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.

Daroff School

Governance	CHARTER	Report Type	Elementarymiddle
Address	5630 Vine St. Philadelphia, Pa 19139	Enrollment	671
		Grade Range	'00-08'
Phone/Fax	215-471-2905 / N/A	Admissions Category	Neighborhood
Website	Www.Universalcompanies.Org/Education/Daroff-Charter-School/	Turnaround Model	Renaissance Charter

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	**36.06%**	**$15,768,887**	**$43,734,652**
Building	37.80 %	$15,592,665	$41,252,952
Grounds	07.10 %	$176,222	$2,481,700

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	89.59 %	$1,423,044	$1,588,440
Exterior Walls (Shows condition of the structural condition of the exterior facade)	02.06 %	$64,579	$3,140,303
Windows (Shows functionality of exterior windows)	32.20 %	$493,353	$1,532,291
Exterior Doors (Shows condition of exterior doors)	147.65 %	$182,146	$123,366
Interior Doors (Classroom doors)	28.75 %	$85,871	$298,631
Interior Walls (Paint and Finishes)	15.08 %	$203,216	$1,347,667
Plumbing Fixtures	00.00 %	$0	$1,150,282
Boilers	00.00 %	$0	$1,588,444
Chillers/Cooling Towers	00.00 %	$0	$2,082,758
Radiators/Unit Ventilators/HVAC	108.90 %	$3,983,003	$3,657,589
Heating/Cooling Controls	158.90 %	$1,825,144	$1,148,580
Electrical Service and Distribution	110.70 %	$913,603	$825,276
Lighting	50.20 %	$1,481,110	$2,950,574
Communications and Security (Cameras, Pa System and Fire Alarm)	54.25 %	$599,615	$1,105,189

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

S421001;Daroff

Final

Site Assessment Report

February 1, 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):	85,080
Year Built:	1972
Last Renovation:	
Replacement Value:	$43,734,652
Repair Cost:	$15,768,886.82
Total FCI:	36.06 %
Total RSLI:	74.62 %

Description:

Facility Assessment
September 2015

School District of Philadelphia
Universal Daroff Charter School
5630 Vine St.
Philadelphia, PA 19139

85,080 SF / 795 Students / LN 02

The Universal Daroff Charter School Campus opened in 2010 serving as a Middle High School serving grades K-6. Previously known as the Daroff Samuel Elementary School this facility was originally constructed in 1972.

Identified as B421001 this facility is located at 5630 Vine St, Philadelphia, PA. The late modern design of the modified square-shaped, concrete and steel-framed building includes brick facades with a concrete foundation.

The main entrance faces the Northern exterior facing Vine St. General parking is west of the school in a dedicated lot accessed from North Fifty Seventh Street. This School building has two stories consisting of a total gross square footage of 85,080 GSF.

This school has several classrooms, a library / IMC , kitchen and student commons, technology room, Gym, Auditorium and cafeteria, with supporting administrative spaces.

The information for this report was collected during a site visit on September 17, 2015.

Mr. Christopher Harris, Building Engineer, and Mr. Wilner Jean-Batiste, Maintenance, accompanied the assessment team on a tour of the school and provided detailed information on the building systems and maintenance history.

ARCHITECTURAL / STRUCTURAL SYSTEMS

Foundations are concrete and appear to be in good condition. The superstructure is concrete and steel framed with masonry support and likewise in good condition.

The exterior brick surfaces are generally in fair to very good condition for their age. The exterior brick finish facing Race Street and from the corner of North Fifty-Sixth Street to the main entrance is damaged. In some locations, bricks have cracked and should be replaced. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

The windows appear to be original to the buildings construction several of the windows no longer work and will require attention prior to an overall effort. The windows are in poor condition. The entire exterior window system is recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

The exterior doors are metal applications with metal frames. The exterior door system for this school is a very high traffic system. The doors are in fair condition but are aging at a faster rate than expected based on traffic and condition. The exterior door system and service doors are recommended for upgrade. The new doors are expected to retain their dimensions and profiles, but that incorporate updated energy-efficient features.

There are a number of roof sections and different roof elevations ranging from the main roof to the mechanical roof. The built up application was reported to have been installed in the early 1990'S. Considering the age and condition of the roofing systems, universal upgrades are recommended.

Special consideration for those that may be physically challenged was not a main not factor in the construction effort for this school. There is no dedicated option for the physically challenged to enter the school. The path of travel is not very clear from the main entrance of the school. The interior path of travel is partially supported by some door hardware, restrooms, hand rails and guard rails. However, the building has received limited upgrades such as the compliant signage package. Included in this report are modifications that allow for considerations to enhance the upgrades required to support the physically challenged.

Interior partitions include painted CMU, glazed block and moveable partitions. There are several movable partitions that remain in classrooms. These wall systems are no longer used and in most cases cannot be used due to damage or wall modifications to support classroom needs. This deficiency provides a budgetary consideration to remove and replace the wall systems with universal removal of the existing movable partitions and upgrades to a permeate wall systems.

The interior exit stair doors are code compliant. Several of the older doors are generally in fair condition considering the age of the application. Other doors have had several repairs to the lock sets and the panic hardware. The doors are aging at a higher than expected rate and accelerating the life cycle for this application. Partial replacement of the existing system is recommended to restore the door finishes. Remove and replace damaged door systems with new code compliant fire rated door system.

Interior doors are typically wood in wood frames with wooden transom and wired glass glazing. Other interior doors include hollow metal in hollow metal frames at some of the stairwells and exit ways, access doors. Doors are generally in fair condition and are a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. Several of the classroom doors are aging at a faster than normal rate for this application. Numinous repairs to locksets and door hardware have advanced the deterioration of the doors. This deficiency provides a budgetary consideration to replace a portion of the interior doors and frames with consideration for the physically challenged.

Fittings include: chalkboards, marker boards; tack boards; interior signage; toilet accessories and metal toilet partitions and fixed storage shelving. There are several tack boards in the hallways for student displays. The systems are damaged and beyond the

expected service life for this application. Remove and replace tack boards is recommended.

The interior signage package was upgraded in 2010 with a complaint application. Several of the signs are damaged. Considering the current condition of the signs it is recommended that the damaged compliant signage be replaced with an in-kind application.

Some of the classroom chalk boards are original to the buildings construction. This system is damaged and beyond its expected life, universal upgrades are warranted. Remove and upgrade damaged chalk boards to new marker board systems.

Current requirements for stairs indicate that they have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread/riser angle). Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they are deficient in handrail and guardrail design relative to current standards. Future efforts should include comprehensive stair railing removal and replacement upgrades.

Often issues develop from stored materials under stairs such as custodial equipment and supplies. During the time of the inspection it was noted that the lobby stair has several items stored under the stairs. Also, considering the visually impaired special consideration should be taken to ensure no head injury may occur due to the lack of barriers preventing someone from entering under the stair with a cane.

There are painted walls, trim, and some painted ceilings in this building. The interior finishes are in fair condition and will require an almost continuous program of renewal of the applied finishes to maintain an acceptable appearance. Cyclical painting should be considered for a standard approach to maintaining the quality of the interior finishes. It is recommended that all previously painted surfaces be repainted according to established cycles for this occupancy and use type. Minor repairs should be completed before work begins.

The interior carpet finish was installed approximately in 2010 and is in fair condition considering the age and high traffic conditions. Near the entrance to the IMC the carpet is damaged and in the high traffic areas worn. This finish will exceed its expected life within the next five years and is recommended for removal and replacement.

The floor finish for this school is a combination of carpet in the administrative and IMC area, tile in the kitchen and service line areas, 12x12 classrooms, hallways and concrete stirs finishes. Some of the vinyl tile finish is a 9 x 9 application and is suspect to contain asbestos. This finish is recommended for upgrade to a new 12 x 12 vinyl tile application.

The ceiling finish is a mix of 12 x 12 ceiling grid, painted and 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and are in good condition considering the age of the application and the current condition of the school. The ceiling finish is expected to require upgrades to support the recommended efforts in this report prior to re-opening. This deficiency provides a budgetary consideration for removal and replacement of the current ceiling finish to a new acoustical tile finish. Considering the recommended mechanical and electrical upgrades this effort should be completed as part of an overall renewal program for the school.

There is no elevator that services this school. Goods, services, and amenities offered in public buildings are generally required to be available to all persons. To assist those that may be physically challenged and to meet current accessibility legislation to provide wheelchair access to the upper floors of this facility, the installation of a new hydraulic elevator has been recommended on the exterior elevation of the building or at another suitable location. The new installation should blend as much as possible with the overall appearance of this historic structure and include all required ADA features, such as audible jewels and gongs, an accessible control panel, etc.

Institutional equipment includes: library equipment, stage equipment and laboratory equipment; gym equipment – basketball backstops and scoreboards. There were no issues that surfaced during the time of the inspection therefore no projects or recommendations are required at this time.

Furnishings include: fixed casework; window shades/blinds; and fixed auditorium seating. The fixed seating for this school is from the original construction. The systems are in fair condition considering the age and usage. This project provides a budgetary consideration for universal upgrades for the fixed seating and furnishing of this school. Ensure that ADA requirements are followed with the new seating layout.

MECHANICAL SYSTEMS

PLUMBING- Plumbing fixtures are standard china commercial quality with wall mounted lavatories, urinals and water closets. Lavatories have dual lever handle faucets and urinals and water closets have recessed manual flush valves with lever operators. Water

coolers are stainless steel high/low type and custodial closets have mop basins. There are a few counter top stainless steel sinks and some laboratory stations with integral sinks. Fixtures are from a 2010 plumbing renovation.

Hot water is provided by a Bradford White gas water heater in the mechanical room. The heater is eighty gallons with direct vent and combustion, installed in 2010. There is a master tempering valve and two sump pump systems in the mechanical room.

Sanitary, waste and vent piping is hub and spigot cast iron with some hubless piping with banded couplings. Domestic hot and cold water is insulated rigid copper piping. There is a four inch water service with three inch meter from N. Fifty Seventh St. with a backflow preventer. The roof has drains piped to horizontal and vertical rainwater piping. Gas piping is either welded or screwed fitting black steel, depending on size.

The plumbing system was renovated in 2010 including fixtures, water heater and piping in the mechanical room. Fixtures should have remaining service life of thirty years. Water heater and piping should be serviceable twenty years.

HVAC- The building is heated by hot water generated by two HB Smith Model 28 cast iron sectional gas/oil boilers in the mechanical room. The boilers are ninety three hp with Powerflame burners and separate oil pumps, installed in 2010. Hot water is circulated to the dual temperature heating/ cooling system and cabinet radiation units throughout the building by three B&G Series 1510 ten hp end suction pumps.

There is an underground oil storage tank, capacity and condition unknown. A duplex fuel pump system is located in the mechanical room. Boilers and water heaters are connected to a stainless steel double wall factory manufactured vent system to a roof cap. A carbon monoxide detection system is in the mechanical room.

There is a central water cooled chilled water system with two Carrier scroll compressor chillers located in the mechanical room and an Evapco AT induced draft cooling tower on the roof. The chilled and hot water are piped to a dual temperature system feeding unit ventilators and air handling units. There are two 15 hp condenser water and two 10 hp chilled water pumps. All are B&G end suction type, located in the mechanical room.

Classrooms have older AAF Herman Nelson unit ventilators with water coils, filters, blowers and motors, valves and controls. A small roof penthouse contains a single zone air handling unit with inline return air fan that serves the atrium area and some interior classrooms. Two air handling units in the boiler room serve the cafeteria and gymnasium. A mechanical space above the auditorium stage has two air handling units that serve the auditorium. Ductwork is sheet metal connected to ceiling diffusers and sidewall grills, with exposed duct in the gymnasium. Toilet and building exhaust is ducted to eleven centrifugal roof ventilators and there are several gravity roof ventilators. There is a small kitchen with no cooking and no exhaust hood. There are only electric warming appliances. There are combustion air louvers with motorized dampers in the mechanical room. A wall mounted propeller fan in the electrical room ventilates that space and the mechanical room, and a refrigerant exhaust system is ducted to the chiller area.

Chilled, heating, and dual temperature water piping is welded insulated black steel. Oil piping is black steel with screwed fittings. An expansion tank, air separators, solid filtration unit and chemical feed unit are part of the piping system.

There are newer control components for the mechanical room and major equipment, and a newer duplex control air compressor. The controls for air handling units and unit ventilators are original and there is no central building automation system.

The air handling units, unit ventilators, distribution piping and air distribution are from the original 1972 installation and should be replaced. The cooling tower, pumps, chillers, boilers and mechanical room piping are from 2010 and should have remaining service life of twenty five to thirty years.

FIRE PROTECTION-The building does not have a sprinkler or standpipe system.

ELECTRICAL SYSTEMS

Electrical Service-- Electrical service to the building is provided by PECO Energy Company. A 13.2 kV service is routed overhead to a B-K Electrical Products, Inc. load center unit substation located in the Main Electrical Room in the Basement. The unit substation is provided with a 600A air interrupter switch, metering section, 500 kVA, 13.2 kV-208/120V, 3 phase, 4 wire dry type transformer and one distribution section. The switchboard does not have a main circuit breaker, but has 11 feeder circuit breakers that feed mechanical equipment and panelboards located on each floor. The unit substation is original equipment and has served its useful life and should be replaced within the next 3 to 5 years. The eight (8) panelboards located on Floors 1 and 2 and in the kitchen should also be replaced.

There is also a feeder tap on the transformer secondary that serves Panelboard BP-1 on the wall adjacent to the substation via an 800A main service disconnect switch. Panelboard BP-1 serves boilers and chillers and was installed in 2009; it has a remaining useful life of 24 years.

Receptacles-- Classrooms are typically supplied with only 2 to 4 duplex receptacles, which is inadequate for today's classrooms. It is recommended 6 to 8 additional duplex receptacles be provided in each classroom using a surface metal raceway system.

There are some classrooms that have sinks. It was observed that receptacles located within 6 feet of the sinks need to be replaced with ground-fault circuit-interrupting (GFCI) type receptacles to comply with NFPA 70, NEC Article 210.8 (B). An allowance for replacement of eight (8) duplex receptacles with GFCI type is included in this report.

