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.

Hopkinson School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	4001 L St.	Enrollment	922
	Philadelphia, Pa 19124	Grade Range	'00-08'
Phone/Fax	215-537-2526 / 215-537-2900	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Hopkinson	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**40.70%**	**$17,562,414**	**$43,154,448**
Building	51.84 %	$16,795,172	$32,399,990
Grounds	17.14 %	$211,567	$1,234,560

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	39.55 %	$307,456	$777,343
Exterior Walls (Shows condition of the structural condition of the exterior facade)	06.61 %	$158,640	$2,399,150
Windows (Shows functionality of exterior windows)	166.03 %	$1,943,654	$1,170,650
Exterior Doors (Shows condition of exterior doors)	137.44 %	$129,537	$94,250
Interior Doors (Classroom doors)	239.80 %	$547,100	$228,150
Interior Walls (Paint and Finishes)	30.60 %	$334,333	$1,092,650
Plumbing Fixtures	79.11 %	$695,213	$878,800
Boilers	108.10 %	$1,311,841	$1,213,550
Chillers/Cooling Towers	52.26 %	$831,584	$1,591,200
Radiators/Unit Ventilators/HVAC	139.03 %	$3,884,975	$2,794,350
Heating/Cooling Controls	102.06 %	$895,570	$877,500
Electrical Service and Distribution	134.46 %	$847,757	$630,500
Lighting	40.68 %	$916,957	$2,254,200
Communications and Security (Cameras, Pa System and Fire Alarm)	84.83 %	$716,265	$844,350

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.

Hopkinson LSH School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	4001 L St.	Enrollment	
	Philadelphia, Pa 19124	Grade Range	'00-08'
Phone/Fax	215-537-2526 / 215-537-2900	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Hopkinson	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**40.70%**	**$17,562,414**	**$43,154,448**
Building	05.84 %	$555,675	$9,519,898
Grounds	17.14 %	$211,567	$1,234,560

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$637,071
Exterior Walls (Shows condition of the structural condition of the exterior facade)	00.00 %	$0	$499,770
Windows (Shows functionality of exterior windows)	02.25 %	$4,912	$218,189
Exterior Doors (Shows condition of exterior doors)	60.88 %	$16,274	$26,733
Interior Doors (Classroom doors)	28.11 %	$16,922	$60,190
Interior Walls (Paint and Finishes)	08.88 %	$22,506	$253,567
Plumbing Fixtures	00.00 %	$0	$505,533
Boilers	00.00 %	$0	$298,869
Chillers/Cooling Towers	00.00 %	$0	$391,876
Radiators/Unit Ventilators/HVAC	00.00 %	$0	$688,184
Heating/Cooling Controls	158.82 %	$343,231	$216,108
Electrical Service and Distribution	00.00 %	$0	$155,278
Lighting	00.32 %	$1,765	$555,157
Communications and Security (Cameras, Pa System and Fire Alarm)	70.43 %	$146,460	$207,944

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

S730001;Hopkinson

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):	65,000
Year Built:	1927
Last Renovation:	
Replacement Value:	$43,154,448
Repair Cost:	$17,562,414.00
Total FCI:	40.70 %
Total RSLI:	70.56 %

Description:

Facility Condition Assessment
July 2015

School District of Philadelphia
Francis Hopkinson Elementary School
4001 L Street
Philadelphia, PA 19124

49,285sf / 635 students / LN 07

General

Francis Hopkinson School is located at 4000 L Street. The main entrance faces L Street. The main building was constructed in 1927 has 49,285 square feet, and is 3 stories tall. There is a full basement. Two additional buildings are located on the site: a Little School House, constructed in 1998 and a "Portable Building", constructed around 2000. The Hopkinson School can be found on the National Historical Register, number 88002282 with the address of 1301 East Lucerne Street. Ed Flaherty, the Building Engineer accompanied the team during the building inspection.

Architectural/Structural

Foundations in the main building appear to be constructed of concrete 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. Cracks of this nature can be sources of water infiltration from outside into 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. The Portable Building is built on cast in place concrete foundations on grade. It appears that there is a grade beam set a grade level, supported on piers. Structural cracking of two corner piers and a grade beam was observed.

Floor slabs in the main building basement are in good condition although covered with ground-in 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. Portable Building floor slab is in good condition.

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 is one perpendicular element forming the building entrance / office area and multi-purpose room element which creates an "L" design. This arrangement creates sloping valleys at the "L" intersection which allows for positive drainage all around the roof. Clerestories and roofs over Multi-purpose room (MPR) windows and entrance element are constructed of a standing seam metal roofing system. Roof over the MPR need to be repainted. Clerestory panels are fading, but no action is required at this time. The roof over the Portable building is constructed of precast concrete "T" planks, spanning from side walls to 2 internal walls a little more than 6 feet apart in the center of the building. The roof "T"s appear to be in good condition as viewed from inside the building.

Exterior walls of the main building are generally in good condition, however the lintels above most basement windows, some upper windows, and some doors are rusted with brick joint cracks extending from the lintels into the brick joints in the walls. Lintels should be replaced when windows are replaced. 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 number of other horizontal masonry cracks were observed in exterior walls at below the level of the roof and above the foundation. A more detailed inspection of the masonry is required to determine if this cracking is related to structural failures and to assess the extent of failing joints for to ensure a watertight envelope. Exterior walls of the Little School House (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. The brick has a glossy finish and is in very good condition with minimal efflorescence or dirt buildup. A few years ago, the corner of the building at L Street and Luzerne Street, was hit by a vehicle which damaged the brickwork. Repairs from this accident have not aged well and the area requires some brick repair/replacement, once again. The exterior walls of the Portable Building form flat wall sections and pilasters under "T" bearing points and they are generally intact, despite an isolated area of surface spalling.

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 plexiglass vision panels. Operable panes are difficult to move up and down; some do not stay open due to broken internal counterbalance weights. Single pane plexiglas units do not meet today's energy code requirements and are large sources of heat loss. Basement level windows are mostly at or slightly above grade, when viewed from the outside, however on the north side of the building they are slightly below grade with sills located in a concrete window well; this forms an area that collects leaves and garbage, requiring frequent maintenance. Galvanized steel security screens attached to basement windows, the lower section of 1st floor windows, and the auditorium windows are in good condition. Exterior windows in the LSH are insulated glass in a painted aluminum tube framing system. The windows in the Multi-Purpose Room have graffiti on the windows; they need to be replaced. Exterior windows are protected by security screens that cover all windows on all sides of the building. The screens facing the play area are dented and there is graffiti on all of the screens around the building. Portable Building windows are horizontal sliding aluminum

framed units with security screens on the outside. These windows are difficult to slide open and closed. Many of the windows show signs of leaking at sills.

Exterior doors on the main building are painted steel framed flush hollow metal units with steel frames. Some doors have small glazing vision panels. The main entrance and secondary main entrance on L Street have decorative Romanesque-style tile arches around door openings. They should be cleaned to highlight their style and artistic technique. Most doors have pictures painted on them possibly by students. Doors are in generally poor condition, have broken or non-functioning panic hardware, rusted dented panels, rusted frames, and are not ADA compliant. There are no handicap entrances, no accessible ramps, and no elevators in the main building. All exterior steel doors, frames, 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. Where plexiglass is also used for sidelights, it is scratched and needs to be replaced. There is a handicap accessible entrance into the Little School House. The steel frame of the hollow metal entrance door to the mechanical area is rusted and needs to be replaced. Portable Building has two sets of doors, both flush solid panel hollow metal doors and frames. They are in poor condition and need to be replaced.

Roof covering on the main building flat roof is a smooth surface, fully adhered, rolled asphalt sheet system, recently painted silver. Flashing of penetrations is formed of the same silver-painted material as the roof, tucked under a reglet-secured copper counterflashing along brick roof structures and mechanical equipment. Parapets are covered with new painted aluminum coping material; flashing is secured underneath. Much of the reglet set into the brick rooftop structures is cracked where the old caulk joint has failed; this is a potential source of water infiltration and must be repaired to minimize the chance of leaks. The silver-painted roof membrane is in good condition. Counterflashing embedded in brickwork of roof penthouse and chimneys is weathered but seems secure, aside from the caulking required along the reglet in the brick. Although the roof is probably past its normal service life of 20 years, it may be able to last for another 5-10 years, with good attention to maintenance. Roof drains are set in slightly dished areas – there are no overflow drains. Many joint cracks in the penthouse and chimney structures have been repointed, but could be the source of future water infiltration. There have been many leaks onto exterior walls below but after recent repairs, there are now none reported by engineering. The auditorium is covered with lightweight "residential-type, 3-tab" asphalt roofing shingle system, sloping to pitched metal troughs on the two low sides of the roof. Leaks along the low flat roof intersection to the main building corridor have created large water-damaged/effloresced areas in plaster walls and ceilings and have been reportedly repaired, but this roof system is thin, dirty, and appears to be at the end of its normal service life; troughs also appear to be at the end of their useful life. The pitched roof over the auditorium should be replaced. 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 green-painted aluminum coping forming the edge of the roof along the low points and the rakes. Roof openings include 8 small vent pipes and 2 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. The roof over the Portable Building precast "T" roof is in poor condition and the source of one major leak that has not yet been successfully repaired. Assuming the Portable Building remains in service, the existing asphalt paper roof needs to be removed and replaced with a new fully adhered asphalt and ceramic granule membrane system. This replacement should also include new aluminum coping along edges. This building has no gutters or roof drains; they are needed to divert water over entrances. A small gutter should be installed over the entrance under the low roof eave, to prevent water from spilling onto teachers and children.

Partitions in main building basement are mostly constructed of brick masonry. The upper 3 floors of the building have plaster on wood lath partitions. There are wood framed clerestory glass panels located in walls above classroom doors in the corridors. These panels are in generally good condition being above the reach of anyone, but the glass is not wired or fire rated; they should be replaced with fire rated gypsum board infill. Between some classrooms are manually operated full height wood folding partions. They are no longer operated since hinges and roller assemblies are tight and doors are heavy. Where loose or unstable, these partitions should be replaced with gypsum board partitions. Partitions in the 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 water damage to one of the clerestory gypsum board soffits which might have been due to a roof leak; this needs further investigation. Partitions in the Portable building are concrete masonry unit bearing walls, in good condition.

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 lite 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 where required. Stairway doors do not positively latch as required of fire rated doors. All doors and hardware in the main building 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 and janitor closet doors are hollow metal in hollow metal frames; there is some rust where frames come in contact with floors. . Classroom doors in the main building and LSH do not have security locking feature from inside classrooms, as required today; all classroom door locksets need to be replaced with security locksets. Doors in the Portable Building are in fair condition and need to be adjusted where not working properly.

Interior fittings/hardware 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. 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 in large gang toilet rooms are solid plastic replacement partitions. Toilet rooms in upper floors are the original marble partitions with wood doors, although old most are in working condition. Toilet room accessories (toilet paper dispensers, soap, paper towel or dryers, grab bars, door latches) have been recently replaced, but some components are missing and others are not fully functional. Missing and broken components need to be added to provide full sets of toilet room accessories. 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 in the LSH have the appropriate toilet room accessories. Toilet rooms in the LSH are ADA compliant.

Stair construction 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. There are two, unenclosed, one-story stairways down from the first floor to the grade-level exit and up from the basement to the grade-level exit. These must be enclosed in a fire rated enclosure with fire-rated doors, as required by today's life-safety codes. There are no stairs in the Little School House.

Wall finishes in the old building are plaster which is cracked with surface crazing in a number of classroom and corridor locations. There is damage in most classrooms at doorways and corners. Many plaster walls behind radiators are spalling and peeling and need to be repaired. There are also many areas of water damage on upper floor plaster walls due to water penetration from roof leaks or lintel leaks. Moveable partitions between some classrooms are the original dark stained oak units and are no longer opened. Blackboards are embedded into wood panels but are not always used; Wood panels are covered with staples and small gouges. All classrooms have smartboards which connect to the teacher's laptop computers, used for teaching in lieu of blackboards. Corridors and stairways have 48" high marble panel wainscots that are generally in good condition with isolated cracks or damages requiring repair. Stained wood trim in all rooms and corridors is damaged and worn requiring filling and refinishing. Toilet room walls are painted plaster with marble wainscots in upper toilet rooms. 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 marble and plaster decorative elements can be revitalized with some repair and new paint. There is water damage on the plaster ceiling outside the auditorium. Assuming roof leaks and lintel damages have been addressed, the plaster should be repaired. The wood wainscot in the auditorium has many surface scratches and some damaged panels; repairs can be made and the wood can be refinished to revitalize this space. 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 some corners have minor damage, but in general, wall condition is good. Main toilet rooms and classroom toilet rooms also have painted block walls.

Floor finishes in the original building consist of dark stained oak floors in classrooms and the auditorium. Most are in good enough condition to be stripped, sanded, and refinished. There are some rooms (main office, faculty lounge, and some classrooms) with 12"x12" vinyl composition tile (VCT) over the wood. The gymnasium which also serves as the cafeteria is finished in VCT. All 12"x12" VCT floors need to be removed and replaced. Stair walking surfaces are finished in exposed concrete that have years of dirt ground into the surfaces; these should be stripped, cleaned and resealed. All corridor floors are finished with 4'x4' (nominal size) concrete tiles which appear to be a monolithic system and highly durable. There is a painted concrete cove base along corridor walls. These corridor floors have not recently 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. Basement toilet rooms have been recently refinished with new fixtures, plastic partitions and ceramic mosaic tile floors; a thorough cleaning of these rooms is required. The room in the basement originally designated as the cafeteria is now a food prep area finished with VCT. 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. Other areas of VCT are cracked and broken, requiring replacement. The main office area in the LSH has glued-down tufted carpet. Classrooms are finished half in vinyl composition tile and half in glued-down tufted carpet. 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 LSH kitchen has a

quarry tile floor in good condition.

Ceiling finishes on upper floors are mostly 2x4 suspended acoustical tile ceiling system with recessed fluorescent lighting fixtures; basement corridors and all toilet rooms have exposed ceilings to concrete deck, above. Many ceiling tiles and grid are old and dirty and need replacement with new tiles and lighting. 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 is still in use; however many seats need to be repaired to operate properly and many are scratched; at least 50% are damaged. With the unavailability of parts for repair and the worn condition of the seating, full replacement is required. Casework and storage cabinets in the classrooms and the office is damaged, worn, and needs replacement.

Grounds

Paving and parking is constructed of 4'x4' (nominal) concrete panels; many are in need of replacement and although they are not all contiguous, it may be possible to replace only those that are failing. This expansive paved area serves as the playground and parking area. Parking and play area striping is worn and almost invisible. Clear separation of play area and parking, to provide a safe area for the children to play, is lacking. The number of required parking spaces for school staff is unknown. Restriping of parking areas and better designation of play and parking areas are required. Granite block stairways into the building need replacement including new handrails and guards at all stairs.

Wrought iron fencing is generally in good condition and appears to have been recently replaced.

There is no ADA accessible ramp into the main building.

Landscaping is in need of trimming and maintenance along L Street.

Mechanical

Plumbing Fixtures - Many of the original plumbing fixtures 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 round handle faucets. In the main building, it is recommended to replace all plumbing fixtures and remodel all student restrooms (excluding the gang toilet rooms in the basement, which have been renovated). In the Little School House, all fixtures appear to be original, are in satisfactory condition, and should not need replacement within the next 10 years.

Drinking fountains in the corridors and at the restrooms are wall hung with integral refrigerated coolers. Most appear to be the original installed equipment or are beyond their service life. Recommend replacement of all drinking fountains in the Main building. The Little School House, constructed in 1998, the original wall hung drinking fountains and are in satisfactory condition and should not need replacement for 10 years.

There are no janitors closets in the main building, however there are janitor sinks in the children's bathrooms. Creating separate janitors closets is a code requirement, today, and it is recommended for this school. The Cafeteria has one three-compartment stainless steel sink with a lever operated faucet. The sink is equipped with sanitizing chemicals and a grease trap. The Little School House has the appropriate stainless steel sink with sanitizing basins and grease trap. There is a grease hood installed in the LSH 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 toilet rooms in the basement and the stainless steel sink in the kitchen. The Little School House needs only a fire suppression system for the grease hood.

Domestic Water Distribution - Domestic water distribution piping is mostly soldered copper. Water service enters the building in the basement. Backflow preventers could not be found. The water meter is on the main line after entering the building. The distribution piping appears to be in satisfactory condition but an inspection is recommended due to the age of the piping and possible material failure due to age. The Little School House water domestic water distribution is soldered copper. Water service enters the building in the mechanical room with a water meter and backflow preventers. The distribution piping in the Little School House appears to be in

satisfactory condition and should not need service or replacement for the next 10 years.

Two Paloma natural gas fired instantaneous water heaters are installed in the main building basement with appropriate piping, controls, and venting. They appear to be in satisfactory condition and but are nearing the end of their service life and should be replaced within the next 5 years. The Little School House has two PVI gas fired water heaters. The water heaters in the Little School House appear to be in satisfactory condition and should not need replacement for the next 10 years.

Sanitary Waste - The sanitary waste piping systems are threaded cast iron. The small sewer ejector pit is located in the basement with one pump. The entire sanitary system appears to be the original installed equipment and which is well beyond its serviceable life. The Building Engineer indicated that the sanitary system frequently overflows coincident with heavy rains. Replacement of sanitary system throughout the main building is recommended. The sanitary system in the Little School House 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 in the building and combine with the sanitary system which frequently overflows. Installing a separate primary roof drain system is recommended. There are no roof overflow drains. The District should consider adding overflow scuppers to the building to protect the roof from flooding. There is no roof access to the Little School House.

It appears that the stormwater and sewage are piped together in this building. The bathrooms floor drains back-up and flood the floors with a mixture of sewage and rain water during heavy rains. Separating the storm and sanitary systems is recommended.

Energy Supply - Duplex fuel oil supply pumps provide the required fuel to the boilers when operating on fuel oil. The concrete fuel tank is located in the basement adjacent to the fuel oil pumps. There was fuel observed on the floor which had apparently leaked from the fuel pumps and skid. The pumps appear to be beyond their serviceable life and should be replaced. Inspection of the concrete fuel tank and the addition of required ventilation and fire suppression/alarm in the fuel storage area is recommended. The Little School House primarily uses natural gas for all heat sources in the building; the gas meter is located in the outside, covered mechanical yard near the chiller. There are two small No. 2 fuel oil tanks having a total capacity of approximately 500 gallons located in the mechanical room which provide 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 oil fired boilers with Power Flame burners. Boilers were under repair at the time of assessment. 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 Little School House by two Smith cast iron boilers with dual fuel Powerflame burners, each having gross output of 1364 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. This appears to be the original installed equipment and is functioning properly. The equipment operates with 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 with a new air cooled chiller is recommended.

