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.

Elkin School

Governance	DISTRICT	Report Type	Elementary
Address	3199 D St.	Enrollment	867
	Philadelphia, Pa 19134	Grade Range	'00-04'
Phone/Fax	215-291-4701 / 215-291-4876	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Elkin	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**41.04%**	**$15,644,482**	**$38,119,975**
Building	53.41 %	$13,910,478	$26,046,114
Grounds	16.21 %	$197,045	$1,215,708

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	89.37 %	$711,522	$796,152
Exterior Walls (Shows condition of the structural condition of the exterior facade)	06.84 %	$134,328	$1,963,612
Windows (Shows functionality of exterior windows)	27.36 %	$262,135	$958,132
Exterior Doors (Shows condition of exterior doors)	212.51 %	$163,932	$77,140
Interior Doors (Classroom doors)	86.18 %	$160,928	$186,732
Interior Walls (Paint and Finishes)	00.00 %	$0	$702,772
Plumbing Fixtures	34.86 %	$250,768	$719,264
Boilers	132.60 %	$1,317,084	$993,244
Chillers/Cooling Towers	00.00 %	$0	$1,302,336
Radiators/Unit Ventilators/HVAC	178.05 %	$4,072,233	$2,287,068
Heating/Cooling Controls	158.90 %	$1,141,249	$718,200
Electrical Service and Distribution	339.58 %	$1,752,373	$516,040
Lighting	43.95 %	$810,793	$1,844,976
Communications and Security (Cameras, Pa System and Fire Alarm)	46.07 %	$318,343	$691,068

Please note that some FCIs may be over 100% because there are times when replacing a building system requires that other building systems be upgraded to complete the installation. A FCI of 0.0% represents that there are no current deficiencies with the associated system.

Facility Condition Assessment Summary Report

This report provides a summary of the Facility Condition Index (FCI) value of a school facility and select major building systems. The FCI calculation represents the cost of needed repairs divided by the replacement value. The FCI is a numerical value of condition and helps to identify the need for renewal or replacement of specific parts of the facility. The FCI is particularly useful when comparing similar facilities within the same portfolio.

Elkin LSH School

Governance	DISTRICT	Report Type	Elementary
Address	3199 D St.	Enrollment	
	Philadelphia, Pa 19134	Grade Range	'00-04'
Phone/Fax	215-291-4701 / 215-291-4876	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Elkin	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**41.04%**	**$15,644,482**	**$38,119,975**
Building	14.15 %	$1,536,959	$10,858,153
Grounds	16.21 %	$197,045	$1,215,708

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	63.64 %	$490,514	$770,719
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$571,576
Windows (Shows functionality of exterior windows)	12.30 %	$30,701	$249,538
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$30,574
Interior Doors (Classroom doors)	00.00 %	$0	$68,838
Interior Walls (Paint and Finishes)	00.00 %	$0	$307,758
Plumbing Fixtures	00.00 %	$0	$578,167
Boilers	00.00 %	$0	$341,810
Chillers/Cooling Towers	84.67 %	$379,479	$448,180
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$787,061
Heating/Cooling Controls	158.90 %	$392,744	$247,158
Electrical Service and Distribution	00.00 %	$0	$177,588
Lighting	00.00 %	$0	$634,921
Communications and Security (Cameras, Pa System and Fire Alarm)	00.00 %	$0	$237,821

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

S526001;Elkin

Final

Site Assessment Report

January 30, 2017

PARSONS

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Site Executive Summary

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

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

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

Gross Area (SF):	53,200
Year Built:	1973
Last Renovation:	
Replacement Value:	$38,119,975
Repair Cost:	$15,644,482.26
Total FCI:	41.04 %
Total RSLI:	79.33 %

Description:

Facility Assessment, August 2015

School District of Philadelphia

Elkin Elementary School

3199 D Street

Philadelphia, PA 19134

53,200 SF / 855 Students / LN 05

The Elkin Elementary school building is located at 3199 D Street in Philadelphia, PA. The 3 level, approximately 53,200 square foot building was originally constructed in 1973. First level floor is partially below grade.

Mr. Scott Ovington, Facility Area Coordinator provided input to the Parsons assessment team on current problems and planned renovation projects. Mr. Richard Ballard, building engineer, accompanied us on our tour of the school and provided limited information

on the building systems and recent maintenance history. School principal, Ms. Evelyn Nunez, provided additional information about school condition.

STRUCTURAL/ EXTERIOR CLOSURE:

The building typically rests on concrete foundations and concrete bearing walls that are not showing signs of settlement. There are no signs of moisture penetration through first level walls.

The main structure consists typically of combination of cast-in-place concrete columns, beams and 2-way ribbed concrete slabs. The roof structure over the main building is similar to floor construction and has cast-in-place concrete clerestories over entrances to classroom pods, some stairways and Library. The roof structure in Gymnasium consists of structural steel columns, framing and bar joists supporting precast concrete roof panels. The superstructure is generally in good condition.

The building envelope is typically face brick masonry with CMU backup. In general, masonry is in fair to good condition with some minor cracks and missing mortar. The second level floor and roof slab edges are exposed with some concrete spalling and exposed stirrup rebars. Water penetration through walls has not been reported. First floor walls are covered with multiple layers of anti-graffiti coating in different colors.

The building windows are extruded aluminum double hung windows single acrylic glazed with integral security screens, installed in late 1990's. Some windows in public areas and hallways are curtain wall type, double glazed. All windows are generally in good condition. The leaks around the windows perimeters have not been reported and are not evident. Roof clerestories windows are a combination of aluminum and coated steel framing, fixed, double acrylic glazed in poor condition.

The exterior doors are typically hollow metal doors and frames, painted. The doors are generally in fair condition; some doors have vision glazing with security screens. Service doors are in poor condition.

Roofing system is a built-up system approximately 15 to 20 years old and in fair condition; all roofing and flashing is typically in fair condition with some deterioration of the built-up system and flashing sealant; leaks have not been reported.

INTERIORS:

The building partition wall types include painted CMU and hollow metal, glazed borrowed light partitions. Partitions are generally in good condition.

Interior doors are generally solid core wood doors, some glazed, with hollow metal frames. Most doors have glazed or solid core wood transoms. Some doors are damaged and missing hardware (20%). The doors leading to exit stairways are hollow metal doors and frames in good condition.

Fittings include toilet accessories and toilet partitions, generally in fair condition, installed approximately in late 1990's; no accessible compartments; chalkboards in good condition. Handrails and ornamental metals are generally in good condition. Built-in cabinets are steel in good condition. Interior identifying signage is typically directly painted on wall or door surfaces generally in poor condition or missing.

The interior wall finishes in the are typically painted CMU. Generally, paint is in good condition throughout the building.

Most ceilings in the building are exposed, painted with some 2x2 suspended acoustical panels in office areas. The suspension system and tile are in fair too poor condition.

Flooring in classrooms and auditorium/ cafeteria and gymnasium is VCT (approximately 80% of floor area); and ceramic tile in toilets and kitchen. Flooring in the kitchen is quarry tile in good condition. Most VCT flooring is in poor condition; tiles are old and separated from the substrate in some areas. About 70% of VCT is beyond their service life.

Stair construction is cast-in-place concrete with cast iron non-slip nosing in good condition.

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

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

generally in good condition; fixed seating in auditorium/cafeteria is in good condition.

CONVEYING SYSTEMS:

The building has a 2,500 lb hydraulic elevator serving all floors; generally in good condition.

PLUMBING:

Plumbing Fixtures - Many of the original plumbing fixtures remain in service. Fixtures in the restrooms consist of wall mounted flush valve water closets, wall hung urinals, and lavatories with both wheel and lever handle faucets. The units have been in use beyond their service life and need to be replaced. All plumbing fixtures should be replaced with new, code compliant fixtures.

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

A service sink is available in each janitor closet in the corridor for use by the janitorial staff.

The Cafeteria has one three compartment stainless steel sink with lever operated faucets. There is not a grease trap installed. Chemicals are injected manually into the sanitizing basins.

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

One Bradford White Magnum Series gas fired 80 gallon vertical hot water heater, installed in 2012, with circulating pump supplies hot water for domestic use. The unit is located in the chiller room. The domestic hot water heater is within its service life and should provide reliable service for the next 5-7 years.

Sanitary Waste - The original sanitary sewer piping is a mixture of galvanized piping with threaded fittings and heavy weight cast iron piping with hub and spigot fittings. Much of the cast iron piping has surface rust on it.

The building is not equipped with a sewage ejector or sump pump.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. However, the sewer piping has been in service for 40 years and will require more frequent attention from the maintenance staff as time passes. The District should hire a qualified contractor to examine the sanitary waste piping using video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

Rain Water Drainage - The rain water drains from the roof are routed through mechanical chases in the building and within some classrooms. The piping appears to be original and shows signs of rust damage on its exterior. The drain piping should be inspected by a qualified contractor and repaired as necessary.

MECHANICAL:

Energy Supply - A 2” city gas service enters the building from Rorer Street. The gas meter is 2” and located in the in the boiler room.

The oil supply is stored in a 12,000 gallon underground storage tank (UST) located in the parking lot on the south side of the building. Oil is the primary fuel for the boilers. Duplex pumps located in the boiler room circulate oil through the system; the pumps were recently replaced. The fuel oil pumping system is within its service life. USTs have an anticipated service life of 20 years. The actual condition of the fuel side is unknown.

Heat Generating Systems - Low pressure steam is generated at a maximum of 15 lbs/sq. in., typically 5-7 lbs/sq. in., by two 156HP Weil-McLain model 94 cast iron sectional boilers original to the building. Each boiler is equipped with a newly installed Power Flame burner designed to operate on fuel oil. Burner controls provide full modulation with electronic ignition, pressure amortization, and digital flame sensing. Burner oil pumps are loose and not driven by the fan motor. When the building is in heating mode the steam is routed to a shell and tube heat exchanger that heats the building water. Combustion air makeup is supplied by louvers equipped with motorized dampers. Cast iron sectional boilers have an anticipated service life of 35 years or more; as these units have been in service

40 years they need to be replaced.

The boiler feed tank is installed in the boiler room, It is beyond its useful service life, shows signs of damage from rust, and needs to be replaced. A chemical feed tank is located next to the boiler feed tank and treats the boiler feed water.

Cooling Generating Systems - Chilled water is generated by one nominal 177 ton Carrier 30HXC screw chiller located in the chiller room with heat rejected by one single cell steel Marley NC Series cooling tower located on the roof. The chiller has two (2) compressors. The chiller and cooling tower were installed in approximately 2007 and the Building Engineer reports no major issues with the units. Screw chillers have an anticipated service life of 20 years; this unit has been in use 8 years and should provide reliable service for the next 10 to 12 years. Galvanized cooling towers have an anticipated service life of 18 years. This unit should provide reliable service for the next 8-10 years.

Distribution Systems - Building water distribution piping is black steel with threaded fittings and copper piping with sweat fittings. Much of the distribution piping has been damaged by rust from condensation. The piping is beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes. The District should hire a qualified contractor to examine the distribution piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 5 years.

A two pipe distribution system supplies building heating or cooling water to the unit ventilators, fin tube radiators, and heating and ventilation units (hot water only). A shell and tube heat exchanger allows energy from the steam boilers to be converted into hot water for the building loop. There are two 15HP Armstrong end suction water pumps which can serve either the hot water or chilled water service depending on valve configuration. Two small Armstrong in-line circulation pumps serve the building hot water distribution network for the heating and ventilation units. The chilled water piping is connected directly to the building water loop and does not pass through the heat exchanger. One Armstrong end suction pump serves the condenser water loop for the cooling tower and chiller. All pumps appear to be original to the building, are well beyond the anticipated service life of 25 years, and need to be replaced. All distribution piping, pumps, and insulation should be replaced.

Conditioned air is provided to several spaces within the school by heating and ventilation units. Two (2) heating and ventilation units mounted near the ceiling in the Gymnasium serve the Gymnasium. Two (2) units installed in the boiler room serve the Cafetorium. The units are original to the building and are beyond their service life. These four (4) heating and ventilation units should be replaced with new units. Replace the heating and ventilation units serving the Gymnasium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in the existing wall openings. Replace the heating and ventilation units serving the Cafetorium by installing a constant volume air handling unit with distribution ductwork and registers.

Unit ventilators and fin tube radiators provide heating and cooling for the majority of classrooms, offices, and indirectly to the hallways. The unit ventilators and radiators are original to the building and beyond their service life. The Principal reported that there are concerns with the indoor air quality due to a lack of outdoor air introduced to the building. The existing unit ventilators and radiators should be removed and new two pipe units that have integral heat exchangers should be installed to introduce outdoor air to the building.

Terminal & Package Units - Supplemental ventilation is provided to the building by twenty (20) roof mounted power ventilators. All of the power ventilators are original to the building and beyond their service life. Many of the units are damaged and need to be replaced to ensure adequate ventilation for the building.

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

Controls & Instrumentation - The original pneumatic systems still provide basic control functions. Pneumatic room thermostats are intended to control the unit ventilator control valves. In reality the ventilator control valves are wide open and heating and cooling control is achieved via the boilers or chiller. Pneumatic control air is supplied from a duplex Quincy compressor located in the boiler room. The pneumatic systems are beyond their service life and require too much attention from the maintenance staff. The original control valves and pneumatic actuators are beyond their service life and should be rebuilt or replaced. These controls should be converted to DDC.

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

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

ELECTRICAL:

Site electrical service – The primary power is at 13.2KV from the power poles located along the Rorer St. The primary service goes underground and feeds a 750KVA dry type transformer (13.2KV – 480V) in the basement. This electrical service is for the Elkin School and does not feed the Elkin LSH. The secondary power also uses a 300KVA Transformer (480V-120/208) for all the lighting & receptacle loads. The electrical service is old and beyond useful life. The main switchgear is rated at 1000 Amp, 480 V, 3 phase, and is located in the basement (main electrical room). The 480 Switchboard feeds the power to the entire school's 480V loads, as well as a 300KVA transformer (480V – 120V/208V) for 120V loads. The PECO meter (PECO 01 017457258 908MUC) is located inside the electrical room. The service entrance and the main building electrical distribution systems are old, in a very poor condition, and do not have ample capacity for future growth.

Distribution system - The electrical distribution is accomplished with a 120V distribution switchboards. Switchboard feeds the 120V panels throughout the building (two on each floor). These panels are in poor condition and need replacements.

Receptacles - There is not adequate number of receptacles in classrooms, computer rooms, libraries, and other areas.

Lighting - Interior of the building is illuminated by various types of fixtures. They include fluorescent lighting (with T-12 & T-8 lamp) in majority of the areas, including; classrooms, corridor, offices and Kitchen. Surface or pendant mounted industrial fluorescent fixtures are used in mechanical and electrical. Gymnasium is illuminated by metal halide enclosed glass fixture. The majorities of interior lighting fixtures are in a poor condition and have reached their useful life.

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

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

Public address - An independent PA system does not exist. School uses the telephone systems for public announcement. This system is working adequately. The present Intercom System is functioning correctly. Each class room is provided by with intercom telephone service. The system permits paging and intercom communication between main office phone to classroom phones, and classroom to main office, classroom to classroom, and to office.

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

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

Security Systems-access control, video surveillance - The school is provided with adequate video surveillance system. Sufficient number of cameras is installed at exit doors, corridors, exterior, and other critical areas. They are controlled by a Closed Circuit Television system (CCTV). The system is working properly.

Emergency Power System - School is not provided with adequate emergency generator to feed elevators, emergency lighting and other emergency loads via a transfer switch.

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

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

Grounding - The present grounding system is adequate.

Site Lighting - Campus and building Perimeter are adequately lighted for safety of the people and security of property.

Site Paging – The present Site paging System is adequate. Sufficient numbers of speakers are located on building exterior walls.

Auditorium lighting and sound system – The auditorium general lighting is not adequate. Stage lighting needs upgrading. Also, the sound system is not adequate.

GROUNDS (SITE):

The site is shared with Elkin LSH (B526002). There is no parking lot at the site; however, staff utilizes the playground to park their vehicles. Playground pavement adjacent to the building is in poor condition, paving is cracked and deteriorated; there is no playground equipment. Courtyard paving on east, west and north side of the building is deteriorated. Perimeter picket fence separating the playground from the street is generally in good condition. Some fencing on the north side of the building is solid brick, in good condition. There is minimal landscaping at the site, generally in fair condition.

ACCESSIBILITY:

Generally, the building has an accessible route per ADA requirements. However, toilets are not equipped with accessible fixtures, and accessories, such as grab bars, and accessible partitions. None of the doors in the building have ADA required door handles. Elevator cabin is wheel chair accessible.

