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.

Carnell School

Governance	DISTRICT	Report Type	Elementary
Address	1100 Devereaux Ave.	Enrollment	979
	Philadelphia, Pa 19111	Grade Range	'00-05'
Phone/Fax	215-537-2527 / 215-537-6305	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Carnell	Turnaround Model	School Redesign Initiative

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	**41.96%**	**$23,120,913**	**$55,103,980**
Building	58.78 %	$22,067,850	$37,545,427
Grounds	15.37 %	$386,982	$2,518,520

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	88.88 %	$877,544	$987,327
Exterior Walls (Shows condition of the structural condition of the exterior facade)	02.19 %	$60,622	$2,764,005
Windows (Shows functionality of exterior windows)	132.83 %	$1,791,476	$1,348,679
Exterior Doors (Shows condition of exterior doors)	38.61 %	$41,924	$108,583
Interior Doors (Classroom doors)	436.66 %	$1,147,753	$262,846
Interior Walls (Paint and Finishes)	24.02 %	$302,350	$1,258,817
Plumbing Fixtures	52.14 %	$527,933	$1,012,445
Boilers	93.83 %	$1,311,841	$1,398,103
Chillers/Cooling Towers	65.70 %	$1,204,455	$1,833,185
Radiators/Unit Ventilators/HVAC	192.08 %	$6,183,555	$3,219,306
Heating/Cooling Controls	170.09 %	$1,719,495	$1,010,948
Electrical Service and Distribution	122.29 %	$888,300	$726,385
Lighting	67.52 %	$1,753,548	$2,597,012
Communications and Security (Cameras, Pa System and Fire Alarm)	20.94 %	$203,735	$972,756

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.

Carnell LSH School

Governance	DISTRICT	Report Type	Elementary
Address	1100 Devereaux Ave.	Enrollment	
	Philadelphia, Pa 19111	Grade Range	'00-05'
Phone/Fax	215-537-2527 / 215-537-6305	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Carnell	Turnaround Model	School Redesign Initiative

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	**41.96%**	**$23,120,913**	**$55,103,980**
Building	04.43 %	$666,081	$15,040,033
Grounds	15.37 %	$386,982	$2,518,520

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.53 %	$11,620	$2,202,459
Exterior Walls (Shows condition of the structural condition of the exterior facade)	02.27 %	$16,707	$734,388
Windows (Shows functionality of exterior windows)	01.34 %	$4,298	$320,618
Exterior Doors (Shows condition of exterior doors)	46.37 %	$18,215	$39,283
Interior Doors (Classroom doors)	31.41 %	$27,778	$88,446
Interior Walls (Paint and Finishes)	20.45 %	$80,878	$395,422
Plumbing Fixtures	00.00 %	$0	$742,856
Boilers	00.00 %	$0	$439,174
Chillers/Cooling Towers	08.54 %	$49,157	$575,843
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$1,011,254
Heating/Cooling Controls	81.06 %	$257,425	$317,561
Electrical Service and Distribution	00.00 %	$0	$228,173
Lighting	03.87 %	$31,553	$815,778
Communications and Security (Cameras, Pa System and Fire Alarm)	05.68 %	$17,341	$305,564

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

S722001;Carnell

Final

Site Assessment Report

January 31, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	74,885
Year Built:	1931
Last Renovation:	
Replacement Value:	$55,103,980
Repair Cost:	$23,120,913.11
Total FCI:	41.96 %
Total RSLI:	63.55 %

Description:

Facility Condition Assessment
July 2015

School District of Philadelphia
Carnell Elementary School
1100 Devereaux Avenue
Philadelphia, PA 19111

74,885sf / 1100 students / LN 07

Carnell Little School House
6101 Summerdale Avenue
Philadelphia, PA 19111

23,523sf / 239 students / LN 07

General

Laura H. Carnell School is located at 1100 Devereaux Avenue. The main entrance faces Devereaux Ave. The main building ("Element 1") was constructed in 1931, has 74,885 square feet, and is 3 stories tall. There is a full basement. An addition, called "Element 2" was constructed before 1950. The additional building on the site is a one-story Little School House, constructed in 1997. The L. H. Carnell School can be found on the National Historical Register, number 88002251 with the address of 6101 Summerdale Avenue. Lamar Howard, the Building Engineer, accompanied the FCA team during the inspection. The team met with Principal Hildebrand Pelzer at the time of the assessment visit. He indicated that critical items in need of improvement were the boiler system including heating controls which create hot and cold rooms when the heating system is running, inadequate lighting in the building, toilet rooms throughout the building which constantly break down with many toilet rooms partially or completely non-operational; also, WIFI is needed.

Architectural/Structural

Foundations for the main building appear to be constructed of concrete, stone, and brick. Joints are in good condition with no major settlement cracks observed. Extensive peeling paint was observed on basement walls and ceilings, mainly due to high room moisture related to excessive steam released by the boilers and a lack of general maintenance of the space. Footings were not seen and their construction type or condition could not be ascertained. There is evidence of rusting on the steel lintels above most basement windows with some localized joint cracking extending beyond the lintels which can be seen from inside the basement and outside the building. This is the probable cause of the standing water in the basement. Foundations and footings for the Little School House (LSH) were not seen. The brick exterior veneer and the interior block both disappear below grade without showing any foundation material.

Floor slabs in the main building are in good condition although covered with dirt and in need of stripping, cleaning and repainting. Upper floor slabs are also constructed of cast-in-place concrete with cast-in-place concrete beams. Cracking and spalling of the concrete structure was not observed anywhere. Floor slabs in the LSH show some evidence of slab movement/settlement along column control joints where there is some telegraphing of joints through the vinyl composition tile. This does not appear to be a result of structural slab failure or unusual movement or settlement.

Roof construction over the main building is reinforced concrete beams and deck, bearing on masonry walls. The superstructure is constructed of reinforced concrete columns, beams, and floor slabs. The main building roof deck is flat with minimum overall slope; areas around roof drains are depressed for drainage. Roof access is via a door out of a masonry penthouse; a steep, narrow, dark stairway with very low headroom up from a 3rd floor stairway landing provides access to the roof penthouse. The roof over the auditorium is constructed of heavy timber trusses with wood decking. All appeared to be in good condition as observed in the attic space. The roof of the LSH is constructed of sloping steel bar joists, forming a large gable roof with its high point over the double loaded center corridor floor plan. There are perpendicular elements forming the building entrance / office area and multi-purpose room elements which create a "t" or "cross" design. This arrangement creates sloping valleys at the "t" intersections which allows for positive drainage all around the roof. Clerestories and roofs over Multi-purpose room (MPR) windows are standing seam metal roofing system. Roof over the MPR need to be repainted. Clerestory roofs have some chipping in ridges.

Exterior walls of the main building are generally in good condition, however there are lintels above most basement windows, some upper windows, and some doors that are rusted with brick joint cracks extending from the lintels into the brick joints in the walls. Joint work along the first floor limestone coping band is losing grout and is a potential source of water infiltration. Many brick roof-structure walls and parapets have been repointed or caulked (not a good solution) and continue to show signs of cracking and joint failure. A more detailed inspection of masonry is required to repair all failing joints and ensure a watertight envelope. The front and sides of the original main building should be powerwashed. Exterior walls of the LSH are generally in good condition constructed of a cavity wall design with a brick veneer exterior and a concrete masonry unit (block) interior. Brick joints are in good condition. Lintels over windows are in good condition. Brick walls have cavity wall venting formed by a mortarless joint approximately 3 brick courses up from grade and over steel window lintels; joints appear to be clear of debris. There is some dirt, effluorescence, and mold staining on brickwork that should be cleaned. Some brick forming the triangular windows in the MPR has been broken – repair with the same brick. One of the "O's" of the Little School House building logo is missing.

Exterior windows in the main building were replaced in the 1990's with bronze anodized aluminum frame operable single hung units with single thickness clear plexiglass acrylic vision panel glazing. Windows are in poor condition with oxidized frames and severely scratched single-pane plexiglass vision panels. Operable units are difficult to operate up and down or do not stay open due to broken internal counterbalance weights, accidentally slamming closed in some cases – a potential safety hazard. Single pane plexiglas units do not meet today's energy code requirements and are large sources of heat loss. Exterior windows in the LSH are insulated glass in a painted aluminum tube framing system. The sidelight glass at the main entrance is broken. Doors have a single layer of plexiglas as glazing. Exterior windows are protected by security screen that cover all windows on all sides of the building. The screens facing the play area are dented and there is graffiti on many of the screens. Most of the graffiti has been painted over with paint that doesn't completely cover the graffiti and doesn't match the existing screen color.

Exterior doors in the main building are painted steel framed flush hollow metal units with steel frames. Some doors have small glazing vision panels. Doors are in generally poor condition, have broken or non-functioning panic hardware, rusted dented panels and frames, and are not ADA compliant. There are no handicap entrances, no accessible ramps and no elevators. All exterior steel doors and hardware systems need to be replaced. Exterior entrance doors in the LSH are painted aluminum tube frame system door units with plexiglass glazing and glass side lights. Plexiglass is scratched and needs replacing. Rear and side doors are painted hollow metal with small, glazed, vision panels or large plexiglass; front doors and accessible entrance have full glass sidelights with plexiglass in painted aluminum frame doors. All doors are in generally poor condition, with scratched and dented panels and frames. There is a labeled ADA accessible entrance on the side of the building, which needs cleaning, repainting and repairs to the aluminum frame.

Roof coverings on the main building flat roof consist of a ceramic granule impregnated, fully adhered rolled asphalt sheet system with asphalt flashing up onto rooftop ventilation ductwork, vents, and masonry parapets. The roof membrane is in poor condition with dried cracked asphalt seen along membrane joints. The membrane, flashing, and counterflashing embedded in brickwork covering the top of the flashing is weathered and is probably past its normal service life of 20 years. Roof openings include toilet room vents, ventilation ductwork, and roof drains. Flashing of the penetrations appears to be in poor condition and past its normal service life, although no leaks were reported. Limestone coping joints have been recaulked and are now cracking. Many joint cracks in the penthouse and chimney structures have been repointed or caulked (incorrect method of repair) and may be the source of water infiltration. There have been a few leaks onto exterior walls below but after recent repairs, there are none reported by engineering. Masonry flashing on rooftop structures and parapets have been repaired with excessive amounts of caulking now weathered, cracking, and the potential sources of future leaks. The auditorium is covered with lightweight "residential-type, 3-tab" asphalt roofing shingles sloping to pitched metal troughs on the two low sides of the roof. Leaks have been repaired, but this roof system is thin and appears to be at the end of its normal service life. Troughs have been recently recaulked as they have been previous sources of leaks. Roofing on the LSH is lightweight "residential-type, 3-tab" asphalt roofing shingles sloping to aluminum gutters on the two low sides of the roof all around the building. Two colors of shingles form diagonal patterns on the roof deck, viewed from above. Gutters are set back one to two feet from the low-edge of the roof and are hidden from view, built into the roof deck, draining to internal vertical leaders. There is a blue-painted aluminum coping forming the edge of the roof along the low points and the rakes. Roof openings include 8 small vent pipes and 3 large clerestory units. Flashing of the penetrations appears to be in good condition when viewed from above, although one of the clerestories has evidence of leaking into the corridor ceiling. The roof shingles are thin and near the end of their 20 year normal service life for this type of roofing shingle.

Partitions in the main building basement are brick or concrete masonry units. The upper 2 floors of the main building ("Element 1") have wood and plaster on wood lath partitions. There are wood framed clerestory glass panels located in walls between classroom storage areas and the corridors. These panels are in generally good condition being above the reach of anyone, but the glass is not wired or fire rated. Between some classrooms in the original building are manually operated full height wood folding partitions. Walls between classrooms and corridors of "Element 2" are concrete masonry units (concrete block) and are generally crack free. Partitions in ther LSH are constructed of concrete masonry units throughout the building. This highly durable material has very few damages. The upper sections of two walls of each classroom have acoustical block, which has vertical slits on the room-side face and rigid insulation inside the cores of each block, reducing noise levels inside and out of classrooms. There is isolated usage of gypsum board and metal stud systems mostly as soffits, ceiling elements in the Multi-purpose room (MPR), and framing inside the clerestory units. There is significant water damage to one of the clerestory gypsum board soffits which might have been due to a roof leak; this needs further investigation. A leak above one of the MPR windows has caused mold and mildew to grow in the area; this should be sterilized and refinished.

Interior doors in the main building are either the original wood and plate glass (not fire rated or wired) raised panel doors with original hardware or replacement wood doors with narrow wired glass vision panels and replacement hardware at least 20 years of age. Most wood doors regardless of age or type are damaged, have broken glass and broken hardware. Some interior basement doors and most interior stairway doors are hollow metal in hollow metal frames; many are rusted where coming in contact with floors. Doors are generally in poor condition throughout the building, are not ADA compliant, do not have ADA or proper locking hardware, and are not fire rated. Stairway doors do not positively latch as required of fire rated doors. Classroom doors do not have security locking feature from inside classrooms. All doors and hardware need to be replaced. Interior doors in the LSH are solid core oak veneer wood doors with narrow vision panels. They are in need of refinishing. Mechanical room doors are hollow metal in hollow metal frames; there is some rust where frames come in contact with floors. Doors are generally in poor condition throughout the building, are not ADA compliant, do not have ADA or proper locking hardware, and are not fire rated. Stairway doors do not positively latch as required of fire rated doors. Classroom doors do not have security locking feature from inside classrooms. All doors and hardware need to be replaced. All doors have hollow metal door frames that have evidence of damage exposing bare metal and rust. Frames need to be derusted, sanded and repainted.

Interior fittings/hardware in the main building include black slate chalkboards with oak chalk trays or bulletin boards integral to the original dark oak folding wall partitions built into the folding panels. In some classrooms, the panels are not supported adequately at tops and bottoms and could fall off the track. These units are no longer opened as they are heavy and most hinges and bearings are not operable. Wall panels need to be replaced with sturdier, safer, fixed partitions. Toilet room partitions are either the original floor

mounted marble toilet partitions or solid plastic replacement partitions. Many do not have doors. The usual sets of toilet room accessories (toilet paper dispensers, soap, paper towel or dryers, grab bars, door latches) are missing; bathrooms are not clean and have years of built up dirt. New toilet partitions and accessories are required throughout the main building toilet rooms. Interior fittings in the LSH include plastic laminate built-in cabinetry in classrooms with stainless steel sinks and storage cabinetry. Classrooms also have plastic laminate cubbie storage units; all in fair to good condition. Toilet rooms have the appropriate toilet room accessories. Toilet rooms are ADA compliant.

Stair construction in the original building consists of concrete treads, risers, and stringers with wood handrails (29" high), guards (36" high), and steel balusters with 3" spacing. Since handrail and guard heights are not in compliance with today's codes, new handrail and guard systems are required. Element 2 has similar concrete treads, risers, and stringers, but has steel pipe handrails and guards, with 2 intermediate balusters, not complying with today's stairway requirement for schools. New handrails and guards are required for Element 2 stairways. There are no stairs in the LSH.

Wall finishes in the old building are plaster which is cracked with surface crazing in a number of classroom and corridor locations. There is usually damage in classrooms at doorways and corners. Moveable partitions between some classrooms are dark stained oak. Blackboards are embedded into wood panels but are no longer used. Wood panels are covered with staples and small gouges. Interior partitions in "Element 2" consist of glazed block wainscot in corridors with painted block above and painted block in classrooms, all in need of repainting. Corridors in the original building have 48" high marble panel wainscots and corridors in Element 2 are finished in glazed block; both are generally in good condition with isolated cracks or damages requiring repair. Toilet rooms painted plaster walls and marble wainscots. The auditorium has a paneled wood wainscot that is in need of repair and refinishing. The queuing area outside the auditorium has marble columns and plaster walls with decorative plaster capitals on square columns. These historical elements can be revitalized with some repair and new paint. Wall finishes in the LSH consist of paint on concrete block in classrooms, offices, multi-purpose room, and corridors. Some touch up is required where tape has removed the paint and at corners, but in general, wall condition is good. Main toilet rooms and classroom toilet rooms also have painted block walls.

Floor finishes in the main building consist of mostly dark stained oak floors in classrooms, the gym/cafeteria, and the auditorium. Most are in good enough condition to be stripped, sanded, and refinished. There are some rooms (main office and faculty lounge) with 12"x12" vinyl composition tile (VCT) over the wood. Classrooms and corridors in the newer "Element 2" section have 9"x9" tile floors that appears to be vinyl asbestos tiles (VAT). All wood floors need to be stripped and refinished to remove years of wax and dirt buildup; 12"x12" VCT floors need to be removed and replaced. Nine by nine inch tile floors may have asbestos and need to addressed as possible asbestos containing materials. They should be removed using proper asbestos abatement procedures if they are found to contain asbestos. Stairs walking surfaces are finished in exposed concrete that has years of dirt ground into the surfaces; these should be stripped, cleaned and resealed. In the main building, all corridor floors are finished with 4'x4' (nominal size) concrete tiles which appear to be a monolithic system and highly durable. These slabs have not been stripped and cleaned and have years of dirt sealed into the surface and corners, causing their color to be very dark and dingy. There is an especially large build -up of dirt at all corners. Floor finishes in LSH corridors and the Multi-Purpose Room are 12"x12" vinyl composition tile (VCT) which is generally in good enough condition to be stripped and rewaxed to rejuvenate the look. Repairs to the VCT are required along concrete expansion and control joints. Although probably not a structural problem, the concrete has shifted enough to cause cracking and buckling of the VCT installed over the concrete joint in the corridors and multi-purpose room. Tiles need to be removed and the concrete repaired before reinstalling new VCT. The main office area has glued-down tufted carpet. Classrooms are finished half in sheet vinyl and half in glued-down tufted carpet. The sheet vinyl is worn at classroom doorways. Some of the welded sheet vinyl joints are separating. These floors should be replaced. Mechanical areas are finished in exposed sealed concrete that should be stripped, cleaned and resealed. Toilet rooms have ceramic mosaic floor tiles with ceramic tile wall base. Entrance vestibules and side entrance doorway areas in the corridor have traffic mats which are worn and dirty; these should be replaced. The kitchen has a quarry tile floor in good condition.

Ceiling finishes in the original building are mostly exposed plaster throughout the original building with suspended fluorescent lighting fixtures; minor cracking is evident throughout the building. Outside the auditorium and above the stage are areas of heavily damaged plaster ceilings due to past leaks, in need of repair. Corridors in Element 2 are finished with 12"x12" concealed spline acoustical tiles with surface mounted lighting fixtures in generally aged and worn condition. Ceiling finishes in LSH corridors and the Multi-Purpose Room, and the office areas consist of 2x4 recessed acoustical tile ceilings with recessed 2x4 fluorescent lighting fixtures. Classrooms have stained wood deck single slope cathedral ceilings with suspended acoustical lighting fixtures. Mechanical areas have no ceilings.

There are no elevators in the original building or the Little School House.

Furnishings include the original folding wood seating in the auditorium which is still in use; however many seats need to be repaired to operate properly and many are scratched. With the unavailability of parts for repair and the worn condition of the seating, full replacement is required. Casework in classrooms and the office is damaged, worn and needs replacement.

Grounds

Paving and parking is constructed of asphalt and in need of repaving. Asphalt areas serve as parking and playground areas, separated by fences. Stairways into the building are limestone blocks (tread/riser) with grouted joints between blocks; all stairs need regrouting. Parking and play area striping is worn and almost invisible. Clear separation of play area and parking is not evident. The number of required parking spaces for school staff is unknown.

Fencing is chain-link system generally in good condition. There are some damaged and bent fence panels in need of replacement in the area of Element 2. Wrought iron site fence needs repainting. Steel pipe handrails to rear parking and playground area and up front stairs are not in compliance with stair and handrail requirements of today's building code. New handrails and guards to entrances and play areas are required for safety and code compliance.

There is no ADA ramp into the main building.

Landscaping is in need of trimming and maintenance.