Distribution Systems - The boiler feed water is treated with a combination of chemicals, controlled with a water treatment controller. There is a condensate return tank with duplex pumps feeding a boiler feed tank, also with duplex pumps. Moisture issues (peeling paint and humidity) are apparent throughout the basement which is due to leaking steam and failing steam traps throughout the building. The steam and condensate return lines throughout the building are only occasionally insulated and are beyond their serviceable life. The building engineer indicated that heat distribution is poor and uneven throughout the building. The Little School House has duplex chilled water pumps and duplex hot water pumps to distribute the conditioned water to the hydronic baseboard heaters and AHUs throughout the building. The pumps and distribution systems at the Little School House 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 provided by a house fan, located in the basement. When operational, the air was pushed into rooms throughout the building by way of ducts built into the walls. The air was exhausted from the rooms by use of another system of ducts built into the walls, routed into the attic space, and out through roof mounted vents. This system is currently non-operational. The only source of fresh air now is from the windows when opened. However, the majority of the windows in the building are damaged and will not stay open, therefore there is little fresh air ventilation in the Main building. The Little School House 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. The majority of those air conditioning units are in service. The Little School House does not have terminal or packaged units.

Controls & Instrumentation - There are some pneumatic thermostats on the walls, however they are not in service. The pneumatic control valves on the radiators throughout the building 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. The poor heat distribution in the building could be partially due to the failing controls. Adding a new DDC system to the main building is recommended. The Little School House has a web-based DDC BMS that was last updated in 1998. This system is not working properly and is barely functional. We recommend installing a new control system in the main building and re-commissioning the control system in the Little School House.

Sprinklers - There are no sprinklers in the main building; installing a new sprinkler system is recommended. The Little School House has sprinklers throughout; the fire water supply enters the building in the mechanical room. Since there is adequate pressure from the municipal water system, no fire pump is required. There is a grease hood installed in the kitchen area but it is not currently in use, because the grease hood requires a chemical agent fire suppression system that is not installed. Installing fire suppression system for the grease hood in the Little School House is recommended. The existing sprinkler system appears to be in satisfactory condition and should not need replacement within the next 10 years.

Electrical

Site Electrical Service of the main building is from Medium voltage overhead lines on wooden utility poles along L Street. Two pole-mounted power transformers with medium voltage primary (Voltage level unknown at this time) and 120/240VAC secondary and at an estimated available power of 150KVA are installed for supplying power to facility. The service entrance to the facility consists of a disconnect switch and utility meter located in a closet in the Multipurpose Room, and a main switch board located in the Boiler Room in the basement. The switchboard is an open switch type and its size is estimated at 600A. Power distribution is achieved through corridor located lighting/receptacle panel boards. There are two flush-mounted panel boards on each floor. It appears that panel boards and branch circuit breakers have out-lived their useful lives thus are ready for upgrade/replacement. There is one 75KVA phase converter transformer for converting 240VAC to 120/208VAC. There is three phase power for the boilers and other 208-volt loads.

Electrical service and distribution system for the Little School House (LSH) is by 400,208, 3PH, 4wire, distribution power panel located in electrical room. This distribution panel board, which feeds all of the loads in LSH, is fed from a pad mounted utility transformer located outside of the building. The utility meter is located adjacent to the utility transformer. Overall, the distribution system of LSH is in a good condition thus no need for upgrade or replacement.

Electrical service and distribution systems in the Portable Building are provided by a flush mounted 225A, 240/120V single phase panel board located in the building. This panel is fed from separate low voltage feeder from utility overhead line located on the L Street. The distribution panel is outdated and should be replaced.

In general there are insufficient numbers of receptacles in classrooms in the Main Building. It is recommended to have a minimum of two receptacles on classroom walls. The computer room should have receptacles every three feet on walls.

Receptacles in Little School House and Portable Building are not of tamper-resistant type. This is in violation of the Electrical code, which states that receptacles that are subject to child access shall be either tamper-proof or GFCI.

Lighting in the Main Building is provided by fluorescent fixtures with T-12 lamps. Classrooms and corridors utilize 2x4, (4) lamp lay-in fluorescent lighting fixtures or surface mounted fixtures. Lighting levels in the gymnasium does not meet IES (Illuminating Engineering Society) standards. Lighting in the LSH classrooms is provided by suspended 1x4 fluorescent lighting fixtures. Lighting in LSH offices and corridors are provided by recessed 2x4 fluorescent lighting fixtures. All are relatively in good condition with some minor maintenance and repairs needed to some of the fixtures. The lighting fixtures in portable building are provided by 1x4 surface/pendent fluorescent lighting fixtures with outdated T12 bulbs.

Fire Alarm systems in the Main Building and LSH are acceptable. Monitoring of fire is by smoke detectors in corridors and pulls stations at building egress points. There are sufficient numbers of horn/strobes installed throughout the building such as classrooms, corridors, offices, and other areas of occupancy. No major deficiencies were observed.

Fire alarm system in Temporary Portable Building is not adequate. Horn/strobes should be installed in the building in place of fire bells.

Fire alarm systems for the all three buildings are controlled by a main fire control panel, located in the main building.

Telephone and LAN equipment/devices serving the main building are located on the second floor. The communication system serving both the LSH and portable building are connected to the main building telephone and LAN (Local Area Networking) system and are all working properly.

Public address / music systems are not provided in main and portable building; the telephone system is used for public announcements. In the LSH, there is a PA rack including AM/FM radio, cassette player, CD player and amplifiers, all working properly.

Intercom and paging systems in all the buildings are functional. The paging system is a one-way communication system from the office to each classroom. Two-way communications occur through wall mounted phones in classrooms and other areas.

Clock and Program system in the main building, LSH and portable building are not functioning properly.

Television system is not provided in any of the buildings.

Security Systems, access control, and video surveillance systems are provided in main building. A sufficient number of cameras are installed to cover exit doors, corridors and other critical areas; they are controlled by a Closed Circuit Television system (CCTV), which is working properly. In Little School House, video surveillance system is provided without motion sensors. There is no security system and video surveillance provided in portable building.

Emergency Power System is provided in the main school. A 30KW, 240/120V, 1PH, 3W diesel generator manufactured by "Cummins" is installed in the boiler room. The emergency power distribution is accomplished with a transfer switch, 45 KVA step down transformer, and emergency distribution panel. Emergency lighting fixtures and all other critical loads are fed by this emergency panel. The emergency distribution system is in a good condition and working properly.

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

Emergency lighting system, including exit lights are provided in all three buildings. Power for lighting in the corridors, library and exit ways in main building is provided by emergency pack up power. Emergency battery pack lighting fixtures are provided in LSH corridor and portable building.

Lightning Protection System is adequate on the main building. It is accomplished with air terminals 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 needed on the LSH and portable building.

Grounding is present and is adequate.

Elevators is not provided in any building.

Theater Lighting and dimming controls in the Main Building are old and require the lights are turned on and off by feeder breakers – this is not the correct way to operate lighting fixtures. A new lighting control system should be installed.

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

Site Video Surveillance system is provided for main building. An adequate number of cameras are installed on the exterior walls of the building which cover the area around the building. There are no cameras installed on the other buildings.

Site paging system is provided and operating adequately.

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
- Replace all exterior windows with insulated single hung units
- Replace all exterior doors with ADA and code compliant exit hardware; repaint doors and frames
- Remove and replace existing sloped asphalt shingle roof over auditorium
- 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/office

- 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
- Provide toilet room accessories
- Repair water damage, cracks, and repaint all interior plaster walls
- Remove and replace stairway handrails and guards with code compliant systems (4 story)
- Add fire-rated stairway enclosure and doors for 2 unenclosed stairs between first floor and basement
- Replace broken and damaged exterior limestone block tread/riser exterior stairs and handrails
- Strip, sand, repair and refinish all wood floors in classrooms and in auditorium
- Remove and replace all 12”x12” VCT floors in gymnasium and other rooms
- Repaint plaster ceilings where damaged by water
- Replace damaged 2x4 acoustical tile ceilings
- Replace damaged folding wood auditorium chairs
- Repair piers, grade beam, and spalled panel on Portable Building
- Reroof Portable Building
- Replace sliding aluminum frame windows both sides of Portable Building

Architectural - Little School House

- Refinish stained and dirty wood doors
- Provide security hardware for classrooms and offices, locking from inside classroom/office
- Repaint all hollow metal door frames
- Replace plexiglass entrance door lite
- Repaint all corridor walls (block)
- Replace VCT in multipurpose room where expansion joint cracked tiles and other areas
- Replace security screens on exterior windows

Grounds

- Repave damaged sections of concrete parking / playground area
- Restripe parking area
- Add ADA accessible ramp into the main building.

Mechanical – Main Building

- Replace all plumbing fixtures and renovate all student restrooms.
- Replace of all drinking fountains
- Replace sanitary system throughout the Main Building.
- Replace duplex fuel oil pumps and skid
- Perform an inspection of the concrete fuel tank
- Install the required ventilation and fire suppression/alarm system in the fuel storage area
- Replace boilers in 5 years
- Install a new DDC system
- Install a new sprinkler system
- Add overflow scuppers to roof parapet
- 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
- Install AHUs to condition the cafeteria, gymnasium, and auditorium.

Mechanical - Little School House

- Re-commission DDC system and provide training for maintenance personnel

Electrical – Main Building

- Upgrade the existing electrical service entrance. Replace the existing incoming and distribution switchboard with new 1200A, 208/120, 3PH, 4-wire switchboards.
- Replace the entire distribution system with new panel boards and new feeders. Provide arc flush label on the all panel boards.

- Install minimum two receptacles in each wall of class rooms. Install surface mounted raceway with two compartments for data and power; install in the computer lab room.
- Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamps.
- Replace existing fire alarm system with a new automatic Fire Alarm System including control panel, initiated devices in corridors, air ducts, electrical and LAN rooms, library, and computer rooms. Provide notification devices in class rooms, offices, auditorium, corridors, other areas recommended by Code.
- Replace existing master clock controller.
- Perform lightning protection studies to ascertain adequacy of existing systems.
- Provide new stage lighting and controller in Auditorium.
- 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.
- Provide sufficient number of cameras on portable building exterior wall and connect to main building CCTV system.
- Replace existing receptacles with GFIC receptacles in areas subject to child access in portable building.
- Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamps in portable building.

Electrical - Little School House

- Replace existing receptacles with GFIC receptacles in areas subject to child access.
- Replace existing master clock controller.
- Provide sufficient number of cameras on LSH exterior walls and connect to main building CCTV system.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 2
Status:	Accepted by SDP	Team:	Tm 2
Site ID:	S730001		

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	49.56 %	0.00 %	$0.00
A20 - Basement Construction	51.53 %	0.00 %	$0.00
B10 - Superstructure	48.20 %	0.00 %	$0.00
B20 - Exterior Enclosure	62.77 %	51.10 %	$2,253,017.87
B30 - Roofing	63.53 %	21.74 %	$307,456.28
C10 - Interior Construction	45.30 %	69.68 %	$1,365,911.87
C20 - Stairs	45.41 %	147.09 %	$164,950.37
C30 - Interior Finishes	81.02 %	24.62 %	$1,041,905.40
D10 - Conveying	100.00 %	0.00 %	$0.00
D20 - Plumbing	87.14 %	48.37 %	$956,846.61
D30 - HVAC	95.97 %	80.65 %	$7,267,200.86
D40 - Fire Protection	94.00 %	107.06 %	$715,270.89
D50 - Electrical	96.96 %	55.58 %	$2,646,341.13
E10 - Equipment	25.10 %	7.04 %	$90,802.49
E20 - Furnishings	45.46 %	313.62 %	$541,143.31
G20 - Site Improvements	41.68 %	22.33 %	$211,566.92
G40 - Site Electrical Utilities	41.18 %	0.00 %	$0.00
Totals:	**70.56 %**	**40.70 %**	**$17,562,414.00**

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)
B730001;Hopkinson	65,000	51.84	$5,269,151.96	$4,139,862.32	$2,836,056.59	$1,766,436.65	$2,783,664.49
B730002;Hopkinson LSH	16,008	5.84	$33,899.59	$389,287.59	$18,163.13	$114,324.76	$0.00
G730001;Grounds	65,000	17.14	$38,972.72	$172,594.20	$0.00	$0.00	$0.00
Total:		**40.70**	**$5,342,024.27**	**$4,701,744.11**	**$2,854,219.72**	**$1,880,761.41**	**$2,783,664.49**

Deficiencies By Priority

1 - Response Time (< 2 yr) - $5,342,024.27
2 - Response Time (2-3 yrs) - $4,701,744.11
3 - Response Time (3-4 yrs) - $2,854,219.72
4 - Response Time (4-5 yrs) - $1,880,761.41
5 - Response Time (> 5 yrs) - $2,783,664.49

Budget Estimate Total: $17,562,414.00

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):	65,000
Year Built:	1927
Last Renovation:	
Replacement Value:	$32,399,990
Repair Cost:	$16,795,172.01
Total FCI:	51.84 %
Total RSLI:	74.29 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B730001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S730001		

Condition Summary

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

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
A10 - Foundations	37.00 %	0.00 %	$0.00
A20 - Basement Construction	37.00 %	0.00 %	$0.00
B10 - Superstructure	37.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	60.55 %	60.91 %	$2,231,831.29
B30 - Roofing	86.68 %	39.55 %	$307,456.28
C10 - Interior Construction	38.68 %	84.57 %	$1,348,989.96
C20 - Stairs	37.00 %	179.98 %	$164,950.37
C30 - Interior Finishes	88.61 %	30.20 %	$1,015,794.14
D10 - Conveying	100.00 %	0.00 %	$0.00
D20 - Plumbing	106.34 %	72.09 %	$956,846.61
D30 - HVAC	107.77 %	95.76 %	$6,923,969.89
D40 - Fire Protection	105.71 %	136.53 %	$715,270.89
D50 - Electrical	110.11 %	65.38 %	$2,498,116.78
E10 - Equipment	18.61 %	8.77 %	$90,802.49
E20 - Furnishings	42.50 %	390.86 %	$541,143.31
Totals:	**74.29 %**	**51.84 %**	**$16,795,172.01**

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.	65,000	100	1927	2027	2052	37.00 %	0.00 %	37			$1,196,000
A1030	Slab on Grade	$7.73	S.F.	65,000	100	1927	2027	2052	37.00 %	0.00 %	37			$502,450
A2010	Basement Excavation	$6.55	S.F.	65,000	100	1927	2027	2052	37.00 %	0.00 %	37			$425,750
A2020	Basement Walls	$12.70	S.F.	65,000	100	1927	2027	2052	37.00 %	0.00 %	37			$825,500
B1010	Floor Construction	$75.10	S.F.	65,000	100	1927	2027	2052	37.00 %	0.00 %	37			$4,881,500
B1020	Roof Construction	$13.88	S.F.	65,000	100	1927	2027	2052	37.00 %	0.00 %	37			$902,200
B2010	Exterior Walls	$36.91	S.F.	65,000	100	1927	2027	2052	37.00 %	6.61 %	37		$158,639.63	$2,399,150
B2020	Exterior Windows	$18.01	S.F.	65,000	40	1980	2020	2057	105.00 %	166.03 %	42		$1,943,654.37	$1,170,650
B2030	Exterior Doors	$1.45	S.F.	65,000	25	1985	2010	2042	108.00 %	137.44 %	27		$129,537.29	$94,250
B3010105	Built-Up	$37.76	S.F.	14,329	20	1985	2005	2037	110.00 %	18.79 %	22		$101,646.03	$541,063
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.	6,000	25	1998	2023		32.00 %	88.57 %	8		$205,810.25	$232,380
B3020	Roof Openings	$0.06	S.F.	65,000	20	1927	1947	2037	110.00 %	0.00 %	22			$3,900
C1010	Partitions	$17.91	S.F.	65,000	100	1927	2027	2052	37.00 %	67.73 %	37		$788,459.86	$1,164,150
C1020	Interior Doors	$3.51	S.F.	65,000	40	1927	1967	2037	55.00 %	239.80 %	22		$547,099.79	$228,150
C1030	Fittings	$3.12	S.F.	65,000	40	1927	1967	2027	30.00 %	6.62 %	12		$13,430.31	$202,800
C2010	Stair Construction	$1.41	S.F.	65,000	100	1927	2027	2052	37.00 %	179.98 %	37		$164,950.37	$91,650

