## 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.*

## Conwell School

| | | | |
|---|---|---|---|
| Governance | DISTRICT | Report Type | Middle |
| Address | 1849 E. Clearfield St. | Enrollment | 408 |
| | Philadelphia, Pa 19134 | Grade Range | '05-08' |
| Phone/Fax | 215-291-4722 / 215-291-5019 | Admissions Category | Special Admit |
| Website | Www.Philasd.Org/Schools/Conwell | 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** | **54.20%** | **$15,601,608** | **$28,785,240** |
| Building | 53.26 % | $15,073,285 | $28,299,720 |
| Grounds | 108.82 % | $528,323 | $485,520 |

## Major Building Systems

| Building System | System FCI | Repair Costs | Replacement Cost |
|---|---|---|---|
| **Roof** (Shows physical condition of roof) | 88.64 % | $623,429 | $703,331 |
| **Exterior Walls** (Shows condition of the structural condition of the exterior facade) | 30.24 % | $736,200 | $2,434,168 |
| **Windows** (Shows functionality of exterior windows) | 187.43 % | $2,230,169 | $1,189,840 |
| **Exterior Doors** (Shows condition of exterior doors) | 158.15 % | $127,502 | $80,620 |
| **Interior Doors** (Classroom doors) | 32.23 % | $62,892 | $195,156 |
| **Interior Walls** (Paint and Finishes) | 22.87 % | $213,790 | $934,636 |
| **Plumbing Fixtures** | 08.48 % | $63,708 | $751,712 |
| **Boilers** | 93.12 % | $966,605 | $1,038,052 |
| **Chillers/Cooling Towers** | 63.79 % | $868,291 | $1,361,088 |
| **Radiators/Unit Ventilators/HVAC** | 138.02 % | $3,298,901 | $2,390,244 |
| **Heating/Cooling Controls** | 158.90 % | $1,192,734 | $750,600 |
| **Electrical Service and Distribution** | 77.62 % | $418,636 | $539,320 |
| **Lighting** | 51.94 % | $1,001,478 | $1,928,208 |
| **Communications and Security** (Cameras, Pa System and Fire Alarm) | 55.64 % | $401,860 | $722,244 |

*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.*

## 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.*

## Conwell Annex School

| | | | |
|---|---|---|---|
| Governance | DISTRICT | Report Type | Middle |
| Address | 3072 Emerald St<br>Philadelphia, Pa 19134 | Enrollment<br>Grade Range | '05-08' |
| Phone/Fax | 215-291-4722 / 215-291-5019 | Admissions Category | Special Admit |
| Website | Www.Philasd.Org/Schools/Conwell | Turnaround Model | N/A |

## Building/System FCI Tiers

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

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

## Building and Grounds

| | FCI | Repair Costs | Replacement Cost |
|---|---|---|---|
| **Overall** | **26.88%** | **$9,128,293** | **$33,955,766** |
| Building | 28.67 % | $9,089,321 | $31,700,707 |
| Grounds | 01.73 % | $38,973 | $2,255,059 |

## Major Building Systems

| Building System | System FCI | Repair Costs | Replacement Cost |
|---|---|---|---|
| **Roof** (Shows physical condition of roof) | 00.00 % | $0 | $2,046,640 |
| **Exterior Walls** (Shows condition of the structural condition of the exterior facade) | 33.86 % | $548,921 | $1,621,317 |
| **Windows** (Shows functionality of exterior windows) | 00.00 % | $0 | $707,833 |
| **Exterior Doors** (Shows condition of exterior doors) | 00.00 % | $0 | $86,726 |
| **Interior Doors** (Classroom doors) | 08.84 % | $17,254 | $195,264 |
| **Interior Walls** (Paint and Finishes) | 66.69 % | $457,482 | $686,022 |
| **Plumbing Fixtures** | 00.92 % | $15,158 | $1,640,013 |
| **Boilers** | 22.97 % | $222,666 | $969,570 |
| **Chillers/Cooling Towers** | 36.36 % | $462,209 | $1,271,295 |
| **Radiators/Unit Ventilators/HVAC** | 97.71 % | $2,181,497 | $2,232,557 |
| **Heating/Cooling Controls** | 82.62 % | $579,206 | $701,082 |
| **Electrical Service and Distribution** | 180.63 % | $909,901 | $503,740 |
| **Lighting** | 50.58 % | $911,009 | $1,801,002 |
| **Communications and Security** (Cameras, Pa System and Fire Alarm) | 83.55 % | $563,626 | $674,597 |

*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.*

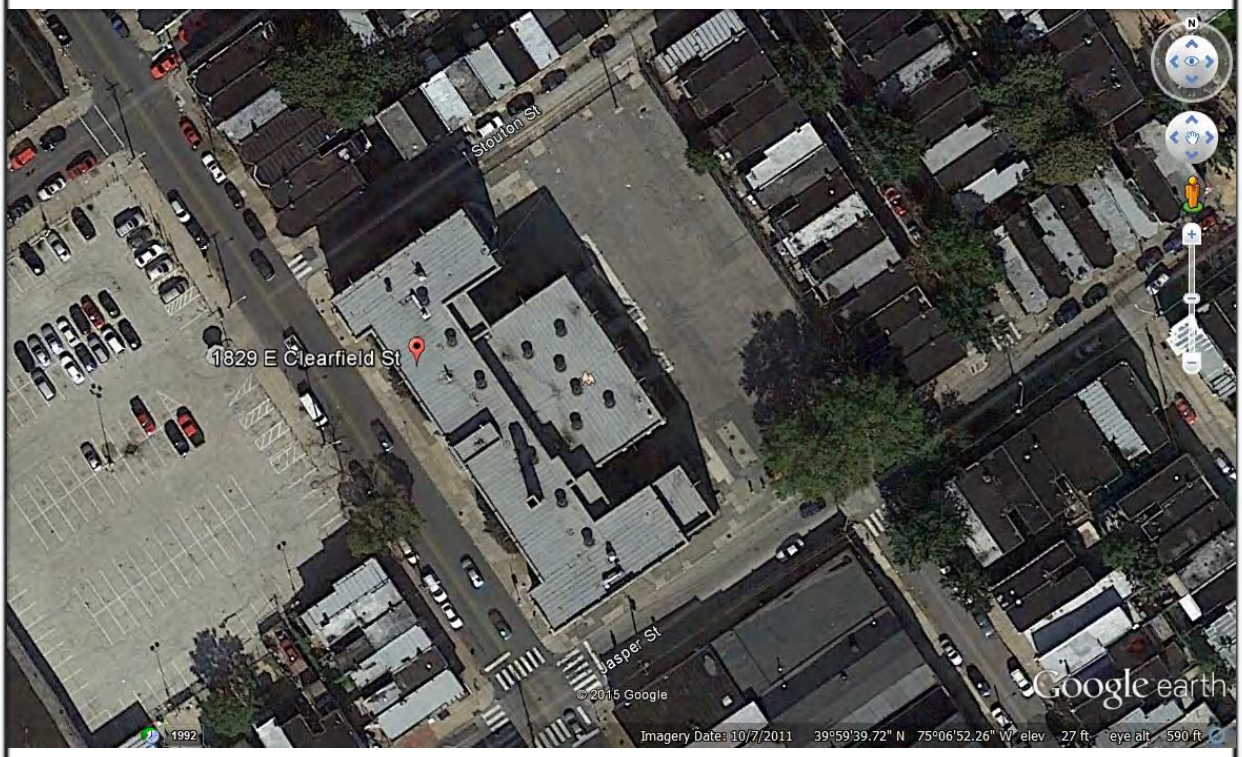
School District of Philadelphia

# S523001;Conwell

Final

## Site Assessment Report

February 2, 2017




PARSONS

# Table of Contents

## Site Executive Summary

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

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

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

| | |
|---|---|
| Gross Area (SF): | 55,600 |
| Year Built: | 1926 |
| Last Renovation: | |
| Replacement Value: | $28,785,240 |
| Repair Cost: | $15,601,607.85 |
| Total FCI: | 54.20 % |
| Total RSLI: | 67.14 % |

**Description:**

Facility assessment, July 2015

**School District of Philadelphia**

**Conwell Middle School**

**1829 Clearfield Avenue**

**Philadelphia, PA 19134**

55600 SF / 483 Students / LN 05

The Conwell Middle School building is located at 1829 Clearfield Avenue in Philadelphia, PA. The 3 story, 70,230 square foot building was originally constructed in 1926. The building has a basement partially above ground and a penthouse on the roof. Most toilets in the building were renovated in 2000 including accessibility reconfiguration. VCT tile was installed in some classrooms in 2009.

Mr. Scott Ovington, Facility Area Coordinator provided input to the Parsons assessment team on current problems and planned

renovation projects. Mr. Derek Mathews, Building Engineer, accompanied us on our tour of the school and provided us with detailed information on the building systems and recent maintenance history.

STRUCTURAL/ EXTERIOR CLOSURE:

The building typically rests on concrete foundations and bearing walls that are not showing signs of settlement. Foundation walls do not show signs of deterioration or mold presence.

The main structure consists typically of cast-in-place concrete columns, beams and one-way concrete slabs. Long slab spans are supported with steel truss girders. Above ground floor slabs are generally in good condition, however roof slab shows some structural deterioration including spalled concrete and exposed, rusting reinforcement.

The building envelope is typically masonry with face brick with decorative stone quoining at windows and doors perimeter. In general, masonry is in poor condition with deteriorated and missing mortar from joints; the chimney shows cracks below steel banding reinforcing its top portion.

The original building windows were retrofitted in late 1980's or early 1990's with extruded aluminum double hung windows single glazed with acrylic glazing; original wood frames are left in place and deteriorating. All windows are generally in poor condition with some of the windows inoperable; basement windows have security screens in fair to poor condition; windows are unsafe to operate due to possible balancing mechanism failure (one case of serious injury reported). The windows are generally not energy efficient.

Exterior doors and frames are typically hollow metal in poor condition; there is some rusting and peeling paint. Most exterior doors are beyond their service life. Generally, the building is not accessible per ADA requirements due to first floor- grade separation with no ramps or lifts.

Roofing is typically built-up, over 20 years old. All roofing and flashing is typically in poor condition with some deterioration of the built -up system including water ponding and soft spots; leaks have been reported. The original copper counter flashing under stone coping was left in place during original roofing replacement preventing proper flashing installation.

INTERIORS:

Partition wall types include plastered ceramic hollow blocks and painted CMU. Partitions separating stairways from corridors are generally steel framed borrowed light with wire glazing. The interior wall finishes are generally painted plaster or drywall and some painted brick with marble and glazed brick wainscot in basement. Generally, paint is in fair condition with areas of plaster and paint deterioration at windows perimeters and radiators.

Most ceilings are 2x4 suspended acoustical panels and exposed, painted. The suspension system and tile are old and approaching the end of their useful life. Paint and plaster on exposed ceilings is deteriorated.

Flooring in classrooms and auditorium is generally hardwood; and patterned concrete in most corridors and toilets. Most flooring is original and in poor condition. Some areas have VCT or original VAT tile, generally in fair to poor condition.

Interior doors are generally solid core wood doors installed in around 2005 in most classrooms with original wood frames and transoms left in place. Door finishes are typically in good condition. Most doors are fitted with door knobs and are not ADA compliant. The doors leading to exit stairways are steel framed doors with wire glazing, in good condition.

Fittings include original chalk boards, generally in good condition; toilet accessories and toilet partitions, generally in very good condition; handrails and ornamental metals, generally in good condition. Interior identifying signage is typically directly painted on wall or door surfaces generally in poor condition.

Stair construction is generally concrete with cast iron non-slip treads in good condition.

Institutional and Commercial equipment includes: stage equipment, generally in poor condition; A/V equipment in fair condition; gym equipment – basketball backstops, scoreboards, etc.; generally in poor condition. Other equipment includes kitchen equipment, generally in good condition.

Furnishings include fixed casework in classrooms, corridors and library, generally in fair to poor condition; window shades/blinds, generally in poor condition; fixed auditorium seating is original, generally in fair condition with some damaged seats.

CONVEYING SYSTEMS:

The building has no elevators.

PLUMBING:

Plumbing Fixtures - Many of the original plumbing fixtures remain in service. Fixtures in the restrooms on each floor consist of floor mounted flush valve water closets, wall hung urinals and lavatories with wheel handle faucets. Fixtures in the gang bathrooms were replaced in 2000 and are in good condition. However, the older units should be replaced as part of any renovation of the spaces.

Drinking fountains in the corridors and at the restrooms are wall hung with integral refrigerated coolers. They are well beyond their service life, some are broken, and should be replaced; most are NOT accessible type.

A mop basin is available in a janitor closet in the corridor on each floor for use by the janitorial staff.

The Kitchen has one sink; a three compartment stainless steel prep sink with lever operated faucets and integral grease trap. Chemicals are injected manually into the sanitizing basins.

Domestic Water Distribution - A 4" city water service enters the building from E. Clearfield Street near the intersection with Jasper Street. The 2" meter and valves are located in the basement mechanical room. Two reduced pressure backflow preventers are installed. Duplex Armstrong domestic pressure booster pumps are installed. The domestic hot and cold water distribution piping is copper piping and sweat fittings. The maintenance staff reports no significant problems with scale build up in the domestic piping and the supply is adequate to the fixtures.

One State Sandblaster gas fired, 70 gallon, vertical hot water heater with circulating pump supplies hot water for domestic use. The unit is located in the boiler room on the basement level. The hot water heater is equipped with a T&P relief valve. The domestic hot water heater is beyond its service life and should be replaced. A water softener was located in the boiler room.

Sanitary Waste - The storm and sanitary sewer piping is threaded galvanized piping. Some repairs have been made with HDPE piping with no-hub fittings.

A sewage ejector pit located in basement off of the Cafeteria/Gymnasium receives sewage from the basement area. It has a single pump that is beyond its service life and fails frequently according to the Building Engineer. The pump was inaccessible during the site visit, but the smell of sewage in the Cafeteria/Gymnasium was strong. The pump system should be replaced immediately to prevent flooding of the basement and a sanitary hazard where children eat. The pit is not sealed, but should be.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. The sewer piping has been in service for over 70 years and will require more frequent attention from the maintenance staff as time passes. The District should hire a qualified contractor to examine the sanitary waste piping using video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

Rain Water Drainage - Rain water drains from the roof are routed through mechanical chases in the building and appear to be original. Some of the original galvanized piping has been repaired with HDPE piping and no-hub fittings. The drain piping should be inspected by a qualified contractor and repaired as necessary.

MECHANICAL:

Energy Supply - The oil supply is stored in an 8,000 gallon underground storage tank (UST) located in the paved play area behind the school. Duplex pumps located in the basement circulate oil through the system. Oil is used as the only fuel. The supply should be tested for quality on a regular schedule. USTs have an anticipated service life of 20 years.

Heat Generating Systems - Low pressure steam is generated at a maximum of 15 lbs/sq. in., typically 5-7 lbs/sq. in., by two 135HP Weil-McLain 94 cast iron sectional boilers, installation date unknown, but most likely in the 1960s. One boiler

can handle the load in normal winter weather conditions. Each boiler is equipped with a Power Flame burner designed to operate on fuel oil and installed in 2015. Combustion air makeup is supplied by louvers equipped with motorized dampers. Burner controls provide full modulation with electronic ignition and digital flame sensing. Burner oil pumps are loose and not driven by the fan motor. The Building Engineer reports the system does not lose a significant amount of condensate due to failed traps, which is made up with chemically treated city water. Cast iron sectional boilers have an anticipated service life of 35 years or more; as these units have been in service approximately 50 plus years need to be replaced. The boilers are operational but should be replaced in the next 3 years. The condensate receiver is installed in the basement. The boiler feed pump and tank assembly is installed in the boiler room. No serious problems were reported with steam leaking into the system from failed steam traps.

Distribution Systems - Steam piping is black steel (ASTM A53) with welded fittings. The condensate piping is Schedule 80 black steel with threaded fittings. Steam and condensate piping mains from the basement level runs up through the building to the radiators on all three floors. The distribution piping has been in use well beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes. The District should hire a qualified contractor to examine the steam and condensate piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years.

Two pipe cast iron radiators provide heating for the majority of classrooms, offices, and hallways. These radiators are well beyond their service life and original to the building. Ventilation for the building is provided by opening windows, which does not meet current codes for outdoor air ventilation. A new heating system should be installed to meet ventilation requirements and achieve more efficient operation. The new units should be designed for quiet operation and equipped with hot water coils, chilled water coils, and integral heat exchangers, where applicable, to introduce outdoor air to the building.

A kitchen hood with integral fire suppression system, operated by a Range Guard control system, is installed above the gas fired cooking equipment. There is no outdoor air make-up system installed. An automatic gas shutoff valve was installed with kitchen hood equipment. The equipment is within its service life.

Two exhaust fans serving the first through third floor restrooms are operational according to the Building Engineer and are located on the roof. The unisex restrooms on the first and second floor are served by an exhaust fan located on the second floor roof. The kitchen has a dedicated exhaust fan located on the second floor roof. These fans are within their service life.

Ventilation should be provided for the Cafeteria/Gymnasium by installing a constant volume air handling unit with distribution ductwork and registers. For the administration offices a fan coil air handling unit should be hung from the structure with outdoor air ducted to the unit from louvers in the window openings. Ventilation should be provided for the Auditorium by installing a constant volume air handling unit with distribution ductwork and registers. These units would be equipped with hot water heating coils and chilled water cooling coils. Steam converters would be installed in the existing boiler room with circulating pumps, distribution piping and controls to provide heating hot water for the new coils.

Terminal & Package Units - Several of the classrooms in the school building have window air conditioning units that have an anticipated service life of only 10 years. Installing a 150 ton air-cooled chiller with pumps located in a mechanical room and chilled water distribution piping could supply more reliable air conditioning for the building with a much longer service life.

A Mitsubishi split system air conditioning system provided cooling to the LAN room located on the second floor. The installation date of this unit is unknown; the anticipated service life of a split system air conditioner is 15 years. The district should budget to replace this unit within the next 7-10 years.

Controls & Instrumentation - The original pneumatic systems still provide basic control functions. Pneumatic room thermostats are intended to control the steam radiator control valves. In reality the radiator control valves are wide open and heating control is achieved via the boilers. Pneumatic control air is supplied from a duplex Honeywell compressor

and air dryer located in the mechanical room. The pneumatic systems are beyond their service life and require too much attention from the maintenance staff. The original control valves and pneumatic actuators are beyond their service life and should be rebuilt or replaced. These controls should be converted to DDC.

A new building automation system (BAS) with modern DDC modules and communications network should be installed to serve the HVAC systems in this building to improve reliability and energy efficiency. An interface should be provided with the preferred system in use throughout the District.

Sprinklers - The school building is NOT covered by an automatic sprinkler system. Installing a sprinkler system with quick response type heads should reduce insurance costs by providing protection for the property investment. A fire pump may be required depending on the available city water pressure.

ELECTRICAL:

Site Electrical Service - The present electrical service is from Medium Voltage overhead lines (13.2KV) on wooden poles along Clear Field St. There is a pole top transformer to step down the voltage to 120V/240V, 2-phase. Overhead lines are brought down on the face of the pole and run underground in conduit into an underground Manhole close to the school entrance. The underground conduit is extended to the building wall and penetrates into the basement in the boiler/electrical room. The main service is metered at 120V/240V. The electrical service entrance room is part of the basement of the building near Clear Field St. The utility main fused disconnect switch and utility metering is in this electrical room. There is much other electrical equipment also housed in the electrical room. These include the 75 KVA dry type phase convertor transformer, main distribution switchboard. There is no emergency generator. The main switchboard is at maximum capacity and has no more room for growth. It has reached the end of service life (50+ years), and Building Engineer complained about lack of capacity.

Distribution System and Raceway System- The distribution system is both 120V single phase and 120V/208V three phase. There are two 120V distribution panels on each floor for lighting and receptacles. These panels are old and have reached the end of service life. The raceways are mainly conduits run above the ceiling.

Receptacles - There is inadequate number of receptacles in classrooms, multi-purpose room, computer room, etc. Two receptacles on each wall of class rooms and other purpose rooms are needed. Also, a wire-mold system with receptacles on every 3’ for the computer room is necessary.

Lighting- The building has a mix of T-8 and outdated T-12 lighting with fixtures that are obsolete.

Fire Alarm System – The present Fire Alarm system is adequate and it is only 2 years old.

Telephone/LAN – The present telephone system is adequate.

Public Address/Intercom/Paging – Although the PA system is not working, the school uses the telephone systems for public announcement. This system is working adequately for most part.

Clock and Program System – The present clocks are not functioning properly.

Television System - The present Television system is adequate.

Security System – There is no security system.

Emergency Power System – There is no emergency power system.

Emergency Lighting System / Exit Lighting- The emergency lighting and exit lighting is inadequate throughout each floor and stairways.

Lightning Protection System- There is adequate Lightning Protection System.

Grounding System - The present grounding system is adequate

Site Lighting - The present Site Lighting System is adequate

Site Video Surveillance - The present Site Video Surveillance System is inadequate with no existing cameras.

Site Paging - The present Site Paging System is adequate

GROUNDS (SITE):

There is no parking lot at the site. Most of the stone stoops and stairs from the sidewalk have deteriorated joints with missing mortar or sealant.

Playground adjacent to the building is in poor condition, paving is cracked and deteriorated; there is no playground equipment. Original perimeter fences are generally in good condition. The landscaping is minimal along West side of the building consisting of grass and shrubs in poor condition.

ACCESSIBILITY:

The building does not have accessible entrance and accessible routes due to grade to first floor separation and absence of elevator. The toilets are equipped with accessible fixtures, partitions and accessories, such as grab bars and accessible partitions. Most of the doors in the building do not have ADA required door handles.

RECOMMENDATIONS:

- Repair deteriorated structural roof slabs at penthouse
- Repair cracks in stone and brick masonry including chimney, tuck-point walls
- Install all new roofing system including insulation; tear-down existing roofing; install flashing, counter flashing and reglets
- Replace all windows
- Replace exterior doors
- Replace all suspended acoustical ceilings
- Repair and repaint exposed ceilings
- Repair (20% area) and repaint all interior walls
- Repair & refinish hardwood flooring
- Replace VAT tile flooring
- Replace VCT tile flooring
- Install new signage throughout
- Install 3000 lb traction elevator serving all floors and basement
- Provide ADA compliant ramp at one entrance (location TBD)
- Provide wheelchair lift at main entrance stair (from stair stoop to first floor)
- Provide ADA compliant hardware on interior doors
- Resurface playground
- Reset stone stoops and stairs at all entrances
- Replace the wall hung drinking fountains and integral refrigerated coolers in the corridors and at the restrooms. These units are beyond their service life and most are NOT accessible type.
- Replace existing vertical gas fired hot water heater with new gas fired hot water heater.
- Replace existing sewage ejector pump system and piping in the basement as it frequently fails and is located next to the Kitchen and Cafeteria.
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the two existing 4,524MBH cast iron boilers, which are beyond their service life, burners, and exhaust ductwork.
- Hire a qualified contractor to examine the steam and condensate piping, in service for over 50 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Remove the existing cast iron steam radiators and install fan coil units with hot and chilled water coils and a dedicated outdoor air system.
- Remove the window air conditioning units and install a 150 ton air-cooled chiller with chilled water distribution piping and pumps to supply more reliable air conditioning for the building with a much longer service life.
- Provide ventilation for the Cafeteria/Gymnasium by installing a constant volume air handling unit with distribution ductwork and registers.
- Provide ventilation for the administration offices by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.
- Provide ventilation for the Auditorium by installing a fan coil air handling unit hung from the structure with outdoor air ducted

to the unit from louvers in window openings.
- Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.
- Upgrade the existing electrical service to a new service with a new 1000 KVA dry-type Transformer, 13.2KV to 480V/277V, 3Ph. Install a new 1200A, 480V, 3 Ph. Switchboard. The new Main switchboard shall be sized to handle the existing loads plus any new HVAC loads. Install a new 500 KVA step down transformer from 480V to 120V/208V, and a main 120V/208V Panel Board for all the lighting/receptacle loads.
- Install 8 120V/208V panels to replace the existing panels (two in each floor). Also replace the power feeders, conduit & wire to the four panels from the new 120V/208V three phase main Panel Board.
- Install two receptacles in all of class rooms and other purpose rooms. Add a wire-mold system with receptacles on every 3' for the computer room.
- Install new lighting fixtures for all the class rooms, and other rooms. New fluorescent lighting (T-5) will be adequate; however, using the state-of-the-art LED lighting will improve the energy usage.
- Install a new Automated Fire Alarm System to be located in the new Electrical Room.
- Install a new clock system.
- Install a new emergency power system (100 KVA generator).
- Install new battery packed emergency lights and exit lights in all the hallways, stairways, and in each class room or other purpose rooms.
- Install a new Auditorium stage lighting and new sound system
- Install a new Security system with new cameras

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Active: | Open | Bldg Lot Tm: | Lot 1 / Tm 4 |
| Status: | Accepted by SDP | Team: | Tm 4 |
| Site ID: | S523001 | | |

## Site Condition Summary

The Table below shows the CI and FCI for each major system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

### Current Investment Requirement and Condition by Uniformat Classification

| UNIFORMAT Classification | RSLI% | FCI % | Current Repair |
|---|---|---|---|
| A10 - Foundations | 37.00 % | 0.00 % | $0.00 |
| A20 - Basement Construction | 37.00 % | 0.00 % | $0.00 |
| B10 - Superstructure | 37.00 % | 3.06 % | $162,170.72 |
| B20 - Exterior Enclosure | 58.61 % | 83.51 % | $3,093,871.47 |
| B30 - Roofing | 99.84 % | 88.64 % | $623,429.01 |
| C10 - Interior Construction | 35.11 % | 6.85 % | $93,505.45 |
| C20 - Stairs | 37.00 % | 0.00 % | $0.00 |
| C30 - Interior Finishes | 55.52 % | 37.70 % | $965,994.74 |
| D10 - Conveying | 0.00 % | 240.51 % | $476,062.05 |
| D20 - Plumbing | 41.83 % | 44.38 % | $494,445.11 |
| D30 - HVAC | 103.36 % | 102.29 % | $6,326,530.08 |
| D40 - Fire Protection | 105.71 % | 177.49 % | $795,384.24 |
| D50 - Electrical | 110.11 % | 62.48 % | $2,041,891.88 |
| E10 - Equipment | 37.14 % | 0.00 % | $0.00 |
| E20 - Furnishings | 32.50 % | 0.00 % | $0.00 |
| G20 - Site Improvements | 90.45 % | 138.62 % | $528,323.10 |
| G40 - Site Electrical Utilities | 38.61 % | 0.00 % | $0.00 |
| **Totals:** | **67.14 %** | **54.20 %** | **$15,601,607.85** |