RECOMMENDATIONS:

- Repair spalled concrete on exposed floor slab edges (elevations)
- Install all new roofing system including insulation within next 3 to 4 years; tear-down existing roofing; install flashing, and counter flashing
- Provide new anti-graffiti coating first floor ext. walls (remove old coating)
- Replace exterior doors
- Replace all clerestory curtain wall windows within next 4 to 5 years
- Replace damaged interior doors
- Replace interior doors hardware for ADA accessibility
- Replace non-ADA compliant toilet partitions; reconfigure remaining toilet partitions
- Replace signage throughout the building
- Replace VCT tile (70% VCT floor area)
- Replace all suspended acoustical ceiling in the building
- Resurface playground paving and courtyards paving
- Replace twelve (12) urinals, in use beyond their service life, with new code compliant fixtures.
- Replace twenty (20) water closets, in use beyond their service life, with new code compliant fixtures.
- Replace three (3) lavatories, in use beyond their service life, with new code compliant fixtures.
- Replace the wall hung drinking fountains and integral refrigerated coolers in the corridors and at the restrooms. These units are well beyond their service life and most are NOT accessible type.
- Hire a qualified contractor to perform a detailed inspection of the domestic water piping, in use for over 40 years, and replace any damaged piping.
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the two existing 5,230MBH cast iron boilers, which are beyond their service life, and exhaust ductwork.
- Replace the existing boiler feed tank, which is beyond its service life and shows signs of rust damage, with a new feed tank and associated piping and pumps.
- Hire a qualified contractor to examine the distribution piping, in service for over 40 years and damaged from condensation, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the three (3) 15HP building water distribution and condenser water loop end suction pumps which are beyond their service life.
- Replace the two (2) 2HP building water distribution in-line pumps which are beyond their service life.
- Replace the existing unit ventilators, which are beyond their service life and in poor condition, with two pipe units that have integral heat exchangers to introduce outdoor air to the building.
- Replace the heating and ventilation units serving Gymnasium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in the existing wall openings.
- Replace the heating and ventilation units serving the Cafetorium by installing a constant volume air handling unit with distribution ductwork and registers.
- Replace twenty (20) roof mounted power ventilators which are beyond their service life and damaged to ensure adequate

ventilation for the building.
- Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.
- New Site electrical service 2000KVA, 480V, 3 Phase to feed the existing loads plus new additional loads for new HVAC System.
- New Distribution system throughout the building for lighting, receptacles and new MCC for HVAC loads.
- New receptacles in all classrooms and other areas
- New lighting system in the entire building
- New automated FA system
- New Clock System
- New 100 KW emergency generator
- New emergency exit signs & emergency lights
- The auditorium general lighting is not adequate. Stage lighting needs upgrading. Also, the sound system is not adequate.

Facility Assessment, August 2015

School District of Philadelphia

Elkin Little School House

501-527 E. Clearfield St.

Philadelphia, PA 19134

18,308SF / 159 Students / LN 05

The Elkin LSH school building is located at 501-527 Clearfield Street in Philadelphia, PA. The 1 story, approximately 18,308 square foot building was originally constructed in 1998. The building has a no basement. The school is co-located on the same site with Elkin Elementary School (B526001).

Mr. Scott Ovington, Facility Area Coordinator provided input to the Parsons assessment team on current problems and planned renovation projects. Mr. Richard Ballard, building engineer, accompanied us on our tour of the school and provided limited information on the building systems and recent maintenance history. School principal, Ms. Evelyn Nunez, provided additional information about school condition.

STRUCTURAL/ EXTERIOR CLOSURE:

The original building typically rests on concrete foundations and bearing walls that are not showing signs of settlement or cracks.

The main structure consists typically of steel framing (columns and girders) supporting bar joist roof structure. The roof structure consists of tongue and groove wood structural deck mostly exposed and clear coated.

The exterior walls are typically face brick with CMU backup, insulated cavity type. The walls are accentuated with patterns of blue glazed face brick. In general, masonry is in good condition. There is no evidence of water penetration through walls, and around windows.

The windows are powder coated aluminum frames, mostly double hung with double insulating glass. Some windows are fitted with integral security screens and some have security screens attached to face brick over windows. Integral security screens are in good condition; however, brick applied screens are damaged.

The building's exterior doors are typically hollow metal doors and frames, painted. The doors are generally in poor condition; weather-stripping is installed; some doors have vision glazing. The main door, fully glazed and with side lights on the east side is fitted with security roll-up grille in good condition.

Roofing system is typically asphalt shingles sloped, and in fair condition; however beyond its service life. Leaks have not been reported. Two cupolas on the main roof and portico over the main entrance are metal clad with standing seam roof panels in good condition. The wall enclosed chiller area is covered with galvanized steel grating supported by galvanized steel framing.

INTERIORS:

Partitions are generally painted CMU in good condition. Upper half of classroom partitions are acoustic CMU. Some corridor walls are fitted with hollow metal framed borrowed light units with wire glass.

Interior doors in the building are typically solid core doors in hollow metal frames in good condition.

Fittings include: toilet accessories and toilet partitions, generally in good condition and fully ADA compliant. Interior identifying signage is typically surface mounted on walls near doors, generally in good condition.

The interior wall finishes in the original building are generally painted CMU or drywall. Generally, paint is in good condition throughout the building.

Most ceilings in the building classrooms are exposed wood deck clear coated; corridors and office spaces have, typically, 2x4 suspended acoustical tiles. The suspension system and tile are old and approaching the end of their useful life.

Flooring in classrooms is typically half VCT and half carpet. The office, corridors and cafeteria has VCT tile, generally in good condition. Carpet is generally in poor condition.

Equipment includes kitchen equipment, generally in good condition.

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

CONVEYING SYSTEMS:

The building has no elevator.

PLUMBING:

Plumbing Fixtures - The original plumbing fixtures remain in service. Fixtures in the restrooms consist of wall mounted flush valve water closets, wall hung urinals and lavatories with both wheel handle and lever faucets. The restrooms are accessible type. The units appear to be in good condition and should provide reliable service for the next 15-20 years.

Drinking fountains in the corridors and at the restrooms consist of wall hung fixtures with integral refrigerated coolers. They are within their service life; most are accessible type.

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

The Kitchen has one three compartment stainless steel sink with lever operated faucets and a disposal. There are no grease traps. Chemicals are injected manually into the sanitizing basins.

Domestic Water Distribution - A 4” city water service enters from under the slab on the south side of the mechanical room. The 3” meter and valves are located in the mechanical room and a reduced pressure backflow preventer is installed. The domestic hot and cold water distribution piping is copper piping and sweat fittings. The maintenance staff reports no significant problems with scale build up in the domestic piping and the supply is adequate to the fixtures.

Two PVI 125 gallon vertical domestic hot water heaters with nickel plated storage tanks, associated circulating pumps and expansion tanks provide domestic hot water for the building. The installation dates of both units are unknown. They are gas fired and are located in the mechanical room. The hot water heaters are equipped with T&P relief valves and two small expansion tanks. The domestic hot water heaters are assumed to be at the end of their service life and should be replaced in the next 1-3 years. A water softener was located in the basement mechanical room.

Sanitary Waste - The sanitary sewer piping is all located under the building slab and was not accessible. It is assumed that all sanitary piping is original to the building and within its service life. The maintenance staff reported no problems with the sanitary waste piping systems.

Rain Water Drainage - Rain water drains from gutters on the sloped roof are routed through mechanical chases in the building to

piping under the slab, and are original. The system is original to the building and is well within its service life. No issues were reported with the roof drains or rain leaders.

MECHANICAL:

Energy Supply - A 4" city gas service enters the building under the slab from Rorer Street near the middle of the block. The gas meter is 4" and is located in the equipment yard outside of the mechanical room.

The reserve oil supply is stored in two 300 gallon storage tanks located in the mechanical room. Duplex pumps located in the basement circulate oil through the system. Oil is used as a backup fuel and the District receives credit from the gas utility as an interruptible service. The current tanks are empty according to the gauge on the wall; the Building Engineer did not know their status. The actual condition of the fuel side is unknown.

Heat Generating Systems - Building heating hot water is generated by two 42HP HB Smith Series 19 cast iron sectional boilers with gross output of 1,388MBH. Each boiler is equipped with a Power Flame burner designed to operate on natural gas or fuel oil. Combustion air makeup is supplied by louvers equipped with motorized dampers. Burner oil pumps are loose and not driven by the fan motor. The gas train serving the boiler does not appear to have code required venting of the regulators and dual solenoid valves with venting of the chamber between. No major issues with the boilers were reported by the Building Engineer. Cast iron boilers have an anticipated service life of 35years or more; these units have been in service 17 years. The District should provide reliable service for the next 15 to 20 years.

Cooling Generating Systems - Chilled water is generated by an 80 ton Carrier model 30GN reciprocating air-cooled chiller located in the equipment yard outside of the mechanical room. This unit has three compressors and utilizes R22 refrigerant, which is no longer produced in the United States. Reciprocating compressor chillers have an anticipated service life of 20 years; this unit has been in service 21 years. A new air cooled chiller should be installed within the next 1-3 years. The Building Engineer reported no issues with the chiller.

Distribution Systems - A four pipe distribution system supplies building heating and cooling water to the fan coil units and air handling unit. Two (2) 2HP end-suction Bell & Gossett heating water supply pumps circulate heating water from the boilers throughout the building. An expansion tank, air separator, and Neptune chemical treatment system are installed on the heating water distribution system. Two (2) 2HP end-suction Bell & Gossett chilled water return pumps circulate chilled water from the chiller throughout the building. The District should provide reliable service for the next 8 to 10 years.

All pumps are original to the building, appear to be in good condition, and are within the anticipated service life of 25 years. Distribution piping is black steel, covered with insulation, and appears to be in good condition. No problems with the distribution systems were reported. The District should provide reliable service for the next 8 to 10 years.

One USA Coil & Air model LWVB air handling unit (AHU) provides heating and cooling to the Cafeteria. The unit is located in the mechanical room adjacent to the fuel oil storage tanks. Heating, cooling and outdoor air are supplied to the Cafeteria by a ducted distribution system above the drop ceiling. The unit was operational and appeared to be in good condition, no major issues were reported by the Building Engineer.

Fan coil units provide heating and cooling for the classrooms and offices. Fin tube radiators are used for additional heating in the winter. The units are original to the building and are within their service life. Outdoor air for the building is provided by the fan coil units which take in outdoor air through louvered wall openings. No major issues were reported with the fan coil units and all radiators appeared to be in good condition.

Terminal & Package Units - The building is exhausted by a total of six (6) roof mounted exhaust fans. The Building Engineer did not report and problems with the exhaust fans. The exhaust fans remove air from the ceiling plenum above the drop ceiling in some areas, from restrooms, and from the kitchen. The roof was not accessible during the site visit so no additional information about the fans is available.

One Caddy kitchen hood without integral fire suppression system is installed above the gas fired equipment. An automatic gas shutoff valve is installed with the kitchen hood equipment. No cooking is done in the kitchen; only prepared meals are served. The equipment is well within its service life. There was no visible make-up air unit for the kitchen while the exhaust hoods are active, but it is assumed that this air is made up from the adjoining Cafeteria.

Controls & Instrumentation - A building management system (BMS) with DDC modules and communications network is installed in this building. According to the Building Engineer the BMS, installed when the building was built, is no longer operational. All major

mechanical equipment (chillers, boilers, air handling units, pumps, fans, etc.) should be monitored and controlled by the system. This system is at the end of its service life and should be replaced.

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

Sprinklers - The building is equipped with a wet type sprinkler system with sprinklers throughout the building. An 8" fire water line enters the building in the mechanical room along the same wall as the domestic water. A booster pump is not installed on the fire line. The fire suppression system is the originally installed equipment, appears to be in good condition, and should not need replacement within the next 15 years.

ELECTRICAL:

Site electrical service - An underground medium voltage (13.2 KV) cable drop from the utility power poles along Rorer Street feeds a pad mounted utility company Dry-type transformer (500 KVA, 13.2KV – 120V/208V, 3-Phase). This electrical utility service is different than the one that feeds the Elkin School, and it is dedicated only for the Elkin LSH. The PECO metering (PECO 004394654) is located inside the electrical room. The school's main service switchgear is located in the main electrical room. The main service is 1600 Amp at 120 V. The main 120 V switchgear consists of 1600A (Frame size) adjustable main Breaker, and several 600 A frame 120V feeder circuit breakers. There is no emergency generator for the emergency loads. Service entrance and the main building electrical distribution systems are fairly new and in a good condition (built in 1998), and have ample capacity. No deficiencies were noted for the electrical service.

Distribution system - The electrical distribution is accomplished with a 120 V distribution switchboards. Switchboard A feeds the distribution panelboard. There are four 208/120V sub-panels. These panels are located throughout the building. All distribution transformers, panels, etc. are in good condition. Lighting- Interior building is illuminated by various types of fixtures. They include fluorescent lighting (with T-5 & T-8 lamp) in majority of the areas, including; classrooms, corridor, offices and Kitchen. Surface or pendent mounted industrial fluorescent used in mechanical and electrical. Gymnasium is illuminated by metal halide enclosed glass fixture. All interior lighting fixtures are in a good condition and building illumination is sufficient.

Fire alarm - The present Fire Alarm system is fully automatic, addressable, and in compliance with safety code. Smoke is monitored by duct smoke detectors, area smoke detectors in corridors. There are manual pulls stations throughout the building. There are sufficient number of horn/strobes installed in the classrooms, corridors, offices and other areas in the school. No major deficiencies with FA System was observed during the assessment.

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

Public address - Separate PA system does not exist. School uses the telephone systems for public announcement. This system is working adequately.

Intercom System and paging - The present Intercom System is functioning fine. Each class room is provided by with intercom telephone service. The system is permit paging and intercom communication between main office phone to classroom phones, and classroom to main office, classroom to classroom, and to office.

Clock and Program system - Clock and program system are working adequately. Classrooms are provided with 12 inches, wall mounted, round clock. The clocks are controlled by central master control panel. The master control is also programmed for class change.

Television System- There is no Television system in the school. Also, classes are not provided with smart boards.

Security Systems-access control, video surveillance - The school is provided with adequate video surveillance system. Sufficient numbers of cameras are installed at exit doors, corridors and other critical areas. They are controlled by a Closed Circuit Television system (CCTV). The system is working properly.

Emergency Power System - School is not provided with an emergency generator.

Emergency lighting system, including exit lighting - sufficient emergency lighting fixtures is instated in corridors, library and other exit ways. All exit signs are equipped with adequate batteries.

Lightning Protection System - There is no lightning protection system installed in the school.

Grounding - The present grounding system is adequate.

Site Lighting - Campus and building perimeter are adequately lighted for safety of the people and security of property.

Site Paging – The present Site paging System is adequate. Sufficient numbers of speaker are located on building exterior walls.

GROUNDS (SITE):

The site is shared with Elkin Elementary School (B526001) and covered above.

ACCESSIBILITY:

Generally, the building is fully accessible per ADA requirements. Toilets are equipped with accessible fixtures, partitions and accessories, such as grab bars and accessible partitions. The doors have ADA required door handles.

RECOMMENDATIONS:

- Replace shingle roof system
- Replace damaged security screens
- Replace existing carpet
- Replace all suspended acoustical ceilings
- Replace the two 125 gallon vertical gas fired domestic hot water heaters.
- Replaced the one 80 ton Carrier model 30GN reciprocating air-cooled chiller located in the equipment yard outside of the mechanical room, which is beyond its service life, within the next 1-3 years.
- Replace the existing controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- Install new 30 KVA Emergency Generator.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 2 / Tm 4
Status:	Accepted by SDP	Team:	Tm 4
Site ID:	S526001		

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	66.60 %	0.00 %	$0.00
A20 - Basement Construction	67.80 %	0.00 %	$0.00
B10 - Superstructure	65.76 %	0.00 %	$0.00
B20 - Exterior Enclosure	63.59 %	15.35 %	$591,095.62
B30 - Roofing	83.10 %	76.72 %	$1,202,036.67
C10 - Interior Construction	71.54 %	15.67 %	$270,032.83
C20 - Stairs	63.95 %	0.00 %	$0.00
C30 - Interior Finishes	94.74 %	20.23 %	$589,907.63
D10 - Conveying	105.71 %	0.00 %	$0.00
D20 - Plumbing	83.08 %	60.32 %	$1,104,347.12
D30 - HVAC	84.04 %	91.81 %	$7,302,789.83
D40 - Fire Protection	89.06 %	128.18 %	$761,051.18
D50 - Electrical	110.01 %	76.95 %	$3,332,581.63
E10 - Equipment	51.80 %	25.79 %	$293,594.70
E20 - Furnishings	92.84 %	0.00 %	$0.00
G20 - Site Improvements	78.83 %	22.09 %	$197,045.05
G40 - Site Electrical Utilities	106.67 %	0.00 %	$0.00
Totals:	**79.33 %**	**41.04 %**	**$15,644,482.26**

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)
B526001;Elkin	53,200	53.41	$761,051.18	$3,095,010.42	$4,451,580.76	$2,841,789.40	$2,761,046.71
B526002;Elkin LSH	18,308	14.15	$0.00	$0.00	$175,161.30	$969,053.07	$392,744.37
G526001;Grounds	74,400	16.21	$0.00	$0.00	$0.00	$197,045.05	$0.00
Total:		**41.04**	**$761,051.18**	**$3,095,010.42**	**$4,626,742.06**	**$4,007,887.52**	**$3,153,791.08**

Deficiencies By Priority

- 1 - Response Time (< 2 yr) - $761,051.18
- 2 - Response Time (2-3 yrs) - $3,095,010.42
- 3 - Response Time (3-4 yrs) - $4,626,742.06
- 4 - Response Time (4-5 yrs) - $4,007,887.52
- 5 - Response Time (> 5 yrs) - $3,153,791.08

Budget Estimate Total: $15,644,482.26

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):	53,200
Year Built:	1973
Last Renovation:	
Replacement Value:	$26,046,114
Repair Cost:	$13,910,478.47
Total FCI:	53.41 %
Total RSLI:	81.69 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B526001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S526001		