Site Assessment Report - B730001;Hopkinson

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.	65,000	10	1927	1937	2037	220.00 %	36.27 %	22		$334,332.85	$921,700
C3010231	Vinyl Wall Covering	$0.00	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.63	S.F.	65,000	30	1927	1957	2037	73.33 %	0.00 %	22			$170,950
C3020411	Carpet	$7.30	S.F.	0	10				0.00 %	0.00 %				$0
C3020412	Terrazzo & Tile	$75.52	S.F.	1,500	50	1927	1977	2020	10.00 %	0.00 %	5			$113,280
C3020413	Vinyl Flooring	$9.68	S.F.	13,200	20	1995	2015	2030	75.00 %	124.15 %	15		$158,631.42	$127,776
C3020414	Wood Flooring	$22.27	S.F.	29,000	25	1927	1952	2032	68.00 %	48.35 %	17		$312,241.26	$645,830
C3020415	Concrete Floor Finishes	$0.97	S.F.	21,300	50	1927	1977	2035	40.00 %	225.74 %	20		$46,640.22	$20,661
C3030	Ceiling Finishes	$20.97	S.F.	65,000	25	1927	1952	2020	20.00 %	12.03 %	5		$163,948.39	$1,363,050
D1010	Elevators and Lifts	$1.53	S.F.	65,000	35	2015	2050		100.00 %	0.00 %	35			$99,450
D2010	Plumbing Fixtures	$13.52	S.F.	65,000	35	1927	1962	2052	105.71 %	79.11 %	37		$695,213.25	$878,800
D2020	Domestic Water Distribution	$1.68	S.F.	65,000	25	1927	1952	2042	108.00 %	0.00 %	27			$109,200
D2030	Sanitary Waste	$2.90	S.F.	65,000	25	1927	1952	2042	108.00 %	111.03 %	27		$209,294.03	$188,500
D2040	Rain Water Drainage	$2.32	S.F.	65,000	30	1927	1957	2047	106.67 %	34.71 %	32		$52,339.33	$150,800
D3020	Heat Generating Systems	$18.67	S.F.	65,000	35	1927	1962	2052	105.71 %	108.10 %	37		$1,311,840.72	$1,213,550
D3030	Cooling Generating Systems	$24.48	S.F.	65,000	30	1927	1957	2047	106.67 %	52.26 %	32		$831,584.11	$1,591,200
D3040	Distribution Systems	$42.99	S.F.	65,000	25	1927	1952	2042	108.00 %	139.03 %	27		$3,884,975.26	$2,794,350
D3050	Terminal & Package Units	$11.60	S.F.	65,000	20	1927	1947	2037	110.00 %	0.00 %	22			$754,000
D3060	Controls & Instrumentation	$13.50	S.F.	65,000	20	1927	1947	2037	110.00 %	102.06 %	22		$895,569.80	$877,500
D4010	Sprinklers	$7.05	S.F.	65,000	35	1927	1962	2052	105.71 %	156.09 %	37		$715,270.89	$458,250
D4020	Standpipes	$1.01	S.F.	65,000	35	1927	1962	2052	105.71 %	0.00 %	37			$65,650
D5010	Electrical Service/Distribution	$9.70	S.F.	65,000	30	1927	1957	2047	106.67 %	134.46 %	32		$847,756.54	$630,500
D5020	Lighting and Branch Wiring	$34.68	S.F.	65,000	20	1927	1947	2037	110.00 %	40.68 %	22		$916,957.03	$2,254,200
D5030	Communications and Security	$12.99	S.F.	65,000	15	1927	1942	2032	113.33 %	84.83 %	17		$716,264.60	$844,350
D5090	Other Electrical Systems	$1.41	S.F.	65,000	30	1927	1957	2047	106.67 %	18.70 %	32		$17,138.61	$91,650
E1020	Institutional Equipment	$4.82	S.F.	65,000	35	1927	1962	2025	28.57 %	28.98 %	10		$90,802.49	$313,300
E1090	Other Equipment	$11.10	S.F.	65,000	35	1927	1962	2020	14.29 %	0.00 %	5			$721,500
E2010	Fixed Furnishings	$2.13	S.F.	65,000	40	1927	1967	2032	42.50 %	390.86 %	17		$541,143.31	$138,450
								Total	**74.29 %**	**51.84 %**			**$16,795,172.01**	**$32,399,990**

System Notes

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

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

Note:
marble wainscot 8%
glazed brick 5%
painted plaster or concrete 87%

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

Note:
sealed concrete 33%
stained oak floors with clear finish 45%
VCT 20%
ceramic tile 2%

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

Note:
2x4 acoustical tile ceiling 85%
Painted plaster or concrete deck above 15%

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

Note: 1-75KVA phase changer (240V to 208V)

Renewal Schedule

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

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$16,795,172**	**$0**	**$0**	**$0**	**$0**	**$2,802,676**	**$0**	**$0**	**$323,809**	**$0**	**$463,154**	**$20,384,811**
*** 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	$158,640	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$158,640**
B2020 - Exterior Windows	$1,943,654	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,943,654**
B2030 - Exterior Doors	$129,537	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$129,537**
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	$101,646	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$101,646**
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	$205,810	$0	$0	$0	$0	$0	$0	$0	$323,809	$0	$0	**$529,619**
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	$788,460	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$788,460**

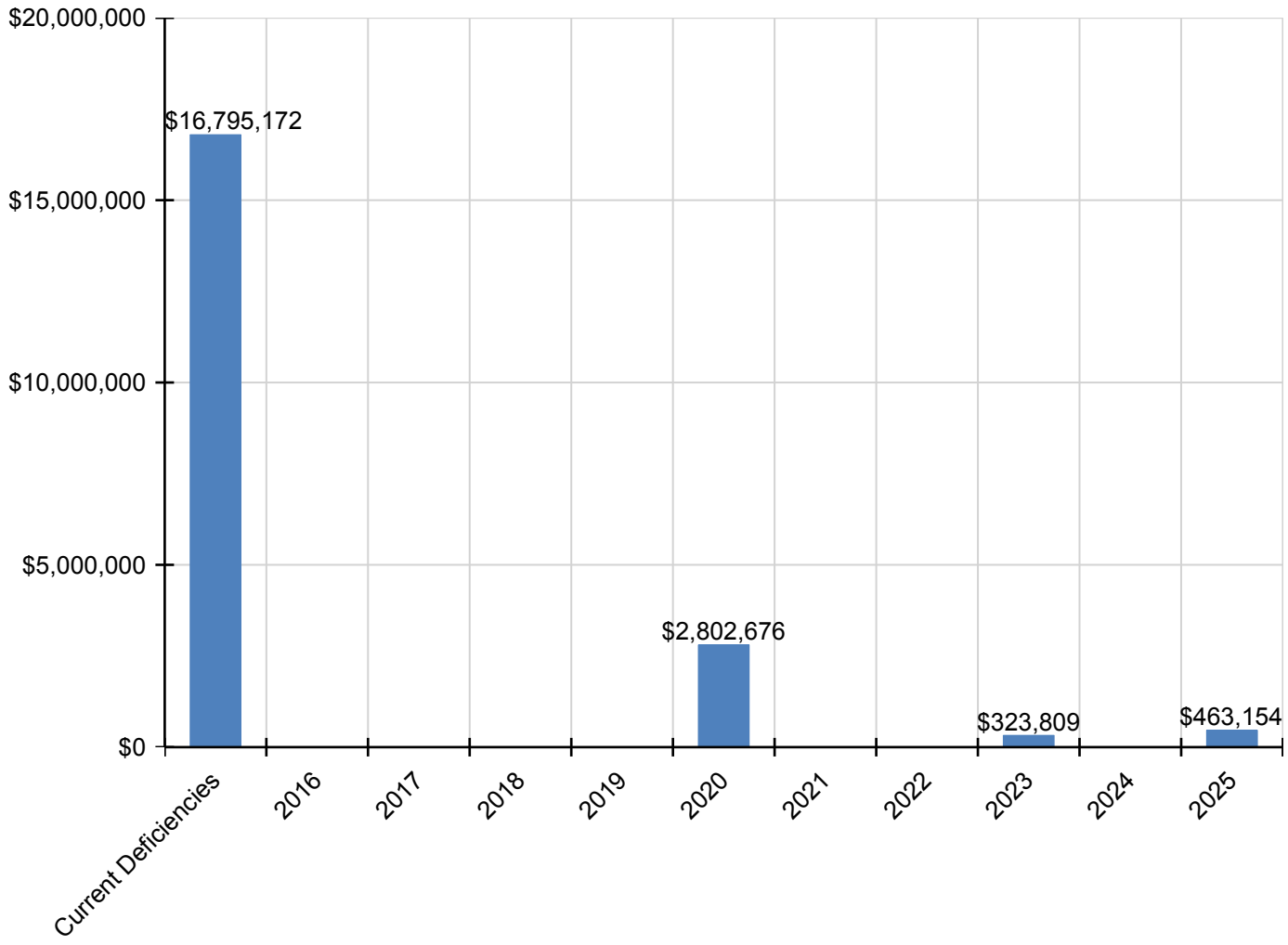
C1020 - Interior Doors	$547,100	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$547,100**
C1030 - Fittings	$13,430	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$13,430**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$164,950	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$164,950**
C30 - Interior Finishes	$0	$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	$334,333	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$334,333**
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	$144,455	$0	$0	$0	$0	$0	**$144,455**
C3020413 - Vinyl Flooring	$158,631	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$158,631**
C3020414 - Wood Flooring	$312,241	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$312,241**
C3020415 - Concrete Floor Finishes	$46,640	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$46,640**
C3030 - Ceiling Finishes	$163,948	$0	$0	$0	$0	$1,738,163	$0	$0	$0	$0	$0	**$1,902,112**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$695,213	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$695,213**
D2020 - Domestic Water Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2030 - Sanitary Waste	$209,294	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$209,294**
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	$831,584	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$831,584**
D3040 - Distribution Systems	$3,884,975	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,884,975**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$895,570	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$895,570**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$715,271	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$715,271**
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	$847,757	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$847,757**
D5020 - Lighting and Branch Wiring	$916,957	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$916,957**
D5030 - Communications and Security	$716,265	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$716,265**
D5090 - Other Electrical Systems	$17,139	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$17,139**
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	$90,802	$0	$0	$0	$0	$0	$0	$0	$0	$0	$463,154	**$553,956**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$920,058	$0	$0	$0	$0	$0	**$920,058**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$541,143	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$541,143**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

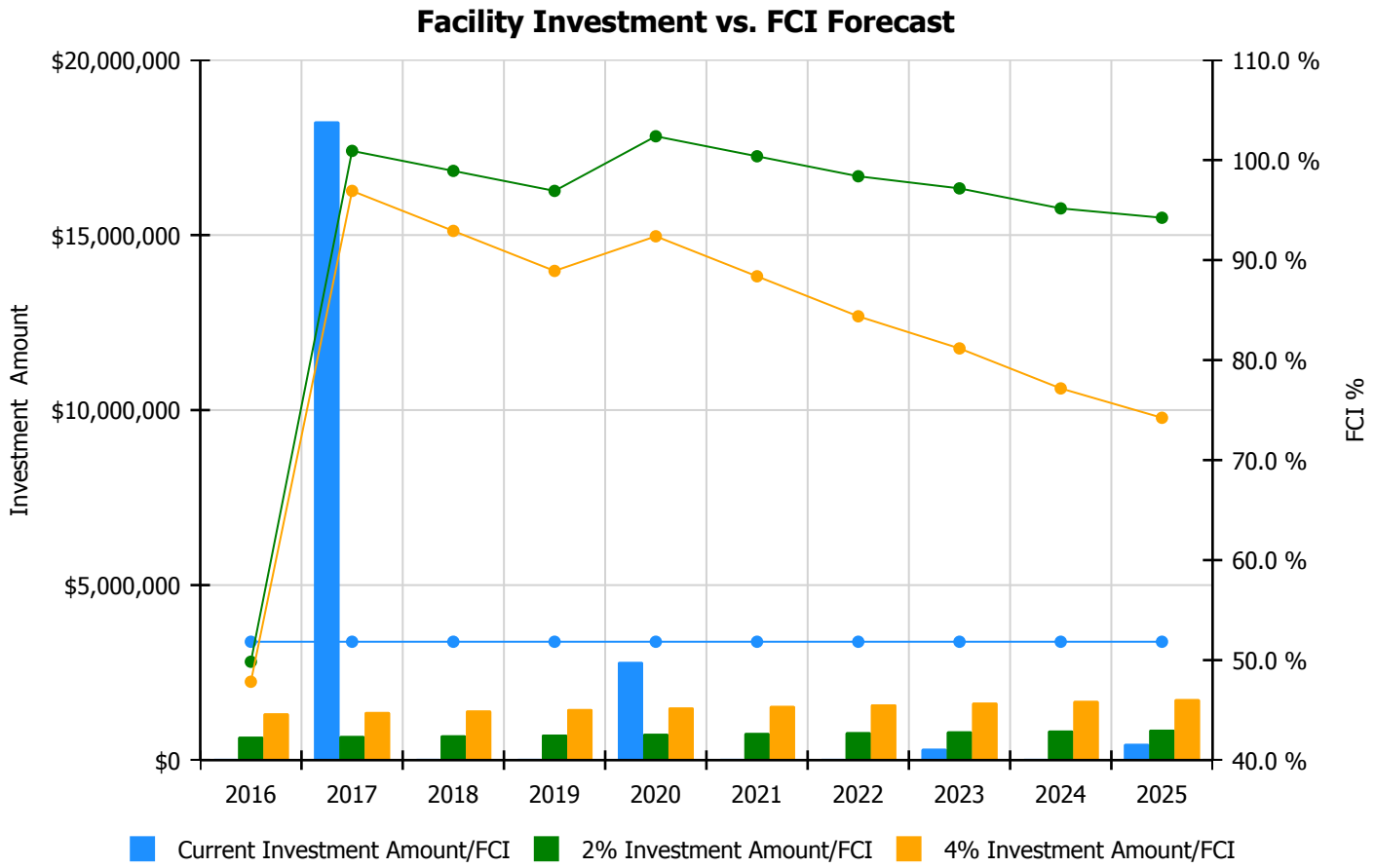
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

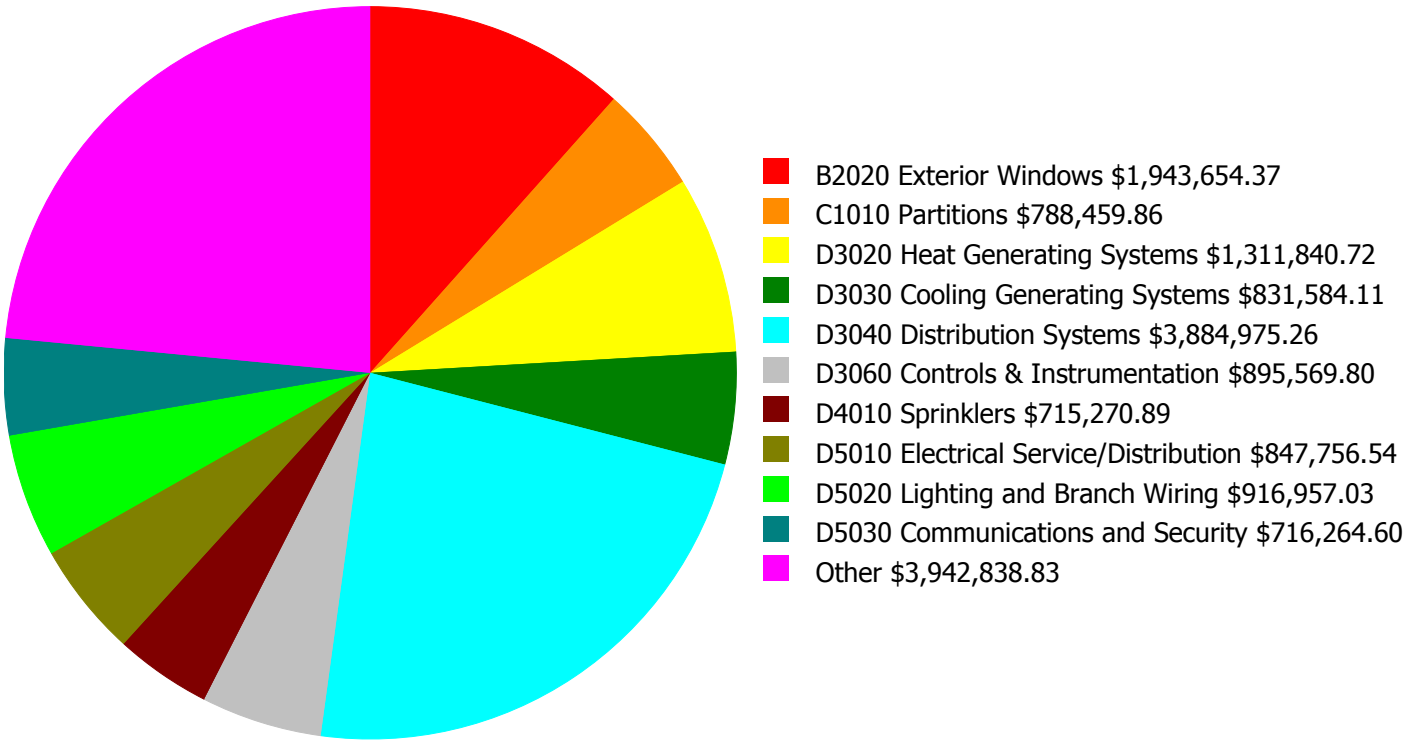
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 51.84%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$667,440.00	49.84 %	$1,334,880.00	47.84 %
2017	$18,244,795	$687,463.00	100.92 %	$1,374,926.00	96.92 %
2018	$0	$708,087.00	98.92 %	$1,416,174.00	92.92 %
2019	$0	$729,329.00	96.92 %	$1,458,659.00	88.92 %
2020	$2,802,676	$751,209.00	102.38 %	$1,502,419.00	92.38 %
2021	$0	$773,746.00	100.38 %	$1,547,491.00	88.38 %
2022	$0	$796,958.00	98.38 %	$1,593,916.00	84.38 %
2023	$323,809	$820,867.00	97.17 %	$1,641,734.00	81.17 %
2024	$0	$845,493.00	95.17 %	$1,690,986.00	77.17 %
2025	$463,154	$870,858.00	94.23 %	$1,741,715.00	74.23 %
Total:	**$21,834,434**	**$7,651,450.00**		**$15,302,900.00**	

Deficiency Summary by System

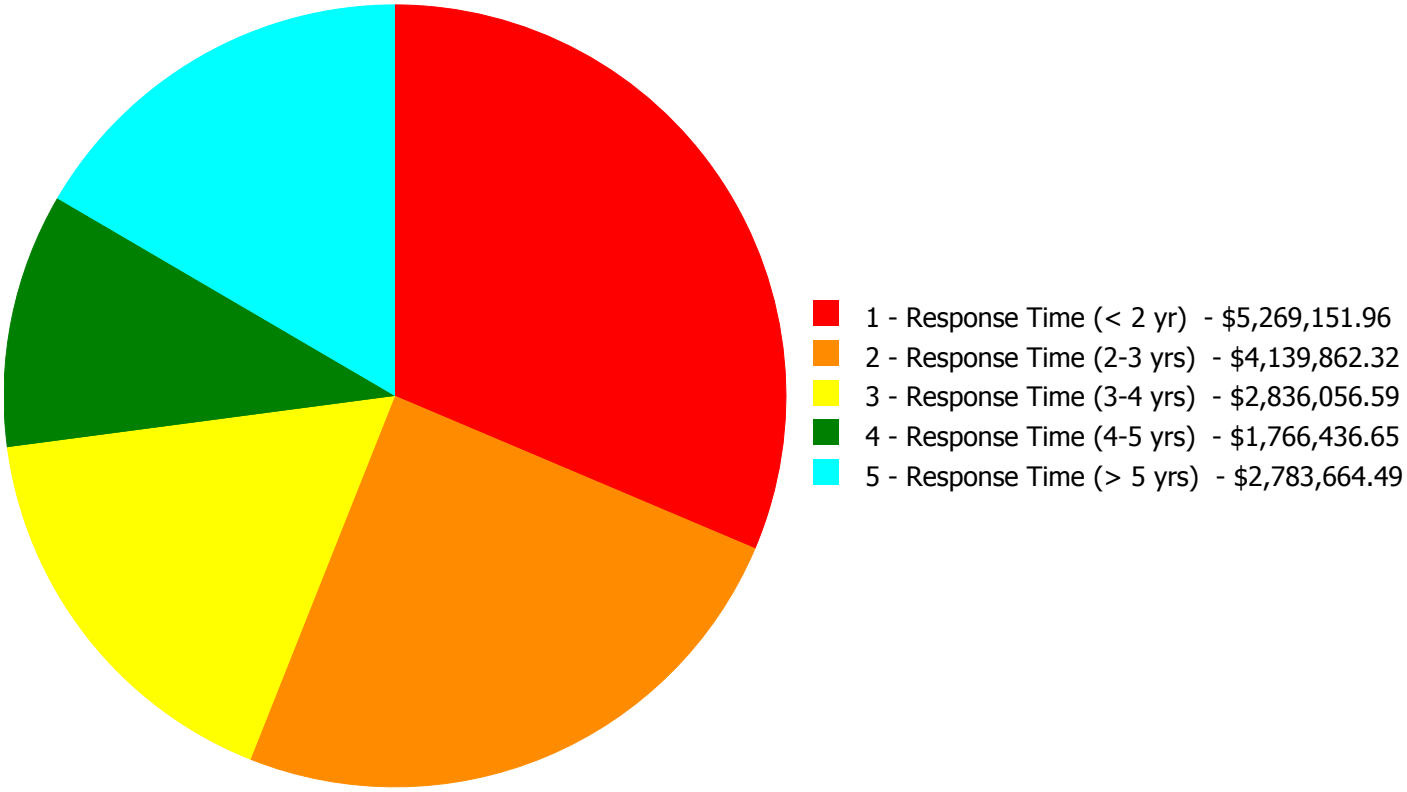
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $16,795,172.01