### 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) |
|---|---|---|---|---|---|---|---|
| B523001;Conwell | 55,600 | 53.26 | $1,449,499.20 | $3,768,377.87 | $5,606,675.50 | $986,763.96 | $3,261,968.22 |
| G523001;Grounds | 24,000 | 108.82 | $0.00 | $163,341.94 | $0.00 | $364,981.16 | $0.00 |
| **Total:** | | **54.20** | **$1,449,499.20** | **$3,931,719.81** | **$5,606,675.50** | **$1,351,745.12** | **$3,261,968.22** |

### Deficiencies By Priority

- 1 - Response Time (< 2 yr) - $1,449,499.20
- 2 - Response Time (2-3 yrs) - $3,931,719.81
- 3 - Response Time (3-4 yrs) - $5,606,675.50
- 4 - Response Time (4-5 yrs) - $1,351,745.12
- 5 - Response Time (> 5 yrs) - $3,261,968.22

**Budget Estimate Total: $15,601,607.85**

## Executive Summary

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

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

| | |
|---|---|
| Function: | Middle School |
| Gross Area (SF): | 55,600 |
| Year Built: | 1926 |
| Last Renovation: | |
| Replacement Value: | $28,299,720 |
| Repair Cost: | $15,073,284.75 |
| Total FCI: | 53.26 % |
| Total RSLI: | 66.93 % |

**Description:**

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Active: | Open | Bldg ID: | B523001 |
| Sewage Ejector: | No | Status: | Accepted by SDP |
| Site ID: | S523001 | | |

## Condition Summary

The Table below shows the CI and FCI for each major building system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

| UNIFORMAT Classification | RSLI % | FCI % | Current Repair Cost |
|---|---|---|---|
| A10 - Foundations | 37.00 % | 0.00 % | $0.00 |
| A20 - Basement Construction | 37.00 % | 0.00 % | $0.00 |
| B10 - Superstructure | 37.00 % | 3.06 % | $162,170.72 |
| B20 - Exterior Enclosure | 58.61 % | 83.51 % | $3,093,871.47 |
| B30 - Roofing | 99.84 % | 88.64 % | $623,429.01 |
| C10 - Interior Construction | 35.11 % | 6.85 % | $93,505.45 |
| C20 - Stairs | 37.00 % | 0.00 % | $0.00 |
| C30 - Interior Finishes | 55.52 % | 37.70 % | $965,994.74 |
| D10 - Conveying | 0.00 % | 240.51 % | $476,062.05 |
| D20 - Plumbing | 41.83 % | 44.38 % | $494,445.11 |
| D30 - HVAC | 103.36 % | 102.29 % | $6,326,530.08 |
| D40 - Fire Protection | 105.71 % | 177.49 % | $795,384.24 |
| D50 - Electrical | 110.11 % | 62.48 % | $2,041,891.88 |
| E10 - Equipment | 37.14 % | 0.00 % | $0.00 |
| E20 - Furnishings | 32.50 % | 0.00 % | $0.00 |
| **Totals:** | **66.93 %** | **53.26 %** | **$15,073,284.75** |

## Condition Detail

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

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

## System Listing

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

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

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

| System Code | System Description | Unit Price $ | UoM | Qty | Life | Year Installed | Calc Next Renewal Year | Next Renewal Year | RSLI% | FCI% | RSL | eCR | Deficiency $ | Replacement Value $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A1010 | Standard Foundations | $23.16 | S.F. | 55,600 | 100 | 1926 | 2026 | 2052 | 37.00 % | 0.00 % | 37 | | | $1,287,696 |
| A1030 | Slab on Grade | $5.17 | S.F. | 55,600 | 100 | 1926 | 2026 | 2052 | 37.00 % | 0.00 % | 37 | | | $287,452 |
| A2010 | Basement Excavation | $4.36 | S.F. | 55,600 | 100 | 1926 | 2026 | 2052 | 37.00 % | 0.00 % | 37 | | | $242,416 |
| A2020 | Basement Walls | $10.05 | S.F. | 55,600 | 100 | 1926 | 2026 | 2052 | 37.00 % | 0.00 % | 37 | | | $558,780 |
| B1010 | Floor Construction | $85.94 | S.F. | 55,600 | 100 | 1926 | 2026 | 2052 | 37.00 % | 3.39 % | 37 | | $162,170.72 | $4,778,264 |
| B1020 | Roof Construction | $9.26 | S.F. | 55,600 | 100 | 1926 | 2026 | 2052 | 37.00 % | 0.00 % | 37 | | | $514,856 |
| B2010 | Exterior Walls | $43.78 | S.F. | 55,600 | 100 | 1926 | 2026 | 2052 | 37.00 % | 30.24 % | 37 | | $736,199.96 | $2,434,168 |
| B2020 | Exterior Windows | $21.40 | S.F. | 55,600 | 40 | 1926 | 1966 | 2055 | 100.00 % | 187.43 % | 40 | | $2,230,169.02 | $1,189,840 |
| B2030 | Exterior Doors | $1.45 | S.F. | 55,600 | 25 | 1926 | 1951 | 2040 | 100.00 % | 158.15 % | 25 | | $127,502.49 | $80,620 |
| B3010105 | Built-Up | $37.76 | S.F. | 18,538 | 20 | 1995 | 2015 | 2035 | 100.00 % | 89.06 % | 20 | | $623,429.01 | $699,995 |
| B3010120 | Single Ply Membrane | $38.73 | S.F. | | 0 | | | | 0.00 % | 0.00 % | | | | $0 |
| B3010130 | Preformed Metal Roofing | $54.22 | S.F. | | 0 | | | | 0.00 % | 0.00 % | | | | $0 |
| B3010140 | Shingle & Tile | $38.73 | S.F. | | 0 | | | | 0.00 % | 0.00 % | | | | $0 |
| B3020 | Roof Openings | $0.06 | S.F. | 55,600 | 30 | 1926 | 1956 | 2035 | 66.67 % | 0.00 % | 20 | | | $3,336 |
| C1010 | Partitions | $17.91 | S.F. | 55,600 | 100 | 1926 | 2026 | 2052 | 37.00 % | 0.00 % | 37 | | | $995,796 |
| C1020 | Interior Doors | $3.51 | S.F. | 55,600 | 40 | 1926 | 1966 | 2027 | 30.00 % | 32.23 % | 12 | | $62,892.35 | $195,156 |
| C1030 | Fittings | $3.12 | S.F. | 55,600 | 40 | 1926 | 1966 | 2027 | 30.00 % | 17.65 % | 12 | | $30,613.10 | $173,472 |
| C2010 | Stair Construction | $1.41 | S.F. | 55,600 | 100 | 1926 | 2026 | 2052 | 37.00 % | 0.00 % | 37 | | | $78,396 |

# Site Assessment Report - B523001;Conwell

| System Code | System Description | Unit Price $ | UoM | Qty | Life | Year Installed | Calc Next Renewal Year | Next Renewal Year | RSLI% | FCI% | RSL | eCR | Deficiency $ | Replacement Value $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C3010230 | Paint & Covering | $13.21 | S.F. | 55,600 | 10 | 1926 | 1936 | 2023 | 80.00 % | 29.11 % | 8 | | $213,789.60 | $734,476 |
| C3010231 | Vinyl Wall Covering | $0.97 | S.F. | 55,600 | 15 | 1926 | 1941 | 2028 | 86.67 % | 0.00 % | 13 | | | $53,932 |
| C3010232 | Wall Tile | $2.63 | S.F. | 55,600 | 30 | 1926 | 1956 | 2028 | 43.33 % | 0.00 % | 13 | | | $146,228 |
| C3020411 | Carpet | $7.30 | S.F. | | 10 | | | | 0.00 % | 0.00 % | | | | $0 |
| C3020412 | Terrazzo & Tile | $75.52 | S.F. | | 50 | | | | 0.00 % | 0.00 % | | | | $0 |
| C3020413 | Vinyl Flooring | $9.68 | S.F. | 13,900 | 20 | 1926 | 1946 | 2037 | 110.00 % | 132.11 % | 22 | | $177,750.75 | $134,552 |
| C3020414 | Wood Flooring | $22.27 | S.F. | 14,700 | 25 | 1926 | 1951 | 2027 | 48.00 % | 55.49 % | 12 | | $181,645.25 | $327,369 |
| C3020415 | Concrete Floor Finishes | $0.97 | S.F. | | 50 | | | | 0.00 % | 0.00 % | | | | $0 |
| C3030 | Ceiling Finishes | $20.97 | S.F. | 55,600 | 25 | 1926 | 1951 | 2024 | 36.00 % | 33.69 % | 9 | | $392,809.14 | $1,165,932 |
| D1010 | Elevators and Lifts | $3.56 | S.F. | 55,600 | 35 | | | | 0.00 % | 240.51 % | | | $476,062.05 | $197,936 |
| D2010 | Plumbing Fixtures | $13.52 | S.F. | 55,600 | 35 | 1926 | 1961 | 2025 | 28.57 % | 8.48 % | 10 | | $63,707.91 | $751,712 |
| D2020 | Domestic Water Distribution | $1.68 | S.F. | 55,600 | 25 | 1926 | 1951 | 2025 | 40.00 % | 26.20 % | 10 | | $24,473.55 | $93,408 |
| D2030 | Sanitary Waste | $2.52 | S.F. | 55,600 | 30 | 1926 | 1956 | 2047 | 106.67 % | 216.57 % | 32 | | $303,445.67 | $140,112 |
| D2040 | Rain Water Drainage | $2.32 | S.F. | 55,600 | 30 | 1926 | 1956 | 2030 | 50.00 % | 79.71 % | 15 | | $102,817.98 | $128,992 |
| D3020 | Heat Generating Systems | $18.67 | S.F. | 55,600 | 35 | 1960 | 1995 | 2052 | 105.71 % | 93.12 % | 37 | | $966,604.67 | $1,038,052 |
| D3030 | Cooling Generating Systems | $24.48 | S.F. | 55,600 | 28 | | | 2045 | 107.14 % | 63.79 % | 30 | | $868,290.77 | $1,361,088 |
| D3040 | Distribution Systems | $42.99 | S.F. | 55,600 | 25 | 1926 | 1951 | 2042 | 108.00 % | 138.02 % | 27 | | $3,298,900.87 | $2,390,244 |
| D3050 | Terminal & Package Units | $11.60 | S.F. | 55,600 | 15 | 2010 | 2025 | | 66.67 % | 0.00 % | 10 | | | $644,960 |
| D3060 | Controls & Instrumentation | $13.50 | S.F. | 55,600 | 20 | 1926 | 1946 | 2037 | 110.00 % | 158.90 % | 22 | | $1,192,733.77 | $750,600 |
| D4010 | Sprinklers | $7.05 | S.F. | 55,600 | 35 | | | 2052 | 105.71 % | 202.91 % | 37 | | $795,384.24 | $391,980 |
| D4020 | Standpipes | $1.01 | S.F. | 55,600 | 35 | | | 2052 | 105.71 % | 0.00 % | 37 | | | $56,156 |
| D5010 | Electrical Service/Distribution | $9.70 | S.F. | 55,600 | 30 | 1926 | 1956 | 2047 | 106.67 % | 77.62 % | 32 | | $418,636.06 | $539,320 |
| D5020 | Lighting and Branch Wiring | $34.68 | S.F. | 55,600 | 20 | 1926 | 1946 | 2037 | 110.00 % | 51.94 % | 22 | | $1,001,478.40 | $1,928,208 |
| D5030 | Communications and Security | $12.99 | S.F. | 55,600 | 15 | 1926 | 1941 | 2032 | 113.33 % | 55.64 % | 17 | | $401,859.88 | $722,244 |
| D5090 | Other Electrical Systems | $1.41 | S.F. | 55,600 | 30 | 1926 | 1956 | 2047 | 106.67 % | 280.52 % | 32 | | $219,917.54 | $78,396 |
| E1020 | Institutional Equipment | $4.82 | S.F. | 55,600 | 35 | 1926 | 1961 | 2028 | 37.14 % | 0.00 % | 13 | | | $267,992 |
| E1090 | Other Equipment | $11.10 | S.F. | 55,600 | 35 | 1926 | 1961 | 2028 | 37.14 % | 0.00 % | 13 | | | $617,160 |
| E2010 | Fixed Furnishings | $2.13 | S.F. | 55,600 | 40 | 1926 | 1966 | 2028 | 32.50 % | 0.00 % | 13 | | | $118,428 |
| | | | | | | | | **Total** | **66.93 %** | **53.26 %** | | | **$15,073,284.75** | **$28,299,720** |

## System Notes

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

**System:** D5010 - Electrical Service/Distribution — This system contains no images

**Note:** Two 75 KVA Phase changer transformer (single phase to three phase).

## 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:** | **$15,073,285** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$1,023,454** | **$1,673,404** | **$2,202,797** | **$19,972,940** |
| *** 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** | $162,171 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$162,171** |
| **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** | $736,200 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$736,200** |
| **B2020 - Exterior Windows** | $2,230,169 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$2,230,169** |
| **B2030 - Exterior Doors** | $127,502 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$127,502** |
| **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** | $623,429 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$623,429** |
| **B3010120 - Single Ply Membrane** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B3010130 - Preformed Metal Roofing** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B3010140 - Shingle & Tile** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B3020 - Roof Openings** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C - Interiors** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C10 - Interior Construction** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C1010 - Partitions** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |

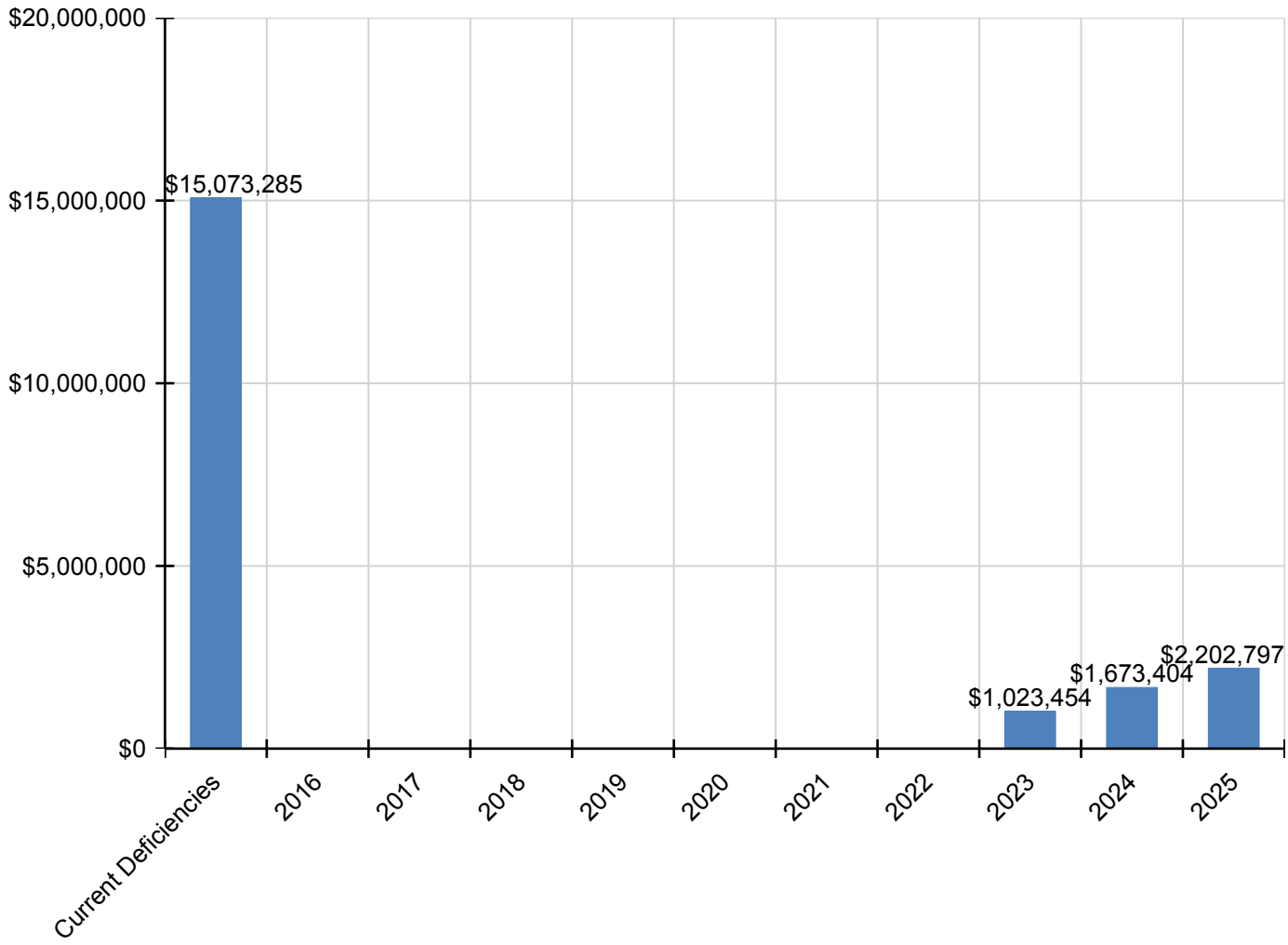
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **C1020 - Interior Doors** | $62,892 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$62,892** |
| **C1030 - Fittings** | $30,613 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$30,613** |
| **C20 - Stairs** | $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** | $213,790 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $1,023,454 | $0 | $0 | **$1,237,244** |
| **C3010231 - Vinyl Wall Covering** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3010232 - Wall Tile** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020 - Floor Finishes** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020411 - Carpet** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020412 - Terrazzo & Tile** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020413 - Vinyl Flooring** | $177,751 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$177,751** |
| **C3020414 - Wood Flooring** | $181,645 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$181,645** |
| **C3020415 - Concrete Floor Finishes** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3030 - Ceiling Finishes** | $392,809 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $1,673,404 | $0 | **$2,066,213** |
| **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** | $476,062 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$476,062** |
| **D20 - Plumbing** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D2010 - Plumbing Fixtures** | $63,708 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $1,111,262 | **$1,174,970** |
| **D2020 - Domestic Water Distribution** | $24,474 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $138,086 | **$162,560** |
| **D2030 - Sanitary Waste** | $303,446 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$303,446** |
| **D2040 - Rain Water Drainage** | $102,818 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$102,818** |
| **D30 - HVAC** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D3020 - Heat Generating Systems** | $966,605 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$966,605** |
| **D3030 - Cooling Generating Systems** | $868,291 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$868,291** |
| **D3040 - Distribution Systems** | $3,298,901 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$3,298,901** |
| **D3050 - Terminal & Package Units** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $953,450 | **$953,450** |
| **D3060 - Controls & Instrumentation** | $1,192,734 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$1,192,734** |
| **D40 - Fire Protection** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D4010 - Sprinklers** | $795,384 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$795,384** |
| **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** | $418,636 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$418,636** |
| **D5020 - Lighting and Branch Wiring** | $1,001,478 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$1,001,478** |
| **D5030 - Communications and Security** | $401,860 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$401,860** |
| **D5090 - Other Electrical Systems** | $219,918 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$219,918** |
| **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** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **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** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |

** Indicates non-renewable system*

## Forecasted Sustainment Requirement

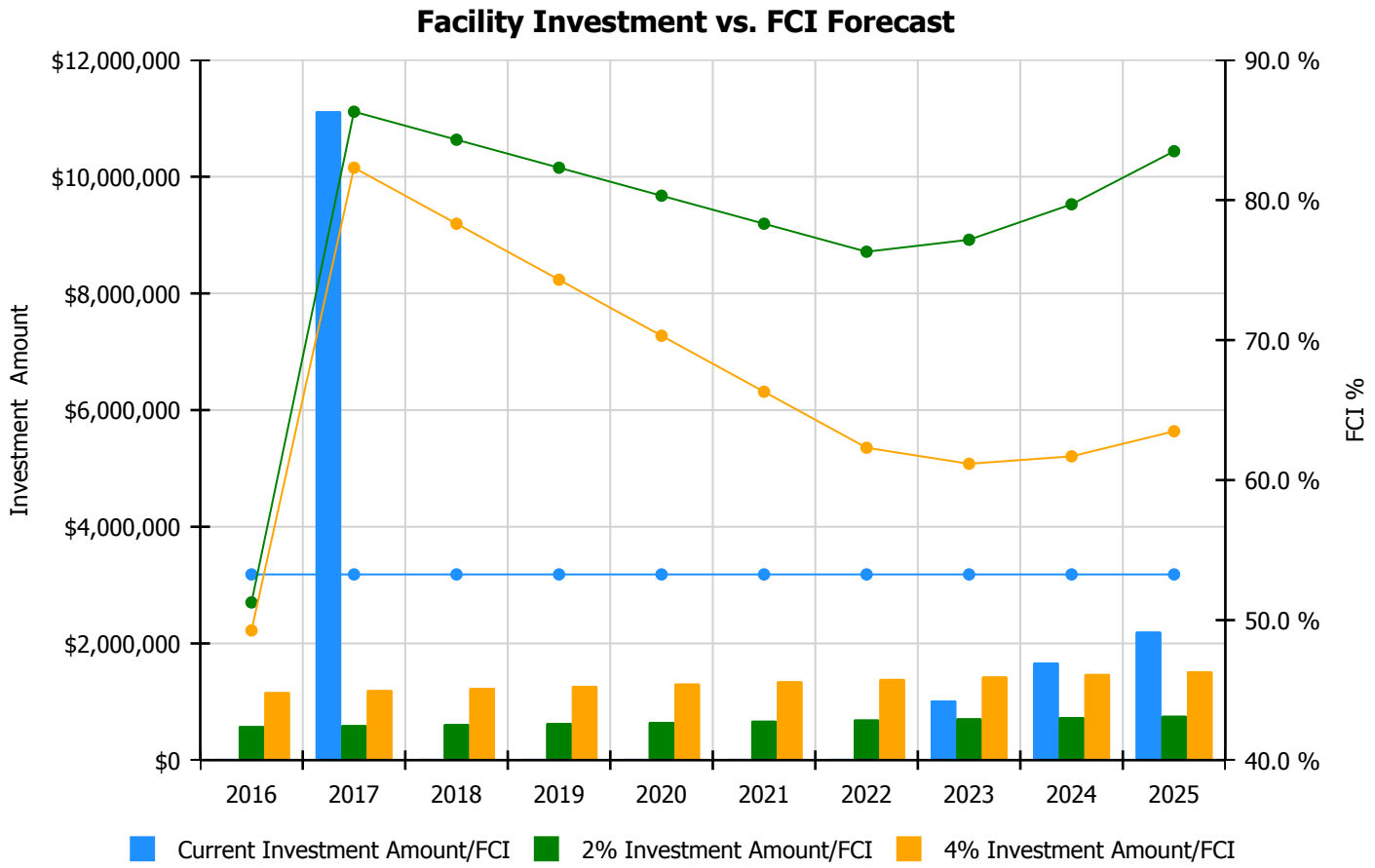
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



## 10 Year FCI Forecast by Investment Scenario

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

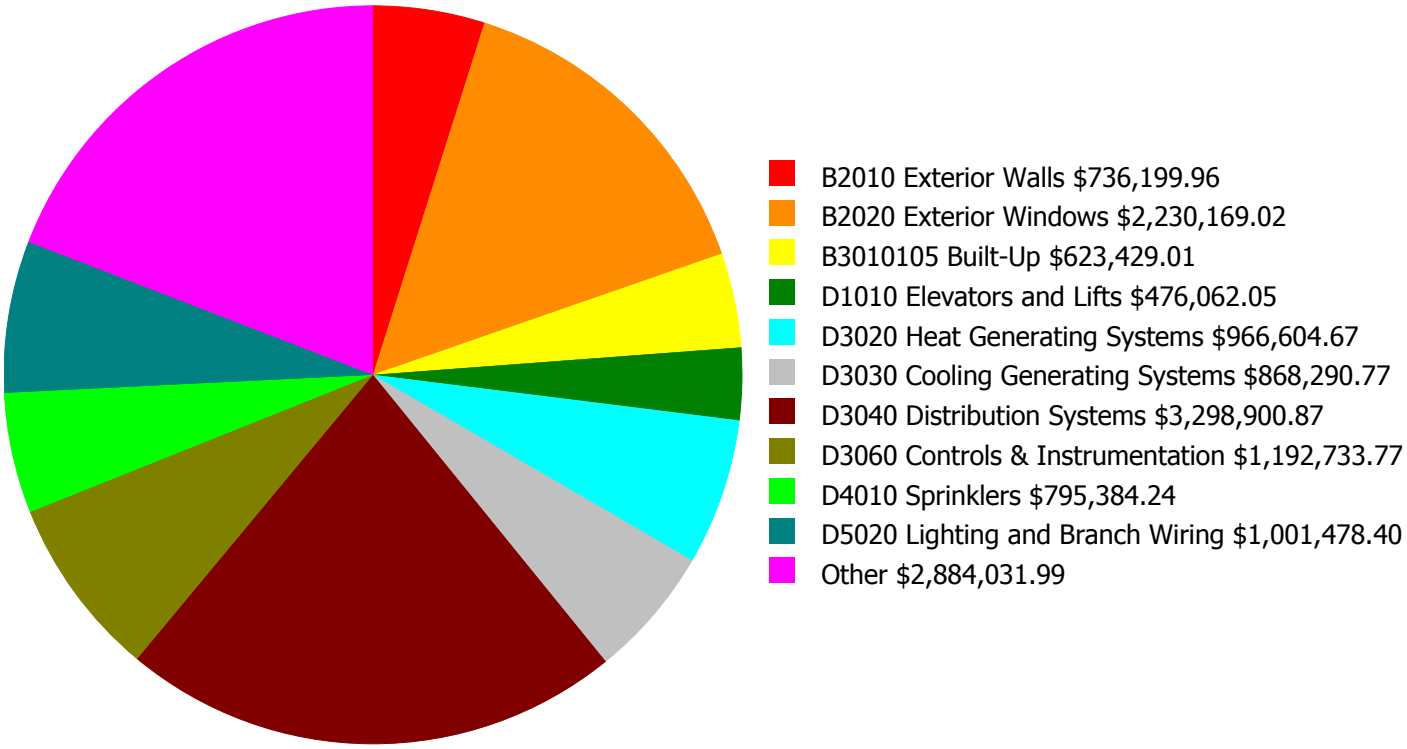
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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




| Year | Investment Amount Current FCI - 53.26% | 2% Investment | | 4% Investment | |
|---|---|---|---|---|---|
| | | Amount | FCI | Amount | FCI |
| 2016 | $0 | $582,974.00 | 51.26 % | $1,165,948.00 | 49.26 % |
| 2017 | $11,122,525 | $600,463.00 | 86.31 % | $1,200,927.00 | 82.31 % |
| 2018 | $0 | $618,477.00 | 84.31 % | $1,236,955.00 | 78.31 % |
| 2019 | $0 | $637,032.00 | 82.31 % | $1,274,063.00 | 74.31 % |
| 2020 | $0 | $656,143.00 | 80.31 % | $1,312,285.00 | 70.31 % |
| 2021 | $0 | $675,827.00 | 78.31 % | $1,351,654.00 | 66.31 % |
| 2022 | $0 | $696,102.00 | 76.31 % | $1,392,203.00 | 62.31 % |
| 2023 | $1,023,454 | $716,985.00 | 77.16 % | $1,433,970.00 | 61.16 % |
| 2024 | $1,673,404 | $738,494.00 | 79.70 % | $1,476,989.00 | 61.70 % |
| 2025 | $2,202,797 | $760,649.00 | 83.49 % | $1,521,298.00 | 63.49 % |
| **Total:** | **$16,022,181** | **$6,683,146.00** | | **$13,366,292.00** | |