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	58.00 %	0.00 %	$0.00
A20 - Basement Construction	58.00 %	0.00 %	$0.00
B10 - Superstructure	58.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	60.72 %	18.69 %	$560,394.35
B30 - Roofing	110.00 %	89.37 %	$711,522.23
C10 - Interior Construction	70.70 %	20.68 %	$270,032.83
C20 - Stairs	58.00 %	0.00 %	$0.00
C30 - Interior Finishes	107.47 %	24.63 %	$490,847.83
D10 - Conveying	105.71 %	0.00 %	$0.00
D20 - Plumbing	106.34 %	93.64 %	$1,017,248.93
D30 - HVAC	92.81 %	110.35 %	$6,530,566.63
D40 - Fire Protection	105.71 %	177.49 %	$761,051.18
D50 - Electrical	109.97 %	100.63 %	$3,275,219.79
E10 - Equipment	51.93 %	34.67 %	$293,594.70
E20 - Furnishings	105.00 %	0.00 %	$0.00
Totals:	**81.69 %**	**53.41 %**	**$13,910,478.47**

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.	53,200	100	1973	2073		58.00 %	0.00 %	58			$978,880
A1030	Slab on Grade	$7.73	S.F.	53,200	100	1973	2073		58.00 %	0.00 %	58			$411,236
A2010	Basement Excavation	$6.55	S.F.	53,200	100	1973	2073		58.00 %	0.00 %	58			$348,460
A2020	Basement Walls	$12.70	S.F.	53,200	100	1973	2073		58.00 %	0.00 %	58			$675,640
B1010	Floor Construction	$75.10	S.F.	53,200	100	1973	2073		58.00 %	0.00 %	58			$3,995,320
B1020	Roof Construction	$13.88	S.F.	53,200	100	1973	2073		58.00 %	0.00 %	58			$738,416
B2010	Exterior Walls	$36.91	S.F.	53,200	100	1973	2073		58.00 %	6.84 %	58		$134,328.03	$1,963,612
B2020	Exterior Windows	$18.01	S.F.	53,200	40	2000	2040		62.50 %	27.36 %	25		$262,134.55	$958,132
B2030	Exterior Doors	$1.45	S.F.	53,200	25	1973	1998	2042	108.00 %	212.51 %	27		$163,931.77	$77,140
B3010105	Built-Up	$37.76	S.F.	21,000	20	1990	2010	2037	110.00 %	89.73 %	22		$711,522.23	$792,960
B3010120	Single Ply Membrane	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.		30				0.00 %	0.00 %				$0
B3010140	Shingle & Tile	$38.73	S.F.		25				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.06	S.F.	53,200	20	1990	2010	2037	110.00 %	0.00 %	22			$3,192
C1010	Partitions	$17.91	S.F.	53,200	100	1973	2073		58.00 %	0.00 %	58			$952,812
C1020	Interior Doors	$3.51	S.F.	53,200	40	1973	2013	2057	105.00 %	86.18 %	42		$160,927.89	$186,732
C1030	Fittings	$3.12	S.F.	53,200	40	1973	2013	2057	105.00 %	65.73 %	42		$109,104.94	$165,984
C2010	Stair Construction	$1.41	S.F.	53,200	100	1973	2073		58.00 %	0.00 %	58			$75,012

Site Assessment Report - B526001;Elkin

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$13.21	S.F.	53,200	10	2005	2015	2027	120.00 %	0.00 %	12			$702,772
C3010231	Vinyl Wall Covering	$0.97	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.63	S.F.		30				0.00 %	0.00 %				$0
C3020411	Carpet	$7.30	S.F.		10				0.00 %	0.00 %				$0
C3020412	Terrazzo & Tile	$75.52	S.F.	1,300	50	1973	2023		16.00 %	0.00 %	8			$98,176
C3020413	Vinyl Flooring	$9.68	S.F.	29,800	20	1973	1993	2037	110.00 %	124.15 %	22		$358,122.44	$288,464
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	11,500	50	1973	2023		16.00 %	0.00 %	8			$11,155
C3030	Ceiling Finishes	$20.97	S.F.	42,560	25	1990	2015	2042	108.00 %	14.87 %	27		$132,725.39	$892,483
D1010	Elevators and Lifts	$1.53	S.F.	53,200	35	1973	2008	2052	105.71 %	0.00 %	37			$81,396
D2010	Plumbing Fixtures	$13.52	S.F.	53,200	35	1973	2008	2052	105.71 %	34.86 %	37		$250,768.15	$719,264
D2020	Domestic Water Distribution	$1.68	S.F.	53,200	25	1973	1998	2042	108.00 %	301.63 %	27		$269,583.15	$89,376
D2030	Sanitary Waste	$2.90	S.F.	53,200	25	1973	1998	2042	108.00 %	169.16 %	27		$260,985.94	$154,280
D2040	Rain Water Drainage	$2.32	S.F.	53,200	30	1973	2003	2047	106.67 %	191.14 %	32		$235,911.69	$123,424
D3020	Heat Generating Systems	$18.67	S.F.	53,200	35	1973	2008	2052	105.71 %	132.60 %	37		$1,317,084.49	$993,244
D3030	Cooling Generating Systems	$24.48	S.F.	53,200	20	2007	2027		60.00 %	0.00 %	12			$1,302,336
D3040	Distribution Systems	$42.99	S.F.	53,200	25	1973	1998	2042	108.00 %	178.05 %	27		$4,072,233.40	$2,287,068
D3050	Terminal & Package Units	$11.60	S.F.	53,200	20	1973	1993	2028	65.00 %	0.00 %	13			$617,120
D3060	Controls & Instrumentation	$13.50	S.F.	53,200	20	1973	1993	2037	110.00 %	158.90 %	22		$1,141,248.74	$718,200
D4010	Sprinklers	$7.05	S.F.	53,200	35			2052	105.71 %	202.91 %	37		$761,051.18	$375,060
D4020	Standpipes	$1.01	S.F.	53,200	35			2052	105.71 %	0.00 %	37			$53,732
D5010	Electrical Service/Distribution	$9.70	S.F.	53,200	30	1973	2003	2047	106.67 %	339.58 %	32		$1,752,372.74	$516,040
D5020	Lighting and Branch Wiring	$34.68	S.F.	53,200	20	1973	1993	2037	110.00 %	43.95 %	22		$810,793.19	$1,844,976
D5030	Communications and Security	$12.99	S.F.	53,200	15	1973	1988	2032	113.33 %	46.07 %	17		$318,343.40	$691,068
D5090	Other Electrical Systems	$3.81	S.F.	53,200	30	1973	2003	2047	106.67 %	194.24 %	32		$393,710.46	$202,692
E1020	Institutional Equipment	$4.82	S.F.	53,200	35	1990	2025	2052	105.71 %	114.50 %	37		$293,594.70	$256,424
E1090	Other Equipment	$11.10	S.F.	53,200	35	1990	2025		28.57 %	0.00 %	10			$590,520
E2010	Fixed Furnishings	$2.13	S.F.	53,200	40	1973	2013	2057	105.00 %	0.00 %	42			$113,316
								Total	**81.69 %**	**53.41 %**			**$13,910,478.47**	**$26,046,114**

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: Paint 100%

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

Note: VCT 70%
Concrete 27%
Tile 3%

System: C3030 - Ceiling Finishes — This system contains no images

Note: Exposed, painted 75%
ACT 20%
Drywall 5%

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:	**$13,910,478**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$152,348**	**$0**	**$872,970**	**$14,935,797**
*** 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	$134,328	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$134,328**
B2020 - Exterior Windows	$262,135	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$262,135**
B2030 - Exterior Doors	$163,932	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$163,932**
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	$711,522	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$711,522**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

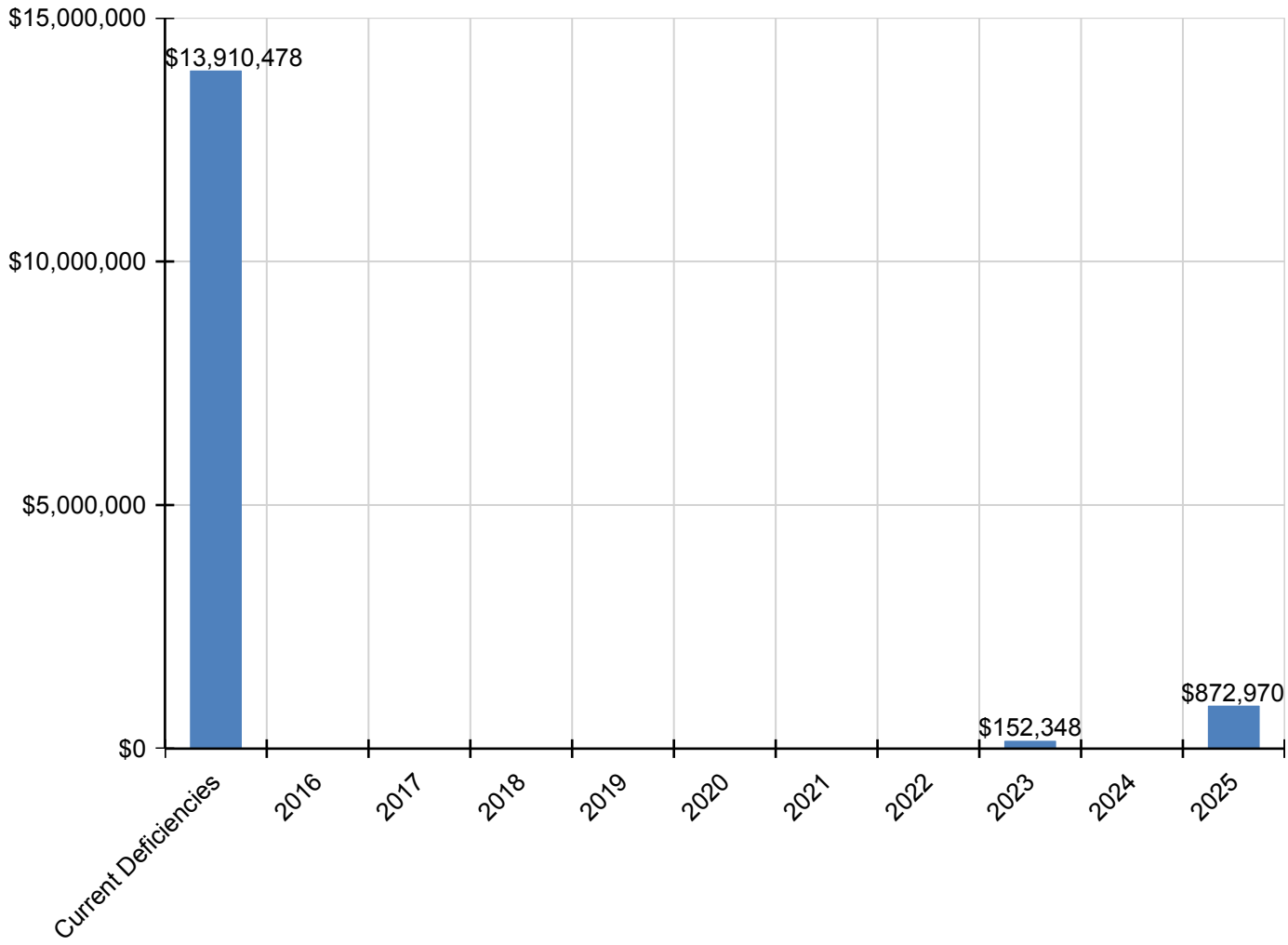
C1020 - Interior Doors	$160,928	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$160,928**
C1030 - Fittings	$109,105	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$109,105**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$136,804	$0	$0	**$136,804**
C3020413 - Vinyl Flooring	$358,122	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$358,122**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$15,545	$0	$0	**$15,545**
C3030 - Ceiling Finishes	$132,725	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$132,725**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$250,768	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$250,768**
D2020 - Domestic Water Distribution	$269,583	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$269,583**
D2030 - Sanitary Waste	$260,986	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$260,986**
D2040 - Rain Water Drainage	$235,912	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$235,912**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$1,317,084	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,317,084**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$4,072,233	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,072,233**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,141,249	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,141,249**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$761,051	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$761,051**
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	$1,752,373	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,752,373**
D5020 - Lighting and Branch Wiring	$810,793	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$810,793**
D5030 - Communications and Security	$318,343	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$318,343**
D5090 - Other Electrical Systems	$393,710	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$393,710**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$293,595	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$293,595**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$872,970	**$872,970**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

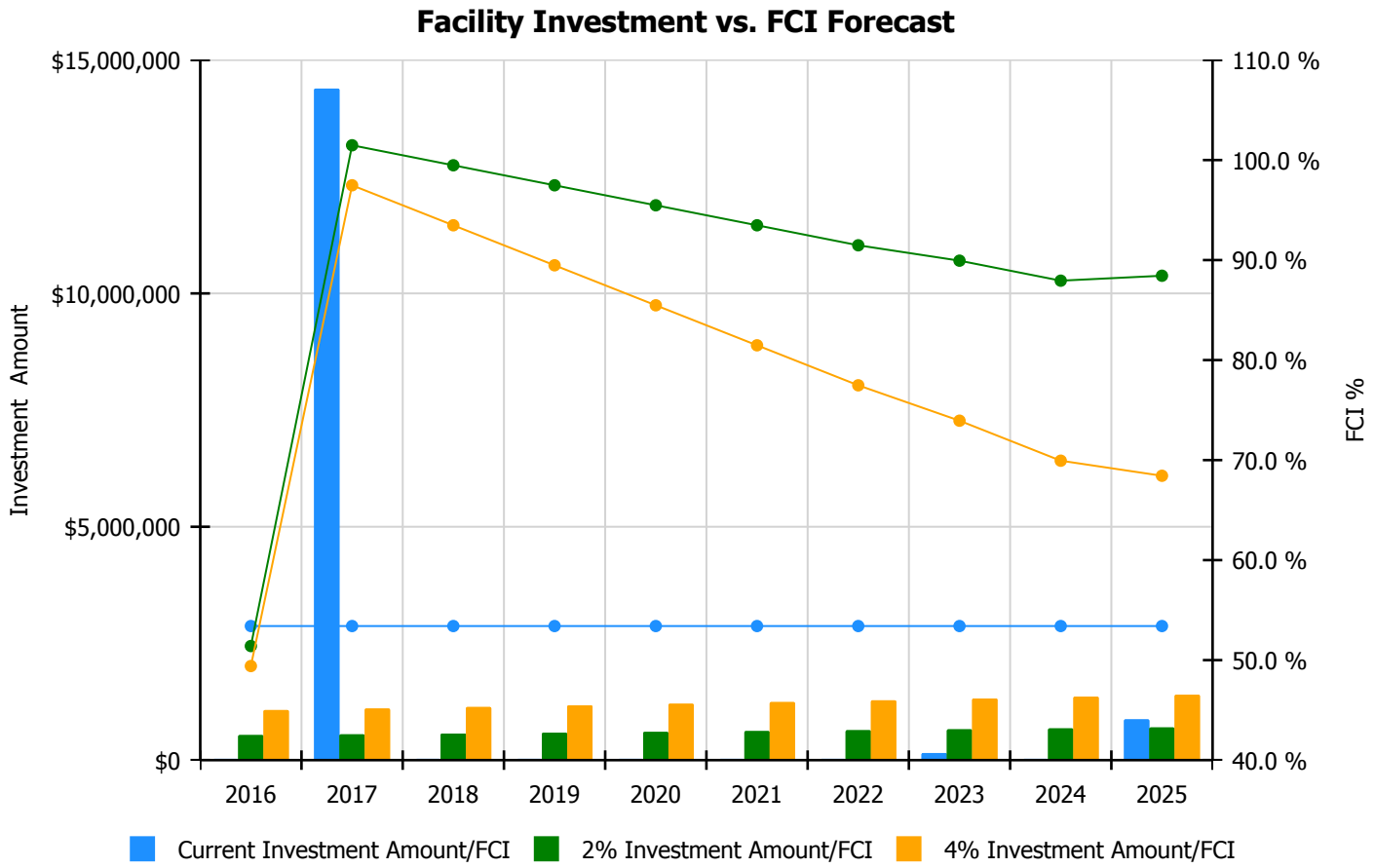
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