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: $16,795,172.01

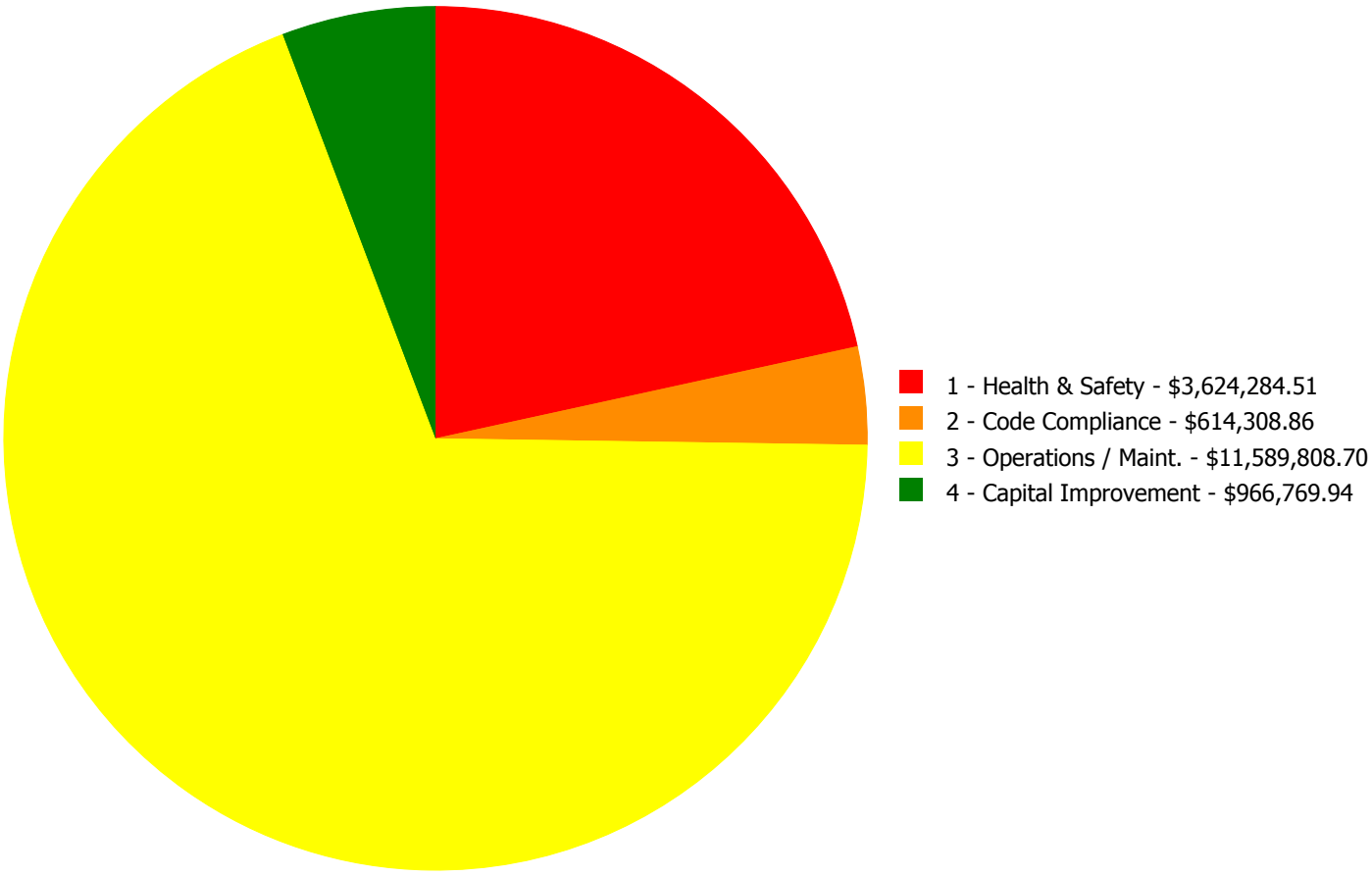
Deficiency By Priority Investment Table

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	$158,639.63	$0.00	$0.00	$0.00	$158,639.63
B2020	Exterior Windows	$0.00	$1,943,654.37	$0.00	$0.00	$0.00	$1,943,654.37
B2030	Exterior Doors	$0.00	$129,537.29	$0.00	$0.00	$0.00	$129,537.29
B3010105	Built-Up	$101,646.03	$0.00	$0.00	$0.00	$0.00	$101,646.03
B3010140	Shingle & Tile	$0.00	$205,810.25	$0.00	$0.00	$0.00	$205,810.25
C1010	Partitions	$41,170.38	$8,024.80	$739,264.68	$0.00	$0.00	$788,459.86
C1020	Interior Doors	$0.00	$547,099.79	$0.00	$0.00	$0.00	$547,099.79
C1030	Fittings	$13,430.31	$0.00	$0.00	$0.00	$0.00	$13,430.31
C2010	Stair Construction	$24,523.14	$140,427.23	$0.00	$0.00	$0.00	$164,950.37
C3010230	Paint & Covering	$0.00	$272,868.34	$61,464.51	$0.00	$0.00	$334,332.85
C3020413	Vinyl Flooring	$0.00	$158,631.42	$0.00	$0.00	$0.00	$158,631.42
C3020414	Wood Flooring	$0.00	$312,241.26	$0.00	$0.00	$0.00	$312,241.26
C3020415	Concrete Floor Finishes	$0.00	$46,640.22	$0.00	$0.00	$0.00	$46,640.22
C3030	Ceiling Finishes	$0.00	$163,948.39	$0.00	$0.00	$0.00	$163,948.39
D2010	Plumbing Fixtures	$0.00	$0.00	$0.00	$625,512.50	$69,700.75	$695,213.25
D2030	Sanitary Waste	$209,294.03	$0.00	$0.00	$0.00	$0.00	$209,294.03
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	$0.00	$1,050,121.66	$261,719.06	$1,311,840.72
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$831,584.11	$831,584.11
D3040	Distribution Systems	$2,411,963.23	$0.00	$567,622.35	$0.00	$905,389.68	$3,884,975.26
D3060	Controls & Instrumentation	$0.00	$0.00	$895,569.80	$0.00	$0.00	$895,569.80
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$715,270.89	$715,270.89
D5010	Electrical Service/Distribution	$847,756.54	$0.00	$0.00	$0.00	$0.00	$847,756.54
D5020	Lighting and Branch Wiring	$903,103.70	$0.00	$13,853.33	$0.00	$0.00	$916,957.03
D5030	Communications and Security	$716,264.60	$0.00	$0.00	$0.00	$0.00	$716,264.60
D5090	Other Electrical Systems	$0.00	$0.00	$17,138.61	$0.00	$0.00	$17,138.61
E1020	Institutional Equipment	$0.00	$0.00	$0.00	$90,802.49	$0.00	$90,802.49
E2010	Fixed Furnishings	$0.00	$0.00	$541,143.31	$0.00	$0.00	$541,143.31
	Total:	$5,269,151.96	$4,139,862.32	$2,836,056.59	$1,766,436.65	$2,783,664.49	$16,795,172.01

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: $16,795,172.01

Deficiency Details by Priority

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

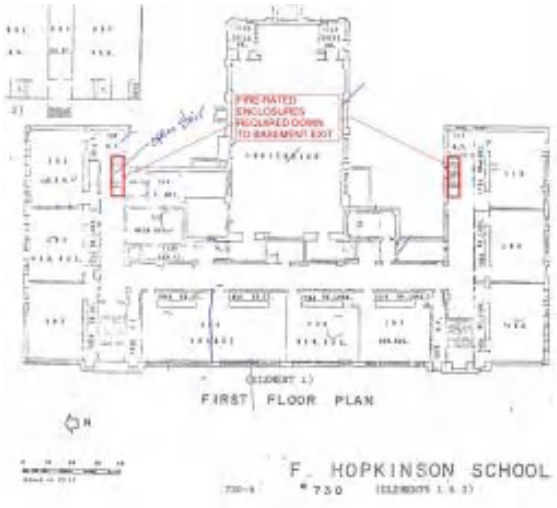
Priority 1 - Response Time (< 2 yr):

System: B3010105 - Built-Up

Location: portable building - roof
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Remove and Replace Built Up Roof
Qty: 3,000.00
Unit of Measure: S.F.
Estimate: $101,646.03
Assessor Name: System
Date Created: 08/06/2015

Notes: Reroof Portable Building

System: C1010 - Partitions



Location: main building - corridor
Distress: Building / MEP Codes
Category: 2 - Code Compliance
Priority: 1 - Response Time (< 2 yr)
Correction: Install fire rated walls and door where required - insert number of doors
Qty: 1,000.00
Unit of Measure: S.F.
Estimate: $41,170.38
Assessor Name: System
Date Created: 08/06/2015

Notes: Add fire-rated stairway enclosure and doors for 2 unenclosed stairs between first floor and basement

System: C1030 - Fittings

Location: main building - toilet rooms

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace toilet accessories - select accessories and quantity

Qty: 5.00

Unit of Measure: Ea.

Estimate: $13,430.31

Assessor Name: System

Date Created: 08/06/2015

Notes: Provide toilet room accessories

System: C2010 - Stair Construction

Location: main building - exterior stairs

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Repair exterior stairs

Qty: 48.00

Unit of Measure: Riser

Estimate: $24,523.14

Assessor Name: System

Date Created: 08/06/2015

Notes: Replace broken and damaged exterior limestone block tread/riser exterior stairs and handrails

System: D2030 - Sanitary Waste

Location: main building - entire building

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

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

Qty: 49,285.00

Unit of Measure: S.F.

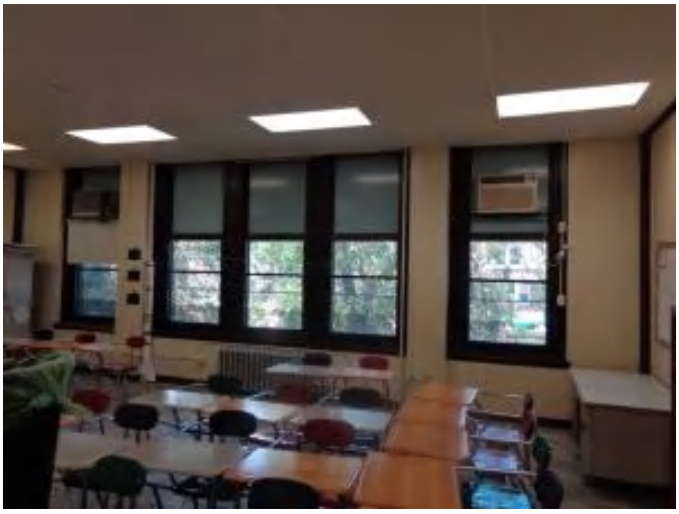
Estimate: $209,294.03

Assessor Name: System

Date Created: 08/10/2015

Notes: Inspect sanitary system throughout the main building and replace as needed. System backs up in the bathrooms during a heavy rain.

System: D3040 - Distribution Systems



Location: main building - boiler room

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

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: 50,000.00

Unit of Measure: S.F.

Estimate: $2,411,963.23

Assessor Name: System

Date Created: 08/10/2015

Notes: Install unit ventilators in all classrooms

System: D5010 - Electrical Service/Distribution

Location: main building - electrical room

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: $506,444.15

Assessor Name: System

Date Created: 08/03/2015

Notes: Upgrade the existing electrical service with a new service. Replace the existing switchboard with new 1600A, 208/120, 3PH, 4 wire switchboards.

System: D5010 - Electrical Service/Distribution

Location: main building - 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: $341,312.39

Assessor Name: System

Date Created: 08/03/2015

Notes: Replace the entire distribution system with new panel boards and new feeders. Provide arc flush label on the all panel boards. Estimated, 10 panel boards.

System: D5020 - Lighting and Branch Wiring

Location: main building - entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Lighting Fixtures (SF)

Qty: 0.00

Unit of Measure: S.F.

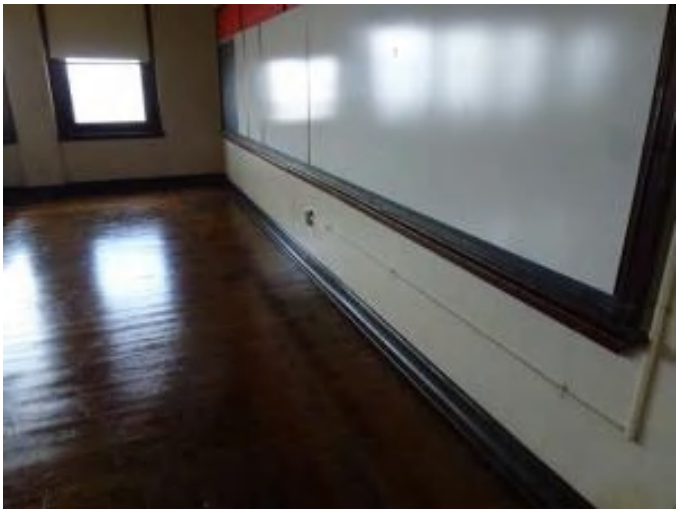
Estimate: $573,024.18

Assessor Name: System

Date Created: 08/03/2015

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

System: D5020 - Lighting and Branch Wiring



Location: main building - entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 0.00

Unit of Measure: S.F.

Estimate: $328,314.98

Assessor Name: System

Date Created: 08/03/2015

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, for data power, for the computer lab room.

System: D5020 - Lighting and Branch Wiring

Location: main building - Kindergarten Classrooms
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 1 - Response Time (< 2 yr)
Correction: Replace Wiring Device
Qty: 0.00
Unit of Measure: Ea.
Estimate: $1,764.54
Assessor Name: System
Date Created: 08/06/2015

Notes: Replace existing receptacles With GFCI type receptacles in the areas subject to kid access. Estimated at 10 total

System: D5030 - Communications and Security

Location: main building - entire building
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Replace fire alarm system
Qty: 1.00
Unit of Measure: S.F.
Estimate: $301,939.66
Assessor Name: System
Date Created: 08/03/2015

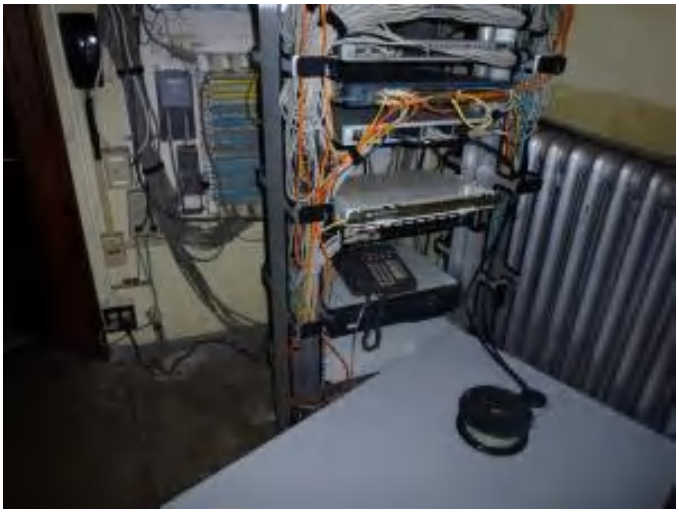
Notes: Replace existing fire alarm system with a new automatic Fire Alarm System including control panel, initiated devices in corridors, air ducts, electrical and LAN rooms, library, and computer rooms. Provide notification devices in class rooms, offices, auditorium, corridors, other area recommended by codes.

System: D5030 - Communications and Security

Location: Main building
Distress: Security Issue
Category: 1 - Health & Safety
Priority: 1 - Response Time (< 2 yr)
Correction: Add/Replace Video Surveillance System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $259,145.92
Assessor Name: System
Date Created: 08/06/2015

Notes: Provide sufficient number of cameras on portable building exterior wall and connect them to the main Building CCTV system.

System: D5030 - Communications and Security



Location: main building - school office
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: $112,560.22
Assessor Name: System
Date Created: 08/03/2015

Notes: Replace existing master clock controller.

System: D5030 - Communications and Security

This deficiency has no image.

Location: main building - backstage

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Sound System

Qty: 1.00

Unit of Measure: LS

Estimate: $42,618.80

Assessor Name: System

Date Created: 08/03/2015

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 microphones.

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

System: B2010 - Exterior Walls

Location: main building - exterior walls

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replacing failing steel lintels in brick wall construction

Qty: 320.00

Unit of Measure: L.F.

Estimate: $152,968.01

Assessor Name: System

Date Created: 08/06/2015

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

System: B2010 - Exterior Walls

Location: portable building - foundations/walls

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair spalled concrete wall structure

Qty: 100.00

Unit of Measure: S.F.

Estimate: $5,671.62

Assessor Name: System

Date Created: 08/06/2015

Notes: Repair piers, grade beam, and spalled panel on Portable Building

System: B2020 - Exterior Windows

Location: main building - windows

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 300.00

Unit of Measure: Ea.