Mechanical

Plumbing Fixtures - Many of the original plumbing fixtures in the main building remain in service, while some appear to have been replaced or upgraded in the 1960s. Fixtures in the restrooms on each floor consist of wall mounted water closets, wall hung urinals and lavatories with wheel handle faucets. There are not enough serviceable urinals and water closets on each floor so that the teachers must lead their students down to the basement to use the larger gang bathrooms. The principal indicated that this takes time away from teaching and would like to remedy the problem. For the main building, replacement of all plumbing fixtures and the remodeling of the student restrooms (excluding the gang bathrooms in the basement) is recommended. In the Little School House (LSH), all fixtures appear to be original, are in satisfactory condition, and should not need replacement for the next 10 years.

Drinking fountains in the corridors and at the restrooms of the main building are wall hung with integral refrigerated coolers. Most appear to be the original installed equipment. Replacement of all drinking fountains in the main building is recommended. The LSH has the original, wall hung drinking fountains from 1997 when that building was constructed and are in satisfactory condition. They should not need replacement for the next 10 years.

A service sink is available in the basement of the main building for use by the janitorial staff and appears to be original equipment. The Cafeteria has (1) two-compartment stainless steel sink with lever operated faucets. No chemicals or sanitizing basin sinks available in the main building. The Little School House has the appropriate stainless steel sink with sanitizing basins and grease trap. There is a grease hood installed but is not currently in use.

The plumbing fixtures throughout the main building are beyond their serviceable life and should all be replaced, with exception of the gang bathrooms and the stainless steel sink. The Little School House needs only a fire suppression system for the grease hood.

Domestic Water Distribution - Domestic water distribution is soldered copper piping. Water service enters the building in the basement, with backflow preventers and a water meter on the main line at the point of entry. The distribution piping appears to be in satisfactory condition and should not need service or replacement for the next 10 years. The Little School House domestic water distribution is soldered copper piping. Water service enters the building in the mechanical room with a water meter and backflow preventers. The distribution piping in the LSH appears to be in satisfactory condition and should not need service or replacement for the next 10 years.

One natural gas fired vertical water heater tank is installed in the basement of the main building with appropriate piping, controls, and venting. The water heater in the main building appears to be in satisfactory condition and should not need replacement within the next 10 years. The LSH has two PVI gas fired water heaters. The water heaters in the LSH appear to be in satisfactory condition and should not need replacement for the next 10 years.

Sanitary Waste - The sanitary waste piping systems in the main building are threaded cast iron. There is a small sewer ejector pit with one pump, located in the basement. The complete sanitary system appears to be the original installed equipment and is well beyond its serviceable life. Replacement of the entire sanitary system throughout the main building is recommended. The sanitary system in the LSH appears to be in satisfactory condition and should not need service or replacement for the next 10 years.

Rain Water Drainage - The rain water drains from the roof are routed through mechanical chases down the walls inside the building. There are no roof overflow drains. Adding roof overflow scuppers to the main building roofing system is recommended. There is no roof access to the Little School House, but it can be seen from the upper floors of the main building that there is a system of hidden metal gutters installed on top of roof framing recessed into the roofing shingles, approximately two feet back from the edge of the roof eaves. There are roof drains in these gutters which drain down internal chases inside the exterior walls to an underground

stormwater system. The system seems to be operating as designed, with no leaks observed that would be attributed to this system.

Energy Supply - Duplex fuel oil supply pumps provide the required fuel to the boilers in the main building when operating on fuel oil. The concrete fuel tank is located in the basement alongside the fuel oil pumps. The pumps appear to be beyond their serviceable life and should be replaced. Inspection of the concrete fuel tank is recommended. The addition of additional openings to provide the required ventilation for the basement and a fire suppression/alarm system in the fuel storage area is recommended. The LSH primarily uses natural gas for all heat sources in the building, having the gas meter outside in the semi-enclosed mechanical yard with the chiller. There are two small No. 2 fuel oil tanks having a total capacity of approximately 500 gallons located in the mechanical room providing fuel to the boilers in the event of the loss of natural gas.

Heat Generating Systems - Steam is generated in the main building by two Weil McLain 94 series oil fired boilers. Boilers were under repair at the time of assessment and burners were not on site. The boilers appear to be at the end of their serviceable life and should be replaced within the next 5 years. Hot water is generated in the LSH by two Burnham model V1106W boilers with dual fuel Powerflame burners, each having gross output of 1069 MBH. The boilers in the Little School House appear to be in satisfactory condition and should not need replacement for the next 10 years.

Cooling Generating Systems - Chilled water is generated in the Little School House by a model 30GN-080, 80 ton Carrier air cooled chiller, located in the semi-enclosed outside chiller area. This appears to be the original installed equipment and is functioning properly. The equipment operates off of R-22 refrigerant which is being phased out and will not be manufactured after 2020. Switching the unit over to a new refrigerant or replacing it with a new air cooled chiller is recommended.

Distribution Systems - The boiler feed water in the main building is treated with a combination of chemicals, controlled with a Master water treatment controller. It appears that what was one time a sump pump has been converted into a condensate receiver and boiler feed tank. This is not sealed off and when the boilers are operating, flash steam is released into the basement. This causes moisture issues which are apparent throughout the basement as a result of the leaking steam. Additionally, the steam traps are failing throughout the building. The steam and condensate return lines are only occasionally insulated and are beyond their serviceable life. The LSH has duplex chilled water pumps and duplex hot water pumps to distribute the conditioned water to the radiators and AHUs throughout the building. The pumps and distribution systems at the LSH appear to be in satisfactory condition and should not need replacement for the next 10 years.

Ventilation and additional heating for the main building was once provided by a house fan in the basement which is now non-operational. At time of operation, the air was pushed into the various rooms of the building through ducts built into the walls. The air was exhausted from the rooms via other ducts built into the walls, up through the attic space, and out through roof mounted vents. This system is not currently operational and the only fresh air that the building receives is through the windows when opened; this does not meet code and needs to be addressed. The LSH receives ventilation through outside air ducted in through the AHUs in the ceiling throughout the building. The ventilation in the Little School House is satisfactory and should not need replacement for the next 10 years.

Terminal & Package Units - Approximately half of the rooms in the main building have window air conditioning units. Approximately half of the air conditioning units are in service. LSH does not have terminal or packaged units.

Controls & Instrumentation - There are some pneumatic thermostats on the walls that are not in service. The pneumatic control valves on the radiators are not in service. Most of the heating radiators are flowing 100% flow when the steam is on. This results in an "on-off" control for the whole building, i.e. when the boilers are on, the whole building has heat. And when the boilers are off, the whole building is without heat. There is also a heating problem in "Element 2" of the building, causing classes to be moved out of that wing when there is no heat in the winter. Adding a new DDC system to the main building is recommended. The LSH has a TSBA Controls WINK BMS that was last updated in 1998. This system is not working properly and ultimately is not functional. Integrating a new control system and re-commissioning of the controls of the LSH is recommended.

Sprinklers - There are no sprinklers in the main building. A new sprinkler system should be installed. The LSH has a sprinkler system installed throughout, with the fire water supply entering the building in the mechanical room. There is adequate pressure from the municipal water system such that a fire pump is not required. There is a grease hood installed in the kitchen area but is not currently in use due to the fact that a chemical agent for the fire suppression system is required but not installed. Installing a fire suppression system for the grease hood in the LSH is recommended. The existing sprinkler system appears to be in satisfactory condition and should not need replacement for the next 10 years.

Electrical

Site Electrical Service of the main building is from Medium voltage overhead lines on wooden poles along Frontenac St. Two pole-

mounted power transformers are used to step down the voltage from Medium Voltage to 120V/240V (estimated 150KVA total). These transformers serve an old, open bus, open switch style service switchboard (estimated 600A) located in the basement of the building (boiler room). All panel boards throughout the building are feed from this switchboard. There is a 75KVA phase converter (2-240V single phase to 120/208V, 3 Phase) to feed the boilers and other 208 volts electrical loads. Our observation shows that the existing service entrance is obsolete, unsafe and does not meet current codes and need to be replaced.

Distribution System and Raceway System of the main building is accomplished with (2) flush mounted, lighting/receptacle panel-boards per floor. These panel-boards are located in the corridor of the older building. There are (2) additional panel boards servicing the new wing of the building. Panel-boards and all branch circuit breakers are old and have exceed their useful life and should be replaced.

Electrical service and distribution system in the Little School House (LSH) is by a 400A, 208V, 3PH, 4wire distribution panel board, fed from a utility transformer located outside of the building. The distribution panel board feeds lighting and power panel boards throughout the building. The distribution system of the LSH is in a good condition without any major deficiencies.

Receptacles in the main building are not provided in adequate numbers in classrooms, computer room, etc. There is a mix of grounding type and non-grounding type receptacles. A minimum of two receptacles in each wall of each classroom is required. Adding a wire-mold system with receptacles every three feet is recommended for the computer room.

Receptacles in LSH are not tamper-resistant receptacles. Today's electrical codes required that all receptacles in areas that are subject to child access should be either tamper proof or GFCI.

Lighting in the main building is provided by fluorescent fixtures with T-12 lamps and incandescent fixtures, located in specific areas. Classrooms and corridors utilize 2x4, (4) lamp lay-in fixtures or surface mounted fixtures. Classroom lighting is typically controlled by a single switch or dual switches. Lighting levels in the gymnasium do not meet IES (Illuminating Engineering Society) standards. Lighting in the LSH class rooms is provided by suspended 1x4 fluorescent lighting fixtures. Lighting in offices and corridors are provided by recessed 2x4 fluorescent lighting fixtures. All are in relatively good condition with some minor maintenance and repairs needed to some of the fixtures.

Fire Alarm systems in main building and LSH are adequate. Smoke is monitored by area smoke detectors in corridors and pulls stations. There are sufficient numbers of horn/strobes installed in the classrooms, corridors, offices and other areas in the school. No major deficiencies were observed.

Telephone and data systems in the main and LSH buildings are working adequately.

Public address / Music systems are not separated in both the main building and the LSH. The telephone system is used for public announcements and is working adequately.

Intercom and paging systems in both main and LSH buildings is functional. The paging system is a one way communication system from the office to each classroom. Two way communications is obtained through wall mounted phones in the classrooms and other areas.

Clock and Program system of both the main building and LSH are not functioning properly. A new clock system is needed. However the class change system is working adequately. The clock controller was located in IT room and was not accessible.

Television system is not provided in either building.

Security Systems, access control, and video surveillance systems are provided and are adequate. A sufficient number of cameras is installed to cover exit doors, corridors and other critical areas; they are controlled by a Closed Circuit Television system (CCTV). This system is working properly.

Emergency Power System is a 15KW diesel generator made by GENERAC Corp. with a transfer switch provided in the main building. The generator is old, has exceeded its useful life and should be replaced. There is no generator in LSH building.

Uninterruptible Power System (UPS) is provided for the IT racks in the main building.

Emergency lighting system, including exit lighting is provided in main building corridors, library and other exit ways, on emergency pack up power. Replacing the existing generator with a 40KW new gen set is recommended. Battery-pack lighting fixtures and exit signs are provided in LSH building.

Lightning Protection System is adequate on the main building. It is accomplished with air terminal mounted on the chimney; however, some repairs are needed to make the system fully operational. A study needs to be conducted to verify that the air terminals provide the proper coverage. No lightning protection is need on LSH.

Grounding is present and is adequate.

Elevator is not provided in either building.

Theater Lighting and dimming controls in main building is old and not adequate. Lights are turned on and off by feeder breakers. This is dangerous and should be updated to a local switching system.

Site Lighting System is adequate. Emergency lighting fixtures are also installed at exit doors.

Sound System in main building is old and should be replaced.

Site Video Surveillance of both the main building and LSH is monitored by a site video surveillance system. This system is adequate.

Site Paging System is adequate.

RECOMMENDATIONS

Architectural

Main Building

- Strip and repaint concrete foundation (basement) walls in mechanical rooms
- Clean and repaint basement floor in mechanical rooms
- Clean and reseal concrete floors in hallways and stairways
- Remove and replace all lintels and cracked masonry at basement windows and grade exit doorways and rooftop structures
- Clean/powerwash exterior brickwork front + sides of main building
- Replace all exterior windows with insulated single hung units
- Replace all exterior doors with ADA and code compliant exit hardware
- Remove and replace existing flat roof and insulation; 5 levels
- Remove and replace existing sloped asphalt shingle roof
- Remove non-rated glass panels between classrooms and corridors; fill with fire rated gyp bd sys.
- Remove and replace all wood interior doors, frames and hardware in classrooms, closets, offices, etc.
- Provide security hardware for classrooms and offices, locking from inside classroom.
- Remove and replace all basement steel doors, frames, and hardware in mechanical rooms and stairways
- Remove folding wood partitions; replace with gypsum board and metal stud walls
- Replace toilet room accessories and partitions where damaged
- Repair and repaint interior plaster walls where damaged
- Remove and replace stairway handrails and guards with code compliant systems
- Regrout all joints between limestone block tread/risers at exterior stairs
- Strip, sand, repair and refinish all wood floors in classrooms and in gym
- Remove and replace all 12”x12” VCT floors
- Replace VAT floors using proper asbestos abatement procedures if determined asbestos is present in Element 2
- Repaint all plaster and concrete ceilings in the building
- Remove and replace folding wood auditorium chair with new chairs
- Add hydraulic elevator to service 4 floors (basement - 3rd floor)

Architectural

Little School House

- Clean and reseal concrete floors in mechanical areas
- Clean exterior brickwork
- Repair brick and mortar in “V” window facing playground in the MPR damaged from impact
- Replace metal roofs over MPR windows and clerestories due to leaks
- Replace missing “O” of Little School House

- Replace exterior security screens on 4'x8' windows
- Broken glass at main entrance door and broken plexiglas at side entrance
- Repaint all hollow metal door frames
- Provide security hardware for classrooms and offices, locking from inside classroom
- Refinish stained and dirty wood doors
- Repaint all corridor walls (block)
- Peeling paint and gypsum board damage at one register in clerestory and multipurpose room water damage area
- Replace classroom carpet floor surface
- Replace sheet vinyl floor in classrooms
- Replace VCT in multipurpose room and corridors where expansion joint cracked tiles

Mechanical

Main Building

- Replace lavatories throughout the building (excluding the gang bathrooms in the basement)
- Replace water closets throughout the building (excluding the gang bathrooms in the basement)
- Replace urinals throughout the building (excluding the gang bathrooms in the basement)
- Replace of all drinking fountains
- Add overflow scuppers to roof parapets
- Replace sanitary system throughout the main building
- Replace duplex fuel oil pumps and skid
- Inspect the condition of the concrete fuel tank
- Install the required ventilation and fire suppression/alarm system in the fuel storage area
- The boilers appear to be at the end of their serviceable life and should be replaced within the next 5 years
- Install a new DDC system to the main building
- Install a new sprinkler system
- Remove existing steam boilers and steam distribution system. Install hot water boilers and hot water distribution system.
- Install chiller and chilled water distribution system
- Install unit ventilators in all classrooms and the IMC
- Install AHU to condition the gymnasium
- Install AHU to condition the cafeteria
- Install AHU to condition the auditorium
- Install AHU to condition the IMC
- Install AHU to condition the administrative area

Little School House

- Convert the chiller over to a new refrigerant or replace with a new air cooled chiller
- Install a new DDC system, re-commission, and provide training for maintenance personnel
- Install chemical sprinkler system for kitchen hood

Electrical

Main Building

- Upgrade the existing electrical service with a new service. Replace the existing switchboard with new 1600A, 208/120, 3PH, 4 wire switchboards. ID#10957
- Replace the entire distribution system with new panel boards and new feeders. Provide arc flush label on the all panel boards. Estimated, 15 panel boards. ID#10991
- Install minimum two receptacles in each wall of class rooms and sufficient number of receptacles in other areas per NEC. We recommend adding a two-compartment surface mounted raceway, for data & power, for the computer lab room. ID#10994
- Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamp. ID#10995
- Replace existing master clock controller. ID#10998
- Install a new emergency power system including 100KW diesel generator and respective transfer switch.ID#11003
- Provide new stage lighting and controller in Auditorium. ID#11005
- Provide new sound system including a freestanding 19" tack back stage with mixer per amplifiers, CD player, cassette player, AM-FM radio, graphic or parametric equalizer, and receivers for wireless microphone. ID#11006

Little School House

- Replace GFIC receptacle in the areas subject to kid access. Estimated 100 each. ID#11007
- Replace existing master clock controller. ID#11008

Grounds

- Repave asphalt parking / playground area
- Repaint wrought iron fencing
- Replace chain link fencing
- Add ADA ramp into Main Building

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 2
Status:	Accepted by SDP	Team:	Tm 2
Site ID:	S722001		

Site Condition Summary

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

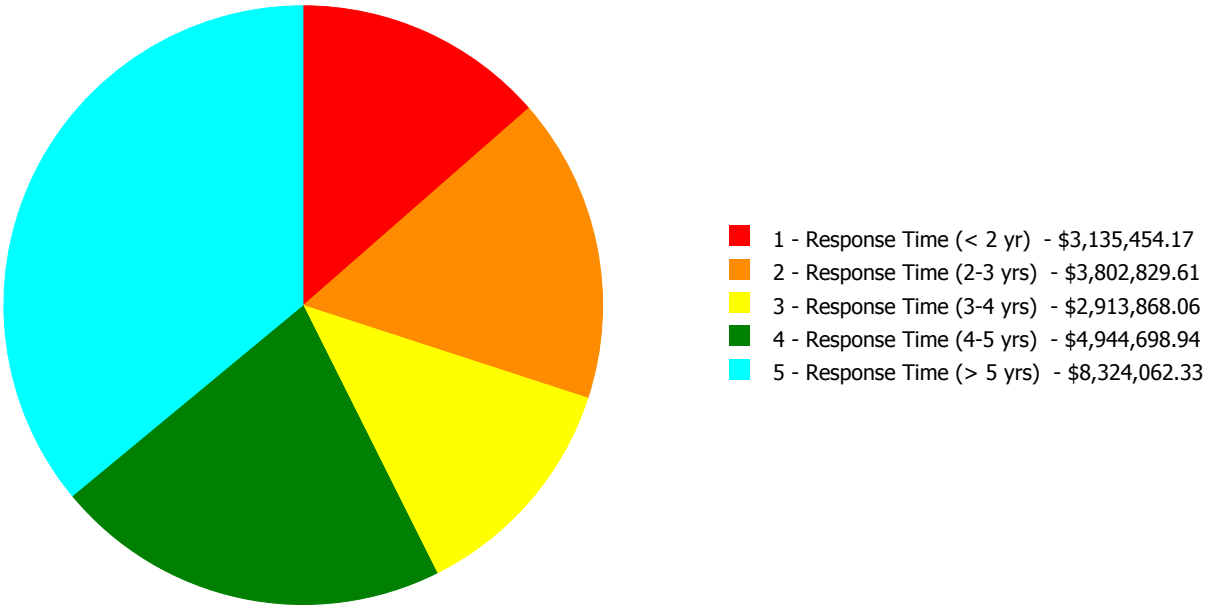
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	37.37 %	0.00 %	$0.00
A20 - Basement Construction	40.46 %	0.00 %	$0.00
B10 - Superstructure	36.21 %	0.00 %	$0.00
B20 - Exterior Enclosure	48.23 %	36.37 %	$1,933,241.07
B30 - Roofing	47.86 %	27.88 %	$889,163.81
C10 - Interior Construction	31.74 %	57.56 %	$1,366,679.79
C20 - Stairs	30.64 %	119.19 %	$161,730.67
C30 - Interior Finishes	96.27 %	24.35 %	$1,195,763.78
D10 - Conveying	105.71 %	251.44 %	$670,322.07
D20 - Plumbing	82.71 %	39.74 %	$987,946.50
D30 - HVAC	84.24 %	97.98 %	$10,725,926.78
D40 - Fire Protection	90.86 %	170.45 %	$1,390,062.63
D50 - Electrical	107.09 %	54.29 %	$3,140,588.64
E10 - Equipment	22.48 %	5.88 %	$92,124.15
E20 - Furnishings	35.98 %	86.06 %	$180,381.10
G20 - Site Improvements	43.21 %	19.34 %	$386,982.12
G40 - Site Electrical Utilities	40.00 %	0.00 %	$0.00
Totals:	**63.55 %**	**41.96 %**	**$23,120,913.11**