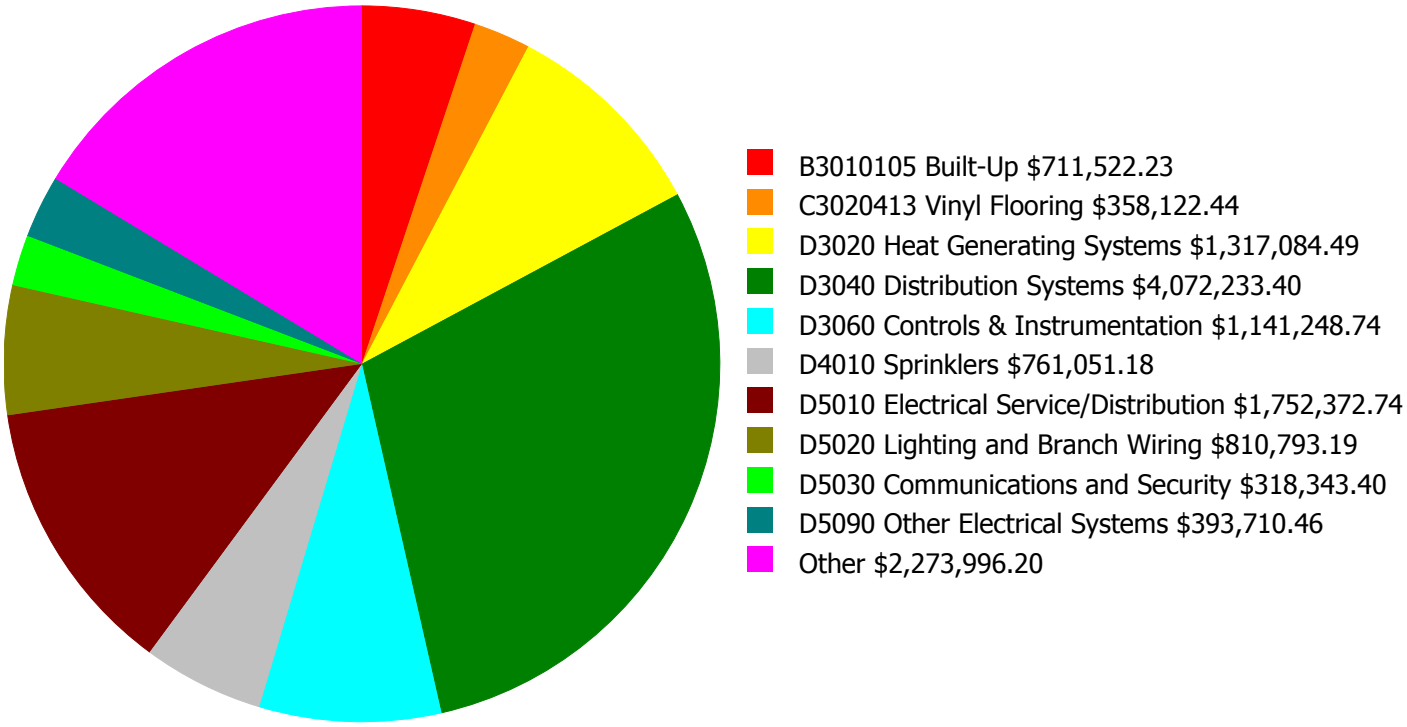
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 53.41%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$536,550.00	51.41 %	$1,073,100.00	49.41 %
2017	$14,388,154	$552,646.00	101.48 %	$1,105,293.00	97.48 %
2018	$0	$569,226.00	99.48 %	$1,138,452.00	93.48 %
2019	$0	$586,303.00	97.48 %	$1,172,605.00	89.48 %
2020	$0	$603,892.00	95.48 %	$1,207,783.00	85.48 %
2021	$0	$622,008.00	93.48 %	$1,244,017.00	81.48 %
2022	$0	$640,669.00	91.48 %	$1,281,337.00	77.48 %
2023	$152,348	$659,889.00	89.94 %	$1,319,778.00	73.94 %
2024	$0	$679,685.00	87.94 %	$1,359,371.00	69.94 %
2025	$872,970	$700,076.00	88.43 %	$1,400,152.00	68.43 %
Total:	**$15,413,472**	**$6,150,944.00**		**$12,301,888.00**	

Deficiency Summary by System

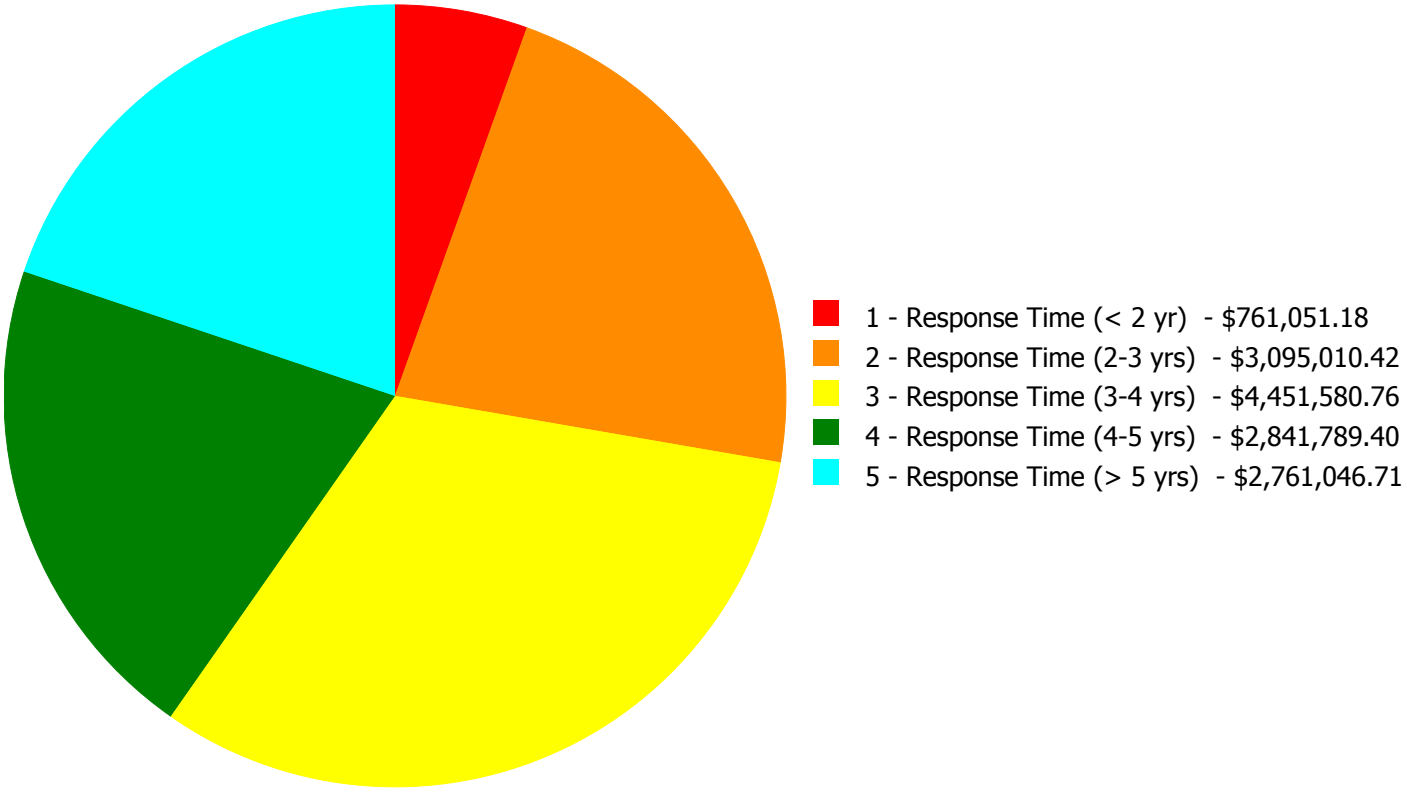
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $13,910,478.47

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: $13,910,478.47

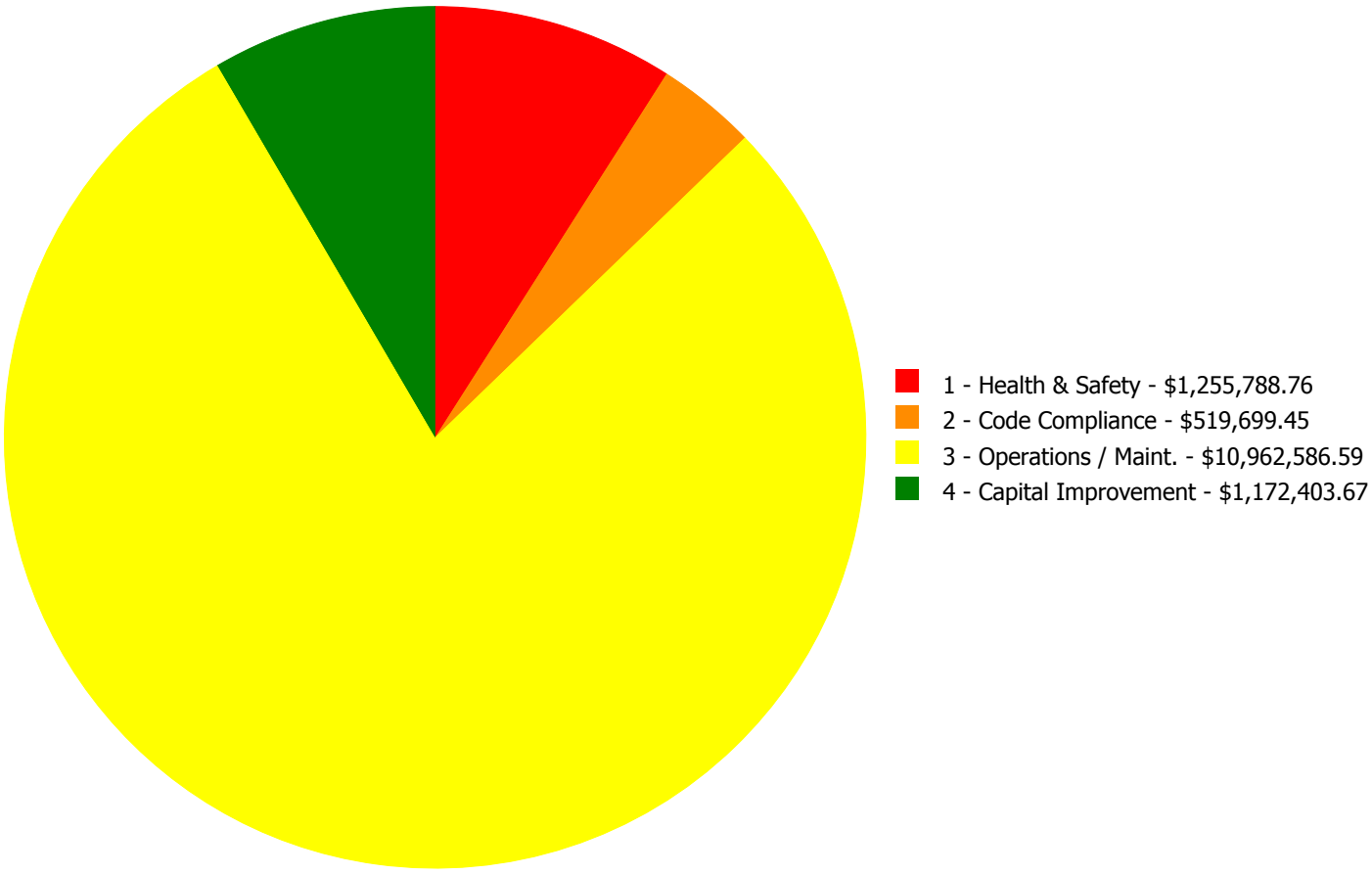
Deficiency By Priority Investment Table

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	$0.00	$45,372.97	$88,955.06	$134,328.03
B2020	Exterior Windows	$0.00	$0.00	$0.00	$262,134.55	$0.00	$262,134.55
B2030	Exterior Doors	$0.00	$0.00	$0.00	$0.00	$163,931.77	$163,931.77
B3010105	Built-Up	$0.00	$0.00	$711,522.23	$0.00	$0.00	$711,522.23
C1020	Interior Doors	$0.00	$0.00	$51,204.39	$109,723.50	$0.00	$160,927.89
C1030	Fittings	$0.00	$0.00	$0.00	$77,950.01	$31,154.93	$109,104.94
C3020413	Vinyl Flooring	$0.00	$0.00	$0.00	$0.00	$358,122.44	$358,122.44
C3030	Ceiling Finishes	$0.00	$132,725.39	$0.00	$0.00	$0.00	$132,725.39
D2010	Plumbing Fixtures	$0.00	$0.00	$250,768.15	$0.00	$0.00	$250,768.15
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$0.00	$269,583.15	$269,583.15
D2030	Sanitary Waste	$0.00	$0.00	$260,985.94	$0.00	$0.00	$260,985.94
D2040	Rain Water Drainage	$0.00	$0.00	$235,911.69	$0.00	$0.00	$235,911.69
D3020	Heat Generating Systems	$0.00	$101,394.17	$1,050,121.66	$165,568.66	$0.00	$1,317,084.49
D3040	Distribution Systems	$0.00	$2,860,890.86	$503,291.92	$0.00	$708,050.62	$4,072,233.40
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$0.00	$1,141,248.74	$1,141,248.74
D4010	Sprinklers	$761,051.18	$0.00	$0.00	$0.00	$0.00	$761,051.18
D5010	Electrical Service/Distribution	$0.00	$0.00	$0.00	$1,752,372.74	$0.00	$1,752,372.74
D5020	Lighting and Branch Wiring	$0.00	$0.00	$810,793.19	$0.00	$0.00	$810,793.19
D5030	Communications and Security	$0.00	$0.00	$183,271.13	$135,072.27	$0.00	$318,343.40
D5090	Other Electrical Systems	$0.00	$0.00	$393,710.46	$0.00	$0.00	$393,710.46
E1020	Institutional Equipment	$0.00	$0.00	$0.00	$293,594.70	$0.00	$293,594.70
	Total:	$761,051.18	$3,095,010.42	$4,451,580.76	$2,841,789.40	$2,761,046.71	$13,910,478.47

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: $13,910,478.47

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: D4010 - Sprinklers

Location: Throughout building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Install a fire protection sprinkler system

Qty: 53,200.00

Unit of Measure: S.F.

Estimate: $761,051.18

Assessor Name: Craig Anding

Date Created: 09/24/2015

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

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

System: C3030 - Ceiling Finishes

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 8,800.00

Unit of Measure: S.F.

Estimate: $132,725.39

Assessor Name: Craig Anding

Date Created: 11/16/2015

Notes: Replace all suspended acoustical ceiling in the building

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System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace boiler feed pump (duplex) and surge tank

Qty: 1.00

Unit of Measure: Ea.

Estimate: $101,394.17

Assessor Name: Craig Anding

Date Created: 11/25/2015

Notes: Replace the existing boiler feed tank, which is beyond its service life and shows signs of rust damage, with a new feed tank and associated piping and pumps.

System: D3040 - Distribution Systems

Location: Classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace classroom unit ventilator (htg/clg coils, 5 tons, 2,000 CFM)

Qty: 43.00

Unit of Measure: Ea.

Estimate: $2,144,782.93

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace the existing unit ventilators, which are beyond their service life and in poor condition, with two pipe units that have integral heat exchangers to introduce outdoor air to the building.

System: D3040 - Distribution Systems

Location: Roof

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace power roof ventilator (24" dia.)

Qty: 20.00

Unit of Measure: Ea.

Estimate: $597,896.51

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace twenty (20) roof mounted power ventilators which are beyond their service life and damaged to ensure adequate ventilation for the building.

System: D3040 - Distribution Systems

Location: Boiler room

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace duplex vacuum and condensate receiver

Qty: 1.00

Unit of Measure: Ea.

Estimate: $118,211.42

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace the existing boiler feed tank, which is beyond its service life and shows signs of rust damage, with a new feed tank and associated piping and pumps.

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

System: B3010105 - Built-Up

Location: Exterior

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Built Up Roof

Qty: 21,000.00

Unit of Measure: S.F.

Estimate: $711,522.23

Assessor Name: Craig Anding

Date Created: 11/16/2015

Notes: Install all new roofing system including insulation within next 3 to 4 years; tear-down existing roofing; install flashing, and counter flashing

System: C1020 - Interior Doors

Location: Interior

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Replace door knobs with compliant lever type

Qty: 92.00

Unit of Measure: Ea.

Estimate: $51,204.39

Assessor Name: Craig Anding

Date Created: 11/16/2015

Notes: Replace interior doors hardware for ADA accessibility

System: D2010 - Plumbing Fixtures

Location: Restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 20.00

Unit of Measure: Ea.

Estimate: $149,242.96

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace twenty (20) water closets, in use beyond their service life, with new code compliant fixtures.

System: D2010 - Plumbing Fixtures

Location: Corridors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 6.00

Unit of Measure: Ea.

Estimate: $45,475.14

Assessor Name: Craig Anding

Date Created: 09/24/2015

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

System: D2010 - Plumbing Fixtures

Location: Restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 12.00

Unit of Measure: Ea.

Estimate: $39,829.00

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace twelve (12) urinals, in use beyond their service life, with new code compliant fixtures.

System: D2010 - Plumbing Fixtures

Location: Restrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 3.00

Unit of Measure: Ea.

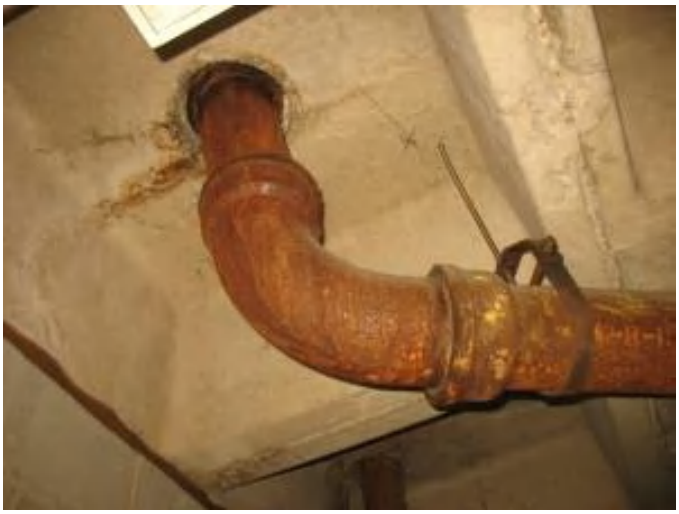
Estimate: $16,221.05

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace three (3) lavatories, in use beyond their service life, with new code compliant fixtures.

