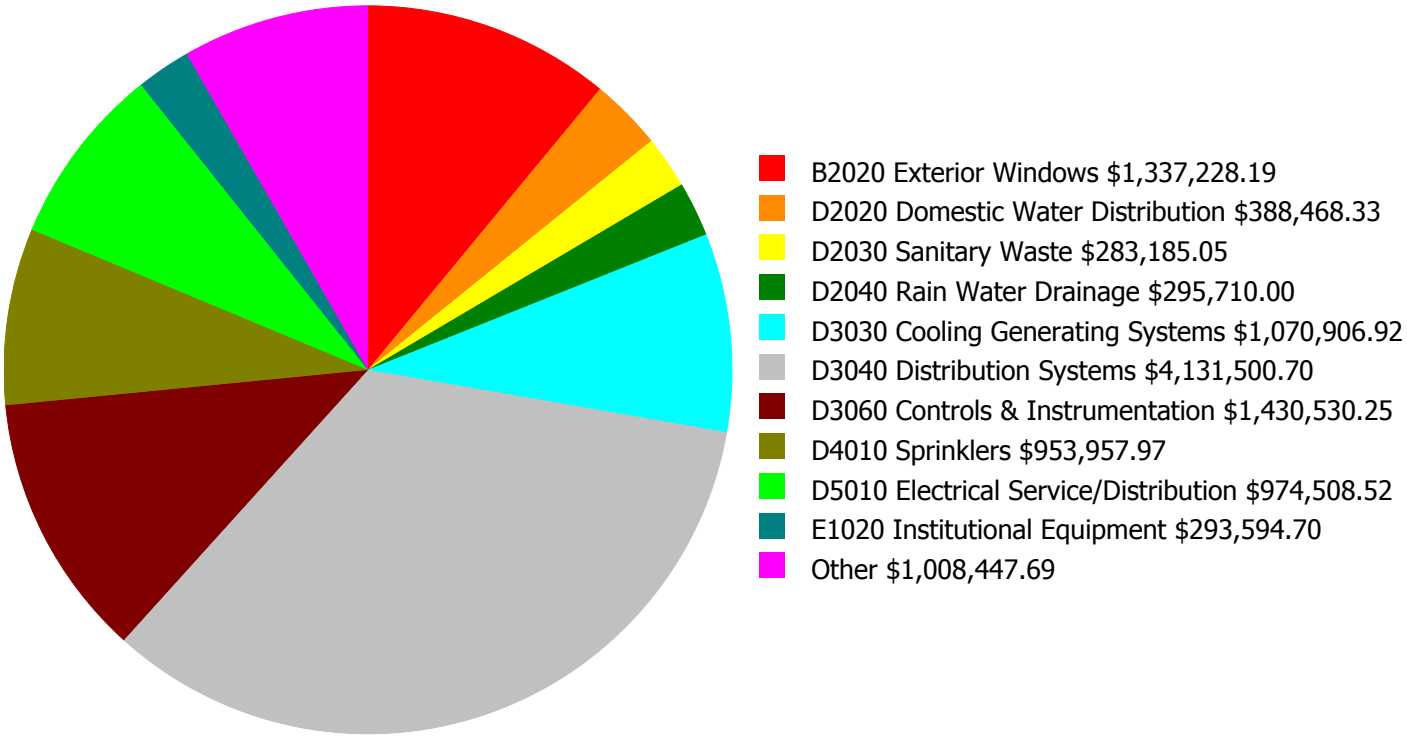
### Facility Investment vs. FCI Forecast




| Year | Investment Amount Current FCI - 36.78% | 2% Investment | | 4% Investment | |
|---|---|---|---|---|---|
| | | Amount | FCI | Amount | FCI |
| 2016 | $0 | $681,532.00 | 34.78 % | $1,363,065.00 | 32.78 % |
| 2017 | $12,416,766 | $701,978.00 | 68.16 % | $1,403,957.00 | 64.16 % |
| 2018 | $0 | $723,038.00 | 66.16 % | $1,446,075.00 | 60.16 % |
| 2019 | $0 | $744,729.00 | 64.16 % | $1,489,458.00 | 56.16 % |
| 2020 | $2,260,456 | $767,071.00 | 68.05 % | $1,534,141.00 | 58.05 % |
| 2021 | $0 | $790,083.00 | 66.05 % | $1,580,166.00 | 54.05 % |
| 2022 | $0 | $813,785.00 | 64.05 % | $1,627,571.00 | 50.05 % |
| 2023 | $641,162 | $838,199.00 | 63.58 % | $1,676,398.00 | 47.58 % |
| 2024 | $0 | $863,345.00 | 61.58 % | $1,726,690.00 | 43.58 % |
| 2025 | $2,776,955 | $889,245.00 | 65.82 % | $1,778,490.00 | 45.82 % |
| **Total:** | **$18,095,338** | **$7,813,005.00** | | **$15,626,011.00** | |

## Deficiency Summary by System

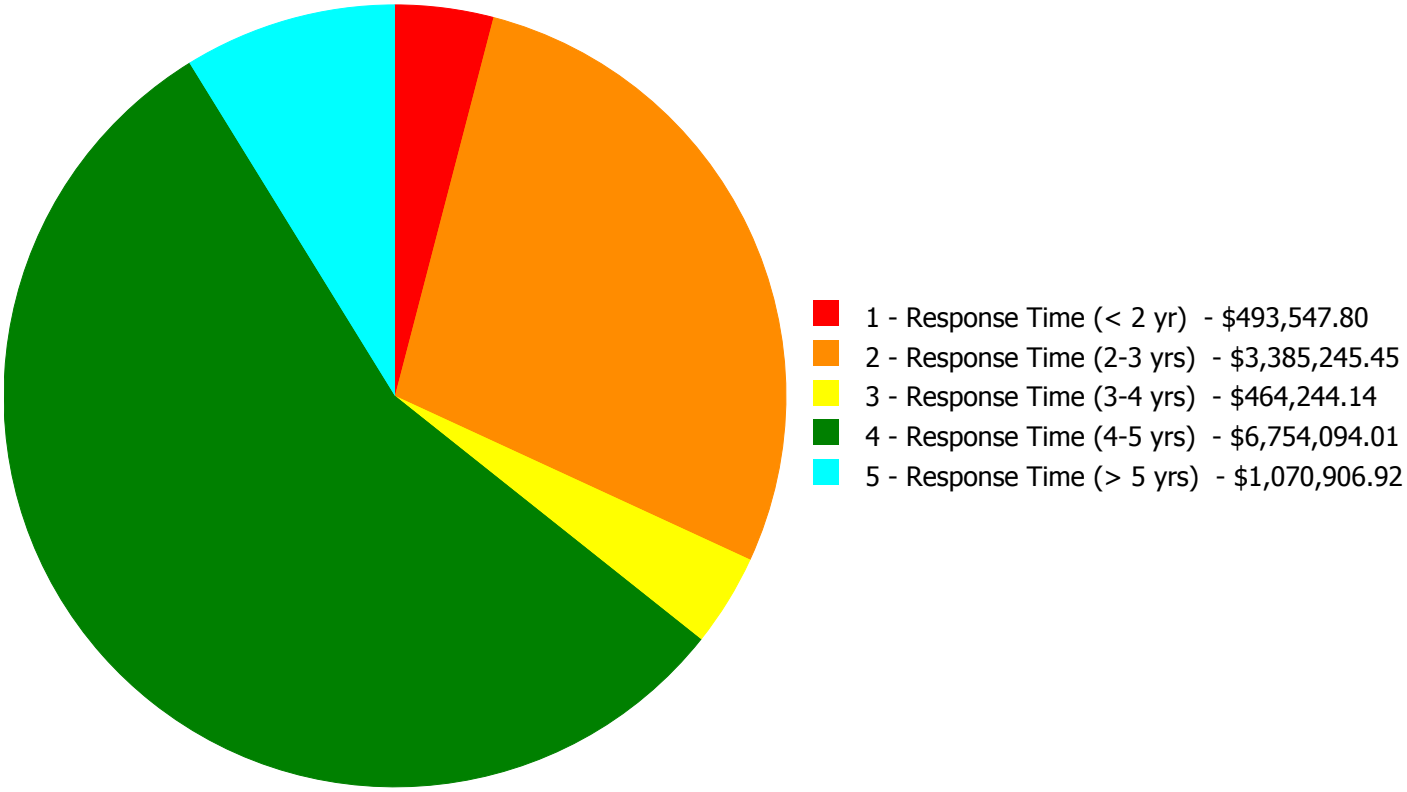
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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