Estimate: $1,876,061.84

Assessor Name: System

Date Created: 08/06/2015

Notes: Replace all exterior windows with insulated single hung units

System: B2020 - Exterior Windows

Location: main building - windows

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 16.00

Unit of Measure: Ea.

Estimate: $67,592.53

Assessor Name: System

Date Created: 08/06/2015

Notes: Replace sliding aluminum frame windows both sides of building

System: B2030 - Exterior Doors

Location: main building - exterior doors

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 16.00

Unit of Measure: Ea.

Estimate: $129,537.29

Assessor Name: System

Date Created: 08/06/2015

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

System: B3010140 - Shingle & Tile

Location: main building - auditorium roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace asphalt shingle roof - partial area

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $205,810.25

Assessor Name: System

Date Created: 08/06/2015

Notes: Remove and replace existing sloped asphalt shingle roof over auditorium

System: C1010 - Partitions

Location: main building - corridors

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Remove non-rated interior glass panels and replace with studs, gypsum board, paint (E) wall

Qty: 300.00

Unit of Measure: S.F.

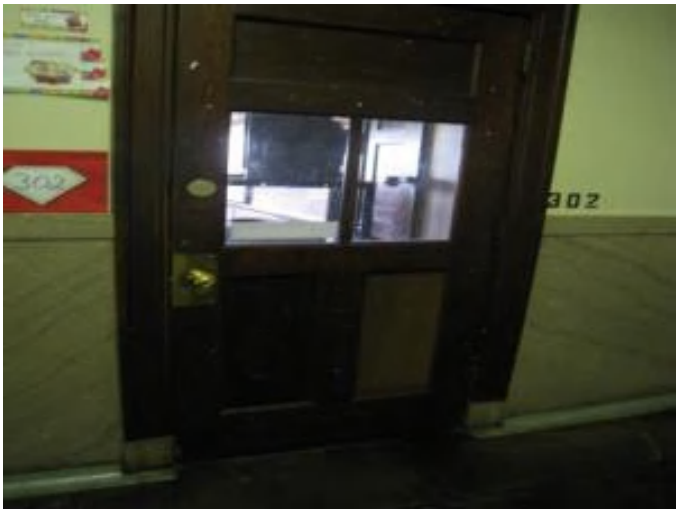
Estimate: $8,024.80

Assessor Name: System

Date Created: 08/06/2015

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

System: C1020 - Interior Doors



Location: main building - interior doors

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: 80.00

Unit of Measure: Ea.

Estimate: $372,347.12

Assessor Name: System

Date Created: 08/06/2015

Notes: Remove and replace all wood interior doors, frames and hardware in classrooms, offices, etc. to meet code requirements.

System: C1020 - Interior Doors

Location: main building - mechanical rooms and stairways

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace hollow metal frames and doors

Qty: 24.00

Unit of Measure: Ea.

Estimate: $121,871.69

Assessor Name: System

Date Created: 08/06/2015

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

System: C1020 - Interior Doors

Location: interior rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Refinish interior doors

Qty: 50.00

Unit of Measure: Ea.

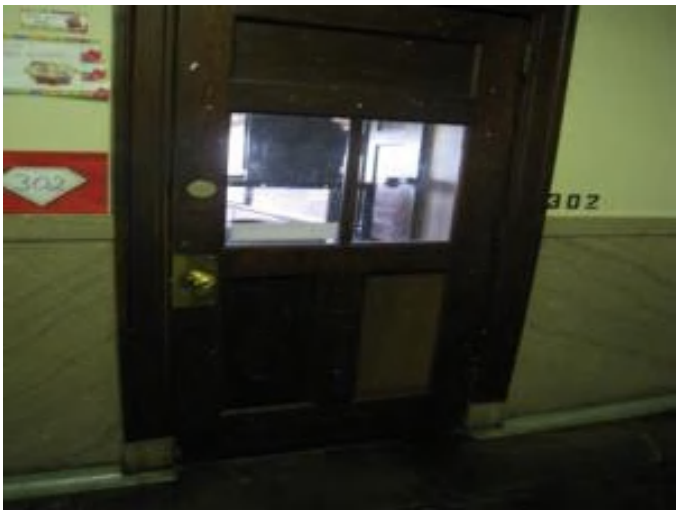
Estimate: $41,409.15

Assessor Name: System

Date Created: 12/14/2015

Notes: Refinish worn-out and damaged interior closet doors (50)

System: C1020 - Interior Doors



Location: main building - classrooms and offices

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Provide security hardware for classroom and office doors

Qty: 50.00

Unit of Measure: Ea.

Estimate: $11,471.83

Assessor Name: System

Date Created: 08/06/2015

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

System: C2010 - Stair Construction

Location: main building - stairways

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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: 08/06/2015

Notes: Remove and replace stairway handrails and guards with code compliant systems wall mounted handrails and center mounted railings with balustrade

System: C3010230 - Paint & Covering

Location: main building - interior walls

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: 70,000.00

Unit of Measure: S.F.

Estimate: $272,868.34

Assessor Name: System

Date Created: 08/06/2015

Notes: Repair water damage, cracks, and repaint all interior plaster

System: C3020413 - Vinyl Flooring

Location: main building - corridors and classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace VCT

Qty: 13,200.00

Unit of Measure: S.F.

Estimate: $158,631.42

Assessor Name: System

Date Created: 08/06/2015

Notes: Remove and replace all 12”x12” VCT floors in gymnasium and other rooms

System: C3020414 - Wood Flooring

Location: main building - classrooms and auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Refinish wood floors

Qty: 29,000.00

Unit of Measure: S.F.

Estimate: $312,241.26

Assessor Name: System

Date Created: 08/06/2015

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

System: C3020415 - Concrete Floor Finishes

Location: main building - mechanical rooms, corridors, stairways

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Clean and reseal concrete floors

Qty: 16,000.00

Unit of Measure: S.F.

Estimate: $46,640.22

Assessor Name: System

Date Created: 08/06/2015

Notes: Clean and repaint basement floor in mechanical rooms; clean and reseal concrete floors in hallways and stairways

System: C3030 - Ceiling Finishes

Location: main building - classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 10,000.00

Unit of Measure: S.F.

Estimate: $150,824.30

Assessor Name: System

Date Created: 08/06/2015

Notes: Replace damaged 2x4 acoustical tile ceilings

System: C3030 - Ceiling Finishes

Location: main building - auditorium and cafeteria

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair and resurface plaster ceilings - 2 coats plaster

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $13,124.09

Assessor Name: System

Date Created: 08/06/2015

Notes: Repaint plaster ceilings where damaged by water

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: 08/10/2015

Notes: Add roof overflow scuppers to roof parapet

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

System: C1010 - Partitions

Location: main building - classrooms

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Folding partition inoperable - remove and replace - select quality

Qty: 2,700.00

Unit of Measure: S.F.

Estimate: $739,264.68

Assessor Name: System

Date Created: 08/06/2015

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

System: C3010230 - Paint & Covering

Location: main building - mechanical room

Distress: Appearance

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 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: $61,464.51

Assessor Name: System

Date Created: 08/06/2015

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

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 60,000.00

Unit of Measure: S.F.

Estimate: $567,622.35

Assessor Name: System

Date Created: 08/10/2015

Notes: Remove existing steam distribution system. Install hot water distribution system.

System: D3060 - Controls & Instrumentation

Location: main building - entire building

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (150KSF)

Qty: 50,000.00

Unit of Measure: S.F.

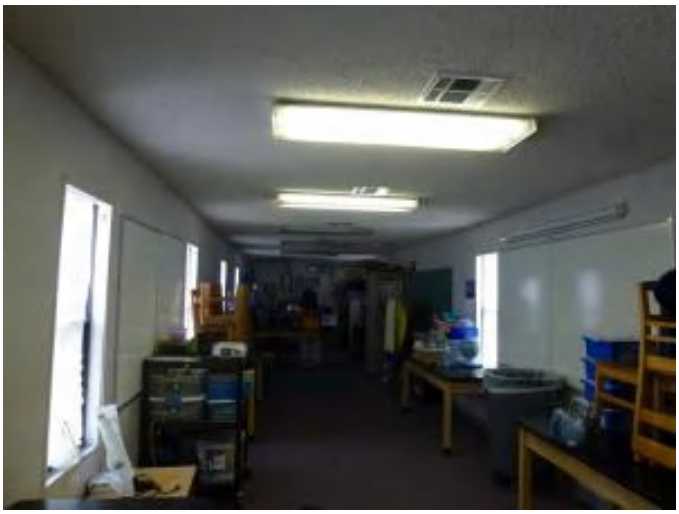
Estimate: $895,569.80

Assessor Name: System

Date Created: 08/10/2015

Notes: Install a new DDC system to the main building

System: D5020 - Lighting and Branch Wiring



Location: portable building - ceiling
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace lighting fixtures
Qty: 30.00
Unit of Measure: Ea.
Estimate: $13,853.33
Assessor Name: System
Date Created: 08/06/2015

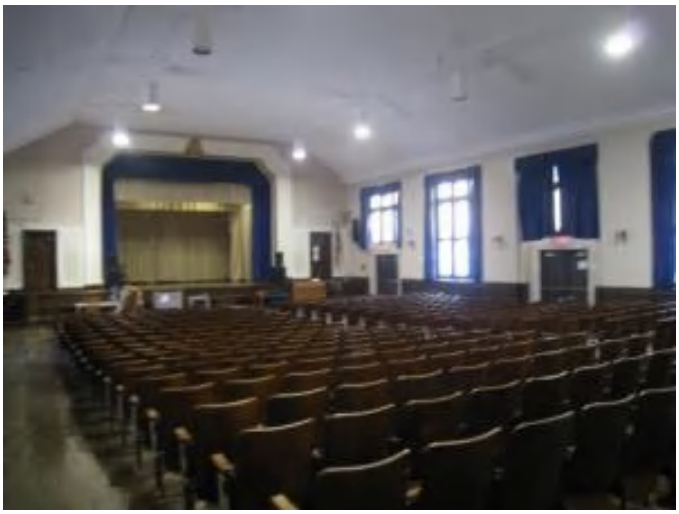
Notes:

System: D5090 - Other Electrical Systems

Location: main building - roof / chimney
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 3 - Response Time (3-4 yrs)
Correction: Repair Lightning Protection System
Qty: 1.00
Unit of Measure: Job
Estimate: $17,138.61
Assessor Name: System
Date Created: 08/03/2015

Notes: Perform Grounding and lightning protection studies to ascertain adequacy of existing systems

System: E2010 - Fixed Furnishings



Location: main building - auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 600.00

Unit of Measure: Ea.

Estimate: $541,143.31

Assessor Name: System

Date Created: 08/06/2015

Notes: Replace damaged folding wood auditorium chairs

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

System: D2010 - Plumbing Fixtures

Location: main building - toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 35.00

Unit of Measure: Ea.

Estimate: $261,175.17

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace all plumbing fixtures and the remodeling of the student restrooms

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System: D2010 - Plumbing Fixtures

Location: main building - corridors

Distress: Beyond Service Life

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: 12.00

Unit of Measure: Ea.

Estimate: $188,314.75

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace of all drinking fountains in the Main building

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System: D2010 - Plumbing Fixtures

Location: main building - toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 42.00

Unit of Measure: Ea.

Estimate: $176,022.58

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace all plumbing fixtures and the remodeling of the student restrooms

System: D3020 - Heat Generating Systems

Location: main building - boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 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: 08/10/2015

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

System: E1020 - Institutional Equipment

Location:	main building - backstage
Distress:	Inadequate
Category:	4 - Capital Improvement
Priority:	4 - Response Time (4-5 yrs)
Correction:	Add/Replace Stage Theatrical Lighting System
Qty:	1.00
Unit of Measure:	Ea.
Estimate:	$90,802.49
Assessor Name:	System
Date Created:	08/03/2015

Notes: Provide new stage lighting and controller in Auditorium.

Priority 5 - Response Time (> 5 yrs):

System: D2010 - Plumbing Fixtures

Location: main building - toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Remove and replace or replace wall hung urinals

Qty: 21.00

Unit of Measure: Ea.

Estimate: $69,700.75

Assessor Name: System

Date Created: 08/10/2015

Notes: Replace all plumbing fixtures and the remodeling of the student restrooms

System: D3020 - Heat Generating Systems

Location: main building - location to be determined

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: 08/10/2015

Notes: Replace the concrete fuel tank

System: D3020 - Heat Generating Systems

Location: main building - boiler room

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: 08/10/2015

Notes: Replace duplex fuel oil pumps and skid

System: D3030 - Cooling Generating Systems

Location: main building - entire building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Install chilled water system with distribution piping and pumps. (+150KSF)

Qty: 50,000.00

Unit of Measure: S.F.

Estimate: $831,584.11

Assessor Name: System

Date Created: 08/10/2015

Notes: Install chiller and chilled water distribution system

System: D3040 - Distribution Systems

Location: main building - auditorium
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Install HVAC unit for Auditorium (200 seat).
Qty: 420.00
Unit of Measure: Seat
Estimate: $598,679.43
Assessor Name: System
Date Created: 08/10/2015

Notes: Install AHUs to condition the auditorium

System: D3040 - Distribution Systems

Location: main building - cafeteria/gymnasium
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Install HVAC unit for Cafeteria (850 students).
Qty: 656.00
Unit of Measure: Pr.
Estimate: $306,710.25
Assessor Name: System
Date Created: 08/10/2015

Notes: Install AHUs to condition the cafeteria/gymnasium

System: D4010 - Sprinklers

Location:	main building - entire building
Distress:	Life Safety / NFPA / PFD
Category:	1 - Health & Safety
Priority:	5 - Response Time (> 5 yrs)
Correction:	Install a fire protection sprinkler system
Qty:	50,000.00
Unit of Measure:	S.F.
Estimate:	$715,270.89
Assessor Name:	System
Date Created:	08/10/2015

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
D5010 Electrical Service/Distribution	Switchboards, main fusible switch, 3 pole, 4 wire, 120/208, 120/240 V, 600 amp, incl fuse	1.00	Ea.	Boiler room					30	1927	2017	$6,986.25	$7,684.88
												Total:	**$7,684.88**

Executive Summary

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

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

Function:	Little School House
Gross Area (SF):	16,008
Year Built:	1998
Last Renovation:	
Replacement Value:	$9,519,898
Repair Cost:	$555,675.07
Total FCI:	5.84 %
Total RSLI:	61.64 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B730002
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S730001		

Condition Summary

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

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
A10 - Foundations	83.00 %	0.00 %	$0.00
A20 - Basement Construction	83.00 %	0.00 %	$0.00
B10 - Superstructure	83.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	73.70 %	2.85 %	$21,186.58
B30 - Roofing	35.28 %	0.00 %	$0.00
C10 - Interior Construction	74.19 %	4.63 %	$16,921.91
C20 - Stairs	83.00 %	0.00 %	$0.00
C30 - Interior Finishes	51.64 %	3.00 %	$26,111.26
D20 - Plumbing	48.00 %	0.00 %	$0.00
D30 - HVAC	48.06 %	19.27 %	$343,230.97
D40 - Fire Protection	51.43 %	0.00 %	$0.00
D50 - Electrical	43.57 %	15.75 %	$148,224.35
E10 - Equipment	51.43 %	0.00 %	$0.00
E20 - Furnishings	57.50 %	0.00 %	$0.00
Totals:	**61.64 %**	**5.84 %**	**$555,675.07**

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.	16,008	100	1998	2098		83.00 %	0.00 %	83			$389,315
A1030	Slab on Grade	$15.51	S.F.	16,008	100	1998	2098		83.00 %	0.00 %	83			$248,284
A2010	Basement Excavation	$13.07	S.F.	16,008	100	1998	2098		83.00 %	0.00 %	83			$209,225
A2020	Basement Walls	$23.02	S.F.	16,008	100	1998	2098		83.00 %	0.00 %	83			$368,504
B1010	Floor Construction	$92.20	S.F.	16,008	100	1998	2098		83.00 %	0.00 %	83			$1,475,938
B1020	Roof Construction	$24.11	S.F.	16,008	100	1998	2098		83.00 %	0.00 %	83			$385,953
B2010	Exterior Walls	$31.22	S.F.	16,008	100	1998	2098		83.00 %	0.00 %	83			$499,770
B2020	Exterior Windows	$13.63	S.F.	16,008	40	1998	2038		57.50 %	2.25 %	23		$4,912.20	$218,189
B2030	Exterior Doors	$1.67	S.F.	16,008	25	1998	2023		32.00 %	60.88 %	8		$16,274.38	$26,733
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.	400	30	1998	2028		43.33 %	0.00 %	13			$21,688
B3010140	Shingle & Tile	$38.73	S.F.	15,608	20	1998	2018	2022	35.00 %	0.00 %	7			$604,498
B3020	Roof Openings	$0.68	S.F.	16,008	20	1998	2018	2022	35.00 %	0.00 %	7			$10,885
C1010	Partitions	$14.93	S.F.	16,008	100	1998	2098		83.00 %	0.00 %	83			$238,999
C1020	Interior Doors	$3.76	S.F.	16,008	40	1998	2038		57.50 %	28.11 %	23		$16,921.91	$60,190
C1030	Fittings	$4.12	S.F.	16,008	40	1998	2038		57.50 %	0.00 %	23			$65,953
C2010	Stair Construction	$1.28	S.F.	16,008	100	1998	2098		83.00 %	0.00 %	83			$20,490