System: D2030 - Sanitary Waste



Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 53,200.00

Unit of Measure: S.F.

Estimate: $260,985.94

Assessor Name: Craig Anding

Date Created: 09/24/2015

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

System: D2040 - Rain Water Drainage

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 53,200.00

Unit of Measure: S.F.

Estimate: $235,911.69

Assessor Name: Craig Anding

Date Created: 09/24/2015

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

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 2.00

Unit of Measure: Ea.

Estimate: $1,050,121.66

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace the two existing 5,230MBH cast iron boilers, which are beyond their service life, and exhaust ductwork.

System: D3040 - Distribution Systems

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 53,200.00

Unit of Measure: S.F.

Estimate: $503,291.92

Assessor Name: Craig Anding

Date Created: 09/24/2015

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

System: D5020 - Lighting and Branch Wiring

Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Lighting Fixtures (SF)

Qty: 0.00

Unit of Measure: S.F.

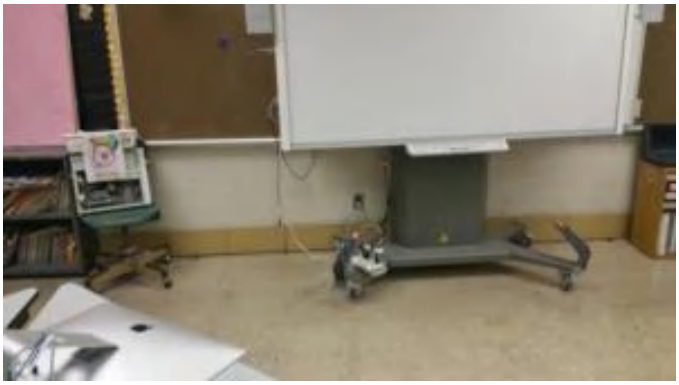
Estimate: $505,577.55

Assessor Name: Craig Anding

Date Created: 09/28/2015

Notes: New lighting system in the entire building

System: D5020 - Lighting and Branch Wiring



Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 0.00

Unit of Measure: S.F.

Estimate: $305,215.64

Assessor Name: Craig Anding

Date Created: 09/28/2015

Notes: New receptacles in all classrooms and other areas

System: D5030 - Communications and Security

Location: throughout the building

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $183,271.13

Assessor Name: Craig Anding

Date Created: 09/28/2015

Notes: New automated FA system

System: D5090 - Other Electrical Systems

Location: electrical room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace standby generator system

Qty: 1.00

Unit of Measure: Ea.

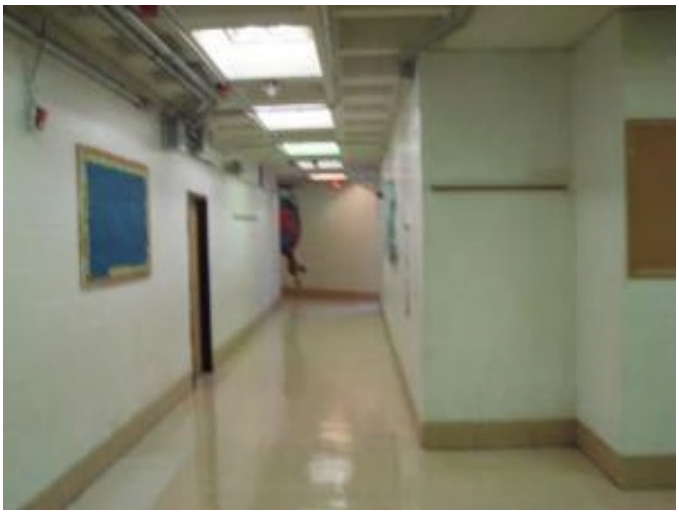
Estimate: $207,273.92

Assessor Name: Craig Anding

Date Created: 09/29/2015

Notes: New 100 KW emergency generator

System: D5090 - Other Electrical Systems



Location: throughout the building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Add Emergency/Exit Lighting

Qty: 1.00

Unit of Measure: Ea.

Estimate: $186,436.54

Assessor Name: Craig Anding

Date Created: 09/29/2015

Notes: Install new emergency lights/Exit signs.

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

System: B2010 - Exterior Walls

Location: Exterior

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair spalled concrete wall structure

Qty: 800.00

Unit of Measure: S.F.

Estimate: $45,372.97

Assessor Name: Craig Anding

Date Created: 11/16/2015

Notes: Repair spalled concrete on exposed floor slab edges (elevations)

System: B2020 - Exterior Windows

Location: Exterior

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

Correction: Remove and replace curtain wall systems - SF of curtain wall area

Qty: 1,600.00

Unit of Measure: S.F.

Estimate: $262,134.55

Assessor Name: Craig Anding

Date Created: 11/16/2015

Notes: Replace all clerestory curtain wall windows within next 4 to 5 years

System: C1020 - Interior Doors

Location: Interior

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 23.00

Unit of Measure: Ea.

Estimate: $109,723.50

Assessor Name: Craig Anding

Date Created: 11/16/2015

Notes: Replace damaged interior doors

System: C1030 - Fittings

Location: Interior

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Remove and replace damaged toilet paritions - handicap units

Qty: 24.00

Unit of Measure: Ea.

Estimate: $77,950.01

Assessor Name: Craig Anding

Date Created: 11/16/2015

Notes: Replace non-ADA compliant toilet partitions; reconfigure remaining toilet partitions

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace pump, base-mounted, end suction HHW (5" size, 15 HP, to 1000 GPM)

Qty: 3.00

Unit of Measure: Ea.

Estimate: $125,329.04

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace the three (3) 15HP building water distribution and condenser water loop end suction pumps which are beyond their service life.

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace pump, base-mounted, end suction HHW (3" size, 5 HP, to 225 GPM)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $40,239.62

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace the two (2) 2HP building water distribution in-line pumps which are beyond their service life.

System: D5010 - Electrical Service/Distribution

Location: electrical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add Electrical Switchgear and Distribution System

Qty: 0.00

Unit of Measure: Ea.

Estimate: $1,535,971.96

Assessor Name: Craig Anding

Date Created: 09/28/2015

Notes: New Site electrical service 2000KVA, 480V, 3 Phase to feed the existing loads plus new additional loads for new HVAC System. New Distribution system throughout the building for lighting, receptacles and new MCC for HVAC loads. •

System: D5010 - Electrical Service/Distribution

Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Panelboard - 225A

Qty: 0.00

Unit of Measure: Ea.

Estimate: $216,400.78

Assessor Name: Craig Anding

Date Created: 09/28/2015

Notes: New panel boards throughout the building for lighting, receptacles..

System: D5030 - Communications and Security

Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Clock System or Components

Qty: 0.00

Unit of Measure: Ea.

Estimate: $135,072.27

Assessor Name: Craig Anding

Date Created: 09/28/2015

Notes: New Clock System

System: E1020 - Institutional Equipment

Location: auditorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $293,594.70

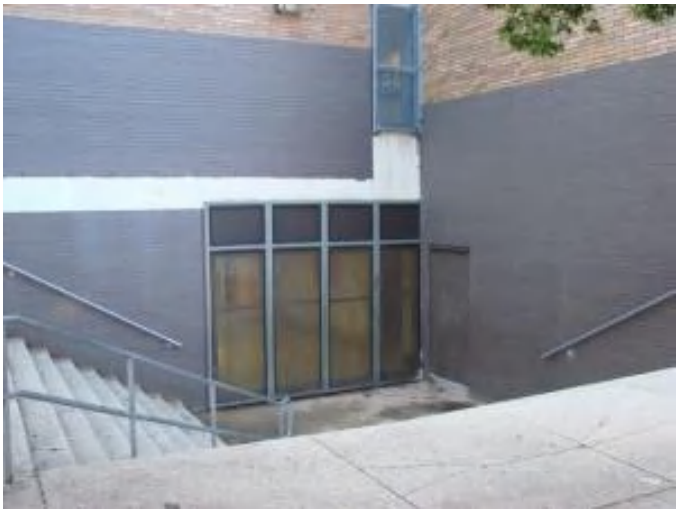
Assessor Name: Craig Anding

Date Created: 09/29/2015

Notes: Auditorium Stage lighting needs upgrading. Also, the sound system needs improvements.

Priority 5 - Response Time (> 5 yrs):

System: B2010 - Exterior Walls



Location: Exterior
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Remove graffiti - power wash and paint
Qty: 13,200.00
Unit of Measure: S.F.
Estimate: $88,955.06
Assessor Name: Craig Anding
Date Created: 11/16/2015

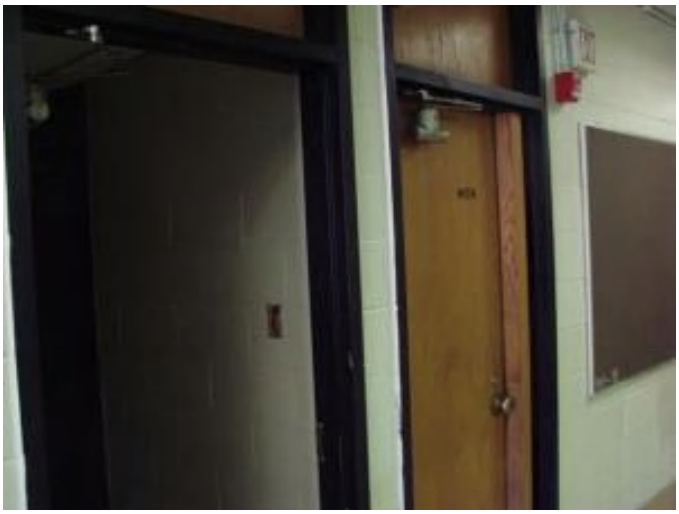
Notes: Provide new anti-graffiti coating first floor ext. walls (remove old coating)

System: B2030 - Exterior Doors

Location: Exterior
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Remove and replace exterior doors - per leaf
Qty: 18.00
Unit of Measure: Ea.
Estimate: $163,931.77
Assessor Name: Craig Anding
Date Created: 11/16/2015

Notes: Replace exterior doors

System: C1030 - Fittings



Location: Interior

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 115.00

Unit of Measure: Ea.

Estimate: $31,154.93

Assessor Name: Craig Anding

Date Created: 11/16/2015

Notes: Replace signage throughout the building

System: C3020413 - Vinyl Flooring

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace VCT

Qty: 29,800.00

Unit of Measure: S.F.

Estimate: $358,122.44

Assessor Name: Craig Anding

Date Created: 11/16/2015

Notes: Replace VCT tile (70% VCT floor area)

System: D2020 - Domestic Water Distribution

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace domestic water piping (75 KSF)

Qty: 53,200.00

Unit of Measure: S.F.

Estimate: $269,583.15

Assessor Name: Craig Anding

Date Created: 09/24/2015

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

System: D3040 - Distribution Systems

Location: Cafetorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 855.00

Unit of Measure: Pr.

Estimate: $399,749.58

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace the heating and ventilation units serving the Cafetorium by installing a constant volume air handling unit with distribution ductwork and registers.

System: D3040 - Distribution Systems

Location: Gymnasium

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $308,301.04

Assessor Name: Craig Anding

Date Created: 09/24/2015

Notes: Replace the heating and ventilation units serving Gymnasium by installing a fan coil air handling unit hung from the structure with outdoor air ducted to the unit from louvers in the existing wall openings to improve indoor air quality.

System: D3060 - Controls & Instrumentation

Location: Throughout building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 53,200.00

Unit of Measure: S.F.

Estimate: $1,141,248.74

Assessor Name: Craig Anding

Date Created: 09/24/2015

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

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D1010 Elevators and Lifts	Hydraulic, passenger elevator, 2500 lb, 5 floors, 100 FPM	1.00	Ea.	building interior					30	1973	2047	$142,170.00	$156,387.00
D3020 Heat Generating Systems	Boiler, oil fired, flame retention burner, cast iron, steam, gross output, 5520 MBH, includes standard controls and insulated flush jacket, packaged	2.00	Ea.	Boiler Room	Weil-McLain	1994			35	1973	2008	$118,960.50	$261,713.10
D3020 Heat Generating Systems	Boiler, oil fired, flame retention burner, cast iron, steam, gross output, 5520 MBH, includes standard controls and insulated flush jacket, packaged	2.00	Ea.	Boiler Room	Weil-McLain	1994			35	1973	2008	$118,960.50	$261,713.10
D3030 Cooling Generating Systems	Cooling tower, packaged unit, galvanized steel, blow through, centrifugal type, 200 ton, includes standard controls, excludes pumps and piping	1.00	Ea.	Roof	Marley	NC Series	NC5001GS		18	2007	2025	$34,884.30	$38,372.73
D3030 Cooling Generating Systems	Water chiller, screw liquid chiller, packaged unit, water cooled, 200 ton, includes standard controls, excludes water tower	1.00	Ea.	Chiller Room	Carrier	30HXC186R--640--	1702Q01477		20	2007	2027	$114,064.50	$125,470.95
												Total:	**$843,656.88**

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:	Little School House
Gross Area (SF):	18,308
Year Built:	1998
Last Renovation:	
Replacement Value:	$10,858,153
Repair Cost:	$1,536,958.74
Total FCI:	14.15 %
Total RSLI:	72.90 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B526002
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S526001		

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	83.00 %	0.00 %	$0.00
A20 - Basement Construction	83.00 %	0.00 %	$0.00
B10 - Superstructure	83.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	73.70 %	3.60 %	$30,701.27
B30 - Roofing	55.31 %	63.64 %	$490,514.44
C10 - Interior Construction	74.19 %	0.00 %	$0.00
C20 - Stairs	83.00 %	0.00 %	$0.00
C30 - Interior Finishes	67.22 %	10.74 %	$99,059.80
D20 - Plumbing	49.14 %	11.70 %	$87,098.19
D30 - HVAC	58.55 %	37.92 %	$772,223.20
D40 - Fire Protection	45.78 %	0.00 %	$0.00
D50 - Electrical	110.11 %	5.33 %	$57,361.84
E10 - Equipment	51.43 %	0.00 %	$0.00
E20 - Furnishings	57.50 %	0.00 %	$0.00
Totals:	**72.90 %**	**14.15 %**	**$1,536,958.74**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$24.32	S.F.	18,308	100	1998	2098		83.00 %	0.00 %	83			$445,251
A1030	Slab on Grade	$15.51	S.F.	18,308	100	1998	2098		83.00 %	0.00 %	83			$283,957
A2010	Basement Excavation	$13.07	S.F.	18,308	100	1998	2098		83.00 %	0.00 %	83			$239,286
A2020	Basement Walls	$23.02	S.F.	18,308	100	1998	2098		83.00 %	0.00 %	83			$421,450
B1010	Floor Construction	$92.20	S.F.	18,308	100	1998	2098		83.00 %	0.00 %	83			$1,687,998
B1020	Roof Construction	$24.11	S.F.	18,308	100	1998	2098		83.00 %	0.00 %	83			$441,406
B2010	Exterior Walls	$31.22	S.F.	18,308	100	1998	2098		83.00 %	0.00 %	83			$571,576
B2020	Exterior Windows	$13.63	S.F.	18,308	40	1998	2038		57.50 %	12.30 %	23		$30,701.27	$249,538
B2030	Exterior Doors	$1.67	S.F.	18,308	25	1998	2023		32.00 %	0.00 %	8			$30,574
B3010105	Built-Up	$37.76	S.F.		20				0.00 %	0.00 %				$0
B3010120	Single Ply Membrane	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.	4,000	30	1998	2028		43.33 %	0.00 %	13			$216,880
B3010140	Shingle & Tile	$38.73	S.F.	14,300	20	1998	2018	2027	60.00 %	88.57 %	12		$490,514.44	$553,839
B3020	Roof Openings	$0.68	S.F.		20				0.00 %	0.00 %				$0
C1010	Partitions	$14.93	S.F.	18,308	100	1998	2098		83.00 %	0.00 %	83			$273,338
C1020	Interior Doors	$3.76	S.F.	18,308	40	1998	2038		57.50 %	0.00 %	23			$68,838
C1030	Fittings	$4.12	S.F.	18,308	40	1998	2038		57.50 %	0.00 %	23			$75,429
C2010	Stair Construction	$1.28	S.F.	18,308	100	1998	2098		83.00 %	0.00 %	83			$23,434