## Deficiency Summary by System

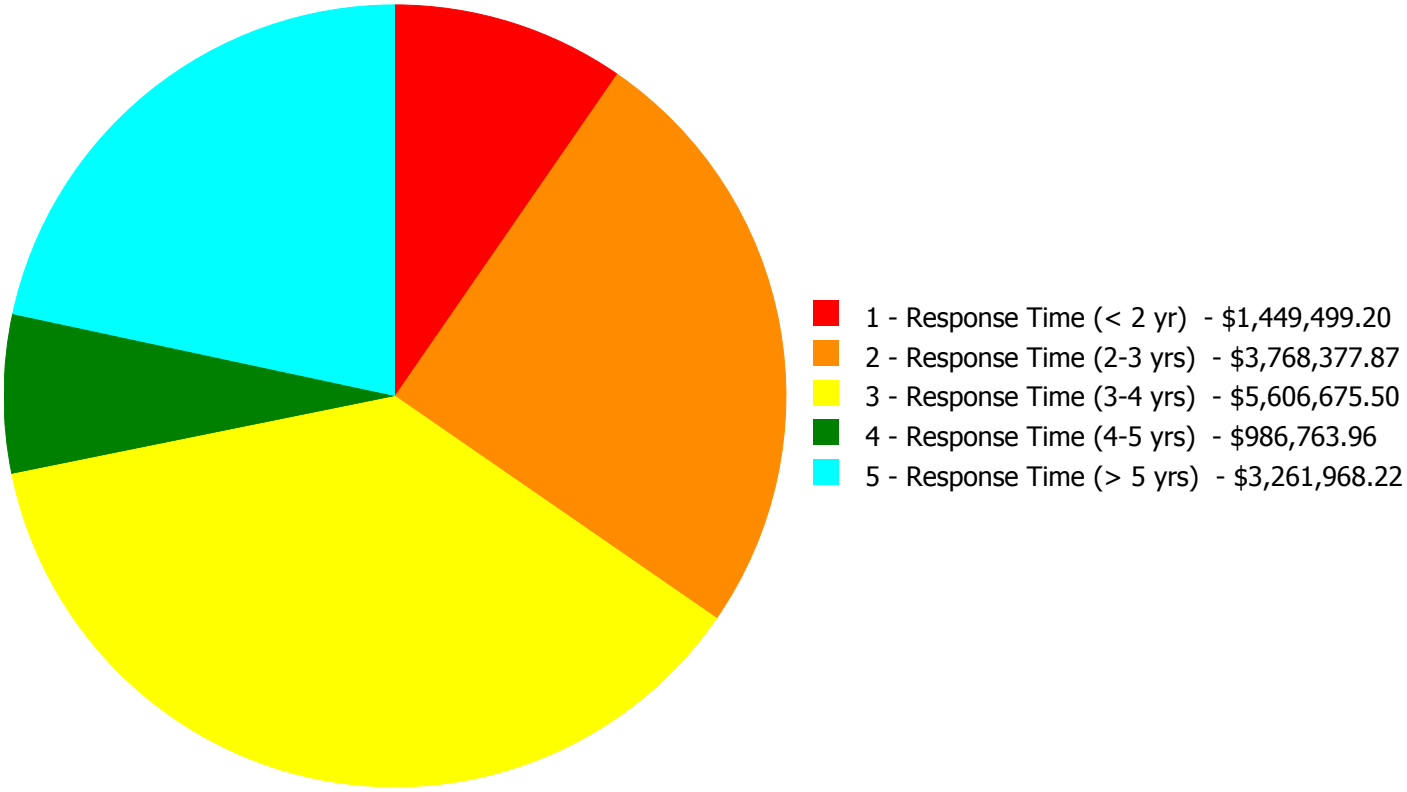
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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




**Budget Estimate Total: $15,073,284.75**

## 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: $15,073,284.75**

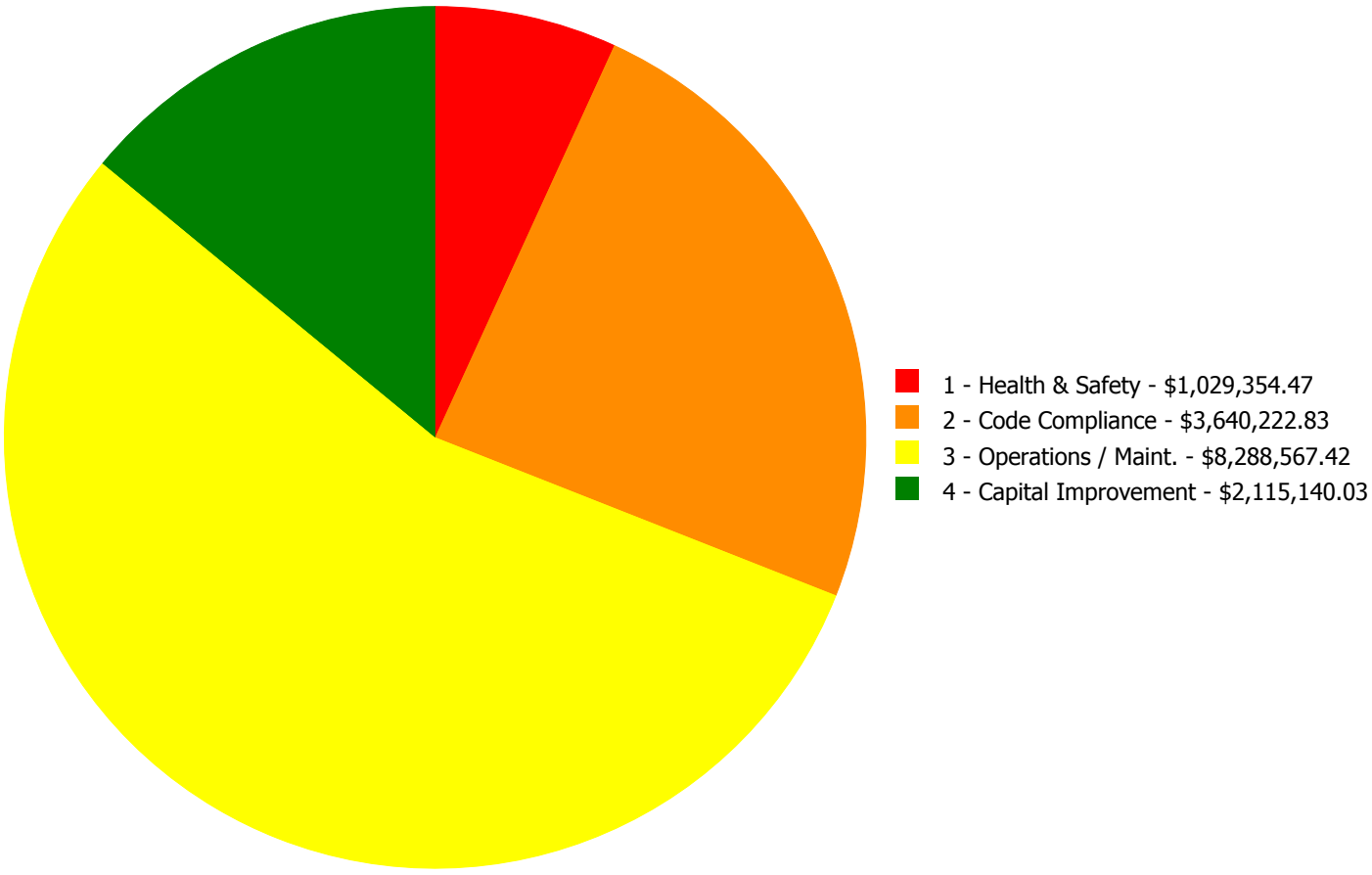
## Deficiency By Priority Investment Table

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

| System Code | System Description | 1 - Response Time (< 2 yr) | 2 - Response Time (2-3 yrs) | 3 - Response Time (3-4 yrs) | 4 - Response Time (4-5 yrs) | 5 - Response Time (> 5 yrs) | Total |
|---|---|---|---|---|---|---|---|
| B1010 | Floor Construction | $0.00 | $162,170.72 | $0.00 | $0.00 | $0.00 | $162,170.72 |
| B2010 | Exterior Walls | $0.00 | $0.00 | $736,199.96 | $0.00 | $0.00 | $736,199.96 |
| B2020 | Exterior Windows | $0.00 | $2,230,169.02 | $0.00 | $0.00 | $0.00 | $2,230,169.02 |
| B2030 | Exterior Doors | $0.00 | $0.00 | $0.00 | $127,502.49 | $0.00 | $127,502.49 |
| B3010105 | Built-Up | $623,429.01 | $0.00 | $0.00 | $0.00 | $0.00 | $623,429.01 |
| C1020 | Interior Doors | $0.00 | $0.00 | $62,892.35 | $0.00 | $0.00 | $62,892.35 |
| C1030 | Fittings | $0.00 | $0.00 | $0.00 | $0.00 | $30,613.10 | $30,613.10 |
| C3010230 | Paint & Covering | $0.00 | $0.00 | $0.00 | $213,789.60 | $0.00 | $213,789.60 |
| C3020413 | Vinyl Flooring | $0.00 | $51,566.67 | $0.00 | $0.00 | $126,184.08 | $177,750.75 |
| C3020414 | Wood Flooring | $0.00 | $0.00 | $0.00 | $0.00 | $181,645.25 | $181,645.25 |
| C3030 | Ceiling Finishes | $0.00 | $0.00 | $221,711.72 | $171,097.42 | $0.00 | $392,809.14 |
| D1010 | Elevators and Lifts | $0.00 | $0.00 | $476,062.05 | $0.00 | $0.00 | $476,062.05 |
| D2010 | Plumbing Fixtures | $0.00 | $60,633.52 | $3,074.39 | $0.00 | $0.00 | $63,707.91 |
| D2020 | Domestic Water Distribution | $0.00 | $24,473.55 | $0.00 | $0.00 | $0.00 | $24,473.55 |
| D2030 | Sanitary Waste | $30,685.95 | $272,759.72 | $0.00 | $0.00 | $0.00 | $303,445.67 |
| D2040 | Rain Water Drainage | $0.00 | $0.00 | $102,817.98 | $0.00 | $0.00 | $102,817.98 |
| D3020 | Heat Generating Systems | $0.00 | $966,604.67 | $0.00 | $0.00 | $0.00 | $966,604.67 |
| D3030 | Cooling Generating Systems | $0.00 | $0.00 | $0.00 | $0.00 | $868,290.77 | $868,290.77 |
| D3040 | Distribution Systems | $0.00 | $0.00 | $2,436,399.62 | $0.00 | $862,501.25 | $3,298,900.87 |
| D3060 | Controls & Instrumentation | $0.00 | $0.00 | $0.00 | $0.00 | $1,192,733.77 | $1,192,733.77 |
| D4010 | Sprinklers | $795,384.24 | $0.00 | $0.00 | $0.00 | $0.00 | $795,384.24 |
| D5010 | Electrical Service/Distribution | $0.00 | $0.00 | $216,965.85 | $201,670.21 | $0.00 | $418,636.06 |
| D5020 | Lighting and Branch Wiring | $0.00 | $0.00 | $947,362.91 | $54,115.49 | $0.00 | $1,001,478.40 |
| D5030 | Communications and Security | $0.00 | $0.00 | $183,271.13 | $218,588.75 | $0.00 | $401,859.88 |
| D5090 | Other Electrical Systems | $0.00 | $0.00 | $219,917.54 | $0.00 | $0.00 | $219,917.54 |
| | **Total:** | $1,449,499.20 | $3,768,377.87 | $5,606,675.50 | $986,763.96 | $3,261,968.22 | $15,073,284.75 |

## 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: $15,073,284.75**

## Deficiency Details by Priority

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

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

**System: B3010105 - Built-Up**

**Location:** Exterior
**Distress:** Building Envelope Integrity
**Category:** 3 - Operations / Maint.
**Priority:** 1 - Response Time (< 2 yr)
**Correction:** Remove and Replace Built Up Roof
**Qty:** 18,400.00
**Unit of Measure:** S.F.
**Estimate:** $623,429.01
**Assessor Name:** System
**Date Created:** 10/04/2015

**Notes:** Install all new roofing system including insulation; tear-down existing roofing; install flashing, counter flashing and reglets

**System: D2030 - Sanitary Waste**

**Location:** Boiler Room
**Distress:** Health Hazard / Risk
**Category:** 1 - Health & Safety
**Priority:** 1 - Response Time (< 2 yr)
**Correction:** Replace sanitary sewage ejector pit and pumps. (48" dia.)
**Qty:** 1.00
**Unit of Measure:** Ea.
**Estimate:** $30,685.95
**Assessor Name:** System
**Date Created:** 08/20/2015

**Notes:** Replace existing sewage ejector pump system and piping in the basement as it frequently fails and is located next to the Kitchen and Cafeteria.

**System: D4010 - Sprinklers**

**Location:** Throughout Building

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

**Category:** 1 - Health & Safety

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

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

**Qty:** 55,600.00

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

**Estimate:** $795,384.24

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.

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

**System: B1010 - Floor Construction**

**Location:** Roof slab

**Distress:** Damaged

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

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

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

**Qty:** 2,000.00

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

**Estimate:** $162,170.72

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Repair deteriorated structural roof slabs at penthouse

**System: B2020 - Exterior Windows**

**Location:** Exterior

**Distress:** Beyond Service Life

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

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

**Correction:** Remove and replace aluminum windows - pick the appropriate size and style and insert the number of units

**Qty:** 332.00

**Unit of Measure:** Ea.

**Estimate:** $2,230,169.02

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Replace all windows

**System: C3020413 - Vinyl Flooring**

**Location:** Interior

**Distress:** Beyond Service Life

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

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

**Correction:** Remove VAT and replace with VCT - SF of area

**Qty:** 3,400.00

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

**Estimate:** $51,566.67

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Replace VAT tile flooring

**System: D2010 - Plumbing Fixtures**

**Location:** Corridors

**Distress:** Beyond Service Life

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

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

**Correction:** Remove and Replace Water Fountains - without ADA new recessed alcove

**Qty:** 8.00

**Unit of Measure:** Ea.

**Estimate:** $60,633.52

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Replace the wall hung drinking fountains and integral refrigerated coolers in the corridors and at the restrooms. These units are beyond their service life and most are NOT accessible type.

**System: D2020 - Domestic Water Distribution**

**Location:** Boiler Room

**Distress:** Beyond Service Life

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

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

**Correction:** Replace instantaneous water heater

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $24,473.55

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Replace existing vertical gas fired hot water heater with new gas fired hot water heater.

**System: D2030 - Sanitary Waste**

**Location:** Throughout Building

**Distress:** Beyond Service Life

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

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

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

**Qty:** 55,600.00

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

**Estimate:** $272,759.72

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

**System: D3020 - Heat Generating Systems**

**Location:** Boiler Room

**Distress:** Beyond Service Life

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

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

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

**Qty:** 2.00

**Unit of Measure:** Ea.

**Estimate:** $966,604.67

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Replace the two existing 4,524MBH cast iron boilers, which are beyond their service life, burners, and exhaust ductwork.

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

**System: B2010 - Exterior Walls**

**Location:** Exterior

**Distress:** Building Envelope Integrity

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

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

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

**Qty:** 22,800.00

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

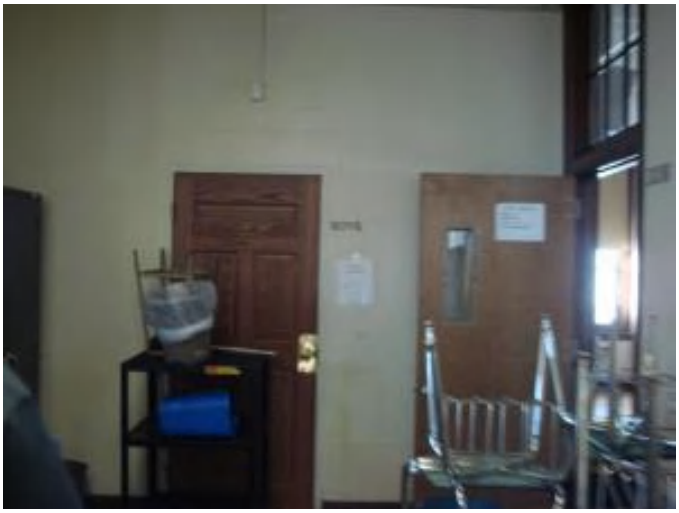
**Estimate:** $736,199.96

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Repair cracks in stone and brick masonry including chimney, tuck-point walls

**System: C1020 - Interior Doors**



**Location:** Interior

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

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

**Qty:** 113.00

**Unit of Measure:** Ea.

**Estimate:** $62,892.35

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Provide ADA compliant hardware on interior doors

**System: C3030 - Ceiling Finishes**

**Location:** Interior

**Distress:** Beyond Service Life

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

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

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

**Qty:** 14,700.00

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

**Estimate:** $221,711.72

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Replace all suspended acoustical ceilings

**System: D1010 - Elevators and Lifts**

This deficiency has no image.

**Location:** Interior

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Add interior elevator - 4 floors - adjust the electrical run lengths to hook up the elevator

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $392,870.03

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Install 3000 lb traction elevator serving all floors and basement

**System: D1010 - Elevators and Lifts**

This deficiency has no image.

**Location:** Interior

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Add interior hydraulic elevator - 2 floors - adjust the electrical run lengths to hook up the elevator

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $83,192.02

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Provide wheelchair lift at main entrance stair (from stair stoop to first floor)

**System: D2010 - Plumbing Fixtures**

**Location:** Restrooms

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

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

**Qty:** 18.00

**Unit of Measure:** Ea.

**Estimate:** $3,074.39

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Replace the lavatories in the restrooms with new code compliant fixtures.

**System: D2040 - Rain Water Drainage**

**Location:** Throughout Building

**Distress:** Beyond Service Life

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

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

**Correction:** Replace roof drains - per drain including piping

**Qty:** 4.00

**Unit of Measure:** Ea.

**Estimate:** $102,817.98

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

**System: D3040 - Distribution Systems**

**Location:** Throuout Builing

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

**Correction:** Provide classroom FC units and dedicated OA ventilation system. (20 clsrms)

**Qty:** 23.00

**Unit of Measure:** C

**Estimate:** $1,910,402.80

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Remove the existing cast iron steam radiators and install fan coil units with hot and chilled water coils and a dedicated outdoor air system.

**System: D3040 - Distribution Systems**

**Location:** Throughout Building

**Distress:** Beyond Service Life

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

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

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

**Qty:** 55,600.00

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

**Estimate:** $525,996.82

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Hire a qualified contractor to examine the steam and condensate piping, in service for over 50 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.

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

**Location:** Throughout the building

**Distress:** Beyond Service Life

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

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

**Correction:** Add Panelboard

**Qty:** 1.00

**Unit of Measure:** Ea.

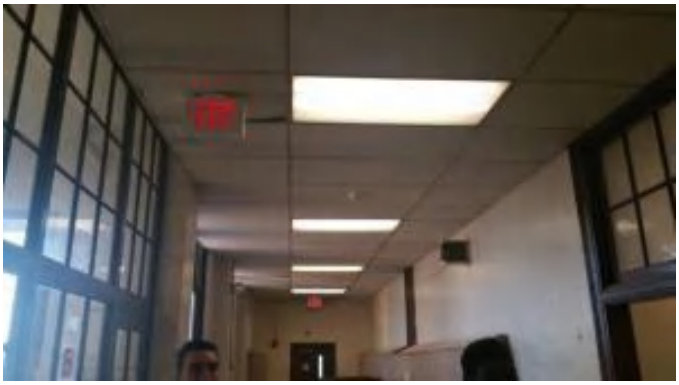
**Estimate:** $216,965.85

**Assessor Name:** System

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

**Notes:** . Install 8 120V/208V panels to replace the existing panels (two in each floor). Also replace the power feeders, conduit wire to the four panels from the new 120V/208V three phase main Panel Board.

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



**Location:** Throughout the building

**Distress:** Beyond Service Life

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

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

**Correction:** Replace Lighting Fixtures (SF)

**Qty:** 0.00

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

**Estimate:** $599,885.10

**Assessor Name:** System

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

**Notes:** Install new lighting fixtures for all the class rooms, and other rooms. New fluorescent lighting (T-5) will be adequate, however, using the state-of-the-art LED lighting will improve the energy usage.

---

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

**Location:** Throughout the building

**Distress:** Beyond Service Life

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

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

**Correction:** Replace Wiring Devices (SF) - surface mounted conduit and boxes

**Qty:** 0.00

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

**Estimate:** $347,477.81

**Assessor Name:** System

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

**Notes:** Install min of two receptacles (12' center) on each wall of the classrooms and other purpose rooms. Add a wire-mold system with receptacles on every 3’ for the computer room.

---

**System: D5030 - Communications and Security**

**Location:** Throughout the building

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

**Correction:** Replace fire alarm system

**Qty:** 1.00

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

**Estimate:** $183,271.13

**Assessor Name:** System

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

**Notes:** Install a new Automated Fire Alarm System to be located in the new Electrical Room.

**System: D5090 - Other Electrical Systems**

**Location:** Electrical Room (in the basement)

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

**Correction:** Add Standby Generator System

**Qty:** 1.00

**Unit of Measure:** Ea.

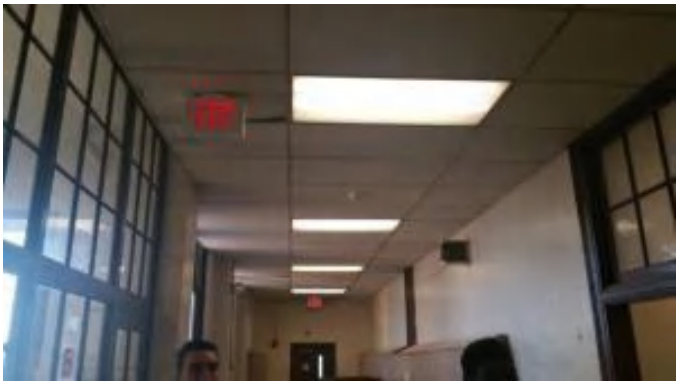
**Estimate:** $111,405.76

**Assessor Name:** System

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

**Notes:** Install a new emergency power system (100 KVA generator). The 100 KVA will have adequate capacity for any new loads including a new elevator, etc. Notes: 20% was added to cover the cost of conduit wiring. A typical emergency generator picture is shown since there is no emergency generator presently in the school. in school.

**System: D5090 - Other Electrical Systems**



**Location:** Throughout the building

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

**Category:** 1 - Health & Safety

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

**Correction:** Add Emergency/Exit Lighting

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $108,511.78

**Assessor Name:** System

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

**Notes:** Install new battery packed emergency lights and exit lights in all the hallways, stairways, and in each class room or other purpose rooms.

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

**System: B2030 - Exterior Doors**


**Location:** Exterior

**Distress:** Beyond Service Life

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

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

**Correction:** Remove and replace exterior doors - per leaf

**Qty:** 14.00

**Unit of Measure:** Ea.

**Estimate:** $127,502.49

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Replace exterior doors

**System: C3010230 - Paint & Covering**

**Location:** Interior

**Distress:** Beyond Service Life

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

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

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

**Qty:** 40,000.00

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

**Estimate:** $213,789.60

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Repair (20% area) and repaint all interior walls

**System: C3030 - Ceiling Finishes**

**Location:** Interior

**Distress:** Damaged

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

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

**Correction:** Repair and resurface plaster ceilings - 2 coats plaster

**Qty:** 29,800.00

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

**Estimate:** $171,097.42

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Repair and repaint exposed ceilings

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

**Location:** Electrical room inside the basement

**Distress:** Beyond Service Life

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

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

**Correction:** Add Electrical Switchgear and Distribution System

**Qty:** 0.00

**Unit of Measure:** Ea.

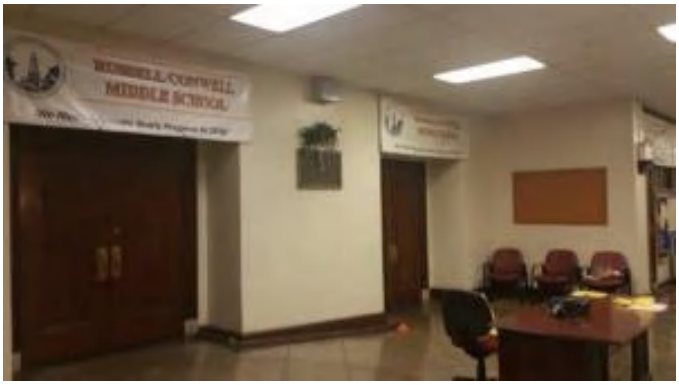
**Estimate:** $201,670.21

**Assessor Name:** System

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

**Notes:** Upgrade the existing electrical service to a new service with a new 1000 KVA dry-type Transformer, 13.2KV to 480V/277V, 3Ph. Install a new 1200A, 480V, 3 Ph. Switchboard. The new Main switchboard shall be sized to handle the existing loads plus any new HVAC loads. Install a new 500 KVA step down transformer from 480V to 120V/208V, and a main 120V/208V Panel Board for all the lighting/receptacle loads.