Lighting-- The main lobby has surface mounted 4x4 modular fluorescent fixtures and recessed downlights. Corridors have 1x4 recessed grid or surface mounted modular fluorescent troffers with acrylic prismatic lenses. The kitchen has 1x4 recessed fluorescent grid troffers. Restrooms have 1x4 recessed flanged fluorescent troffers. Most classrooms and the Main Office are provided with 2x4 recessed grid troffers with acrylic lenses. Some classrooms also have 1x4 fluorescent grid troffers. Otherwise, fixtures are surface mounted. At least two light switches are provided in classrooms to control lighting fixtures. The IMC has (24) surface mounted wraparound fluorescent fixtures with four (4) lamps. Mechanical and electrical rooms are provided with 4 foot industrial fixtures with T8 lamps. Except for the Science Room 106, which has 2x4 fixtures with T8 lamps, all fluorescent fixtures have T12 lamps, which are now obsolete. All fixtures with T12 lamps should be replaced with fixtures using T8 or T5 lamps.

The auditorium is illuminated with recessed incandescent lighting fixtures. These fixtures should be replaced with energy efficient, dimmable LED downlights that would also reduce maintenance costs. There are three (3) ceiling mounted theatrical lighting positions in front of the stage, each with three (3) spotlighting fixtures. There are also two rows of electrics and seven (7) 8-foot fluorescent worklights with T8 lamps above the stage. There is no dimmer panel for the auditorium. Lighting fixtures are switched by circuit breakers in the lighting panelboard.

The gymnasium has (30) stem mounted, industrial type metal halide fixtures that were reported by staff to be original fixtures. There are also incandescent fixtures that are used for emergency lighting. It is recommended that the metal halide fixtures be replaced with LED type fixtures, which would also allow them to be used for emergency lighting.

Incandescent wall mounted fixtures are provided above exterior egress doors. It is recommended fixtures be replaced with LED wall packs. There are also HID floodlight fixtures on the west and south sides of the building.

There is no lighting on the roof, either at the access door or at the roof mounted HVAC equipment. Switch controlled LED lighting fixtures should be provided at the access door to the roof and at the roof mounted chiller. Also, the three (3) incandescent lighting fixtures in the air handling unit penthouse, and one (1) damaged convenience receptacle, should also be replaced.

Fire Alarm System-- The fire alarm system is original equipment. The fire alarm control panel (FACP) is manufactured by S.H. Couch, Inc. and is located in the Building Engineer's Office. The system is monitored by Tyco Integrated Security and consists of manual fire alarm pull stations and bell notification appliances. The mounting heights of initiating devices exceed ADA requirements. There are no visual notification appliances in the building. The fire alarm system is obsolete and does not meet current NFPA codes and ADA. Replacement with an addressable fire alarm system is needed.

Telephone/LAN-- A telephone and data outlet is provided in each classroom. Wireless access points are located in corridors and classrooms to provide wireless access throughout the building. The telephone system demarcation point is located in the Basement.

Paging/Sound/Intercom Systems-- The paging system is accessed through the telephone system. Each classroom has a ceiling speaker for announcements and class changes. There are also ceiling recessed paging speakers in the corridors. Horn type speakers are located in the gymnasium and on the exterior of the building. A new sound cabinet was being installed in the auditorium during the site visit. There is an Aiphone intercom system at the visitor's entrance to the school.

Clock and Program System-- There are clock/speaker assemblies in the classrooms. The Building Engineer reported that the clock system is not operational. The recessed ceiling speakers in classrooms and corridors are used for paging and program. Speakers show signs of age and should be replaced. A wireless GPS clock system with battery operated clock is recommended to replace the existing system.

Television System-- There is no television system in this school.

Video Surveillance and Security Systems-- Video surveillance cameras are located in corridors, stairwells, gymnasium, auditorium and

exterior of the building. The video surveillance system is monitored in the Main Office. Some of the cameras are reaching the end of their useful life. An allowance for replacement of ten (10) interior and five (5) exterior cameras is included in this report. A Tyco Integrated Security panel is located in the Building Engineer's Office in the Basement. There are three security zones that monitor exterior doors and motion sensors in the First Floor corridor and report alarms off-premise.

Emergency Power System-- A Generac 15 kW/19 kVA, 208/120V, 3 phase, 4 wire standby generator with diesel oil full supply and day tank serves only emergency egress and exit lighting loads. The generator feeds a B-K Electrical Products 100A, 208/120V, 3 phase, 4 wire plug-in fusible emergency panelboard in the Main Electrical Room via a Generac GTS 100A automatic transfer switch (ATS). The generator and ATS were installed in 2007 and are in good condition, with an estimated remaining useful life of 13 years. It is recommended that the 100A emergency panelboard be replaced. The standby generator would need to be replaced with a larger size if an electric fire pump is required. It is recommended that a diesel fire pump be provided, if required.

Emergency Lighting System / Exit Lighting-- Emergency egress and exit lighting is powered from the standby generator. There are no emergency lighting fixtures in classrooms. There are a few exit signs that have reached the end of their useful life and need to be replaced. An allowance for replacement of five (5) exit signs is included in this report.

Lightning Protection System -- There is no lightning protection system for this facility.

Conveying Systems-- There is one Otis, 2500 pound capacity, hydraulic, passenger elevator that serves the two floors. The machine room is located in a pit below the First Floor in an office within the Main Office. The machine room is accessed by ladder through a floor hatch located under a desk, but was not easily accessible. No elevator information was recorded. However, it was observed that the hydraulic power unit had an oil leak. It appears the hydraulic unit is original and has reached the end of its useful life. The elevator hydraulic unit should be located to the First Floor, so that it is easily accessible.

GROUNDS

Generally the sidewalks are in good condition and there were no issues that surfaced during the time of the inspection therefore no projects or recommendations are required at this time.

The fence system consists of a four and eight foot fence around the playground and parking areas. This system is in good condition and there are no recommendations required at this time.

Although not part of the school property there is a city park just outside of the fence and the western wall of the school facing Race Street. As indicated in the photos, there are several safety hazards such as open pits, cut pipes extending a foot to two feet off of the ground and broken park benches. Care should be taken to ensure that these issues are addressed with the proper city department to prevent unnecessary injury.

The parking area has ADA parking with approved curb cuts for access to the sidewalks that lead to the main entrance. However, the parking lots are in poor condition, the harsh environmental conditions associated with snow removal have taken its toll on the asphalt surface. Also, there is no marked path of ingress to the main entrance. This project provides a budgetary consideration for a parking lot renewal program that includes all aspects of the current ADA legislation. Universal upgrades are recommended.

The trash dumpster is located in the parking lot open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area are necessary for the safety of the students and the general public. Construction of a secure lockable dumpster area is recommended.

Site Lighting-- The paved play area on the south side of the school is illuminated from building mounted HID floodlighting fixtures. The paved parking lot on the west side of the school is illuminated by four (4) pole mounted shoebox style HID luminaires. The light poles are in poor condition, some with damaged luminaires. It was reported by the Building Engineer that only one of the light poles was operational.

Site Video Surveillance—there are a total of nine (9) exterior cameras around the perimeter of the building that provide coverage of the entrances, play areas and parking lot. An allowance for replacement of five (5) exterior cameras is included in this report.

RECOMMENDATIONS

- Upgrade chalk board
- Upgrade tack board
- Remove and replace suspended acoustic ceilings

- Install elevator
- Repair and repaint all interior walls
- Replace inadequate or install proper stair railing
- Replace auditorium seating
- Replace carpet
- Remove VAT and replace with VCT
- Install fire rated walls and door where required
- Remove and replace stage curtain
- Replace missing or damaged signage
- Repair damaged single ply roofing
- Replace blackboards with marker boards
- Remove and replace interior doors
- Remove and replace aluminum windows
- Build secure trash dumpster enclosure
- Remove and replace parking lot
- Provide a four pipe fan coil system with roof mounted outside air system ducted to each fan coil unit. Provide a fan coil unit for each interior classroom, IMC and office area as required. Include new hot and chilled water piping, control valves and controls.
- Install NFPA wet pipe automatic sprinkler system in entire building, including fire service, piping sprinkler heads, standpipes and fire pump if required.
- Inspect old cast iron sanitary piping including camera observation and replace damaged sections.
- Provide a new central station air handling unit for the auditorium with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water systems.
- Install new direct digital control system and building automation system with remote computer control capability and graphics package.
- Provide a new central station air handling unit for the cafeteria with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water systems.
- Provide a new central station air handling unit for the gymnasium with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water systems.
- Replace the existing unit ventilators with new units designed for quiet operation and equipped with hot water and chilled water coils, hydronic control valves with digital controls and integral heat exchangers to provide code required fresh air quantities. Connect to new chilled and hot water distribution piping systems and building automation control system.
- Replace the existing load center unit substation. Provide a 600A air interrupter switch, metering section, 750 kVA, 13.2 kV-208/120V, 3 phase, 4 wire dry type transformer, 2500A main circuit breaker and one 2500A distribution section. Remove the 800A safety switch feeding Panelboard BP-1 and feed BP-1 from the distribution section.
- Replace (8) panelboards, including their feeder conductors, which are located on Floors 1 and 2.
- Provide surface metal raceway system with 6 to 8 duplex receptacles in each of 33 classrooms.
- Provide an allowance for replacement of eight (8) duplex receptacles that are located within 6 feet of the sinks in classrooms with ground-fault circuit-interrupting (GFCI) type receptacles to comply with NFPA 70, NEC Article 210.8 (B).
- Replace lighting fixtures and branch circuit wiring in 35 classrooms (approximately 35,030 SF).
- Replace (24) wraparound fluorescent lighting fixtures and wiring in the IMC.
- Replace (50) recessed incandescent lighting fixtures and wiring in the auditorium.
- Replace (30) stem mounted industrial type metal halide lighting fixtures in the gymnasium with LED fixtures.
- Replace fluorescent lighting fixtures in corridors, restrooms, offices, cafeteria, kitchen and support areas that have T12 lamps with fixtures having T8 or T5 lamps (estimate 25,300 SF).
- Replace incandescent wall mounted fixtures above exterior egress doors with LED wall pack fixtures (total of 10 fixtures).
- Provide lighting fixtures on roof at access door from stair and at the rooftop chiller. Replace incandescent lampholders in the penthouse air handler room with vapor-tight LED fixtures. Provide convenience receptacle at chiller and replace defective receptacle in the air handler room.
- Replace fire alarm system with an addressable system.
- Replace ceiling recessed paging speakers and wiring in classrooms and corridors (approximately 115 speakers).
- Replace clocks with wireless clock system in all classrooms, cafeteria, auditorium, gymnasium, IMC, offices and similar occupied rooms.
- Replace (10) interior video surveillance cameras.
- Replace hydraulic elevator power unit and move to a new elevator machine room on the First Floor. Upgrade elevator cab, controller, hall stations, lanterns and position indicators.
- Replace four (4) 10-foot high exterior poles and HID luminaires in parking lot on the west side of the building. Site lighting poles/luminaires are in poor condition and are not operational.
- Provide allowance for replacement of five (5) exterior building mounted video surveillance cameras.

Site Assessment Report - S421001;Daroff

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 3 / Tm 1
Status:	Accepted by SDP	Team:	Tm 1
Site ID:	S421001		

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.

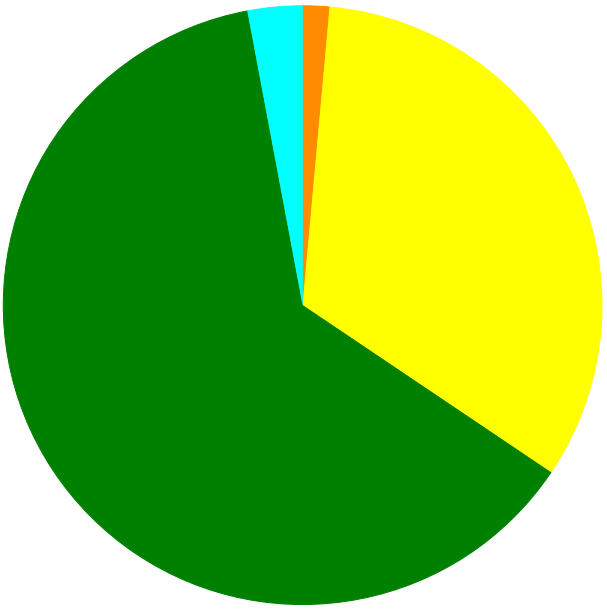
Current Investment Requirement and Condition by Uniformat Classification

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	48.14 %	15.43 %	$740,078.36
B30 - Roofing	60.00 %	89.59 %	$1,423,044.46
C10 - Interior Construction	49.71 %	15.23 %	$317,944.93
C20 - Stairs	57.00 %	12.98 %	$15,569.46
C30 - Interior Finishes	79.90 %	38.97 %	$1,660,113.46
D10 - Conveying	105.71 %	446.51 %	$581,228.00
D20 - Plumbing	82.46 %	20.80 %	$361,301.23
D30 - HVAC	98.03 %	68.51 %	$5,808,146.38
D40 - Fire Protection	105.71 %	177.49 %	$1,217,107.39
D50 - Electrical	109.31 %	59.87 %	$2,994,327.56
E10 - Equipment	85.71 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	261.45 %	$473,803.36
G20 - Site Improvements	39.43 %	4.84 %	$91,234.24
G40 - Site Electrical Utilities	110.00 %	14.21 %	$84,987.99
Totals:	**74.62 %**	**36.06 %**	**$15,768,886.82**

Condition Deficiency Priority

Facility Name	Gross Area (S.F.)	FCI %	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)
B421001;Daroff	85,080	37.80	$0.00	$207,906.07	$5,098,228.92	$9,820,712.90	$465,816.70
G421001;Grounds	137,500	7.10	$0.00	$18,852.52	$103,980.95	$53,388.76	$0.00
Total:		**36.06**	**$0.00**	**$226,758.59**	**$5,202,209.87**	**$9,874,101.66**	**$465,816.70**

Deficiencies By Priority



Budget Estimate Total: $15,768,886.82

Executive Summary

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

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

Function:	Elementary School
Gross Area (SF):	85,080
Year Built:	1972
Last Renovation:	
Replacement Value:	$41,252,952
Repair Cost:	$15,592,664.59
Total FCI:	37.80 %
Total RSLI:	75.71 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B421001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S421001		