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$13.21	S.F.	18,308	10	2005	2015	2027	120.00 %	0.00 %	12			$241,849
C3010231	Vinyl Wall Covering	$0.97	S.F.	18,308	15				0.00 %	0.00 %				$17,759
C3010232	Wall Tile	$2.63	S.F.	18,308	30				0.00 %	0.00 %				$48,150
C3020411	Carpet	$7.30	S.F.	4,000	10	1998	2008	2027	120.00 %	153.30 %	12		$44,763.05	$29,200
C3020412	Terrazzo & Tile	$75.52	S.F.	1,500	50	1998	2048		66.00 %	0.00 %	33			$113,280
C3020413	Vinyl Flooring	$9.68	S.F.	9,140	20	1998	2018	2037	110.00 %	0.00 %	22			$88,475
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.		50				0.00 %	0.00 %				$0
C3030	Ceiling Finishes	$20.97	S.F.	18,308	25	1998	2023		32.00 %	14.14 %	8		$54,296.75	$383,919
D2010	Plumbing Fixtures	$31.58	S.F.	18,308	35	1998	2033		51.43 %	0.00 %	18			$578,167
D2020	Domestic Water Distribution	$2.90	S.F.	18,308	25	1998	2023	2027	48.00 %	164.05 %	12		$87,098.19	$53,093
D2030	Sanitary Waste	$2.90	S.F.	18,308	25	1998	2023		32.00 %	0.00 %	8			$53,093
D2040	Rain Water Drainage	$3.29	S.F.	18,308	30	1998	2028		43.33 %	0.00 %	13			$60,233
D3020	Heat Generating Systems	$18.67	S.F.	18,308	35	1998	2033		51.43 %	0.00 %	18			$341,810
D3030	Cooling Generating Systems	$24.48	S.F.	18,308	20	1998	2018	2037	110.00 %	84.67 %	22		$379,478.83	$448,180
D3040	Distribution Systems	$42.99	S.F.	18,308	25	1998	2023		32.00 %	0.00 %	8			$787,061
D3050	Terminal & Package Units	$11.60	S.F.	18,308	20				0.00 %	0.00 %				$212,373
D3060	Controls & Instrumentation	$13.50	S.F.	18,308	20	1998	2018	2037	110.00 %	158.90 %	22		$392,744.37	$247,158
D4010	Sprinklers	$8.02	S.F.	18,308	35	1998	2033		51.43 %	0.00 %	18			$146,830
D4020	Standpipes	$0.99	S.F.	18,308	35				0.00 %	0.00 %				$18,125
D5010	Electrical Service/Distribution	$9.70	S.F.	18,308	30	1998	2028	2047	106.67 %	0.00 %	32			$177,588
D5020	Lighting and Branch Wiring	$34.68	S.F.	18,308	20	1998	2018	2037	110.00 %	0.00 %	22			$634,921
D5030	Communications and Security	$12.99	S.F.	18,308	15	1998	2013	2032	113.33 %	0.00 %	17			$237,821
D5090	Other Electrical Systems	$1.41	S.F.	18,308	30	1998	2028	2047	106.67 %	222.21 %	32		$57,361.84	$25,814
E1020	Institutional Equipment	$4.82	S.F.	18,308	35	1998	2033		51.43 %	0.00 %	18			$88,245
E1090	Other Equipment	$11.10	S.F.	18,308	35	1998	2033		51.43 %	0.00 %	18			$203,219
E2010	Fixed Furnishings	$2.13	S.F.	18,308	40	1998	2038		57.50 %	0.00 %	23			$38,996
								Total	**72.90 %**	**14.15 %**			**$1,536,958.74**	**$10,858,153**

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: Paint 100%

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

Note: VCT 62%
Carpet 27%
Tile 11%

System: C3030 - Ceiling Finishes — This system contains no images

Note: ACT 25%
Exposed 75%

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:	**$1,536,959**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,748,286**	**$0**	**$0**	**$3,285,245**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A10 - Foundations**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A20 - Basement Construction**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2020 - Exterior Windows	$30,701	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$30,701**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$42,604	$0	$0	**$42,604**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$490,514	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$490,514**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

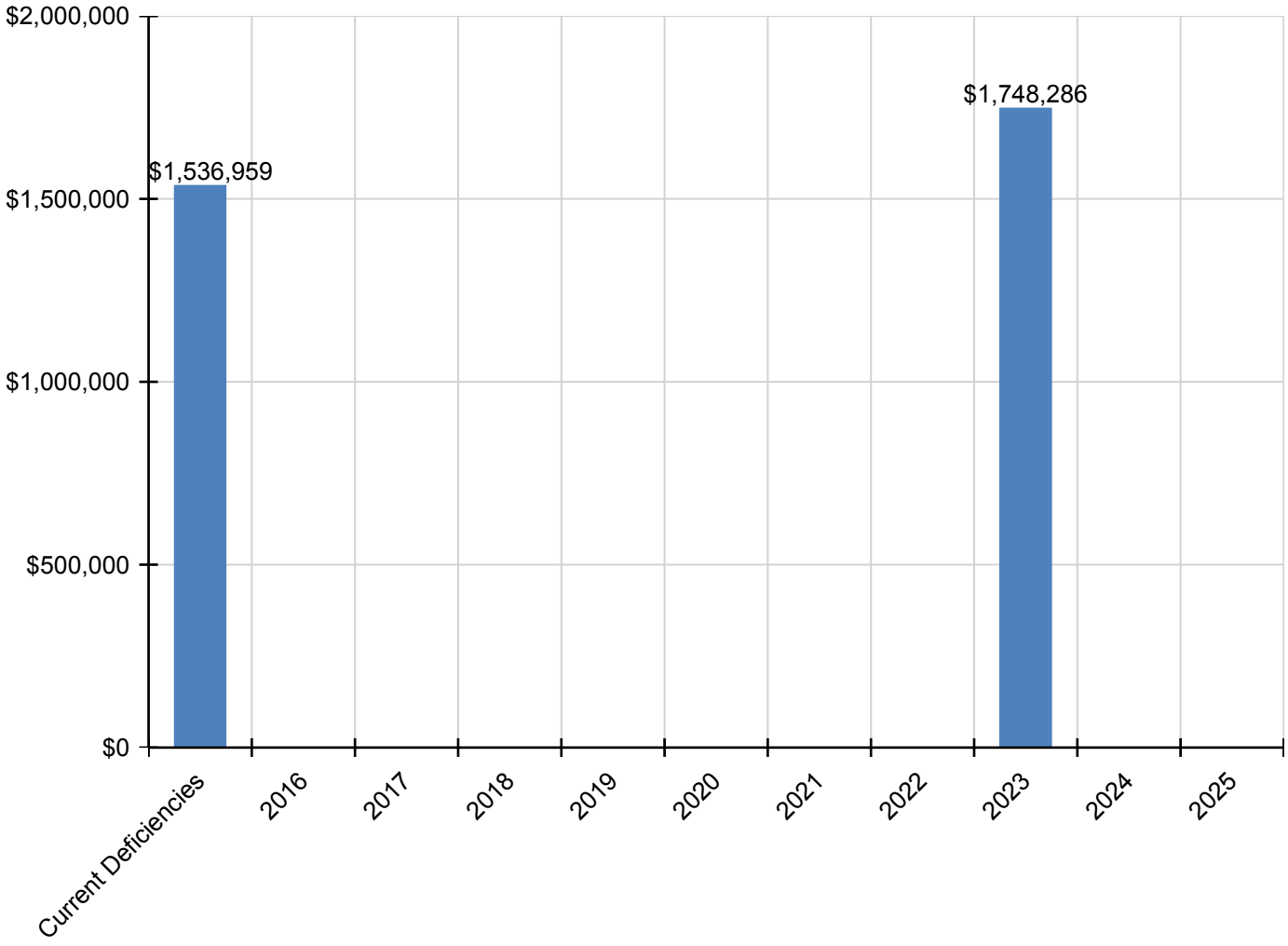
C1020 - Interior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$44,763	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$44,763**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$54,297	$0	$0	$0	$0	$0	$0	$0	$534,971	$0	$0	**$589,268**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2020 - Domestic Water Distribution	$87,098	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$87,098**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$0	$73,983	$0	$0	**$73,983**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$379,479	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$379,479**
D3040 - Distribution Systems	$0	$0	$0	$0	$0	$0	$0	$0	$1,096,728	$0	$0	**$1,096,728**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$392,744	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$392,744**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

D5020 - Lighting and Branch Wiring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5030 - Communications and Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5090 - Other Electrical Systems	$57,362	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$57,362**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

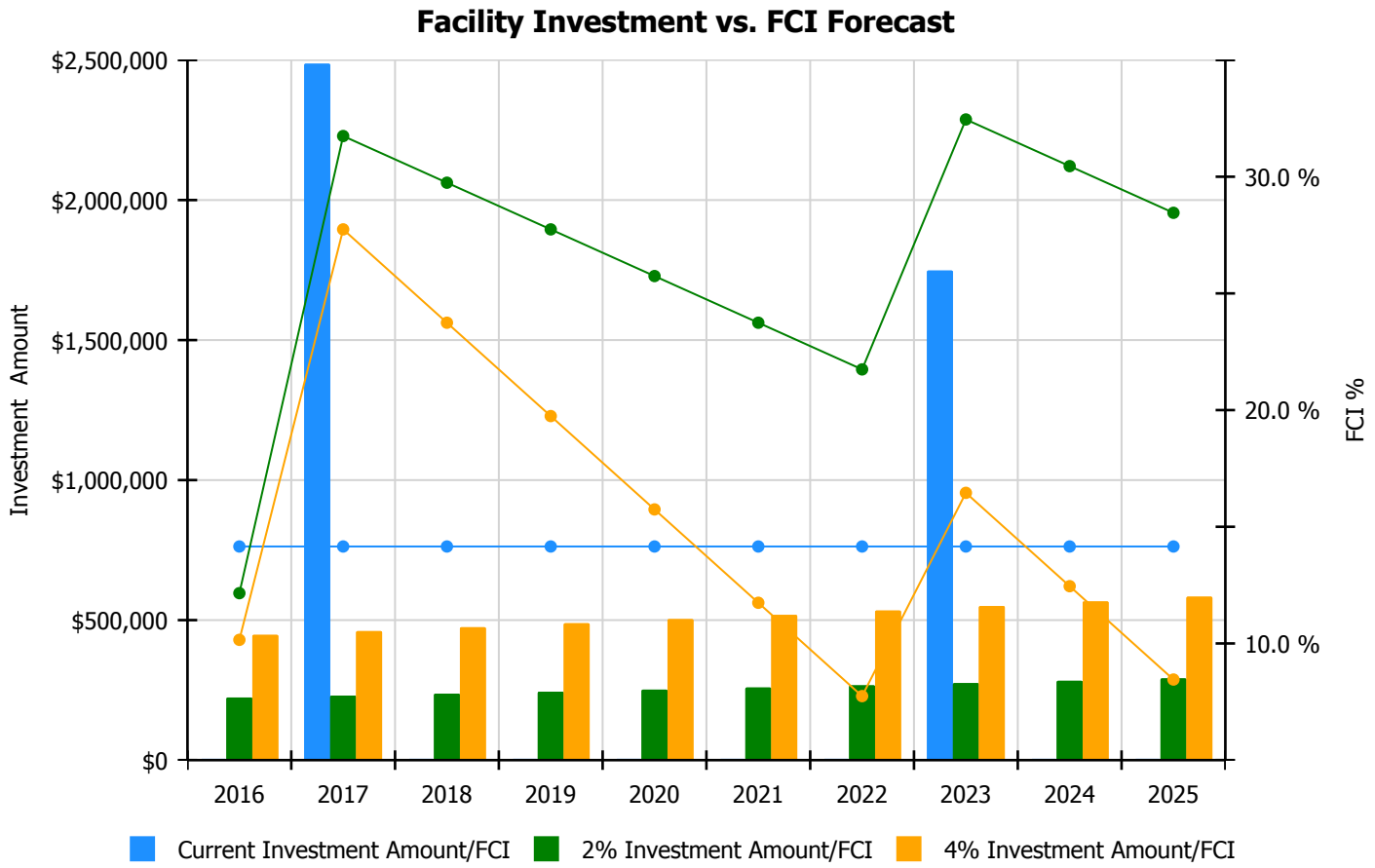
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

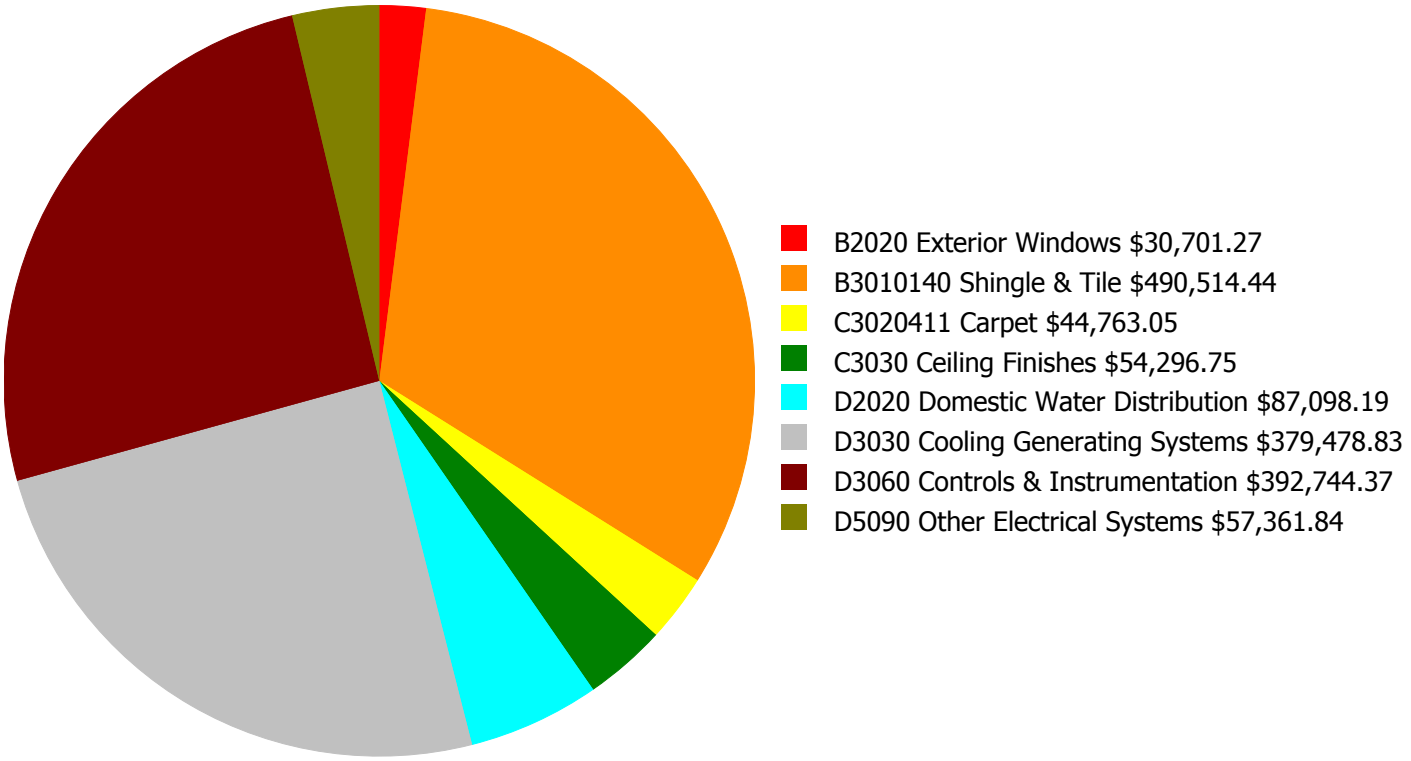
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 14.15%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$223,678.00	12.15 %	$447,356.00	10.15 %
2017	$2,486,864	$230,388.00	31.74 %	$460,777.00	27.74 %
2018	$0	$237,300.00	29.74 %	$474,600.00	23.74 %
2019	$0	$244,419.00	27.74 %	$488,838.00	19.74 %
2020	$0	$251,752.00	25.74 %	$503,503.00	15.74 %
2021	$0	$259,304.00	23.74 %	$518,608.00	11.74 %
2022	$0	$267,083.00	21.74 %	$534,166.00	7.74 %
2023	$1,748,286	$275,096.00	32.45 %	$550,191.00	16.45 %
2024	$0	$283,349.00	30.45 %	$566,697.00	12.45 %
2025	$0	$291,849.00	28.45 %	$583,698.00	8.45 %
Total:	**$4,235,150**	**$2,564,218.00**		**$5,128,434.00**	

