

# EAST CAROLINA UNIVERSITY

Facility Condition Assessment

Ward Sports Medicine  
Asset 097

Inspected January 25, 2023





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# FACILITY CONDITION ASSESSMENT

## SECTION 1

### ASSET OVERVIEW



## ASSET EXECUTIVE SUMMARY

All costs shown as Present Value

<b>ASSET CODE</b> 097	<b>CURRENT REPLACEMENT VALUE</b> \$37,387,000
<b>ASSET NAME</b> WARD SPORTS MEDICINE	<b>FACILITY CONDITION NEEDS INDEX</b> 0.39
<b>ASSET USE</b> Classroom / Academic	<b>FACILITY CONDITION INDEX</b> 0.09
<b>YEAR BUILT</b> 1989	<b>10-YEAR \$/SF</b> 190.57
<b>GSF</b> 76,695	
<b>INSPECTION DATE</b> 01/25/2023	

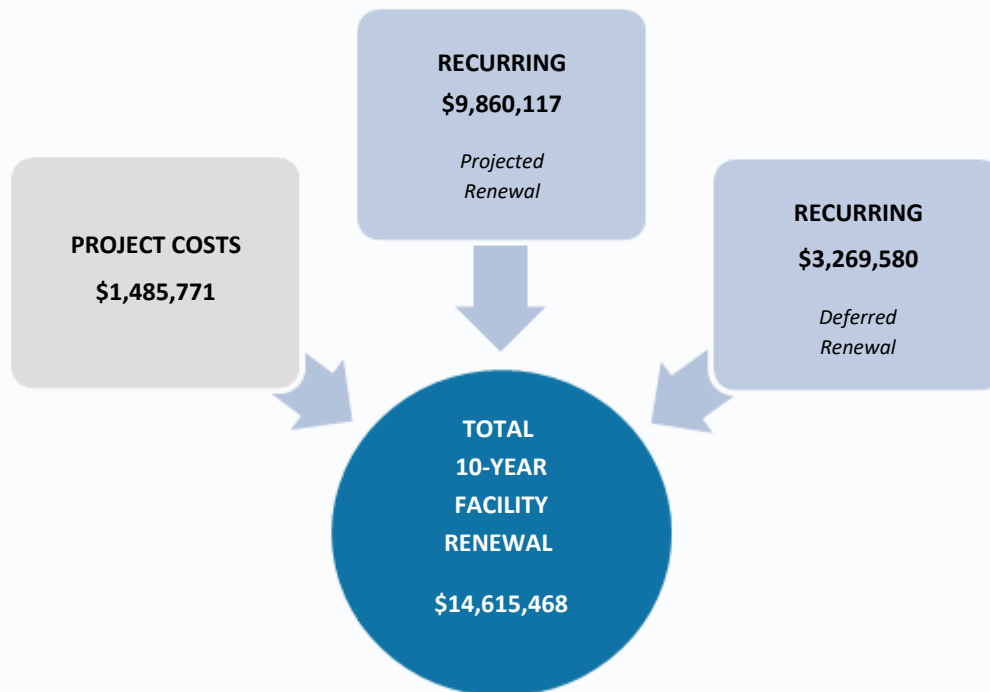
### FCNI Scale

The FCNI for this asset is **0.39**

- Excellent Condition (typically new construction)
- Below Average Condition (major renovation required)
- Good Condition (maintained within lifecycle)
- Poor Condition (total renovation required)
- Fair Condition (normal renovations required)
- Replacement Indicated (unless historic)



### Total Facility Renewal Costs



## Project Costs

### *Project Cost by Priority*

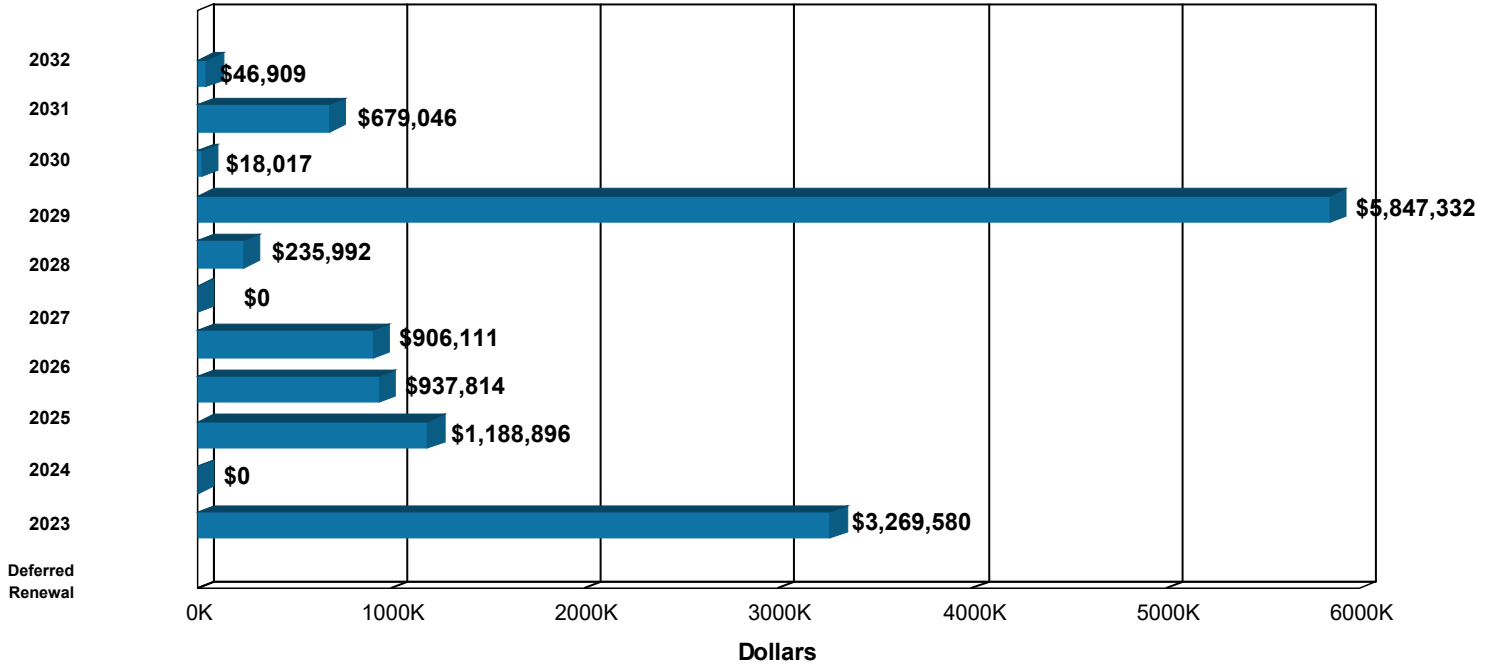
PLANT ADAPTION	
Priority 1	\$3,387
Priority 2	\$321,398
Priority 3	\$1,160,986
Priority 4	\$0
Priority 5	\$0

CORRECTIVE ACTION	
Priority 1	\$0
Priority 2	\$0
Priority 3	\$0
Priority 4	\$0
Priority 5	\$0

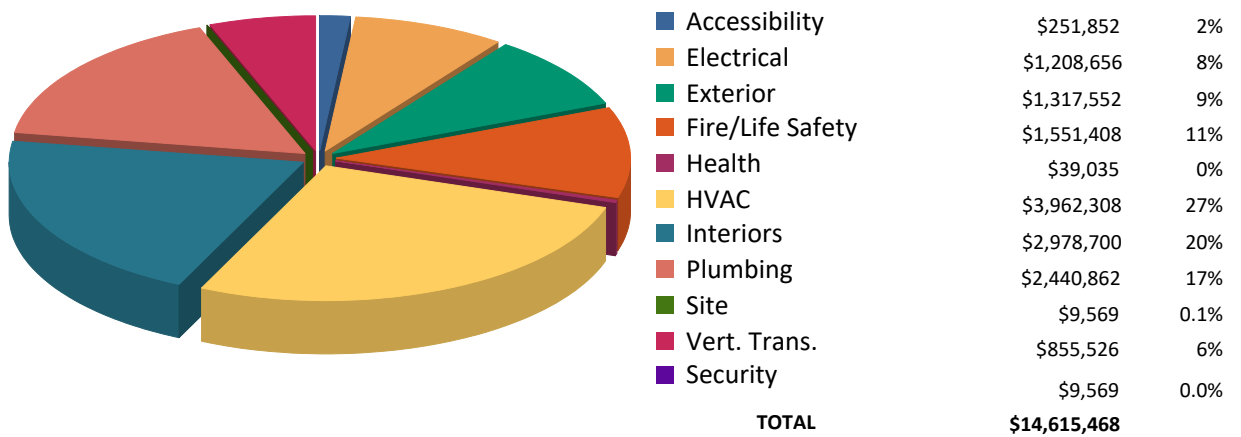


## Recurring Costs

Component Replacement Cost by Year



## Facilities Renewal Cost by System





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## ASSET SUMMARY

The Robert A. & Margaret C. Ward Sports Medicine Building is a three- story administrative and sports facility at the Athletic District of East Carolina University. Built in 1989, this rectangular-shaped, 76,695 gross square foot building also has a basement and primarily contains offices, locker rooms, classrooms, and athletic medical support spaces. There have been very few finish upgrades with the last one in 2016.

The information in this report was gathered during a site visit conducted on January 25, 2023.

### Site

The site is on a slight north to south slope and has a mixture of pedestrian walkways, grassy lawns, shrubbery, and trees. The walkways leading to the entrances are in satisfactory condition but have exceeded their lifecycle and should be considered for joint refills in the future.

### Exterior Structure

The exterior is brick with metal-framed, dual-pane glazing. The brick appears to be in good condition and is not expected to need restoration within the next ten years. The glazing has exceeded its lifecycle and should be considered for replacement. Exterior doors are painted hollow metal as well as glass with metal frames. All have associated panic hardware and there is a power assist door operator at the main entrance. Although in satisfactory working condition, the doors and hardware should be replaced within the next ten years.

The flat, modified bitumen roof appears to be original and has exceeded its lifecycle. Water is evacuated via roof drains. It is recommended that the roof be replaced in the near term. No significant issues with the structural system were identified at the time of this site visit.

### Interior Finishes/Systems

The floor finishes include primarily carpet in the corridors and offices. Some support areas have vinyl sheet and vinyl composition tile floors. The stairwell has a terrazzo application, the restrooms have ceramic floor tile, and the rehabilitation areas have epoxy and neoprene rubber flooring. While the floor finishes are generally in good condition, the carpet, epoxy, neoprene, ceramic and VCT finishes have exceeded their lifecycle and may need to be renewed or replaced within the next ten years. Ceilings are mostly suspended acoustical tile, with some painted drywall areas. The older ceiling tile should be considered for replacement in the near term. Walls are painted in most areas and there is ceramic tile in the restrooms. While these finishes are in good condition, the painted walls should be repainted as part of a cyclical renewal program and the tile should be upgraded.

Interior doors are a combination of painted hollow metal wood with glass in metal frames both with standard commercial locksets. There is also an overhead door in the window of the equipment room. The older doors and the associated hardware are recommended for upgrade within the next ten years. Casework systems are laminate countertops and cabinetry in the support and break areas. All are in dated condition and should be upgraded. The fixed seating in the meeting and classrooms are in satisfactory condition but vary in age and replacement should be anticipated for those that are original.