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	48.14 %	15.43 %	$740,078.36
B30 - Roofing	60.00 %	89.59 %	$1,423,044.46
C10 - Interior Construction	49.71 %	15.23 %	$317,944.93
C20 - Stairs	57.00 %	12.98 %	$15,569.46
C30 - Interior Finishes	79.90 %	38.97 %	$1,660,113.46
D10 - Conveying	105.71 %	446.51 %	$581,228.00
D20 - Plumbing	82.46 %	20.80 %	$361,301.23
D30 - HVAC	98.03 %	68.51 %	$5,808,146.38
D40 - Fire Protection	105.71 %	177.49 %	$1,217,107.39
D50 - Electrical	109.31 %	59.87 %	$2,994,327.56
E10 - Equipment	85.71 %	0.00 %	$0.00
E20 - Furnishings	30.00 %	261.45 %	$473,803.36
Totals:	**75.71 %**	**37.80 %**	**$15,592,664.59**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$18.40	S.F.	85,080	100	1972	2072		57.00 %	0.00 %	57			$1,565,472
A1030	Slab on Grade	$7.73	S.F.	85,080	100	1972	2072		57.00 %	0.00 %	57			$657,668
A2010	Basement Excavation	$6.55	S.F.	85,080	100	1972	2072		57.00 %	0.00 %	57			$557,274
A2020	Basement Walls	$12.70	S.F.	85,080	100	1972	2072		57.00 %	0.00 %	57			$1,080,516
B1010	Floor Construction	$75.10	S.F.	85,080	100	1972	2072		57.00 %	0.00 %	57			$6,389,508
B1020	Roof Construction	$13.88	S.F.	42,000	100	1972	2072		57.00 %	0.00 %	57			$582,960
B2010	Exterior Walls	$36.91	S.F.	85,080	100	1972	2072		57.00 %	2.06 %	57		$64,578.94	$3,140,303
B2020	Exterior Windows	$18.01	S.F.	85,080	40	1972	2012	2027	30.00 %	32.20 %	12		$493,353.00	$1,532,291
B2030	Exterior Doors	$1.45	S.F.	85,080	25	1972	1997	2027	48.00 %	147.65 %	12		$182,146.42	$123,366
B3010105	Built-Up	$37.76	S.F.	42,000	20	1990	2010	2027	60.00 %	89.73 %	12		$1,423,044.46	$1,585,920
B3020	Roof Openings	$0.06	S.F.	42,000	20	1990	2010	2027	60.00 %	0.00 %	12			$2,520
C1010	Partitions	$17.91	S.F.	85,080	100	1972	2072		57.00 %	13.37 %	57		$203,719.16	$1,523,783
C1020	Interior Doors	$3.51	S.F.	85,080	40	1972	2012	2027	30.00 %	28.75 %	12		$85,870.57	$298,631
C1030	Fittings	$3.12	S.F.	85,080	40	1972	2012	2027	30.00 %	10.68 %	12		$28,355.20	$265,450
C2010	Stair Construction	$1.41	S.F.	85,080	100	1972	2072		57.00 %	12.98 %	57		$15,569.46	$119,963
C3010230	Paint & Covering	$13.21	S.F.	85,080	10	2010	2020	2027	120.00 %	18.08 %	12		$203,216.31	$1,123,907
C3010232	Wall Tile	$2.63	S.F.	85,080	30	1972	2002	2027	40.00 %	0.00 %	12			$223,760
C3020411	Carpet	$7.30	S.F.	3,000	10	2010	2020		50.00 %	102.20 %	5		$22,381.52	$21,900

Site Assessment Report - B421001;Daroff

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3020412	Terrazzo & Tile	$75.52	S.F.	5,000	50	1972	2022	2027	24.00 %	0.00 %	12			$377,600
C3020413	Vinyl Flooring	$9.68	S.F.	75,080	20	1972	1992	2027	60.00 %	41.74 %	12		$303,333.36	$726,774
C3020415	Concrete Floor Finishes	$0.97	S.F.	2,000	50	1972	2022	2027	24.00 %	0.00 %	12			$1,940
C3030	Ceiling Finishes	$20.97	S.F.	85,080	25	2010	2035		80.00 %	63.40 %	20		$1,131,182.27	$1,784,128
D1010	Elevators and Lifts	$1.53	S.F.	85,080	35	1972	2007	2052	105.71 %	446.51 %	37		$581,228.00	$130,172
D2010	Plumbing Fixtures	$13.52	S.F.	85,080	35	2010	2045		85.71 %	0.00 %	30			$1,150,282
D2020	Domestic Water Distribution	$1.68	S.F.	85,080	25	2010	2035		80.00 %	0.00 %	20			$142,934
D2030	Sanitary Waste	$2.90	S.F.	85,080	25	1972	1997	2042	108.00 %	146.43 %	27		$361,301.23	$246,732
D2040	Rain Water Drainage	$2.32	S.F.	85,080	30	1972	2002	2025	33.33 %	0.00 %	10			$197,386
D3020	Heat Generating Systems	$18.67	S.F.	85,080	35	2010	2045		85.71 %	0.00 %	30			$1,588,444
D3030	Cooling Generating Systems	$24.48	S.F.	85,080	30	2010	2040		83.33 %	0.00 %	25			$2,082,758
D3040	Distribution Systems	$42.99	S.F.	85,080	25	1972	1997	2042	108.00 %	108.90 %	27		$3,983,002.51	$3,657,589
D3050	Terminal & Package Units	$11.60	S.F.		20				0.00 %	0.00 %				$0
D3060	Controls & Instrumentation	$13.50	S.F.	85,080	20	1972	1992	2037	110.00 %	158.90 %	22		$1,825,143.87	$1,148,580
D4010	Sprinklers	$7.05	S.F.	85,080	35	1972	2007	2052	105.71 %	202.91 %	37		$1,217,107.39	$599,814
D4020	Standpipes	$1.01	S.F.	85,080	35	1972	2007	2052	105.71 %	0.00 %	37			$85,931
D5010	Electrical Service/Distribution	$9.70	S.F.	85,080	30	1972	2002	2047	106.67 %	110.70 %	32		$913,602.51	$825,276
D5020	Lighting and Branch Wiring	$34.68	S.F.	85,080	20	1972	1992	2037	110.00 %	50.20 %	22		$1,481,110.05	$2,950,574
D5030	Communications and Security	$12.99	S.F.	85,080	15	1972	1987	2032	113.33 %	54.25 %	17		$599,615.00	$1,105,189
D5090	Other Electrical Systems	$1.41	S.F.	85,080	30	1972	2002	2037	73.33 %	0.00 %	22			$119,963
E1020	Institutional Equipment	$4.82	S.F.	85,080	35	2010	2045		85.71 %	0.00 %	30			$410,086
E1090	Other Equipment	$11.10	S.F.	85,080	35	2010	2045		85.71 %	0.00 %	30			$944,388
E2010	Fixed Furnishings	$2.13	S.F.	85,080	40	1972	2012	2027	30.00 %	261.45 %	12		$473,803.36	$181,220
								Total	**75.71 %**	**37.80 %**			**$15,592,664.59**	**$41,252,952**

System Notes

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

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

Note: painted walls 100

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

Note: carpet 4
terrazzo tile 4
vinyl 88%
concrete 4

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

Note: There is one (1) unit substation transformer and no secondary transformers.

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:	**$15,592,665**	**$0**	**$0**	**$0**	**$0**	**$27,927**	**$0**	**$0**	**$0**	**$0**	**$291,796**	**$15,912,388**
*** 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	$64,579	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$64,579**
B2020 - Exterior Windows	$493,353	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$493,353**
B2030 - Exterior Doors	$182,146	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$182,146**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$1,423,044	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,423,044**
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	$203,719	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$203,719**
C1020 - Interior Doors	$85,871	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$85,871**
C1030 - Fittings	$28,355	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$28,355**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

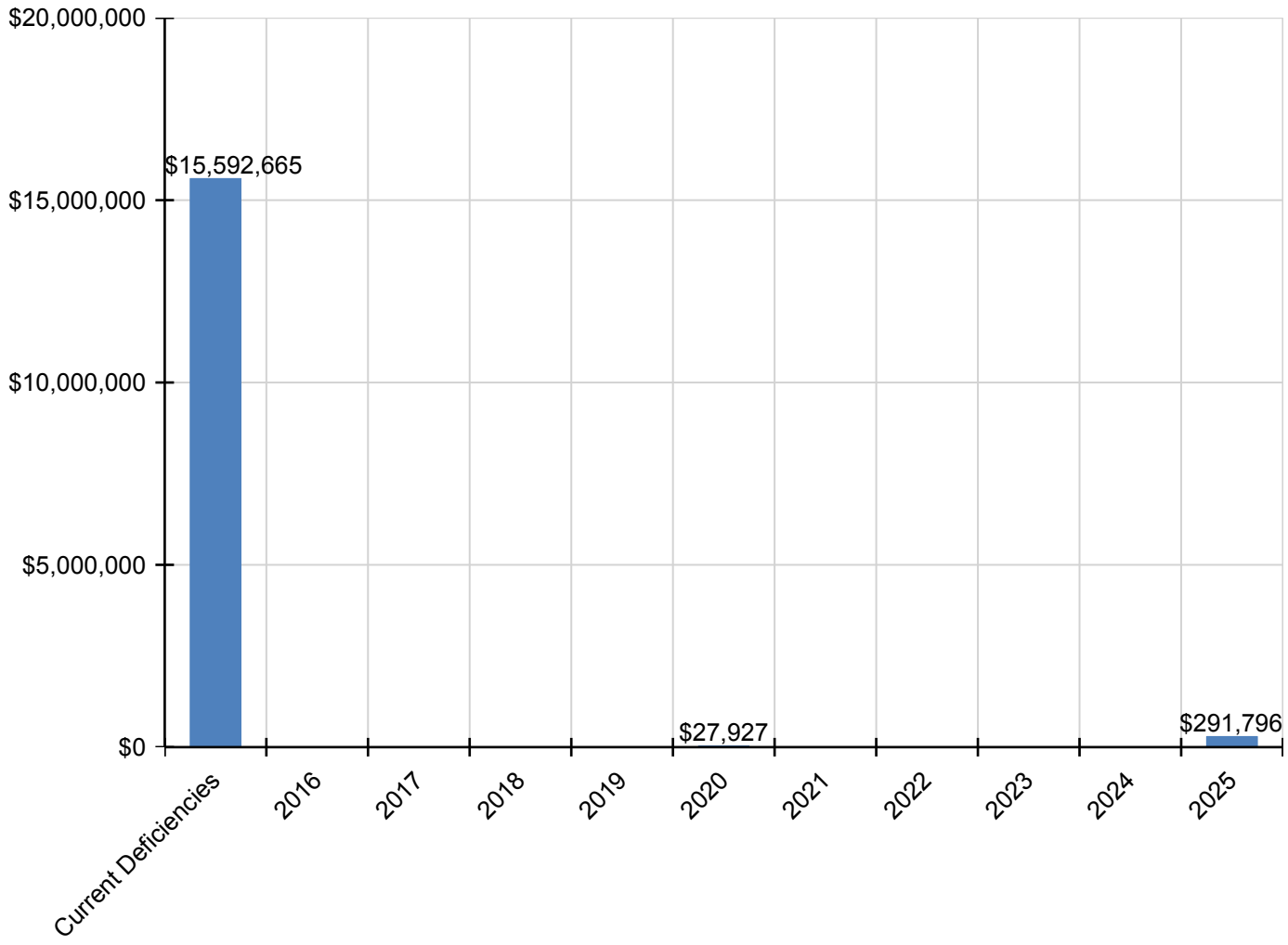
C2010 - Stair Construction	$15,569	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$15,569**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$203,216	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$203,216**
C3010232 - Wall Tile	$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	$22,382	$0	$0	$0	$0	$27,927	$0	$0	$0	$0	$0	**$50,308**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$303,333	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$303,333**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$1,131,182	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,131,182**
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	$581,228	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$581,228**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2030 - Sanitary Waste	$361,301	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$361,301**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$291,796	**$291,796**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$3,983,003	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,983,003**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,825,144	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,825,144**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,217,107	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,217,107**
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	$913,603	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$913,603**
D5020 - Lighting and Branch Wiring	$1,481,110	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,481,110**
D5030 - Communications and Security	$599,615	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$599,615**
D5090 - Other Electrical Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

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	$473,803	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$473,803**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

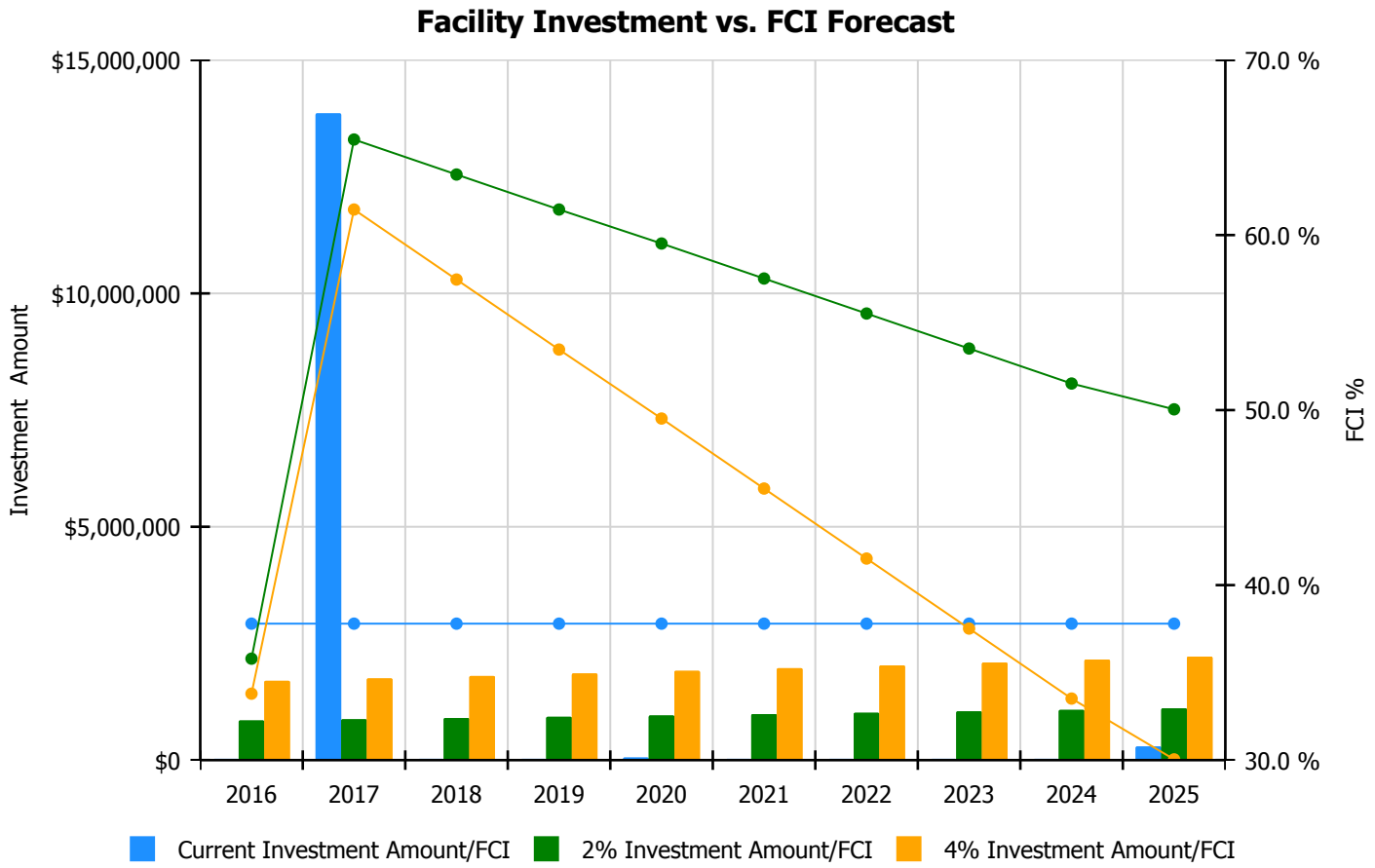
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