**Budget Estimate Total: $12,168,038.32**

## 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: $12,168,038.32**

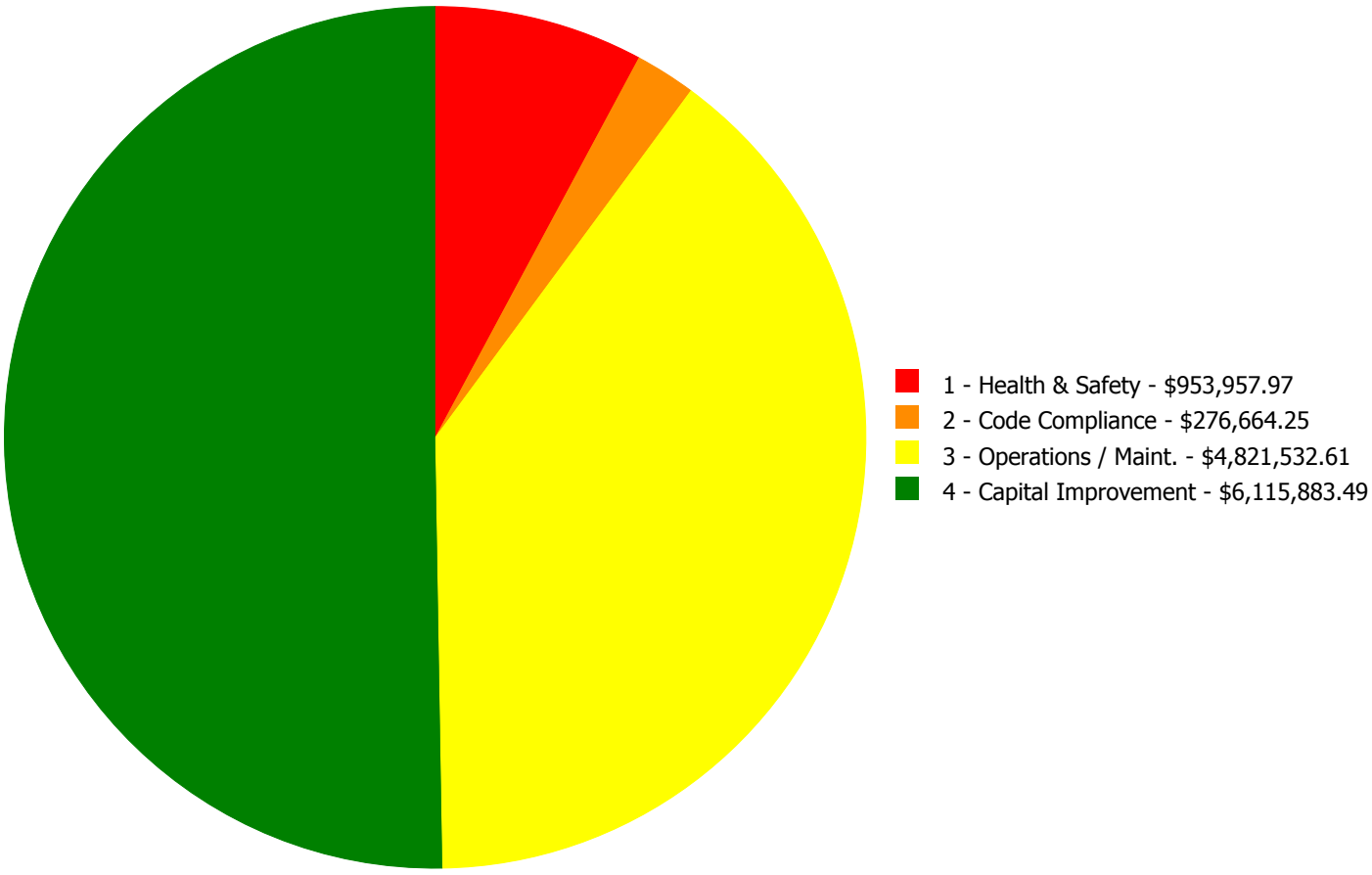
## Deficiency By Priority Investment Table

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 | $1,337,228.19 | $0.00 | $1,337,228.19 |
| B2030 | Exterior Doors | $0.00 | $6,987.28 | $0.00 | $0.00 | $0.00 | $6,987.28 |
| C1020 | Interior Doors | $0.00 | $30,611.32 | $0.00 | $0.00 | $0.00 | $30,611.32 |
| C1030 | Fittings | $0.00 | $7,822.84 | $14,376.19 | $0.00 | $0.00 | $22,199.03 |
| C3010230 | Paint & Covering | $0.00 | $169,346.93 | $0.00 | $0.00 | $0.00 | $169,346.93 |
| C3020411 | Carpet | $0.00 | $0.00 | $14,928.50 | $0.00 | $0.00 | $14,928.50 |
| C3020413 | Vinyl Flooring | $0.00 | $0.00 | $72,105.19 | $0.00 | $0.00 | $72,105.19 |
| D2010 | Plumbing Fixtures | $0.00 | $125,543.18 | $0.00 | $0.00 | $0.00 | $125,543.18 |
| D2020 | Domestic Water Distribution | $0.00 | $50,554.73 | $0.00 | $337,913.60 | $0.00 | $388,468.33 |
| D2030 | Sanitary Waste | $0.00 | $0.00 | $283,185.05 | $0.00 | $0.00 | $283,185.05 |
| D2040 | Rain Water Drainage | $0.00 | $295,710.00 | $0.00 | $0.00 | $0.00 | $295,710.00 |
| D3020 | Heat Generating Systems | $0.00 | $0.00 | $9,111.04 | $24,388.63 | $0.00 | $33,499.67 |
| D3030 | Cooling Generating Systems | $0.00 | $0.00 | $0.00 | $0.00 | $1,070,906.92 | $1,070,906.92 |
| D3040 | Distribution Systems | $0.00 | $30,895.08 | $0.00 | $4,100,605.62 | $0.00 | $4,131,500.70 |
| D3050 | Terminal & Package Units | $0.00 | $5,361.41 | $0.00 | $0.00 | $0.00 | $5,361.41 |
| D3060 | Controls & Instrumentation | $0.00 | $1,430,530.25 | $0.00 | $0.00 | $0.00 | $1,430,530.25 |
| D4010 | Sprinklers | $0.00 | $0.00 | $0.00 | $953,957.97 | $0.00 | $953,957.97 |
| D5010 | Electrical Service/Distribution | $493,547.80 | $480,960.72 | $0.00 | $0.00 | $0.00 | $974,508.52 |
| D5020 | Lighting and Branch Wiring | $0.00 | $146,948.40 | $0.00 | $0.00 | $0.00 | $146,948.40 |
| D5030 | Communications and Security | $0.00 | $164,000.96 | $0.00 | $0.00 | $0.00 | $164,000.96 |
| D5090 | Other Electrical Systems | $0.00 | $146,377.65 | $0.00 | $0.00 | $0.00 | $146,377.65 |
| E1020 | Institutional Equipment | $0.00 | $293,594.70 | $0.00 | $0.00 | $0.00 | $293,594.70 |
| E2010 | Fixed Furnishings | $0.00 | $0.00 | $70,538.17 | $0.00 | $0.00 | $70,538.17 |
| | **Total:** | $493,547.80 | $3,385,245.45 | $464,244.14 | $6,754,094.01 | $1,070,906.92 | $12,168,038.32 |