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



**Location:** In the Auditorium
**Distress:** Inadequate
**Category:** 4 - Capital Improvement
**Priority:** 4 - Response Time (4-5 yrs)
**Correction:** Add Lighting Fixtures
**Qty:** 1.00
**Unit of Measure:** Ea.
**Estimate:** $54,115.49
**Assessor Name:** System
**Date Created:** 08/11/2015

**Notes:** Install a new Auditorium stage lighting and new sound system

**System: D5030 - Communications and Security**

**Location:** Throughout the building
**Distress:** Beyond Service Life
**Category:** 3 - Operations / Maint.
**Priority:** 4 - Response Time (4-5 yrs)
**Correction:** Add/Replace Clock System or Components
**Qty:** 0.00
**Unit of Measure:** Ea.
**Estimate:** $123,816.25
**Assessor Name:** System
**Date Created:** 08/11/2015

**Notes:** Install a new clock system. Note: 10% was added to cover the cost of wiring.

**System: D5030 - Communications and Security**

**Location:** Indors/ Outdoors

**Distress:** Security Issue

**Category:** 1 - Health & Safety

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

**Correction:** Add/Replace Security System

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $94,772.50

**Assessor Name:** System

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

**Notes:** Install a new Security system with new cameras.

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

**System: C1030 - Fittings**

**Location:** Interior

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

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

**Qty:** 113.00

**Unit of Measure:** Ea.

**Estimate:** $30,613.10

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Install new signage throughout to meet requirements

**System: C3020413 - Vinyl Flooring**

**Location:** Interior

**Distress:** Beyond Service Life

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

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

**Correction:** Remove and replace VCT

**Qty:** 10,500.00

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

**Estimate:** $126,184.08

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Replace VCT tile flooring

**System: C3020414 - Wood Flooring**

**Location:** Interior

**Distress:** Beyond Service Life

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

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

**Correction:** Remove and replace partial area of wood flooring and refinish entire floor - set replacement area

**Qty:** 14,700.00

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

**Estimate:** $181,645.25

**Assessor Name:** System

**Date Created:** 10/04/2015

**Notes:** Repair refinish hardwood flooring

**System: D3030 - Cooling Generating Systems**

**Location:** Throughout Buildin

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

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

**Qty:** 55,600.00

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

**Estimate:** $868,290.77

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Remove the window air conditioning units and install a 150 ton air-cooled chiller with chilled water distribution piping and pumps to supply more reliable air conditioning for the building with a much longer service life.

**System: D3040 - Distribution Systems**

**Location:** Auditorium
**Distress:** Building / MEP Codes
**Category:** 2 - Code Compliance
**Priority:** 5 - Response Time (> 5 yrs)
**Correction:** Install HVAC unit for Auditorium (200 seat).
**Qty:** 300.00
**Unit of Measure:** Seat
**Estimate:** $427,628.15
**Assessor Name:** System
**Date Created:** 08/20/2015

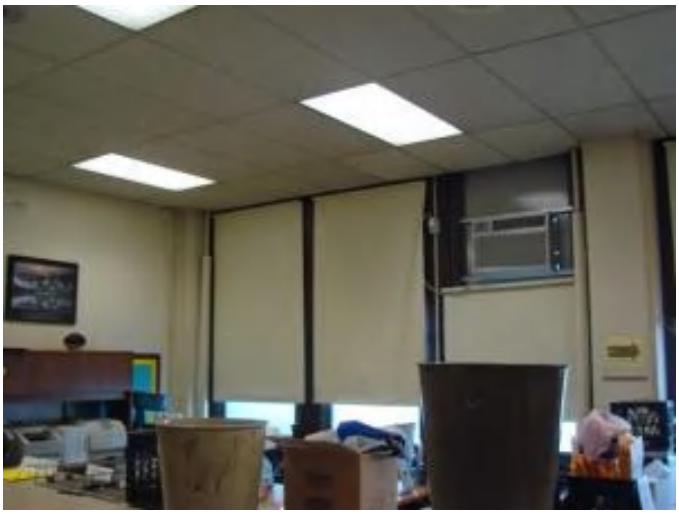
**Notes:** Provide ventilation for the Auditorium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.

**System: D3040 - Distribution Systems**

**Location:** Cafeteria/Gymnasium
**Distress:** Building / MEP Codes
**Category:** 2 - Code Compliance
**Priority:** 5 - Response Time (> 5 yrs)
**Correction:** Install HVAC unit for Cafeteria (850 students).
**Qty:** 483.00
**Unit of Measure:** Pr.
**Estimate:** $225,819.31
**Assessor Name:** System
**Date Created:** 08/20/2015

**Notes:** Provide ventilation for the Cafeteria/Gymnasium by installing a constant volume air handling unit with distribution ductwork and registers.

**System: D3040 - Distribution Systems**



**Location:** Admistration

**Distress:** Building / MEP Codes

**Category:** 2 - Code Compliance

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

**Correction:** Install HVAC unit for Administration (2000 students).

**Qty:** 483.00

**Unit of Measure:** Pr.

**Estimate:** $209,053.79

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Provide ventilation for the administration offices by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.

**System: D3060 - Controls & Instrumentation**

**Location:** Throughout Building

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

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

**Qty:** 55,600.00

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

**Estimate:** $1,192,733.77

**Assessor Name:** System

**Date Created:** 08/20/2015

**Notes:** Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.

## Equipment Inventory

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

| Subsystem | Inventory | Qty | UoM | Location | Manufacturer | Model Number | Serial Number | Barcode | Life | Install Date | Next Renewal | Raw Cost | Inventory Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D2020 Domestic Water Distribution | Pump, pressure booster system, 1 HP pump, includes diaphragm tank, control and pressure switch | 2.00 | Ea. | Boiler Room | Armstrong | | | | 25 | 2010 | 2035 | $9,262.50 | $20,377.50 |
| D3020 Heat Generating Systems | Boiler, gas/oil combination, cast iron, hot water, gross output, 4672 MBH, includes burners, controls and insulated jacket, packaged | 2.00 | Ea. | Boiler Room | Weil-McLain | 94 | | | 35 | 1960 | 1995 | $102,205.50 | $224,852.10 |
| D3020 Heat Generating Systems | Boiler, gas/oil combination, cast iron, hot water, gross output, 4672 MBH, includes burners, controls and insulated jacket, packaged | 2.00 | Ea. | Boiler Room | Weil-McLain | 94 | | | 35 | 1960 | 1995 | $102,205.50 | $224,852.10 |
| D5010 Electrical Service/Distribution | Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 1 phase, 400 A | 1.00 | Ea. | | | | | | 20 | 1926 | 2017 | $13,848.30 | $15,233.13 |
| D5010 Electrical Service/Distribution | Transformers, 4800 volts to 480/277 volts, 500 kVA | 1.00 | Ea. | electrical room | | | | | 30 | 1926 | 1956 | $65,205.00 | $71,725.50 |
| | | | | | | | | | | | | **Total:** | **$557,040.33** |

## 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): | 24,000 |
| Year Built: | 1926 |
| Last Renovation: | |
| Replacement Value: | $485,520 |
| Repair Cost: | $528,323.10 |
| Total FCI: | 108.82 % |
| Total RSLI: | 79.30 % |

**Description:**

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Bldg ID: | S523001 | Site ID: | S523001 |

## 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 | 90.45 % | 138.62 % | $528,323.10 |
| G40 - Site Electrical Utilities | 38.61 % | 0.00 % | $0.00 |
| **Totals:** | **79.30 %** | **108.82 %** | **$528,323.10** |

## Condition Detail

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

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

## System Listing

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

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

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

| System Code | System Description | Unit Price $ | UoM | Qty | Life | Year Installed | Calc Next Renewal Year | Next Renewal Year | RSLI% | FCI% | RSL | eCR | Deficiency $ | Replacement Value $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G2010 | Roadways | $11.52 | S.F. | | 30 | | | | 0.00 % | 0.00 % | | | | $0 |
| G2020 | Parking Lots | $7.65 | S.F. | | 30 | | | | 0.00 % | 0.00 % | | | | $0 |
| G2030 | Pedestrian Paving | $11.52 | S.F. | 24,000 | 40 | 1926 | 1966 | 2057 | 105.00 % | 191.09 % | 42 | | $528,323.10 | $276,480 |
| G2040 | Site Development | $4.36 | S.F. | 24,000 | 25 | 1926 | 1951 | 2028 | 52.00 % | 0.00 % | 13 | | | $104,640 |
| G2050 | Landscaping & Irrigation | $3.78 | S.F. | | 15 | | | | 0.00 % | 0.00 % | | | | $0 |
| G4020 | Site Lighting | $3.58 | S.F. | 24,000 | 30 | 1926 | 1956 | 2028 | 43.33 % | 0.00 % | 13 | | | $85,920 |
| G4030 | Site Communications & Security | $0.77 | S.F. | 24,000 | 30 | 1926 | 1956 | 2020 | 16.67 % | 0.00 % | 5 | | | $18,480 |
| | | | | | | | | **Total** | **79.30 %** | **108.82 %** | | | **$528,323.10** | **$485,520** |

## 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.

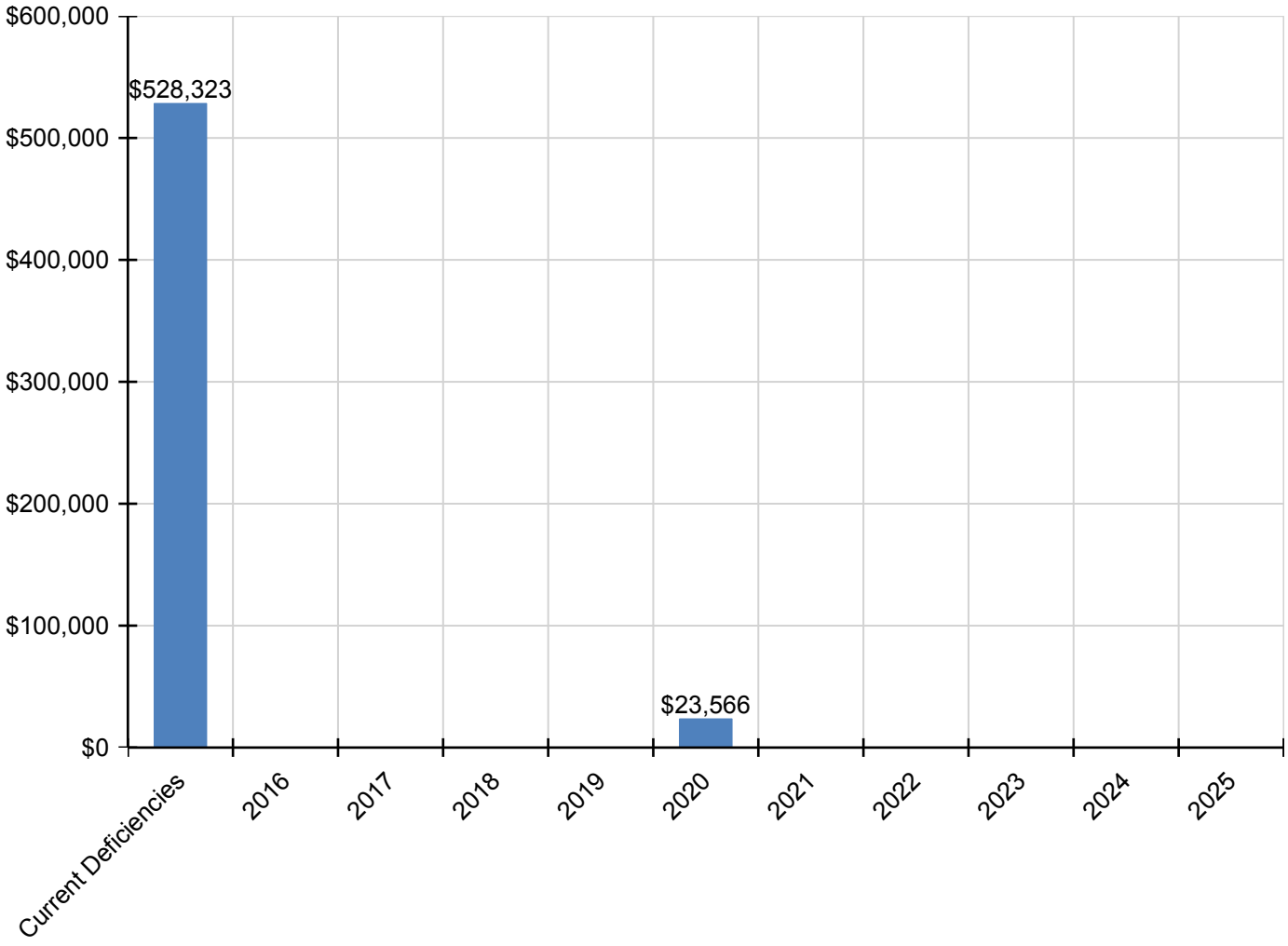
*Inflation Rate: 3%*

| System | Current Deficiencies | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total:** | **$528,323** | **$0** | **$0** | **$0** | **$0** | **$23,566** | **$0** | **$0** | **$0** | **$0** | **$0** | **$551,889** |
| **G - Building Sitework** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G20 - Site Improvements** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G2010 - Roadways** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G2020 - Parking Lots** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G2030 - Pedestrian Paving** | $528,323 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$528,323** |
| **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 | $0 | **$0** |
| **G40 - Site Electrical Utilities** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G4020 - Site Lighting** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G4030 - Site Communications & Security** | $0 | $0 | $0 | $0 | $0 | $23,566 | $0 | $0 | $0 | $0 | $0 | **$23,566** |

** Indicates non-renewable system*

## Forecasted Sustainment Requirement

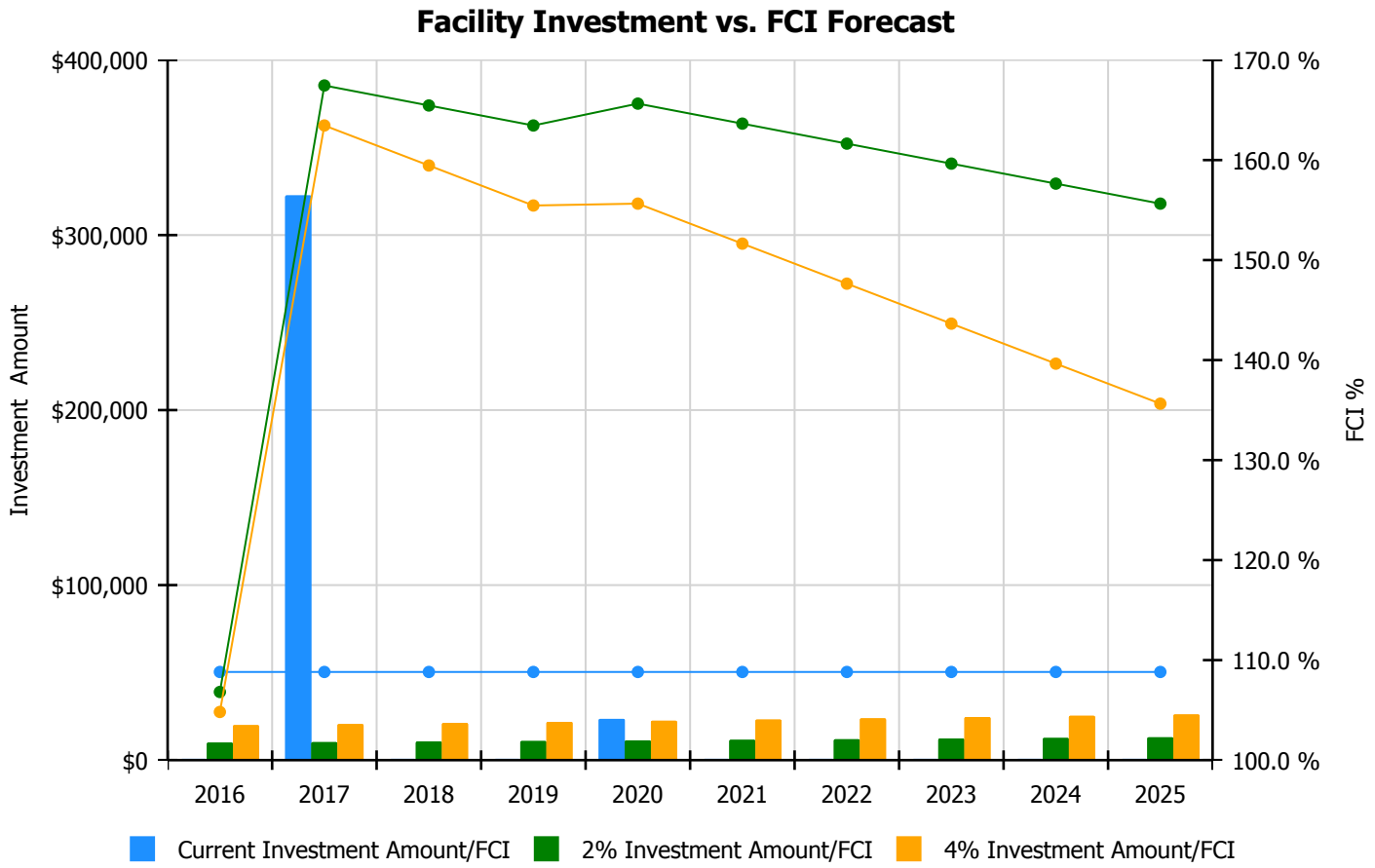
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



## 10 Year FCI Forecast by Investment Scenario

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

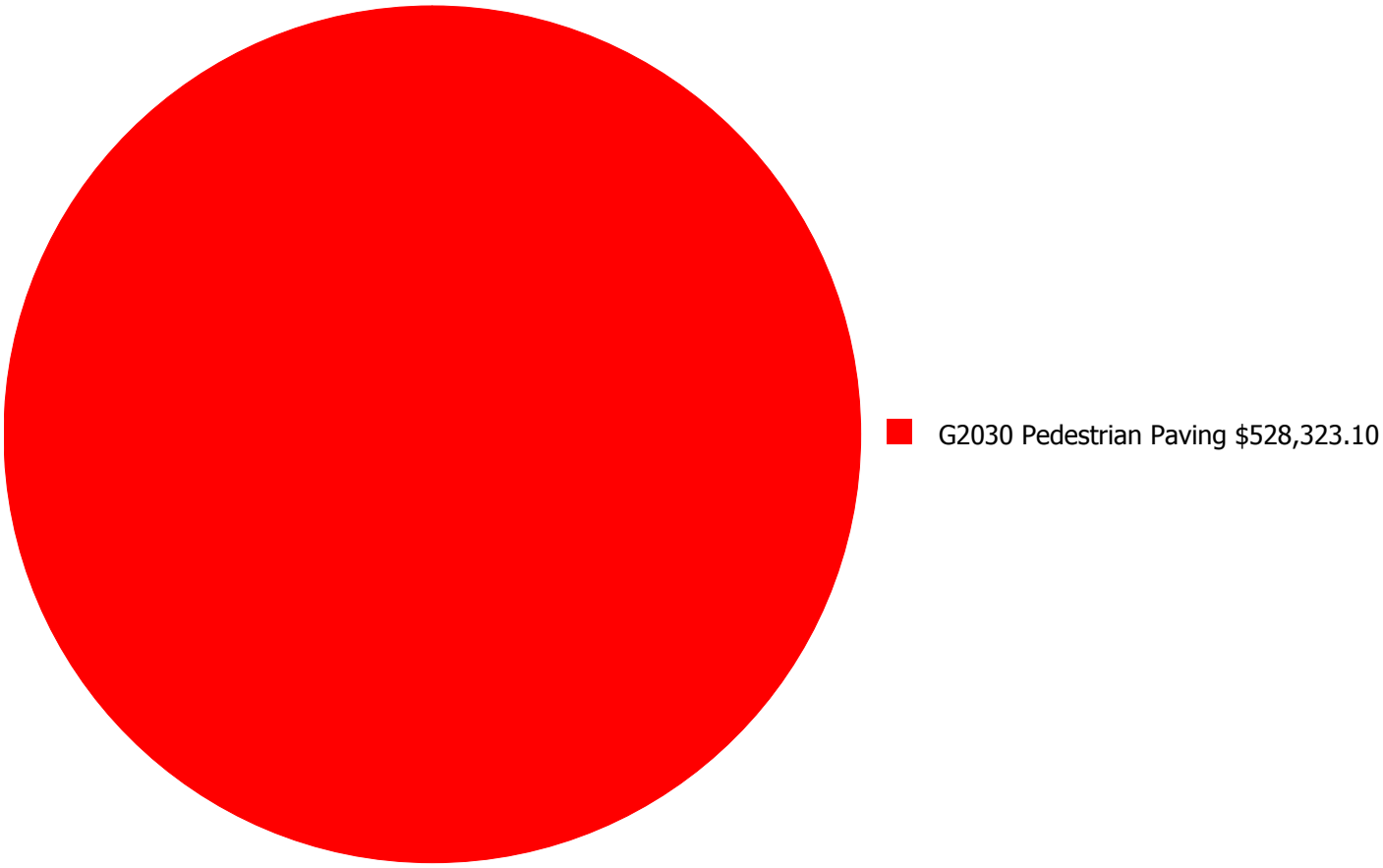
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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




| Year | Investment Amount Current FCI - 108.82% | 2% Investment | | 4% Investment | |
|---|---|---|---|---|---|
| | | Amount | FCI | Amount | FCI |
| 2016 | $0 | $10,002.00 | 106.82 % | $20,003.00 | 104.82 % |
| 2017 | $322,649 | $10,302.00 | 167.46 % | $20,604.00 | 163.46 % |
| 2018 | $0 | $10,611.00 | 165.46 % | $21,222.00 | 159.46 % |
| 2019 | $0 | $10,929.00 | 163.46 % | $21,858.00 | 155.46 % |
| 2020 | $23,566 | $11,257.00 | 165.64 % | $22,514.00 | 155.64 % |
| 2021 | $0 | $11,595.00 | 163.64 % | $23,189.00 | 151.64 % |
| 2022 | $0 | $11,943.00 | 161.64 % | $23,885.00 | 147.64 % |
| 2023 | $0 | $12,301.00 | 159.64 % | $24,602.00 | 143.64 % |
| 2024 | $0 | $12,670.00 | 157.64 % | $25,340.00 | 139.64 % |
| 2025 | $0 | $13,050.00 | 155.64 % | $26,100.00 | 135.64 % |
| **Total:** | **$346,215** | **$114,660.00** | | **$229,317.00** | |

## Deficiency Summary by System

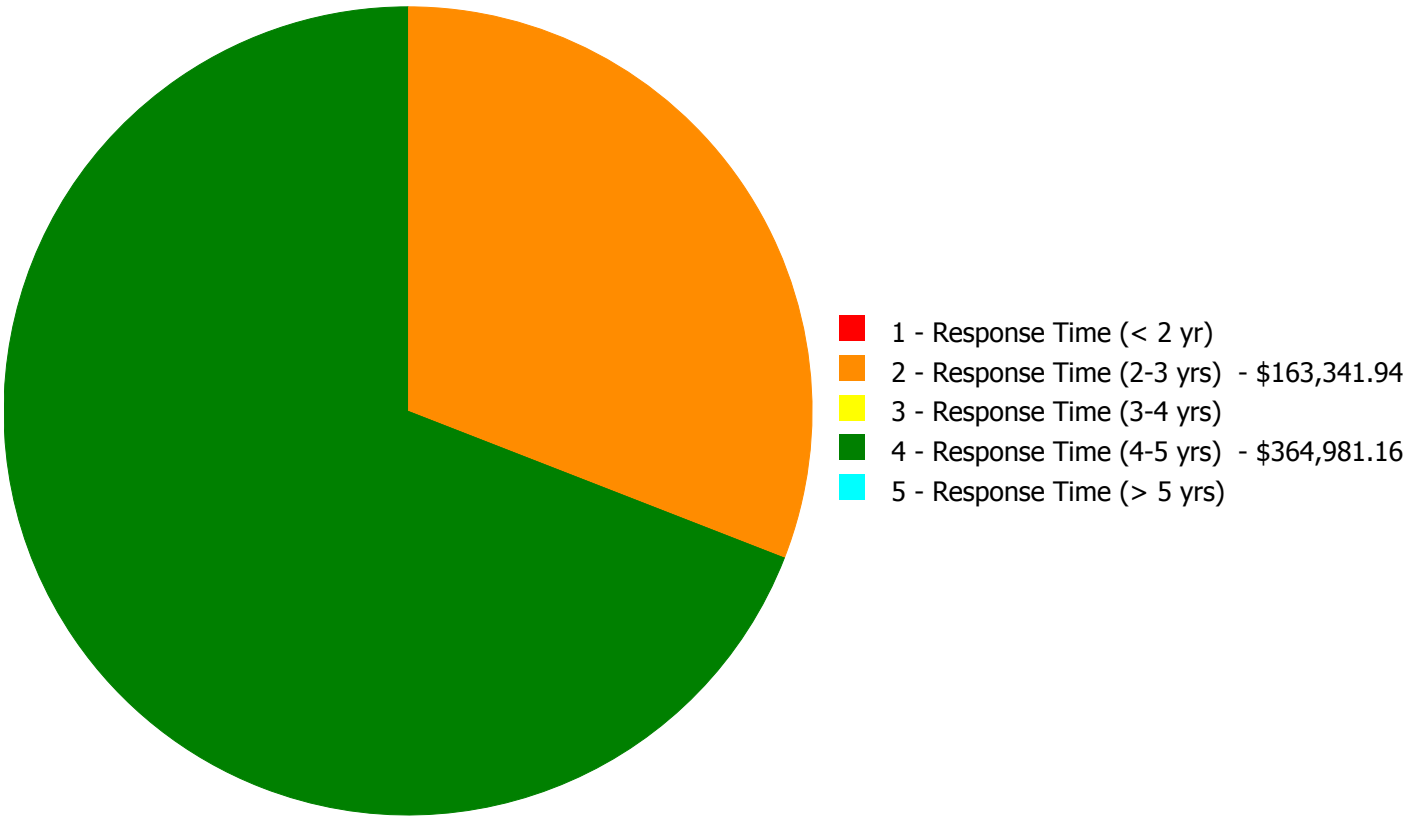
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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