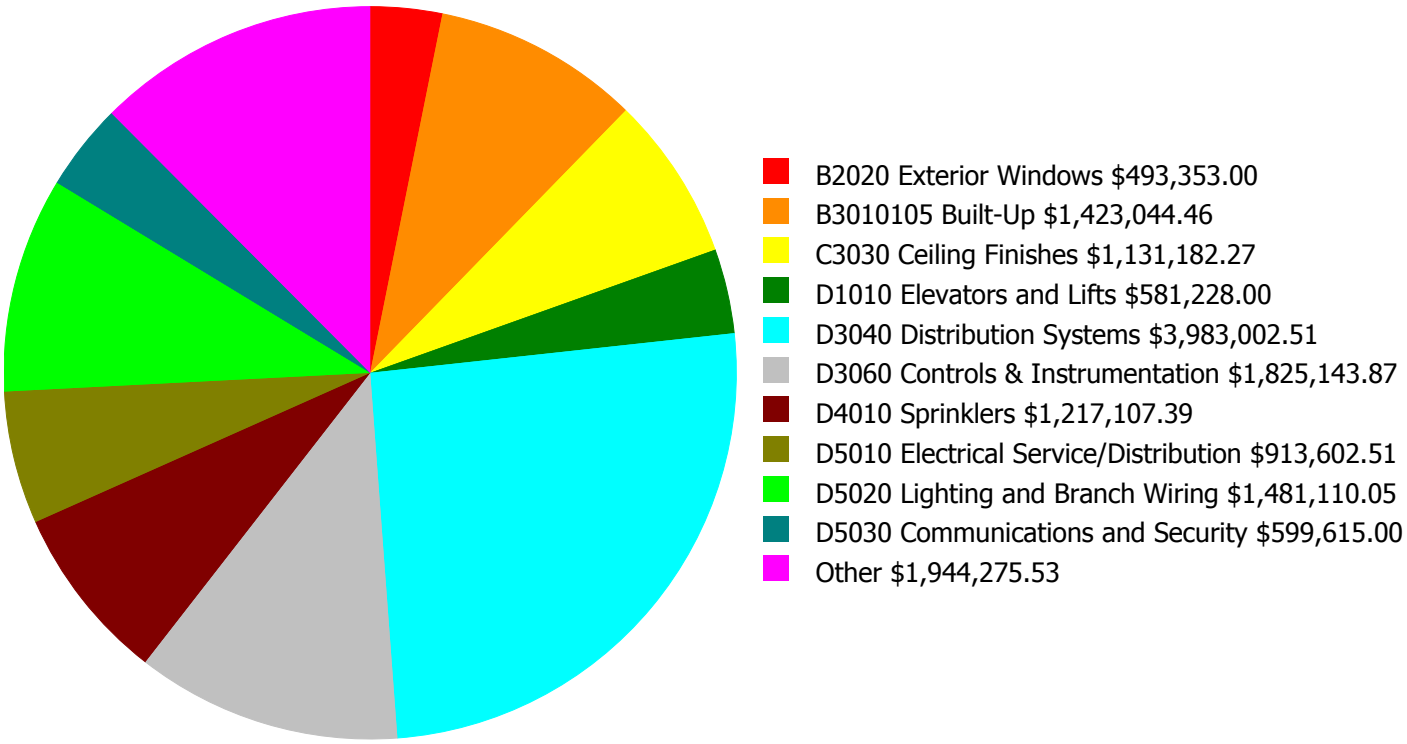
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 37.8%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$849,811.00	35.80 %	$1,699,622.00	33.80 %
2017	$13,856,564	$875,305.00	65.46 %	$1,750,610.00	61.46 %
2018	$0	$901,564.00	63.46 %	$1,803,129.00	57.46 %
2019	$0	$928,611.00	61.46 %	$1,857,222.00	53.46 %
2020	$27,927	$956,470.00	59.52 %	$1,912,939.00	49.52 %
2021	$0	$985,164.00	57.52 %	$1,970,327.00	45.52 %
2022	$0	$1,014,719.00	55.52 %	$2,029,437.00	41.52 %
2023	$0	$1,045,160.00	53.52 %	$2,090,320.00	37.52 %
2024	$0	$1,076,515.00	51.52 %	$2,153,030.00	33.52 %
2025	$291,796	$1,108,810.00	50.04 %	$2,217,621.00	30.04 %
Total:	**$14,176,288**	**$9,742,129.00**		**$19,484,257.00**	

Deficiency Summary by System

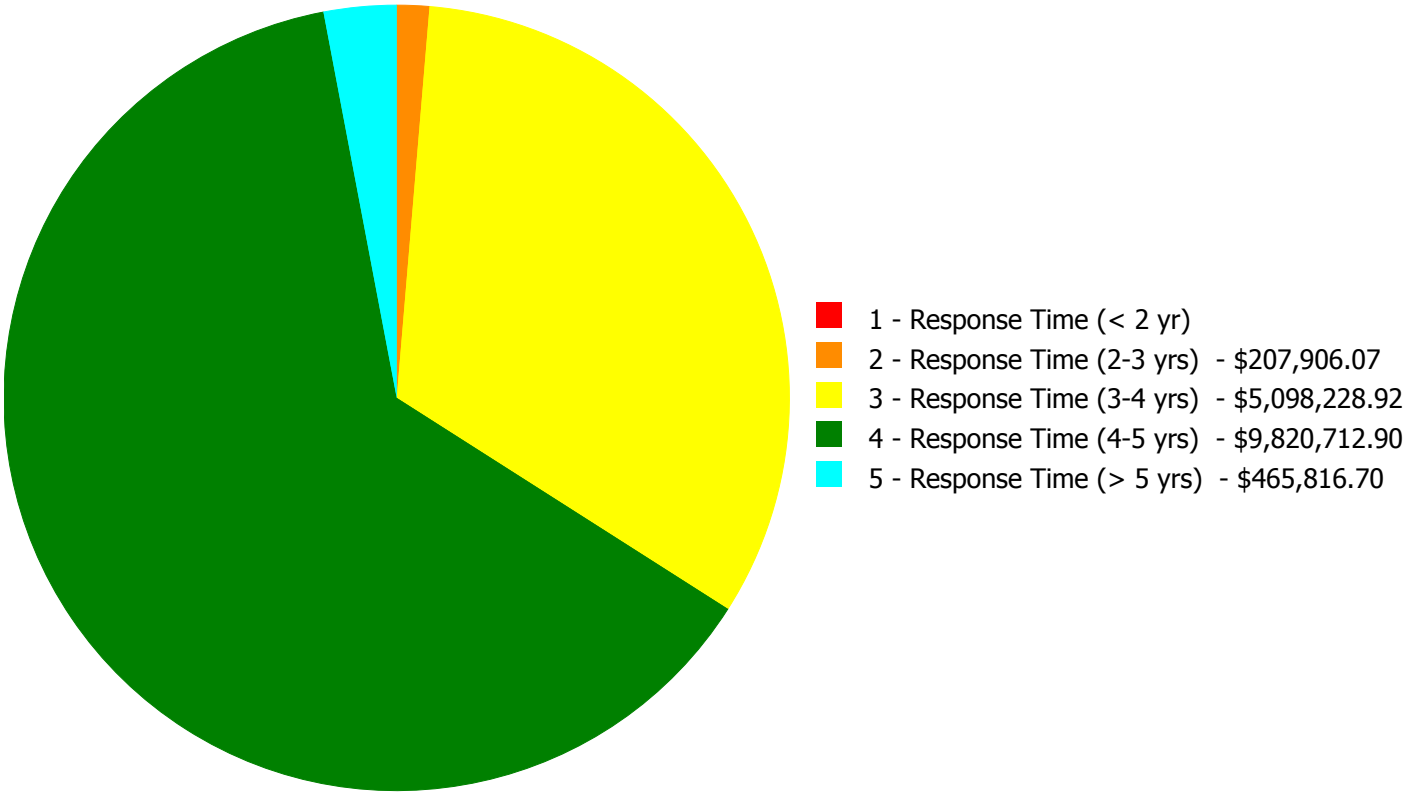
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $15,592,664.59

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: $15,592,664.59

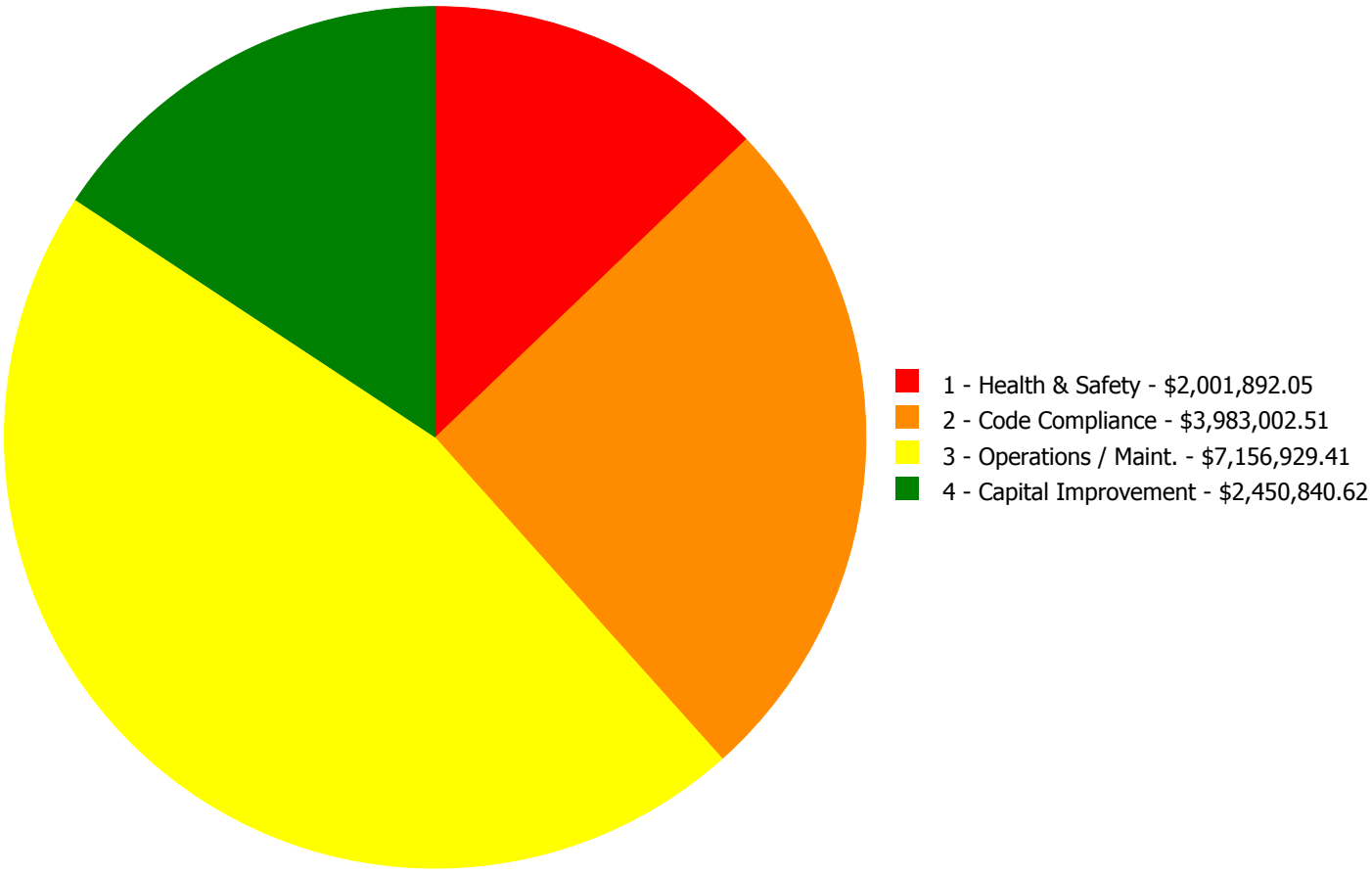
Deficiency By Priority Investment Table

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	$0.00	$64,578.94	$0.00	$0.00	$64,578.94
B2020	Exterior Windows	$0.00	$0.00	$493,353.00	$0.00	$0.00	$493,353.00
B2030	Exterior Doors	$0.00	$0.00	$182,146.42	$0.00	$0.00	$182,146.42
B3010105	Built-Up	$0.00	$0.00	$1,423,044.46	$0.00	$0.00	$1,423,044.46
C1010	Partitions	$0.00	$0.00	$203,719.16	$0.00	$0.00	$203,719.16
C1020	Interior Doors	$0.00	$0.00	$85,870.57	$0.00	$0.00	$85,870.57
C1030	Fittings	$0.00	$0.00	$13,545.62	$14,809.58	$0.00	$28,355.20
C2010	Stair Construction	$0.00	$0.00	$15,569.46	$0.00	$0.00	$15,569.46
C3010230	Paint & Covering	$0.00	$0.00	$0.00	$203,216.31	$0.00	$203,216.31
C3020411	Carpet	$0.00	$0.00	$0.00	$22,381.52	$0.00	$22,381.52
C3020413	Vinyl Flooring	$0.00	$0.00	$0.00	$303,333.36	$0.00	$303,333.36
C3030	Ceiling Finishes	$0.00	$0.00	$0.00	$1,131,182.27	$0.00	$1,131,182.27
D1010	Elevators and Lifts	$0.00	$194,074.52	$0.00	$0.00	$387,153.48	$581,228.00
D2030	Sanitary Waste	$0.00	$0.00	$0.00	$361,301.23	$0.00	$361,301.23
D3040	Distribution Systems	$0.00	$0.00	$0.00	$3,983,002.51	$0.00	$3,983,002.51
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$1,825,143.87	$0.00	$1,825,143.87
D4010	Sprinklers	$0.00	$0.00	$0.00	$1,217,107.39	$0.00	$1,217,107.39
D5010	Electrical Service/Distribution	$0.00	$0.00	$913,602.51	$0.00	$0.00	$913,602.51
D5020	Lighting and Branch Wiring	$0.00	$0.00	$1,253,488.25	$148,958.58	$78,663.22	$1,481,110.05
D5030	Communications and Security	$0.00	$0.00	$449,310.53	$150,304.47	$0.00	$599,615.00
E2010	Fixed Furnishings	$0.00	$13,831.55	$0.00	$459,971.81	$0.00	$473,803.36
	Total:	$0.00	$207,906.07	$5,098,228.92	$9,820,712.90	$465,816.70	$15,592,664.59

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: $15,592,664.59

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: D1010 - Elevators and Lifts

Location: Elevator Pit off Main Office

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace elevator - 2 stop hydraulic

Qty: 1.00

Unit of Measure: Ea.