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)
B722001;Carnell	74,885	58.78	$3,063,756.69	$3,125,403.58	$2,845,827.20	$4,788,175.08	$8,244,687.15
B722002;Carnell LSH	23,523	4.43	$71,697.48	$423,778.65	$68,040.86	$23,189.12	$79,375.18
G722001;Grounds	119,000	15.37	$0.00	$253,647.38	$0.00	$133,334.74	$0.00
Total:		**41.96**	**$3,135,454.17**	**$3,802,829.61**	**$2,913,868.06**	**$4,944,698.94**	**$8,324,062.33**

Deficiencies By Priority



Budget Estimate Total: $23,120,913.11

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):	74,885
Year Built:	1931
Last Renovation:	
Replacement Value:	$37,545,427
Repair Cost:	$22,067,849.70
Total FCI:	58.78 %
Total RSLI:	66.18 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B722001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S722001		

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	16.00 %	0.00 %	$0.00
A20 - Basement Construction	16.00 %	0.00 %	$0.00
B10 - Superstructure	17.40 %	0.00 %	$0.00
B20 - Exterior Enclosure	42.03 %	44.87 %	$1,894,021.27
B30 - Roofing	109.61 %	88.88 %	$877,544.09
C10 - Interior Construction	19.78 %	72.84 %	$1,338,599.85
C20 - Stairs	16.00 %	153.17 %	$161,730.67
C30 - Interior Finishes	111.01 %	25.48 %	$980,818.28
D10 - Conveying	105.71 %	251.44 %	$670,322.07
D20 - Plumbing	106.34 %	64.61 %	$987,946.50
D30 - HVAC	96.30 %	125.08 %	$10,419,344.34
D40 - Fire Protection	105.71 %	227.53 %	$1,373,322.85
D50 - Electrical	110.11 %	70.24 %	$3,091,694.53
E10 - Equipment	14.29 %	7.73 %	$92,124.15
E20 - Furnishings	30.00 %	113.09 %	$180,381.10
Totals:	**66.18 %**	**58.78 %**	**$22,067,849.70**

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.	74,885	100	1931	2031		16.00 %	0.00 %	16			$1,377,884
A1030	Slab on Grade	$7.73	S.F.	74,885	100	1931	2031		16.00 %	0.00 %	16			$578,861
A2010	Basement Excavation	$6.55	S.F.	74,885	100	1931	2031		16.00 %	0.00 %	16			$490,497
A2020	Basement Walls	$12.70	S.F.	74,885	100	1931	2031		16.00 %	0.00 %	16			$951,040
B1010	Floor Construction	$75.10	S.F.	74,885	100	1931	2031		16.00 %	0.00 %	16			$5,623,864
B1020	Roof Construction	$13.88	S.F.	74,885	100	1931	2031	2040	25.00 %	0.00 %	25			$1,039,404
B2010	Exterior Walls	$36.91	S.F.	74,885	100	1931	2031		16.00 %	2.19 %	16		$60,622.07	$2,764,005
B2020	Exterior Windows	$18.01	S.F.	74,885	40	1980	2020	2050	87.50 %	132.83 %	35		$1,791,475.52	$1,348,679
B2030	Exterior Doors	$1.45	S.F.	74,885	25	1931	1956	2050	140.00 %	38.61 %	35		$41,923.68	$108,583
B3010105	Built-Up	$37.76	S.F.	20,900	20	1995	2015	2037	110.00 %	111.20 %	22		$877,544.09	$789,184
B3010120	Single Ply Membrane	$38.73	S.F.	0	20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.	0	30				0.00 %	0.00 %				$0
B3010140	Shingle & Tile	$38.73	S.F.	5,000	25	1990	2015	2042	108.00 %	0.00 %	27			$193,650
B3020	Roof Openings	$0.06	S.F.	74,885	20	1995	2015	2037	110.00 %	0.00 %	22			$4,493
C1010	Partitions	$17.91	S.F.	74,885	100	1931	2031		16.00 %	10.03 %	16		$134,480.57	$1,341,190
C1020	Interior Doors	$3.51	S.F.	74,885	40	1931	1971	2027	30.00 %	436.66 %	12		$1,147,753.48	$262,846
C1030	Fittings	$3.12	S.F.	74,885	40	1931	1971	2027	30.00 %	24.12 %	12		$56,365.80	$233,641
C2010	Stair Construction	$1.41	S.F.	74,885	100	1931	2031		16.00 %	153.17 %	16		$161,730.67	$105,588

Site Assessment Report - B722001;Carnell

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	$14.18	S.F.	74,885	10	1931	1941	2037	220.00 %	28.47 %	22		$302,349.62	$1,061,869
C3010231	Vinyl Wall Covering	$0.00	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.63	S.F.	74,885	30	1931	1961	2027	40.00 %	0.00 %	12			$196,948
C3020411	Carpet	$7.30	S.F.	0	10				0.00 %	0.00 %				$0
C3020412	Terrazzo & Tile	$75.52	S.F.	0	50				0.00 %	0.00 %				$0
C3020413	Vinyl Flooring	$9.68	S.F.	17,200	20	1995	2015	2037	110.00 %	151.01 %	22		$251,419.29	$166,496
C3020414	Wood Flooring	$22.27	S.F.	37,440	25	1931	1956	2042	108.00 %	48.35 %	27		$403,114.23	$833,789
C3020415	Concrete Floor Finishes	$0.97	S.F.	20,245	50	1931	1981	2067	104.00 %	0.00 %	52			$19,638
C3030	Ceiling Finishes	$20.97	S.F.	74,885	25	1931	1956	2027	48.00 %	1.52 %	12		$23,935.14	$1,570,338
D1010	Elevators and Lifts	$3.56	S.F.	74,885	35			2052	105.71 %	251.44 %	37		$670,322.07	$266,591
D2010	Plumbing Fixtures	$13.52	S.F.	74,885	35	1931	1966	2052	105.71 %	52.14 %	37		$527,932.96	$1,012,445
D2020	Domestic Water Distribution	$1.68	S.F.	74,885	25	1931	1956	2042	108.00 %	0.00 %	27			$125,807
D2030	Sanitary Waste	$2.90	S.F.	74,885	25	1931	1956	2042	108.00 %	187.72 %	27		$407,674.21	$217,167
D2040	Rain Water Drainage	$2.32	S.F.	74,885	30	1931	1961	2047	106.67 %	30.13 %	32		$52,339.33	$173,733
D3020	Heat Generating Systems	$18.67	S.F.	74,885	35	1970	2005	2052	105.71 %	93.83 %	37		$1,311,840.72	$1,398,103
D3030	Cooling Generating Systems	$24.48	S.F.	74,885	30			2047	106.67 %	65.70 %	32		$1,204,454.53	$1,833,185
D3040	Distribution Systems	$42.99	S.F.	74,885	25	1931	1956	2042	108.00 %	192.08 %	27		$6,183,554.52	$3,219,306
D3050	Terminal & Package Units	$11.60	S.F.	74,885	20				0.00 %	0.00 %				$868,666
D3060	Controls & Instrumentation	$13.50	S.F.	74,885	20	1970	1990	2037	110.00 %	170.09 %	22		$1,719,494.57	$1,010,948
D4010	Sprinklers	$7.05	S.F.	74,885	35			2052	105.71 %	260.13 %	37		$1,373,322.85	$527,939
D4020	Standpipes	$1.01	S.F.	74,885	35			2052	105.71 %	0.00 %	37			$75,634
D5010	Electrical Service/Distribution	$9.70	S.F.	74,885	30	1931	1961	2047	106.67 %	122.29 %	32		$888,299.93	$726,385
D5020	Lighting and Branch Wiring	$34.68	S.F.	74,885	20	1931	1951	2037	110.00 %	67.52 %	22		$1,753,548.00	$2,597,012
D5030	Communications and Security	$12.99	S.F.	74,885	15	1931	1946	2032	113.33 %	20.94 %	17		$203,735.25	$972,756
D5090	Other Electrical Systems	$1.41	S.F.	74,885	30	1931	1961	2047	106.67 %	233.09 %	32		$246,111.35	$105,588
E1020	Institutional Equipment	$4.82	S.F.	74,885	35	1931	1966	2020	14.29 %	25.52 %	5		$92,124.15	$360,946
E1090	Other Equipment	$11.10	S.F.	74,885	35	1931	1966	2020	14.29 %	0.00 %	5			$831,224
E2010	Fixed Furnishings	$2.13	S.F.	74,885	40	1931	1971	2027	30.00 %	113.09 %	12		$180,381.10	$159,505
								Total	**66.18 %**	**58.78 %**			**$22,067,849.70**	**$37,545,427**

System Notes

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

System: B3010105 - Built-Up — This system contains no images

Note: built-up roofing 80%

System: B3010140 - Shingle & Tile — This system contains no images

Note: shingle roofing 20%

System: C1010 - Partitions — This system contains no images

Note: INTERIOR WALL CONSTRUCTION ESTIMATES
glazed block/brick wall construction 8%
painted plaster 87%
marble 4%
wood 1%

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

Note: paint 90%
tile 10%

System: C3010230 - Paint & Covering — This system contains no images

Note: paint 90%

System: C3010232 - Wall Tile — This system contains no images

Note: marble wainscot 10%

System: C3020413 - Vinyl Flooring — This system contains no images

Note: 23%

System: C3020414 - Wood Flooring — This system contains no images

Note: 50%

System: C3020415 - Concrete Floor Finishes — This system contains no images

Note: 27%

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

Note: painted plaster of concrete deck ceiling 90%
2x4 acoustical tile ceiling 10%

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:	**$22,067,850**	**$0**	**$0**	**$0**	**$0**	**$1,520,256**	**$0**	**$0**	**$0**	**$0**	**$0**	**$23,588,105**
*** 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	$60,622	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$60,622**
B2020 - Exterior Windows	$1,791,476	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,791,476**
B2030 - Exterior Doors	$41,924	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$41,924**
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	$877,544	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$877,544**
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	$134,481	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$134,481**

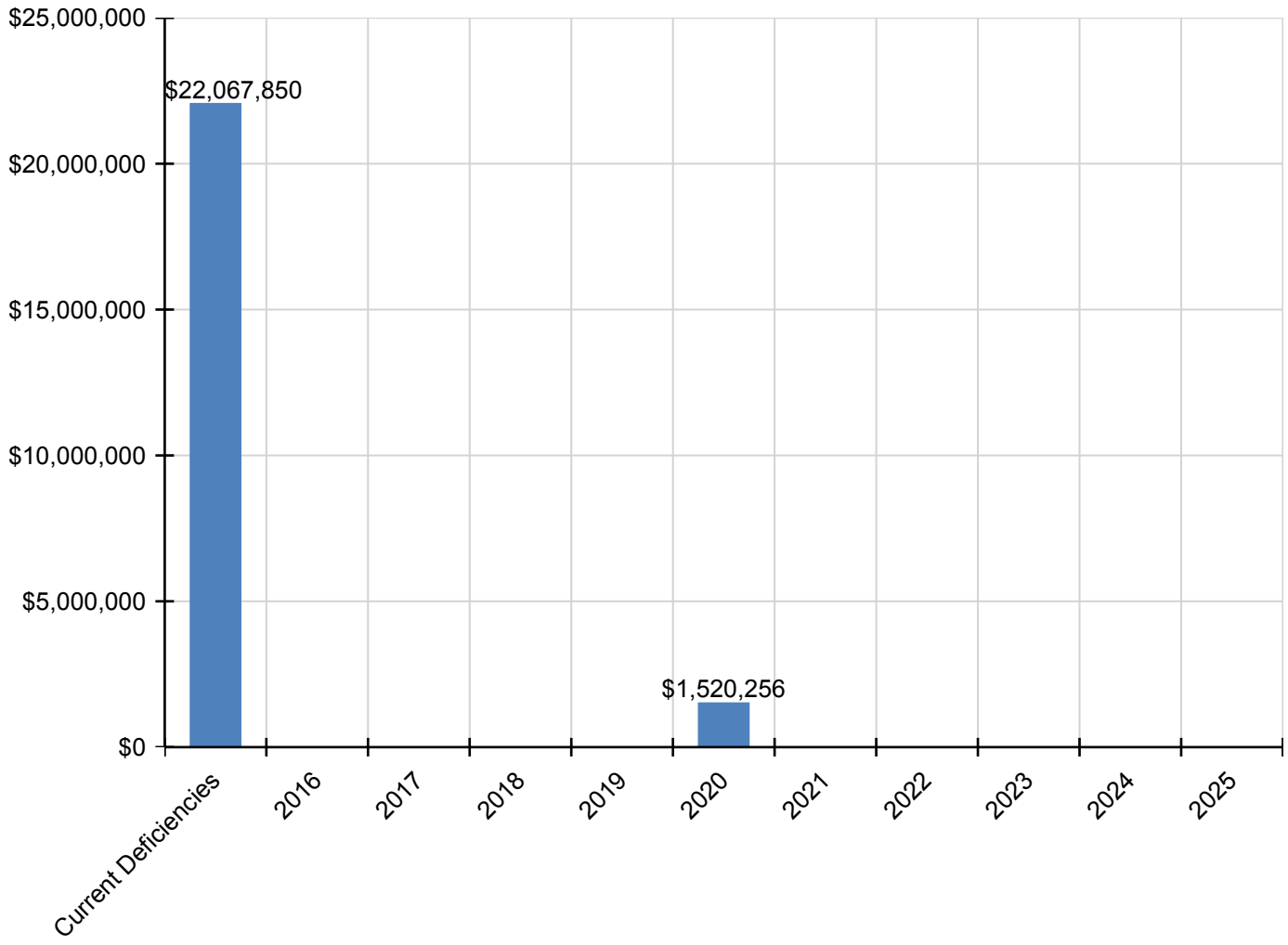
C1020 - Interior Doors	$1,147,753	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,147,753**
C1030 - Fittings	$56,366	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$56,366**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$161,731	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$161,731**
C30 - Interior Finishes	$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	$302,350	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$302,350**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$251,419	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$251,419**
C3020414 - Wood Flooring	$403,114	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$403,114**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3030 - Ceiling Finishes	$23,935	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$23,935**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$670,322	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$670,322**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$527,933	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$527,933**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2030 - Sanitary Waste	$407,674	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$407,674**
D2040 - Rain Water Drainage	$52,339	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$52,339**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$1,311,841	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,311,841**
D3030 - Cooling Generating Systems	$1,204,455	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,204,455**
D3040 - Distribution Systems	$6,183,555	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$6,183,555**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,719,495	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,719,495**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,373,323	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,373,323**
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	$888,300	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$888,300**
D5020 - Lighting and Branch Wiring	$1,753,548	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,753,548**
D5030 - Communications and Security	$203,735	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$203,735**
D5090 - Other Electrical Systems	$246,111	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$246,111**
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	$92,124	$0	$0	$0	$0	$460,278	$0	$0	$0	$0	$0	**$552,402**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$1,059,978	$0	$0	$0	$0	$0	**$1,059,978**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$180,381	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$180,381**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

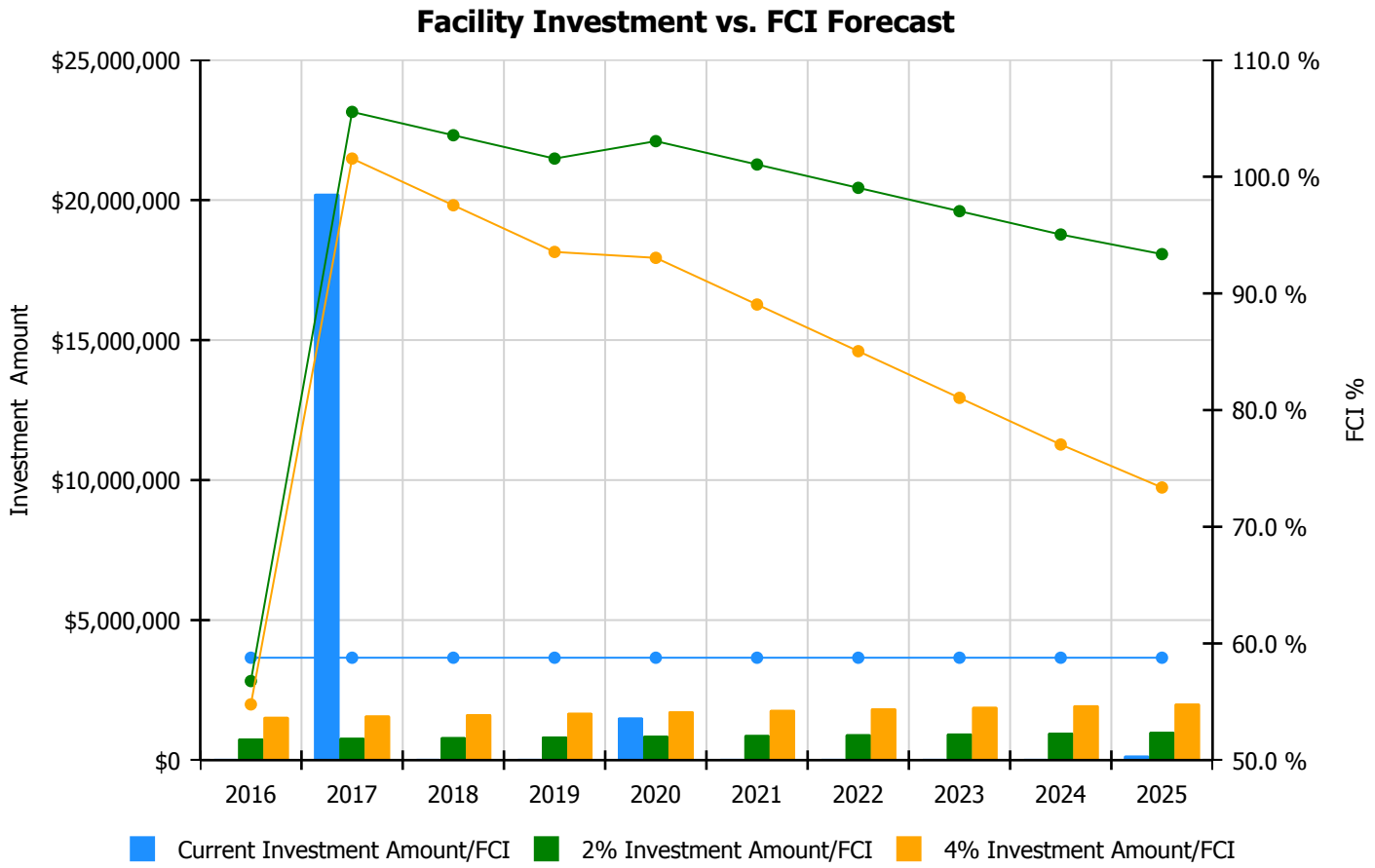
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