## Accessibility

This building has several handicap amenities, but the drinking fountains are a single-level design and should be replaced with dual-level units set in alcoves or with a tapered lower cabinet design. Also, the elevator is only partially compliant with current ADA legislation. It is recommended that an ADA-compliant, hands-free phone be installed in order meet the current standards.

Several restrooms throughout the building are not fully compliant with ADAAG legislation. Installation of ADA-compliant fixtures along with accessories such as mirrors, grab bars, and partition replacement should remedy the situation.

The exterior ramp at Entrance B lacks the proper handrail requirements. To comply with the intent of ADA legislation, it is recommended that compliant painted metal handrails be installed at all entrances as required. This includes directional signage at the entrances.

The configuration of the break room kitchen cabinetry is a barrier to accessibility. The installation of wheelchair-accessible cabinetry is recommended where applicable.

## Health

No health issues were observed or reported during this inspection.

## Fire/Life Safety

Fall protection is required for roofing installations to protect the welfare of workers on roofing systems located over six feet above grade. The installation of hard looped tie-off points is recommended at intervals throughout the roof to support workers associated lifelines and harness personal protective equipment.

Structural fire separations are not maintained according to code requirements for new construction in select areas of this facility. These areas include mechanical and data closets. Although only these instances were noted, other fire separation compromises may exist elsewhere in this building. It is recommended that the entire building be surveyed for similar problem areas, especially in conditions and spaces that are similar to those that were observed. Intumescent passive firestopping and some minor structural separation repairs should be accomplished promptly.

The building is not protected by an automated fire suppression sprinkler system. Hydraulic standpipes feed fire hose cabinets throughout the building providing connections for local fire departments in emergency situations. These standpipes are charged by pressurized municipal water. Additional fire suppression is available from manual chemical fire extinguishers. Modern codes require facilities of this size, occupancy and type to be protected by fire suppression sprinklers. As a part of future renovation efforts, it is recommended that this facility be fully protected by an automatic, wet-pipe sprinkler system.

A modern, point addressable Simplex 4100 U fire alarm control panel monitors detection and notification devices throughout the building. The devices include manual pull stations, horns and strobes, and open area and HVAC duct detector smoke and CO2 sensors. The main panel and remote annunciators are newer and have significant remaining useful life. The devices are original but communicate with the new software and panel with no issues. It is recommended that devices be replaced because of their age.

## HVAC

The building general heating, ventilation, and air conditioning is provided by two large consolidated forced air units (air handlers). A current project is underway to convert heating hot water from campus-fed steam to two new natural gas-fired boilers. Campus chilled water provides the cooling medium. AHU02, which serves the second and third floor, is a built-in place unit with a single supply fan and multiple return fans. This unit has a cooling coil only and heating in areas served by this unit utilize hot water reheats. AHU01 serves the first floor and has both cooling and heating coils plus ultraviolet filtration. Above ceiling fan coil units throughout the building temper air using both chilled and hot water coils. Three consolidated exhaust fans at the roof draw and remove exhaust from restrooms and locker rooms throughout the building.

The original AHU01 has original supply and return fans that have exceeded their useful life and should be replaced. The chilled water coil section and filter section as well as the fresh air intakes all look to be in good condition and should last another ten years. AHU02 is a modular section type AHU and has been replaced but is due for replacement again within the scope of this assessment. Fan coil units throughout the building will reach the end of their expected useful life in three years but are operating without major issues. Minor maintenance leaks and age related wear were noted but expected for 33-year old units. It is recommended that the systematic replacement be budgeted. The majority of the ventilation fans are aged and should be replaced.

Electric motor driven heating hot water pumps will be re-used by the hot water producing boilers to distribute heating hot water to AHU02 and to fan coil units throughout the building. Similar electric motor driven chilled water pumps circulate chilled water to AHUs and fan coil units throughout the building. The pumps have been well maintained and should outlast the scope of this assessment. Both use original insulated piping, except for small sections replaced for retrofit or replacement of AHU02. The piping network remains effective and should outlast the scope of this assessment. The piping distribution network includes steel expansion tanks. Two are due within the scope of this assessment.

The HVAC air distribution network consists of internally and non-insulated metal ductwork. The original air distribution network is forecast for replacement at the end of this assessment scope.

The HVAC controls are a hybrid system utilizing the original pneumatic driven dampers and actuators in field devices and multiple generations of direct digital controls (DDC) for electronic monitoring and adjustments and the building is considered fully addressable with some difficulty. The preferred HVAC controls are Trane and it is recommended that all non-Trane network controls be upgraded. The original pneumatic field devices should also be planned for replacement. This would negate the need for replacement of the HVAC controls compressor, which is also due for and in need of replacement.

(Note: The components of the steam conversion system have been left out of this assessment due to the current heating and domestic hot water conversion project.)

## Electrical

Power is supplied from the campus 4160-volt primary loop to the facility underground and to a 750-volt primary electrical transformer at the south side of the building. Power is then fed to the basement electrical room to the main building 277/480-volt, three-phase switchgear. The main transformer exhibits no leaks but is significantly past due for lifecycle replacement. The main switchgear is functioning with no issues, but it has exceeded its statistical useful life and should be replaced.

Step down transformers through the building step voltage from the primary 480-voltage to single-phase 120/240, and three-phase 120/208 and 277 volt service voltages. Secondary electrical distribution energizes circuits throughout feeding safety switches, local panelboards, and devices. Most of the secondary electrical distribution is original but some of the more recent renovations have included upgraded electrical distribution. The network as a whole has significant remaining useful life and should outlast the scope of this assessment.

Large equipment electric motors are equipped with variable frequency drives as an energy efficiency measure. All of these will reach the end of their service life in five years or have already done so. Replacement of all devices is recommended.

Emergency power is provided from a diesel powered generator. Fuel is stored in a large day tank at the base of the generator. The unit is now 20 years old, but only runs periodically, is run tested monthly, and should last another ten years. Automatic transfer switches engage emergency power when the generator is activated due to utility power loss. These switches are also 20 years old but should last another ten years.

Interior lighting is a combination of fluorescent and LED lights with open parabolic, lay-in type acrylic lenses, surface-mounted, and recessed fixtures. Although the fluorescent fixtures are current T8 technology, fixtures throughout the original building are yellowing and exhibiting degradation of reflectivity. These fixtures should be planned for systematic replacement. LED lighting in recent renovations will outlast the scope of this assessment. Exterior lighting is a combination of LED and HID wall packs and recessed fluorescents. All are operational but the older HID fixtures should be planned for replacement.

This facility would benefit from the addition of lightning protection. Install an appropriately designed system that protects the structure and rooftop structure and equipment.

## Plumbing

Domestic water is supplied to functional spaces through a galvanized steel piping network. The drain piping for functional spaces is cast-iron or plastic. Supply and drain piping are both due within the scope of this assessment. Domestic hot water is produced by a four-unit natural gas hot water heater pack which produces on demand hot water. These units are new and will outlast the scope of this assessment. There are two backflow preventers for domestic water lines. One appears to be new and one is original and is due for replacement. A stormwater sump system is in a basement utility room and also needs to be replaced.

Components of the original domestic hot water system have been left out of this assessment due to the current heating and domestic hot water conversion project.

Restroom plumbing fixtures include wall-hung and counter lavatories, tankless water closets, showers, and urinals. All of these fixtures, as well as the utility sinks, are in satisfactory working condition but near the end of their expected service life and should be considered for replacement. The kitchen sinks should outlast the report scope.

The treatment area spas have chemical dispensers and electric motor-driven pumps, similar to fountains or small pools. This equipment has significant remaining useful life.

## Vertical Transportation

Two hydraulic passenger elevators are in service. Both are original, 4,000 pound lifts with submersible pumps, oil tanks, and solid state controllers. While they are functional, the elevators have some difficulty leveling and are aged. The elevator machines are due for modernization and the controls should be upgraded. The cabs are also in need of remodel.

Note: The renewal needs outlined in this report were identified from the visual inspection and staff interviews. Our professional architectural and engineering inspectors examined the accessible equipment and various building components to determine what repairs or modifications may be necessary to restore the systems and asset to an acceptable condition, or to a level defined by the Client. The estimated costs represent correction of existing deficiencies and anticipated lifecycle failures within a ten-year period. These recommendations are to bring the facility to modern standards without any anticipation of change to facility space layout or function. The total costs include variable project delivery costs as determined by the Owner. The costs developed do not represent the cost of a complete facility renovation. Soft costs not represented in this report include telecommunications, security, furniture, window treatment, space change, program issues, relocation, swing space, contingency, or costs that could not be identified or determined from the visual inspection and available building information.



## INSPECTION TEAM DATA

### Report Development

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Duluth, GA 30096

### Project Manager

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### Date of Inspection

January 25, 2023

### Inspection Team Personnel

NAME	POSITION	SPECIALTY
Michelle Thompson	Facility Assessor	Interior Finishes, Exterior Structure, ADA Compliance, Site, Fire/Life Safety, Health
Jerry Watkins	Senior Project Manager	Mechanical, Electrical, Plumbing, Energy, Fire/Life Safety, Health

### Client Contact

NAME	POSITION
Griffin L. Avin, CEFP	Director of Facilities Services, Health Sciences Campus Chief Sustainability Officer

## DEFINITIONS

The following information is a clarification of the Facility Condition Assessment report using example definitions.

### Overview

#### Recurring and Nonrecurring Facility Renewal Costs

Facility renewal costs are divided into two main categories – recurring and nonrecurring. Recurring costs are cyclical and consist primarily of major repairs to or replacement/rebuilding of facility systems and components (e.g., roof or HVAC system replacement at or past the end of its normal useful life). The tool for projecting the recurring renewal costs is the Renewable Component Inventory, which is explained in detail below. Nonrecurring costs typically consist of modifications or repairs necessary to comply with fire/life safety or accessibility code requirements or to address isolated, nonrecurring deficiencies that could negatively affect the structure of the facility or the systems and components within. For these nonrecurring costs, projects have been developed and include estimated material and labor costs.

#### Facility Condition Needs Index (FCNI)

The FCNI provides a lifecycle cost comparison. It is a ratio of the sum of the recurring and nonrecurring renewal costs over ten years to the current replacement value of the asset. The current replacement value is based on replacement with current construction standards for the facility use type, and not original design parameters. This index gives the university a comparison within all buildings for identifying worst case/best case building conditions.

$$\text{FCNI} = \frac{\text{Nonrecurring Projects} + \text{10-Year Recurring Component Renewal}}{\text{Current Replacement Value}}$$

#### Facility Condition Index (FCI)

The FCI is a ratio of the Deferred Renewal costs to the current replacement value.

$$\text{FCI} = \frac{\text{Deferred Renewal}}{\text{Current Replacement Value}}$$

## Material and Labor Cost Factors and Additional Markups

The project costs are adjusted from the national averages to reflect conditions in Greenville using the R. S. Means City Cost Index for material and labor cost factors. The percentage adjustment of the national average is shown in the table below. Also included in the renewal costs are the construction markup (general contractor profit and overhead, construction management, permitting, accounting, site security, insurance, bonds, sales tax, institutional fees, site utilities, refuse fees, and insurance) and professional fees (architect or engineer design fees and in-house design costs).