## 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: $12,168,038.32**

## 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: D5010 - Electrical Service/Distribution**

**Location:** Basement electrical room

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

**Correction:** Replace Switchboard

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $493,547.80

**Assessor Name:** System

**Date Created:** 07/31/2015

**Notes:** The electrical service entrance must be upgraded. The new service will be 480V/277V, 3 phase power, approximate 1000 Amperes and will occupy the same space of the existing fusible distribution section.

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

**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.

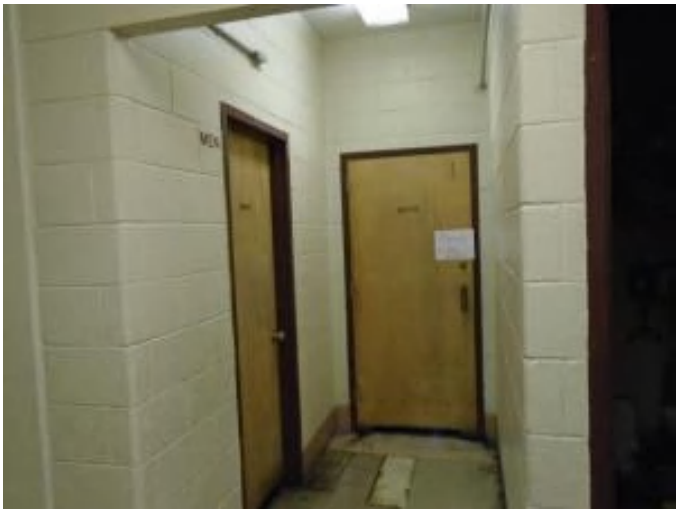
**Estimate:** $6,987.28

**Assessor Name:** System

**Date Created:** 08/11/2015

**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:** 55.00

**Unit of Measure:** Ea.

**Estimate:** $30,611.32

**Assessor Name:** System

**Date Created:** 08/11/2015

**Notes:** Provide ADA lever handle lock/latchsets on interior doors

**System: C1030 - Fittings**

**Location:** Toilets

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Remove and replace damaged toilet paritions - handicap units

**Qty:** 8.00

**Unit of Measure:** Ea.

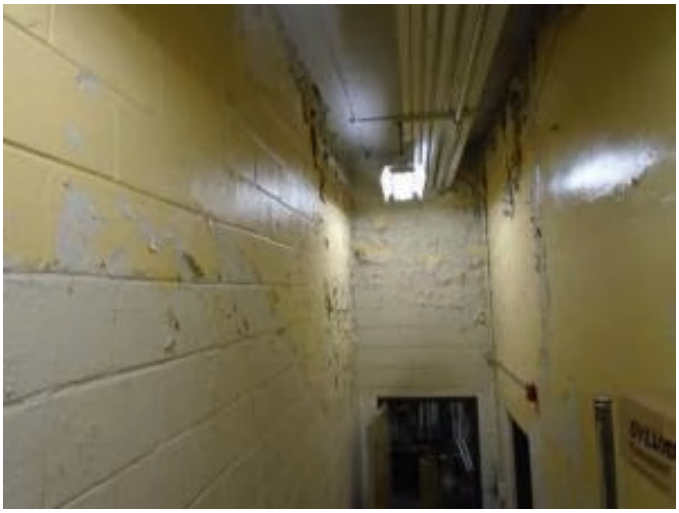
**Estimate:** $7,822.84

**Assessor Name:** System

**Date Created:** 08/11/2015

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

**System: C3010230 - Paint & Covering**



**Location:** Basement

**Distress:** Appearance

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

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

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

**Qty:** 25,000.00

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

**Estimate:** $169,346.93

**Assessor Name:** System

**Date Created:** 08/11/2015

**Notes:** Repaint walls in basement

**System: D2010 - Plumbing Fixtures**

**Location:** Corridors

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

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

**Qty:** 8.00

**Unit of Measure:** Ea.

**Estimate:** $125,543.18

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Replace drinking fountains with accessible fountains with integral coolers.

**System: D2020 - Domestic Water Distribution**

**Location:** Boiler room

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

**Correction:** Provide 4" reduced pressure back flow preventer

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $50,554.73

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Replace failed 4” gate valve on city water entrance line, and install double backflow preventers on water meter and meter-bypass lines.

**System: D2040 - Rain Water Drainage**

**Location:** Entire building

**Distress:** Beyond Service Life

**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:** 66,685.00

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

**Estimate:** $295,710.00

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Inspect rain water drainage pipes.

**System: D3040 - Distribution Systems**

**Location:** Sanitary sewer sump room

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

**Correction:** Provide inline ceiling exhaust fan and wall outlet louver

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $30,895.08

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Install exhaust fan in sewage sump room and seal sump pit cover.

**System: D3050 - Terminal & Package Units**

**Location:** Offices

**Distress:** Obsolete

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

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

**Correction:** Remove window air conditioners - replace window - if not required remove the qty. from the window replacement

**Qty:** 3.00

**Unit of Measure:** Ea.

**Estimate:** $5,361.41

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Remove window unit air conditioners.

**System: D3060 - Controls & Instrumentation**


**Location:** Entire building

**Distress:** Energy Efficiency

**Category:** 4 - Capital Improvement

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

**Correction:** Replace pneumatic controls with DDC (75KSF)

**Qty:** 66,685.00

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

**Estimate:** $1,430,530.25

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Remove pneumatic controls and replace with DDC and BAS.