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$13.21	S.F.	16,008	10	1998	2008	2020	50.00 %	10.64 %	5		$22,506.00	$211,466
C3010231	Vinyl Wall Covering	$0.97	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.63	S.F.	16,008	30	1998	2028		43.33 %	0.00 %	13			$42,101
C3020411	Carpet	$7.30	S.F.	3,000	10	1998	2008	2037	220.00 %	0.00 %	22			$21,900
C3020412	Terrazzo & Tile	$75.52	S.F.	2,208	50	1998	2048		66.00 %	0.00 %	33			$166,748
C3020413	Vinyl Flooring	$9.68	S.F.	9,300	20	1998	2018	2022	35.00 %	4.00 %	7		$3,605.26	$90,024
C3020414	Wood Flooring	$22.27	S.F.	0	25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	1,500	50	1998	2048		66.00 %	0.00 %	33			$1,455
C3030	Ceiling Finishes	$20.97	S.F.	16,008	25	1998	2023	2025	40.00 %	0.00 %	10			$335,688
D2010	Plumbing Fixtures	$31.58	S.F.	16,008	35	1998	2033		51.43 %	0.00 %	18			$505,533
D2020	Domestic Water Distribution	$2.90	S.F.	16,008	25	1998	2023		32.00 %	0.00 %	8			$46,423
D2030	Sanitary Waste	$2.90	S.F.	16,008	25	1998	2023		32.00 %	0.00 %	8			$46,423
D2040	Rain Water Drainage	$3.29	S.F.	16,008	30	1998	2028		43.33 %	0.00 %	13			$52,666
D3020	Heat Generating Systems	$18.67	S.F.	16,008	35	1998	2033		51.43 %	0.00 %	18			$298,869
D3030	Cooling Generating Systems	$24.48	S.F.	16,008	30	1998	2028		43.33 %	0.00 %	13			$391,876
D3040	Distribution Systems	$42.99	S.F.	16,008	25	1998	2023		32.00 %	0.00 %	8			$688,184
D3050	Terminal & Package Units	$11.60	S.F.	16,008	20	1998	2018	2023	40.00 %	0.00 %	8			$185,693
D3060	Controls & Instrumentation	$13.50	S.F.	16,008	20	1998	2018	2037	110.00 %	158.82 %	22		$343,230.97	$216,108
D4010	Sprinklers	$8.02	S.F.	16,008	35	1998	2033		51.43 %	0.00 %	18			$128,384
D4020	Standpipes	$0.99	S.F.	16,008	35	1998	2033		51.43 %	0.00 %	18			$15,848
D5010	Electrical Service/Distribution	$9.70	S.F.	16,008	30	1998	2028		43.33 %	0.00 %	13			$155,278
D5020	Lighting and Branch Wiring	$34.68	S.F.	16,008	20	1998	2018	2021	30.00 %	0.32 %	6		$1,764.54	$555,157
D5030	Communications and Security	$12.99	S.F.	16,008	15	1998	2013	2027	80.00 %	70.43 %	12		$146,459.81	$207,944
D5090	Other Electrical Systems	$1.41	S.F.	16,008	30	1998	2028		43.33 %	0.00 %	13			$22,571
E1020	Institutional Equipment	$4.82	S.F.	16,008	35	1998	2033		51.43 %	0.00 %	18			$77,159
E1090	Other Equipment	$11.10	S.F.	16,008	35	1998	2033		51.43 %	0.00 %	18			$177,689
E2010	Fixed Furnishings	$2.13	S.F.	16,008	40	1998	2038		57.50 %	0.00 %	23			$34,097
								Total	**61.64 %**	**5.84 %**			**$555,675.07**	**$9,519,898**

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:	B3010 - Roof Coverings	This system contains no images
Note:	asphalt shingle 98% standing seam metal roof 2%	
System:	C1010 - Partitions	This system contains no images
Note:	concrete masonry units (block) 90% gypsum board and metal stud - upper walls and clerestories 10%	
System:	C3010 - Wall Finishes	This system contains no images
Note:	ceramic tile wainscot 5% painted block or gyp bd 95%	
System:	C3020 - Floor Finishes	This system contains no images
Note:	sealed concrete 8% vinyl floor finish 60% ceramic tile 13% broadloom carpet 19%	
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:	**$555,675**	**$0**	**$0**	**$0**	**$0**	**$269,661**	**$729,175**	**$954,318**	**$1,384,330**	**$0**	**$496,251**	**$4,389,410**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A10 - Foundations**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
*** A20 - Basement Construction**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2020 - Exterior Windows	$4,912	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,912**
B2030 - Exterior Doors	$16,274	$0	$0	$0	$0	$0	$0	$0	$37,252	$0	$0	**$53,526**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$817,802	$0	$0	$0	**$817,802**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$14,727	$0	$0	$0	**$14,727**
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**

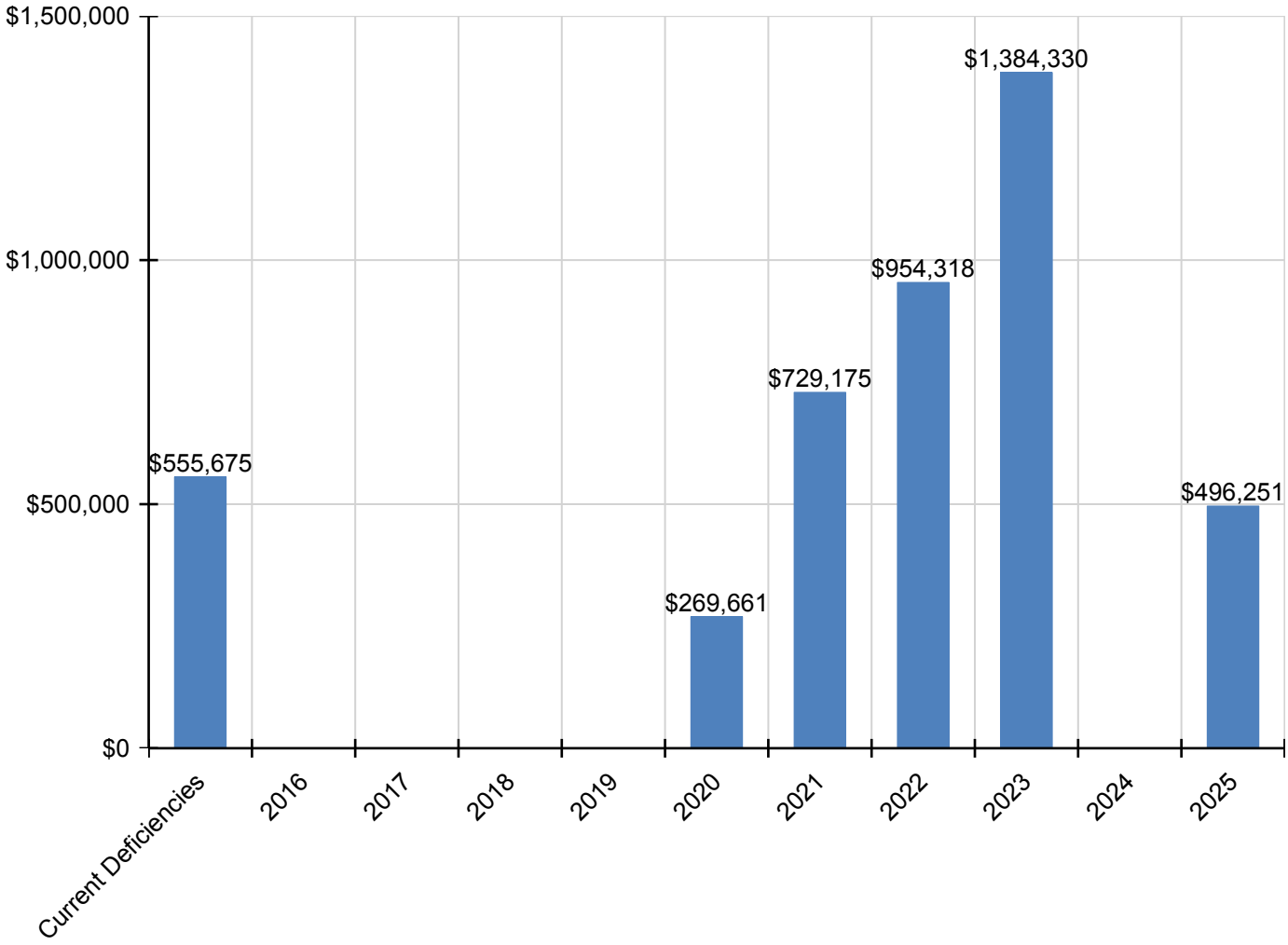
C1020 - Interior Doors	$16,922	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$16,922**
C1030 - Fittings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$22,506	$0	$0	$0	$0	$269,661	$0	$0	$0	$0	$0	**$292,167**
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	$3,605	$0	$0	$0	$0	$0	$0	$121,789	$0	$0	$0	**$125,395**
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	$0	$0	$0	$496,251	**$496,251**
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	$0	$64,689	$0	$0	**$64,689**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$0	$64,689	$0	$0	**$64,689**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$0	$0	$0	$0	$0	$0	$0	$0	$958,947	$0	$0	**$958,947**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$258,753	$0	$0	**$258,753**
D3060 - Controls & Instrumentation	$343,231	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$343,231**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

D5020 - Lighting and Branch Wiring	$1,765	$0	$0	$0	$0	$0	$729,175	$0	$0	$0	$0	**$730,940**
D5030 - Communications and Security	$146,460	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$146,460**
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

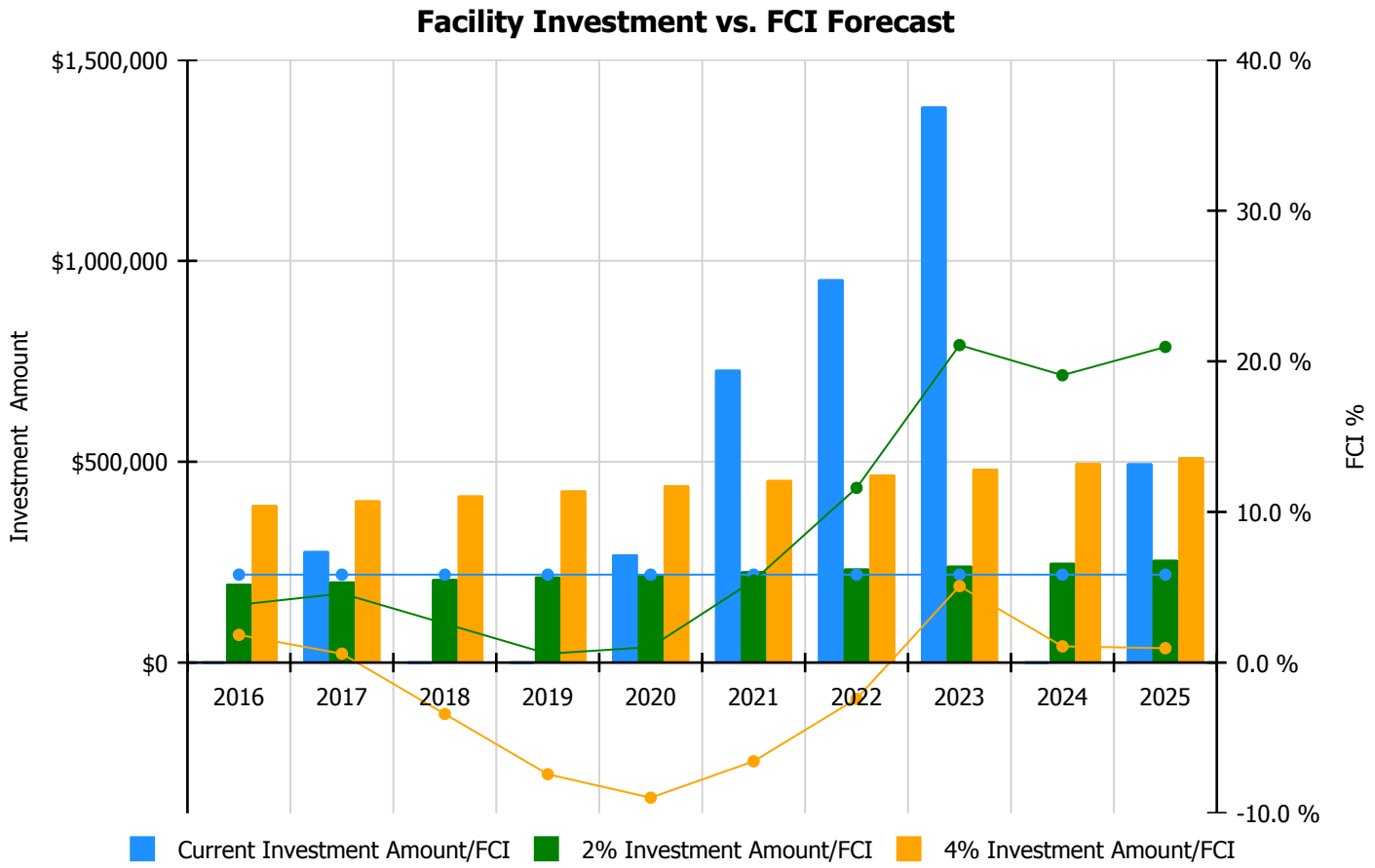
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

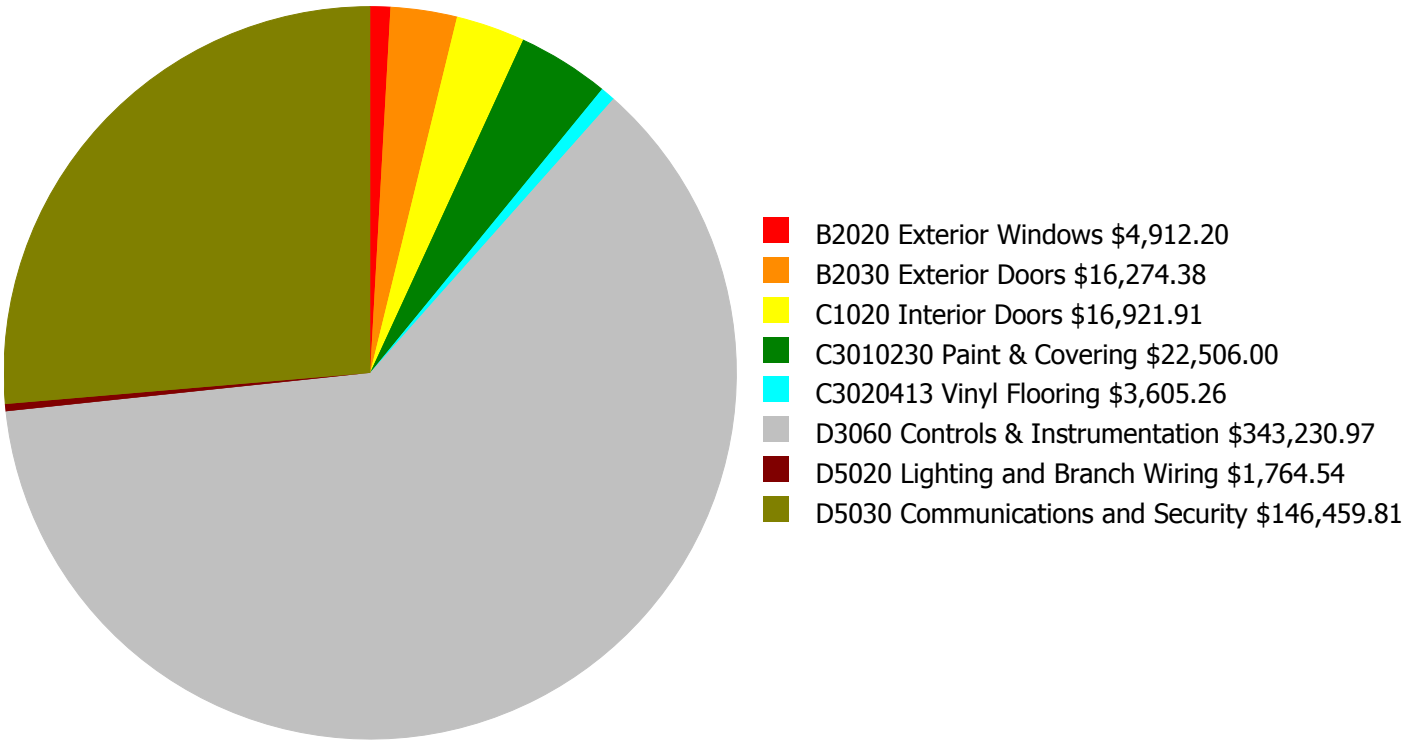
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 5.84%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$196,110.00	3.84 %	$392,220.00	1.84 %
2017	$277,753	$201,993.00	4.59 %	$403,986.00	0.59 %
2018	$0	$208,053.00	2.59 %	$416,106.00	-3.41 %
2019	$0	$214,295.00	0.59 %	$428,589.00	-7.41 %
2020	$269,661	$220,723.00	1.03 %	$441,447.00	-8.97 %
2021	$729,175	$227,345.00	5.45 %	$454,690.00	-6.55 %
2022	$954,318	$234,165.00	11.60 %	$468,331.00	-2.40 %
2023	$1,384,330	$241,190.00	21.08 %	$482,381.00	5.08 %
2024	$0	$248,426.00	19.08 %	$496,852.00	1.08 %
2025	$496,251	$255,879.00	20.95 %	$511,758.00	0.95 %
Total:	**$4,111,489**	**$2,248,179.00**		**$4,496,360.00**	

Deficiency Summary by System

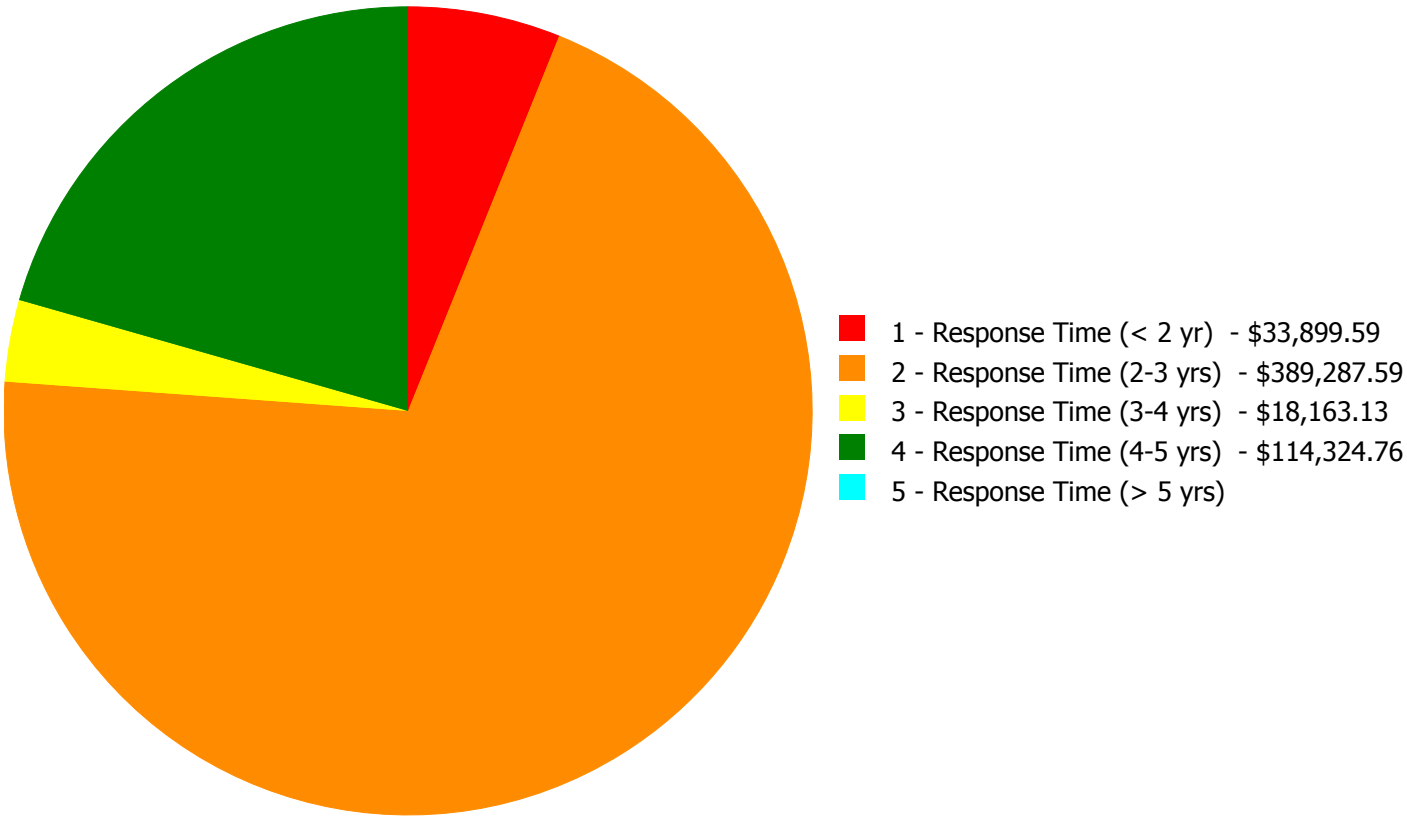
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $555,675.07