GLOBAL MARKUP	%
Local Labor Index	71.3
Local Materials Index	100.7
Construction Markup	20.0
Professional Fees	16.0

## Recurring Costs

### Renewable Component Inventory and Cost Projections

The Renewable Component Inventory (starting on page 4.1.1) is based on industry standard lifecycle expectancies applied to an inventory of major systems and components within a facility. Each indicated component has the following associated information:

CATEGORY	DESCRIPTION
Component Code	A four-digit code assigned by AMS to the component
Component Description	Description of the individual component
Identifier	Identifying information can be entered as necessary.
Customer ID	Customer-provided equipment ID number
Location	The location of each component can be entered if applicable.
Quantity	The quantity of the listed component
Units	The unit of measure associated with the quantity
Complexity Factor	Adjusts the component replacement costs when it is anticipated that the actual cost will deviate from the average for that component
Total Cost	The unit cost multiplied by quantity, in today's dollars (note that this is a one-time renewal/replacement cost)
Install Date	This is the year that the component was or is estimated to have been installed. When this data is not available, the default is the year the asset was constructed.
Useful Life	Average life expectancy of the component
Useful Life Adjustment	An optional adjustment that lengthens or reduces the first lifecycle of the component
Replacement Year	Expresses when the next replacement should occur and is the sum of the install date, useful life, and any useful life adjustment

The component listing forms the basis of the Recurring Costs by Year report, which provides a year-by-year list of projected recurring renewal costs (in future year dollars) over the next ten years. Each individual component is assigned a replacement year based on lifecycles. For items already past the end of their lifecycle, the replacement year is shown as Deferred Renewal.

For a longer term perspective, the Recurring Component Expenditure Projections Graph presents recurring renewal cost projections over a 50-year period (starting from the date the report is run) based on each individual item's renewal cost and life span. Some components might require renewal several times within the 50-year model, while others might not occur at all. The vertical bars on the graph represent the accumulated total costs for each individual year. The average annual cost per gross square foot (\$/GSF) is shown at the bottom of the graph. In this calculation, costs are not escalated. This figure can be utilized to assess the adequacy of existing capital renewal and repair budgets.

## Recurring Cost Classifications

- **Deferred Renewal**  
Recurring repairs, generated by the Renewable Component Inventory, that are past due for completion and have not yet been accomplished as part of normal maintenance or capital repair efforts. Further deferral could impair the proper functioning of the facility. Deferred Renewal upgrades should include compliance with applicable codes, even if such compliance requires expenditures beyond those essential to effect the needed repairs.
- **Projected Renewal**  
Recurring renewal efforts, generated by the Renewable Component Inventory, that will be due within the scope of the assessment. These are regular or normal facility maintenance, repair, or renovation efforts that should be planned in the near future.

## Nonrecurring Costs

As previously mentioned, modifications or repairs necessary to comply with fire/life safety or accessibility code requirements and those that address isolated, nonrecurring deficiencies that could negatively affect the structure of the facility or the systems and components within are not included in the Renewable Component Inventory. For each such deficiency identified during the facility inspection, a project with an estimated cost to rectify said deficiency is recommended. These projects each have a unique identifier and are categorized by system type, priority, and classification, which are defined below. The costs in these projects are also indexed to local conditions and markups applied as the situation dictates.

## Project Number

Each project has a unique number consisting of three elements, the asset identification number, system code, and a sequential number assigned by the FCA software. For example, the third fire/life safety project identified for asset 0001 would have a project number of 0001FS03 (0001 for the asset number, FS for fire/life safety, and 03 being the next sequential number for a fire/life safety project).

## Project Classifications

- **Plant Adaption**  
Nonrecurring expenditures, stored in the Projects module, required to adapt the physical plant to the evolving needs of the institution and to changing codes or standards. These are expenditures beyond normal maintenance. Examples include compliance with changing codes (e.g., accessibility), facility alterations required by changing teaching or research methods, and improvements occasioned by the adoption of modern technology (e.g., the use of personal computer networks).
- **Corrective Action**  
Nonrecurring expenditures, stored in the Projects module, for repairs needed to correct random and unpredictable deficiencies. Such projects are not related to aligning a building with codes or standards. Deficiencies classified as Corrective Action could have an effect on building aesthetics, safety, or usability.

## Priority Classes

Recurring renewal needs do not receive individual prioritization, as the entire data set of needs in this category is year-based. Each separate component has a distinct need year, rendering further prioritization unnecessary. Each nonrecurring renewal project, however, has a priority assigned to indicate the criticality of the recommended work. The prioritization utilized for this subset of the data is as follows.

- **Priority 1 – High**  
Items in this category include:
  - a. correcting a cited safety hazard
  - b. stopping accelerated deterioration
  - c. returning a facility to normal operation
- **Priority 2 – Medium**  
Items in this category include:
  - a. repairs to prevent further deterioration
  - b. improvements to facility approach/entry and access to goods and services (DOJ ADA title III, priorities 1 and 2)
  - c. correction of potential safety hazards

- **Priority 3 – Low**

Items in this category include:

- a. improving access to restrooms and other amenities (DOJ ADA title III, priorities 3 and 4)
- b. bringing a facility into compliance with current building codes as grandfather clauses expire
- c. increasing usability following an occupancy or use change
- d. actions that are recommended but not required by code

### Project Subclass

Subclass ratings are assigned to accessibility upgrade activities based on the four Department of Justice priority rankings recommended by the Title III regulations for planning readily achievable barrier removal projects. These ratings are:

- DOJ1 Accessible approach and entrance
- DOJ2 Access to goods and services
- DOJ3 Access to restrooms
- DOJ4 Any other necessary measures

### Category Codes

CATEGORY CODE*	SYSTEM DESCRIPTION
AC1A – AC4B	ACCESSIBILITY
EL1A – EL8A	ELECTRICAL
ES1A – ES6E	EXTERIOR STRUCTURE
FS1A – FS6A	FIRE/LIFE SAFETY
HE1A – HE7A	HEALTH
HV1A – HV8B	HVAC
IS1A – IS6D	INTERIOR FINISHES/SYSTEMS
PL1A – PL5A	PLUMBING
SI1A – SI4A	SITE
VT1A – VT7A	VERTICAL TRANSPORTATION

<i>Example:</i> Category Code = EL5A	
<b>EL</b>	System Description
<b>5</b>	Component Description
<b>A</b>	Element Description

## Priority Sequence

A Priority Sequence number is automatically assigned to each project to rank the projects in order of relative criticality and show the recommended execution order. This number is calculated based on the Priority Class and identified system of each project.

<i>Example</i>			
Priority Class	Category Code	Project Number	Priority Sequence
1	HV2C	0001HV04	01
1	PL1D	0001PL02	02
2	IS1E	0001IS06	03
2	EL4C	0001EL03	04

## Drawings

Floor plans for this facility are provided as a reference.

## Photographs

A code shown on the Photo Log identifies the asset number, photo sequence, and a letter designation for architect (a) or engineer (e).

<i>Example:</i>	
Photo Number: 0001006e	
<b>0001</b>	Asset Number
<b>006</b>	Photo Sequence
<b>e</b>	Engineering Photo

## Sustainability/Energy Analysis

Energy/resource conservation measures (ECMs) are recommendations that will reduce resource consumption or the rate of growth in consumption. Examples include improving the efficiency of an HVAC system (e.g., digital motor speed controls, exhaust energy recovery, retrocommissioning) or directly reducing the consumption of a resource (e.g., low flow plumbing fixtures, high-efficiency lighting, or structural insulation improvement). Where significant conservation opportunities are evident for this facility, ECMs are identified and tabulated in Section 7 as a basis for further viability investigation.





FACILITY CONDITION ASSESSMENT

**SECTION 2**

**COST SUMMARIES  
AND TOTALS**



### RENEWAL NEEDS MATRIX

*All dollars shown as Present Value*

CATEGORY	NONRECURRING PROJECT NEEDS			RECURRING COMPONENT REPLACEMENT NEEDS											
	Immediate	Critical	Noncritical	Deferred Renewal	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
ACCESSIBILITY	0	206,977	44,875	0	0	0	0	0	0	0	0	0	0	0	\$251,852
EXTERIOR	0	0	0	331,673	0	0	0	0	0	0	985,879	0	0	0	\$1,317,552
INTERIOR	0	0	0	1,388,547	0	0	0	0	0	235,992	675,115	0	679,046	0	\$2,978,700
PLUMBING	0	0	0	0	0	1,082,368	0	10,921	0	0	1,301,560	0	0	46,013	\$2,440,862
HVAC	0	0	0	304,499	0	0	21,410	789,760	0	0	2,845,743	0	0	896	\$3,962,308
FIRE/LIFE SAFETY	3,387	70,334	1,116,111	361,577	0	0	0	0	0	0	0	0	0	0	\$1,551,408
ELECTRICAL	0	44,088	0	18,189	0	106,529	916,404	105,430	0	0	0	18,017	0	0	\$1,208,656
SITE	0	0	0	9,569	0	0	0	0	0	0	0	0	0	0	\$9,569
VERT. TRANS.	0	0	0	855,526	0	0	0	0	0	0	0	0	0	0	\$855,526
HEALTH/EQUIP.	0	0	0	0	0	0	0	0	0	0	39,035	0	0	0	\$39,035
<b>SUBTOTAL</b>	<b>\$3,387</b>	<b>\$321,398</b>	<b>\$1,160,986</b>	<b>\$3,269,580</b>	<b>\$0</b>	<b>\$1,188,896</b>	<b>\$937,814</b>	<b>\$906,111</b>	<b>\$0</b>	<b>\$235,992</b>	<b>\$5,847,332</b>	<b>\$18,017</b>	<b>\$679,046</b>	<b>\$46,909</b>	<b>\$14,615,468</b>
<b>TOTAL NONRECURRING PROJECT NEEDS</b>			<b>\$1,485,771</b>	<b>TOTAL RECURRING COMPONENT REPLACEMENT NEEDS</b>										<b>\$13,129,697</b>	

<b>CURRENT REPLACEMENT VALUE</b>	<b>\$37,387,000</b>
<b>FACILITY CONDITION NEEDS INDEX</b>	<b>0.39</b>
<b>FACILITY CONDITION INDEX</b>	<b>0.09</b>

<b>GSF</b>	<b>TOTAL 10-YEAR FACILITY RENEWAL NEEDS</b>	<b>10-YEAR NEEDS/SF</b>
<b>76,695</b>	<b>\$14,615,468</b>	<b>\$190.57</b>

## RENEWAL NEEDS BY SYSTEM

*All costs shown as Present Value*

CATEGORY	NONRECURRING PROJECT COSTS	RECURRING COMPONENT REPLACEMENT COSTS	TOTAL 10-YEAR FACILITY RENEWAL COSTS
ACCESSIBILITY	\$251,852	\$0	\$251,852
EXTERIOR	\$0	\$1,317,552	\$1,317,552
INTERIOR	\$0	\$2,978,700	\$2,978,700
PLUMBING	\$0	\$2,440,862	\$2,440,862
HVAC	\$0	\$3,962,308	\$3,962,308
FIRE/LIFE SAFETY	\$1,189,832	\$361,577	\$1,551,408
ELECTRICAL	\$44,088	\$1,164,569	\$1,208,656
SITE	\$0	\$9,569	\$9,569
VERT. TRANS	\$0	\$855,526	\$855,526
HEALTH	\$0	\$39,035	\$39,035
<b>TOTALS</b>	<b>\$1,485,771</b>	<b>\$13,129,697</b>	<b>\$14,615,468</b>