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

**Location:** Entire Building

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

**Correction:** Replace Electrical DIstribution System (U1)

**Qty:** 14.00

**Unit of Measure:** Ea.

**Estimate:** $480,960.72

**Assessor Name:** System

**Date Created:** 07/31/2015

**Notes:** Replace the entire distribution system with new panels and new wiring/conduits. Approximate (14) 208/120V

**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:** 400.00

**Unit of Measure:** Ea.

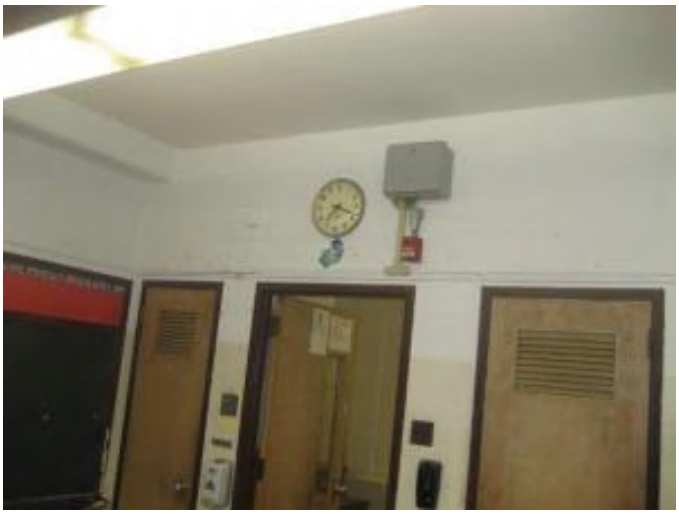
**Estimate:** $146,948.40

**Assessor Name:** System

**Date Created:** 07/31/2015

**Notes:** Provide (2)25FT of surface raceways with 24" receptacles on center and two-duplex wall mount receptacles. Approximate 400 receptacles

**System: D5030 - Communications and Security**



**Location:** Entire Building
**Distress:** Inadequate
**Category:** 4 - Capital Improvement
**Priority:** 2 - Response Time (2-3 yrs)
**Correction:** Add/Replace Clock System or Components
**Qty:** 40.00
**Unit of Measure:** Ea.
**Estimate:** $130,720.72
**Assessor Name:** System
**Date Created:** 07/31/2015

**Notes:** Provide a clock system with wireless, battery operated clocks. Approximate 40 clocks

**System: D5030 - Communications and Security**

**Location:** Auditorium
**Distress:** Inadequate
**Category:** 4 - Capital Improvement
**Priority:** 2 - Response Time (2-3 yrs)
**Correction:** Add/Replace Sound System
**Qty:** 1.00
**Unit of Measure:** LS
**Estimate:** $33,280.24
**Assessor Name:** System
**Date Created:** 07/31/2015

**Notes:** The auditorium sound system is local/portable amplifier. Provide an up to date sound system

**System: D5090 - Other Electrical Systems**

**Location:** Outdoor

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

**Correction:** Add Standby Generator System

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $122,127.83

**Assessor Name:** System

**Date Created:** 07/31/2015

**Notes:** Provide an outdoor diesel powered generator. Approximate 75KW

**System: D5090 - Other Electrical Systems**

**Location:** Roof

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

**Correction:** Repair Lightning Protection System

**Qty:** 1.00

**Unit of Measure:** Job

**Estimate:** $24,249.82

**Assessor Name:** System

**Date Created:** 07/31/2015

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

**System: E1020 - Institutional Equipment**

**Location:** Auditorium

**Distress:** Obsolete

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

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

**Correction:** Add/Replace Stage Theatrical Lighting System

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $293,594.70

**Assessor Name:** System

**Date Created:** 07/31/2015

**Notes:** The stage lighting controller is old and has exceeded its service life. Theatrical lighting are ON/OFF from local panel-board. The entire system should be replaced.

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

**System: C1030 - Fittings**


**Location:** Throughout

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

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

**Qty:** 100.00

**Unit of Measure:** Ea.

**Estimate:** $14,376.19

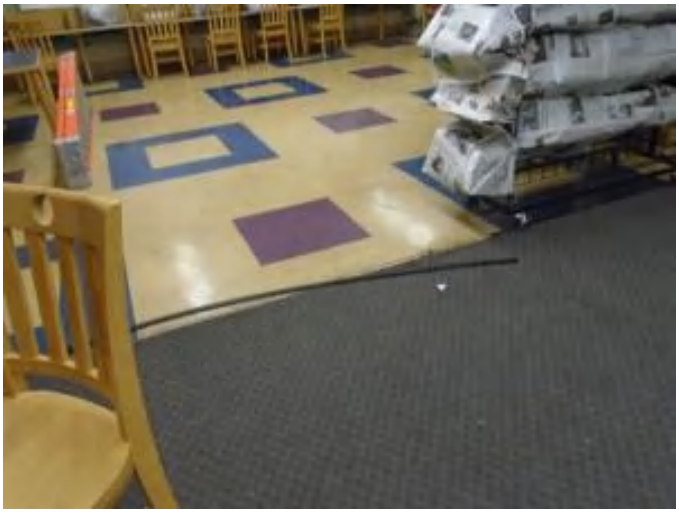
**Assessor Name:** System

**Date Created:** 08/11/2015

**Notes:** Install new ID signage

---

**System: C3020411 - Carpet**



**Location:** IMC, office

**Distress:** Beyond Service Life

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

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

**Correction:** Remove and replace carpet

**Qty:** 1,334.00

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

**Estimate:** $14,928.50

**Assessor Name:** System

**Date Created:** 08/12/2015

**Notes:** Replace stained and worn carpet (100% of carpeted area)

---

**System: C3020413 - Vinyl Flooring**

**Location:** Throughout

**Distress:** Damaged

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

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

**Correction:** Remove and replace VCT

**Qty:** 6,000.00

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

**Estimate:** $72,105.19

**Assessor Name:** System

**Date Created:** 08/12/2015

**Notes:** Replace damaged and mismatched VCT floor tiles (10% of VCT areas)

**System: D2030 - Sanitary Waste**

**Location:** Entire building

**Distress:** Beyond Service Life

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

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

**Correction:** Inspect sanitary waste piping and replace damaged sections. (+100KSF)

**Qty:** 66,685.00

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

**Estimate:** $283,185.05

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Inspect sanitary waste piping to determine condition and repair as needed.

**System: D3020 - Heat Generating Systems**

**Location:** Boiler room

**Distress:** Beyond Service Life

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

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

**Correction:** Repair boiler

**Qty:** 2.00

**Unit of Measure:** Ea.

**Estimate:** $9,111.04

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Replace rusted and corroded boiler feedwater supply lines.

**System: E2010 - Fixed Furnishings**

**Location:** Auditorium

**Distress:** Damaged

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

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

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

**Qty:** 80.00

**Unit of Measure:** Ea.

**Estimate:** $70,538.17

**Assessor Name:** System

**Date Created:** 08/12/2015

**Notes:** Replace broken/missing auditorium seats (20% of capacity)

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

**System: B2020 - Exterior Windows**

**Location:** Throughout
**Distress:** Energy Efficiency
**Category:** 4 - Capital Improvement
**Priority:** 4 - Response Time (4-5 yrs)
**Correction:** Remove and replace double slider windows
**Qty:** 265.00
**Unit of Measure:** Ea.
**Estimate:** $1,337,228.19
**Assessor Name:** System
**Date Created:** 08/11/2015

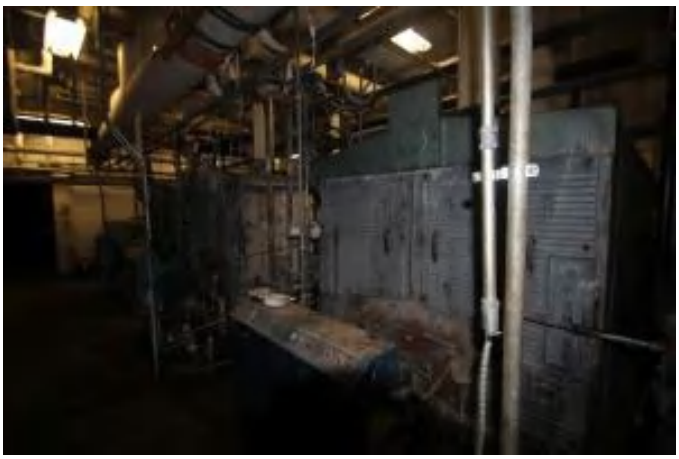
**Notes:** Replace windows - past useful life

**System: D2020 - Domestic Water Distribution**

**Location:** Entire building
**Distress:** Beyond Service Life
**Category:** 3 - Operations / Maint.
**Priority:** 4 - Response Time (4-5 yrs)
**Correction:** Replace domestic water piping (75 KSF)
**Qty:** 66,685.00
**Unit of Measure:** S.F.
**Estimate:** $337,913.60
**Assessor Name:** System
**Date Created:** 08/10/2015

**Notes:** Inspect domestic water distribution pipes to determine remaining lifespan.

**System: D3020 - Heat Generating Systems**



**Location:** Boiler room

**Distress:** Failing

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

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

**Correction:** Repair boiler

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $24,388.63

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Repair inoperable boiler.