Estimate: $194,074.52

Assessor Name: Hayden Collins

Date Created: 12/18/2015

Notes: Replace hydraulic elevator power unit and move to a new elevator machine room on the First Floor. Upgrade elevator cab, controller, hall stations, lanterns and position indicators.

System: E2010 - Fixed Furnishings

Location: Stage

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Remove and replace stage curtain - insert the LF of track and SF of curtain

Qty: 1.00

Unit of Measure: Ea.

Estimate: $13,831.55

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: The school stage has a stage curtain assembly that appears to be from the original construction. Modern applications are typically fire-proof applications with adjustable tracks and electric support for operation. The curtains are torn in a few section and the track is not functioning properly, overall the system is in poor condition. It is recommended that the curtain and track system be upgraded to a new system. Special care should be considered in regards to modern fire proofing for the new installation.

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

System: B2010 - Exterior Walls

Location: Exterior Elevation

Distress: Damaged

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: 2,000.00

Unit of Measure: S.F.

Estimate: $64,578.94

Assessor Name: Hayden Collins

Date Created: 12/21/2015

Notes: The exterior brick surfaces are generally in fair to very good condition for their age. The exterior brick finish facing Race Street and from the corner of North Fifty-sixth Street to the main entrance is damaged. In some locations, bricks have cracked and should be replaced. The repointing of deteriorated mortar joints is also recommended, using mortar of a similar color and consistency as the original. Following the detailed examination of the brick and repair of mortar construction joints, the entire building should be pressure washed to remove stains and embedded pollutants. If moisture is found to be penetrating the masonry facade, the application of a spray sealant to the suspected exterior masonry surface is recommended.

System: B2020 - Exterior Windows

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 90.00

Unit of Measure: Ea.

Estimate: $493,353.00

Assessor Name: Hayden Collins

Date Created: 12/21/2015

Notes: The windows appear to be original to the buildings construction several of the windows no longer work and will require attention prior to an overall effort. The windows are in poor condition. The entire exterior window system is recommended to be replaced with units that retain their dimensions and profiles, but that incorporate updated energy-efficient features.

System: B2030 - Exterior Doors

Location: Exterior Elevation

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 20.00

Unit of Measure: Ea.

Estimate: $182,146.42

Assessor Name: Hayden Collins

Date Created: 12/21/2015

Notes: The exterior doors are metal applications with metal frames. The exterior door system for this school is a very high traffic system. The doors are in fair condition but are aging at a faster rate than expected based on traffic and condition. The exterior door system and service doors are recommended for upgrade. The new doors are expected to retain their dimensions and profiles, but that incorporate updated energy-efficient features.

System: B3010105 - Built-Up

Location: Roof

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Built Up Roof

Qty: 42,000.00

Unit of Measure: S.F.

Estimate: $1,423,044.46

Assessor Name: Hayden Collins

Date Created: 12/21/2015

Notes: There are a number of roof sections and different roof elevations ranging from the main roof to the mechanical roof. The built up application was reported to have been installed in the early 1990'S. Considering the age and condition of the roofing systems, universal upgrades are recommended.

System: C1010 - Partitions

Location: Classroom

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove folding wood partitions; replace with metal studs and gypsum board painted

Qty: 8,000.00

Unit of Measure: S.F.

Estimate: $178,235.98

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: There are several movable partitions that remain in classrooms. These wall systems are no longer used and in most cases cannot be used due to damage or wall modifications to support classroom needs. This deficiency provides a budgetary consideration to remove and replace the wall systems with universal removal of the existing movable partitions and upgrades to a permeate wall systems.

System: C1010 - Partitions

Location: Exit doors

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Install fire rated walls and door where required - insert number of doors

Qty: 8.00

Unit of Measure: S.F.

Estimate: $25,483.18

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: The interior exit stair doors are code compliant. Several of the older doors are generally in fair condition considering the age of the application. Other doors have had several repairs to the lock sets and the panic hardware. The doors are aging at a higher than expected rate and accelerating the life cycle for this application. Partial replacement of the existing system is recommended to restore the door finishes. Remove and replace damaged door systems with new code compliant fire rated door system.

System: C1020 - Interior Doors

Location: Classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace interior doors - wood doors with hollow metal frames - per leaf

Qty: 18.00

Unit of Measure: Ea.

Estimate: $85,870.57

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: Interior doors are typically wood in wood frames with wooden transom and wired glass glazing. Other interior doors include hollow metal in hollow metal frames at some of the stairwells and exit ways, access doors. Doors are generally in fair condition and is a mix of ADA compliant and non-complaint doors with both non-rated and fire rated. Several of the classroom doors are aging at a faster than normal rate for this application. Numinous repairs to locksets and door hardware have advanced the deterioration of the doors. This deficiency provides a budgetary consideration to replace a portion of the interior doors and frames with consideration for the physically challenged.

System: C1030 - Fittings

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 50.00

Unit of Measure: Ea.

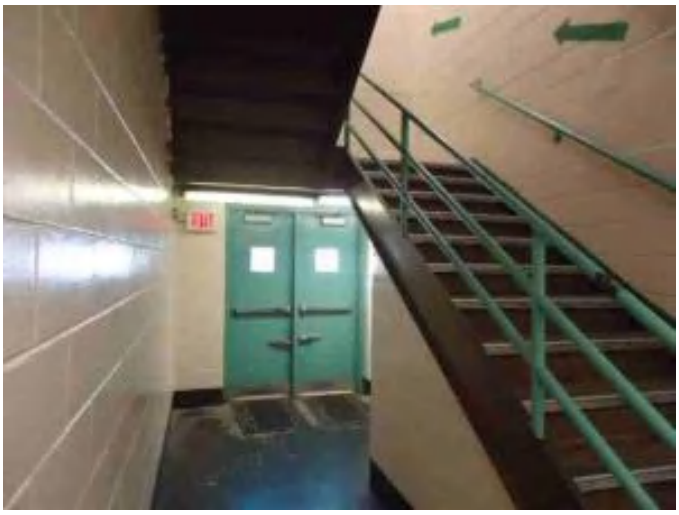
Estimate: $13,545.62

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: The interior signage package was upgraded in 2010 with a complaint application. Several of the signs are damaged. Considering the current condition of the signs it is recommended that the damaged compliant signage be replaced with an in-kind application.

System: C2010 - Stair Construction



Location: Stairs

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace inadequate or install proper stair railing - select appropriate material

Qty: 1,000.00

Unit of Measure: L.F.

Estimate: $15,569.46

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: Current requirements for stairs indicate that they have graspable handrails on both sides, that the rails have a specific end geometry, and that the handrails continue horizontally at the landings. In addition, guardrails must prevent the passage of a 4 inch diameter sphere (6 inches in the triangle formed by the lower rail and tread/riser angle). Although the stairs are compliant with the code enforced at the time of construction until a major renovation occurs, they are deficient in handrail and guardrail design relative to current standards. Future efforts should include comprehensive stair railing removal and replacement upgrades.

System: D5010 - Electrical Service/Distribution

Location: Main Electrical Room 001

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace unit substation

Qty: 1.00

Unit of Measure: Ea.

Estimate: $618,840.74

Assessor Name: Hayden Collins

Date Created: 12/17/2015

Notes: Replace the existing load center unit substation. Provide a 600A air interrupter switch, metering section, 750 kVA, 13.2 kV-208/120V, 3 phase, 4 wire dry type transformer, 2500A main circuit breaker and one 2500A distribution section. Remove the 800A safety switch feeding Panelboard BP-1 and feed BP-1 from the distribution section.

System: D5010 - Electrical Service/Distribution

Location: Floors 1 and 2

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard

Qty: 8.00

Unit of Measure: Ea.

Estimate: $294,761.77

Assessor Name: Hayden Collins

Date Created: 12/17/2015

Notes: Replace (8) panelboards, including their feeder conductors, which are located on Floors 1 and 2.

System: D5020 - Lighting and Branch Wiring

Location: Classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 35,030.00

Unit of Measure: S.F.

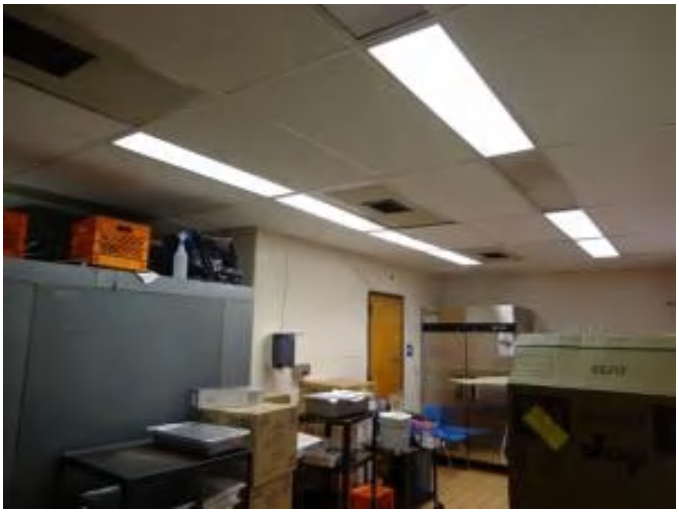
Estimate: $731,208.36

Assessor Name: Hayden Collins

Date Created: 12/17/2015

Notes: Replace lighting fixtures and branch circuit wiring in 35 classrooms (approximately 35,030 SF).

System: D5020 - Lighting and Branch Wiring



Location: Various locations

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 25,300.00

Unit of Measure: S.F.

Estimate: $394,184.55

Assessor Name: Hayden Collins

Date Created: 12/18/2015

Notes: Replace fluorescent lighting fixtures in corridors, restrooms, offices, cafeteria, kitchen and support areas that have T12 lamps with fixtures having T8 or T5 lamps (estimate 25,300 SF).

System: D5020 - Lighting and Branch Wiring

Location: Gymnasium
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 30.00
Unit of Measure: Ea.
Estimate: $92,279.72
Assessor Name: Hayden Collins
Date Created: 12/17/2015

Notes: Replace (30) stem mounted industrial type metal halide lighting fixtures in the gymnasium with LED fixtures.

System: D5020 - Lighting and Branch Wiring

Location: IMC
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 24.00
Unit of Measure: Ea.
Estimate: $22,154.39
Assessor Name: Hayden Collins
Date Created: 12/17/2015

Notes: Replace (24) wraparound fluorescent lighting fixtures and wiring in the IMC.

System: D5020 - Lighting and Branch Wiring

Location: Exit discharges

Distress: Energy Efficiency

Category: 4 - Capital Improvement

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

Correction: Replace lighting fixtures

Qty: 10.00

Unit of Measure: Ea.

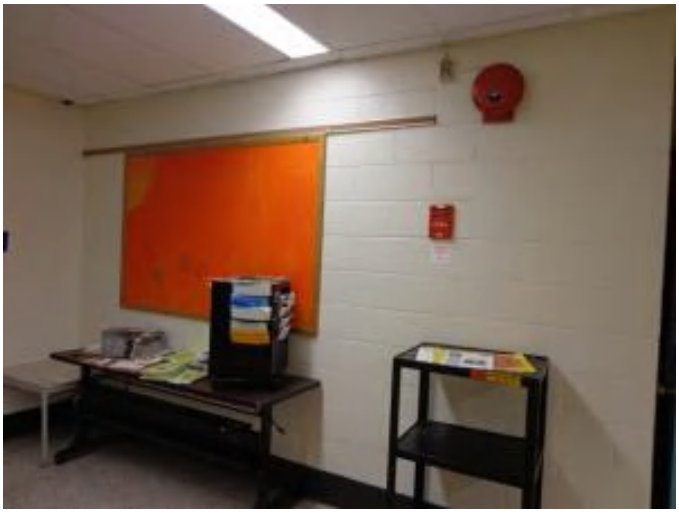
Estimate: $13,661.23

Assessor Name: Hayden Collins

Date Created: 12/18/2015

Notes: Replace incandescent wall mounted fixtures above exterior egress doors with LED wall pack fixtures (total of 10 fixtures).

System: D5030 - Communications and Security



Location: Building wide

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace fire alarm system

Qty: 85,080.00

Unit of Measure: S.F.

Estimate: $449,310.53

Assessor Name: Hayden Collins

Date Created: 12/18/2015

Notes: Replace fire alarm system with an addressable system.

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

System: C1030 - Fittings

Location: Classroom

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace tackboards - select size

Qty: 10.00

Unit of Measure: Ea.

Estimate: $7,927.26

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: There are several tack boards in the hallways for student displays. The systems are damaged and beyond the expected service life for this application. Remove and replace tack boards is recommended.

System: C1030 - Fittings

Location: Classroom

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace blackboards with marker boards - pick the appropriate size and insert the quantities

Qty: 10.00

Unit of Measure: Ea.

Estimate: $6,882.32

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: Some of the classroom chalk boards are original to the buildings construction. This system is damaged and beyond its expected life, universal upgrades are warranted. Remove and upgrade damaged chalk boards to new marker board systems.

System: C3010230 - Paint & Covering

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 30,000.00

Unit of Measure: S.F.