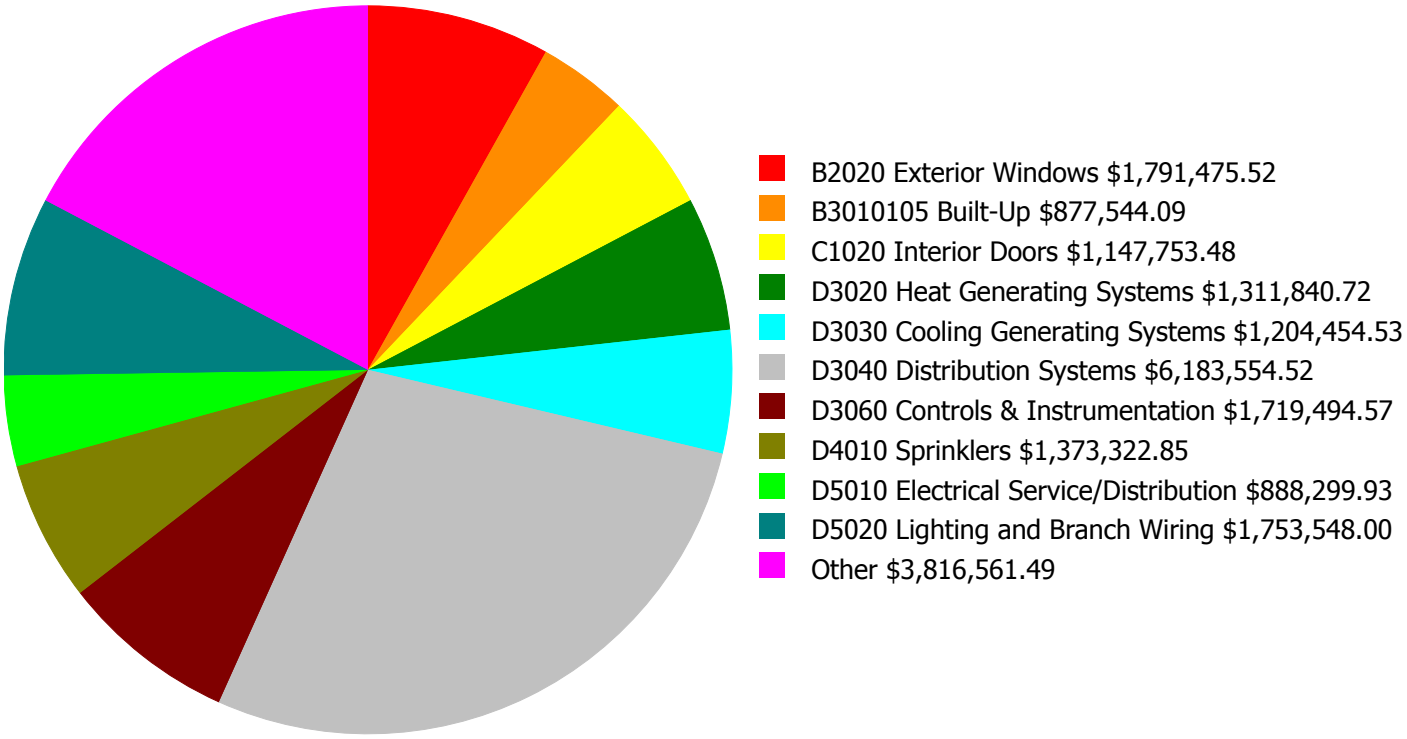
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 58.78%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$773,436.00	56.78 %	$1,546,872.00	54.78 %
2017	$20,225,939	$796,639.00	105.55 %	$1,593,278.00	101.55 %
2018	$0	$820,538.00	103.55 %	$1,641,076.00	97.55 %
2019	$0	$845,154.00	101.55 %	$1,690,308.00	93.55 %
2020	$1,520,256	$870,509.00	103.05 %	$1,741,018.00	93.05 %
2021	$0	$896,624.00	101.05 %	$1,793,248.00	89.05 %
2022	$0	$923,523.00	99.05 %	$1,847,046.00	85.05 %
2023	$0	$951,228.00	97.05 %	$1,902,457.00	81.05 %
2024	$0	$979,765.00	95.05 %	$1,959,531.00	77.05 %
2025	$160,520	$1,009,158.00	93.37 %	$2,018,317.00	73.37 %
Total:	**$21,906,714**	**$8,866,574.00**		**$17,733,151.00**	

Deficiency Summary by System

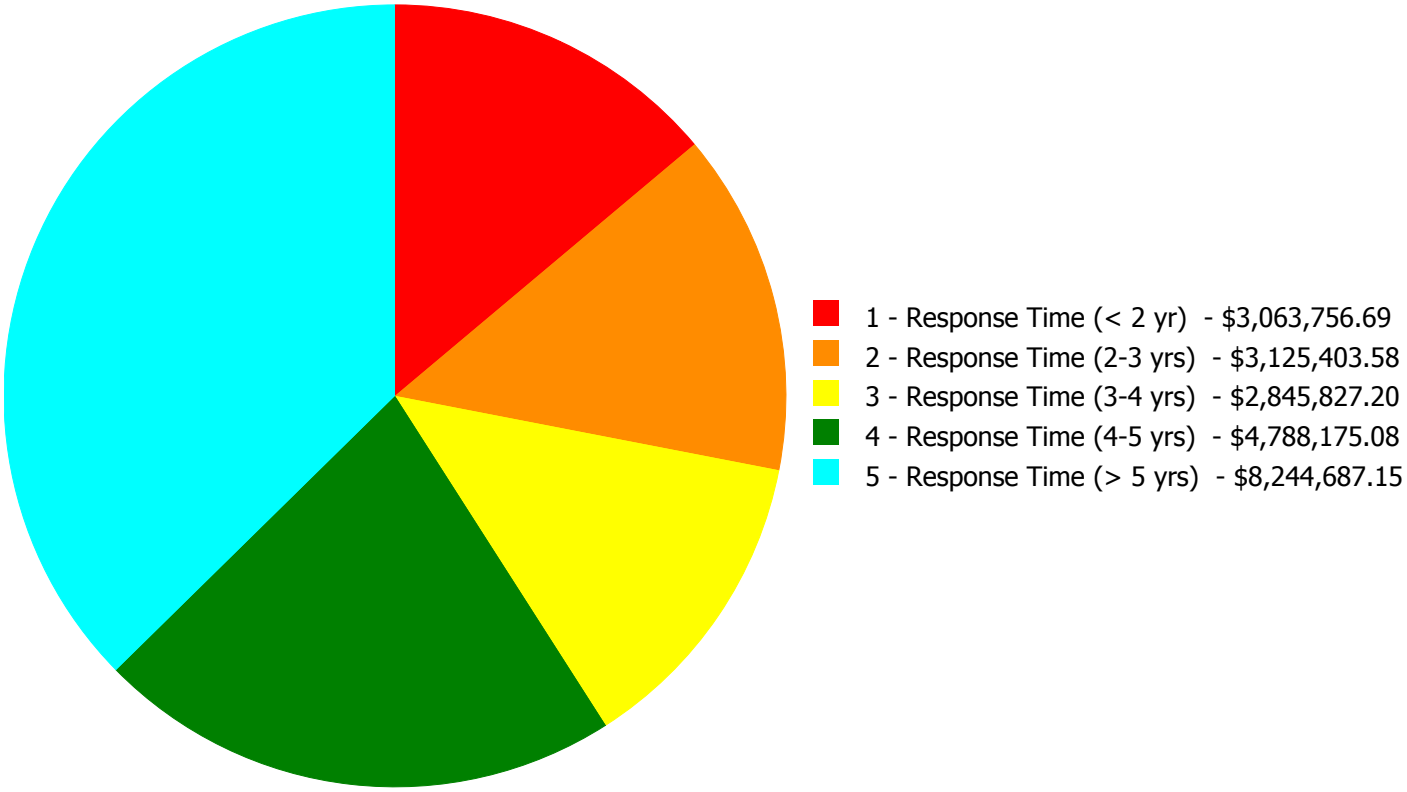
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $22,067,849.70

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: $22,067,849.70

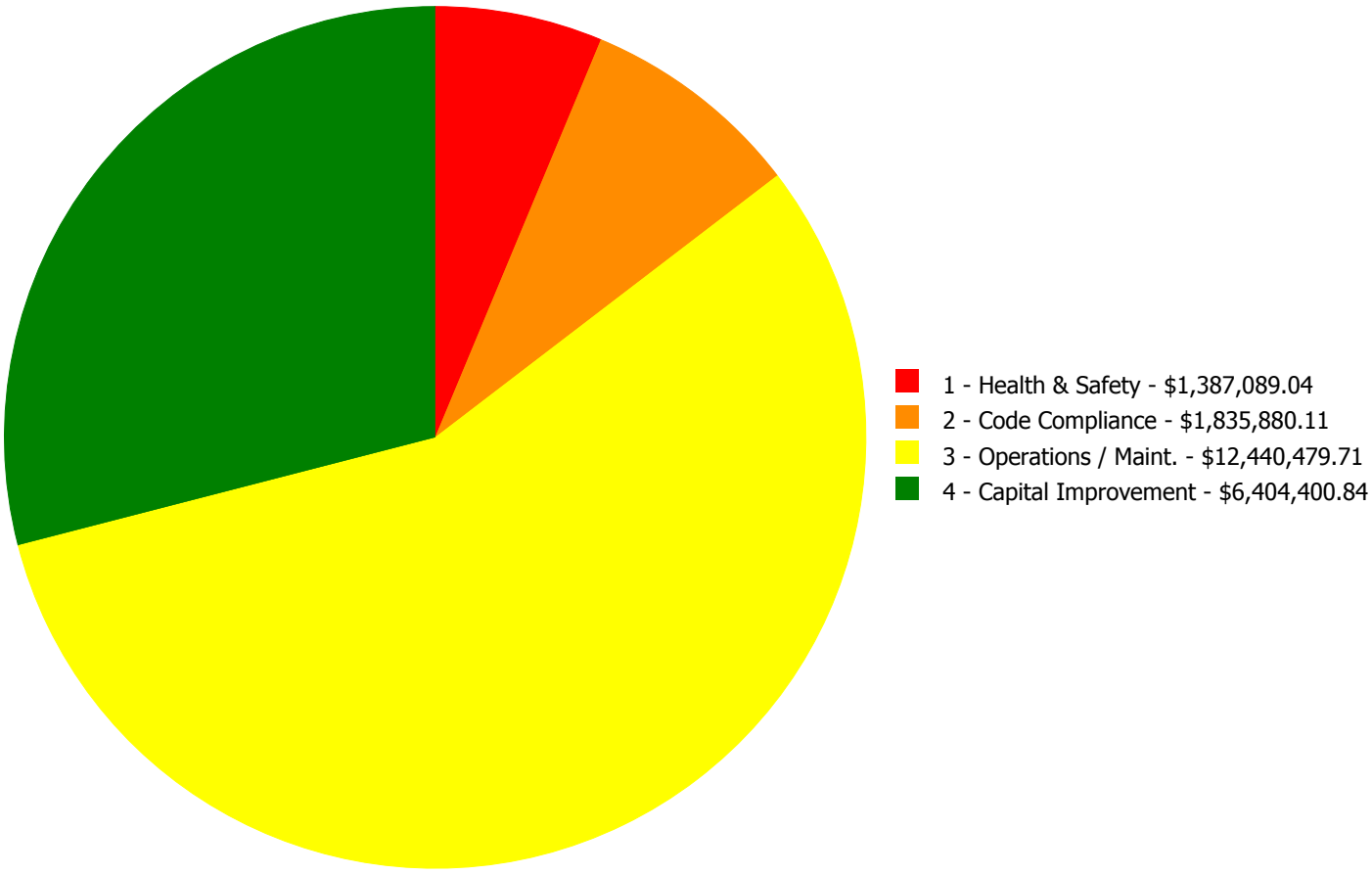
Deficiency By Priority Investment Table

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	$38,747.37	$0.00	$0.00	$21,874.70	$60,622.07
B2020	Exterior Windows	$0.00	$0.00	$0.00	$1,791,475.52	$0.00	$1,791,475.52
B2030	Exterior Doors	$0.00	$0.00	$41,923.68	$0.00	$0.00	$41,923.68
B3010105	Built-Up	$203,292.07	$0.00	$0.00	$674,252.02	$0.00	$877,544.09
C1010	Partitions	$0.00	$111,397.49	$0.00	$0.00	$23,083.08	$134,480.57
C1020	Interior Doors	$13,766.19	$1,133,987.29	$0.00	$0.00	$0.00	$1,147,753.48
C1030	Fittings	$0.00	$56,365.80	$0.00	$0.00	$0.00	$56,365.80
C2010	Stair Construction	$161,730.67	$0.00	$0.00	$0.00	$0.00	$161,730.67
C3010230	Paint & Covering	$0.00	$227,329.61	$0.00	$75,020.01	$0.00	$302,349.62
C3020413	Vinyl Flooring	$0.00	$251,419.29	$0.00	$0.00	$0.00	$251,419.29
C3020414	Wood Flooring	$0.00	$403,114.23	$0.00	$0.00	$0.00	$403,114.23
C3030	Ceiling Finishes	$0.00	$0.00	$0.00	$0.00	$23,935.14	$23,935.14
D1010	Elevators and Lifts	$0.00	$670,322.07	$0.00	$0.00	$0.00	$670,322.07
D2010	Plumbing Fixtures	$0.00	$0.00	$0.00	$527,932.96	$0.00	$527,932.96
D2030	Sanitary Waste	$0.00	$0.00	$407,674.21	$0.00	$0.00	$407,674.21
D2040	Rain Water Drainage	$0.00	$52,339.33	$0.00	$0.00	$0.00	$52,339.33
D3020	Heat Generating Systems	$0.00	$0.00	$1,050,121.66	$0.00	$261,719.06	$1,311,840.72
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,204,454.53	$1,204,454.53
D3040	Distribution Systems	$0.00	$0.00	$847,256.73	$0.00	$5,336,297.79	$6,183,554.52
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$1,719,494.57	$0.00	$1,719,494.57
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$1,373,322.85	$1,373,322.85
D5010	Electrical Service/Distribution	$888,299.93	$0.00	$0.00	$0.00	$0.00	$888,299.93
D5020	Lighting and Branch Wiring	$1,254,697.08	$0.00	$498,850.92	$0.00	$0.00	$1,753,548.00
D5030	Communications and Security	$203,735.25	$0.00	$0.00	$0.00	$0.00	$203,735.25
D5090	Other Electrical Systems	$246,111.35	$0.00	$0.00	$0.00	$0.00	$246,111.35
E1020	Institutional Equipment	$92,124.15	$0.00	$0.00	$0.00	$0.00	$92,124.15
E2010	Fixed Furnishings	$0.00	$180,381.10	$0.00	$0.00	$0.00	$180,381.10
	Total:	$3,063,756.69	$3,125,403.58	$2,845,827.20	$4,788,175.08	$8,244,687.15	$22,067,849.70

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: $22,067,849.70

Deficiency Details by Priority

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

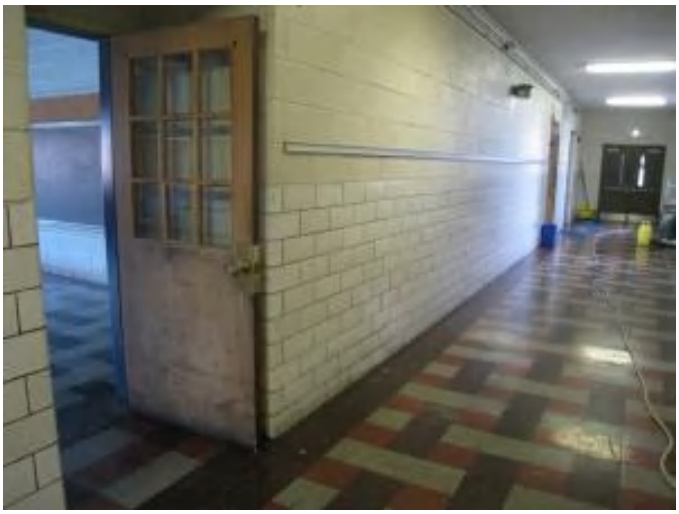
Priority 1 - Response Time (< 2 yr):

System: B3010105 - Built-Up

Location: main bldg - auditorium
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Remove and Replace Built Up Roof
Qty: 6,000.00
Unit of Measure: S.F.
Estimate: $203,292.07
Assessor Name: System
Date Created: 07/29/2015

Notes: Remove and replace existing sloped asphalt shingle roof

System: C1020 - Interior Doors



Location: main bldg
Distress: Security Issue
Category: 1 - Health & Safety
Priority: 1 - Response Time (< 2 yr)
Correction: Provide security hardware for classroom and office doors
Qty: 60.00
Unit of Measure: Ea.
Estimate: $13,766.19
Assessor Name: System
Date Created: 07/29/2015

Notes: Provide security hardware for classrooms and offices, locking from inside classroom.

System: C2010 - Stair Construction

Location: main bldg

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

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

Qty: 300.00

Unit of Measure: L.F.

Estimate: $140,427.23

Assessor Name: System

Date Created: 07/29/2015

Notes: Remove and replace stairway handrails and guards with code compliant systems (5) 4 story + (2) 1 story; wall mounted handrails and center mounted rails and balustrades

System: C2010 - Stair Construction

Location: main bldg

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Repair exterior stairs

Qty: 50.00

Unit of Measure: Riser

Estimate: $21,303.44

Assessor Name: System

Date Created: 07/29/2015

Notes: Regrout all joints between limestone block tread/risers at exterior stairs

System: D5010 - Electrical Service/Distribution

Location: Boiler Room in the basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Switchboard

Qty: 1.00

Unit of Measure: Ea.

Estimate: $490,962.39

Assessor Name: System

Date Created: 07/27/2015

Notes: Upgrade the existing electrical service with a new service. Replace the existing switchboard with new 2000A, 208/120, 3PH, 4 wire switchboards. 20% is adding to switchgear prize for respective medium and low voltage cabling.

System: D5010 - Electrical Service/Distribution

Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Electrical Distribution System (U)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $397,337.54

Assessor Name: System

Date Created: 07/27/2015

Notes: Replace the entire distribution system with new panel boards and new feeders. Provide arc flush label on all panel boards. Estimated, 15 panel boards

System: D5020 - Lighting and Branch Wiring

Location: Entire building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Replace Lighting Fixtures (SF)
Qty: 1.00
Unit of Measure: S.F.
Estimate: $1,254,697.08
Assessor Name: System
Date Created: 07/27/2015

Notes: Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamp.

System: D5030 - Communications and Security

Location: Entire Building
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Add/Replace Clock System or Components
Qty: 1.00
Unit of Measure: Ea.
Estimate: $164,874.77
Assessor Name: System
Date Created: 07/27/2015

Notes: Replace existing clock system with new clock system.

System: D5030 - Communications and Security

Location: Auditorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Sound System

Qty: 1.00

Unit of Measure: LS

Estimate: $38,860.48

Assessor Name: System

Date Created: 07/28/2015

Notes: Provide new sound system including a freestanding 19" rack backstage with mixer per amplifiers, CD player, cassette player, AM-FM radio, graphic or parametric equalizer, and receivers for wireless microphone. ID#11006

System: D5090 - Other Electrical Systems

This deficiency has no image.

Location: Basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add Standby Generator System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $246,111.35

Assessor Name: System

Date Created: 07/28/2015

Notes: Install a new emergency power system including 100KW diesel generator and respective transfer switch.

System: E1020 - Institutional Equipment

Location: Auditorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $92,124.15

Assessor Name: System

Date Created: 07/28/2015

Notes: Provide new stage lighting and controller in Auditorium.

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

System: B2010 - Exterior Walls

Location: main bldg

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 1,200.00

Unit of Measure: S.F.

Estimate: $38,747.37

Assessor Name: System

Date Created: 07/29/2015

Notes: Remove and replace all lintels and cracked masonry at basement windows and grade exit doorways and rooftop structures

System: C1010 - Partitions

Location: main bldg

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 5,000.00

Unit of Measure: S.F.

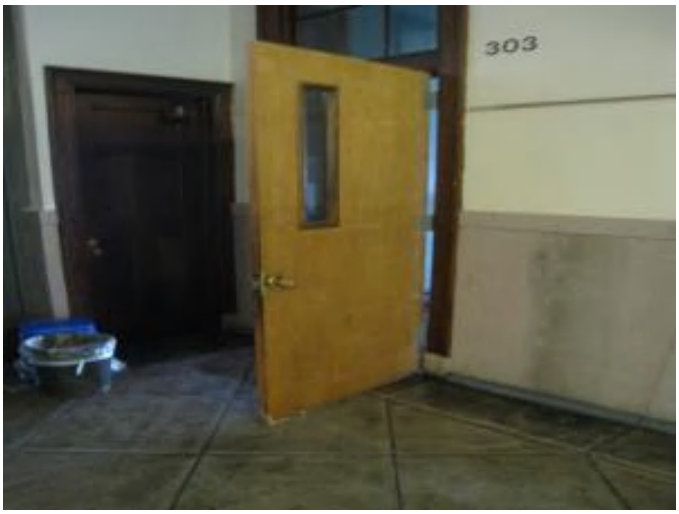
Estimate: $111,397.49

Assessor Name: System

Date Created: 07/29/2015

Notes: Remove folding wood partitions; replace with gypsum board and metal stud walls

System: C1020 - Interior Doors



Location: main bldg

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Remove and replace interior doors - wood doors with wood frame - per leaf

Qty: 200.00

Unit of Measure: Ea.