**System: D3040 - Distribution Systems**

**Location:** Classrooms

**Distress:** Damaged

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

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

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

**Qty:** 66,685.00

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

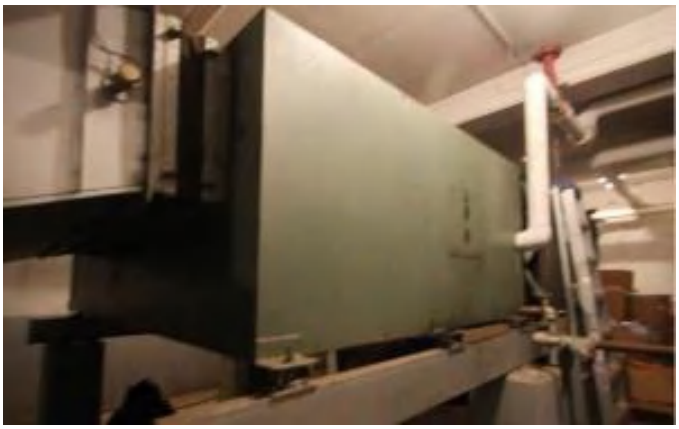
**Estimate:** $3,245,349.39

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Replace unit ventilators and radiators due to age, damage, and lack of cooling coils.

**System: D3040 - Distribution Systems**



**Location:** Gym and auditorium.

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

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

**Qty:** 600.00

**Unit of Measure:** Seat

**Estimate:** $855,256.23

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Replace three air handlers due to age and lack of cooling coils.

**System: D4010 - Sprinklers**

This deficiency has no image.

**Location:** Entire building

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

**Category:** 1 - Health & Safety

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

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

**Qty:** 66,685.00

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

**Estimate:** $953,957.97

**Assessor Name:** System

**Date Created:** 08/10/2015

**Notes:** Install fire sprinkler system including engine driven fire pump if needed.

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

**System: D3030 - Cooling Generating Systems**

This deficiency has no image.

| | |
|---|---|
| **Location:** | Entire building |
| **Distress:** | Inadequate |
| **Category:** | 4 - Capital Improvement |
| **Priority:** | 5 - Response Time (> 5 yrs) |
| **Correction:** | Install chilled water system with distribution piping and pumps. (+75KSF) |
| **Qty:** | 66,685.00 |
| **Unit of Measure:** | S.F. |
| **Estimate:** | $1,070,906.92 |
| **Assessor Name:** | System |
| **Date Created:** | 08/10/2015 |

**Notes:** Install chilled water system with distribution piping and pumps

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D2030 Sanitary Waste | Pump, sewage ejector, simplex system, polyethylene tank, 87 GPM, .7 H.P., 15' head, 37 gallon, 2" discharge, includes operating and level controls, tank, cover and pump | 2.00 | Ea. | Basement | | | | | 25 | | | $1,368.00 | $3,009.60 |
| D3020 Heat Generating Systems | Boiler, gas/oil combination, cast iron, steam, gross output, 2700 MBH, includes burners, controls and insulated jacket, packaged | 3.00 | Ea. | | HB Smith | | | | 35 | | | $50,376.70 | $166,243.11 |
| D5010 Electrical Service/Distribution | Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 1 phase, 400 A | 1.00 | Ea. | Basement electrical room | | | | | 20 | 1959 | 2017 | $13,848.30 | $15,233.13 |
| | | | | | | | | | | | | **Total:** | **$184,485.84** |

## 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): | 63,600 |
| Year Built: | 1957 |
| Last Renovation: | |
| Replacement Value: | $1,199,940 |
| Repair Cost: | $842,360.50 |
| Total FCI: | 70.20 % |
| Total RSLI: | 53.27 % |

**Description:**

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Bldg ID: | S232001 | Site ID: | S232001 |

## 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 | 59.25 % | 74.39 % | $686,850.60 |
| G40 - Site Electrical Utilities | 33.33 % | 56.21 % | $155,509.90 |
| **Totals:** | **53.27 %** | **70.20 %** | **$842,360.50** |

## 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 $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G2030 | Pedestrian Paving | $11.52 | S.F. | 54,500 | 40 | 1990 | 2030 | | 37.50 % | 109.40 % | 15 | | $686,850.60 | $627,840 |
| G2040 | Site Development | $4.36 | S.F. | 63,600 | 25 | 1990 | 2015 | 2042 | 108.00 % | 0.00 % | 27 | | | $277,296 |
| G2050 | Landscaping & Irrigation | $3.78 | S.F. | 4,800 | 15 | 1990 | 2005 | 2025 | 66.67 % | 0.00 % | 10 | | | $18,144 |
| G4020 | Site Lighting | $3.58 | S.F. | 63,600 | 30 | 1995 | 2025 | | 33.33 % | 45.42 % | 10 | | $103,420.49 | $227,688 |
| G4030 | Site Communications & Security | $0.77 | S.F. | 63,600 | 30 | 1995 | 2025 | | 33.33 % | 106.37 % | 10 | | $52,089.41 | $48,972 |
| | | | | | | | | **Total** | **53.27 %** | **70.20 %** | | | **$842,360.50** | **$1,199,940** |