**FACILITIES RENEWAL PLAN**  
**RECURRING COMPONENT REPLACEMENT COSTS**

*All costs shown as Present Value*

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	CUSTOMER ID	LOCATION	UNI- FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
097 DR12	DOOR AND STOREFRONT, EXTERIOR, SWINGING, ALUMINUM AND GLASS	BRONZE ANOD		EXTERIOR	B2030	Deferred Renewal	18,057
097 DR28	DOOR OPERATOR, POWER-ASSIST		13503	MAIN ENTRANCE	B2030	Deferred Renewal	42,034
097 RR06	ROOF - BITUMINOUS, 2-PLY, SBS MODIFIED BITUMEN, MOP	FLAT MOD BIT	13461	ROOF	B3010	Deferred Renewal	271,583
097 DR24	DOOR LOCK, COMMERCIAL-GRADE	PT ON METAL		FLR 1-3	C1020	Deferred Renewal	134,464
097 DR26	DOOR PANIC HARDWARE			GLASS EXT DRS	C1020	Deferred Renewal	5,866
097 DR26	DOOR PANIC HARDWARE			HM EXT DRS	C1020	Deferred Renewal	8,800
097 CW01	CASEWORK - WOOD BASE AND WALL, TOP, STANDARD	LAMINATE		FLR 1-3	C1030	Deferred Renewal	72,709
097 IW03	WALL FINISH - TILE, CERAMIC / STONE, STANDARD	CERAMIC		FLR 1-3	C3010	Deferred Renewal	77,151
097 IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD	BROADLOOM		FLR 1-3	C3020	Deferred Renewal	304,991
097 IF03	FLOORING - VINYL COMPOSITION TILE, STANDARD	VCT		FLR 1-3	C3020	Deferred Renewal	126,063
097 IF06	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD	CERAMIC		RESTROOMS	C3020	Deferred Renewal	208,636
097 IC01	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD	2X2 FLUSH GRID		FLR 1-3	C3030	Deferred Renewal	449,867
097 VT03	ELEVATOR MODERNIZATION - HYDRAULIC	ELEVATOR 1	13471	ELEV 109	D1010	Deferred Renewal	363,640
097 VT03	ELEVATOR MODERNIZATION - HYDRAULIC	ELEVATOR 2	13470	ELEV 130	D1010	Deferred Renewal	363,640
097 VT04	ELEVATOR CAB RENOVATION - PASSENGER	ELEVATOR 1	13471	ELEV 1 CAB	D1010	Deferred Renewal	64,123
097 VT04	ELEVATOR CAB RENOVATION - PASSENGER	ELEVATOR 2	13470	ELEV 2 CAB	D1010	Deferred Renewal	64,123

## FACILITIES RENEWAL PLAN

### RECURRING COMPONENT REPLACEMENT COSTS

*All costs shown as Present Value*

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	CUSTOMER ID	LOCATION	UNI- FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
097 TK04	EXPANSION TANK (41-60 GAL)	ORIGINAL GREY TANKS		MECHANICAL 02	D3020	Deferred Renewal	11,005
097 TK04	EXPANSION TANK (41-60 GAL)	ORIGINAL GREY TANKS		MECHANICAL 02	D3020	Deferred Renewal	11,005
097 AC01	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (<=6 TOTAL HP)	CURTIS-TOLEDO	13465	MECH 02	D3060	Deferred Renewal	4,320
097 BA14	HVAC CONTROLS - TERMINAL ASSEMBLIES - OFFICE	VAV BOXES WITH PNEUMATIC ACTUATORS		THROUGHOUT	D3060	Deferred Renewal	234,245
097 BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	ORIGINAL - ROBERT SHAW		THIRD FLOOR	D3060	Deferred Renewal	21,410
097 BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	ORIGINAL ROBERT SHAW		THIRD FLOOR	D3060	Deferred Renewal	11,257
097 BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	UPGRADED DDC - ROBERT SHAW		2ND FLOOR	D3060	Deferred Renewal	11,257
097 FA02	FIRE ALARM SYSTEM - DEVICES	HORN/STROBES, SMOKE/CO2 SENSORS, MAN PS	13465	THROUGHOUT	D4030	Deferred Renewal	361,577
097 VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	AHU-02 RF-2 VFD		MECH 334	D5010	Deferred Renewal	4,217
097 VF08	VARIABLE FREQUENCY DRIVE (30-40 HP)	AHU-02 SF VFD		MECH 334	D5010	Deferred Renewal	13,973
097 SI01	CONCRETE PEDESTRIAN PAVING - JOINT MAINTENANCE	CONCRETE PAVING		PERIMETER	G2030	Deferred Renewal	4,784
097 SI01	CONCRETE PEDESTRIAN PAVING - JOINT MAINTENANCE	CONCRETE PAVING		PERIMETER	G2030	Deferred Renewal	4,784
097 FX02	PLUMBING FIXTURE - LAVATORY, WALL HUNG	PC		RESTROOMS	D2010	2024	3,203
097 FX06	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	PE ON CASTIRON		FLR 1-3	D2010	2024	4,316

## FACILITIES RENEWAL PLAN

### RECURRING COMPONENT REPLACEMENT COSTS

*All costs shown as Present Value*

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	CUSTOMER ID	LOCATION	UNI- FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
097 FX07	PLUMBING FIXTURE - SHOWER, GANG PEDESTAL, STAINLESS STEEL	SST 4 HEAD POLES		FLR 1	D2010	2024	39,047
097 FX08	PLUMBING FIXTURE - SHOWER VALVE AND HEAD	SST FIXTURES		RESTROOMS	D2010	2024	72,663
097 FX10	PLUMBING FIXTURE - URINAL	PC WALLMOUNT		RESTROOMS	D2010	2024	35,695
097 FX12	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	PC LOW FLOW		RESTROOMS	D2010	2024	65,679
097 PS02	SUPPLY PIPING SYSTEM - CLASSROOM	ORIGINAL	097	THROUGHOUT	D2020	2024	861,765
097 SG04	MAIN SWITCHBOARD W/BREAKERS (800-1200 AMP)	277/480		ELEC 03	D5010	2024	106,529
097 BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	PNEUMATIC CONTROLS - UPGRADED ROBERT SHAW		2ND FLOOR	D3060	2025	21,410
097 VF05	VARIABLE FREQUENCY DRIVE (15-20 HP)	CHWP 2B VFD		MECH 02	D5010	2025	9,030
097 VF05	VARIABLE FREQUENCY DRIVE (15-20 HP)	CHWP 2A VFD		MECH 02	D5010	2025	9,030
097 LI02	LIGHTING SYSTEM, INTERIOR - CLASSROOM	T8 FLUORESCENT	097	THROUGHOUT	D5020	2025	898,343
097 BF03	BACKFLOW PREVENTER (2-3 INCHES)	PARALLEL BOTTOM		MECH 02	D2020	2026	9,285
097 PP04	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	GREY WATER	13476	RM 04	D2030	2026	1,636
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24837	RM 105B	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24838	RM 105D	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24839	RM 105F, ACCESSIBLE FROM RM 105H	D3040	2026	10,844

## FACILITIES RENEWAL PLAN

### RECURRING COMPONENT REPLACEMENT COSTS

*All costs shown as Present Value*

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	CUSTOMER ID	LOCATION	UNI- FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-1	24840	RM 105F	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24841	RM 105H	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24843	RM 201, FRONT OF ELEV.	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24844	RM 201, LEFT OF DOOR 265	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24845	RM 210	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24846	HALLWAY 213, ABOVE SINK	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24847	HALLWAY 216	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24848	HALLWAY 228	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24849	RM 230A	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-7	24850	RM 244	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24851	RM 259	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24852	ELEV #2 LOBBY	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24853	RM 270	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24854	RM 272	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24855	RM 275	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24856	RM 301	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24857	RM 304	D3040	2026	10,844



**FACILITIES RENEWAL PLAN**  
**RECURRING COMPONENT REPLACEMENT COSTS**

*All costs shown as Present Value*

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	CUSTOMER ID	LOCATION	UNI- FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24858	RM 316	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24859	RM 319	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24860	RM 320	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-6	24861	RM 323, ACCESS FROM HALLWAY	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24862	RM 331, ENTER FROM RM 332	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24863	RM 332, EAST SIDE OF ROOM	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-1	24866	ELEV #2 LOBBY	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24867	RM 342 OUTSIDE RM 344	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24868	HALLWAY 346 OUTSIDE ROOM RM 348	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24869	RM 351	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24870	HALLWAY 357 OUTSIDE RM 356	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24871	RM 366	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24872	RM 367	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24873	RM 368	D3040	2026	10,844

**FACILITIES RENEWAL PLAN**  
**RECURRING COMPONENT REPLACEMENT COSTS**

*All costs shown as Present Value*

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	CUSTOMER ID	LOCATION	UNI- FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24864	RM 332, NORTH-WEST SIDE OF ROOM	D3040	2026	10,844
097 AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-1	24865	RM 337	D3040	2026	10,844
097 AH07	AIR HANDLING UNIT - INDOOR (9-12 HP)	YORK AHU-1	13464	MECH 02	D3040	2026	98,239
097 AH12	AIR HANDLING UNIT - INDOOR (35-45 HP)	AHU-02	13463	MECH 334	D3040	2026	207,419
097 FN01	FAN - AXIAL, RETURN, 1.5" SP (<=3 HP) 9,200 CFM	AHU-1 RF		MECH 02	D3040	2026	8,664
097 FN02	FAN - AXIAL, RETURN, 1.5" SP (3-5 HP) 13,200 CFM	AHU-02 RF#1	13480	MECH 334	D3040	2026	14,620
097 FN02	FAN - AXIAL, RETURN, 1.5" SP (3-5 HP) 13,200 CFM	AHU-02 RF#2	13481	MECH 334	D3040	2026	14,620
097 FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	NO LABEL	13469	ROOF	D3040	2026	7,711
097 FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	BREBIERT	13468	ROOF	D3040	2026	7,711
097 FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EX AIR FAN	24307	UNKN	D3040	2026	7,711
097 BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	UPGRADED DDC - TRANE		1ST FLOOR	D3060	2026	21,410
097 BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	UPGRADED DDC - TRANE		1ST FLOOR	D3060	2026	11,257
097 TX18	TRANSFORMER - OIL-FILLED, 3PH, 5-15KV PRIMARY (500-750 KVA)	WARD SPORTS		SOUTH SIDE	D5010	2026	89,861
097 LE03	LIGHTING - EXTERIOR, RECESSED (INC, CFL, LED)	RECESSED	097	ALL ELEVATIONS	D5020	2026	3,670
097 LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	HID		ALL ELEVATIONS	D5020	2026	1,190