Estimate: $930,867.80

Assessor Name: System

Date Created: 07/29/2015

Notes: Remove and replace all wood interior doors, frames and hardware in classrooms, closets, offices, etc

System: C1020 - Interior Doors

Location: main bldg

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace hollow metal frames and doors

Qty: 40.00

Unit of Measure: Ea.

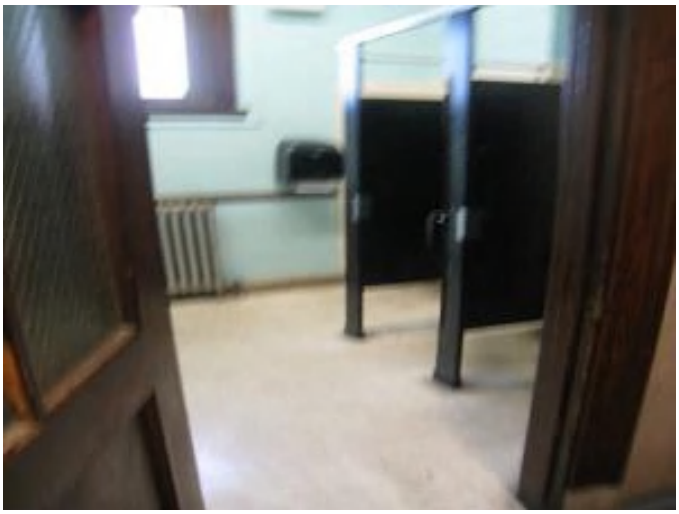
Estimate: $203,119.49

Assessor Name: System

Date Created: 07/29/2015

Notes: Remove and replace all steel doors, frames, and hardware in mechanical rooms and all stairways

System: C1030 - Fittings



Location: main bldg

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace toilet partitions

Qty: 20.00

Unit of Measure: Ea.

Estimate: $51,328.09

Assessor Name: System

Date Created: 07/30/2015

Notes: Replace toilet room partitions where damaged

System: C1030 - Fittings

Location: main bldg

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace toilet accessories - select accessories and quantity

Qty: 10.00

Unit of Measure: Ea.

Estimate: $5,037.71

Assessor Name: System

Date Created: 07/30/2015

Notes: Replace toilet room accessories where damaged

System: C3010230 - Paint & Covering

Location: main bldg

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 20,000.00

Unit of Measure: S.F.

Estimate: $161,659.02

Assessor Name: System

Date Created: 07/30/2015

Notes: Repair and repaint all interior plaster walls where damaged

System: C3010230 - Paint & Covering

Location: main bldg

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 12,000.00

Unit of Measure: S.F.

Estimate: $43,780.39

Assessor Name: System

Date Created: 07/28/2015

Notes: Strip and repaint foundation (basement) walls in mechanical rooms

System: C3010230 - Paint & Covering

Location: main bldg

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 6,000.00

Unit of Measure: S.F.

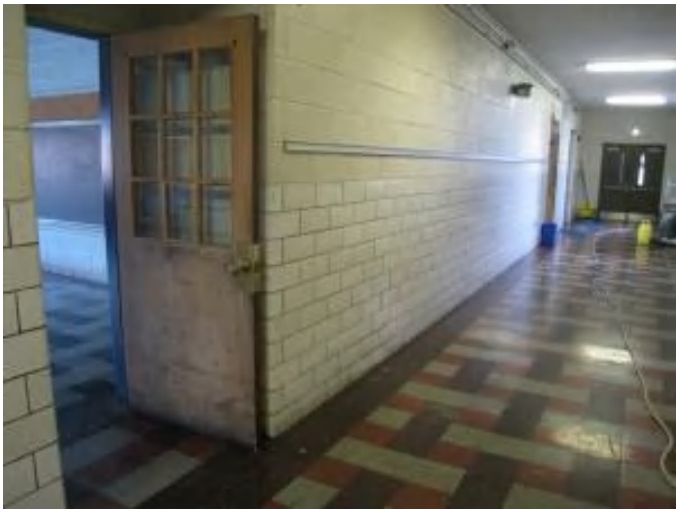
Estimate: $21,890.20

Assessor Name: System

Date Created: 07/29/2015

Notes: Clean and repaint basement floor in mechanical rooms

System: C3020413 - Vinyl Flooring



Location: main bldg

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 14,200.00

Unit of Measure: S.F.

Estimate: $215,366.69

Assessor Name: System

Date Created: 07/29/2015

Notes: Replace VAT floors in main building using proper asbestos abatement procedures if determined asbestos is present in Element 2

System: C3020413 - Vinyl Flooring

Location: main bldg
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace VCT
Qty: 3,000.00
Unit of Measure: S.F.
Estimate: $36,052.60
Assessor Name: System
Date Created: 07/29/2015

Notes: Replace all 12”x12” VCT floors in main bldg

System: C3020414 - Wood Flooring

Location: main bldg
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Refinish wood floors
Qty: 37,440.00
Unit of Measure: S.F.
Estimate: $403,114.23
Assessor Name: System
Date Created: 07/29/2015

Notes: Strip, sand, repair and refinish all wood floors in classrooms and in gym

System: D1010 - Elevators and Lifts

This deficiency has no image.

Location: location to be determined

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $670,322.07

Assessor Name: System

Date Created: 08/07/2015

Notes: add elevator

System: D2040 - Rain Water Drainage

Location: main building roof

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Create new overflow scupper through a parapet with up to 100' downspout

Qty: 5.00

Unit of Measure: Ea.

Estimate: $52,339.33

Assessor Name: System

Date Created: 10/23/2015

Notes: Add overflow scuppers to main building roof parapets

System: E2010 - Fixed Furnishings

Location: main bldg - auditorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 200.00

Unit of Measure: Ea.

Estimate: $180,381.10

Assessor Name: System

Date Created: 07/29/2015

Notes: Repair and replace (if necessary) folding wood auditorium chair with new chairs

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

System: B2030 - Exterior Doors

Location: main bldg

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Replace hardware with compliant hardware, paint and weatherstrip - per leaf

Qty: 12.00

Unit of Measure: Ea.

Estimate: $41,923.68

Assessor Name: System

Date Created: 07/29/2015

Notes: Replace all exterior doors with ADA and code compliant exit hardware

System: D2030 - Sanitary Waste

Location: main building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 96,000.00

Unit of Measure: S.F.

Estimate: $407,674.21

Assessor Name: System

Date Created: 07/31/2015

Notes: Inspect sanitary system throughout the main building.

System: D3020 - Heat Generating Systems

Location: main building

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: System

Date Created: 07/31/2015

Notes: The boilers appear to be at the end of their serviceable life and should be replaced within the next 5 years

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

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

Qty: 60,000.00

Unit of Measure: S.F.

Estimate: $567,622.35

Assessor Name: System

Date Created: 07/31/2015

Notes: Install hot water distribution system.

System: D3040 - Distribution Systems

Location: main building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Install / replace HVAC unit for Auditorium (800 seat).

Qty: 500.00

Unit of Measure: Seat

Estimate: $279,634.38

Assessor Name: System

Date Created: 08/01/2015

Notes: Install AHU to condition the auditorium

System: D5020 - Lighting and Branch Wiring

Location: Entire Building

Distress: Inadequate

Category: 4 - Capital Improvement

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

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

Qty: 1.00

Unit of Measure: S.F.

Estimate: $498,850.92

Assessor Name: System

Date Created: 07/27/2015

Notes: Install minimum two receptacles in each wall of class rooms and sufficient number of receptacles in other areas per NEC. We recommend adding a two-compartment surface mounted raceway.

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

System: B2020 - Exterior Windows

Location: main bldg

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 300.00

Unit of Measure: Ea.

Estimate: $1,791,475.52

Assessor Name: System

Date Created: 07/29/2015

Notes: Replace all exterior windows with insulated single hung units

System: B3010105 - Built-Up

Location: main bldg

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and Replace Built Up Roof

Qty: 19,900.00

Unit of Measure: S.F.

Estimate: $674,252.02

Assessor Name: System

Date Created: 07/29/2015

Notes: Remove and replace existing flat roof and insulation; 5 levels

System: C3010230 - Paint & Covering

Location: main bldg

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 10,000.00

Unit of Measure: S.F.

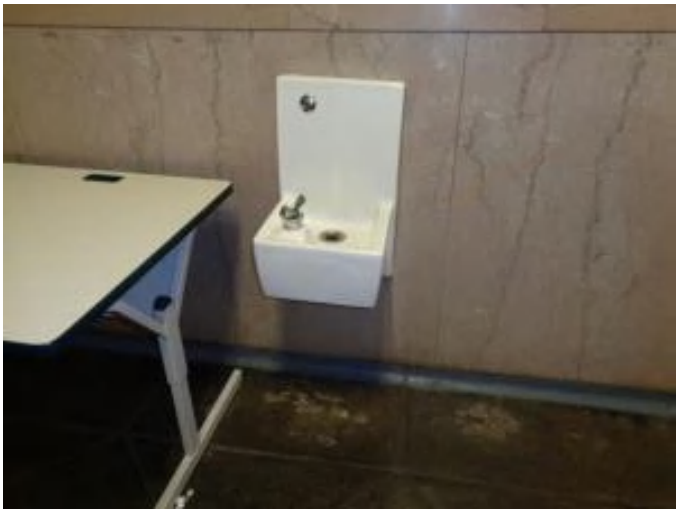
Estimate: $75,020.01

Assessor Name: System

Date Created: 07/29/2015

Notes: Clean and reseal concrete floors in hallways and stairways

System: D2010 - Plumbing Fixtures



Location: main building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

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

Qty: 14.00

Unit of Measure: Ea.

Estimate: $219,700.55

Assessor Name: System

Date Created: 07/31/2015

Notes: Replace all drinking fountains in the Main building

System: D2010 - Plumbing Fixtures

Location: main building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

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

Qty: 20.00

Unit of Measure: Ea.

Estimate: $152,045.46

Assessor Name: System

Date Created: 07/31/2015

Notes: Replace water closets throughout the building (excluding the gang bathrooms in the basement).

System: D2010 - Plumbing Fixtures

Location: main building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

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

Qty: 20.00

Unit of Measure: Ea.

Estimate: $87,002.78

Assessor Name: System

Date Created: 07/31/2015

Notes: Replace lavatories throughout the building (excluding the gang bathrooms in the basement).

System: D2010 - Plumbing Fixtures

Location: main building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 20.00

Unit of Measure: Ea.

Estimate: $69,184.17

Assessor Name: System

Date Created: 07/31/2015

Notes: Replace urinals throughout the building (excluding the gang bathrooms in the basement).

System: D3060 - Controls & Instrumentation

Location: main building

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (150KSF)

Qty: 96,000.00

Unit of Measure: S.F.

Estimate: $1,719,494.57

Assessor Name: System

Date Created: 07/31/2015

Notes: Install a new DDC system to the main building

Priority 5 - Response Time (> 5 yrs):

System: B2010 - Exterior Walls

Location: main bldg
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Sooty and dirty walls - powerwash
Qty: 20,000.00
Unit of Measure: S.F.
Estimate: $21,874.70
Assessor Name: System
Date Created: 07/29/2015

Notes: Clean (powerwash) exterior brickwork front + sides of main building

System: C1010 - Partitions

Location: main bldg
Distress: Obsolete
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Install fire rated walls and door where required - insert number of doors
Qty: 1,000.00
Unit of Measure: S.F.
Estimate: $23,083.08
Assessor Name: System
Date Created: 07/29/2015

Notes: Remove non-rated glass panels between classrooms and corridors; fill with fire rated gyp bd sys

System: C3030 - Ceiling Finishes

Location: main bldg

Distress: Appearance

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Re-paint ceilings - SF of ceilings

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $23,935.14

Assessor Name: System

Date Created: 07/29/2015

Notes: Repaint plaster and concrete ceilings where damaged in the main building

System: D3020 - Heat Generating Systems

Location: main building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Provide fuel oil tank, above ground concrete encased (8,000 gal)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $235,040.98

Assessor Name: System

Date Created: 07/31/2015

Notes: Replace the concrete fuel tank

System: D3020 - Heat Generating Systems

Location: main building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace fuel oil pumps

Qty: 1.00

Unit of Measure: Ea.

Estimate: $26,678.08

Assessor Name: System

Date Created: 07/31/2015

Notes: Replace duplex fuel oil pumps and skid

System: D3030 - Cooling Generating Systems

Location: main building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 75,000.00

Unit of Measure: S.F.

Estimate: $1,204,454.53

Assessor Name: System

Date Created: 08/01/2015

Notes: Install chiller and chilled water distribution system

System: D3040 - Distribution Systems

Location: main building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 96,000.00

Unit of Measure: S.F.

Estimate: $4,630,961.81

Assessor Name: System

Date Created: 08/01/2015

Notes: Install unit ventilators in all classrooms (and IMC) to replace radiators.

System: D3040 - Distribution Systems

This deficiency has no image.

Location: administration area

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 874.00

Unit of Measure: Pr.

Estimate: $378,287.84

Assessor Name: System

Date Created: 08/12/2015

Notes: Install AHU to condition the administrative area

System: D3040 - Distribution Systems

Location: gymnasium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 5,000.00

Unit of Measure: Ea.

Estimate: $256,914.56

Assessor Name: System

Date Created: 08/12/2015

Notes: Install AHU to condition the gymnasium

System: D3040 - Distribution Systems

Location: main building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 150.00

Unit of Measure: Pr.

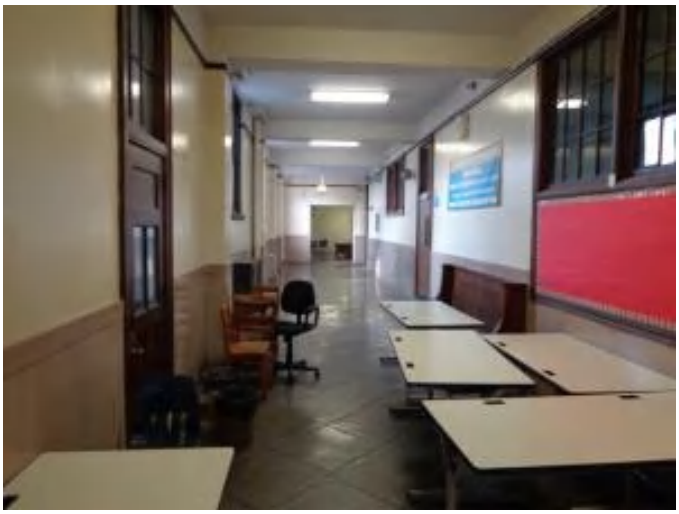
Estimate: $70,133.58

Assessor Name: System

Date Created: 08/01/2015

Notes: Install AHU to condition the cafeteria

System: D4010 - Sprinklers



Location: main building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Install a fire protection sprinkler system

Qty: 96,000.00

Unit of Measure: S.F.

Estimate: $1,373,322.85

Assessor Name: System

Date Created: 07/31/2015

Notes: Install a new sprinkler system

Equipment Inventory

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

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, oil fired, flame retention burner, cast iron, steam, gross output, 4940 MBH, includes standard controls and insulated flush jacket, packaged	1.00	Ea.	boiler room	Weil McLain	94			35			$103,881.00	$114,269.10
D3020 Heat Generating Systems	Boiler, oil fired, flame retention burner, cast iron, steam, gross output, 4940 MBH, includes standard controls and insulated flush jacket, packaged	1.00	Ea.	boiler room	Weil McLain	94			35			$103,881.00	$114,269.10
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, subfeed lug-rated, 400 amp, excl breakers	2.00	Ea.						30	1931	2017	$3,167.10	$6,967.62
												Total:	**$235,505.82**

Executive Summary

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

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

Function:	Little School House
Gross Area (SF):	23,523
Year Built:	1997
Last Renovation:	
Replacement Value:	$15,040,033
Repair Cost:	$666,081.29
Total FCI:	4.43 %
Total RSLI:	60.51 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B722002
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S722001		

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	82.00 %	0.00 %	$0.00
A20 - Basement Construction	82.00 %	0.00 %	$0.00
B10 - Superstructure	82.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	72.15 %	3.58 %	$39,219.80
B30 - Roofing	20.17 %	0.53 %	$11,619.72
C10 - Interior Construction	72.67 %	5.23 %	$28,079.94
C20 - Stairs	82.00 %	0.00 %	$0.00
C30 - Interior Finishes	42.87 %	20.24 %	$214,945.50
D20 - Plumbing	44.94 %	0.00 %	$0.00
D30 - HVAC	45.82 %	11.72 %	$306,582.44
D40 - Fire Protection	48.57 %	7.90 %	$16,739.78
D50 - Electrical	97.51 %	3.54 %	$48,894.11
E10 - Equipment	48.57 %	0.00 %	$0.00
E20 - Furnishings	55.00 %	0.00 %	$0.00
Totals:	**60.51 %**	**4.43 %**	**$666,081.29**

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.	23,523	100	1997	2097		82.00 %	0.00 %	82			$572,079
A1030	Slab on Grade	$15.51	S.F.	23,523	100	1997	2097		82.00 %	0.00 %	82			$364,842
A2010	Basement Excavation	$13.07	S.F.	23,523	100	1997	2097		82.00 %	0.00 %	82			$307,446
A2020	Basement Walls	$23.02	S.F.	23,523	100	1997	2097		82.00 %	0.00 %	82			$541,499
B1010	Floor Construction	$92.20	S.F.	23,523	100	1997	2097		82.00 %	0.00 %	82			$2,168,821
B1020	Roof Construction	$24.11	S.F.	23,523	100	1997	2097		82.00 %	0.00 %	82			$567,140
B2010	Exterior Walls	$31.22	S.F.	23,523	100	1997	2097		82.00 %	2.27 %	82		$16,706.98	$734,388
B2020	Exterior Windows	$13.63	S.F.	23,523	40	1997	2037		55.00 %	1.34 %	22		$4,298.18	$320,618
B2030	Exterior Doors	$1.67	S.F.	23,523	25	1997	2022		28.00 %	46.37 %	7		$18,214.64	$39,283
B3010105	Built-Up	$37.76	S.F.	0	20				0.00 %	0.00 %				$0
B3010120	Single Ply Membrane	$38.73	S.F.	0	20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.	23,523	30	1997	2027	2020	16.67 %	0.91 %	5		$11,619.72	$1,275,417
B3010140	Shingle & Tile	$38.73	S.F.	23,523	20	1997	2017	2020	25.00 %	0.00 %	5			$911,046
B3020	Roof Openings	$0.68	S.F.	23,523	20	1997	2017	2020	25.00 %	0.00 %	5			$15,996
C1010	Partitions	$14.93	S.F.	23,523	100	1997	2097		82.00 %	0.00 %	82			$351,198
C1020	Interior Doors	$3.76	S.F.	23,523	40	1997	2037		55.00 %	31.41 %	22		$27,777.85	$88,446
C1030	Fittings	$4.12	S.F.	23,523	40	1997	2037		55.00 %	0.31 %	22		$302.09	$96,915
C2010	Stair Construction	$1.28	S.F.	23,523	100	1997	2097		82.00 %	0.00 %	82			$30,109