## 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.

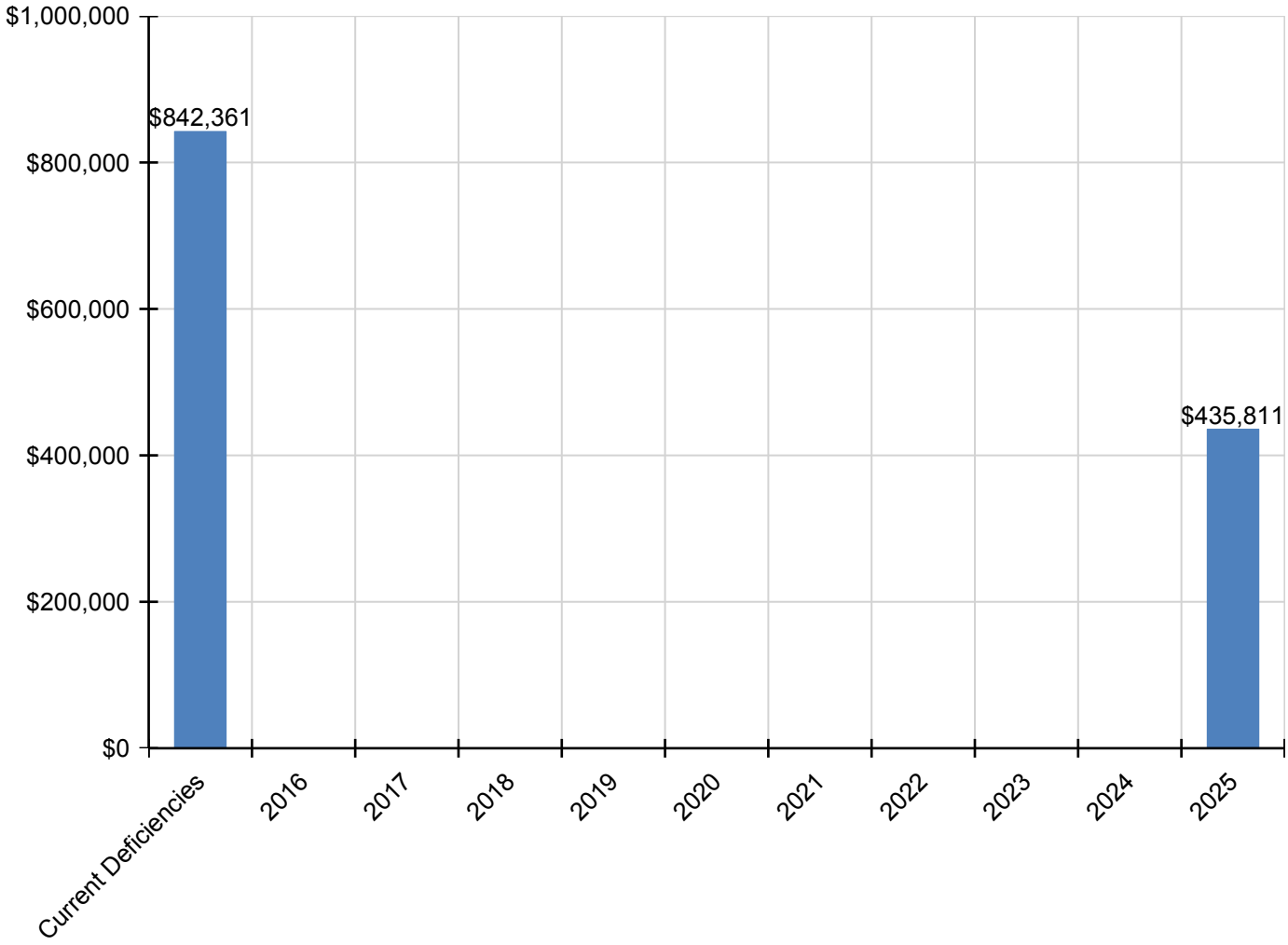
*Inflation Rate: 3%*

| System | Current Deficiencies | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total:** | **$842,361** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$435,811** | **$1,278,171** |
| **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** |
| **G2030 - Pedestrian Paving** | $686,851 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$686,851** |
| **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 | $0 | $0 | $26,822 | **$26,822** |
| **G40 - Site Electrical Utilities** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G4020 - Site Lighting** | $103,420 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $336,593 | **$440,014** |
| **G4030 - Site Communications & Security** | $52,089 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $72,395 | **$124,485** |

** Indicates non-renewable system*

## Forecasted Sustainment Requirement

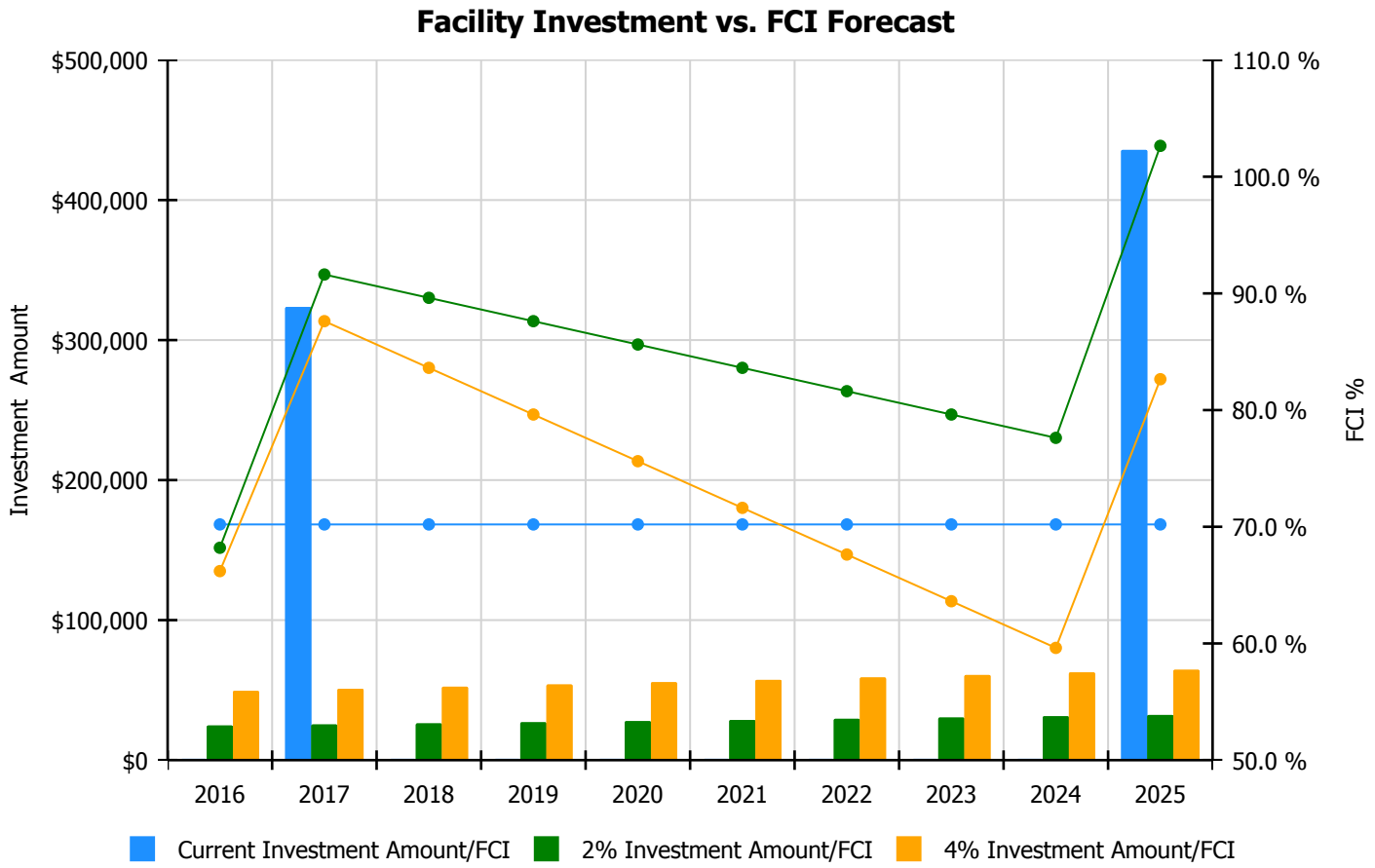
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