**FACILITIES RENEWAL PLAN**  
**RECURRING COMPONENT REPLACEMENT COSTS**

*All costs shown as Present Value*

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	CUSTOMER ID	LOCATION	UNI- FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
097 LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	HID		SOUTH SIDE GEN PEN, LANDSCAPE BLDG	D5020	2026	10,709
097 IW01	WALL FINISH - PAINT, STANDARD	PT ON DRYWALL		FLR 1-3	C3010	2028	219,924
097 IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD	CARPET TILE			C3020	2028	16,068
097 WN01	GLASS, WINDOW, ALUMINUM OR WOOD, STANDARD	METAL FRAME DUAL PANE		EXTERIOR	B2010	2029	971,210
097 DR08	DOOR AND FRAME, EXTERIOR, SWINGING, HOLLOW METAL	PT ON HM		EXTERIOR	B2030	2029	14,669
097 DR02	DOOR AND FRAME, INTERIOR, FIRE-RATED	PT ON METAL		FLR 1-3	C1020	2029	675,115
097 PD02	DRAIN PIPING SYSTEM - CLASSROOM	ORIGINAL	097	THROUGHOUT	D2030	2029	1,301,560
097 HV02	HVAC DISTRIBUTION NETWORKS - CLASSROOM	INTERNALLY INS METAL	097	THROUGHOUT	D3040	2029	2,845,743
097 SF01	SEATING, FIXED, FOLDING, STANDARD			RM 236B	E2010	2029	19,517
097 SF01	SEATING, FIXED, FOLDING, STANDARD			RM 236C	E2010	2029	19,517
097 VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	AHU-02 RF-1 VFD		MECH 334	D5010	2030	4,217
097 VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	AHU-1 RF VFD		MECH 02	D5010	2030	1,687
097 VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	HHWP VFD		MECH 02	D5010	2030	5,736
097 VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	AHU-2 SF VFD		MECH 02	D5010	2030	6,378
097 IF14	FLOORING - FLUID APPLIED, EPOXY / ACRYLIC / POLYURETHANE	EPOXY AGGR		HYDRO THERAPY	C3020	2031	386,955

**FACILITIES RENEWAL PLAN**  
RECURRING COMPONENT REPLACEMENT COSTS

*All costs shown as Present Value*

ASSET CODE COMP CODE	COMPONENT	IDENTIFIER	CUSTOMER ID	LOCATION	UNI- FORMAT	REPLACEMENT YEAR	REPLACEMENT COST
097 IF17	FLOORING - ATHLETIC, RUBBER, TILE OR ROLL	HD NEOPRENE INTERLOCK		WEIGHT RM	C3020	2031	292,091
097 FX01	PLUMBING FIXTURE - LAVATORY, COUNTER	PE ON STEEL		RESTROOMS	D2010	2032	46,013
097 BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	UPGRADED DDC - JCI (HEATING HOT WATER)		MECH 02	D3060	2032	587
097 BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	UPGRADED DDC - JCI (HEATING HOT WATER)		MECH 02	D3060	2032	309
<b>TOTAL</b>							<b>\$13,129,697</b>

## FACILITIES RENEWAL PLAN

### NONRECURRING PROJECT COSTS

*All costs shown as Present Value*

PROJECT NUMBER	PROJECT TITLE	UNI-FORMAT	PRIORITY CLASS	PROJECT CLASSIFICATION	PROJECT COST
097FS03	ELIMINATE FIRE RATING COMPROMISES	C1010	1	Plant Adaption	3,387
097AC01	UPGRADE ELEVATOR CONTROL PANELS	C1010	2	Plant Adaption	3,367
097AC02	RESTROOM ACCESSIBILITY UPGRADES	D2010	2	Plant Adaption	120,968
097AC03	BUILDING ENTRY ACCESSIBILITY UPGRADES	B2030	2	Plant Adaption	14,343
097AC05	REPLACE DRINKING FOUNTAINS	D2010	2	Plant Adaption	68,300
097EL01	ADD LIGHTNING PROTECTION SYSTEM	D5090	2	Plant Adaption	44,088
097FS02	ADD ROPE DAVITS TO SUPPORT WORKER FALL PROTECTION	B3010	2	Plant Adaption	70,334
097AC04	UPGRADE BREAK ROOM CABINETS	C1010	3	Plant Adaption	44,875
097FS01	FIRE SPRINKLER SYSTEM INSTALLATION	D4010	3	Plant Adaption	1,116,111
<b>TOTAL</b>					<b>\$1,485,771</b>



FACILITY CONDITION ASSESSMENT

**SECTION 3**

NONRECURRING  
PROJECT DETAILS

All costs shown as Present Value

ELIMINATE FIRE RATING COMPROMISES			
<b>Project Number:</b>	097FS03	<b>Category Code:</b>	
<b>Priority Sequence:</b>	1	FS5C	
<b>Priority Class:</b>	High	<b>System:</b>	FIRE/LIFE SAFETY
<b>Project Class:</b>	Plant Adaption	<b>Component:</b>	EGRESS PATH
<b>Date Basis:</b>	2/6/2023	<b>Element:</b>	SEPARATION RATING

Code Application:		Subclass/Savings:	Project Location:
IBC	711.3	Not Applicable	Floor-wide: Floor(s) 1,2,3

### Description

Structural fire separations are not maintained according to code requirements for new construction in select areas of this facility. These areas include data rooms . Although only these instances were noted, other fire separation compromises may exist elsewhere in this building. It is recommended that the entire building be surveyed for similar problem areas, especially in conditions and spaces that are similar to those that were observed. Intumescent passive firestopping and some minor structural separation repairs should be accomplished promptly.



All costs shown as Present Value

**Project Cost Estimate**

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Minor passive firestopping efforts	LOT	1	\$1,000	\$1,000	\$2,000	\$2,000	\$3,000
<b>Base Material/Labor Costs</b>				<b>\$1,000</b>		<b>\$2,000</b>	
<b>Indexed Material/Labor Costs</b>				<b>\$1,007</b>		<b>\$1,426</b>	<b>\$2,433</b>
<b>Construction Mark Up at 20.0%</b>							<b>\$487</b>
<b>Original Construction Cost</b>							<b>\$2,920</b>
<b>Date of Original Estimate:</b>	2/6/2023					<b>Inflation</b>	<b>\$0</b>
<b>Current Year Construction Cost</b>							<b>\$2,920</b>
<b>Professional Fees at 16.0%</b>							<b>\$467</b>
<b>TOTAL PROJECT COST</b>							<b>\$3,387</b>

All costs shown as Present Value

ADD ROPE DAVITS TO SUPPORT WORKER FALL PROTECTION			
<b>Project Number:</b>	097FS02	<b>Category Code:</b>	
<b>Priority Sequence:</b>	2	FS6A	
<b>Priority Class:</b>	Medium	<b>System:</b>	FIRE/LIFE SAFETY
<b>Project Class:</b>	Plant Adaption	<b>Component:</b>	GENERAL
<b>Date Basis:</b>	2/6/2023	<b>Element:</b>	OTHER

**Code Application:**

Not Applicable

**Subclass/Savings:**

Not Applicable

**Project Location:**

Floor-wide: Floor(s) R

**Description**

Fall protection is required for roofing installations to protect the welfare of workers on roofing systems located over six feet above grade. The installation of hard looped tie-off points is recommended at intervals throughout the roof to support workers associated lifelines and harness personal protective equipment.

All costs shown as Present Value

**Project Cost Estimate**

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Allocation to install metal rope davits to support PPE equipment on roof	EA	60	\$391	\$23,484	\$628	\$37,698	\$61,182
<b>Base Material/Labor Costs</b>				<b>\$23,484</b>		<b>\$37,698</b>	
<b>Indexed Material/Labor Costs</b>				<b>\$23,648</b>		<b>\$26,879</b>	<b>\$50,527</b>
<b>Construction Mark Up at 20.0%</b>							<b>\$10,105</b>
<b>Original Construction Cost</b>							<b>\$60,632</b>
<b>Date of Original Estimate:</b>	2/6/2023					<b>Inflation</b>	<b>\$0</b>
<b>Current Year Construction Cost</b>							<b>\$60,632</b>
<b>Professional Fees at 16.0%</b>							<b>\$9,701</b>
<b>TOTAL PROJECT COST</b>							<b>\$70,334</b>

All costs shown as Present Value

UPGRADE ELEVATOR CONTROL PANELS			
<b>Project Number:</b>	097AC01	<b>Category Code:</b>	
<b>Priority Sequence:</b>	3	AC3A	
<b>Priority Class:</b>	Medium	<b>System:</b>	ACCESSIBILITY
<b>Project Class:</b>	Plant Adaption	<b>Component:</b>	INTERIOR PATH OF TRAVEL
<b>Date Basis:</b>	2/6/2023	<b>Element:</b>	LIFTS/RAMPS/ELEVATORS

**Code Application:**

ADAAG 407

**Subclass/Savings:**

DOJ2 - Access to Goods & Services

**Project Location:**

Building-wide: Floor(s) 1

**Description**

Present legislation pertaining to handicapped access within buildings requires that goods and services offered in buildings be generally accessible to all persons. The elevator is partially compliant with current ADA legislation. It is recommended that a compliant hands-free phone be installed in order meet the current standards.

All costs shown as Present Value

**Project Cost Estimate**

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
ADA-compliant hands-free elevator emergency telephone	EA	1	\$1,580	\$1,580	\$1,161	\$1,161	\$2,741
<b>Base Material/Labor Costs</b>				<b>\$1,580</b>		<b>\$1,161</b>	
<b>Indexed Material/Labor Costs</b>				<b>\$1,591</b>		<b>\$828</b>	<b>\$2,419</b>
<b>Construction Mark Up at 20.0%</b>							<b>\$484</b>
<b>Original Construction Cost</b>							<b>\$2,902</b>
<b>Date of Original Estimate:</b>	2/6/2023		<b>Inflation</b>			<b>\$0</b>	
<b>Current Year Construction Cost</b>							<b>\$2,902</b>
<b>Professional Fees at 16.0%</b>							<b>\$464</b>
<b>TOTAL PROJECT COST</b>							<b>\$3,367</b>

All costs shown as Present Value

BUILDING ENTRY ACCESSIBILITY UPGRADES			
<b>Project Number:</b>	097AC03	<b>Category Code:</b>	
<b>Priority Sequence:</b>	4	AC2A	
<b>Priority Class:</b>	Medium	<b>System:</b>	ACCESSIBILITY
<b>Project Class:</b>	Plant Adaption	<b>Component:</b>	BUILDING ENTRY
<b>Date Basis:</b>	2/6/2023	<b>Element:</b>	GENERAL

**Code Application:**

**Subclass/Savings:**

**Project Location:**

ADAAG

403.6, 505

DOJ1 - Approach & Entrance

Building-wide: Floor(s) 1

**Description**

Current accessibility legislation requires that building entrances be wheelchair accessible. The exterior ramp at Entrance B lacks the handrail requirements. To comply with the intent of this legislation, it is recommended that compliant painted metal handrails be installed at all entrances as required. This should include directional signage at the entrances.