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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	$15.98	S.F.	23,523	10	1997	2007	2020	50.00 %	21.52 %	5		$80,877.73	$375,898
C3010231	Vinyl Wall Covering	$0.00	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$0.83	S.F.	23,523	30	1997	2027	2020	16.67 %	0.00 %	5			$19,524
C3020411	Carpet	$7.30	S.F.	5,000	10	1997	2007	2027	120.00 %	153.30 %	12		$55,953.81	$36,500
C3020412	Terrazzo & Tile	$75.52	S.F.		50				0.00 %	0.00 %				$0
C3020413	Vinyl Flooring	$9.68	S.F.	14,000	20	1997	2017	2027	60.00 %	57.64 %	12		$78,113.96	$135,520
C3020414	Wood Flooring	$22.27	S.F.	0	25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	1,523	50	1997	2047		64.00 %	0.00 %	32			$1,477
C3030	Ceiling Finishes	$20.97	S.F.	23,523	25	1997	2022		28.00 %	0.00 %	7			$493,277
D2010	Plumbing Fixtures	$31.58	S.F.	23,523	35	1997	2032		48.57 %	0.00 %	17			$742,856
D2020	Domestic Water Distribution	$2.90	S.F.	23,523	25	1997	2022		28.00 %	0.00 %	7			$68,217
D2030	Sanitary Waste	$2.90	S.F.	23,523	25	1997	2022		28.00 %	0.00 %	7			$68,217
D2040	Rain Water Drainage	$3.29	S.F.	23,523	30	1997	2027		40.00 %	0.00 %	12			$77,391
D3020	Heat Generating Systems	$18.67	S.F.	23,523	35	1997	2032		48.57 %	0.00 %	17			$439,174
D3030	Cooling Generating Systems	$24.48	S.F.	23,523	30	1997	2027		40.00 %	8.54 %	12		$49,157.36	$575,843
D3040	Distribution Systems	$42.99	S.F.	23,523	25	1997	2022		28.00 %	0.00 %	7			$1,011,254
D3050	Terminal & Package Units	$11.60	S.F.	23,523	20	1997	2017	2024	45.00 %	0.00 %	9			$272,867
D3060	Controls & Instrumentation	$13.50	S.F.	23,523	20	1997	2017	2037	110.00 %	81.06 %	22		$257,425.08	$317,561
D4010	Sprinklers	$8.02	S.F.	23,523	35	1997	2032		48.57 %	8.87 %	17		$16,739.78	$188,654
D4020	Standpipes	$0.99	S.F.	23,523	35	1997	2032		48.57 %	0.00 %	17			$23,288
D5010	Electrical Service/Distribution	$9.70	S.F.	23,523	30	1997	2027		40.00 %	0.00 %	12			$228,173
D5020	Lighting and Branch Wiring	$34.68	S.F.	23,523	20	1997	2017	2037	110.00 %	3.87 %	22		$31,553.33	$815,778
D5030	Communications and Security	$12.99	S.F.	23,523	15	1997	2012	2032	113.33 %	5.68 %	17		$17,340.78	$305,564
D5090	Other Electrical Systems	$1.41	S.F.	23,523	30	1997	2027		40.00 %	0.00 %	12			$33,167
E1020	Institutional Equipment	$4.82	S.F.	23,523	35	1997	2032		48.57 %	0.00 %	17			$113,381
E1090	Other Equipment	$11.10	S.F.	23,523	35	1997	2032		48.57 %	0.00 %	17			$261,105
E2010	Fixed Furnishings	$2.13	S.F.	23,523	40	1997	2037		55.00 %	0.00 %	22			$50,104
								Total	**60.51 %**	**4.43 %**			**$666,081.29**	**$15,040,033**

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: B3010130 - Preformed Metal Roofing — This system contains no images
Note: standing seam metal roof <3%

System: B3010140 - Shingle & Tile — This system contains no images
Note: asphalt shingle roof >97%

System: C1010 - Partitions — This system contains no images
Note: painted concrete masonry units (block) 90%
painted gypsum board and metal stud - upper walls and clerestories 10%

System: C3010 - Wall Finishes — This system contains no images
Note: paint 95%
tile 5%

System: C3010230 - Paint & Covering — This system contains no images
Note: painted block or gyp bd 95%

System: C3010232 - Wall Tile — This system contains no images
Note: ceramic tile wainscot 5%

System: C3020411 - Carpet — This system contains no images
Note: glue-down broadloom carpet 22%

System: C3020412 - Terrazzo & Tile — This system contains no images
Note: ceramic tile 13%

System: C3020413 - Vinyl Flooring — This system contains no images
Note: vinyl floor finish 60%

System: C3020415 - Concrete Floor Finishes — This system contains no images
Note: sealed concrete 5%

System: C3030 - Ceiling Finishes — This system contains no images
Note: exposed wood deck ceiling 33%
suspended acoustical tile ceiling 67%

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:	**$666,081**	**$0**	**$0**	**$0**	**$0**	**$3,312,819**	**$0**	**$2,273,141**	**$0**	**$391,632**	**$0**	**$6,643,674**
*** 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	$16,707	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$16,707**
B2020 - Exterior Windows	$4,298	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,298**
B2030 - Exterior Doors	$18,215	$0	$0	$0	$0	$0	$0	$53,145	$0	$0	$0	**$71,360**
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	$11,620	$0	$0	$0	$0	$1,626,414	$0	$0	$0	$0	$0	**$1,638,034**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$1,161,767	$0	$0	$0	$0	$0	**$1,161,767**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$20,397	$0	$0	$0	$0	$0	**$20,397**
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**

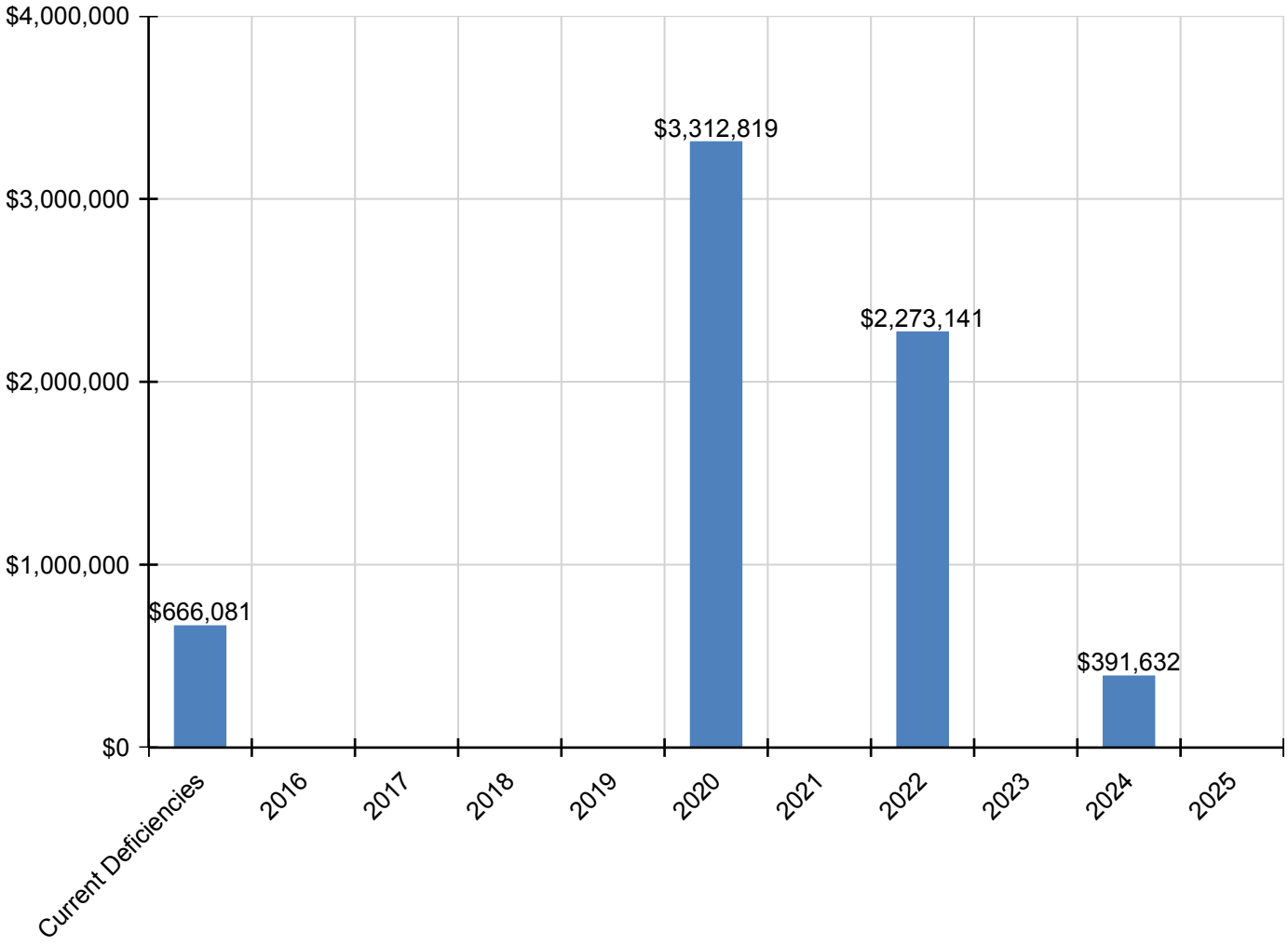
C1020 - Interior Doors	$27,778	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$27,778**
C1030 - Fittings	$302	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$302**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$80,878	$0	$0	$0	$0	$479,345	$0	$0	$0	$0	$0	**$560,222**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$24,897	$0	$0	$0	$0	$0	**$24,897**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$55,954	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$55,954**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$78,114	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$78,114**
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	$0	$0	$0	$0	$0	$0	$0	$667,336	$0	$0	$0	**$667,336**
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	$0	$0	$0	$0	$0	$0	$0	$92,287	$0	$0	$0	**$92,287**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$92,287	$0	$0	$0	**$92,287**
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	$49,157	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$49,157**
D3040 - Distribution Systems	$0	$0	$0	$0	$0	$0	$0	$1,368,086	$0	$0	$0	**$1,368,086**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$391,632	$0	**$391,632**
D3060 - Controls & Instrumentation	$257,425	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$257,425**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$16,740	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$16,740**
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	$31,553	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$31,553**
D5030 - Communications and Security	$17,341	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$17,341**
D5090 - Other Electrical Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

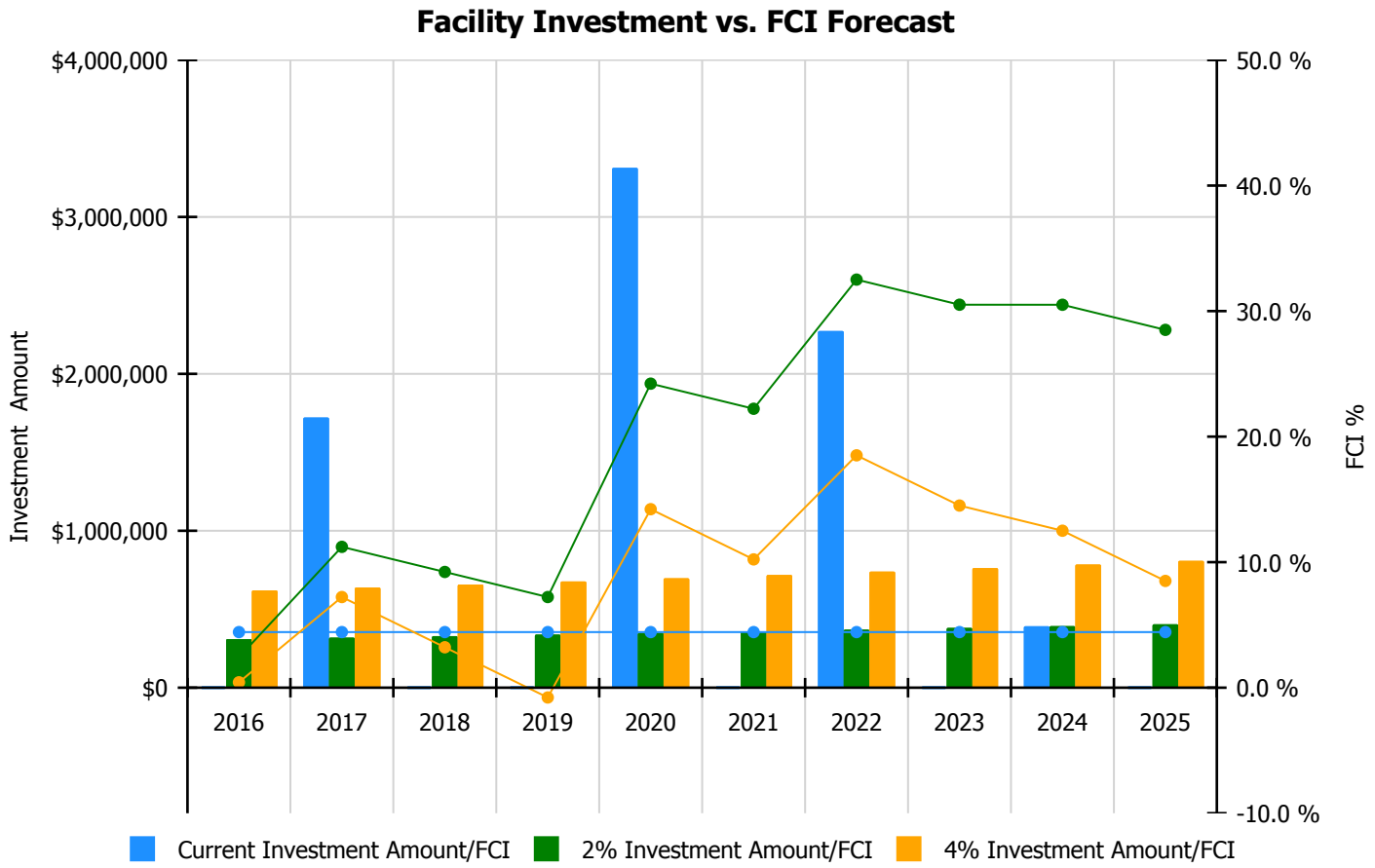
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

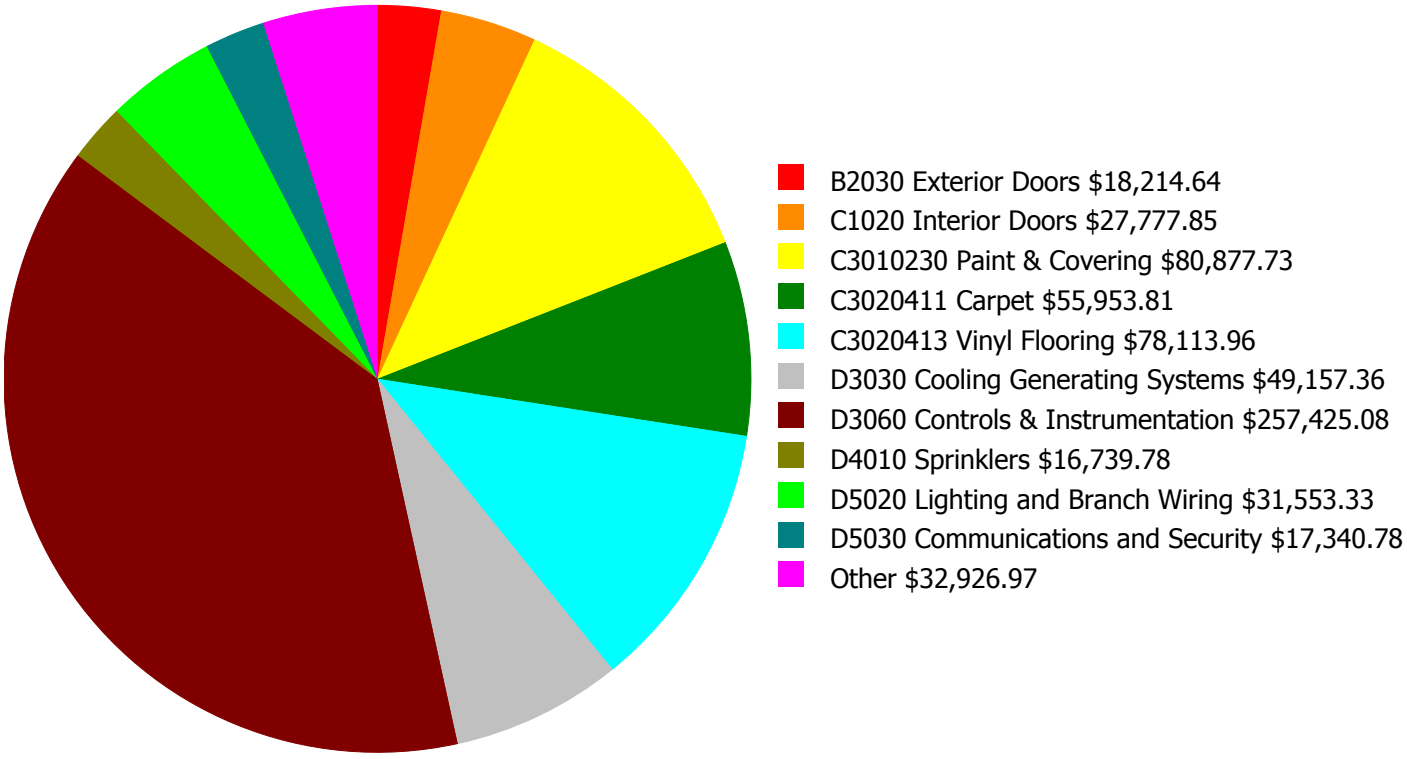
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 4.43%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$309,825.00	2.43 %	$619,649.00	0.43 %
2017	$1,721,779	$319,119.00	11.22 %	$638,239.00	7.22 %
2018	$0	$328,693.00	9.22 %	$657,386.00	3.22 %
2019	$0	$338,554.00	7.22 %	$677,108.00	-0.78 %
2020	$3,312,819	$348,710.00	24.22 %	$697,421.00	14.22 %
2021	$0	$359,172.00	22.22 %	$718,343.00	10.22 %
2022	$2,273,141	$369,947.00	32.51 %	$739,894.00	18.51 %
2023	$0	$381,045.00	30.51 %	$762,091.00	14.51 %
2024	$391,632	$392,477.00	30.50 %	$784,953.00	12.50 %
2025	$0	$404,251.00	28.50 %	$808,502.00	8.50 %
Total:	**$7,699,371**	**$3,551,793.00**		**$7,103,586.00**	

Deficiency Summary by System

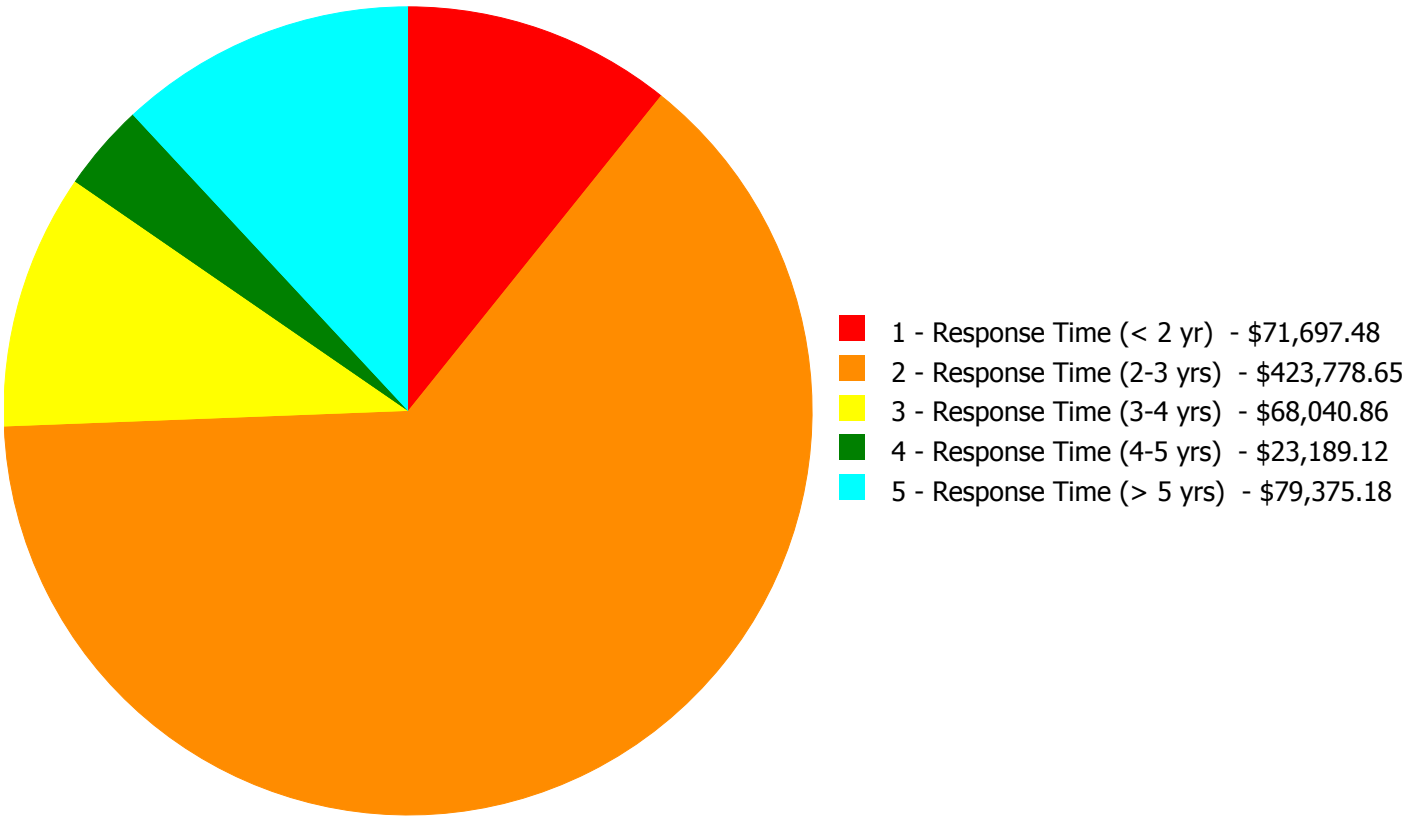
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $666,081.29