## 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:

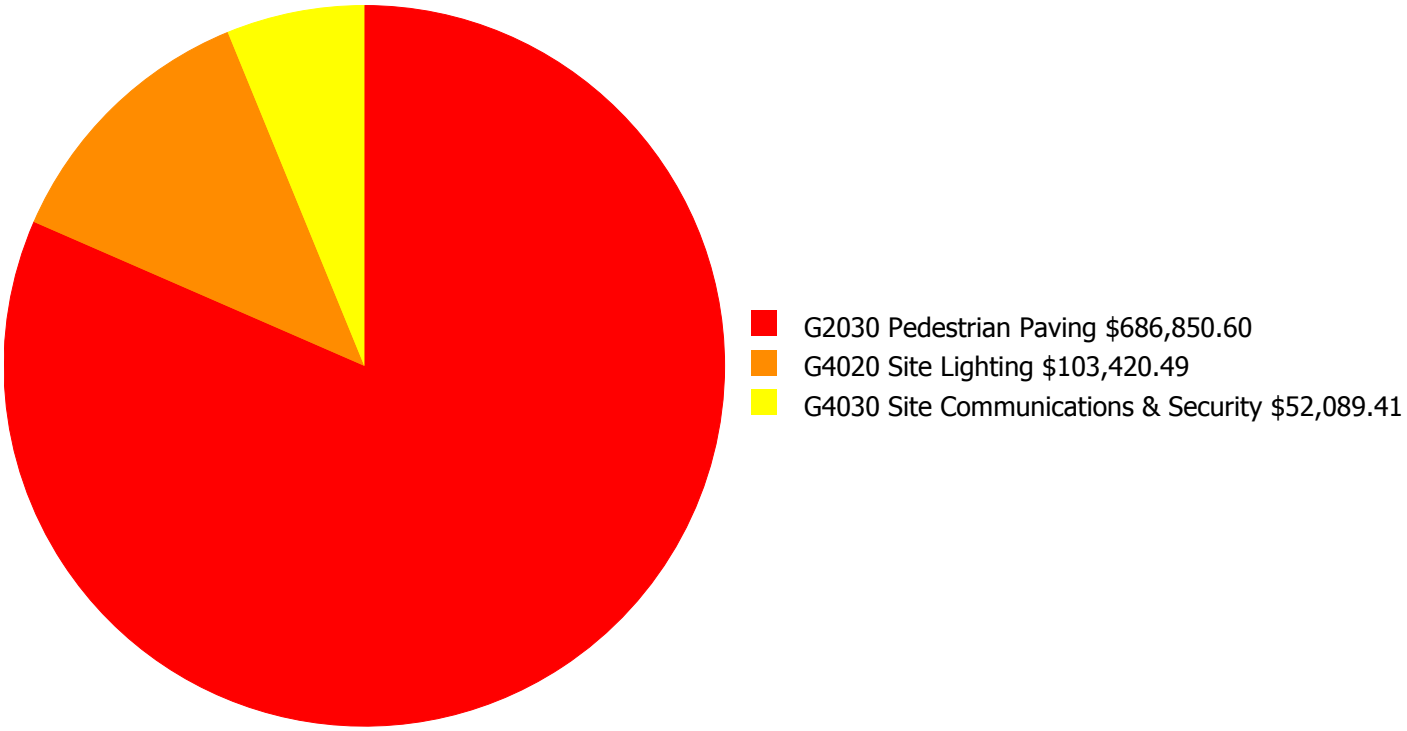
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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




| Year | Investment Amount Current FCI - 70.2% | 2% Investment | | 4% Investment | |
|---|---|---|---|---|---|
| | | Amount | FCI | Amount | FCI |
| 2016 | $0 | $24,719.00 | 68.20 % | $49,438.00 | 66.20 % |
| 2017 | $323,602 | $25,460.00 | 91.62 % | $50,921.00 | 87.62 % |
| 2018 | $0 | $26,224.00 | 89.62 % | $52,448.00 | 83.62 % |
| 2019 | $0 | $27,011.00 | 87.62 % | $54,022.00 | 79.62 % |
| 2020 | $0 | $27,821.00 | 85.62 % | $55,642.00 | 75.62 % |
| 2021 | $0 | $28,656.00 | 83.62 % | $57,312.00 | 71.62 % |
| 2022 | $0 | $29,515.00 | 81.62 % | $59,031.00 | 67.62 % |
| 2023 | $0 | $30,401.00 | 79.62 % | $60,802.00 | 63.62 % |
| 2024 | $0 | $31,313.00 | 77.62 % | $62,626.00 | 59.62 % |
| 2025 | $435,811 | $32,252.00 | 102.65 % | $64,505.00 | 82.65 % |
| **Total:** | **$759,413** | **$283,372.00** | | **$566,747.00** | |

## Deficiency Summary by System

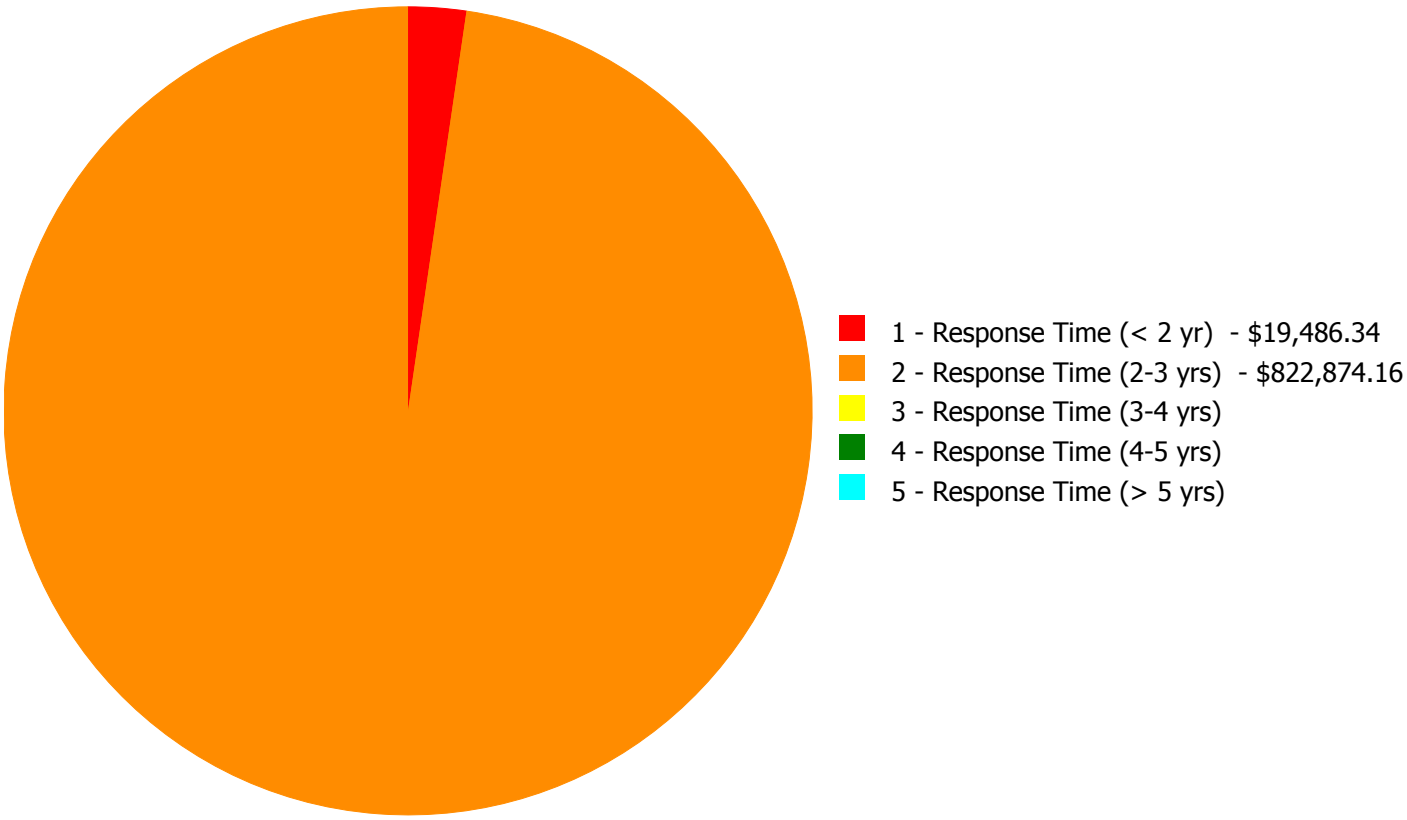
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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