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: $555,675.07

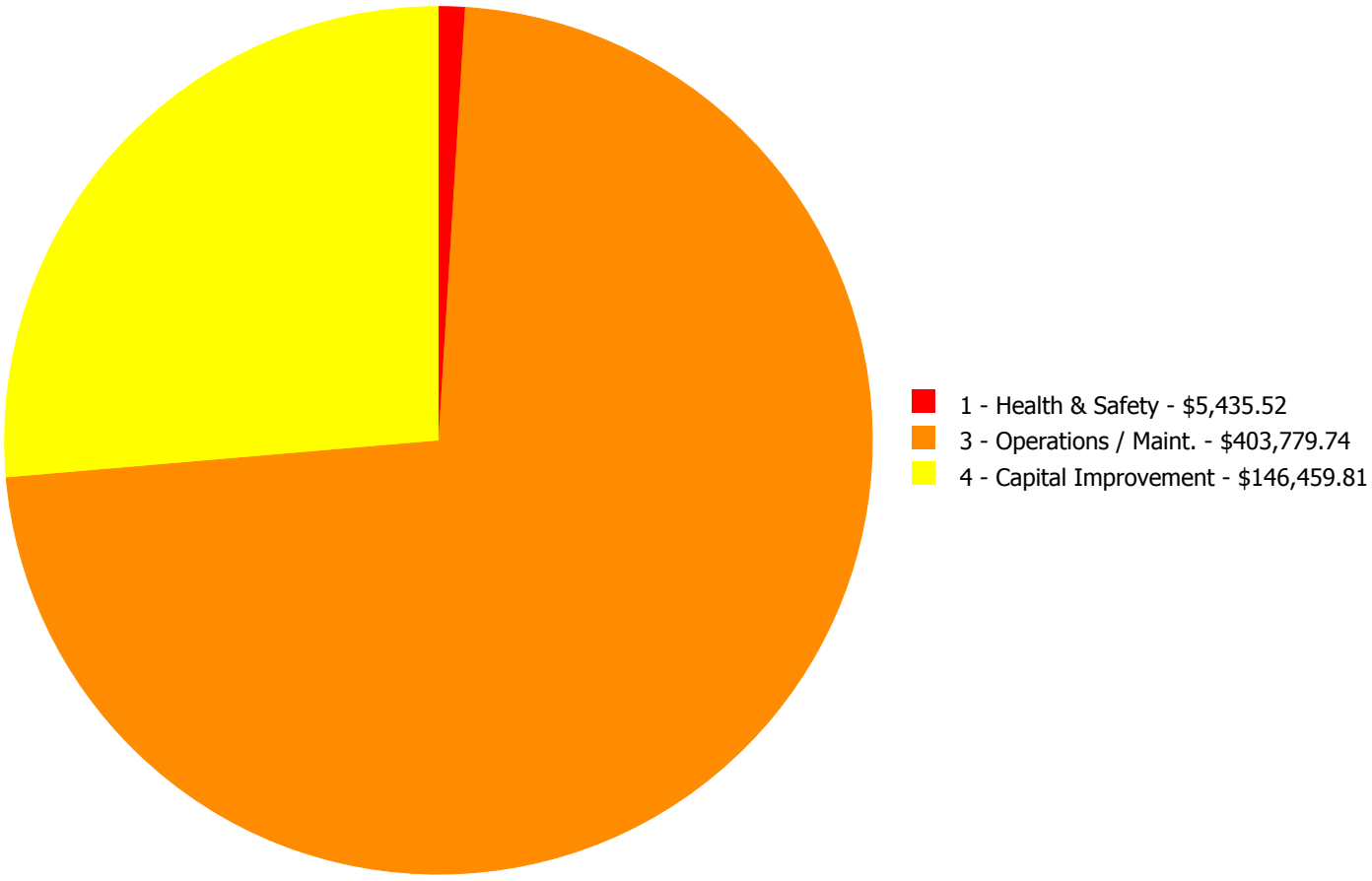
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2020	Exterior Windows	$0.00	$0.00	$4,912.20	$0.00	$0.00	$4,912.20
B2030	Exterior Doors	$0.00	$16,274.38	$0.00	$0.00	$0.00	$16,274.38
C1020	Interior Doors	$0.00	$3,670.98	$13,250.93	$0.00	$0.00	$16,921.91
C3010230	Paint & Covering	$0.00	$22,506.00	$0.00	$0.00	$0.00	$22,506.00
C3020413	Vinyl Flooring	$0.00	$3,605.26	$0.00	$0.00	$0.00	$3,605.26
D3060	Controls & Instrumentation	$0.00	$343,230.97	$0.00	$0.00	$0.00	$343,230.97
D5020	Lighting and Branch Wiring	$0.00	$0.00	$0.00	$1,764.54	$0.00	$1,764.54
D5030	Communications and Security	$33,899.59	$0.00	$0.00	$112,560.22	$0.00	$146,459.81
	Total:	$33,899.59	$389,287.59	$18,163.13	$114,324.76	$0.00	$555,675.07

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: $555,675.07

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: D5030 - Communications and Security

Location: LSH - exterior

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Add/Replace Video Surveillance System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $33,899.59

Assessor Name: Craig Anding

Date Created: 08/04/2015

Notes: Provide sufficient number of cameras on LSH exterior wall and connect them to main building CCTV system.

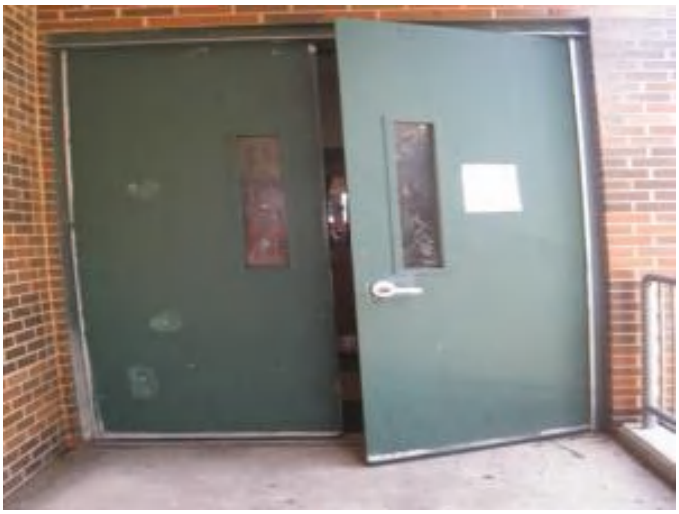
Priority 2 - Response Time (2-3 yrs):

System: B2030 - Exterior Doors

Location: LSH - exterior doors
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace exterior doors - per leaf
Qty: 1.00
Unit of Measure: Ea.
Estimate: $9,107.32
Assessor Name: Craig Anding
Date Created: 08/06/2015

Notes: Replace plexiglass entrance door lite

System: B2030 - Exterior Doors



Location: LSH - exterior doors
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Refinish and repaint exterior doors - per leaf
Qty: 12.00
Unit of Measure: Ea.
Estimate: $7,167.06
Assessor Name: Craig Anding
Date Created: 08/06/2015

Notes: Repaint all hollow metal door frames

System: C1020 - Interior Doors

Location: LSH - classrooms and offices

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Provide security hardware for classroom and office doors

Qty: 16.00

Unit of Measure: Ea.

Estimate: $3,670.98

Assessor Name: Craig Anding

Date Created: 08/06/2015

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

System: C3010230 - Paint & Covering

Location: LSH - walls

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: 3,000.00

Unit of Measure: S.F.

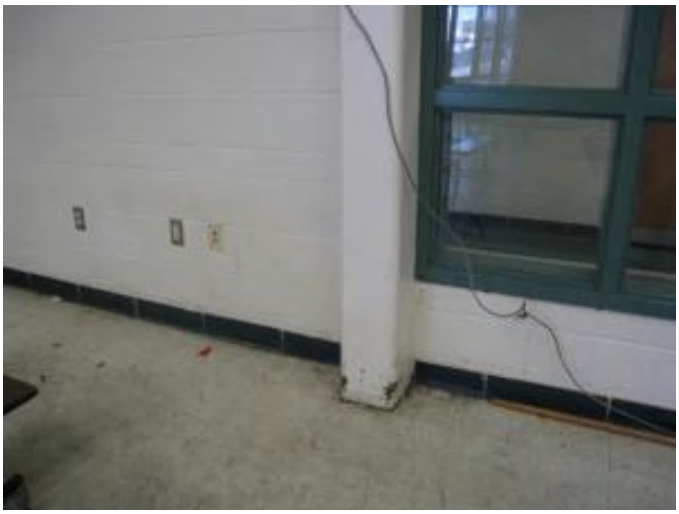
Estimate: $22,506.00

Assessor Name: Craig Anding

Date Created: 08/06/2015

Notes: Repaint all corridor walls (block)

System: C3020413 - Vinyl Flooring



Location: LSH - floors

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace VCT

Qty: 300.00

Unit of Measure: S.F.

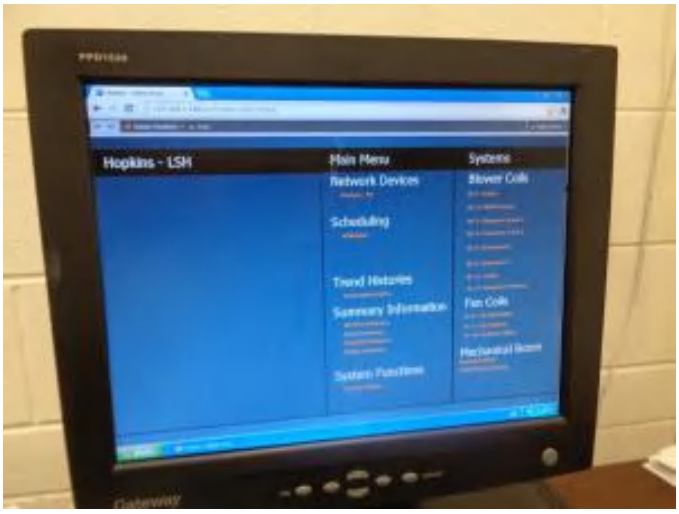
Estimate: $3,605.26

Assessor Name: Craig Anding

Date Created: 08/06/2015

Notes: Replace VCT in multipurpose room where expansion joint cracked tiles and other areas

System: D3060 - Controls & Instrumentation



Location: LSH - entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 16,000.00

Unit of Measure: S.F.

Estimate: $343,230.97

Assessor Name: Craig Anding

Date Created: 08/10/2015

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

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

System: B2020 - Exterior Windows

Location: LSH - exterior walls
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace security screens
Qty: 32.00
Unit of Measure: S.F.
Estimate: $4,912.20
Assessor Name: Craig Anding
Date Created: 08/06/2015

Notes: Replace security screens on (32) 4x8 windows

System: C1020 - Interior Doors

Location: LSH - interior doors
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Refinish interior doors
Qty: 16.00
Unit of Measure: Ea.
Estimate: $13,250.93
Assessor Name: Craig Anding
Date Created: 08/06/2015

Notes: Refinish stained and dirty wood doors

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

System: D5020 - Lighting and Branch Wiring

Location: Kindergarten Classrooms
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 4 - Response Time (4-5 yrs)
Correction: Replace Wiring Device
Qty: 0.00
Unit of Measure: Ea.
Estimate: $1,764.54
Assessor Name: Craig Anding
Date Created: 08/03/2015

Notes: Replace existing receptacles with GFCI receptacle in the areas subject to kid access. Estimated at 100total.

System: D5030 - Communications and Security

Location: LSH - school office
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 4 - Response Time (4-5 yrs)
Correction: Add/Replace Clock System or Components
Qty: 0.00
Unit of Measure: Ea.
Estimate: $112,560.22
Assessor Name: Craig Anding
Date Created: 08/03/2015

Notes: Replace existing master clock controller.

Equipment Inventory

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

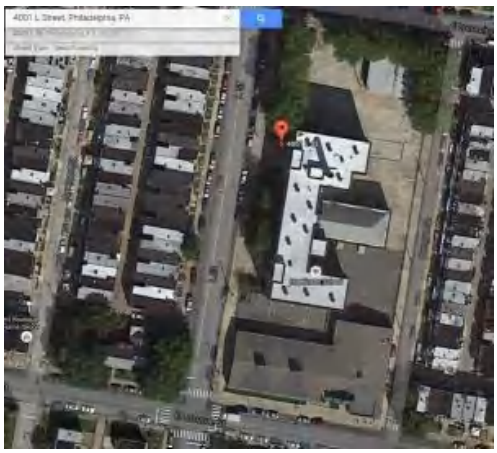
Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, packaged water tube, gas fired, steam or hot water, gross output, 1680 MBH	1.00	Ea.	mechanical room	Smith	19 Series-10	F98-201		35	1998	2033	$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	Smith	19 Series-10	F98-207		35	1998	2033	$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---5	1598F36317		30			$90,207.10	$99,227.81
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 0 stories, 0' horizontal	1.00	Ea.						30	1998	2028	$7,824.60	$8,607.06
D5010 Electrical Service/Distribution	Transformer, liquid-filled, 5 kV or 15 kV primary, 277/480 V secondary, 3 phase, 225 kVA, pad mounted	1.00	Ea.	Electrical room					30	1998	2028	$22,728.60	$25,001.46
												Total:	**$221,548.47**

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):	65,000
Year Built:	1927
Last Renovation:	
Replacement Value:	$1,234,560
Repair Cost:	$211,566.92
Total FCI:	17.14 %
Total RSLI:	41.56 %



Description:

Attributes:

General Attributes:

Bldg ID:	S730001	Site ID:	S730001

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	41.68 %	22.33 %	$211,566.92
G40 - Site Electrical Utilities	41.18 %	0.00 %	$0.00
Totals:	**41.56 %**	**17.14 %**	**$211,566.92**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$7.65	S.F.		30				0.00 %	0.00 %				$0
G2030	Pedestrian Paving	$11.52	S.F.	53,000	40	1990	2030		37.50 %	34.65 %	15		$211,566.92	$610,560
G2040	Site Development	$4.36	S.F.	66,000	25	1990	2015	2026	44.00 %	0.00 %	11			$287,760
G2050	Landscaping & Irrigation	$3.78	S.F.	13,000	15	1990	2005	2027	80.00 %	0.00 %	12			$49,140
G4020	Site Lighting	$3.58	S.F.	66,000	30	1990	2020	2027	40.00 %	0.00 %	12			$236,280
G4030	Site Communications & Security	$0.77	S.F.	66,000	30	1990	2020	2029	46.67 %	0.00 %	14			$50,820
								Total	**41.56 %**	**17.14 %**			**$211,566.92**	**$1,234,560**

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.