**Budget Estimate Total: $528,323.10**

## 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: $528,323.10**

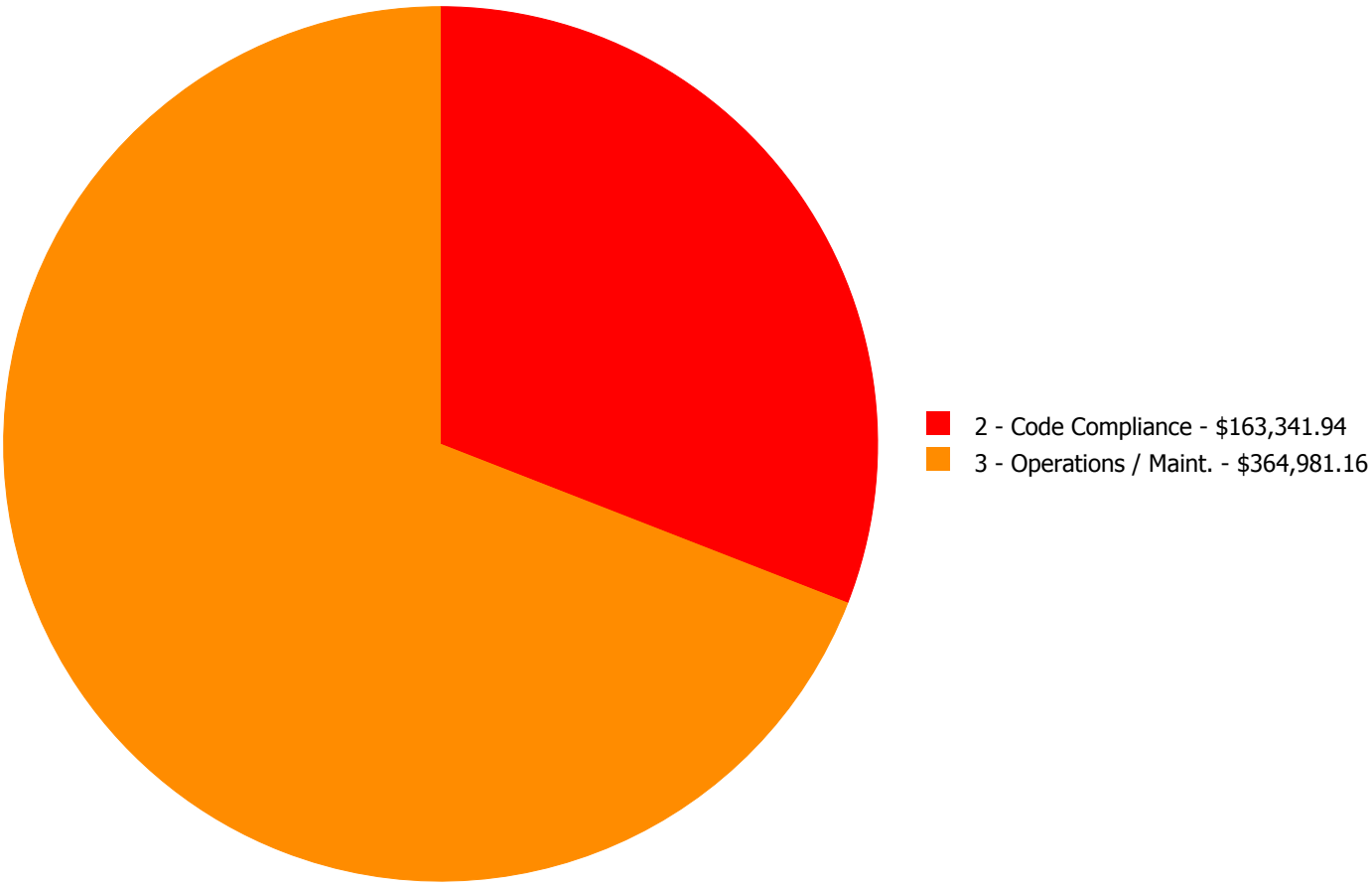
## Deficiency By Priority Investment Table

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

| System Code | System Description | 1 - Response Time (< 2 yr) | 2 - Response Time (2-3 yrs) | 3 - Response Time (3-4 yrs) | 4 - Response Time (4-5 yrs) | 5 - Response Time (> 5 yrs) | Total |
|---|---|---|---|---|---|---|---|
| G2030 | Pedestrian Paving | $0.00 | $163,341.94 | $0.00 | $364,981.16 | $0.00 | $528,323.10 |
| | **Total:** | $0.00 | $163,341.94 | $0.00 | $364,981.16 | $0.00 | $528,323.10 |

## 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: $528,323.10**

## Deficiency Details by Priority

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

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

**System: G2030 - Pedestrian Paving**

This deficiency has no image.

**Location:** Grounds/ site

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Install an exterior ADA ramp - based on 5' wide by the linear foot - up to 84" rise - per LF of ramp - figure 1 LF of ramp per inch of rise

**Qty:** 69.00

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

**Estimate:** $163,341.94

**Assessor Name:** Craig Anding

**Date Created:** 10/04/2015

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

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

**System: G2030 - Pedestrian Paving**

**Location:** Grounds/ site

**Distress:** Maintenance Required

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

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

**Correction:** Remove and replace exterior egress stairway - per flight

**Qty:** 6.00

**Unit of Measure:** Flight

**Estimate:** $203,893.23

**Assessor Name:** Craig Anding

**Date Created:** 10/04/2015

**Notes:** Reset stone stoops and stairs at all entrances

**System: G2030 - Pedestrian Paving**

**Location:** Grounds/ site

**Distress:** Beyond Service Life

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

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

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

**Qty:** 11,200.00

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

**Estimate:** $161,087.93

**Assessor Name:** Craig Anding

**Date Created:** 10/04/2015

**Notes:** Resurface 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 |

School District of Philadelphia

# S523101;Conwell Annex

Final

## Site Assessment Report

February 2, 2017


PARSONS

# Table of Contents

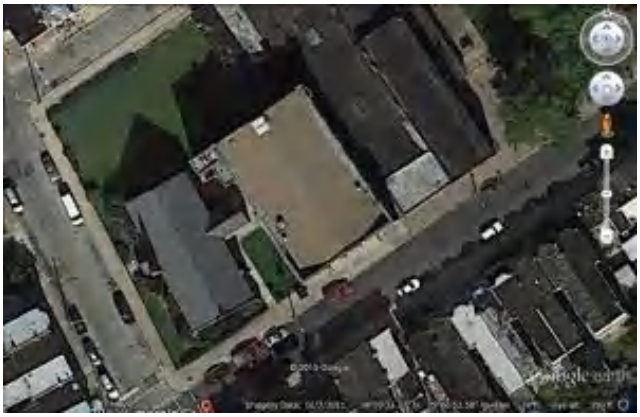
## Site Executive Summary

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

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

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

| | |
|---|---|
| Gross Area (SF): | 27,000 |
| Year Built: | 1903 |
| Last Renovation: | 1972 |
| Replacement Value: | $33,955,766 |
| Repair Cost: | $9,128,293.22 |
| Total FCI: | 26.88 % |
| Total RSLI: | 81.29 % |



**Description:**

Facility Assessment, August, 2015

**School District of Philadelphia**

**Conwell Annex School**

**3072 Emerald Street**

**Philadelphia, PA 19134**

27000 SF / 420 Students / LN 05

The Conwell Annex school building is located at 3072 Emerald Street in Philadelphia, PA. The 3 story with basement, approximately 27,000 square foot building was originally constructed in 1903. Some interior renovations were done in 1971 and an enclosed external egress stairway was added.

Mr. Scott Ovington, Facility Area Coordinator provided input to the Parsons assessment team on current problems and planned

renovation projects. Ms. Donna Jakimowicz, building engineer, accompanied us on our tour of the school and provided us with as much information as he could on the building systems and recent maintenance history.

STRUCTURAL/ EXTERIOR CLOSURE:

The building typically rests on stone masonry foundations and bearing walls that are not showing signs of settlement or damage, although water penetration in Northwest corner of the boiler room has been reported.

The main structure consists typically of masonry load bearing walls and timber columns supporting heavy timber beams and joists and wood plank sub-floor, generally in good condition. Roof structure consists of sloped heavy timber trusses and purlins supporting wood plank sheathing.

The building envelope is typically face brick with solid brick backup. In general, masonry is in poor condition with mortar missing from joints; moisture penetration through walls is evident and has been reported. Brick pilasters between basement windows supporting timber girders are cracked and crumbling. Brick chimney is also damaged.

The original windows were replaced in early 2000's with extruded aluminum double hung windows single glazed with acrylic glazing; they are not energy efficient. First floor windows are fitted with galvanized steel security screens. All windows and screens are generally in good condition.

The exterior doors are generally in fair condition; no weather-stripping is installed; some doors have vision glazing with security screens.

Roofing is typically shingles roofing installed in approximately 2000 and is n good condition. No leaks have been reported.

Exterior doors and frames are typically hollow metal in fair condition.

INTERIORS:

Partition wall types include plastered ceramic blocks (hollow brick), CMU and drywall. The interior wall finishes are generally painted plaster or drywall. Generally, paint is in fair condition, except toilets and interior faces of exterior walls. Plaster cracking and peeling paint was observed.

Interior doors are generally solid core wood doors, some glazed in good condition, however most doors do not have accessible handles; doors leading to exit stairways are retrofitted with hollow metal doors and frames in good condition.

Stair finishes are generally painted wood with non-slip treads. Added stairway is painted steel with steel non-slip checkered plate treads.

Interior identifying signage is typically directly painted on wall or door surfaces in poor condition.

Most ceilings are exposed, painted plaster and 2x4 suspended acoustical panels; the suspension system and tile are old and approaching the end of their useful life. There is substantial plaster cracking and peeling paint in stairways and boiler room.

Flooring is generally VCT with cove base in good condition (installed approximately in 2000), and original hardwood in fair to poor condition . Toilets have 2x2 ceramic tile flooring in good condition.

Furnishings include fixed casework in classrooms, corridors and library, generally in good condition; window shades/blinds, generally in fair condition.

GROUNDS (SITE):

There is neither parking nor playground at the site.

The landscaping consists of narrow strips of grass along South and West walls in fair condition.

ACCESSIBILITY:

The building does not have accessible entrance, and accessible routes. There is no elevator to reach floors above. Toilets are equipped with accessible fixtures, partitions and accessories, such as grab bars. Most doors in the building do not have ADA required door handles.

PLUMBING:

Plumbing Fixtures - Many of the plumbing fixtures have recently been replaced. Fixtures in the restrooms on each floor consist of wall mounted flush valve water closets, wall hung urinals and lavatories with wheel handle faucets. The building is equipped with handicap accessible stalls on each floor, except the basement. The fixtures are in good condition and should provide reliable service for the next 15-20 years.

Drinking fountains are a mixture of old and new wall hung units with integral refrigerated coolers. Several units are well beyond their service life and should be replaced; some are accessible type.

A mop basin is available in a janitor on the first floor for use by the janitorial staff.

There is no kitchen at Conwell Annex as all meals are served at the main Conwell School building down the block.

Domestic Water Distribution - A 4" city water service enters the building from Emerald Street near the middle of the block. The 3" meter and valves are located in a small room in the basement. A reduced pressure backflow preventer is installed. The domestic hot and cold water distribution piping is copper piping and sweat fittings. The maintenance staff reports no significant problems with scale build up in the domestic piping and the supply is adequate to the fixtures, but the piping is over 40 years old and should be inspected and replaced by a qualified contractor.

One Bradford White gas fired, 75 gallon, vertical hot water heater with circulating pump supplies hot water for domestic use. The unit was installed in 2013 and is located in the boiler room on the basement level. The hot water heater is equipped with a T&P relief valve. The domestic hot water heater is within its service life and should provide reliable service for the next 6-8 years.

Sanitary Waste - The storm and sanitary sewer piping is a mixture of threaded galvanized piping and cast iron with hub and spigot fittings.

The maintenance staff reported no problems with the sanitary waste piping systems. The sewer piping has been in service for over 40 years and will require more frequent attention from the maintenance staff as time passes. The District should hire a qualified contractor to examine the sanitary waste piping using video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

A sewage ejector pit located in basement boiler room receives sewage from the basement area. It has a single pump that is beyond its service life. The pump system should be replaced to prevent flooding of the basement. The pit is sealed.

Rain Water Drainage - Rain water drains from the roof and is routed to downspouts on the exterior of the building. Aluminum downspouts have replaced much of the original cast iron piping above ground level, with the aluminum to iron transition taking place about six feet above ground. The original cast iron piping remains for the underground drainage piping. The drain piping should be inspected by a qualified contractor and repaired as necessary.

MECHANICAL:

Energy Supply - A 2" city gas service enters the building from Emerald Street near the middle of the block. The gas meter is 2" and is located in a closet in the basement.

The oil supply is stored in two 275 gallon storage tanks located in the basement. Oil is the only fuel for the burners, which are not served by natural gas.

Heat Generating Systems - Low pressure steam is generated at a maximum of 15 lbs/sq. in., typically 5-7 lbs/sq. in., by one 30HP HB Smith cast iron sectional boiler, original to the building. The one boiler handles the load in all winter weather conditions. The boiler is equipped with an external burner, manufacturer unknown, designed to operate on fuel oil. The burner is well beyond its service life and should be replaced. Burner oil pumps are connected and are driven by the fan motor, which is not allowed by current codes. The Building Engineer reports no major issues with the boiler or burner. Cast iron sectional boilers have an anticipated service life of 35 years or more; as this unit has most likely been in service 45 years it needs to be replaced. The boiler is operational but should be replaced within the next 3 years.

The condensate receiver is installed in the basement boiler room. No problems were reported with steam leaking into the system from failed steam traps. The district should hire a qualified contractor to examine the piping, in service for over 40 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. A chemical feed tank is installed for the boiler condensate tank.

Distribution Systems - The steam/condensate piping is black steel with threaded fittings in a one pipe system. Steam/condensate piping mains from the basement level run up through the building to the radiators on all three floors. The distribution piping has been in use beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes. The District should hire a qualified contractor to examine the steam/condensate piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 10 years.

One pipe cast iron radiators and fin tube radiators provide heating for the majority of classrooms, offices, and hallways. These radiators are well beyond their service life and original to the building. Ventilation for the building is provided by roof mounted fans and opening windows, which does not meet current codes for outdoor air ventilation. A new heating system should be installed to meet ventilation requirements and achieve more efficient operation. The new units should be designed for quiet operation and equipped with hot water coils, chilled water coils, and integral heat exchangers, where applicable, to introduce outdoor air to the building.

Meals are served in the Conwell School two blocks away, therefore there is no kitchen in the building.

Two roof mounted exhaust fans serving the east and west restrooms are operational according to the Building Engineer. These fans are within their service life.

Ventilation should be provided for the administration offices by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in the window openings. This unit would be equipped with hot water heating coils and chilled water cooling coils. Steam converters would be installed in the existing boiler room with circulating pumps, distribution piping and controls to provide heating hot water for the new coils.

Terminal & Package Units - Several of the classrooms in the school building have window air conditioning units that have an anticipated service life of only 10 years. Installing a 70 ton air-cooled chiller with pumps located in a mechanical room and chilled water distribution piping would supply more reliable air conditioning for the building with a much longer service life.

One unit ventilator, with an associated roof mounted McQuay condenser unit, is located on the third floor. This unit is now defunct, but was used to supply cool air in a space that was used as a computer room in the past.

Controls & Instrumentation - The temperature in the building is controlled by one electric Honeywell thermostat mounted on the wall outside the main office. The thermostat controls heating for the building and works well according to the Building Engineer. This control scheme should be converted to DDC.

A new building automation system (BAS) with modern DDC modules and communications network should be installed to serve the HVAC systems in this building to improve reliability and energy efficiency. An interface should be provided with the preferred system in use throughout the District.

Sprinklers - Only the basement is covered by an automatic sprinkler system, a wet pipe system, the rest of the building is not. A 6” fire line enters the building from Emerald Street. Installing a sprinkler system with quick response type heads throughout the building should reduce insurance costs by providing protection for the property investment. A fire pump may be required depending on the available city water pressure.

ELECTRICAL:

Site electrical service – The primary power is at 13.2KV from the street power pole which feeds a 300KVA pole-top transformer (13.2KV – 120V/240V) and runs overhead to the building and into the electrical room. The electrical service is not functioning adequately and has reached its useful life (built in1972). The main switchgear is rated at 600 Amp, 120V/240V480 V, 2 phase, 3W, and is located in main electrical room. The PECO meter (PECO AXR) is also located inside the electrical room. The service entrance and the main building electrical distribution systems are not in good condition, and have reached the end of their service life. Also, the system has no extra capacity for the additional mechanical loads.

Distribution system - The electrical distribution is accomplished with a 120V/240V distribution switchboard, located in the electrical

room, feeding several panels throughout the building. These panels are not in good condition. They have reached the end of their service life.

Receptacles - The receptacles in classrooms, computer rooms, libraries, and other areas are not adequate.

Lighting- Interior building is illuminated by various types of fixtures. They include fluorescent lighting (T-8 lamp) in majority of the areas, including; classrooms, corridor, offices and Kitchen. Surface or pendant mounted industrial fluorescent fixtures are used in mechanical and electrical rooms. Gymnasium is illuminated by metal halide enclosed glass fixtures. The majority of interior lighting fixtures are in a poor condition and have reached the end of their service life.

Fire alarm- The present Fire Alarm system is not automatic/addressable, and is not in compliance with safety code. There are manual pulls stations throughout the building. There is not sufficient number of horn/strobes installed in the classrooms, corridors, offices and other areas in the school.

Telephone/LAN- The school telephone and data systems are new and working adequately. A main distribution frame (MDF) along with a telephone PBX system are providing the communication system function for the building. School is also equipped with Wi-Fi system.

Public address- A separate PA system does not exist. School uses the telephone systems for public announcement. This system is working properly. The present Intercom System is functioning properly. Each class room is provided by with an intercom telephone service. The system permits paging and intercom communication between main office to each classroom, between each classroom to main office, and between classrooms to classrooms.

Clock and Program system - Clock and program systems are not working adequately. Classrooms are provided with 12-inch wall mounted, round clock, however, the clocks are not controlled properly by central master control panel.

Television System- Television system is not provided in the school. Most classes are provided with smart boards having the ability to connect to computer and internet.

Security Systems-access control, video surveillance- The school is not provided with video surveillance system. Cameras are not installed at exit doors, corridors, exterior, and other critical areas. These cameras should be controlled by a Closed Circuit Television system (CCTV).

Emergency Power System - School is not provided with emergency power. There is no generator for emergency lights and other emergency loads.

Emergency lighting system, including exit lighting- there are insufficient emergency lighting fixtures in corridors, library and other exit ways. Exit signs and emergency fixtures are old and beyond their useful life.

Lightning Protection System - There is adequate lightning protection system installed in the school.

Grounding - The present grounding system is adequate.

Site Lighting – There is no site per say at this campus. There is only a narrow strip of grass on the south side of the building. The existing lights on the building exteriors are adequate.

Site Paging – The present site paging is adequate. Sufficient number of speakers are located on the exterior walls.

Auditorium lighting and sound system – No major deficiencies were observed during the assessment.

RECOMMENDATIONS:

- Repair cracks in masonry, replace missing mortar, tuck-point original building – all walls, window pilasters in basement and chimney
- Provide new signage throughout the building
- Refinish hardwood flooring
- Replace all suspended acoustical ceilings
- Repair plaster ceilings (25% area), repaint all ceilings
- Repair and repaint interior walls
- Replace all door hardware for accessibility

- Provide accessible ramp at the main entrance
- Provide elevator serving all floors.
- Replace two (2) wall hung drinking fountains and integral refrigerated coolers in the corridors. These units are beyond their service life and are NOT accessible type.
- Hire a qualified contractor to perform a detailed inspection of the domestic water piping, in use for over 40 years, and replace any damaged piping.
- Replace existing sewage ejector pump system and piping in the basement as it is beyond its service life.
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the one existing 1,005MBH cast iron boiler, which is beyond its service life, burners, and exhaust ductwork.
- Hire a qualified contractor to examine the steam/condensate piping, in service for over 40 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Remove the existing cast iron steam radiators and fin tube radiators and install fan coil units with hot and chilled water coils and a dedicated outdoor air system.
- Remove the window air conditioning units and install a 70 ton air-cooled chiller with chilled water distribution piping and pumps to supply more reliable air conditioning for the building with a much longer service life.
- Provide ventilation for the administration office by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.
- Replace the electric controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- Install a fire protection sprinkler system with quick response type heads throughout the building to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.
- Install a new electrical Service.
- Install new distribution panels.
- Install adequate (two on each wall minimum) surface-mounted receptacles in all classrooms and other areas within the building.
- Install new lighting system for the entire building.
- Install new automated FA system.
- Install new Video Surveillance System with Cameras and CCTV.
- Install new Clock System.
- Install new emergency exit signs & emergency lights.
- Install a new Emergency generator.

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Active: | Open | Bldg Lot Tm: | Lot 2 / Tm 4 |
| Status: | Accepted by SDP | Team: | Tm 4 |
| Site ID: | S523101 | | |

## 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 | 57.00 % | 0.00 % | $0.00 |
| A20 - Basement Construction | 57.00 % | 0.00 % | $0.00 |
| B10 - Superstructure | 57.00 % | 0.00 % | $0.00 |
| B20 - Exterior Enclosure | 111.69 % | 22.72 % | $548,921.03 |
| B30 - Roofing | 125.00 % | 0.00 % | $0.00 |
| C10 - Interior Construction | 93.45 % | 2.17 % | $25,651.94 |
| C20 - Stairs | 57.00 % | 0.00 % | $0.00 |
| C30 - Interior Finishes | 99.86 % | 25.73 % | $781,392.45 |
| D10 - Conveying | 105.71 % | 135.02 % | $670,322.07 |
| D20 - Plumbing | 63.01 % | 16.91 % | $357,157.80 |
| D30 - HVAC | 97.25 % | 59.64 % | $3,445,577.87 |
| D40 - Fire Protection | 105.71 % | 82.55 % | $386,247.07 |
| D50 - Electrical | 109.97 % | 90.46 % | $2,874,050.27 |
| E10 - Equipment | 37.14 % | 0.00 % | $0.00 |
| E20 - Furnishings | 62.50 % | 0.00 % | $0.00 |
| G20 - Site Improvements | 0.00 % | 2.36 % | $38,972.72 |
| G40 - Site Electrical Utilities | 106.67 % | 0.00 % | $0.00 |
| **Totals:** | **81.29 %** | **26.88 %** | **$9,128,293.22** |

### 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) |
|---|---|---|---|---|---|---|---|
| B523101;Conwell Annex | 51,392 | 28.67 | $608,912.99 | $712,062.15 | $3,538,373.76 | $1,134,916.50 | $3,095,055.10 |
| G523101;Grounds | 138,100 | 1.73 | $0.00 | $0.00 | $38,972.72 | $0.00 | $0.00 |
| **Total:** | | **26.88** | **$608,912.99** | **$712,062.15** | **$3,577,346.48** | **$1,134,916.50** | **$3,095,055.10** |

### Deficiencies By Priority

- 1 - Response Time (< 2 yr) - $608,912.99
- 2 - Response Time (2-3 yrs) - $712,062.15
- 3 - Response Time (3-4 yrs) - $3,577,346.48
- 4 - Response Time (4-5 yrs) - $1,134,916.50
- 5 - Response Time (> 5 yrs) - $3,095,055.10

**Budget Estimate Total: $9,128,293.22**

## 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): | 51,392 |
| Year Built: | 1972 |
| Last Renovation: | |
| Replacement Value: | $31,700,707 |
| Repair Cost: | $9,089,320.50 |
| Total FCI: | 28.67 % |
| Total RSLI: | 85.05 % |

**Description:**

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Active: | Open | Bldg ID: | B523101 |
| Sewage Ejector: | Yes | Status: | Accepted by SDP |
| Site ID: | S523101 | | |

## 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 | 57.00 % | 0.00 % | $0.00 |
| A20 - Basement Construction | 57.00 % | 0.00 % | $0.00 |
| B10 - Superstructure | 57.00 % | 0.00 % | $0.00 |
| B20 - Exterior Enclosure | 111.69 % | 22.72 % | $548,921.03 |
| B30 - Roofing | 125.00 % | 0.00 % | $0.00 |
| C10 - Interior Construction | 93.45 % | 2.17 % | $25,651.94 |
| C20 - Stairs | 57.00 % | 0.00 % | $0.00 |
| C30 - Interior Finishes | 99.86 % | 25.73 % | $781,392.45 |
| D10 - Conveying | 105.71 % | 135.02 % | $670,322.07 |
| D20 - Plumbing | 63.01 % | 16.91 % | $357,157.80 |
| D30 - HVAC | 97.25 % | 59.64 % | $3,445,577.87 |
| D40 - Fire Protection | 105.71 % | 82.55 % | $386,247.07 |
| D50 - Electrical | 109.97 % | 90.46 % | $2,874,050.27 |
| E10 - Equipment | 37.14 % | 0.00 % | $0.00 |
| E20 - Furnishings | 62.50 % | 0.00 % | $0.00 |
| **Totals:** | **85.05 %** | **28.67 %** | **$9,089,320.50** |