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: $666,081.29

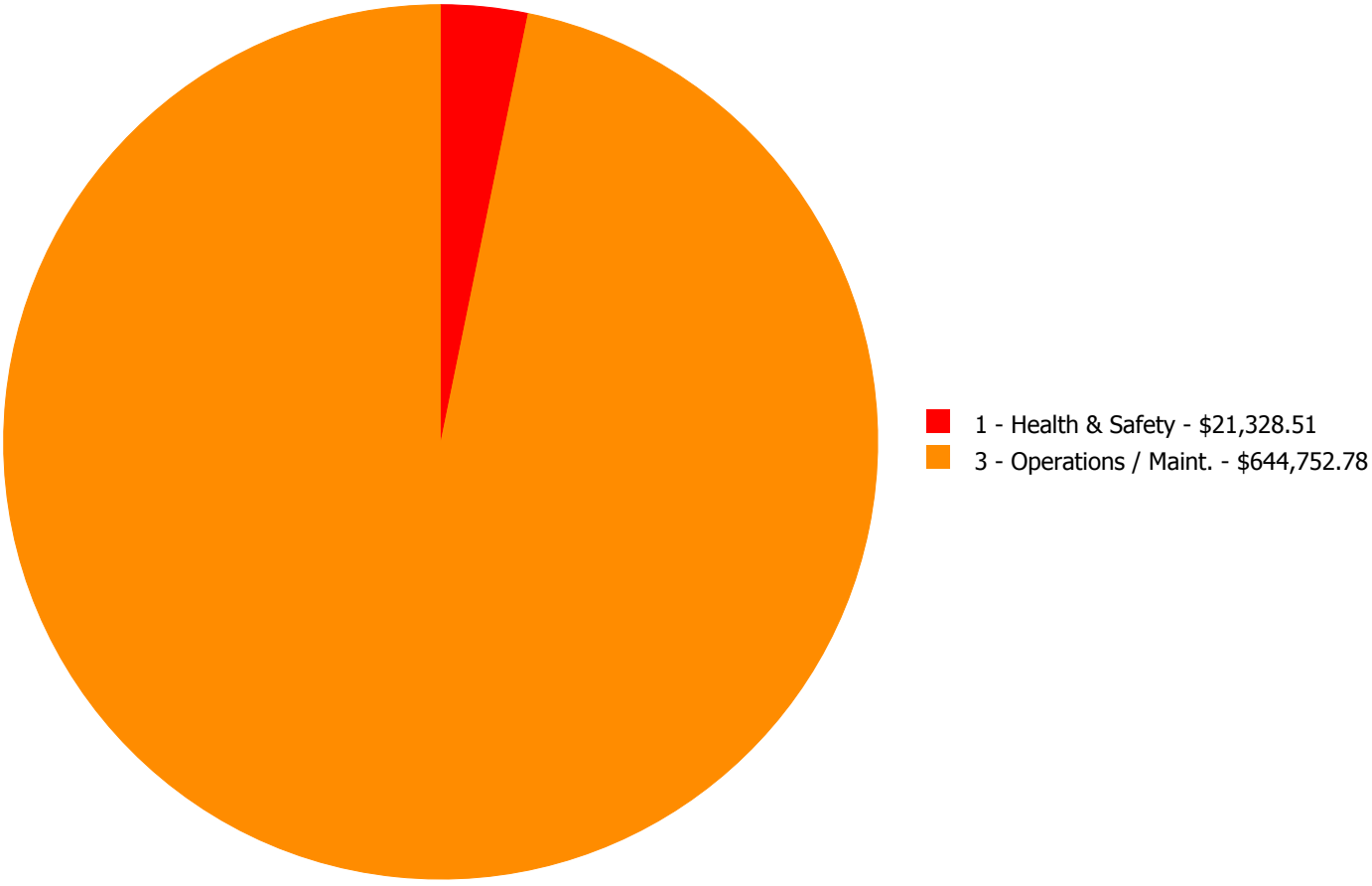
Deficiency By Priority Investment Table

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	$3,228.94	$0.00	$0.00	$13,478.04	$16,706.98
B2020	Exterior Windows	$0.00	$4,298.18	$0.00	$0.00	$0.00	$4,298.18
B2030	Exterior Doors	$18,214.64	$0.00	$0.00	$0.00	$0.00	$18,214.64
B3010130	Preformed Metal Roofing	$0.00	$11,619.72	$0.00	$0.00	$0.00	$11,619.72
C1020	Interior Doors	$4,588.73	$0.00	$0.00	$23,189.12	$0.00	$27,777.85
C1030	Fittings	$0.00	$0.00	$302.09	$0.00	$0.00	$302.09
C3010230	Paint & Covering	$0.00	$13,138.96	$67,738.77	$0.00	$0.00	$80,877.73
C3020411	Carpet	$0.00	$55,953.81	$0.00	$0.00	$0.00	$55,953.81
C3020413	Vinyl Flooring	$0.00	$78,113.96	$0.00	$0.00	$0.00	$78,113.96
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$49,157.36	$49,157.36
D3060	Controls & Instrumentation	$0.00	$257,425.08	$0.00	$0.00	$0.00	$257,425.08
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$16,739.78	$16,739.78
D5020	Lighting and Branch Wiring	$31,553.33	$0.00	$0.00	$0.00	$0.00	$31,553.33
D5030	Communications and Security	$17,340.78	$0.00	$0.00	$0.00	$0.00	$17,340.78
	Total:	$71,697.48	$423,778.65	$68,040.86	$23,189.12	$79,375.18	$666,081.29

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: $666,081.29

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: B2030 - Exterior Doors

Location: LSH

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Remove and replace exterior doors - per leaf

Qty: 2.00

Unit of Measure: Ea.

Estimate: $18,214.64

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Replace broken glass at main entrance door sidelight and broken plexiglass at side entrance

System: C1020 - Interior Doors

Location: LSH

Distress: Security Issue

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Provide security hardware for classroom and office doors

Qty: 20.00

Unit of Measure: Ea.

Estimate: $4,588.73

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Provide security hardware for classrooms and offices, locking from inside classroom

System: D5020 - Lighting and Branch Wiring

Location: LSH
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Replace Wiring Device
Qty: 100.00
Unit of Measure: Ea.
Estimate: $31,553.33
Assessor Name: Craig Anding
Date Created: 07/28/2015

Notes: Replace GFIC receptacle in the areas subject to kid access. Estimated 100 each. ID#11007

System: D5030 - Communications and Security

Location: LSH
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Add/Replace Clock System or Components
Qty: 0.00
Unit of Measure: Ea.
Estimate: $17,340.78
Assessor Name: Craig Anding
Date Created: 07/28/2015

Notes: Replace existing master clock controller with new wireless battery operated clock system.

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

System: B2010 - Exterior Walls

Location: LSH

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 100.00

Unit of Measure: S.F.

Estimate: $3,228.94

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Repair brick and mortar in "V" window facing playground in the MPR damaged from impact

System: B2020 - Exterior Windows

Location: LSH

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace security screens

Qty: 28.00

Unit of Measure: S.F.

Estimate: $4,298.18

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Replace exterior security screens on 4'x8' windows

System: B3010130 - Preformed Metal Roofing

Location: LSH

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace preformed metal roofing

Qty: 200.00

Unit of Measure: S.F.

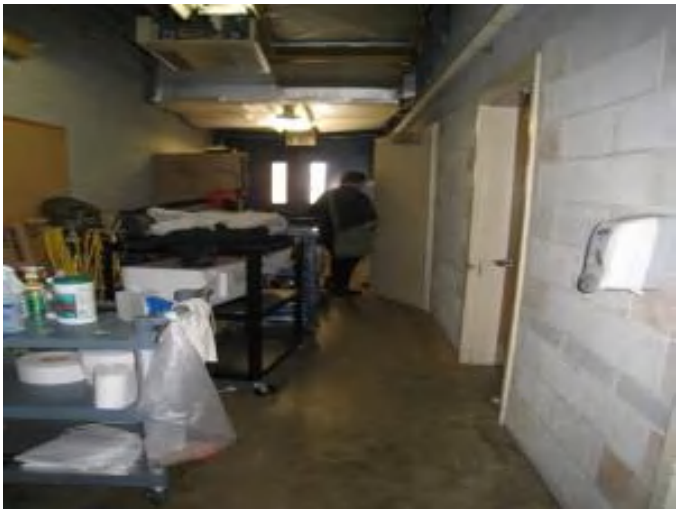
Estimate: $11,619.72

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Replace metal roofs over multipurpose room windows and clerestories due to leaks

System: C3010230 - Paint & Covering



Location: LSH

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 1,523.00

Unit of Measure: S.F.

Estimate: $11,425.54

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Clean and reseal concrete floors in mechanical areas

System: C3010230 - Paint & Covering

Location: LSH

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 200.00

Unit of Measure: S.F.

Estimate: $1,713.42

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Peeling paint and gypsum board damage at one register in clerestory and multipurpose room water damage area

System: C3020411 - Carpet

Location: LSH

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Remove and replace carpet

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $55,953.81

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Replace classroom carpet floor surface

System: C3020413 - Vinyl Flooring

Location: LSH
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace VCT
Qty: 6,000.00
Unit of Measure: S.F.
Estimate: $72,105.19
Assessor Name: Craig Anding
Date Created: 07/30/2015

Notes: Replace sheet vinyl floor in classrooms

System: C3020413 - Vinyl Flooring

Location: LSH
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace VCT
Qty: 500.00
Unit of Measure: S.F.
Estimate: $6,008.77
Assessor Name: Craig Anding
Date Created: 07/30/2015

Notes: Replace VCT in multipurpose room and corridors where expansion joint cracked tiles (300sf)

System: D3060 - Controls & Instrumentation

Location: LSH

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 12,000.00

Unit of Measure: S.F.

Estimate: $257,425.08

Assessor Name: Craig Anding

Date Created: 07/31/2015

Notes: Install a new DDC system, re-commission, and provide training for maintenance personnel

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

System: C1030 - Fittings

Location: LSH

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $302.09

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Replace missing "O" of Little School House

System: C3010230 - Paint & Covering

Location: LSH

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 10,000.00

Unit of Measure: S.F.

Estimate: $67,738.77

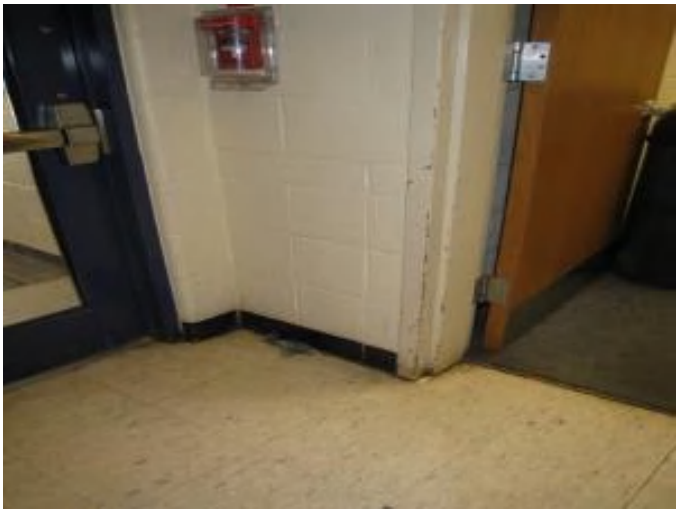
Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Repaint all corridor walls

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

System: C1020 - Interior Doors



Location: LSH

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Refinish interior doors

Qty: 28.00

Unit of Measure: Ea.

Estimate: $23,189.12

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Repaint all hollow metal door frames; Refinish stained and dirty wood doors

Priority 5 - Response Time (> 5 yrs):

System: B2010 - Exterior Walls

Location: LSH

Distress: Appearance

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove graffiti - power wash and paint

Qty: 2,000.00

Unit of Measure: S.F.

Estimate: $13,478.04

Assessor Name: Craig Anding

Date Created: 07/30/2015

Notes: Clean exterior brickwork

System: D3030 - Cooling Generating Systems

Location: LSH

Distress: Obsolete

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Convert air-cooled chiller to alternative refrigerant (80T)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $49,157.36

Assessor Name: Craig Anding

Date Created: 07/31/2015

Notes: Convert the chiller over to a new refrigerant or replace with a new air cooled chiller

System: D4010 - Sprinklers

Location: LSH

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Provide kitchen hood fire suppression system (8 FT)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $16,739.78

Assessor Name: Craig Anding

Date Created: 07/31/2015

Notes: Install chemical sprinkler system for kitchen hood

Equipment Inventory

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

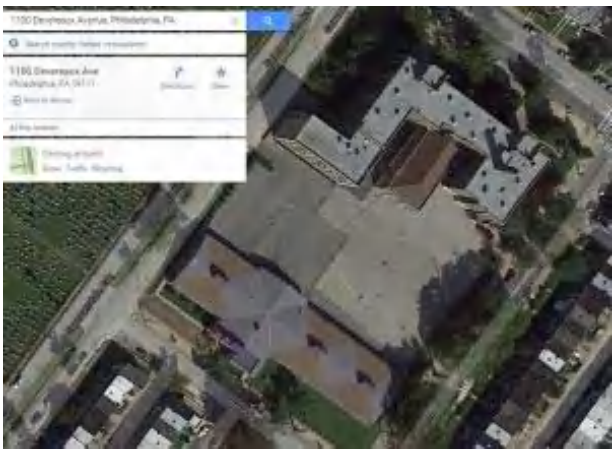
Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, packaged water tube, gas fired, steam or hot water, gross output, 1680 MBH	1.00	Ea.	mechanical room	Burnham	V1106W	26001774		35	1997	2032	$40,323.70	$44,356.07
D3020 Heat Generating Systems	Boiler, packaged water tube, gas fired, steam or hot water, gross output, 1680 MBH	1.00	Ea.	mechanical room	Burnham	V1106W	26001772		35	1997	2032	$40,323.70	$44,356.07
D3030 Cooling Generating Systems	Chiller, reciprocating, air cooled, standard controls, 80 ton	1.00	Ea.	mechanical yard	Carrier	30GN-080--K510--	1797F69249		15			$90,207.10	$99,227.81
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 277/480 V, 3 phase, 400 A	1.00	Ea.						20	1997	2017	$20,461.95	$22,508.15
												Total:	**$210,448.10**

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):	119,000
Year Built:	1937
Last Renovation:	
Replacement Value:	$2,518,520
Repair Cost:	$386,982.12
Total FCI:	15.37 %
Total RSLI:	42.55 %



Description:

Attributes:

General Attributes:

Bldg ID:	S722001	Site ID:	S722001

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	43.21 %	19.34 %	$386,982.12
G40 - Site Electrical Utilities	40.00 %	0.00 %	$0.00
Totals:	**42.55 %**	**15.37 %**	**$386,982.12**

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.	0	30	1997	2027		40.00 %	0.00 %	12			$0
G2020	Parking Lots	$7.65	S.F.	55,000	30	1997	2027		40.00 %	31.69 %	12		$133,334.74	$420,750
G2030	Pedestrian Paving	$11.52	S.F.	79,000	40	1997	2037		55.00 %	18.73 %	22		$170,443.72	$910,080
G2040	Site Development	$4.36	S.F.	119,000	25	1997	2022		28.00 %	16.04 %	7		$83,203.66	$518,840
G2050	Landscaping & Irrigation	$3.78	S.F.	40,000	15	1997	2012	2020	33.33 %	0.00 %	5			$151,200
G4020	Site Lighting	$3.58	S.F.	119,000	30	1997	2027		40.00 %	0.00 %	12			$426,020
G4030	Site Communications & Security	$0.77	S.F.	119,000	30	1997	2027		40.00 %	0.00 %	12			$91,630
								Total	**42.55 %**	**15.37 %**			**$386,982.12**	**$2,518,520**

System Notes

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

No data found for this asset

Renewal Schedule

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

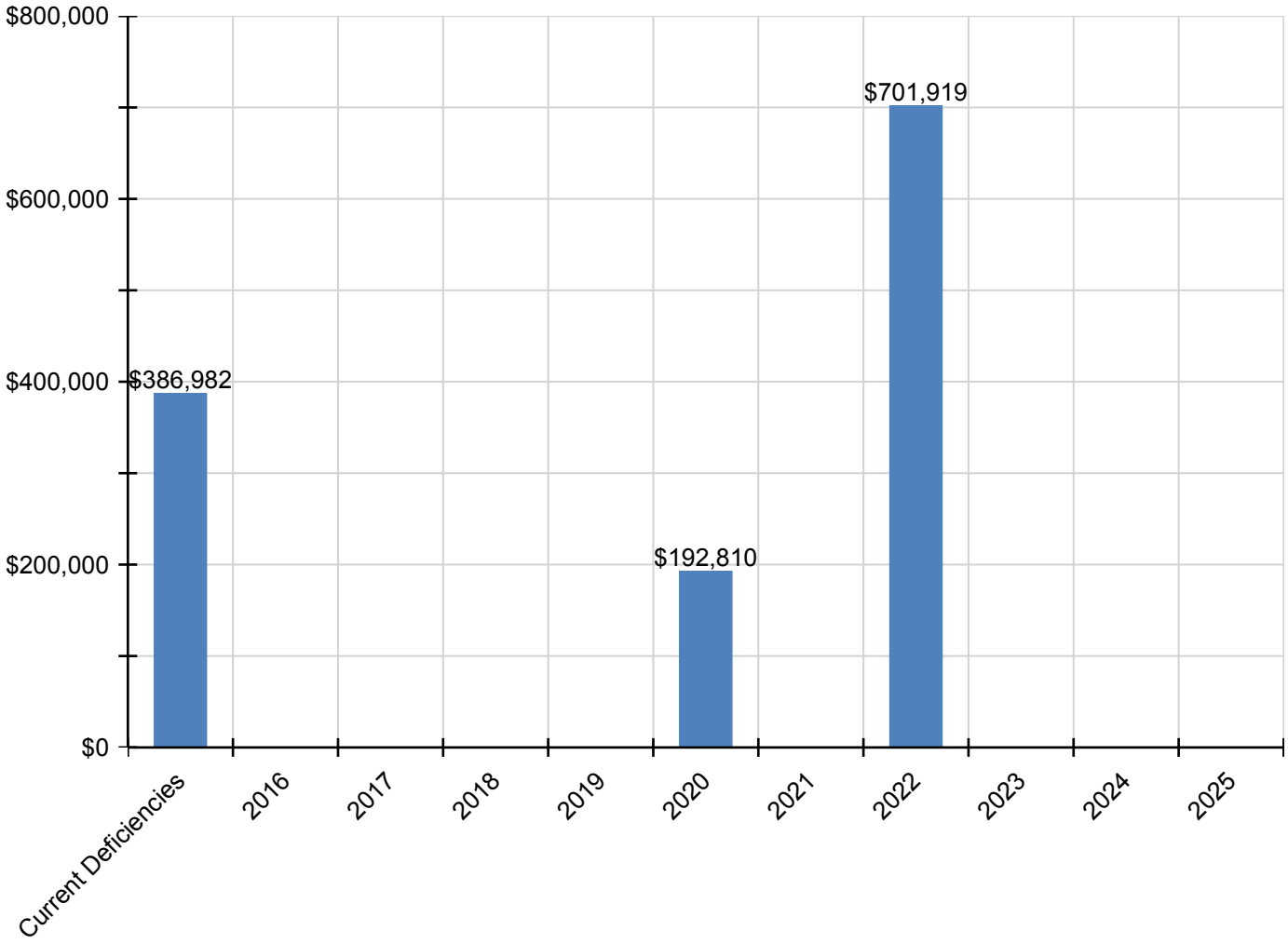
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$386,982**	**$0**	**$0**	**$0**	**$0**	**$192,810**	**$0**	**$701,919**	**$0**	**$0**	**$0**	**$1,281,711**
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	$133,335	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$133,335**
G2030 - Pedestrian Paving	$170,444	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$170,444**
G2040 - Site Development	$83,204	$0	$0	$0	$0	$0	$0	$701,919	$0	$0	$0	**$785,122**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$192,810	$0	$0	$0	$0	$0	**$192,810**
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