Estimate: $203,216.31

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: There are painted walls, trim, and some painted ceilings in this building. The interior finishes are in fair condition and will require an almost continuous program of renewal of the applied finishes to maintain an acceptable appearance. Cyclical painting should be considered for a standard approach to maintaining the quality of the interior finishes. It is recommended that all previously painted surfaces be repainted according to established cycles for this occupancy and use type. Minor repairs should be completed before work begins.

System: C3020411 - Carpet

Location: IMC

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace carpet

Qty: 2,000.00

Unit of Measure: S.F.

Estimate: $22,381.52

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: The interior carpet finish was installed approximately in 2010 and is in fair condition considering the age and high traffic conditions. This finish will exceeded its expected life within the next five years and is recommended for removal and replacement.

System: C3020413 - Vinyl Flooring

Location: Building Wide

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 20,000.00

Unit of Measure: S.F.

Estimate: $303,333.36

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: The floor finish for this school is a combination of carpet in the administrative and IMC area, tile in the kitchen and service line areas, 12x12 classrooms, hallways and concrete stirs finishes. Some of the vinyl tile finish is a 9 x 9 application and is suspect to contain asbestos. This finish is recommended for upgrade to a new 12 x 12 vinyl tile application.

System: C3030 - Ceiling Finishes

Location: Building Wide

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 75,000.00

Unit of Measure: S.F.

Estimate: $1,131,182.27

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: The ceiling finish is a mix of 12 x 12 ceiling grid, painted and 2 x 4 Acoustical tile finish. Ceilings have been repaired in several areas and is in good condition considering the age of the application and the current condition of the school. The ceiling finish is expected to require upgrades to support the recommended efforts in this report prior to re-opening. This deficiency provides a budgetary consideration for removal and replacement of the current ceiling finish to a new acoustical tile finish. Considering the recommended mechanical and electrical upgrades this effort should be completed as part of an overall renewal program for the school. No work should be considered until after the recommended exterior efforts are complete.

System: D2030 - Sanitary Waste

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 85,080.00

Unit of Measure: S.F.

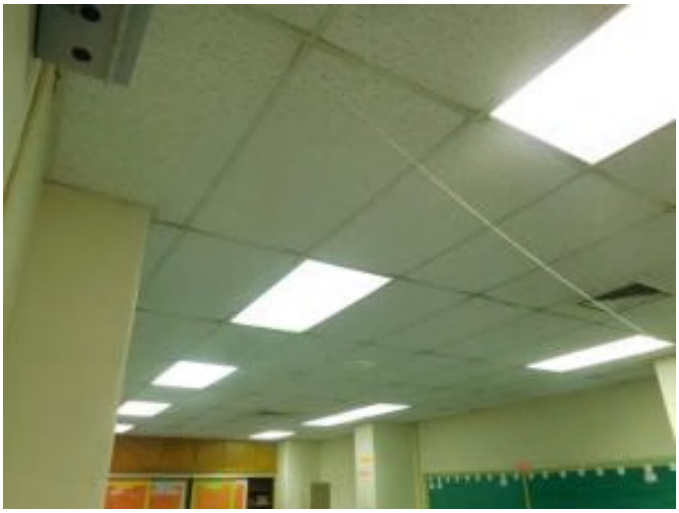
Estimate: $361,301.23

Assessor Name: Hayden Collins

Date Created: 11/24/2015

Notes: Inspect old cast iron sanitary piping including camera observation and replace damaged sections.

System: D3040 - Distribution Systems



Location: interior classrooms

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 18.00

Unit of Measure: C

Estimate: $1,437,666.51

Assessor Name: Hayden Collins

Date Created: 11/24/2015

Notes: Provide a four pipe fan coil system with roof mounted outside air system ducted to each fan coil unit. Provide a fan coil unit for each interior classroom, IMC and office area as required. Include new hot and chilled water piping, control valves and controls.

System: D3040 - Distribution Systems

Location: exterior classrooms

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 25,000.00

Unit of Measure: S.F.

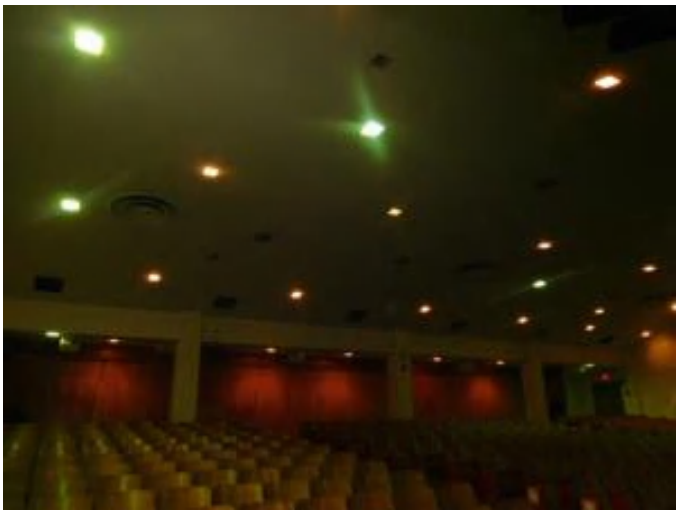
Estimate: $1,138,371.12

Assessor Name: Hayden Collins

Date Created: 11/24/2015

Notes: Replace the existing unit ventilators with new units designed for quiet operation and equipped with hot water and chilled water coils, hydronic control valves with digital controls and integral

System: D3040 - Distribution Systems



Location: auditorium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 510.00

Unit of Measure: Seat

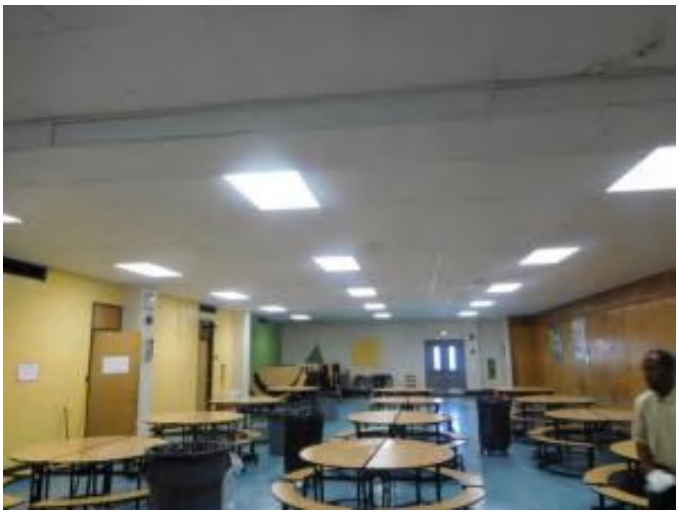
Estimate: $726,967.79

Assessor Name: Hayden Collins

Date Created: 11/24/2015

Notes: Provide a new central station air handling unit for the auditorium with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water systems.

System: D3040 - Distribution Systems



Location: cafeteria

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Install HVAC unit for Cafeteria (850 students).

Qty: 795.00

Unit of Measure: Pr.

Estimate: $371,696.05

Assessor Name: Hayden Collins

Date Created: 11/24/2015

Notes: Provide a new central station air handling unit for the cafeteria with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water systems.

System: D3040 - Distribution Systems

Location: gymnasium

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Install HVAC unit for Gymnasium (single station).

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $308,301.04

Assessor Name: Hayden Collins

Date Created: 11/24/2015

Notes: Provide a new central station air handling unit for the gymnasium with hot and chilled water coils, filters, outside and return air dampers, hydronic valves and controls, blower and motor. Connect to hot and chilled water systems.

System: D3060 - Controls & Instrumentation

Location: entire building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 85,080.00

Unit of Measure: S.F.

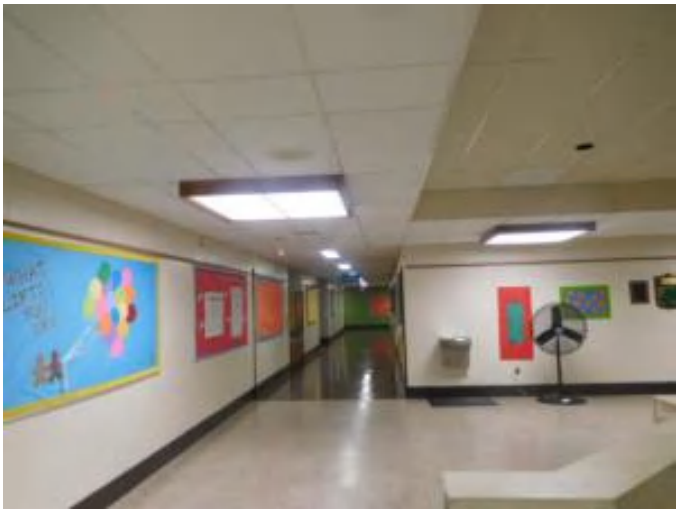
Estimate: $1,825,143.87

Assessor Name: Hayden Collins

Date Created: 11/24/2015

Notes: Install new direct digital control system and building automation system with remote computer control capability and graphics package.

System: D4010 - Sprinklers



Location: entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Install a fire protection sprinkler system

Qty: 85,080.00

Unit of Measure: S.F.

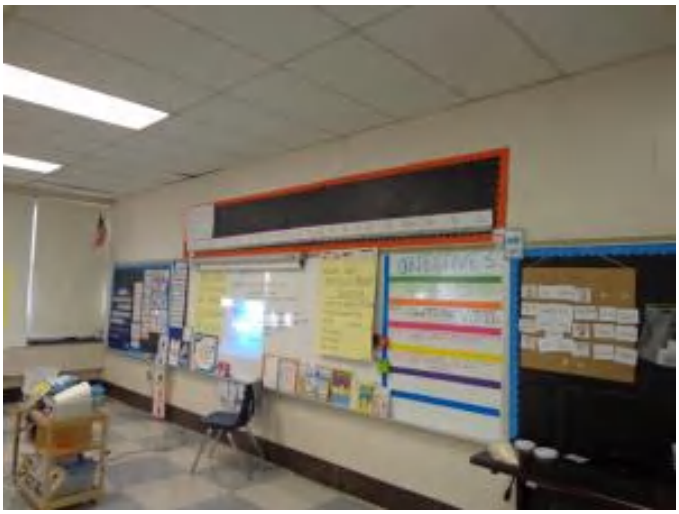
Estimate: $1,217,107.39

Assessor Name: Hayden Collins

Date Created: 11/24/2015

Notes: Install NFPA wet pipe automatic sprinkler system in entire building, including fire service, piping sprinkler heads, standpipes and fire pump if required.

System: D5020 - Lighting and Branch Wiring



Location: Classrooms

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Provide surface raceway system and wiring devices

Qty: 990.00

Unit of Measure: L.F.

Estimate: $137,504.32

Assessor Name: Hayden Collins

Date Created: 12/17/2015

Notes: Provide surface metal raceway system with 6 to 8 duplex receptacles in each of 33 classrooms.

System: D5020 - Lighting and Branch Wiring

Location: Roof

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Lighting Fixtures

Qty: 5.00

Unit of Measure: Ea.

Estimate: $8,714.50

Assessor Name: Hayden Collins

Date Created: 12/18/2015

Notes: Provide lighting fixtures on roof at access door from stair and at the rooftop chiller. Replace incandescent lampholders in the penthouse air handler room with vapor-tight LED fixtures. Provide convenience receptacle at chiller and replace defective receptacle in the air handler room.

System: D5020 - Lighting and Branch Wiring

Location: Receptacles at sinks

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace Wiring Device

Qty: 8.00

Unit of Measure: Ea.

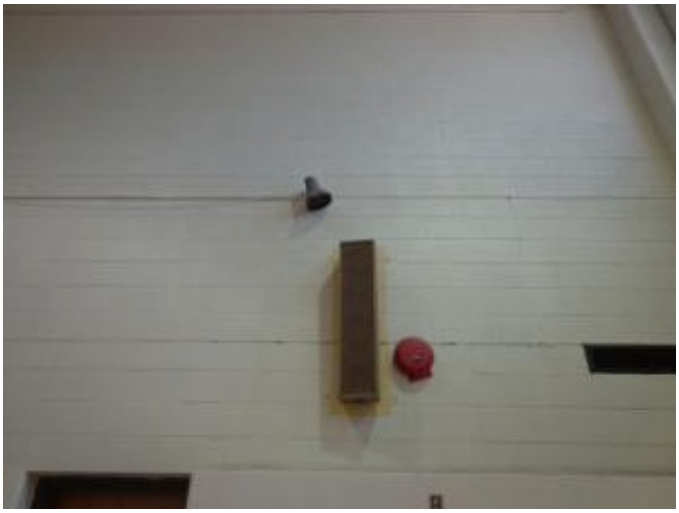
Estimate: $2,739.76

Assessor Name: Hayden Collins

Date Created: 12/17/2015

Notes: Provide an allowance for replacement of eight (8) duplex receptacles that are located within 6 feet of the sinks in classrooms with ground-fault circuit-interrupting (GFCI) type receptacles to comply with NFPA 70, NEC Article 210.8 (B).

System: D5030 - Communications and Security



Location: Building wide

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Paging System

Qty: 115.00

Unit of Measure: Ea.

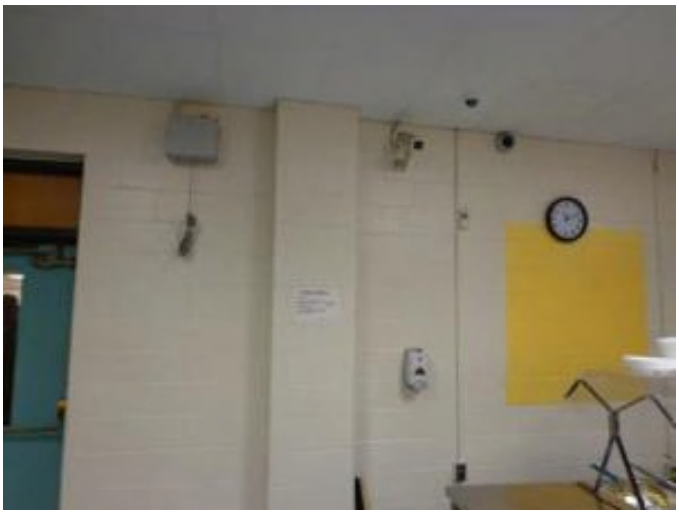
Estimate: $83,959.09

Assessor Name: Hayden Collins

Date Created: 12/18/2015

Notes: Replace ceiling recessed paging speakers and wiring in classrooms and corridors (approximately 115 speakers).