## 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 $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A1010 | Standard Foundations | $24.32 | S.F. | 51,932 | 100 | 1972 | 2072 | | 57.00 % | 0.00 % | 57 | | | $1,262,986 |
| A1030 | Slab on Grade | $15.51 | S.F. | 51,932 | 100 | 1972 | 2072 | | 57.00 % | 0.00 % | 57 | | | $805,465 |
| A2010 | Basement Excavation | $13.07 | S.F. | 51,932 | 100 | 1972 | 2072 | | 57.00 % | 0.00 % | 57 | | | $678,751 |
| A2020 | Basement Walls | $23.02 | S.F. | 51,932 | 100 | 1972 | 2072 | | 57.00 % | 0.00 % | 57 | | | $1,195,475 |
| B1010 | Floor Construction | $92.20 | S.F. | 51,932 | 100 | 1972 | 2072 | | 57.00 % | 0.00 % | 57 | | | $4,788,130 |
| B1020 | Roof Construction | $24.11 | S.F. | 51,932 | 100 | 1972 | 2072 | | 57.00 % | 0.00 % | 57 | | | $1,252,081 |
| B2010 | Exterior Walls | $31.22 | S.F. | 51,932 | 100 | 1903 | 2003 | 2103 | 88.00 % | 33.86 % | 88 | | $548,921.03 | $1,621,317 |
| B2020 | Exterior Windows | $13.63 | S.F. | 51,932 | 40 | 2000 | 2040 | 2080 | 162.50 % | 0.00 % | 65 | | | $707,833 |
| B2030 | Exterior Doors | $1.67 | S.F. | 51,932 | 25 | 2000 | 2025 | 2050 | 140.00 % | 0.00 % | 35 | | | $86,726 |
| B3010105 | Built-Up | $37.76 | S.F. | | 20 | | | | 0.00 % | 0.00 % | | | | $0 |
| B3010120 | Single Ply Membrane | $38.73 | S.F. | | 20 | | | | 0.00 % | 0.00 % | | | | $0 |
| B3010130 | Preformed Metal Roofing | $54.22 | S.F. | | 30 | | | | 0.00 % | 0.00 % | | | | $0 |
| B3010140 | Shingle & Tile | $38.73 | S.F. | 51,932 | 20 | 2000 | 2020 | 2040 | 125.00 % | 0.00 % | 25 | | | $2,011,326 |
| B3020 | Roof Openings | $0.68 | S.F. | 51,932 | 20 | 2000 | 2020 | 2040 | 125.00 % | 0.00 % | 25 | | | $35,314 |
| C1010 | Partitions | $14.93 | S.F. | 51,932 | 100 | 1972 | 2072 | | 57.00 % | 0.00 % | 57 | | | $775,345 |
| C1020 | Interior Doors | $3.76 | S.F. | 51,932 | 40 | 2000 | 2040 | 2080 | 162.50 % | 8.84 % | 65 | | $17,253.65 | $195,264 |
| C1030 | Fittings | $4.12 | S.F. | 51,932 | 40 | 2000 | 2040 | 2080 | 162.50 % | 3.93 % | 65 | | $8,398.29 | $213,960 |
| C2010 | Stair Construction | $1.28 | S.F. | 51,932 | 100 | 1972 | 2072 | | 57.00 % | 0.00 % | 57 | | | $66,473 |

# Site Assessment Report - B523101;Conwell Annex

| System Code | System Description | Unit Price $ | UoM | Qty | Life | Year Installed | Calc Next Renewal Year | Next Renewal Year | RSLI% | FCI% | RSL | eCR | Deficiency $ | Replacement Value $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C3010230 | Paint & Covering | $13.21 | S.F. | 51,932 | 10 | 2000 | 2010 | 2027 | 120.00 % | 66.69 % | 12 | | $457,481.86 | $686,022 |
| C3010231 | Vinyl Wall Covering | $0.97 | S.F. | | 15 | | | | 0.00 % | 0.00 % | | | | $0 |
| C3010232 | Wall Tile | $2.63 | S.F. | | 30 | | | | 0.00 % | 0.00 % | | | | $0 |
| C3020411 | Carpet | $7.30 | S.F. | | 10 | | | | 0.00 % | 0.00 % | | | | $0 |
| C3020412 | Terrazzo & Tile | $75.52 | S.F. | 11,632 | 50 | 2000 | 2050 | | 70.00 % | 0.00 % | 35 | | | $878,449 |
| C3020413 | Vinyl Flooring | $9.68 | S.F. | 35,800 | 20 | 2000 | 2020 | 2037 | 110.00 % | 0.00 % | 22 | | | $346,544 |
| C3020414 | Wood Flooring | $22.27 | S.F. | 1,500 | 25 | 1903 | 1928 | 2042 | 108.00 % | 85.86 % | 27 | | $28,680.34 | $33,405 |
| C3020415 | Concrete Floor Finishes | $0.97 | S.F. | 3,000 | 50 | 1972 | 2022 | | 14.00 % | 0.00 % | 7 | | | $2,910 |
| C3030 | Ceiling Finishes | $20.97 | S.F. | 51,932 | 25 | 1972 | 1997 | 2042 | 108.00 % | 27.11 % | 27 | | $295,230.25 | $1,089,014 |
| D1010 | Elevators and Lifts | $9.66 | S.F. | 51,392 | 35 | | | 2052 | 105.71 % | 135.02 % | 37 | | $670,322.07 | $496,447 |
| D2010 | Plumbing Fixtures | $31.58 | S.F. | 51,932 | 35 | 2000 | 2035 | | 57.14 % | 0.92 % | 20 | | $15,158.38 | $1,640,013 |
| D2020 | Domestic Water Distribution | $2.90 | S.F. | 51,932 | 25 | 1972 | 1997 | 2042 | 108.00 % | 90.85 % | 27 | | $136,818.72 | $150,603 |
| D2030 | Sanitary Waste | $2.90 | S.F. | 51,932 | 25 | 1972 | 1997 | 2042 | 108.00 % | 108.33 % | 27 | | $163,141.12 | $150,603 |
| D2040 | Rain Water Drainage | $3.29 | S.F. | 51,932 | 30 | 1972 | 2002 | 2027 | 40.00 % | 24.61 % | 12 | | $42,039.58 | $170,856 |
| D3020 | Heat Generating Systems | $18.67 | S.F. | 51,932 | 35 | 1972 | 2007 | 2047 | 91.43 % | 22.97 % | 32 | | $222,665.92 | $969,570 |
| D3030 | Cooling Generating Systems | $24.48 | S.F. | 51,932 | 20 | | | 2037 | 110.00 % | 36.36 % | 22 | | $462,208.70 | $1,271,295 |
| D3040 | Distribution Systems | $42.99 | S.F. | 51,932 | 25 | 1972 | 1997 | 2042 | 108.00 % | 97.71 % | 27 | | $2,181,496.80 | $2,232,557 |
| D3050 | Terminal & Package Units | $11.60 | S.F. | 51,932 | 20 | 2000 | 2020 | | 25.00 % | 0.00 % | 5 | | | $602,411 |
| D3060 | Controls & Instrumentation | $13.50 | S.F. | 51,932 | 20 | 1972 | 1992 | 2037 | 110.00 % | 82.62 % | 22 | | $579,206.45 | $701,082 |
| D4010 | Sprinklers | $8.02 | S.F. | 51,932 | 35 | | | 2052 | 105.71 % | 92.74 % | 37 | | $386,247.07 | $416,495 |
| D4020 | Standpipes | $0.99 | S.F. | 51,932 | 35 | | | 2052 | 105.71 % | 0.00 % | 37 | | | $51,413 |
| D5010 | Electrical Service/Distribution | $9.70 | S.F. | 51,932 | 30 | 1972 | 2002 | 2047 | 106.67 % | 180.63 % | 32 | | $909,900.70 | $503,740 |
| D5020 | Lighting and Branch Wiring | $34.68 | S.F. | 51,932 | 20 | 1972 | 1992 | 2037 | 110.00 % | 50.58 % | 22 | | $911,009.38 | $1,801,002 |
| D5030 | Communications and Security | $12.99 | S.F. | 51,932 | 15 | 1972 | 1987 | 2032 | 113.33 % | 83.55 % | 17 | | $563,626.42 | $674,597 |
| D5090 | Other Electrical Systems | $3.81 | S.F. | 51,932 | 30 | 1972 | 2002 | 2047 | 106.67 % | 247.40 % | 32 | | $489,513.77 | $197,861 |
| E1020 | Institutional Equipment | $4.82 | S.F. | 51,932 | 35 | 1972 | 2007 | 2028 | 37.14 % | 0.00 % | 13 | | | $250,312 |
| E1090 | Other Equipment | $11.10 | S.F. | 51,932 | 35 | 1972 | 2007 | 2028 | 37.14 % | 0.00 % | 13 | | | $576,445 |
| E2010 | Fixed Furnishings | $2.13 | S.F. | 51,932 | 40 | 2000 | 2040 | | 62.50 % | 0.00 % | 25 | | | $110,615 |
| | | | | | | | | **Total** | **85.05 %** | **28.67 %** | | | **$9,089,320.50** | **$31,700,707** |

## 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:** | **$9,089,321** | **$0** | **$0** | **$0** | **$0** | **$768,195** | **$0** | **$3,937** | **$0** | **$0** | **$0** | **$9,861,453** |
| *** 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** | $548,921 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$548,921** |
| **B2020 - Exterior Windows** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B2030 - Exterior Doors** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B30 - Roofing** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B3010 - Roof Coverings** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B3010105 - Built-Up** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B3010120 - Single Ply Membrane** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B3010130 - Preformed Metal Roofing** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B3010140 - Shingle & Tile** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **B3020 - Roof Openings** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C - Interiors** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C10 - Interior Construction** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C1010 - Partitions** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |

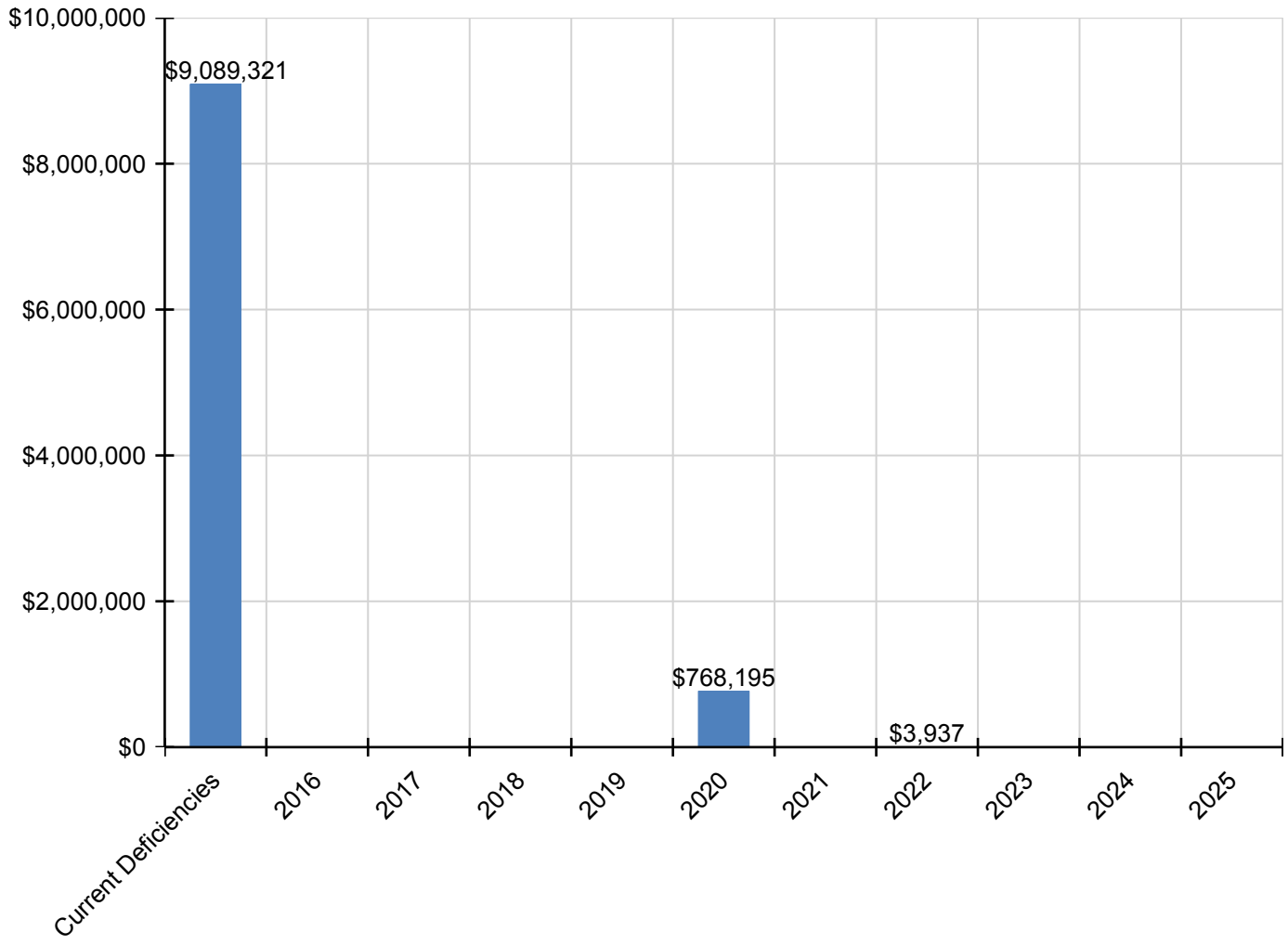
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **C1020 - Interior Doors** | $17,254 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$17,254** |
| **C1030 - Fittings** | $8,398 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$8,398** |
| **C20 - Stairs** | $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** | $457,482 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$457,482** |
| **C3010231 - Vinyl Wall Covering** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3010232 - Wall Tile** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020 - Floor Finishes** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020411 - Carpet** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020412 - Terrazzo & Tile** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020413 - Vinyl Flooring** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **C3020414 - Wood Flooring** | $28,680 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$28,680** |
| **C3020415 - Concrete Floor Finishes** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $3,937 | $0 | $0 | $0 | **$3,937** |
| **C3030 - Ceiling Finishes** | $295,230 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$295,230** |
| **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** | $670,322 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$670,322** |
| **D20 - Plumbing** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D2010 - Plumbing Fixtures** | $15,158 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$15,158** |
| **D2020 - Domestic Water Distribution** | $136,819 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$136,819** |
| **D2030 - Sanitary Waste** | $163,141 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$163,141** |
| **D2040 - Rain Water Drainage** | $42,040 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$42,040** |
| **D30 - HVAC** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D3020 - Heat Generating Systems** | $222,666 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$222,666** |
| **D3030 - Cooling Generating Systems** | $462,209 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$462,209** |
| **D3040 - Distribution Systems** | $2,181,497 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$2,181,497** |
| **D3050 - Terminal & Package Units** | $0 | $0 | $0 | $0 | $0 | $768,195 | $0 | $0 | $0 | $0 | $0 | **$768,195** |
| **D3060 - Controls & Instrumentation** | $579,206 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$579,206** |
| **D40 - Fire Protection** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **D4010 - Sprinklers** | $386,247 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$386,247** |
| **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** | $909,901 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$909,901** |
| **D5020 - Lighting and Branch Wiring** | $911,009 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$911,009** |
| **D5030 - Communications and Security** | $563,626 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$563,626** |
| **D5090 - Other Electrical Systems** | $489,514 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$489,514** |
| **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** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **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** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |

** Indicates non-renewable system*

## Forecasted Sustainment Requirement

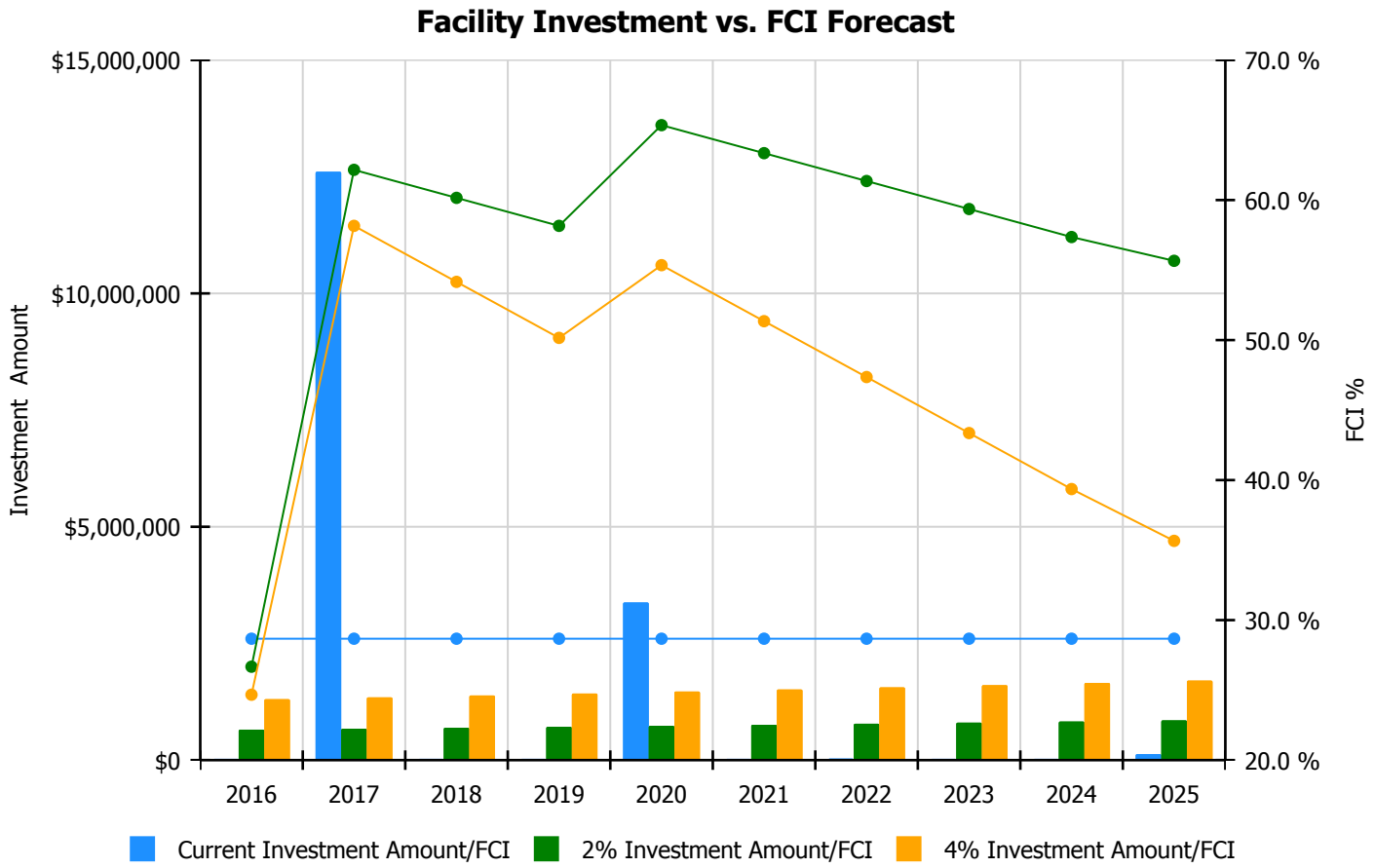
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



## 10 Year FCI Forecast by Investment Scenario

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

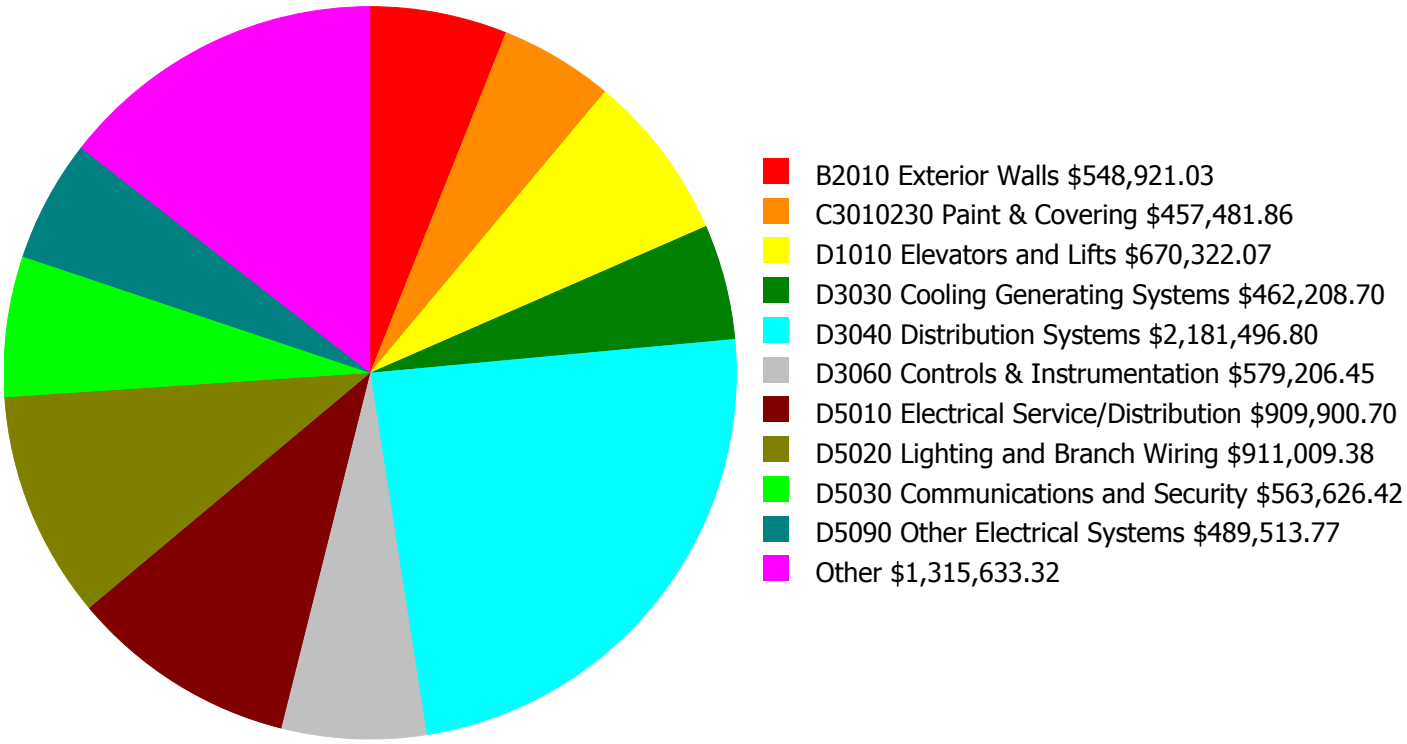
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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




| Year | Investment Amount Current FCI - 28.67% | 2% Investment | | 4% Investment | |
|---|---|---|---|---|---|
| | | Amount | FCI | Amount | FCI |
| 2016 | $0 | $653,035.00 | 26.67 % | $1,306,069.00 | 24.67 % |
| 2017 | $12,606,615 | $672,626.00 | 62.16 % | $1,345,251.00 | 58.16 % |
| 2018 | $0 | $692,804.00 | 60.16 % | $1,385,609.00 | 54.16 % |
| 2019 | $0 | $713,589.00 | 58.16 % | $1,427,177.00 | 50.16 % |
| 2020 | $3,378,074 | $734,996.00 | 65.35 % | $1,469,992.00 | 55.35 % |
| 2021 | $0 | $757,046.00 | 63.35 % | $1,514,092.00 | 51.35 % |
| 2022 | $3,937 | $779,757.00 | 61.36 % | $1,559,515.00 | 47.36 % |
| 2023 | $0 | $803,150.00 | 59.36 % | $1,606,300.00 | 43.36 % |
| 2024 | $0 | $827,245.00 | 57.36 % | $1,654,489.00 | 39.36 % |
| 2025 | $128,208 | $852,062.00 | 55.66 % | $1,704,124.00 | 35.66 % |
| **Total:** | **$16,116,834** | **$7,486,310.00** | | **$14,972,618.00** | |

## Deficiency Summary by System

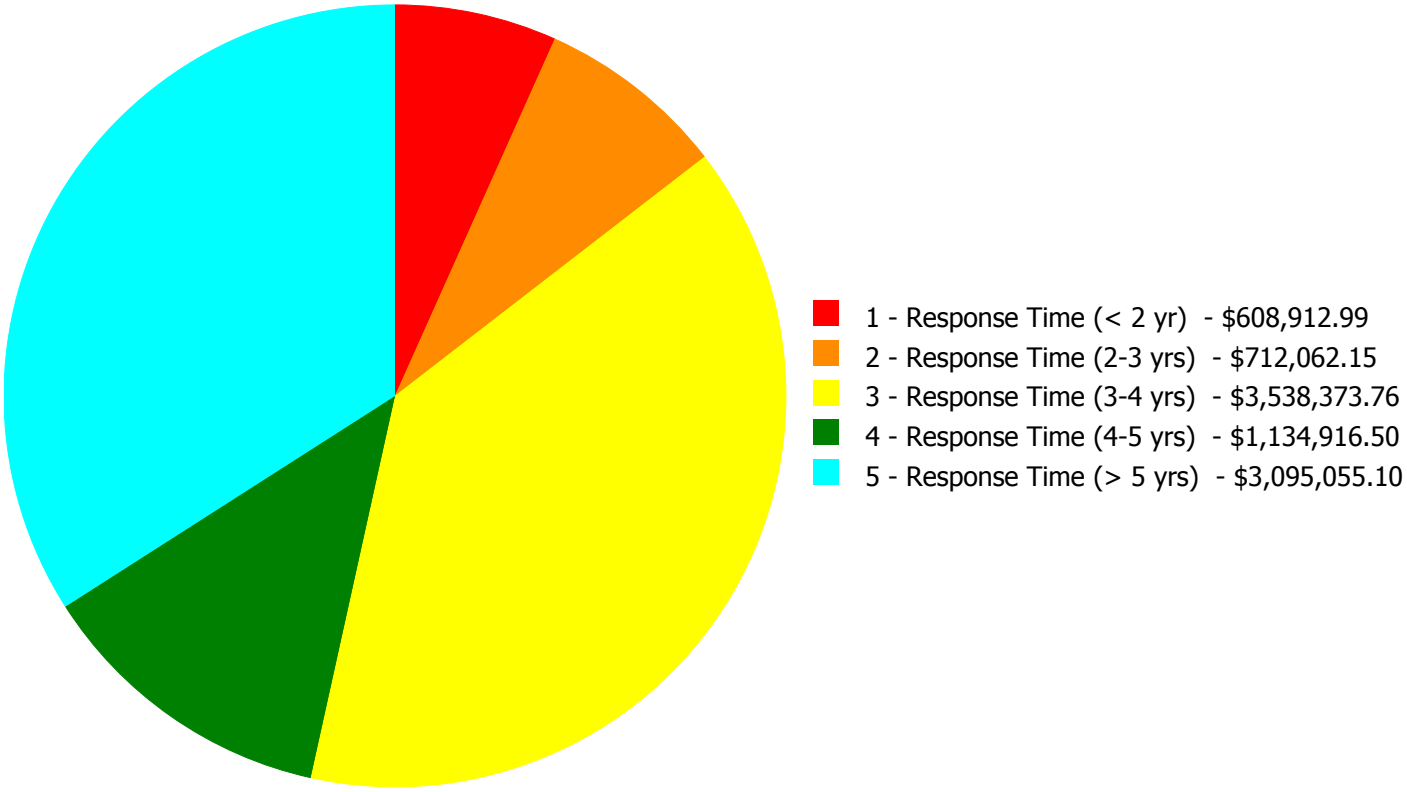
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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