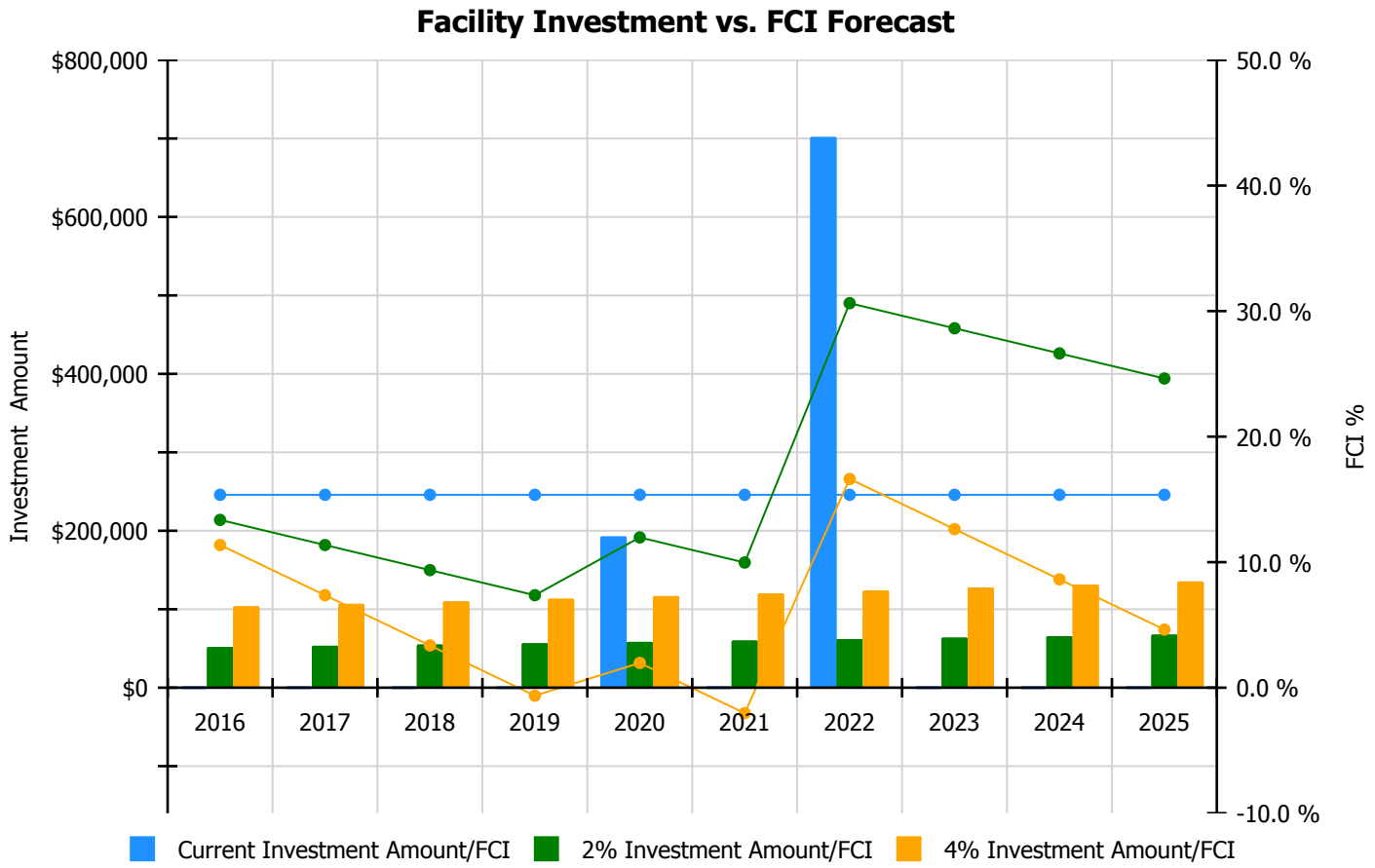
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

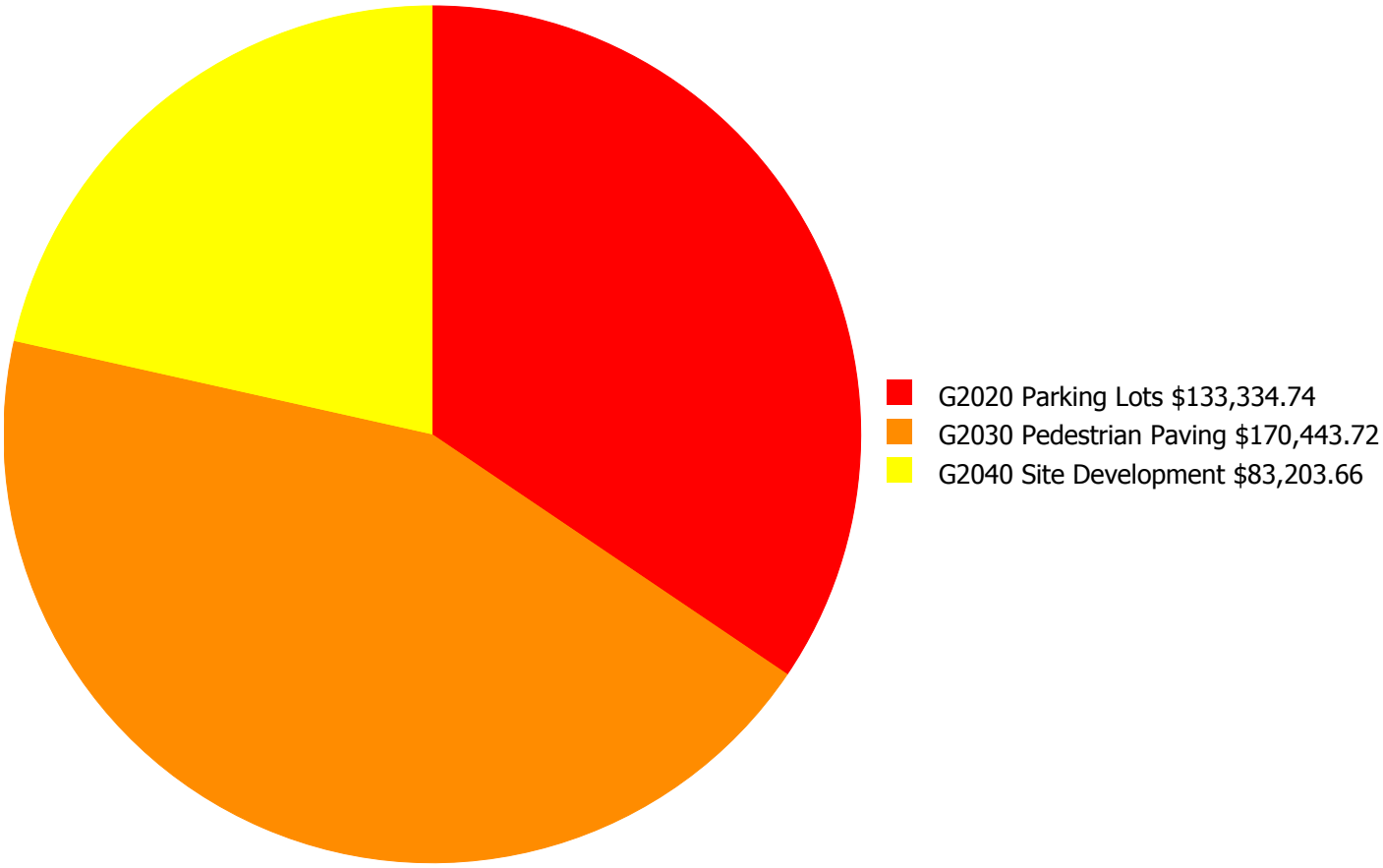
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 15.37%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$51,882.00	13.37 %	$103,763.00	11.37 %
2017	$0	$53,438.00	11.37 %	$106,876.00	7.37 %
2018	$0	$55,041.00	9.37 %	$110,082.00	3.37 %
2019	$0	$56,692.00	7.37 %	$113,385.00	-0.63 %
2020	$192,810	$58,393.00	11.97 %	$116,786.00	1.97 %
2021	$0	$60,145.00	9.97 %	$120,290.00	-2.03 %
2022	$701,919	$61,949.00	30.63 %	$123,898.00	16.63 %
2023	$0	$63,808.00	28.63 %	$127,615.00	12.63 %
2024	$0	$65,722.00	26.63 %	$131,444.00	8.63 %
2025	$0	$67,694.00	24.63 %	$135,387.00	4.63 %
Total:	**$894,729**	**$594,764.00**		**$1,189,526.00**	

Deficiency Summary by System

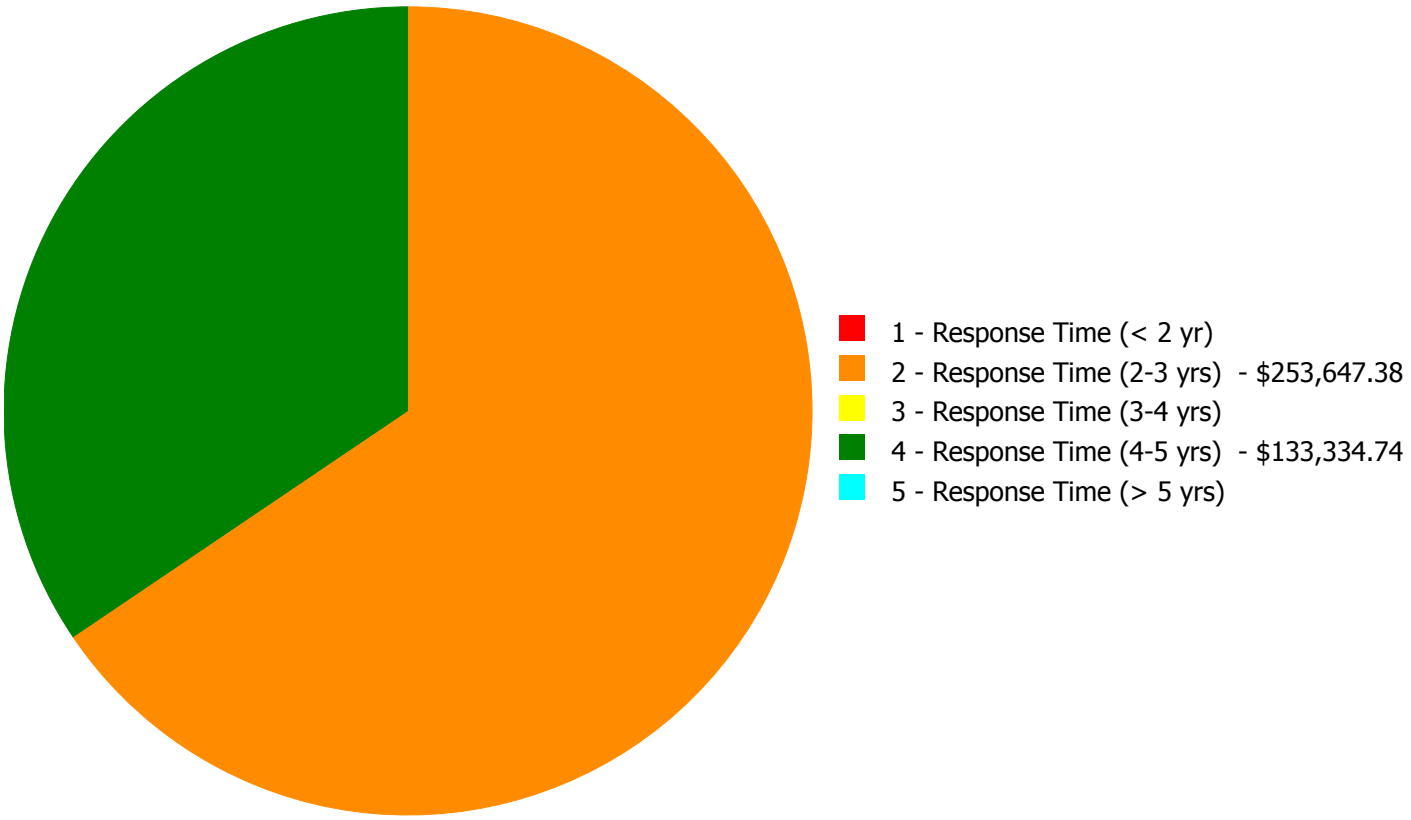
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $386,982.12

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: $386,982.12

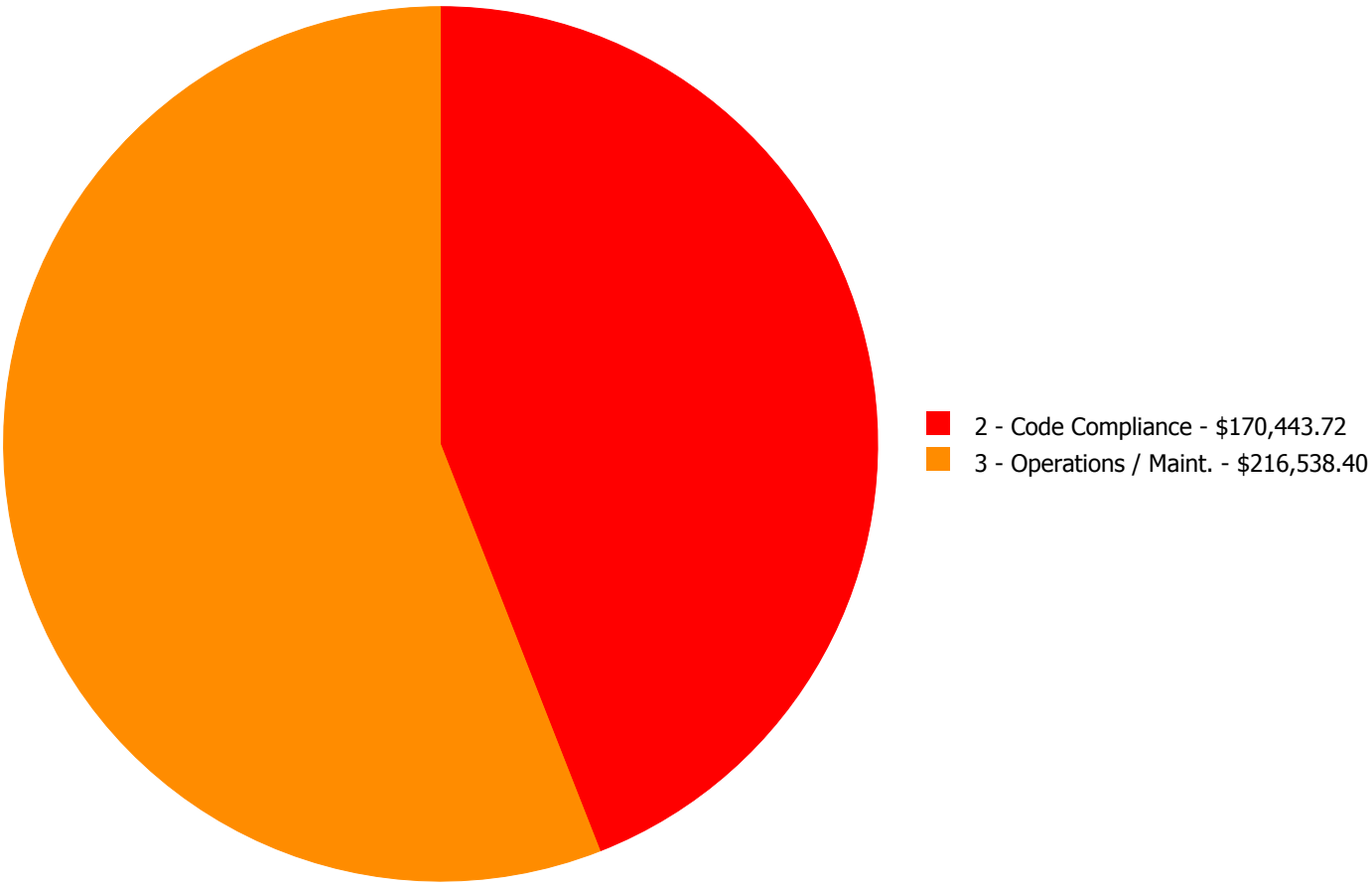
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2020	Parking Lots	$0.00	$0.00	$0.00	$133,334.74	$0.00	$133,334.74
G2030	Pedestrian Paving	$0.00	$170,443.72	$0.00	$0.00	$0.00	$170,443.72
G2040	Site Development	$0.00	$83,203.66	$0.00	$0.00	$0.00	$83,203.66
	Total:	$0.00	$253,647.38	$0.00	$133,334.74	$0.00	$386,982.12

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: $386,982.12

Deficiency Details by Priority

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

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

System: G2030 - Pedestrian Paving

This deficiency has no image.

Location: outside 1 door
Distress: Building / MEP Codes
Category: 2 - Code Compliance
Priority: 2 - Response Time (2-3 yrs)
Correction: Install an exterior ADA ramp - based on 5' wide by the linear foot - up to 84" rise - per LF of ramp - figure 1 LF of ramp per inch of rise
Qty: 72.00
Unit of Measure: L.F.
Estimate: $170,443.72
Assessor Name: Ben Nixon
Date Created: 08/07/2015

Notes: add handicap accessible ramp into building

System: G2040 - Site Development

This deficiency has no image.

Location: site fence
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Paint steel picket fence - LF of fence 6' high
Qty: 1,000.00
Unit of Measure: L.F.
Estimate: $65,260.05
Assessor Name: Ben Nixon
Date Created: 07/29/2015

Notes: Repaint wrought iron fencing

System: G2040 - Site Development

Location: play area fence

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace chain link fence - 6' high

Qty: 200.00

Unit of Measure: L.F.

Estimate: $17,943.61

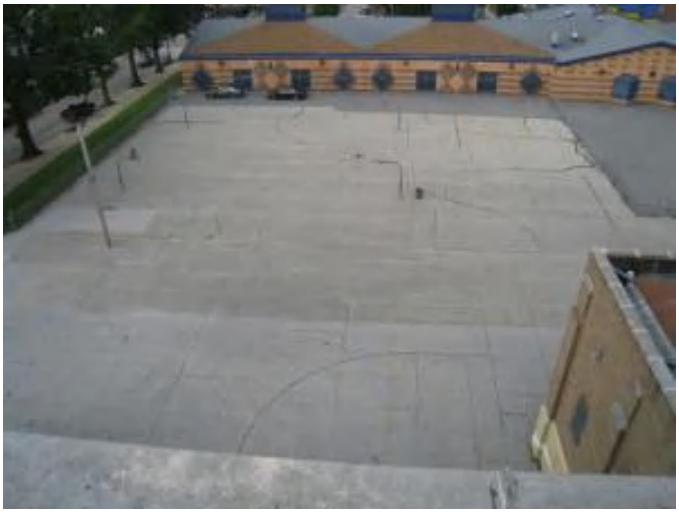
Assessor Name: Ben Nixon

Date Created: 07/30/2015

Notes: Replace damaged chain link fence surrounding play area

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

System: G2020 - Parking Lots



Location: parking lot and play area

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Resurface parking lot - grind and resurface including striping

Qty: 35,000.00

Unit of Measure: S.F.

Estimate: $133,334.74

Assessor Name: Ben Nixon

Date Created: 07/29/2015

Notes: Repave asphalt parking / playground area

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