**Budget Estimate Total: $842,360.50**

## 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: $842,360.50**

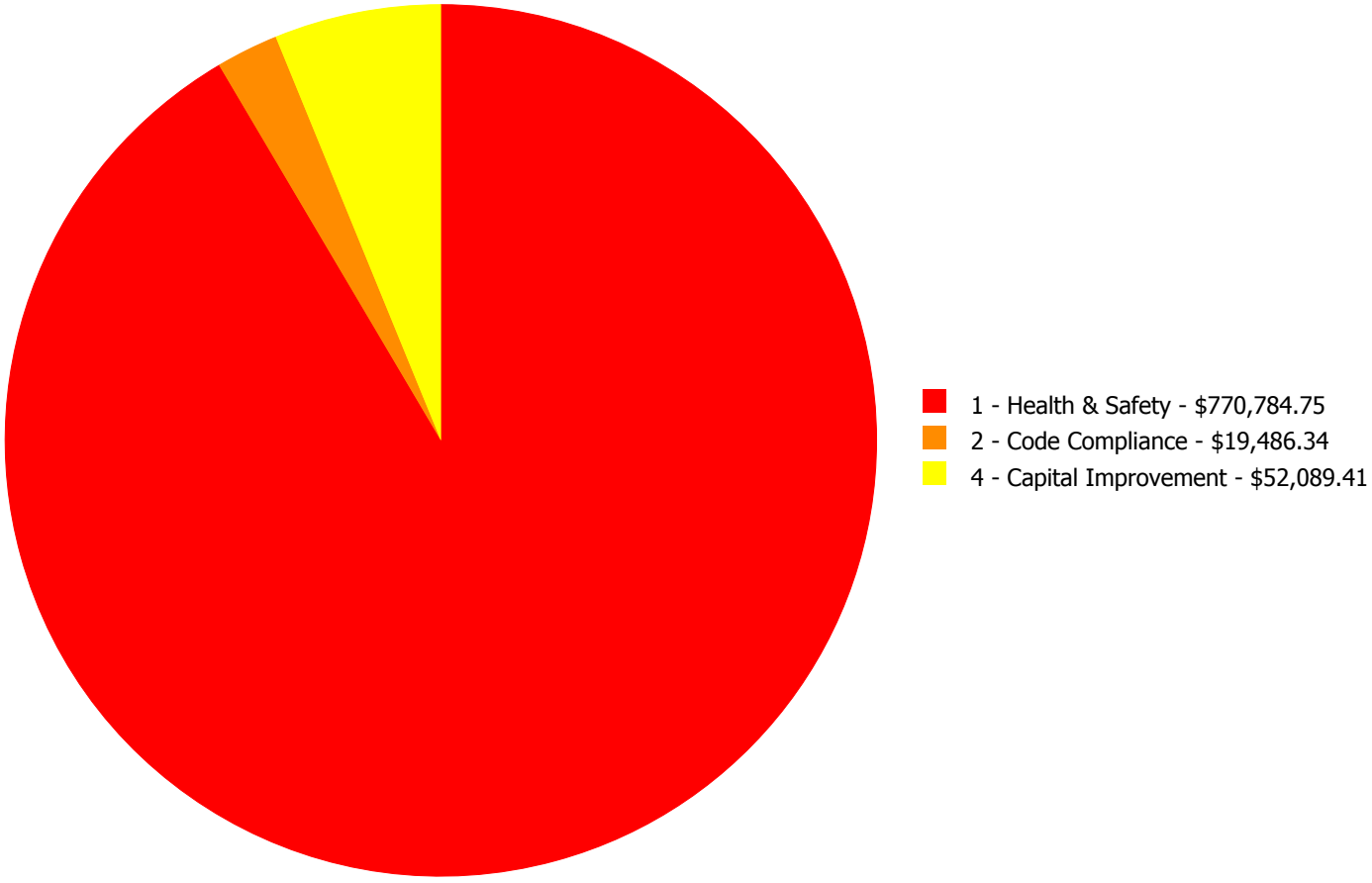
## Deficiency By Priority Investment Table

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 | $19,486.34 | $667,364.26 | $0.00 | $0.00 | $0.00 | $686,850.60 |
| G4020 | Site Lighting | $0.00 | $103,420.49 | $0.00 | $0.00 | $0.00 | $103,420.49 |
| G4030 | Site Communications & Security | $0.00 | $52,089.41 | $0.00 | $0.00 | $0.00 | $52,089.41 |
| | **Total:** | $19,486.34 | $822,874.16 | $0.00 | $0.00 | $0.00 | $842,360.50 |

## 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: $842,360.50**

## 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:** 15.00

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

**Estimate:** $19,486.34

**Assessor Name:** Ben Nixon

**Date Created:** 08/12/2015

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

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

**System: G2030 - Pedestrian Paving**

**Location:** Play yard

**Distress:** Health Hazard / Risk

**Category:** 1 - Health & Safety

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

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

**Qty:** 46,400.00

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

**Estimate:** $667,364.26

**Assessor Name:** Ben Nixon

**Date Created:** 08/12/2015

**Notes:** Resurface play yard due to large depressed areas and cracks in asphalt paving

**System: G4020 - Site Lighting**

**Location:** Outdoor

**Distress:** Security Issue

**Category:** 1 - Health & Safety

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

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

**Qty:** 6.00

**Unit of Measure:** Ea.

**Estimate:** $103,420.49

**Assessor Name:** Ben Nixon

**Date Created:** 07/31/2015

**Notes:** The school parking lot is poorly illuminated at least 6 pole mounted fixtures are required for security

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

**Location:** Outdoor
**Distress:** Inadequate
**Category:** 4 - Capital Improvement
**Priority:** 2 - Response Time (2-3 yrs)
**Correction:** Add Video Surveillance System
**Qty:** 3.00
**Unit of Measure:** Ea.
**Estimate:** $38,663.62
**Assessor Name:** Ben Nixon
**Date Created:** 07/31/2015

**Notes:** Additional (3) CCTV cameras should be provided to provide complete coverage around the building perimeter and parking lot.

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

**Location:** Outdoor
**Distress:** Inadequate
**Category:** 4 - Capital Improvement
**Priority:** 2 - Response Time (2-3 yrs)
**Correction:** Add Site Paging System
**Qty:** 2.00
**Unit of Measure:** Ea.
**Estimate:** $13,425.79
**Assessor Name:** Ben Nixon
**Date Created:** 07/31/2015

**Notes:** Two loud speakers should be added to cover the parking lot and playground

## 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 |