Deficiency Summary by System

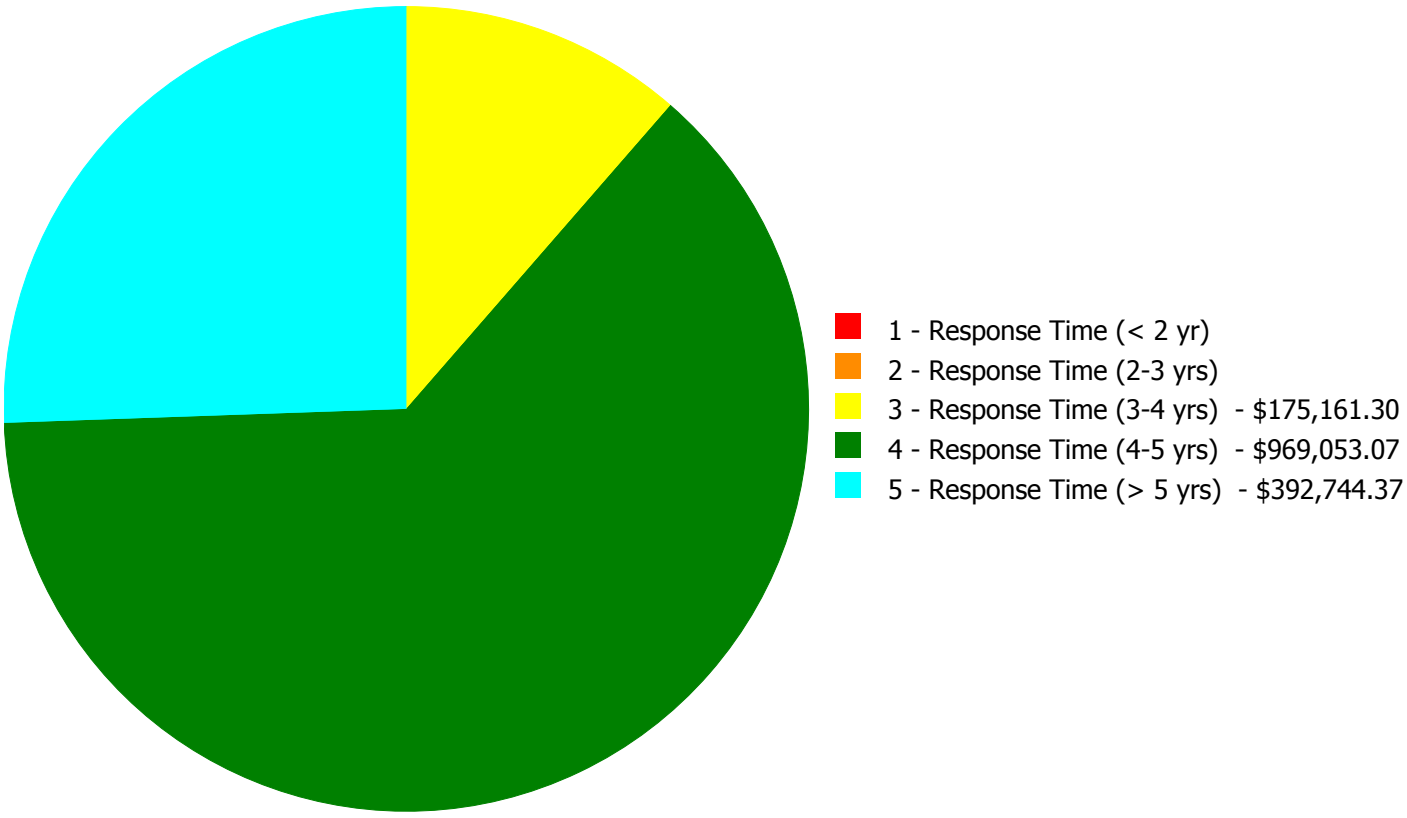
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $1,536,958.74

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: $1,536,958.74

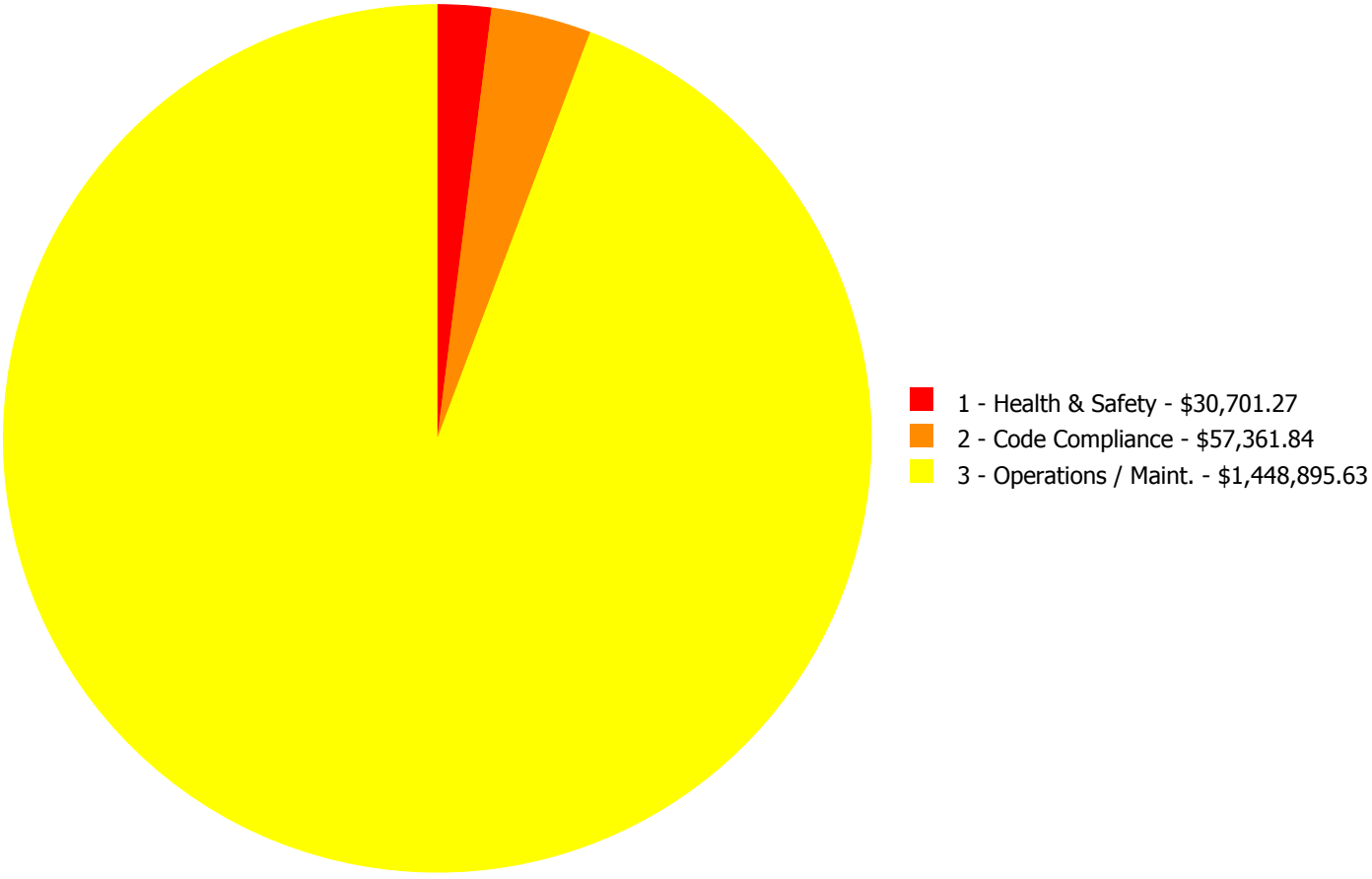
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2020	Exterior Windows	$0.00	$0.00	$30,701.27	$0.00	$0.00	$30,701.27
B3010140	Shingle & Tile	$0.00	$0.00	$0.00	$490,514.44	$0.00	$490,514.44
C3020411	Carpet	$0.00	$0.00	$0.00	$44,763.05	$0.00	$44,763.05
C3030	Ceiling Finishes	$0.00	$0.00	$0.00	$54,296.75	$0.00	$54,296.75
D2020	Domestic Water Distribution	$0.00	$0.00	$87,098.19	$0.00	$0.00	$87,098.19
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$379,478.83	$0.00	$379,478.83
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$0.00	$392,744.37	$392,744.37
D5090	Other Electrical Systems	$0.00	$0.00	$57,361.84	$0.00	$0.00	$57,361.84
	Total:	$0.00	$0.00	$175,161.30	$969,053.07	$392,744.37	$1,536,958.74

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: $1,536,958.74

Deficiency Details by Priority

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

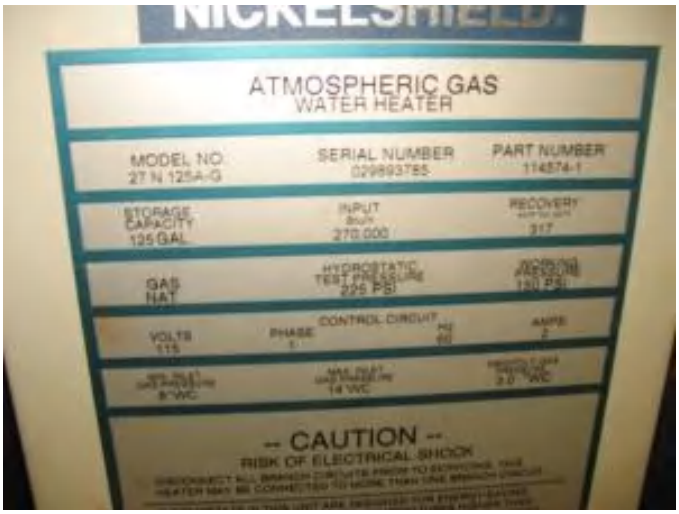
Priority 3 - Response Time (3-4 yrs):

System: B2020 - Exterior Windows

Location: Exterior
Distress: Security Issue
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace security screens
Qty: 200.00
Unit of Measure: S.F.
Estimate: $30,701.27
Assessor Name: Craig Anding
Date Created: 11/17/2015

Notes: Replace damaged security screens

System: D2020 - Domestic Water Distribution



Location: Mechanical room
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace instantaneous water heater
Qty: 2.00
Unit of Measure: Ea.
Estimate: $87,098.19
Assessor Name: Craig Anding
Date Created: 09/16/2015

Notes: Replace the two 125 gallon vertical gas fired domestic hot water heaters.

System: D5090 - Other Electrical Systems

Location: electrical room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Add Standby Generator System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $57,361.84

Assessor Name: Craig Anding

Date Created: 09/28/2015

Notes: Install a new 30KVA emergency generator. Note: the picture shows the location of the future EG inside the electrical room near the main distribution.

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

System: B3010140 - Shingle & Tile

Location: Exterior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace asphalt shingle roof - partial area

Qty: 14,300.00

Unit of Measure: S.F.

Estimate: $490,514.44

Assessor Name: Craig Anding

Date Created: 11/17/2015

Notes: Replace shingle roof system

System: C3020411 - Carpet

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace carpet

Qty: 4,000.00

Unit of Measure: S.F.

Estimate: $44,763.05

Assessor Name: Craig Anding

Date Created: 11/17/2015

Notes: Replace existing carpet

System: C3030 - Ceiling Finishes

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 3,600.00

Unit of Measure: S.F.

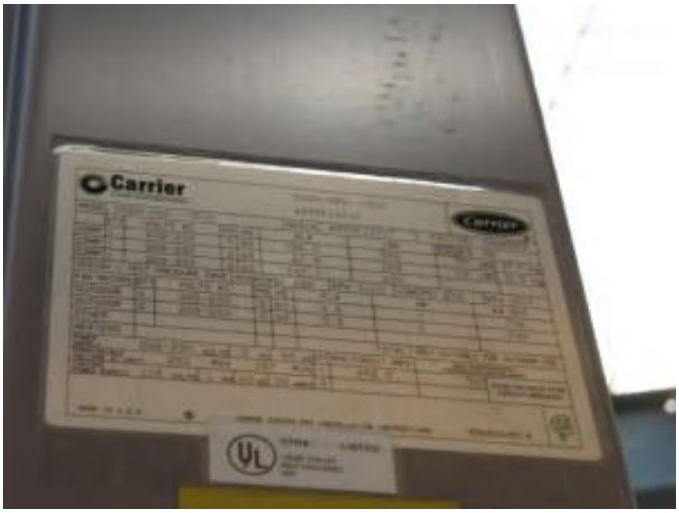
Estimate: $54,296.75

Assessor Name: Craig Anding

Date Created: 11/17/2015

Notes: Replace all suspended acoustical ceilings

System: D3030 - Cooling Generating Systems



Location: Mechanical yard

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace chiller, air-cooled (130 tons)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $379,478.83

Assessor Name: Craig Anding

Date Created: 09/16/2015

Notes: Replaced the one 80 ton Carrier model 30GN reciprocating air-cooled chiller located in the yard outside of the mechanical room, which is beyond its service life, within the next 1-3 years.

Priority 5 - Response Time (> 5 yrs):

System: D3060 - Controls & Instrumentation

Location: Throughout building

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 18,308.00

Unit of Measure: S.F.

Estimate: $392,744.37

Assessor Name: Craig Anding

Date Created: 09/16/2015

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

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 1360 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Mechanical Room	HB Smith	Series 19-10	F97-496		35	1998	2033	$33,286.60	$73,230.52
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 1360 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Mechanical Room	HB Smith	Series 19-10	F97-497		35	1998	2033	$33,286.60	$73,230.52
D3030 Cooling Generating Systems	Water chiller, liquid chiller, packaged unit with integral air cooled condenser, 80 ton cooling, includes standard controls	1.00	Ea.	Mechanical Yard	Carrier	30GN-080-510	4997F11717		20	1998	2018	$73,656.00	$81,021.60
												Total:	**$227,482.64**

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):	74,400
Year Built:	1998
Last Renovation:	
Replacement Value:	$1,215,708
Repair Cost:	$197,045.05
Total FCI:	16.21 %
Total RSLI:	86.24 %

Description:

Attributes:

General Attributes:

Bldg ID:	S526001	Site ID:	S526001

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	78.83 %	22.09 %	$197,045.05
G40 - Site Electrical Utilities	106.67 %	0.00 %	$0.00
Totals:	**86.24 %**	**16.21 %**	**$197,045.05**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$7.65	S.F.		30				0.00 %	0.00 %				$0
G2030	Pedestrian Paving	$11.52	S.F.	45,800	40	1973	2013	2057	105.00 %	37.35 %	42		$197,045.05	$527,616
G2040	Site Development	$4.36	S.F.	74,400	25	1998	2023		32.00 %	0.00 %	8			$324,384
G2050	Landscaping & Irrigation	$3.78	S.F.	10,600	15	1998	2013	2032	113.33 %	0.00 %	17			$40,068
G4020	Site Lighting	$3.58	S.F.	74,400	30	1998	2028	2047	106.67 %	0.00 %	32			$266,352
G4030	Site Communications & Security	$0.77	S.F.	74,400	30	1998	2028	2047	106.67 %	0.00 %	32			$57,288
								Total	**86.24 %**	**16.21 %**			**$197,045.05**	**$1,215,708**

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.

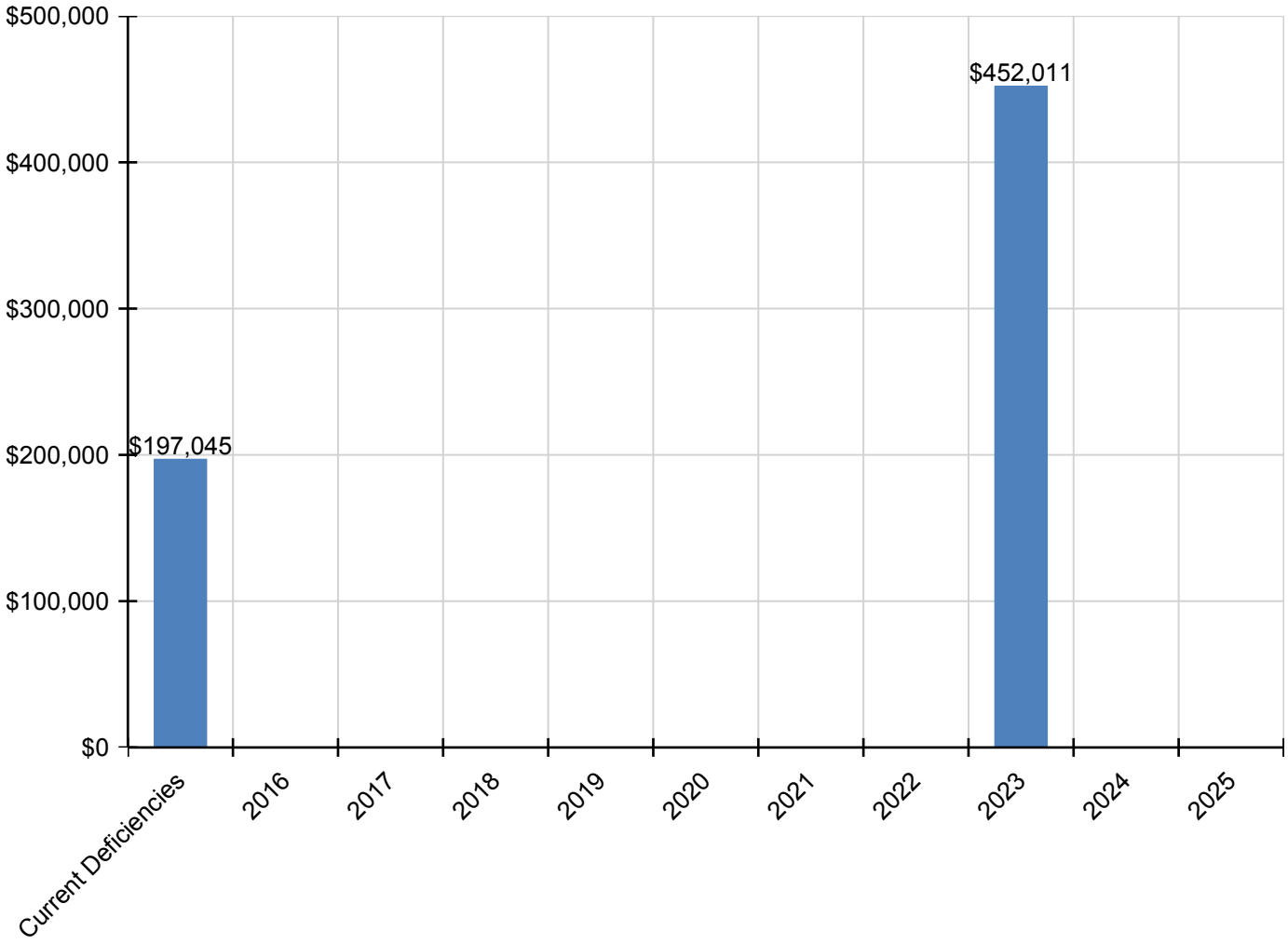
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$197,045**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$452,011**	**$0**	**$0**	**$649,056**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2030 - Pedestrian Paving	$197,045	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$197,045**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$452,011	$0	$0	**$452,011**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