System: D5030 - Communications and Security



Location: Building wide
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Replace clock/program system
Qty: 62.00
Unit of Measure: Ea.
Estimate: $35,242.75
Assessor Name: Hayden Collins
Date Created: 12/18/2015

Notes: Replace clocks with wireless clock system in all classrooms, cafeteria, auditorium, gymnasium, IMC, offices and similar occupied rooms.

System: D5030 - Communications and Security

Location: Building wide
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Video Surveillance System
Qty: 10.00
Unit of Measure: Ea.
Estimate: $31,102.63
Assessor Name: Hayden Collins
Date Created: 12/18/2015

Notes: Replace (10) interior video surveillance cameras.

System: E2010 - Fixed Furnishings

Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 510.00

Unit of Measure: Ea.

Estimate: $459,971.81

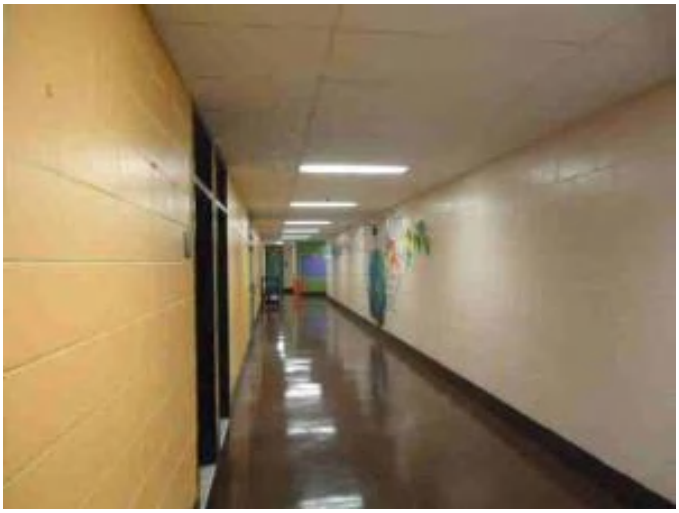
Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: The fixed seating for this school is from the original construction. The systems are in fair condition considering the age and usage. This project provides a budgetary consideration for universal upgrades for the fixed seating and furnishing of this school. Ensure that ADA requirements are followed with the new seating layout.

Priority 5 - Response Time (> 5 yrs):

System: D1010 - Elevators and Lifts



Location: Building Wide

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 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: $387,153.48

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: There is no elevator that services this school. Goods, services, and amenities offered in public buildings are generally required to be available to all persons. To assist those that may be physically challenged and to meet current accessibility legislation to provide wheelchair access to the upper floors of this facility, the installation of a new hydraulic elevator has been recommended on the exterior elevation of the building or at another suitable location. The new installation should blend as much as possible with the overall appearance of this historic structure and include all required ADA features, such as audible jewels and gongs, an accessible control panel, etc.

System: D5020 - Lighting and Branch Wiring

Location: Auditorium

Distress: Energy Efficiency

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace lighting fixtures

Qty: 50.00

Unit of Measure: Ea.

Estimate: $78,663.22

Assessor Name: Hayden Collins

Date Created: 12/17/2015

Notes: Replace (50) recessed incandescent lighting fixtures and wiring in the auditorium.

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
D1010 Elevators and Lifts	Hydraulic, passenger elevator, 3000 lb, 2 floors, 100 FPM	1.00	Ea.	Pit Below Floor 1	Otis	NA			30			$73,815.00	$81,196.50
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	hb smith	28hesw14			35	2010	2045	$75,956.00	$83,551.60
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 3210 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	mechanical room	hb smith	28hesw14			35	2010	2045	$75,956.00	$83,551.60
D3030 Cooling Generating Systems	Cooling tower, packaged unit, galvanized steel, axial fan, induced draft, 200 ton, includes standard controls, excludes pumps and piping	1.00	Ea.	roof	evapco	at-19911	t020770		30	2010	2040	$33,963.60	$37,359.96
D3030 Cooling Generating Systems	Water chiller, screw liquid chiller, air cooled, insulated evaporator, 130 ton, includes standard controls	1.00	Ea.	mechanical room	carrier	30hxc106	3109q17766		30	2010	2040	$122,760.00	$135,036.00
D3030 Cooling Generating Systems	Water chiller, screw liquid chiller, air cooled, insulated evaporator, 130 ton, includes standard controls	1.00	Ea.	mechanical room	carrier	30hxc106	3109q17768		30	2010	2040	$122,760.00	$135,036.00
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 15 H.P., to 1000 GPM, 5" size	1.00	Ea.	mechanical room	b&g	1510			25	2010	2035	$21,432.00	$23,575.20
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 15 H.P., to 1000 GPM, 5" size	1.00	Ea.	mechanical room	b&g	1510			25	2010	2035	$21,432.00	$23,575.20
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 400 kVA & above, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	1.00	Ea.	Main Electrical Room	B-K Electrical Products, Inc.	108-50			30			$42,849.00	$47,133.90
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 1600 A	1.00	Ea.	Main Electrical Room	B-K Electrical Products, Inc.	NA	15574		30			$40,458.15	$44,503.97
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 800 A	1.00	Ea.	Main Electrical Room	Siemens	Type P4			30	2009	2039	$21,766.05	$23,942.66
D5010 Electrical Service/Distribution	Transformer, dry-type, 3 phase 15 kV primary 277/480 volt secondary, 500 kVA	1.00	Ea.	Main Electrical Room	B-K Electrical Products, Inc.	NA	21002-B01		30			$74,520.00	$81,972.00
												Total:	**$800,434.59**

Executive Summary

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

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

Function:	
Gross Area (SF):	137,500
Year Built:	1972
Last Renovation:	
Replacement Value:	$2,481,700
Repair Cost:	$176,222.23
Total FCI:	7.10 %
Total RSLI:	56.44 %

Description:

Attributes:

General Attributes:

Bldg ID:	S421001	Site ID:	S421001

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	39.43 %	4.84 %	$91,234.24
G40 - Site Electrical Utilities	110.00 %	14.21 %	$84,987.99
Totals:	**56.44 %**	**7.10 %**	**$176,222.23**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2020	Parking Lots	$7.65	S.F.	19,100	30	1972	2002	2027	40.00 %	49.54 %	12		$72,381.72	$146,115
G2030	Pedestrian Paving	$11.52	S.F.	89,200	40	1972	2012	2027	30.00 %	0.00 %	12			$1,027,584
G2040	Site Development	$4.36	S.F.	137,500	25	1972	1997	2027	48.00 %	3.14 %	12		$18,852.52	$599,500
G2050	Landscaping & Irrigation	$3.78	S.F.	29,200	15	1972	1987	2027	80.00 %	0.00 %	12			$110,376
G4020	Site Lighting	$3.58	S.F.	137,500	20	1972	1992	2037	110.00 %	10.85 %	22		$53,388.76	$492,250
G4030	Site Communications & Security	$0.77	S.F.	137,500	20	1972	1992	2037	110.00 %	29.85 %	22		$31,599.23	$105,875
								Total	**56.44 %**	**7.10 %**			**$176,222.23**	**$2,481,700**

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.

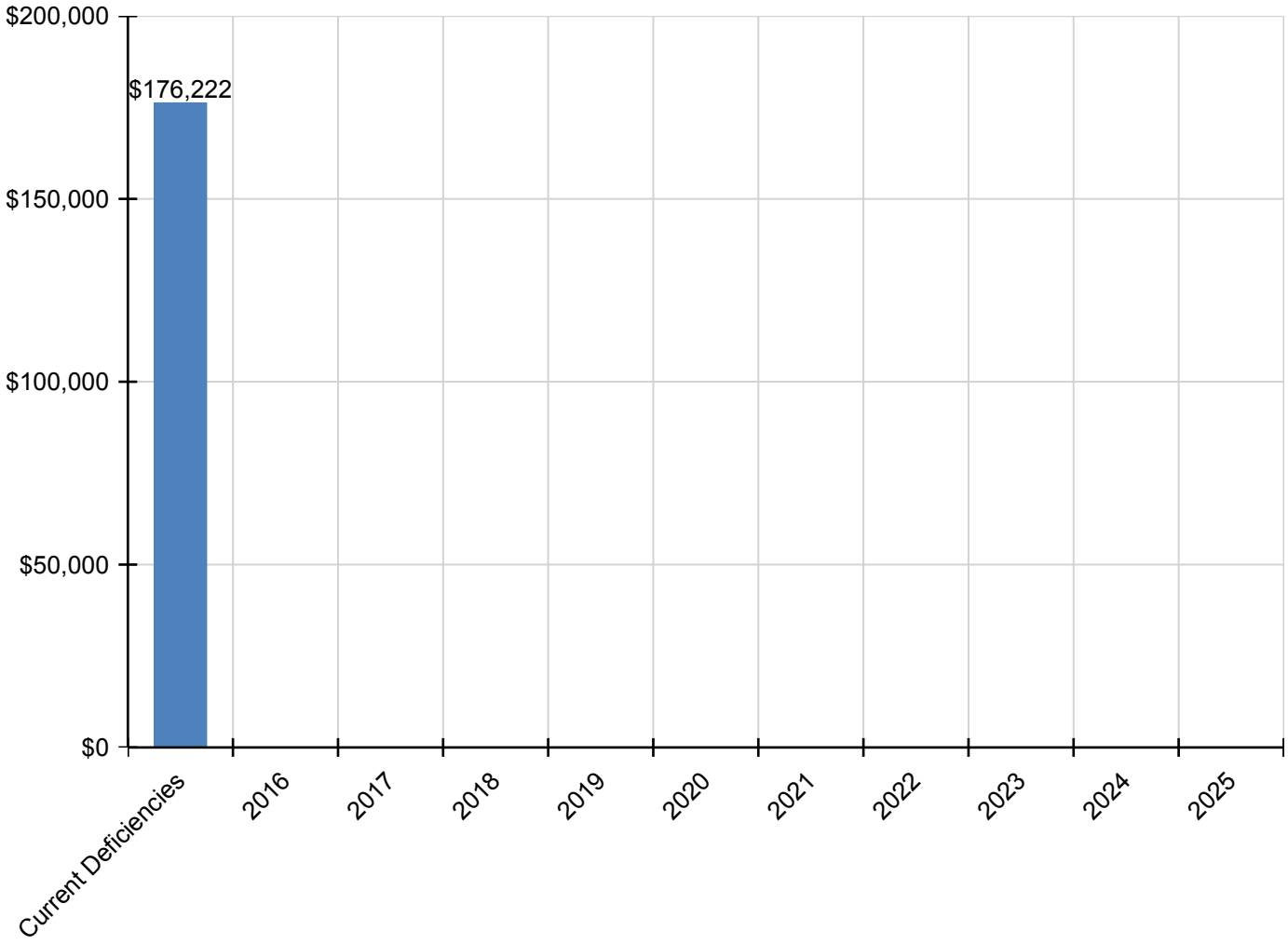
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$176,222**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$176,222**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$72,382	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$72,382**
G2030 - Pedestrian Paving	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2040 - Site Development	$18,853	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$18,853**
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	$53,389	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$53,389**
G4030 - Site Communications & Security	$31,599	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$31,599**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