All costs shown as Present Value

**Project Cost Estimate**

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Freestanding handrail system, painted	LF	30	\$149	\$4,483	\$246	\$7,377	\$11,860
Exterior signage	EA	5	\$87.09	\$435	\$25.61	\$128	\$564
<b>Base Material/Labor Costs</b>				<b>\$4,918</b>		<b>\$7,505</b>	
<b>Indexed Material/Labor Costs</b>				<b>\$4,952</b>		<b>\$5,351</b>	<b>\$10,304</b>
<b>Construction Mark Up at 20.0%</b>							<b>\$2,061</b>
<b>Original Construction Cost</b>							<b>\$12,364</b>
<b>Date of Original Estimate:</b>	2/6/2023					<b>Inflation</b>	<b>\$0</b>
<b>Current Year Construction Cost</b>							<b>\$12,364</b>
<b>Professional Fees at 16.0%</b>							<b>\$1,978</b>
<b>TOTAL PROJECT COST</b>							<b>\$14,343</b>

All costs shown as Present Value

REPLACE DRINKING FOUNTAINS			
<b>Project Number:</b>	097AC05	<b>Category Code:</b>	
<b>Priority Sequence:</b>	5	AC3F	
<b>Priority Class:</b>	Medium	<b>System:</b>	ACCESSIBILITY
<b>Project Class:</b>	Plant Adaption	<b>Component:</b>	INTERIOR PATH OF TRAVEL
<b>Date Basis:</b>	2/6/2023	<b>Element:</b>	DRINKING FOUNTAINS

**Code Application:**

ADAAG 602

**Subclass/Savings:**

DOJ4 - Other

**Project Location:**

Floor-wide: Floor(s) 1,2,3

**Description**

The single-level drinking fountains are a barrier to accessibility. They should be replaced with dual-level units.



All costs shown as Present Value

**Project Cost Estimate**

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost	
Dual -level drinking fountain	EA	9	\$1,603	\$14,429	\$501	\$4,510	\$18,938	
Construct recessed alcove, including all finishes and MEP updates	EA	9	\$981	\$8,830	\$3,495	\$31,457	\$40,288	
<b>Base Material/Labor Costs</b>				<b>\$23,259</b>		<b>\$35,967</b>		
<b>Indexed Material/Labor Costs</b>				<b>\$23,422</b>		<b>\$25,644</b>	<b>\$49,066</b>	
<b>Construction Mark Up at 20.0%</b>								<b>\$9,813</b>
<b>Original Construction Cost</b>								<b>\$58,879</b>
<b>Date of Original Estimate:</b>	2/6/2023				<b>Inflation</b>		<b>\$0</b>	
<b>Current Year Construction Cost</b>								<b>\$58,879</b>
<b>Professional Fees at 16.0%</b>								<b>\$9,421</b>
<b>TOTAL PROJECT COST</b>								<b>\$68,300</b>

All costs shown as Present Value

RESTROOM ACCESSIBILITY UPGRADES			
<b>Project Number:</b>	097AC02	<b>Category Code:</b>	
<b>Priority Sequence:</b>	6	AC3E	
<b>Priority Class:</b>	Medium	<b>System:</b>	ACCESSIBILITY
<b>Project Class:</b>	Plant Adaption	<b>Component:</b>	INTERIOR PATH OF TRAVEL
<b>Date Basis:</b>	2/6/2023	<b>Element:</b>	RESTROOMS/BATHROOMS

**Code Application:**

**Subclass/Savings:**

**Project Location:**

ADAAG 603, 604, 605, 606,  
607, 608

DOJ3 - Restrooms

Room Only: Floor(s) 1,2,3

**Description**

The restrooms throughout the building are not fully compliant with ADAAG legislation. Installation of assorted accessibility features such as fixtures, mirrors, grab bars, and partition replacement should remedy the situation.

All costs shown as Present Value

**Project Cost Estimate**

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Grab bars (per stall)	SYS	10	\$232	\$2,322	\$546	\$5,465	\$7,787
Mirror	EA	2	\$478	\$956	\$367	\$734	\$1,691
ADA-compliant signage	EA	9	\$87.09	\$784	\$25.61	\$230	\$1,014
ADA-compliant lavatory	EA	9	\$1,008	\$9,073	\$375	\$3,378	\$12,451
ADA-compliant toilet	EA	6	\$1,584	\$9,501	\$418	\$2,511	\$12,012
High density polymer toilet partition modification	EA	9	\$2,647	\$23,821	\$1,639	\$14,754	\$38,575
Roll-in shower	EA	2	\$5,379	\$10,758	\$7,001	\$14,002	\$24,760
<b>Base Material/Labor Costs</b>				<b>\$57,216</b>		<b>\$41,074</b>	
<b>Indexed Material/Labor Costs</b>				<b>\$57,616</b>		<b>\$29,286</b>	<b>\$86,902</b>
<b>Construction Mark Up at 20.0%</b>							<b>\$17,380</b>
<b>Original Construction Cost</b>							<b>\$104,282</b>
<b>Date of Original Estimate:</b>	2/6/2023					<b>Inflation</b>	<b>\$0</b>
<b>Current Year Construction Cost</b>							<b>\$104,282</b>
<b>Professional Fees at 16.0%</b>							<b>\$16,685</b>
<b>TOTAL PROJECT COST</b>							<b>\$120,968</b>

All costs shown as Present Value

ADD LIGHTNING PROTECTION SYSTEM			
<b>Project Number:</b>	097EL01	<b>Category Code:</b>	
<b>Priority Sequence:</b>	7	EL4E	
<b>Priority Class:</b>	Medium	<b>System:</b>	ELECTRICAL
<b>Project Class:</b>	Plant Adaption	<b>Component:</b>	DEVICES AND FIXTURES
<b>Date Basis:</b>	2/6/2023	<b>Element:</b>	LIGHTNING PROTECTION

**Code Application:**

NFPA 70, 780

**Subclass/Savings:**

Not Applicable

**Project Location:**

Floor-wide: Floor(s) R

**Description**

This facility would benefit from the addition of lightning protection. Install an appropriately designed system that protects the structure and rooftop structure and equipment.

All costs shown as Present Value

**Project Cost Estimate**

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Cable, connectors, air terminals, grounding rods, specialty fasteners, etc.	SF	26,687	\$0.69	\$18,414	\$0.69	\$18,414	\$36,828
<b>Base Material/Labor Costs</b>				<b>\$18,414</b>		<b>\$18,414</b>	
<b>Indexed Material/Labor Costs</b>				<b>\$18,543</b>		<b>\$13,129</b>	<b>\$31,672</b>
<b>Construction Mark Up at 20.0%</b>							<b>\$6,334</b>
<b>Original Construction Cost</b>							<b>\$38,007</b>
<b>Date of Original Estimate:</b>	2/6/2023					<b>Inflation</b>	<b>\$0</b>
<b>Current Year Construction Cost</b>							<b>\$38,007</b>
<b>Professional Fees at 16.0%</b>							<b>\$6,081</b>
<b>TOTAL PROJECT COST</b>							<b>\$44,088</b>

All costs shown as Present Value

FIRE SPRINKLER SYSTEM INSTALLATION			
<b>Project Number:</b>	097FS01	<b>Category Code:</b>	
<b>Priority Sequence:</b>	8	FS3A	
<b>Priority Class:</b>	Low	<b>System:</b>	FIRE/LIFE SAFETY
<b>Project Class:</b>	Plant Adaption	<b>Component:</b>	SUPPRESSION
<b>Date Basis:</b>	2/3/2023	<b>Element:</b>	SPRINKLERS

**Code Application:**

NFPA 1, 13, 13R, 101

**Subclass/Savings:**

Not Applicable

**Project Location:**

Floor-wide: Floor(s)

**Description**

There is no automatic fire suppression in this building. Modern codes require facilities of this size, occupancy and type to be protected by fire suppression sprinklers. As a part of future renovation efforts, it is recommended that this facility be fully protected by an automatic, wet-pipe sprinkler system.

All costs shown as Present Value

**Project Cost Estimate**

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
Install a wet-pipe sprinkler system, including valves, piping, sprinkler heads, piping supports, etc.	SF	76,695	\$5.56	\$426,424	\$6.81	\$522,293	\$948,717
<b>Base Material/Labor Costs</b>				<b>\$426,424</b>		<b>\$522,293</b>	
<b>Indexed Material/Labor Costs</b>				<b>\$429,409</b>		<b>\$372,395</b>	<b>\$801,804</b>
<b>Construction Mark Up at 20.0%</b>							<b>\$160,361</b>
<b>Original Construction Cost</b>							<b>\$962,165</b>
<b>Date of Original Estimate:</b>	2/3/2023					<b>Inflation</b>	<b>\$0</b>
<b>Current Year Construction Cost</b>							<b>\$962,165</b>
<b>Professional Fees at 16.0%</b>							<b>\$153,946</b>
<b>TOTAL PROJECT COST</b>							<b>\$1,116,111</b>

All costs shown as Present Value

UPGRADE BREAK ROOM CABINTRY			
<b>Project Number:</b>	097AC04	<b>Category Code:</b>	
<b>Priority Sequence:</b>	9	AC4A	
<b>Priority Class:</b>	Low	<b>System:</b>	ACCESSIBILITY
<b>Project Class:</b>	Plant Adaption	<b>Component:</b>	GENERAL
<b>Date Basis:</b>	2/6/2023	<b>Element:</b>	FUNCTIONAL SPACE MOD.

**Code Application:**

ADAAG 804

**Subclass/Savings:**

DOJ2 - Access to Goods & Services

**Project Location:**

Room Only: Floor(s) 2,3

**Description**

Current legislation requires that building amenities be generally accessible to all persons. The configuration of the break room cabinetry is a barrier to accessibility. The installation of wheelchair-accessible cabinetry is recommended where applicable.



All costs shown as Present Value

**Project Cost Estimate**

Task Description	Unit	Qty	Material Unit Cost	Total Material Cost	Labor Unit Cost	Total Labor Cost	Total Cost
ADA-compliant cabinetry with base cabinetry, overhead cabinetry, and amenities	EA	3	\$8,553	\$25,658	\$2,992	\$8,976	\$34,634
<b>Base Material/Labor Costs</b>				<b>\$25,658</b>		<b>\$8,976</b>	
<b>Indexed Material/Labor Costs</b>				<b>\$25,838</b>		<b>\$6,400</b>	<b>\$32,238</b>
<b>Construction Mark Up at 20.0%</b>							<b>\$6,448</b>
<b>Original Construction Cost</b>							<b>\$38,685</b>
<b>Date of Original Estimate:</b>	2/6/2023					<b>Inflation</b>	<b>\$0</b>
<b>Current Year Construction Cost</b>							<b>\$38,685</b>
<b>Professional Fees at 16.0%</b>							<b>\$6,190</b>
<b>TOTAL PROJECT COST</b>							<b>\$44,875</b>