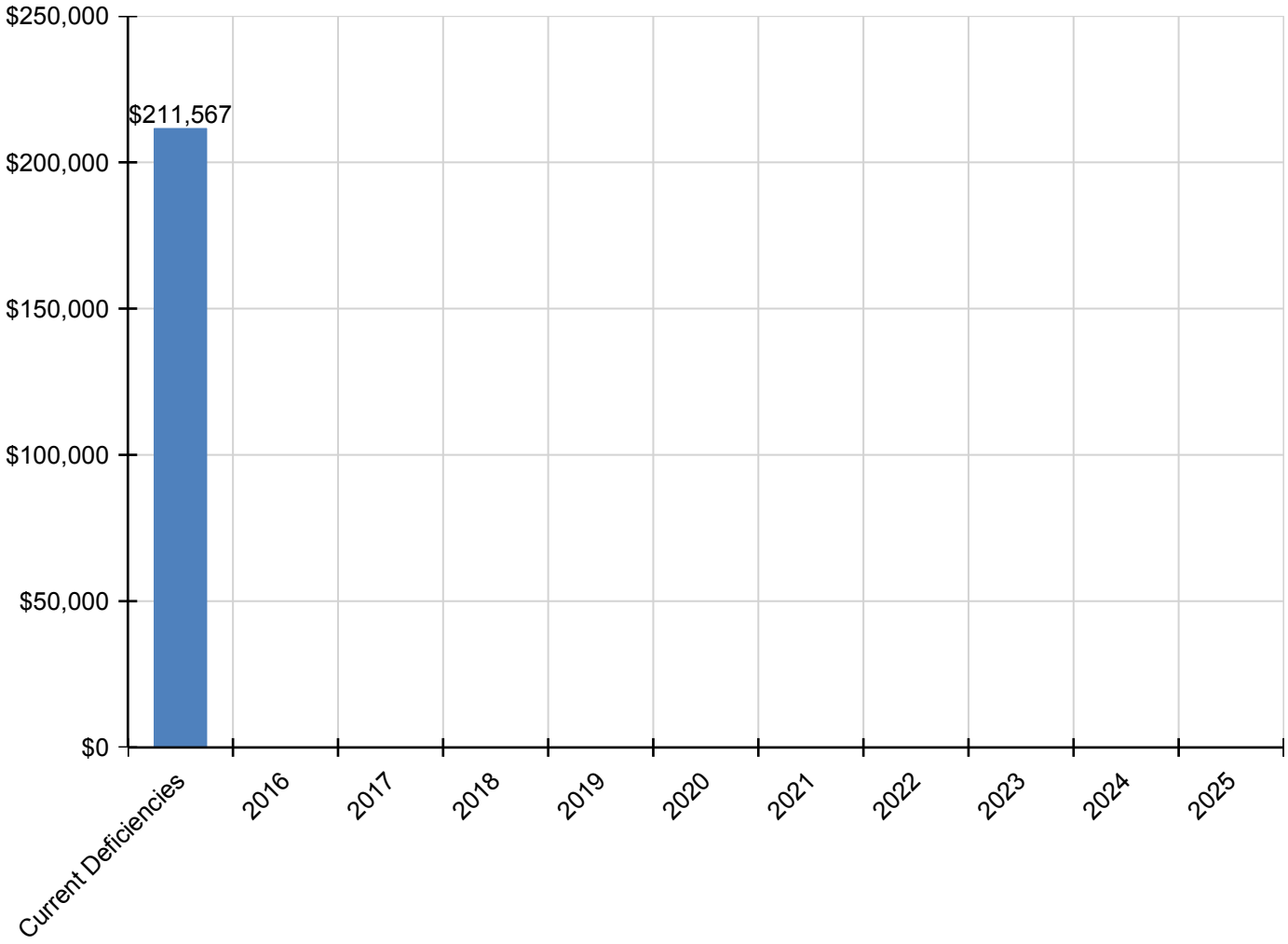
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$211,567**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$211,567**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2030 - Pedestrian Paving	$211,567	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$211,567**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

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

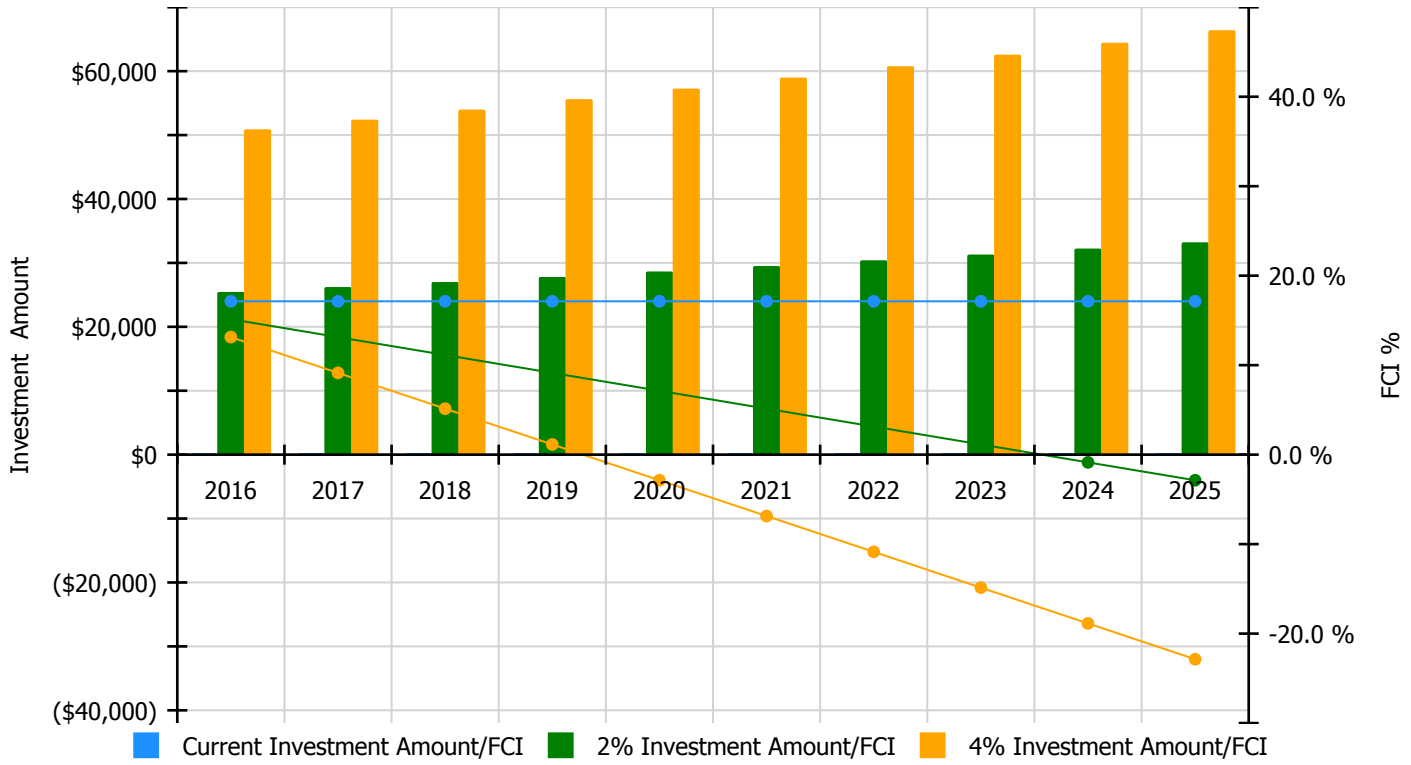


10 Year FCI Forecast by Investment Scenario

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

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

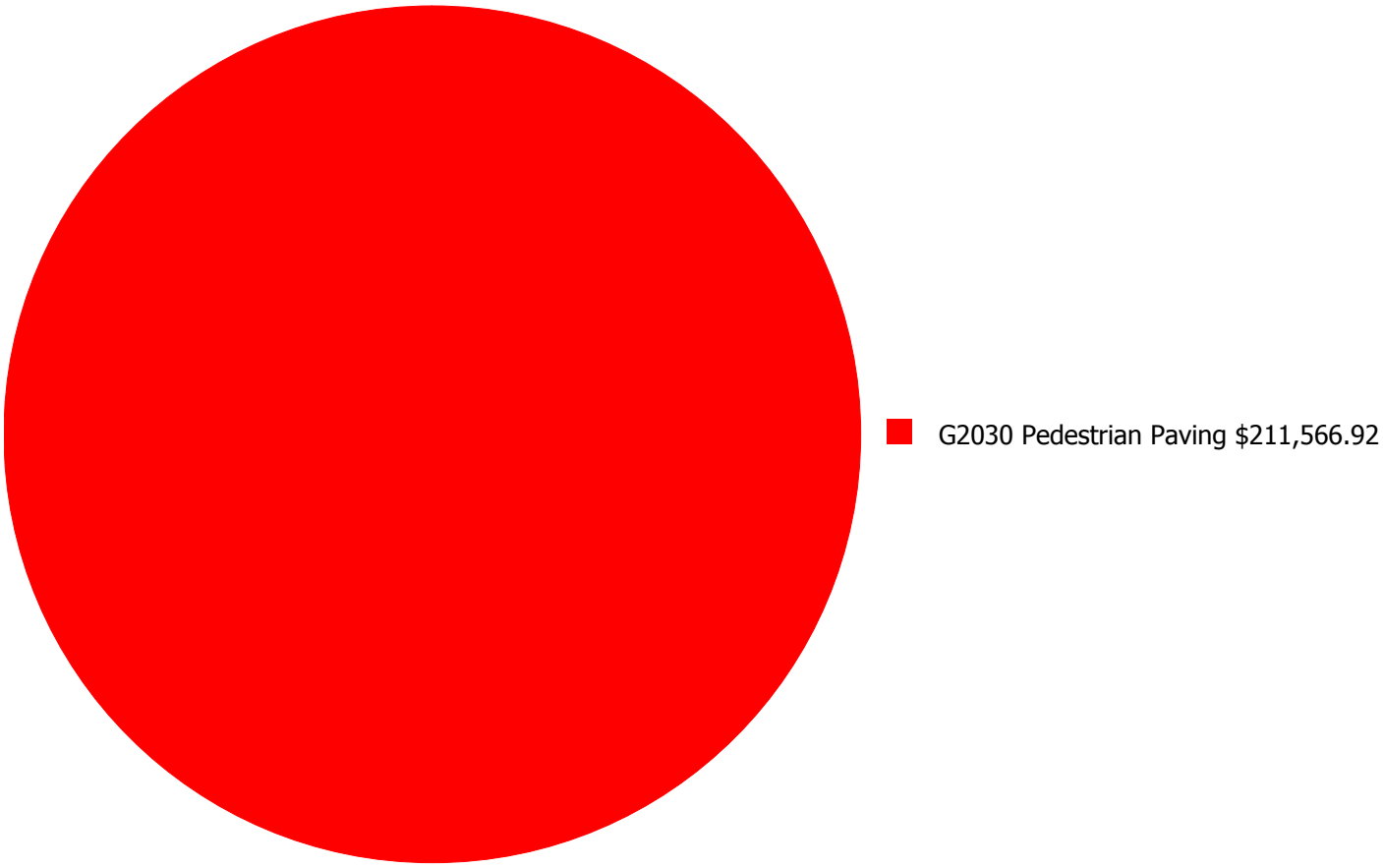
Facility Investment vs. FCI Forecast



Year	Investment Amount Current FCI - 17.14%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$25,432.00	15.14 %	$50,864.00	13.14 %
2017	$0	$26,195.00	13.14 %	$52,390.00	9.14 %
2018	$0	$26,981.00	11.14 %	$53,961.00	5.14 %
2019	$0	$27,790.00	9.14 %	$55,580.00	1.14 %
2020	$0	$28,624.00	7.14 %	$57,248.00	-2.86 %
2021	$0	$29,483.00	5.14 %	$58,965.00	-6.86 %
2022	$0	$30,367.00	3.14 %	$60,734.00	-10.86 %
2023	$0	$31,278.00	1.14 %	$62,556.00	-14.86 %
2024	$0	$32,216.00	-0.86 %	$64,433.00	-18.86 %
2025	$0	$33,183.00	-2.86 %	$66,366.00	-22.86 %
Total:	**$0**	**$291,549.00**		**$583,097.00**	

Deficiency Summary by System

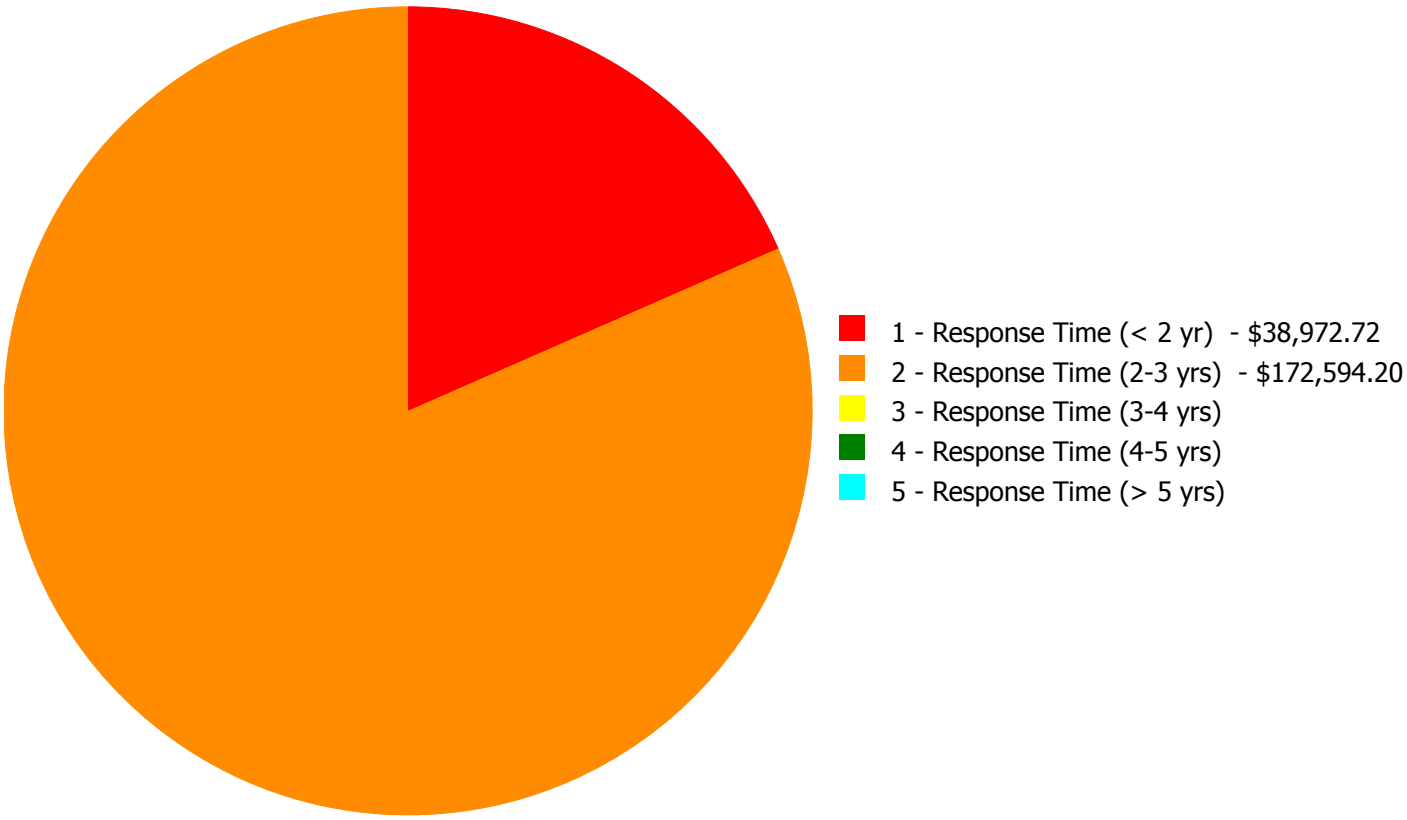
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $211,566.92

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: $211,566.92

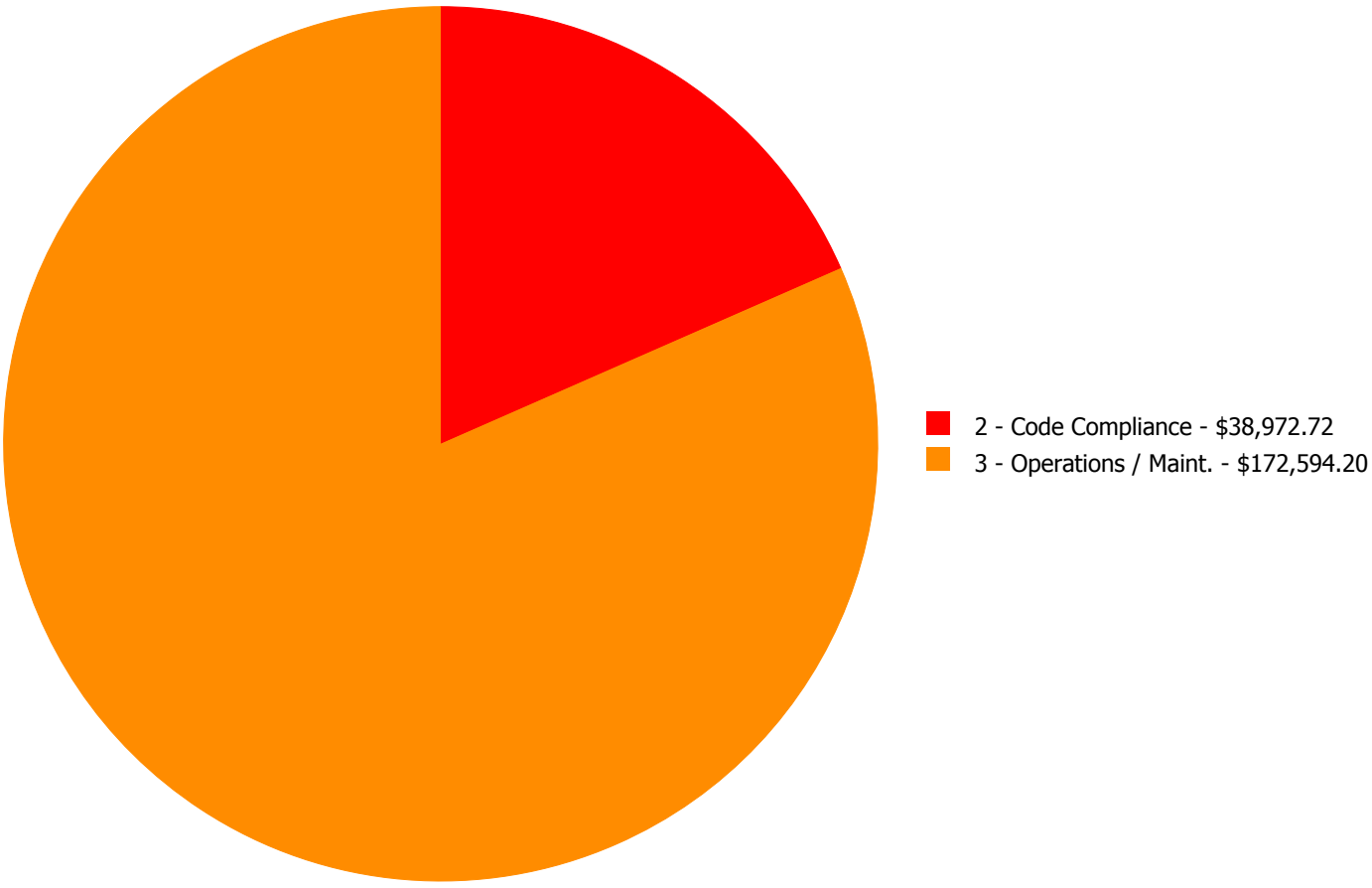
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2030	Pedestrian Paving	$38,972.72	$172,594.20	$0.00	$0.00	$0.00	$211,566.92
	Total:	$38,972.72	$172,594.20	$0.00	$0.00	$0.00	$211,566.92

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: $211,566.92

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: G2030 - Pedestrian Paving

This deficiency has no image.

Location: to be determined

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

Correction: Install an exterior ADA ramp - based on 5' wide by the linear foot - up to a 48" rise - per LF of ramp - figure 1 LF per inch of rise

Qty: 30.00

Unit of Measure: L.F.

Estimate: $38,972.72

Assessor Name: Craig Anding

Date Created: 10/23/2015

Notes: Add ADA accessible ramp into the main building

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

System: G2030 - Pedestrian Paving

Location: site play area

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 12,000.00

Unit of Measure: S.F.

Estimate: $172,594.20

Assessor Name: Craig Anding

Date Created: 08/06/2015

Notes: Repave damaged sections of concrete 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