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

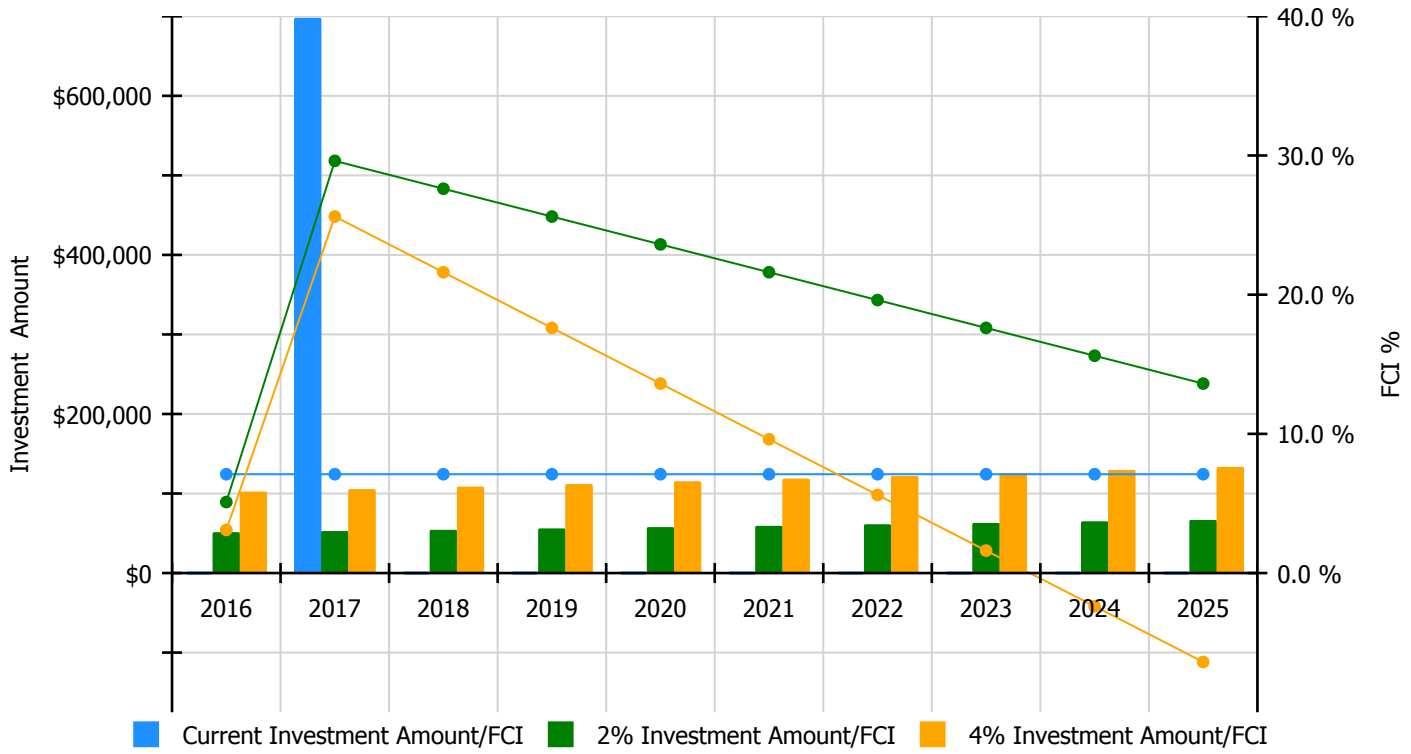


10 Year FCI Forecast by Investment Scenario

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

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

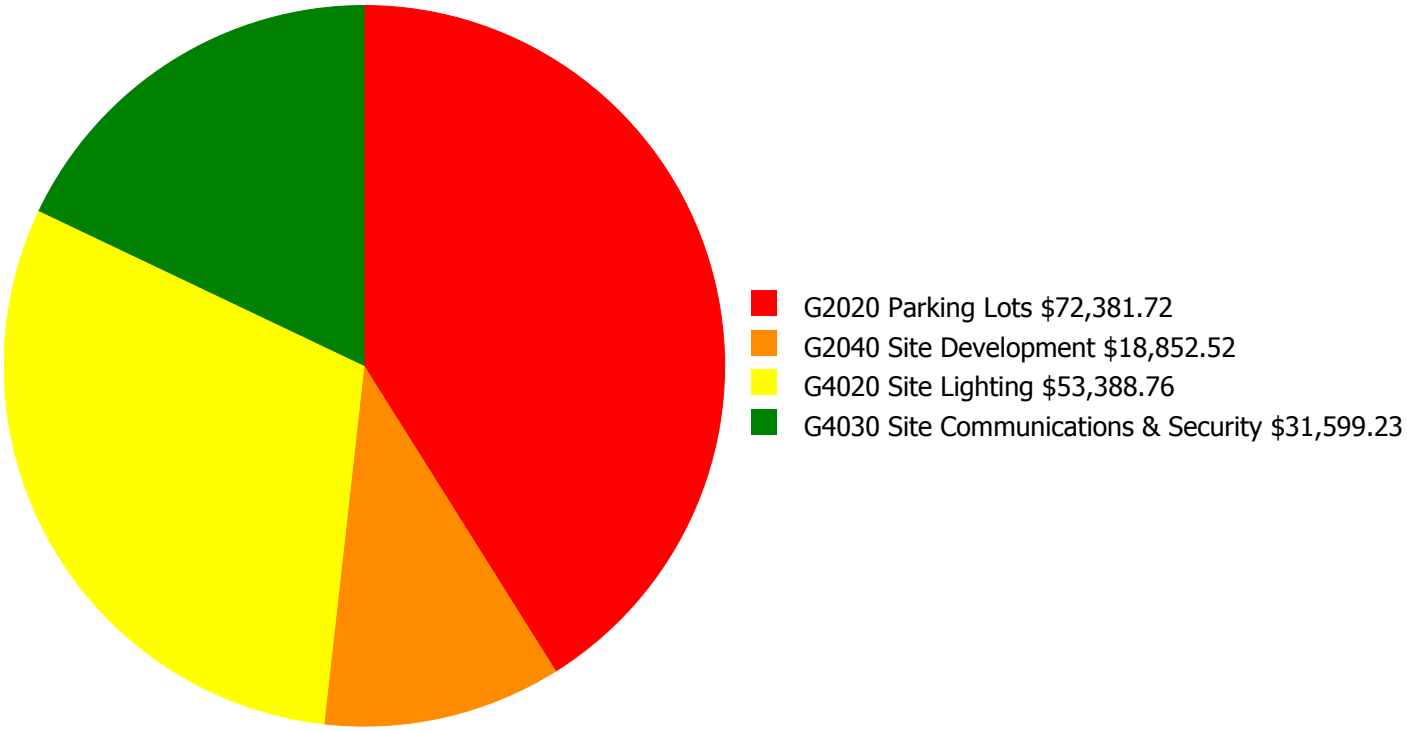
Facility Investment vs. FCI Forecast



Year	Investment Amount Current FCI - 7.1%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$51,123.00	5.10 %	$102,246.00	3.10 %
2017	$698,006	$52,657.00	29.61 %	$105,313.00	25.61 %
2018	$0	$54,236.00	27.61 %	$108,473.00	21.61 %
2019	$0	$55,864.00	25.61 %	$111,727.00	17.61 %
2020	$0	$57,539.00	23.61 %	$115,079.00	13.61 %
2021	$0	$59,266.00	21.61 %	$118,531.00	9.61 %
2022	$0	$61,044.00	19.61 %	$122,087.00	5.61 %
2023	$0	$62,875.00	17.61 %	$125,750.00	1.61 %
2024	$0	$64,761.00	15.61 %	$129,522.00	-2.39 %
2025	$0	$66,704.00	13.61 %	$133,408.00	-6.39 %
Total:	**$698,006**	**$586,069.00**		**$1,172,136.00**	

Deficiency Summary by System

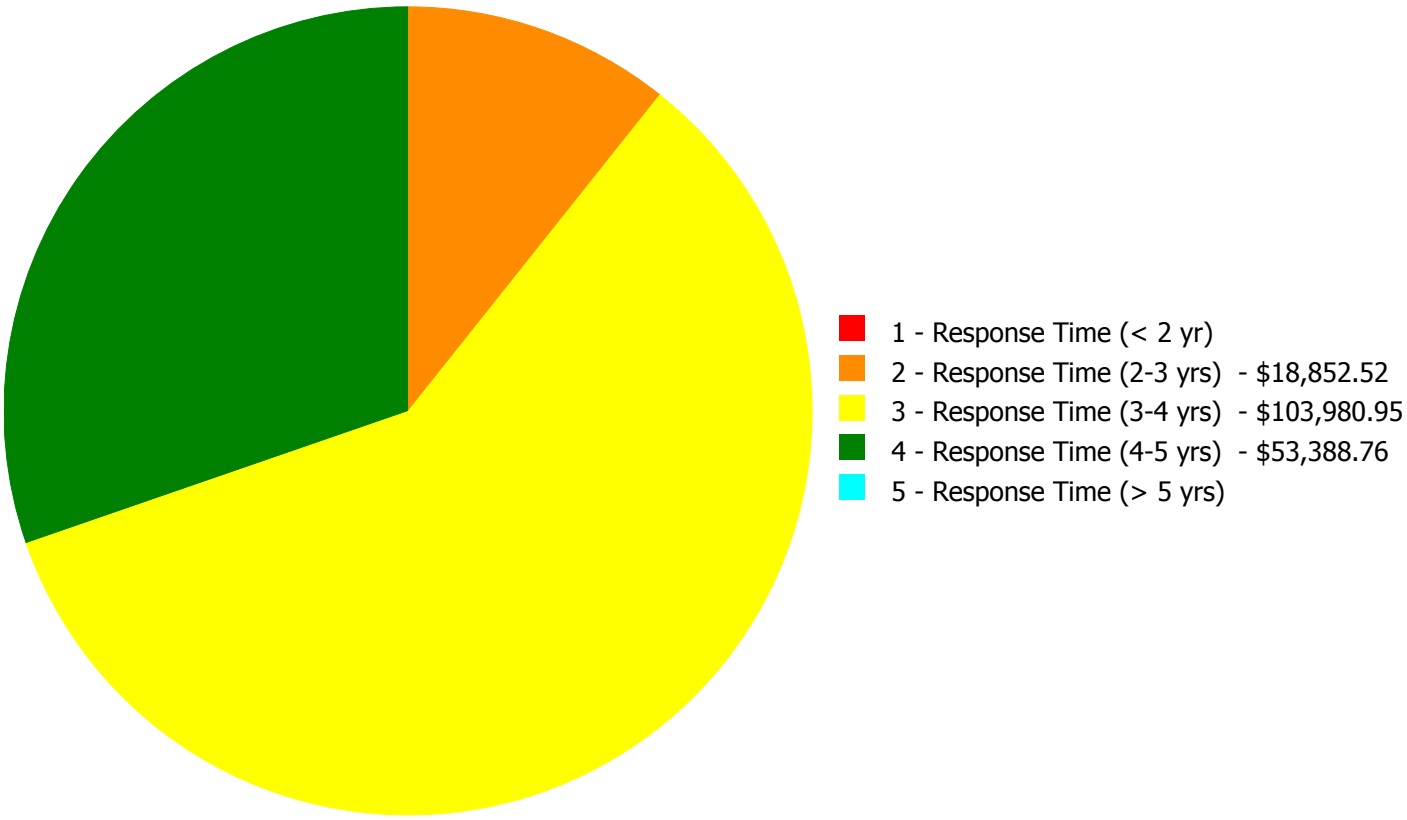
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $176,222.23

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: $176,222.23

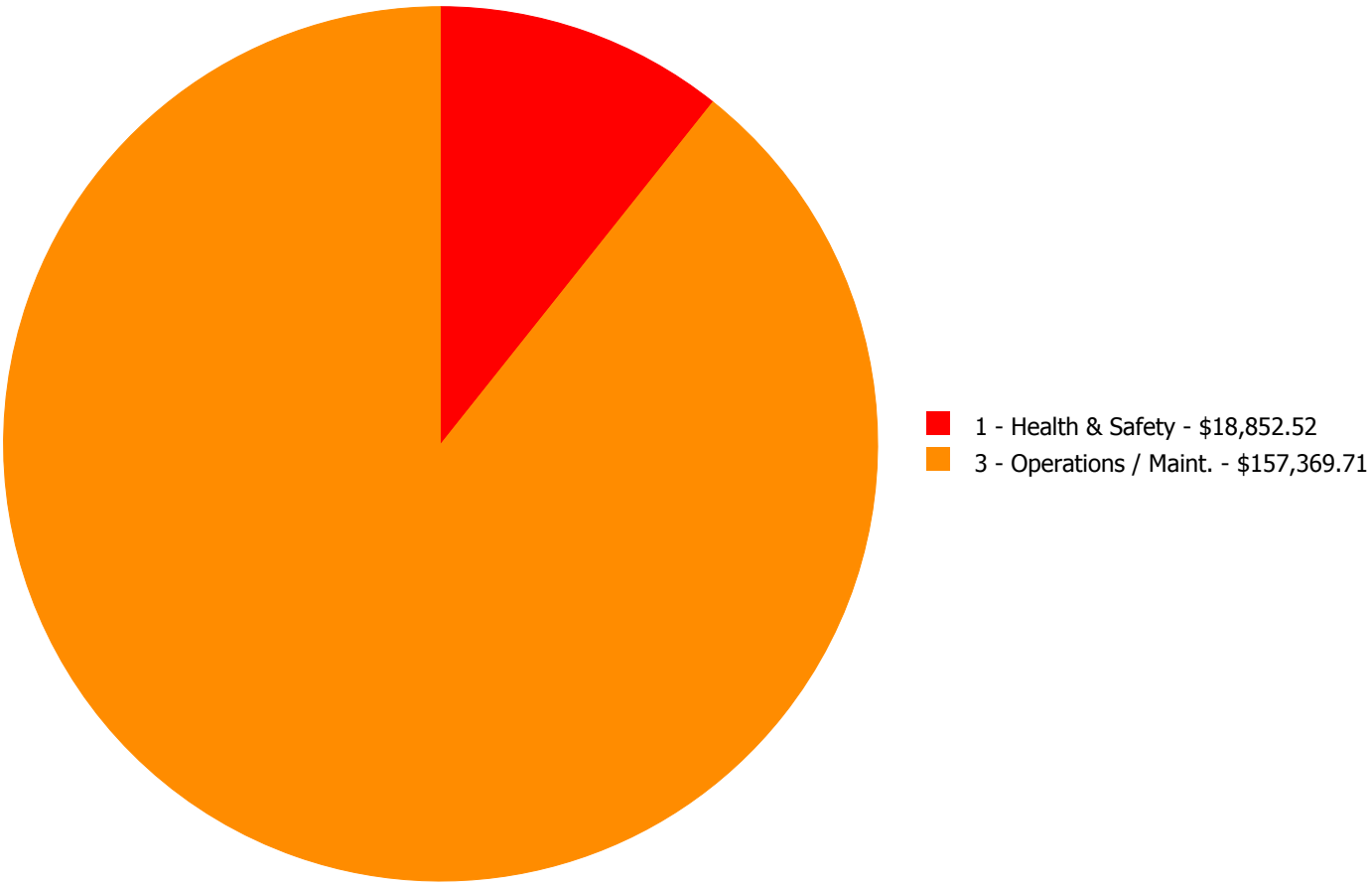
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2020	Parking Lots	$0.00	$0.00	$72,381.72	$0.00	$0.00	$72,381.72
G2040	Site Development	$0.00	$18,852.52	$0.00	$0.00	$0.00	$18,852.52
G4020	Site Lighting	$0.00	$0.00	$0.00	$53,388.76	$0.00	$53,388.76
G4030	Site Communications & Security	$0.00	$0.00	$31,599.23	$0.00	$0.00	$31,599.23
	Total:	$0.00	$18,852.52	$103,980.95	$53,388.76	$0.00	$176,222.23

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: $176,222.23

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: G2040 - Site Development

Location: Site

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Build secure trash dumpster enclosure

Qty: 1.00

Unit of Measure: Ea.

Estimate: $18,852.52

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: The trash dumpster is located in the parking lot open to the students and to the public. The exterior services are not protected. Upgrades to protect the exterior services and trash area is necessary for the safety of the students and the general public. Construction of a secure lockable dumpster area is recommended.

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

System: G2020 - Parking Lots

Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Resurface parking lot - grind and resurface including striping

Qty: 19,000.00

Unit of Measure: S.F.

Estimate: $72,381.72

Assessor Name: Hayden Collins

Date Created: 12/22/2015

Notes: The parking area has ADA parking with approved curb cuts for access to the sidewalks that lead to the main entrance. However, the parking lots are in poor condition, the harsh environmental conditions associated with snow removal have taken its toll on the asphalt surface. Also, there is no marked path of ingress to the main entrance. This project provides a budgetary consideration for a parking lot renewal program that includes all aspects of the current ADA legislation. Universal upgrades are recommended.

System: G4030 - Site Communications & Security

Location: Exterior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace video surveillance camera

Qty: 5.00

Unit of Measure: Ea.

Estimate: $31,599.23

Assessor Name: Hayden Collins

Date Created: 12/18/2015

Notes: Provide allowance for replacement of five (5) exterior building mounted video surveillance cameras.

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

System: G4020 - Site Lighting

Location: Parking lot on west side

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace site lighting fixture

Qty: 4.00

Unit of Measure: Ea.

Estimate: $53,388.76

Assessor Name: Hayden Collins

Date Created: 12/18/2015

Notes: Replace four (4) 10-foot high exterior poles and HID luminaires in parking lot on the west side of the building. Site lighting poles/luminaires are in poor condition and are not operational.

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