**Budget Estimate Total: $9,089,320.50**

## 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: $9,089,320.50**

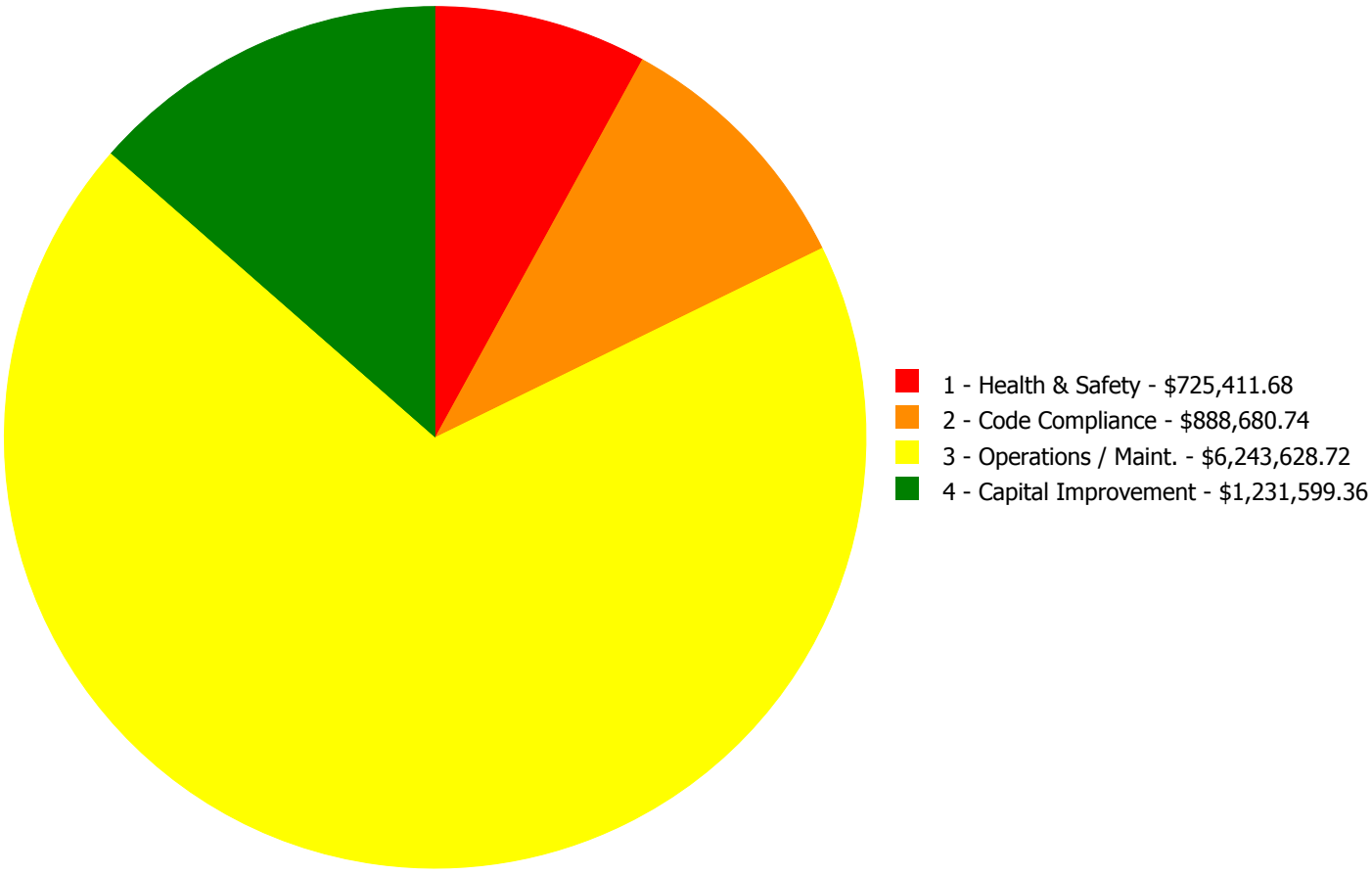
## Deficiency By Priority Investment Table

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 |
|---|---|---|---|---|---|---|---|
| B2010 | Exterior Walls | $0.00 | $548,921.03 | $0.00 | $0.00 | $0.00 | $548,921.03 |
| C1020 | Interior Doors | $0.00 | $0.00 | $0.00 | $17,253.65 | $0.00 | $17,253.65 |
| C1030 | Fittings | $0.00 | $0.00 | $0.00 | $0.00 | $8,398.29 | $8,398.29 |
| C3010230 | Paint & Covering | $0.00 | $0.00 | $457,481.86 | $0.00 | $0.00 | $457,481.86 |
| C3020414 | Wood Flooring | $0.00 | $0.00 | $0.00 | $0.00 | $28,680.34 | $28,680.34 |
| C3030 | Ceiling Finishes | $0.00 | $0.00 | $0.00 | $204,735.67 | $90,494.58 | $295,230.25 |
| D1010 | Elevators and Lifts | $0.00 | $0.00 | $670,322.07 | $0.00 | $0.00 | $670,322.07 |
| D2010 | Plumbing Fixtures | $0.00 | $0.00 | $15,158.38 | $0.00 | $0.00 | $15,158.38 |
| D2020 | Domestic Water Distribution | $0.00 | $0.00 | $136,818.72 | $0.00 | $0.00 | $136,818.72 |
| D2030 | Sanitary Waste | $0.00 | $163,141.12 | $0.00 | $0.00 | $0.00 | $163,141.12 |
| D2040 | Rain Water Drainage | $0.00 | $0.00 | $42,039.58 | $0.00 | $0.00 | $42,039.58 |
| D3020 | Heat Generating Systems | $222,665.92 | $0.00 | $0.00 | $0.00 | $0.00 | $222,665.92 |
| D3030 | Cooling Generating Systems | $0.00 | $0.00 | $0.00 | $0.00 | $462,208.70 | $462,208.70 |
| D3040 | Distribution Systems | $0.00 | $0.00 | $255,430.06 | $0.00 | $1,926,066.74 | $2,181,496.80 |
| D3060 | Controls & Instrumentation | $0.00 | $0.00 | $0.00 | $0.00 | $579,206.45 | $579,206.45 |
| D4010 | Sprinklers | $386,247.07 | $0.00 | $0.00 | $0.00 | $0.00 | $386,247.07 |
| D5010 | Electrical Service/Distribution | $0.00 | $0.00 | $194,057.67 | $715,843.03 | $0.00 | $909,900.70 |
| D5020 | Lighting and Branch Wiring | $0.00 | $0.00 | $911,009.38 | $0.00 | $0.00 | $911,009.38 |
| D5030 | Communications and Security | $0.00 | $0.00 | $366,542.27 | $197,084.15 | $0.00 | $563,626.42 |
| D5090 | Other Electrical Systems | $0.00 | $0.00 | $489,513.77 | $0.00 | $0.00 | $489,513.77 |
| | **Total:** | $608,912.99 | $712,062.15 | $3,538,373.76 | $1,134,916.50 | $3,095,055.10 | $9,089,320.50 |

## 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: $9,089,320.50**

## 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: D3020 - Heat Generating Systems**

**Location:** Boiler room
**Distress:** Beyond Service Life
**Category:** 3 - Operations / Maint.
**Priority:** 1 - Response Time (< 2 yr)
**Correction:** Replace boiler, cast iron sectional (50 HP)
**Qty:** 1.00
**Unit of Measure:** Ea.
**Estimate:** $222,665.92
**Assessor Name:** System
**Date Created:** 09/08/2015

**Notes:** Replace the one existing 1,005MBH cast iron boiler, which is beyond its service life, burners, and exhaust ductwork.

**System: D4010 - Sprinklers**

**Location:** Throughout building
**Distress:** Life Safety / NFPA / PFD
**Category:** 1 - Health & Safety
**Priority:** 1 - Response Time (< 2 yr)
**Correction:** Install a fire protection sprinkler system
**Qty:** 27,000.00
**Unit of Measure:** S.F.
**Estimate:** $386,247.07
**Assessor Name:** System
**Date Created:** 09/08/2015

**Notes:** Install a fire protection sprinkler system with quick response type heads throughout the building to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.

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

**System: B2010 - Exterior Walls**

**Location:** Exterior

**Distress:** Building Envelope Integrity

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

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

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

**Qty:** 17,000.00

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

**Estimate:** $548,921.03

**Assessor Name:** System

**Date Created:** 10/20/2015

**Notes:** Repair cracks in masonry, replace missing mortar, tuck-point original building – all walls, window pilasters in basement and chimney

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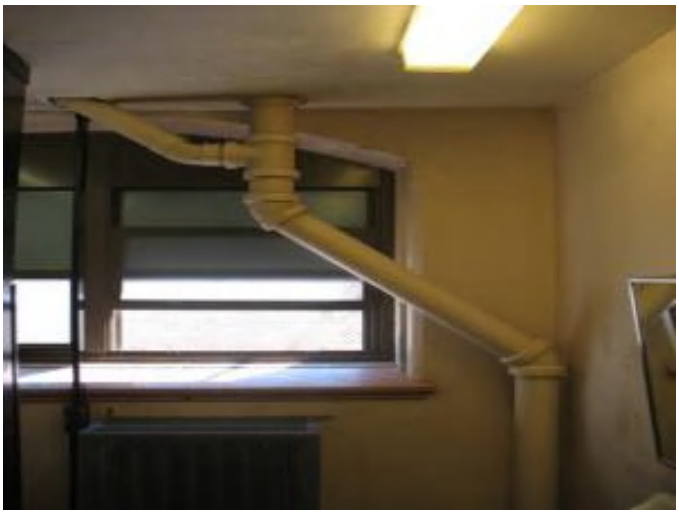
**System: D2030 - Sanitary Waste**



**Location:** Throughout building

**Distress:** Beyond Service Life

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

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

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

**Qty:** 27,000.00

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

**Estimate:** $132,455.17

**Assessor Name:** System

**Date Created:** 09/08/2015

**Notes:** Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

---

**System: D2030 - Sanitary Waste**

**Location:** Boiler room

**Distress:** Beyond Service Life

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

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

**Correction:** Replace sanitary sewage ejector pit and pumps. (48" dia.)

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $30,685.95

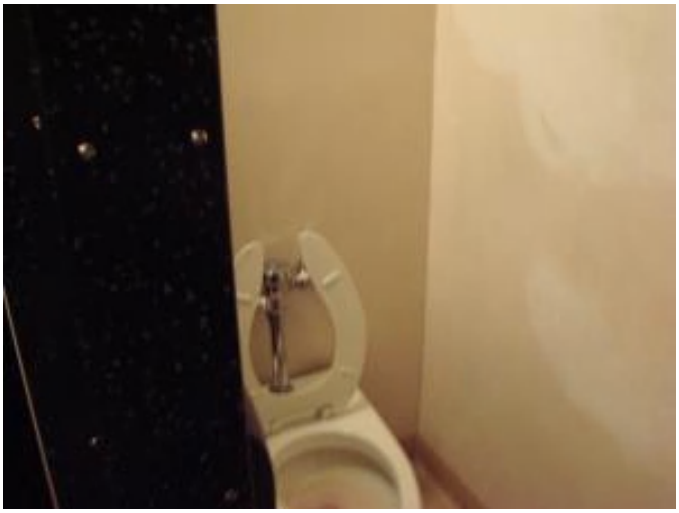
**Assessor Name:** System

**Date Created:** 09/08/2015

**Notes:** Replace existing sewage ejector pump system and piping in the basement as it is beyond its service life.

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

**System: C3010230 - Paint & Covering**



**Location:** Interior

**Distress:** Beyond Service Life

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

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

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

**Qty:** 53,400.00

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

**Estimate:** $457,481.86

**Assessor Name:** System

**Date Created:** 10/20/2015

**Notes:** Repair and repaint interior walls

---

**System: D1010 - Elevators and Lifts**

This deficiency has no image.

**Location:** Interior

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

**Correction:** Add interior elevator - 4 floors - adjust the electrical run lengths to hook up the elevator

**Qty:** 1.00

**Unit of Measure:** Ea.

**Estimate:** $670,322.07

**Assessor Name:** System

**Date Created:** 10/20/2015

**Notes:** Provide elevator serving all floors.

---

**System: D2010 - Plumbing Fixtures**

**Location:** Corridors

**Distress:** Beyond Service Life

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

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

**Correction:** Remove and Replace Water Fountains - without ADA new recessed alcove

**Qty:** 2.00

**Unit of Measure:** Ea.

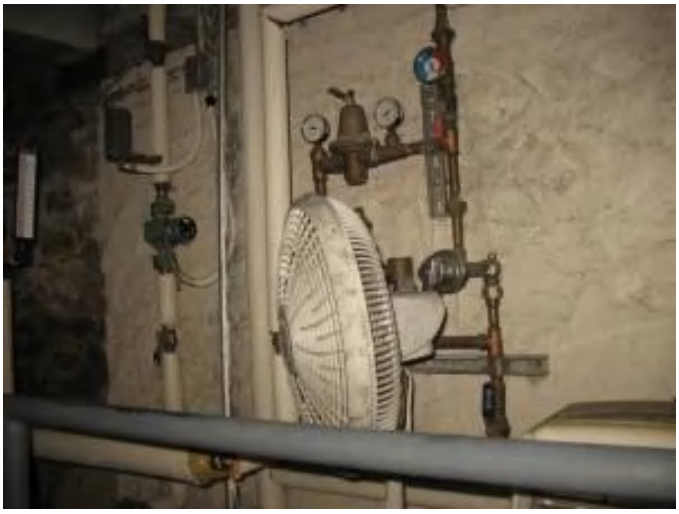
**Estimate:** $15,158.38

**Assessor Name:** System

**Date Created:** 09/08/2015

**Notes:** Replace two (2) wall hung drinking fountains and integral refrigerated coolers in the corridors. These units are beyond their service life and are NOT accessible type.

**System: D2020 - Domestic Water Distribution**



**Location:** Throughout building

**Distress:** Beyond Service Life

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

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

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

**Qty:** 27,000.00

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

**Estimate:** $136,818.72

**Assessor Name:** System

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

**Notes:** Hire a qualified contractor to perform a detailed inspection of the domestic water piping, in use for over 40 years, and replace any damaged piping.

**System: D2040 - Rain Water Drainage**

**Location:** Throughout building

**Distress:** Beyond Service Life

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

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

**Correction:** Replace roof drains - per drain including piping

**Qty:** 2.00

**Unit of Measure:** Ea.

**Estimate:** $42,039.58

**Assessor Name:** System

**Date Created:** 09/08/2015

**Notes:** Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

**System: D3040 - Distribution Systems**

**Location:** Throughout building

**Distress:** Beyond Service Life

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

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

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

**Qty:** 27,000.00

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

**Estimate:** $255,430.06

**Assessor Name:** System

**Date Created:** 09/08/2015

**Notes:** Hire a qualified contractor to examine the steam/condensate piping, in service for over 40 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.

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

**Location:** throughout the building
**Distress:** Beyond Service Life
**Category:** 3 - Operations / Maint.
**Priority:** 3 - Response Time (3-4 yrs)
**Correction:** Add Panelboard
**Qty:** 1.00
**Unit of Measure:** Ea.
**Estimate:** $194,057.67
**Assessor Name:** System
**Date Created:** 10/19/2015

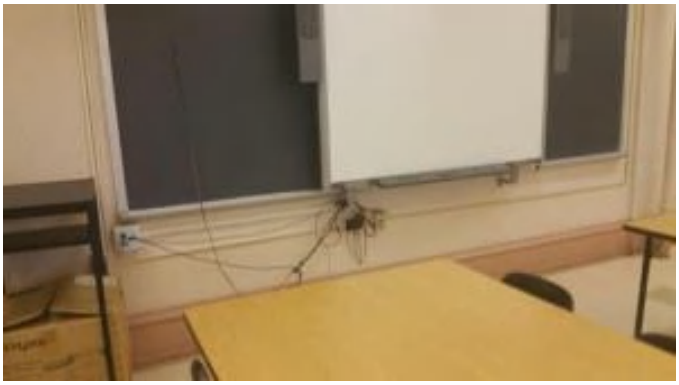
**Notes:** Install new panelboards.

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

**Location:** throughout the building
**Distress:** Beyond Service Life
**Category:** 3 - Operations / Maint.
**Priority:** 3 - Response Time (3-4 yrs)
**Correction:** Replace Lighting Fixtures (SF)
**Qty:** 0.00
**Unit of Measure:** S.F.
**Estimate:** $596,623.41
**Assessor Name:** System
**Date Created:** 10/19/2015

**Notes:** Install new lighting system for the entire building

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



**Location:** throughout the building

**Distress:** Beyond Service Life

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

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

**Correction:** Replace Wiring Devices (SF) - surface mounted conduit and boxes

**Qty:** 0.00

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

**Estimate:** $314,385.97

**Assessor Name:** System

**Date Created:** 10/19/2015

**Notes:** Install adequate (two on each wall minimum) surface-mounted receptacles in all classrooms and other areas within the building.

**System: D5030 - Communications and Security**

**Location:** throughout the building

**Distress:** Beyond Service Life

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

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

**Correction:** Replace fire alarm system

**Qty:** 1.00

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

**Estimate:** $366,542.27

**Assessor Name:** System

**Date Created:** 10/19/2015

**Notes:** Install new automated FA system

**System: D5090 - Other Electrical Systems**


**Location:** throughout the building
**Distress:** Life Safety / NFPA / PFD
**Category:** 1 - Health & Safety
**Priority:** 3 - Response Time (3-4 yrs)
**Correction:** Add Emergency/Exit Lighting
**Qty:** 1.00
**Unit of Measure:** Ea.
**Estimate:** $288,408.75
**Assessor Name:** System
**Date Created:** 10/19/2015

**Notes:** Install new emergency exit signs emergency lights

---

**System: D5090 - Other Electrical Systems**

This deficiency has no image.

**Location:** Electrical room
**Distress:** Building / MEP Codes
**Category:** 2 - Code Compliance
**Priority:** 3 - Response Time (3-4 yrs)
**Correction:** Add Standby Generator System
**Qty:** 1.00
**Unit of Measure:** Ea.
**Estimate:** $201,105.02
**Assessor Name:** System
**Date Created:** 10/19/2015

**Notes:** Install a new Emergency generator
Note: A multiplier of 1.4 was used instead of 1.0 to cover the cost of other related work.
No attachment picture, since there is no Emergency generator at this time.

---

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

**System: C1020 - Interior Doors**

**Location:** Interior

**Distress:** Accessibility

**Category:** 2 - Code Compliance

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

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

**Qty:** 31.00

**Unit of Measure:** Ea.

**Estimate:** $17,253.65

**Assessor Name:** System

**Date Created:** 10/20/2015

**Notes:** Replace all door hardware for accessibility

**System: C3030 - Ceiling Finishes**

**Location:** Interior

**Distress:** Beyond Service Life

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

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

**Correction:** Repair and resurface plaster ceilings - 2 coats plaster

**Qty:** 15,600.00

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

**Estimate:** $204,735.67

**Assessor Name:** System

**Date Created:** 10/20/2015

**Notes:** Repair plaster ceilings (25% area), repaint all ceilings

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

**Location:** Electrical Room

**Distress:** Beyond Service Life

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

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

**Correction:** Replace Service Transformer

**Qty:** 0.00

**Unit of Measure:** Ea.

**Estimate:** $458,555.28

**Assessor Name:** System

**Date Created:** 10/19/2015

**Notes:** Install a new electrical Service. Replace Service Transformer, new 480 V distribution Panel and new MCC

---

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

**Location:** Throughout the building

**Distress:** Beyond Service Life

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

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

**Correction:** Add Electrical Switchgear and Distribution System

**Qty:** 0.00

**Unit of Measure:** Ea.

**Estimate:** $257,287.75

**Assessor Name:** System

**Date Created:** 10/19/2015

**Notes:** Install new distribution panels

---

**System: D5030 - Communications and Security**

**Location:** throughout the building
**Distress:** Beyond Service Life
**Category:** 3 - Operations / Maint.
**Priority:** 4 - Response Time (4-5 yrs)
**Correction:** Add/Replace Clock System or Components
**Qty:** 0.00
**Unit of Measure:** Ea.
**Estimate:** $146,328.29
**Assessor Name:** System
**Date Created:** 10/19/2015

**Notes:** Install new Clock System
Note: A multiplier of 1.3 was selected instead of 1.0 to cover the cost for other related work.

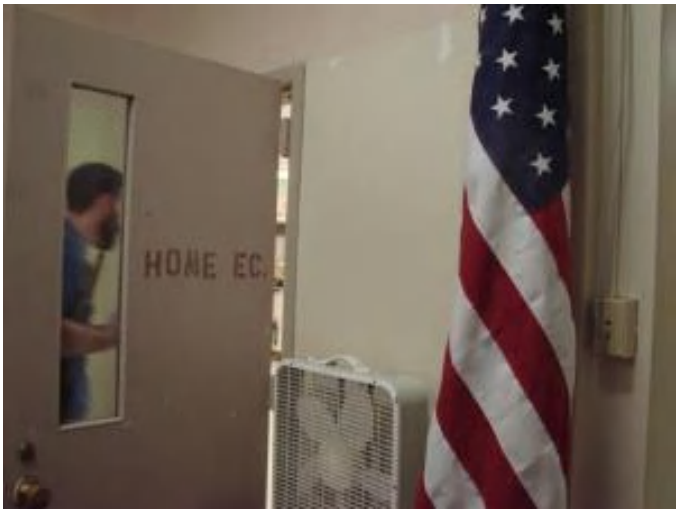
**System: D5030 - Communications and Security**

**Location:** throughout the building
**Distress:** Security Issue
**Category:** 1 - Health & Safety
**Priority:** 4 - Response Time (4-5 yrs)
**Correction:** Add/Replace Video Surveillance System
**Qty:** 1.00
**Unit of Measure:** Ea.
**Estimate:** $50,755.86
**Assessor Name:** System
**Date Created:** 10/19/2015

**Notes:** Install new Video Surveillance System with Cameras and CCTV

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

**System: C1030 - Fittings**




**Location:** Interior

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

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

**Qty:** 31.00

**Unit of Measure:** Ea.

**Estimate:** $8,398.29

**Assessor Name:** System

**Date Created:** 10/20/2015

**Notes:** Provide new signage throughout the building

**System: C3020414 - Wood Flooring**

**Location:** Interior

**Distress:** Appearance

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

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

**Correction:** Remove and replace partial area of wood flooring and refinish entire floor - set replacement area

**Qty:** 3,100.00

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

**Estimate:** $28,680.34

**Assessor Name:** System

**Date Created:** 10/20/2015

**Notes:** Refinish hardwood flooring

**System: C3030 - Ceiling Finishes**

**Location:** Interior

**Distress:** Beyond Service Life

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

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

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

**Qty:** 6,000.00

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

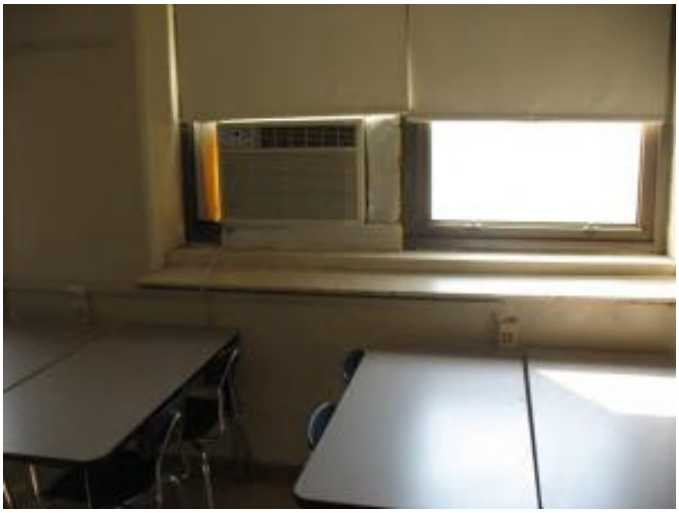
**Estimate:** $90,494.58

**Assessor Name:** System

**Date Created:** 10/20/2015

**Notes:** Replace all suspended acoustical ceilings

**System: D3030 - Cooling Generating Systems**



**Location:** Throughout 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:** 27,000.00

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

**Estimate:** $462,208.70

**Assessor Name:** System

**Date Created:** 09/08/2015

**Notes:** Remove the window air conditioning units and install a 70 ton air-cooled chiller with chilled water distribution piping and pumps to supply more reliable air conditioning for the building with a much longer service life.