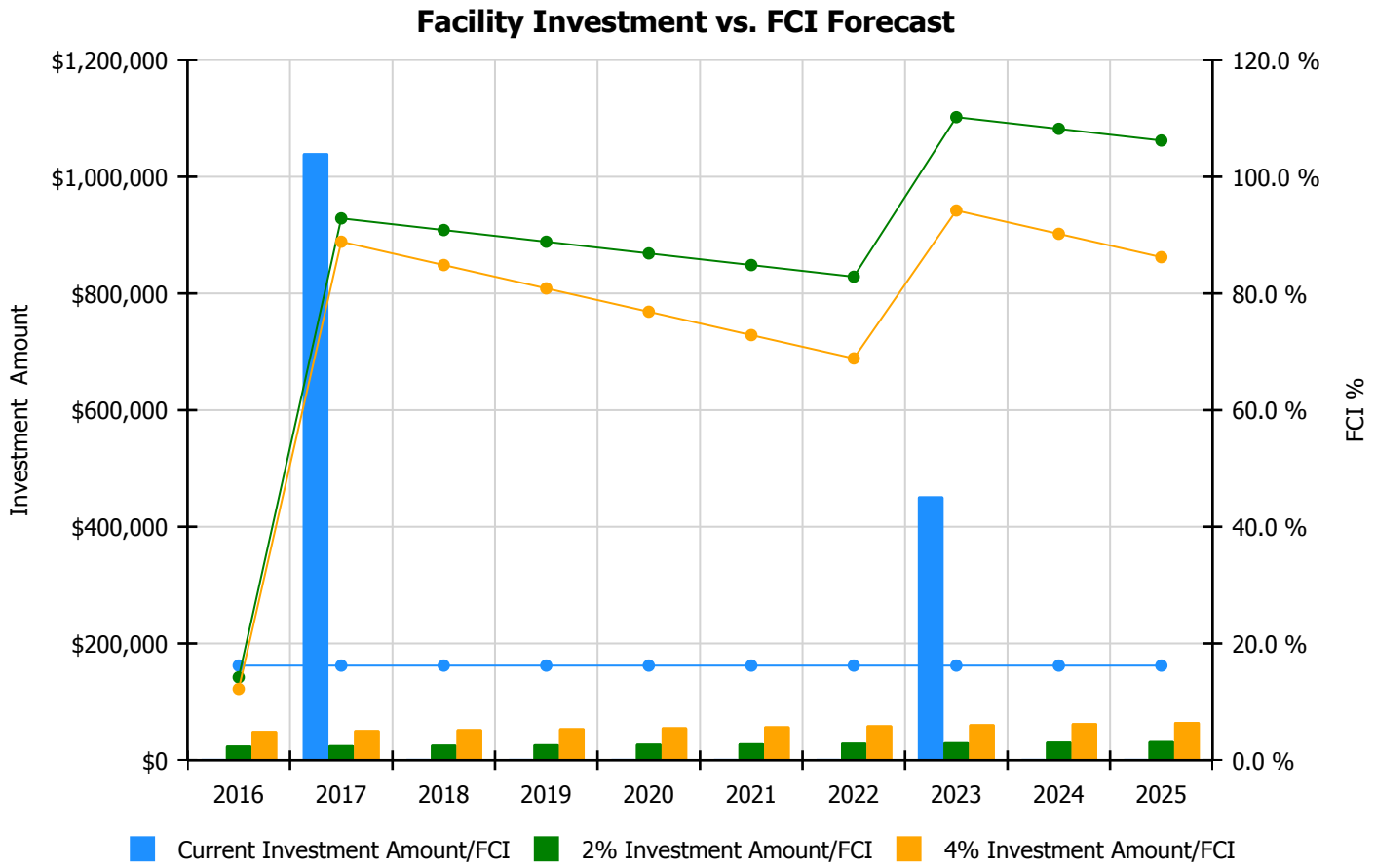
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

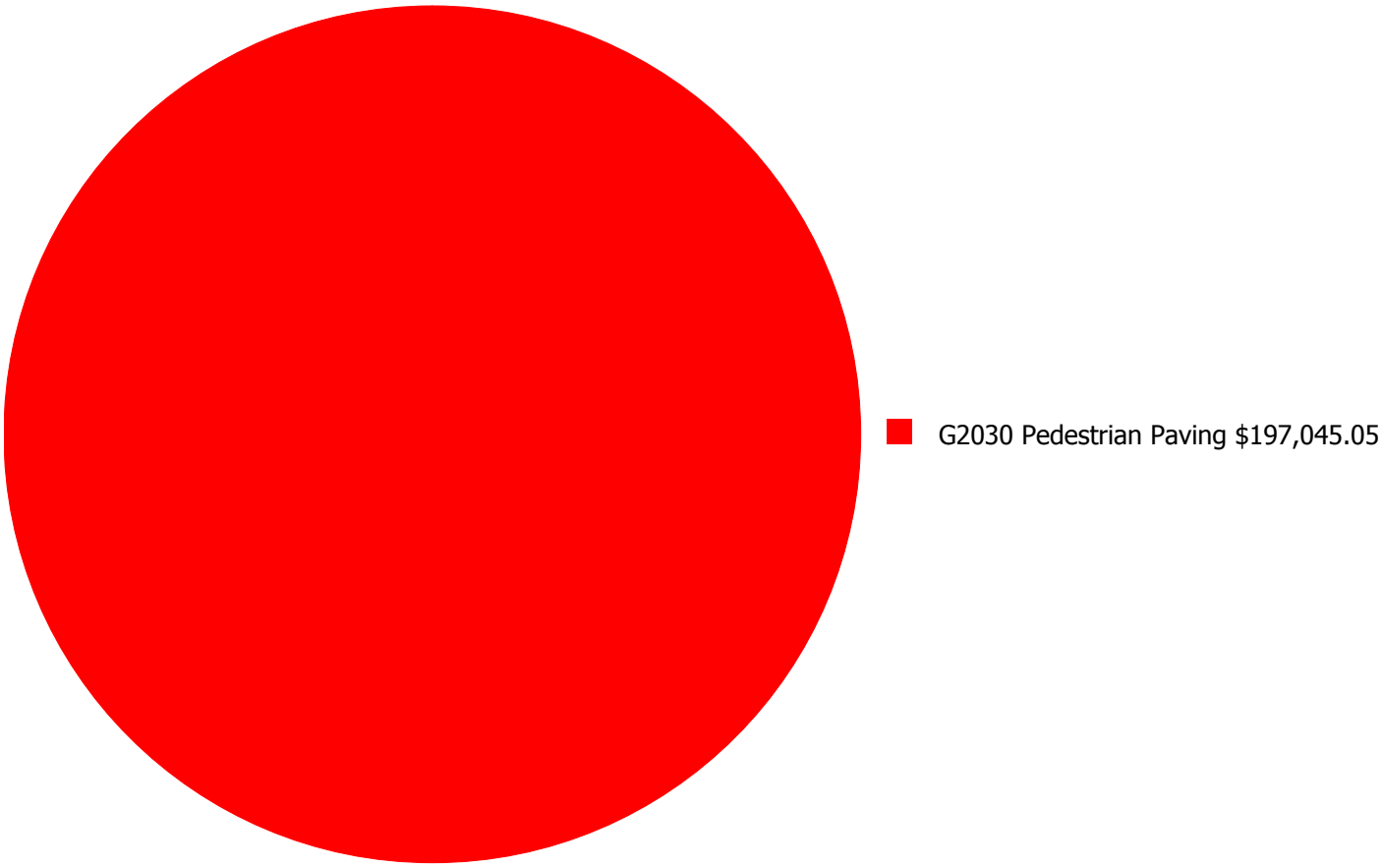
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 16.21%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$25,044.00	14.21 %	$50,087.00	12.21 %
2017	$1,040,167	$25,795.00	92.86 %	$51,590.00	88.86 %
2018	$0	$26,569.00	90.86 %	$53,137.00	84.86 %
2019	$0	$27,366.00	88.86 %	$54,732.00	80.86 %
2020	$0	$28,187.00	86.86 %	$56,374.00	76.86 %
2021	$0	$29,032.00	84.86 %	$58,065.00	72.86 %
2022	$0	$29,903.00	82.86 %	$59,807.00	68.86 %
2023	$452,011	$30,800.00	110.21 %	$61,601.00	94.21 %
2024	$0	$31,724.00	108.21 %	$63,449.00	90.21 %
2025	$0	$32,676.00	106.21 %	$65,352.00	86.21 %
Total:	**$1,492,178**	**$287,096.00**		**$574,194.00**	

Deficiency Summary by System

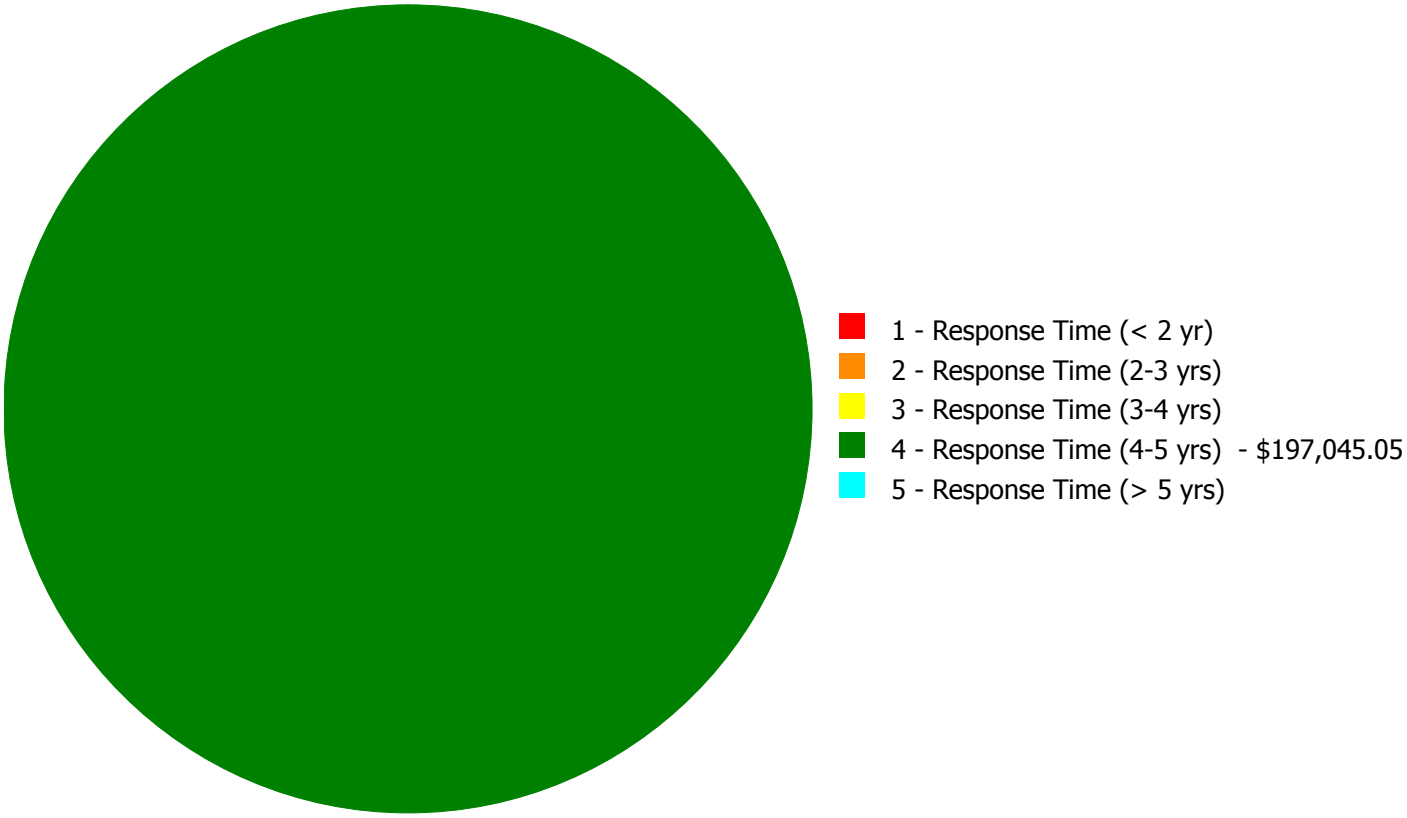
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $197,045.05

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: $197,045.05

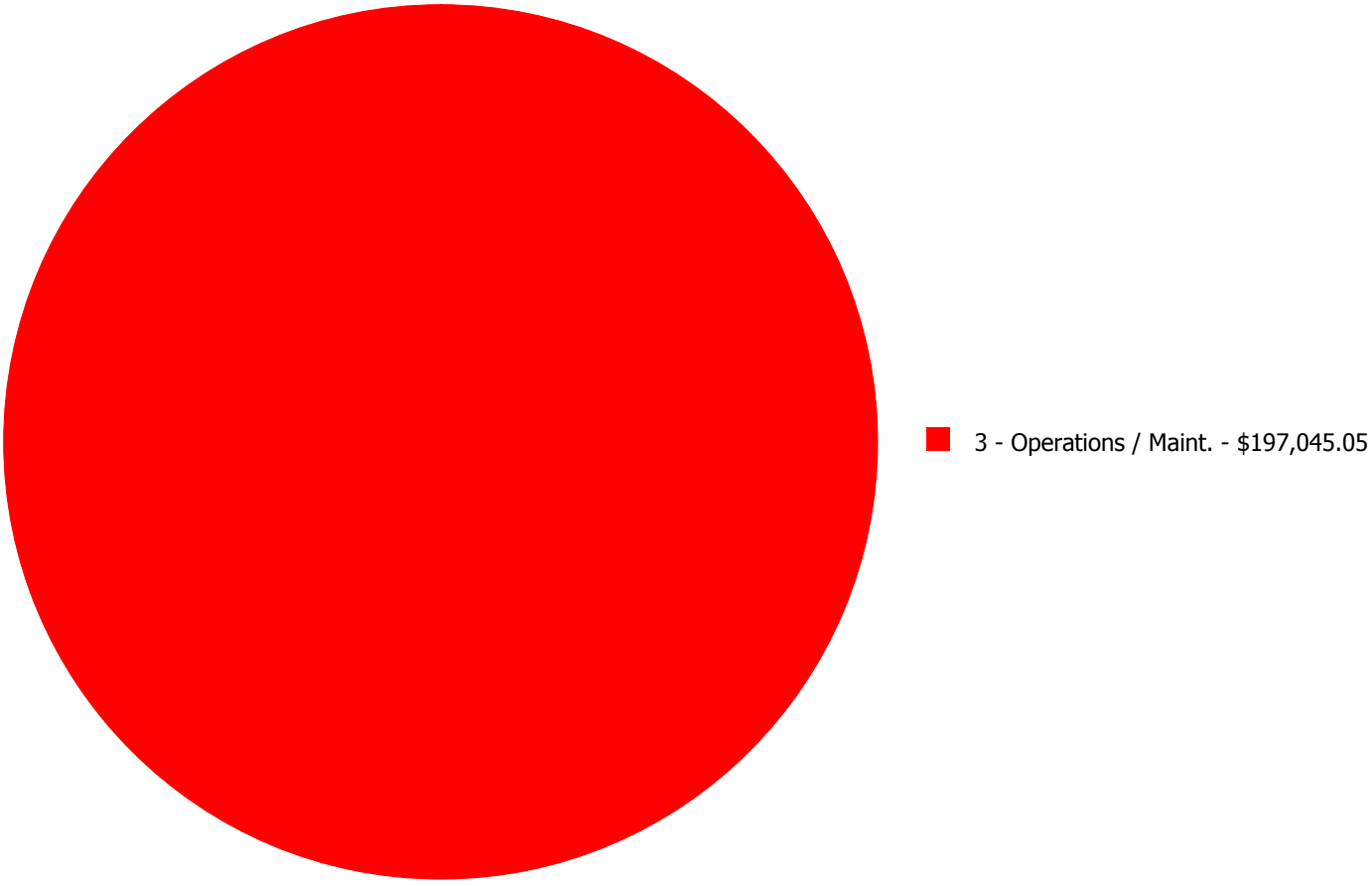
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2030	Pedestrian Paving	$0.00	$0.00	$0.00	$197,045.05	$0.00	$197,045.05
	Total:	$0.00	$0.00	$0.00	$197,045.05	$0.00	$197,045.05

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: $197,045.05

Deficiency Details by Priority

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

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

System: G2030 - Pedestrian Paving

Location:	Grounds/ site
Distress:	Beyond Service Life
Category:	3 - Operations / Maint.
Priority:	4 - Response Time (4-5 yrs)
Correction:	Remove and replace concrete sidewalk or concrete paving - 4" concrete thickness
Qty:	13,700.00
Unit of Measure:	S.F.
Estimate:	$197,045.05
Assessor Name:	Tom Moe
Date Created:	11/17/2015

Notes: Resurface playground paving and courtyards paving

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