**System: D3040 - Distribution Systems**

**Location:** Throughout building

**Distress:** Beyond Service Life

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

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

**Correction:** Provide classroom FC units and dedicated OA ventilation system. (20 clsrms)

**Qty:** 21.00

**Unit of Measure:** C

**Estimate:** $1,744,280.82

**Assessor Name:** System

**Date Created:** 09/08/2015

**Notes:** Remove the existing cast iron steam radiators and fin tube radiators and install fan coil units with hot and chilled water coils and a dedicated outdoor air system.

**System: D3040 - Distribution Systems**

**Location:** Throughout building

**Distress:** Inadequate

**Category:** 4 - Capital Improvement

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

**Correction:** Install HVAC unit for Administration (2000 students).

**Qty:** 420.00

**Unit of Measure:** Pr.

**Estimate:** $181,785.92

**Assessor Name:** System

**Date Created:** 09/08/2015

**Notes:** Provide ventilation for the administration office by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in window openings.

**System: D3060 - Controls & Instrumentation**

**Location:** Throughout building

**Distress:** Energy Efficiency

**Category:** 4 - Capital Improvement

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

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

**Qty:** 27,000.00

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

**Estimate:** $579,206.45

**Assessor Name:** System

**Date Created:** 09/08/2015

**Notes:** Replace the electric controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.

## Equipment Inventory

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

| Subsystem | Inventory | Qty | UoM | Location | Manufacturer | Model Number | Serial Number | Barcode | Life | Install Date | Next Renewal | Raw Cost | Inventory Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D3020 Heat Generating Systems | Boiler, oil fired, flame retention burner, cast iron, steam, gross output, 1084 MBH, includes standard controls and insulated flush jacket, packaged | 1.00 | Ea. | Boiler Room | HB Smith | 350 Mills | | | 35 | 1972 | 2007 | $21,558.10 | $23,713.91 |
| | | | | | | | | | | | | **Total:** | **$23,713.91** |

## 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): | 138,100 |
| Year Built: | 1972 |
| Last Renovation: | |
| Replacement Value: | $2,255,059 |
| Repair Cost: | $38,972.72 |
| Total FCI: | 1.73 % |
| Total RSLI: | 28.42 % |

**Description:**

**Attributes:**

**General Attributes:**

| | | | |
|---|---|---|---|
| Bldg ID: | S523101 | Site ID: | S523101 |

## 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 | 0.00 % | 2.36 % | $38,972.72 |
| G40 - Site Electrical Utilities | 106.67 % | 0.00 % | $0.00 |
| **Totals:** | **28.42 %** | **1.73 %** | **$38,972.72** |

## Condition Detail

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

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

## System Listing

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

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

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

| System Code | System Description | Unit Price $ | UoM | Qty | Life | Year Installed | Calc Next Renewal Year | Next Renewal Year | RSLI% | FCI% | RSL | eCR | Deficiency $ | Replacement Value $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G2010 | Roadways | $11.52 | S.F. | | 30 | | | | 0.00 % | 0.00 % | | | | $0 |
| G2020 | Parking Lots | $7.65 | S.F. | 48,800 | 30 | | | | 0.00 % | 0.00 % | | | | $373,320 |
| G2030 | Pedestrian Paving | $11.52 | S.F. | 44,100 | 40 | | | | 0.00 % | 7.67 % | | | $38,972.72 | $508,032 |
| G2040 | Site Development | $4.36 | S.F. | 138,100 | 25 | | | | 0.00 % | 0.00 % | | | | $602,116 |
| G2050 | Landscaping & Irrigation | $3.78 | S.F. | 45,200 | 15 | | | | 0.00 % | 0.00 % | | | | $170,856 |
| G4020 | Site Lighting | $3.58 | S.F. | 138,100 | 30 | 1972 | 2002 | 2047 | 106.67 % | 0.00 % | 32 | | | $494,398 |
| G4030 | Site Communications & Security | $0.77 | S.F. | 138,100 | 30 | 1972 | 2002 | 2047 | 106.67 % | 0.00 % | 32 | | | $106,337 |
| | | | | | | | | **Total** | **28.42 %** | **1.73 %** | | | **$38,972.72** | **$2,255,059** |

## 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.

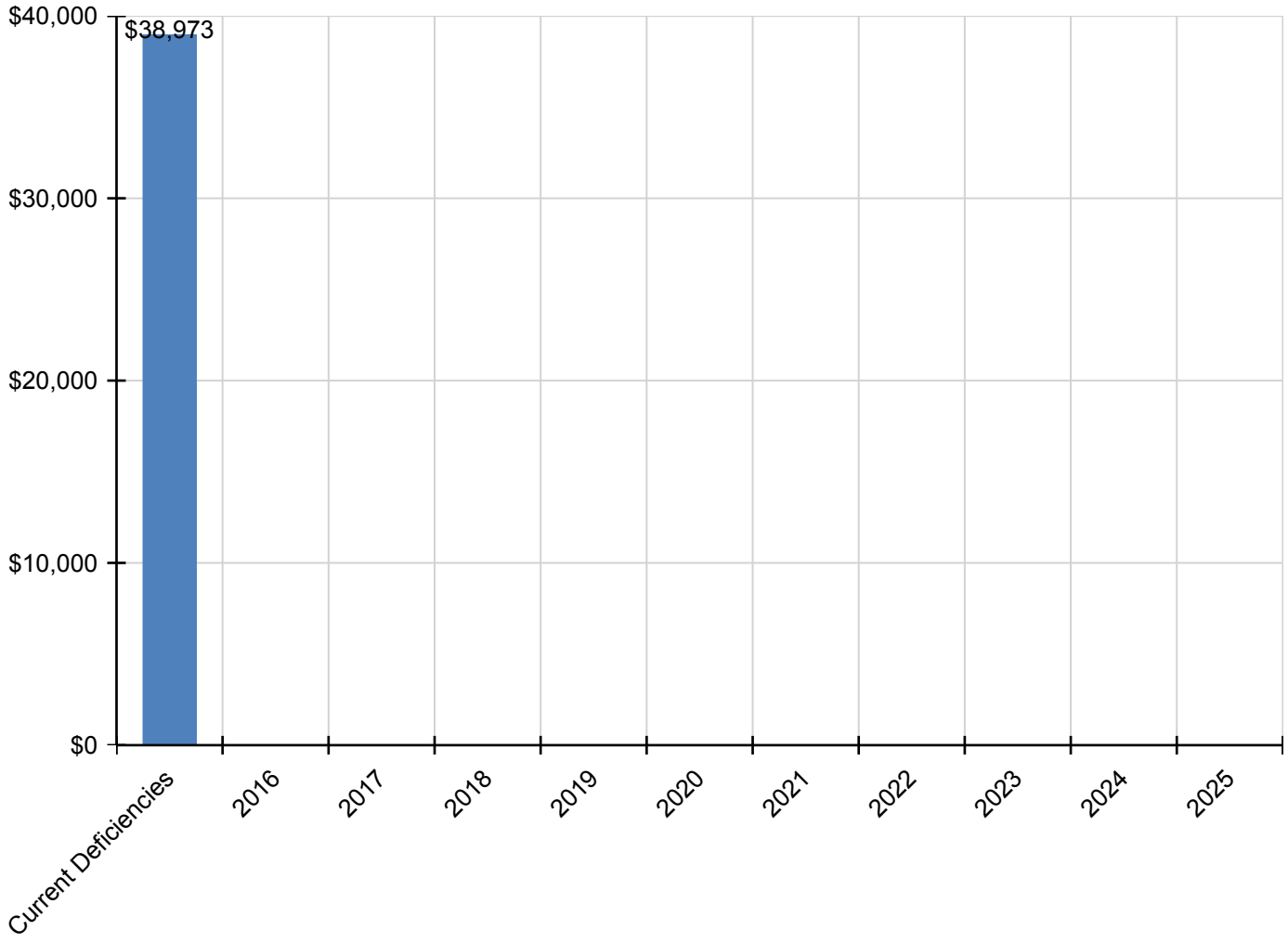
*Inflation Rate: 3%*

| System | Current Deficiencies | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total:** | **$38,973** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$38,973** |
| **G - Building Sitework** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G20 - Site Improvements** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G2010 - Roadways** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G2020 - Parking Lots** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G2030 - Pedestrian Paving** | $38,973 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$38,973** |
| **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 | $0 | **$0** |
| **G40 - Site Electrical Utilities** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G4020 - Site Lighting** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |
| **G4030 - Site Communications & Security** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$0** |

** Indicates non-renewable system*

## Forecasted Sustainment Requirement

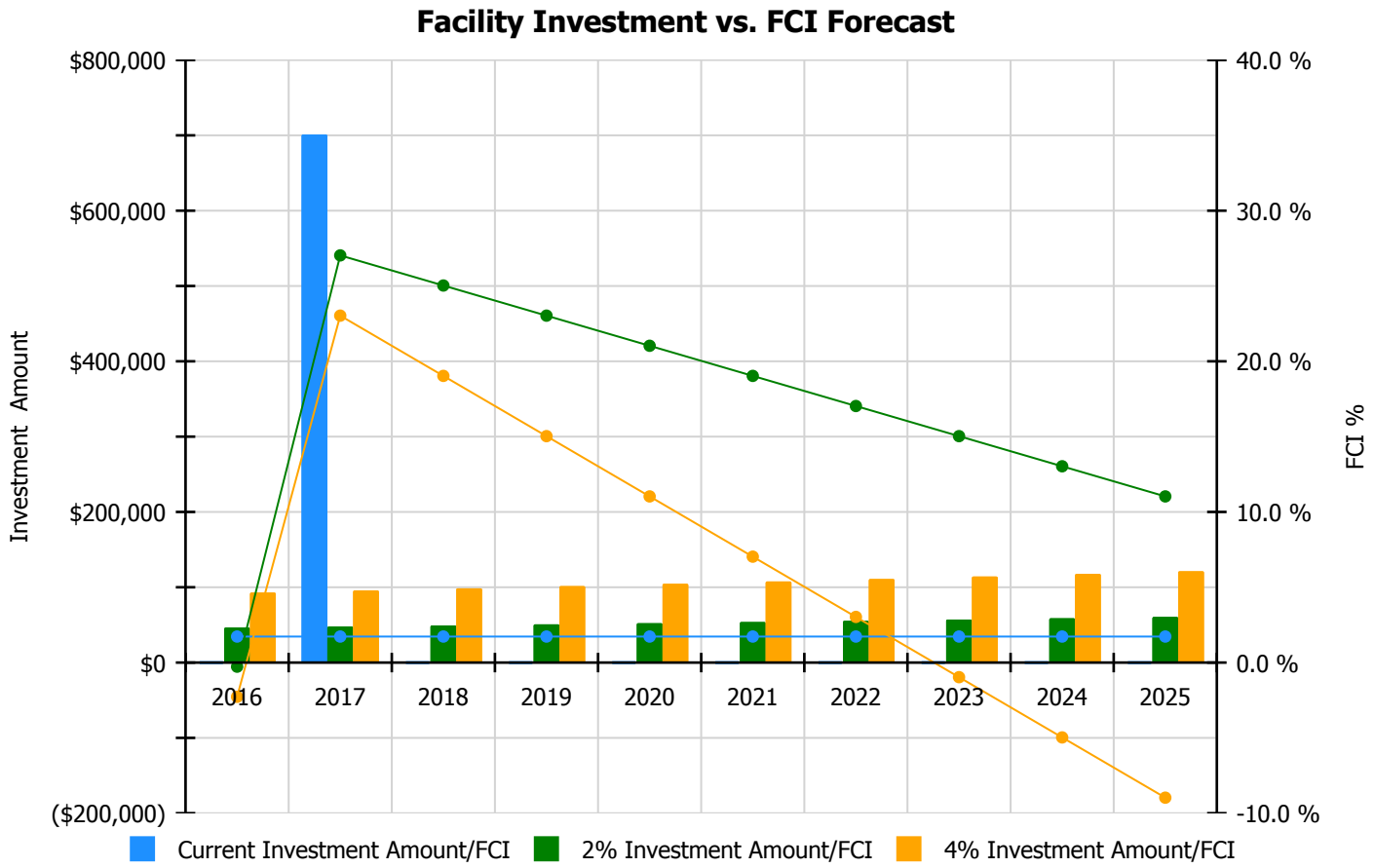
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



## 10 Year FCI Forecast by Investment Scenario

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

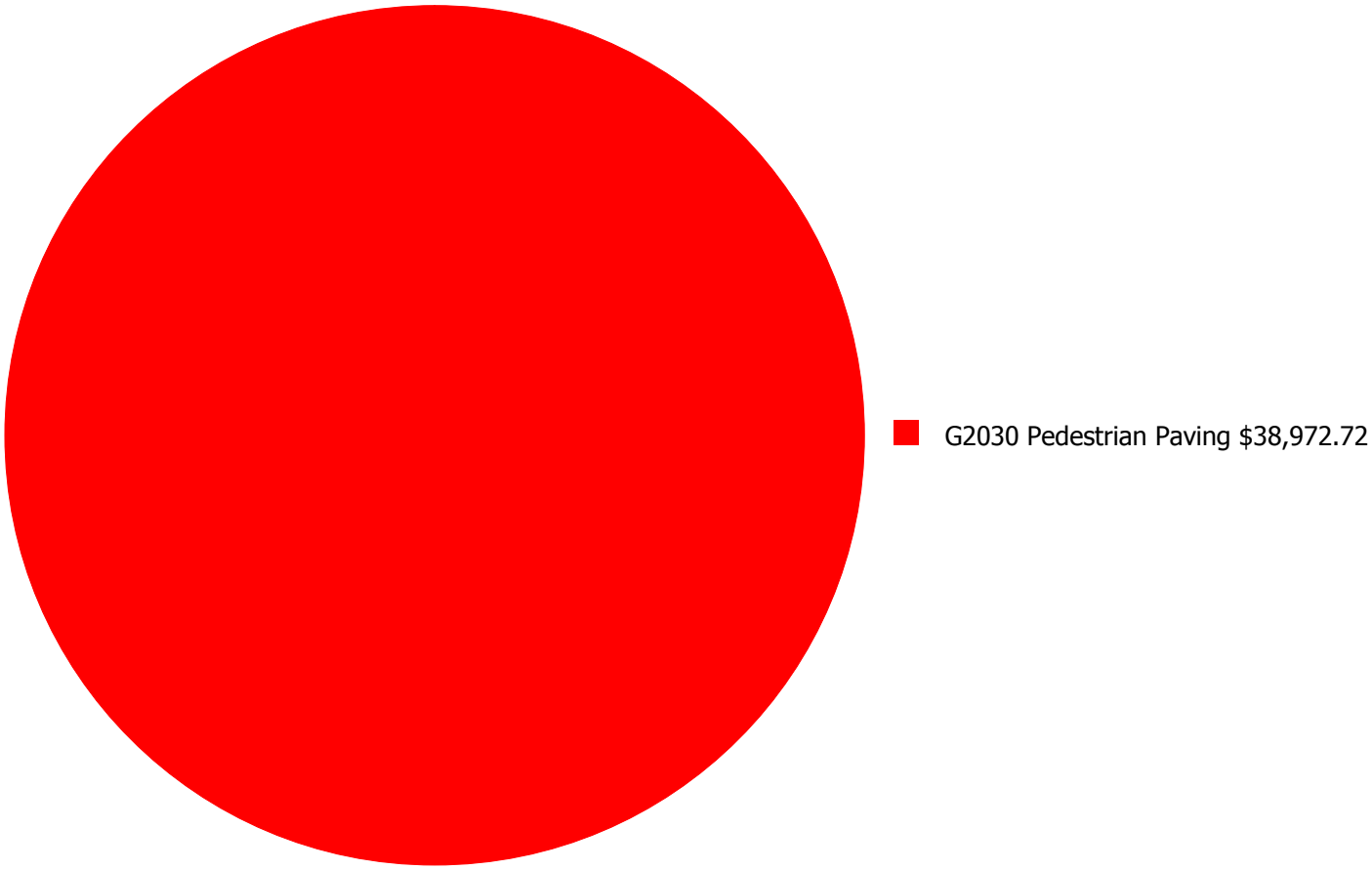
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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




| Year | Investment Amount Current FCI - 1.73% | 2% Investment | | 4% Investment | |
|---|---|---|---|---|---|
| | | Amount | FCI | Amount | FCI |
| 2016 | $0 | $46,454.00 | -0.27 % | $92,908.00 | -2.27 % |
| 2017 | $701,052 | $47,848.00 | 27.03 % | $95,696.00 | 23.03 % |
| 2018 | $0 | $49,283.00 | 25.03 % | $98,567.00 | 19.03 % |
| 2019 | $0 | $50,762.00 | 23.03 % | $101,524.00 | 15.03 % |
| 2020 | $0 | $52,285.00 | 21.03 % | $104,569.00 | 11.03 % |
| 2021 | $0 | $53,853.00 | 19.03 % | $107,706.00 | 7.03 % |
| 2022 | $0 | $55,469.00 | 17.03 % | $110,938.00 | 3.03 % |
| 2023 | $0 | $57,133.00 | 15.03 % | $114,266.00 | -0.97 % |
| 2024 | $0 | $58,847.00 | 13.03 % | $117,694.00 | -4.97 % |
| 2025 | $0 | $60,612.00 | 11.03 % | $121,224.00 | -8.97 % |
| **Total:** | **$701,052** | **$532,546.00** | | **$1,065,092.00** | |

## Deficiency Summary by System

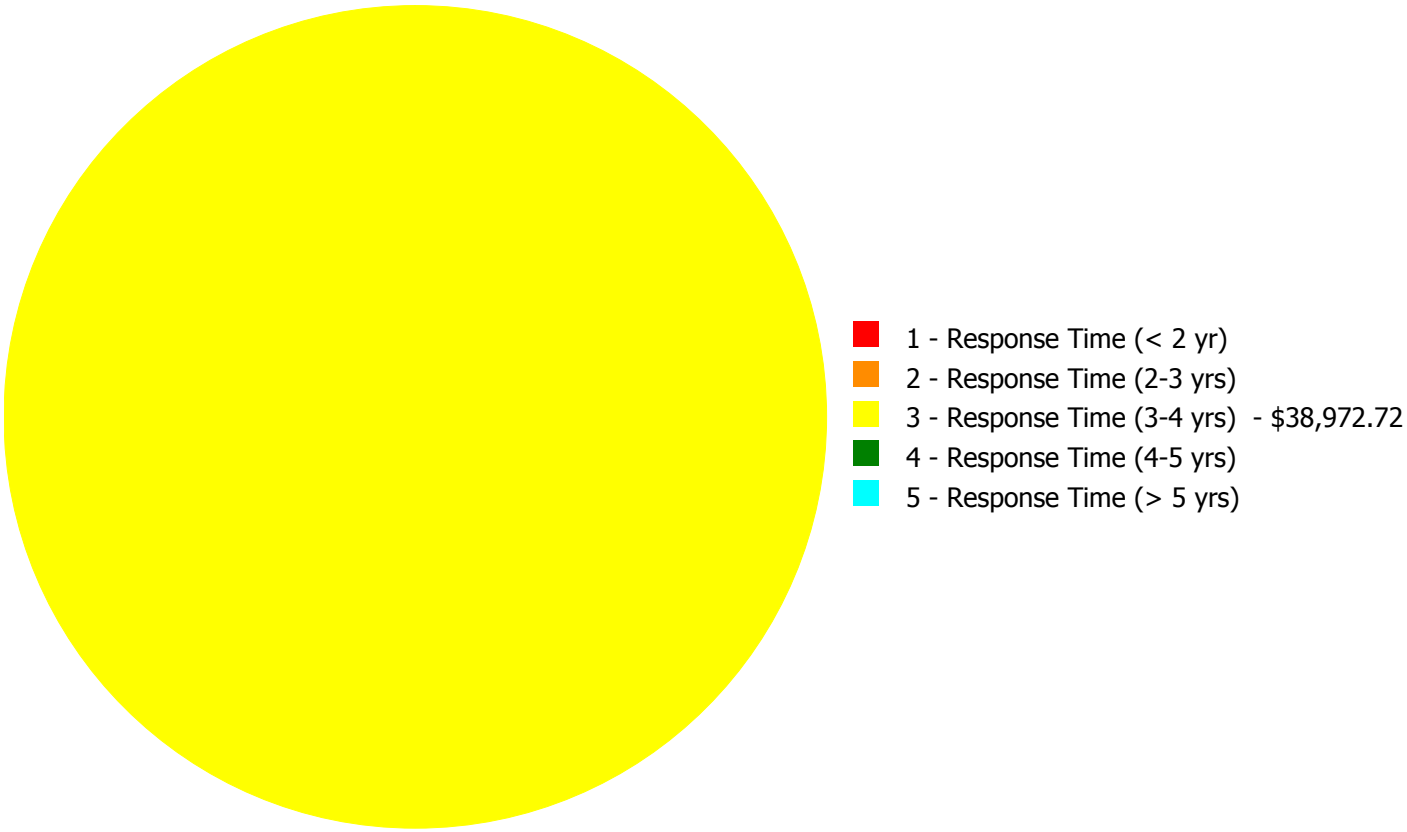
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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




**Budget Estimate Total: $38,972.72**

## 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: $38,972.72**

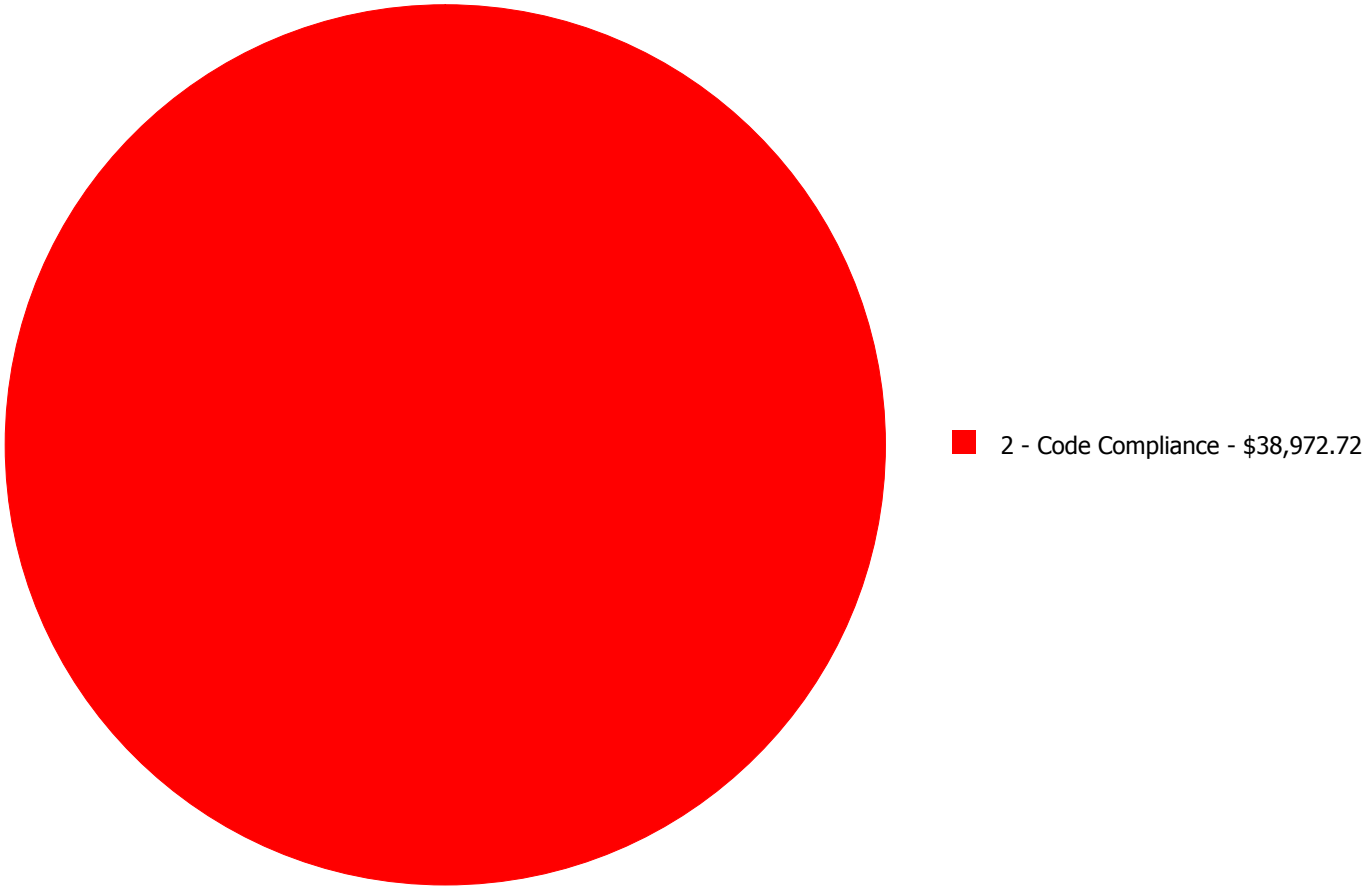
## Deficiency By Priority Investment Table

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

| System Code | System Description | 1 - Response Time (< 2 yr) | 2 - Response Time (2-3 yrs) | 3 - Response Time (3-4 yrs) | 4 - Response Time (4-5 yrs) | 5 - Response Time (> 5 yrs) | Total |
|---|---|---|---|---|---|---|---|
| G2030 | Pedestrian Paving | $0.00 | $0.00 | $38,972.72 | $0.00 | $0.00 | $38,972.72 |
| | **Total:** | $0.00 | $0.00 | $38,972.72 | $0.00 | $0.00 | $38,972.72 |

## 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: $38,972.72**

## Deficiency Details by Priority

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

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

**System: G2030 - Pedestrian Paving**

This deficiency has no image.

| | |
|---|---|
| **Location:** | Grounds/ site |
| **Distress:** | Accessibility |
| **Category:** | 2 - Code Compliance |
| **Priority:** | 3 - Response Time (3-4 yrs) |
| **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:** | 30.00 |
| **Unit of Measure:** | L.F. |
| **Estimate:** | $38,972.72 |
| **Assessor Name:** | Ben Nixon |
| **Date Created:** | 10/20/2015 |

**Notes:** Provide accessible ramp at the main entrance

## 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 |

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

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

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

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

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

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

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

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

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