FACILITY CONDITION ASSESSMENT

**SECTION 4**

LIFECYCLE COMPONENT  
INVENTORY



### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	IN STL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
WN01	GLASS, WINDOW, ALUMINUM OR WOOD, STANDARD	METAL FRAME DUAL PANE		EXTERIOR	4,150	SF	1.27	\$971,210	1989	40		2029
DR08	DOOR AND FRAME, EXTERIOR, SWINGING, HOLLOW METAL	PT ON HM		EXTERIOR	6	LEAF	1.00	\$14,669	1989	40		2029
DR12	DOOR AND STOREFRONT, EXTERIOR, SWINGING, ALUMINUM AND GLASS	BRONZE ANOD		EXTERIOR	4	LEAF	1.00	\$18,057	1989	25	8	DR
DR28	DOOR OPERATOR, POWER-ASSIST		13503	MAIN ENTRANCE	4	EA	1.00	\$42,034	1989	20	13	DR
RR06	ROOF - BITUMINOUS, 2-PLY, SBS MODIFIED BITUMEN, MOP	FLAT MOD BIT	13461	ROOF	26,687	SF	1.25	\$271,583	1989	20	13	DR
DR02	DOOR AND FRAME, INTERIOR, FIRE-RATED	PT ON METAL		FLR 1-3	150	LEAF	1.00	\$675,115	1989	40		2029
DR02	DOOR AND FRAME, INTERIOR, FIRE-RATED	PT ON METAL			54	LEAF	1.00	\$243,041	2016	40		2056
DR02	DOOR AND FRAME, INTERIOR, FIRE-RATED	WOOD AND GLASS		FLR 2	50	LEAF	1.00	\$225,038	2016	40		2056
DR03	DOOR - OVERHEAD, INTERIOR	METAL WINDOW		EQUIP RM	15	SF	1.00	\$1,772	2016	30		2046
DR24	DOOR LOCK, COMMERCIAL-GRADE	PT ON METAL		FLR 1-3	150	EA	1.00	\$134,464	1989	20	13	DR
DR24	DOOR LOCK, COMMERCIAL-GRADE	PT ON METAL			54	EA	1.00	\$48,407	2016	20		2036
DR24	DOOR LOCK, COMMERCIAL-GRADE	LEVER		FLR 2	50	EA	1.00	\$44,821	2016	20		2036
DR26	DOOR PANIC HARDWARE			HM EXT DRS	6	EA	1.00	\$8,800	1989	20	13	DR
DR26	DOOR PANIC HARDWARE			GLASS EXT DRS	4	EA	1.00	\$5,866	1989	20	13	DR
CW01	CASEWORK - WOOD BASE AND WALL, TOP, STANDARD	LAMINATE		FLR 1-3	112	LF	1.00	\$72,709	1989	20	13	DR

### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	IN STL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
IW01	WALL FINISH - PAINT, STANDARD	PT ON DRYWALL		FLR 1-3	81,630	SF	1.00	\$219,924	2016	12		2028
IW03	WALL FINISH - TILE, CERAMIC / STONE, STANDARD	CERAMIC		FLR 1-3	1,670	SF	1.00	\$77,151	1989	30	3	DR
IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD	BROADLOOM		FLR 1-3	20,690	SF	1.00	\$304,991	1989	12	21	DR
IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD	CARPET TILE			1,090	SF	1.00	\$16,068	2016	12		2028
IF03	FLOORING - VINYL COMPOSITION TILE, STANDARD	VCT		FLR 1-3	16,340	SF	1.00	\$126,063	1989	20	13	DR
IF04	FLOORING - VINYL SHEET, STANDARD	30 MIL VINYL ROLL		FLR 3	2,720	SF	1.00	\$34,970	2016	15	3	2034
IF06	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD	CERAMIC		RESTROOMS	5,450	SF	1.00	\$208,636	1989	30		DR
IF09	FLOORING - TERRAZZO RESURFACE	CUSTOM PATTERNED		STAIRWELL	5,450	SF	1.00	\$66,770	1989	50		2039
IF14	FLOORING - FLUID APPLIED, EPOXY / ACRYLIC / POLYURETHANE	EPOXY AGGR		HYDRO THERAPY	5,450	SF	3.00	\$386,955	2016	15		2031
IF17	FLOORING - ATHLETIC, RUBBER, TILE OR ROLL	HD NEOPRENE INTERLOCK		WEIGHT RM	2,720	SF	3.00	\$292,091	2016	15		2031
IC01	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD	2X2 FLUSH GRID		FLR 1-3	37,030	SF	1.00	\$449,867	1989	30	3	DR
IC01	CEILING FINISH - SUSPENDED ACOUSTICAL TILE, STANDARD	2X2 FLUSH GRID		FLR 2	9,260	SF	1.00	\$112,497	2016	30		2046
IC04	CEILING FINISH - PAINTED OR STAINED, STANDARD	PT ON DRYWALL		FLR 1-3	8,170	SF	1.00	\$22,011	2016	24		2040
VT03	ELEVATOR MODERNIZATION - HYDRAULIC	ELEVATOR 1	13471	ELEV 109	1	EA	1.00	\$363,640	1989	25	8	DR
VT03	ELEVATOR MODERNIZATION - HYDRAULIC	ELEVATOR 2	13470	ELEV 130	1	EA	1.00	\$363,640	1989	25	8	DR

### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	IN STL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
VT04	ELEVATOR CAB RENOVATION - PASSENGER	ELEVATOR 1	13471	ELEV 1 CAB	1	EA	1.00	\$64,123	1989	12	21	DR
VT04	ELEVATOR CAB RENOVATION - PASSENGER	ELEVATOR 2	13470	ELEV 2 CAB	1	EA	1.00	\$64,123	1989	12	21	DR
FX01	PLUMBING FIXTURE - LAVATORY, COUNTER	PE ON STEEL		RESTROOMS	29	EA	1.00	\$46,013	1989	35	8	2032
FX02	PLUMBING FIXTURE - LAVATORY, WALL HUNG	PC		RESTROOMS	2	EA	1.00	\$3,203	1989	35		2024
FX04	PLUMBING FIXTURE - SINK, KITCHEN	SST		FLR 1-3	4	EA	1.00	\$10,399	1989	35	13	2037
FX06	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	PE ON CASTIRON		FLR 1-3	2	EA	1.00	\$4,316	1989	35		2024
FX07	PLUMBING FIXTURE - SHOWER, GANG PEDESTAL, STAINLESS STEEL	SST 4 HEAD POLES		FLR 1	2	EA	1.00	\$39,047	1989	35		2024
FX08	PLUMBING FIXTURE - SHOWER VALVE AND HEAD	SST FIXTURES		RESTROOMS	35	EA	1.00	\$72,663	1989	35		2024
FX10	PLUMBING FIXTURE - URINAL	PC WALLMOUNT		RESTROOMS	14	EA	1.00	\$35,695	1989	35		2024
FX12	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	PC LOW FLOW		RESTROOMS	28	EA	1.00	\$65,679	1989	35		2024
BF03	BACKFLOW PREVENTER (2-3 INCHES)	PARALLEL BOTTOM		MECH 02	1	EA	1.00	\$9,285	1989	10	27	2026
BF03	BACKFLOW PREVENTER (2-3 INCHES)	PARALLEL TOP		MECH 02	1	EA	1.00	\$9,285	2022	10	1	2033
PS02	SUPPLY PIPING SYSTEM - CLASSROOM	ORIGINAL	097	THROUGHOUT	76,695	SF	0.96	\$861,765	1989	35		2024
PD02	DRAIN PIPING SYSTEM - CLASSROOM	ORIGINAL	097	THROUGHOUT	76,695	SF	0.96	\$1,301,560	1989	40		2029
PP04	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	GREY WATER	13476	RM 04	2	EA	1.00	\$1,636	1989	20	17	2026

### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	IN STL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
WT08	POOL FILTRATION, TREATMENT, PUMPING, HEATING SYSTEMS	TREATMENT SPAS		POOL ROOM 134	200	SF	1.00	\$11,395	2018	18		2036
BL01	BOILER - GAS (<=250 MBH)	DHW BOILER 1		MECH 02	199	MBH	0.15	\$3,043	2023	35		2058
BL01	BOILER - GAS (<=250 MBH)	DHW BOILER 2		MECH 02	199	MBH	0.15	\$3,043	2023	35		2058
BL01	BOILER - GAS (<=250 MBH)	DHW BOILER 3		MECH 02	199	MBH	0.15	\$3,043	2023	35		2058
BL01	BOILER - GAS (<=250 MBH)	DHW BOILER 4		MECH 02	199	MBH	0.15	\$3,043	2023	35		2058
BL02	BOILER - GAS (250-2,000 MBH)	BOILER #1		MECH 02	1,500	MBH	1.00	\$87,361	2022	35		2057
BL02	BOILER - GAS (250-2,000 MBH)	BOILER #2		MECH 02	1,500	MBH	1.00	\$87,361	2022	35		2057
TK03	EXPANSION TANK (21-40 GAL)	TACO xxxx4AC-125		MECHANICAL 02	30	GAL	1.00	\$7,268	2023	25		2048
TK04	EXPANSION TANK (41-60 GAL)	ORIGINAL GREY TANKS		MECHANICAL 02	50	GAL	1.00	\$11,005	1989	25		DR
TK04	EXPANSION TANK (41-60 GAL)	ORIGINAL GREY TANKS		MECHANICAL 02	50	GAL	1.00	\$11,005	1989	25		DR
TK05	EXPANSION TANK (61-100 GAL)	RED TACO	13485	MECHANICAL 02	100	GAL	1.00	\$19,620	1989	25	19	2033
TK05	EXPANSION TANK (61-100 GAL)	TACO CA300-125		MECHANICAL 02	79	GAL	1.00	\$15,500	2022	25		2047
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24837	RM 105B	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24838	RM 105D	1	HP	1.00	\$10,844	1989	25	12	2026



### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	IN STL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24839	RM 105F, ACCESSIBLE FROM RM 105H	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-1	24840	RM 105F	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24841	RM 105H	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24843	RM 201, FRONT OF ELEV.	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24870	HALLWAY 357 OUTSIDE RM 356	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24871	RM 366	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24872	RM 367	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24873	RM 368	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24864	RM 332, NORTH-WEST SIDE OF ROOM	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-1	24865	RM 337	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24862	RM 331, ENTER FROM RM 332	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24863	RM 332, EAST SIDE OF ROOM	1	HP	1.00	\$10,844	1989	25	12	2026

### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	INSL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-1	24866	ELEV #2 LOBBY	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24867	RM 342 OUTSIDE RM 344	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24868	HALLWAY 346 OUTSIDE ROOM RM 348	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24869	RM 351	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24856	RM 301	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24857	RM 304	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24858	RM 316	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24859	RM 319	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24860	RM 320	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-6	24861	RM 323, ACCESS FROM HALLWAY	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-7	24850	RM 244	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24851	RM 259	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24852	ELEV #2 LOBBY	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24853	RM 270	1	HP	1.00	\$10,844	1989	25	12	2026

### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	IN STL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24854	RM 272	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24855	RM 275	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24844	RM 201, LEFT OF DOOR 265	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24845	RM 210	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24846	HALLWAY 213, ABOVE SINK	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24847	HALLWAY 216	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24848	HALLWAY 228	1	HP	1.00	\$10,844	1989	25	12	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24849	RM 230A	1	HP	1.00	\$10,844	1989	25	12	2026
AH07	AIR HANDLING UNIT - INDOOR (9-12 HP)	YORK AHU-1	13464	MECH 02	10	HP	1.00	\$98,239	2001	25		2026
AH12	AIR HANDLING UNIT - INDOOR (35-45 HP)	AHU-02	13463	MECH 334	40	HP	0.75	\$207,419	1989	25	12	2026
FN01	FAN - AXIAL, RETURN, 1.5" SP (<=3 HP) 9,200 CFM	AHU-1 RF		MECH 02	2	HP	1.00	\$8,664	2001	20	5	2026
FN02	FAN - AXIAL, RETURN, 1.5" SP (3-5 HP) 13,200 CFM	AHU-02 RF#1	13480	MECH 334	5	HP	1.00	\$14,620	1989	20	17	2026
FN02	FAN - AXIAL, RETURN, 1.5" SP (3-5 HP) 13,200 CFM	AHU-02 RF#2	13481	MECH 334	5	HP	1.00	\$14,620	1989	20	17	2026
FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EF-2	13467	ROOF	1	EA	1.00	\$7,711	2015	20		2035
FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	NO LABEL	13469	ROOF	1	EA	1.00	\$7,711	1989	20	17	2026

### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	IN STL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	BREBIERT	13468	ROOF	1	EA	1.00	\$7,711	1989	20	17	2026
FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EX AIR FAN	24307	UNKN	1	EA	1.00	\$7,711	1989	20	17	2026
HV02	HVAC DISTRIBUTION NETWORKS - CLASSROOM	INTERNALLY INS METAL	097	THROUGHOUT	76,695	SF	0.96	\$2,845,743	1989	40		2029
PH01	PUMP - ELECTRIC (<=10 HP)	HHWP-1		MECH 02	5	HP	1.00	\$9,903	1989	25	20	2034
PH01	PUMP - ELECTRIC (<=10 HP)	HHWP-2		MECH 02	5	HP	1.00	\$9,903	1989	25	20	2034
PH01	PUMP - ELECTRIC (<=10 HP)	CHWP-2	13474	UNKN	10	HP	1.00	\$19,806	1989	25	20	2034
PH03	PUMP - ELECTRIC (15 - 20 HP)	CHWP-2A	13477	MECH 02	20	HP	1.00	\$25,689	2013	25		2038
PH03	PUMP - ELECTRIC (15 - 20 HP)	CHWP-2B	13478	MECH 02	20	HP	1.00	\$25,689	2013	25		2038
AC01	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (<=6 TOTAL HP)	CURTIS-TOLEDO	13465	MECH 02	2	HP	1.00	\$4,320	1989	20	13	DR
BA14	HVAC CONTROLS - TERMINAL ASSEMBLIES - OFFICE	VAV BOXES WITH PNEUMATIC ACTUATORS		THROUGHOUT	76,695	SF	1.00	\$234,245	1989	20		DR
BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	PNEUMATIC CONTROLS - UPGRADED ROBERT SHAW		2ND FLOOR	25,333	SF	1.00	\$21,410	2001	10	14	2025
BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	ORIGINAL - ROBERT SHAW		THIRD FLOOR	25,333	SF	1.00	\$21,410	1989	10		DR
BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	UPGRADED DDC - TRANE		1ST FLOOR	25,333	SF	1.00	\$21,410	2016	10		2026

### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	IN STL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	UPGRADED DDC - JCI (HEATING HOT WATER)		MECH 02	695	SF	1.00	\$587	2022	10		2032
BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	ORIGINAL ROBERT SHAW		THIRD FLOOR	25,333	SF	1.00	\$11,257	1989	10		DR
BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	UPGRADED DDC - ROBERT SHAW		2ND FLOOR	25,333	SF	1.00	\$11,257	2001	10		DR
BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	UPGRADED DDC - TRANE		1ST FLOOR	25,333	SF	1.00	\$11,257	2016	10		2026
BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	UPGRADED DDC - JCI (HEATING HOT WATER)		MECH 02	695	SF	1.00	\$309	2022	10		2032
FA01	FIRE ALARM PANEL, DIALER, BATTERY, & CHARGER	SIMPLEX 4100U	13465	LOBBY 101	1	EA	1.00	\$45,567	2019	15		2034
FA02	FIRE ALARM SYSTEM - DEVICES	HORN/STROBES, SMOKE/CO2 SENSORS, MAN PS	13465	THROUGHOUT	76,695	SF	0.96	\$361,577	1989	18	15	DR
SE02	ELECTRICAL DISTRIBUTION NETWORK - CLASSROOM	120/240 Y DELTA	097	THROUGHOUT	61,695	SF	0.98	\$1,601,885	1989	40	4	2033
SE02	ELECTRICAL DISTRIBUTION NETWORK - CLASSROOM	UPGRADED/ADDED		SELECT RENOVATIONS	15,000	SF	1.13	\$449,081	2003	40		2043
SG04	MAIN SWITCHBOARD W/BREAKERS (800-1200 AMP)	277/480		ELEC 03	1,200	AMP	1.00	\$106,529	1989	20	15	2024
TX18	TRANSFORMER - OIL-FILLED, 3PH, 5-15KV PRIMARY (500-750 KVA)	WARD SPORTS		SOUTH SIDE	750	KVA	1.00	\$89,861	1989	35	2	2026
VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	AHU-02 RF-1 VFD		MECH 334	5	HP	1.00	\$4,217	2018	12		2030
VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	AHU-02 RF-2 VFD		MECH 334	5	HP	1.00	\$4,217	2004	12	6	DR
VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	AHU-1 RF VFD		MECH 02	2	HP	1.00	\$1,687	2018	12		2030

### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	INSL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	HHWP VFD		MECH 02	7.50	HP	1.00	\$5,736	2018	12		2030
VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	AHU-2 SF VFD		MECH 02	10	HP	1.00	\$6,378	2018	12		2030
VF05	VARIABLE FREQUENCY DRIVE (15-20 HP)	CHWP 2B VFD		MECH 02	20	HP	1.00	\$9,030	2013	12		2025
VF05	VARIABLE FREQUENCY DRIVE (15-20 HP)	CHWP 2A VFD		MECH 02	20	HP	1.00	\$9,030	2013	12		2025
VF08	VARIABLE FREQUENCY DRIVE (30-40 HP)	AHU-02 SF VFD		MECH 334	40	HP	1.00	\$13,973	1989	16	17	DR
LE03	LIGHTING - EXTERIOR, RECESSED (INC, CFL, LED)	RECESSED	097	ALL ELEVATIONS	13	EA	1.00	\$3,670	1989	15	22	2026
LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	HID		ALL ELEVATIONS	1	EA	1.00	\$1,190	1989	15	22	2026
LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	LED		ALL ELEVATIONS	4	EA	1.00	\$4,760	2016	15	2	2033
LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	HID		SOUTH SIDE GEN PEN, LANDSCAPE BLDG	9	EA	1.00	\$10,709	2003	15	8	2026
LI02	LIGHTING SYSTEM, INTERIOR - CLASSROOM	T8 FLUORESCENT	097	THROUGHOUT	76,695	SF	0.96	\$898,343	2005	20		2025
LI02	LIGHTING SYSTEM, INTERIOR - CLASSROOM	LED		SELECT RENOVATIONS	15,000	SF	1.13	\$206,811	2016	20		2036
GN04	GENERATOR - DIESEL (200-500 KW)	CUMMINS DIESEL	13472	SOUTH GEN PEN	350	KW	1.00	\$205,892	2003	25	5	2033
GN15	SWITCH - AUTO TRANSFER, 480 V (100-400 AMP)	ATS#1	13497	ELECTRICAL 03	400	AMP	1.00	\$19,798	2003	25	5	2033
GN15	SWITCH - AUTO TRANSFER, 480 V (100-400 AMP)	ATS#2	13498	ELECTRICAL 03	150	AMP	1.00	\$7,424	2003	25	5	2033

### RENEWABLE COMPONENT INVENTORY

COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	QTY	UNITS	CPLX FACTR	TOTAL COST	IN STL DATE	USEFUL LIFE	USEFUL LIFE ADJ	REPL YEAR
SF01	SEATING, FIXED, FOLDING, STANDARD			RM 105H	132	EA	1.00	\$56,006	2016	40		2056
SF01	SEATING, FIXED, FOLDING, STANDARD			RM 105B	50	EA	1.00	\$21,215	2016	40		2056
SF01	SEATING, FIXED, FOLDING, STANDARD			RM 236B	46	EA	1.00	\$19,517	1989	40		2029
SF01	SEATING, FIXED, FOLDING, STANDARD			RM 236C	46	EA	1.00	\$19,517	1989	40		2029
SI01	CONCRETE PEDESTRIAN PAVING - JOINT MAINTENANCE	CONCRETE PAVING		PERIMETER	800	LF	1.00	\$4,784	1989	7		DR
<b>Grand Total:</b>								<b>\$16,901,743</b>				

## RECURRING NEEDS BY YEAR

All costs shown as Future Value using a 3% average inflation rate

DEFERRED RENEWAL									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
DR12	DOOR AND STOREFRONT, EXTERIOR, SWINGING, ALUMINUM AND GLASS	BRONZE ANOD		EXTERIOR	B2030	4	LEAF	\$18,057	DR
DR28	DOOR OPERATOR, POWER-ASSIST		13503	MAIN ENTRANCE	B2030	4	EA	\$42,034	DR
RR06	ROOF - BITUMINOUS, 2-PLY, SBS MODIFIED BITUMEN, MOP	FLAT MOD BIT	13461	ROOF	B3010	26,687	SF	\$271,583	DR
DR24	DOOR LOCK, COMMERCIAL-GRADE	PT ON METAL		FLR 1-3	C1020	150	EA	\$134,464	DR
DR26	DOOR PANIC HARDWARE			HM EXT DRS	C1020	6	EA	\$8,800	DR
DR26	DOOR PANIC HARDWARE			GLASS EXT DRS	C1020	4	EA	\$5,866	DR
CW01	CASEWORK - WOOD BASE AND WALL, TOP, STANDARD	LAMINATE		FLR 1-3	C1030	112	LF	\$72,709	DR
IW03	WALL FINISH - TILE, CERAMIC / STONE, STANDARD	CERAMIC		FLR 1-3	C3010	1,670	SF	\$77,151	DR
IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD	BROADLOOM		FLR 1-3	C3020	20,690	SF	\$304,991	DR
IF03	FLOORING - VINYL COMPOSITION TILE, STANDARD	VCT		FLR 1-3	C3020	16,340	SF	\$126,063	DR
IF06	FLOORING - TILE, CERAMIC / STONE / QUARRY STANDARD	CERAMIC		RESTROOMS	C3020	5,450	SF	\$208,636	DR
IC01	CEILING FINISH - SUSPENDE ACOUSTICAL TILE, STANDARD	2X2 FLUSH GRID		FLR 1-3	C3030	37,030	SF	\$449,867	DR



## RECURRING NEEDS BY YEAR

*All costs shown as Future Value using a 3% average inflation rate*

VT03	ELEVATOR MODERNIZATION - HYDRAULIC	ELEVATOR 1	13471	ELEV 109	D1010	1	EA	\$363,640	DR
VT03	ELEVATOR MODERNIZATION - HYDRAULIC	ELEVATOR 2	13470	ELEV 130	D1010	1	EA	\$363,640	DR
VT04	ELEVATOR CAB RENOVATION - PASSENGER	ELEVATOR 1	13471	ELEV 1 CAB	D1010	1	EA	\$64,123	DR
VT04	ELEVATOR CAB RENOVATION - PASSENGER	ELEVATOR 2	13470	ELEV 2 CAB	D1010	1	EA	\$64,123	DR
TK04	EXPANSION TANK (41-60 GAL)	ORIGINAL GREY TANKS		MECHANICAL 02	D3020	50	GAL	\$11,005	DR
TK04	EXPANSION TANK (41-60 GAL)	ORIGINAL GREY TANKS		MECHANICAL 02	D3020	50	GAL	\$11,005	DR
AC01	AIR COMPRESSOR SYSTEM - HVAC CONTROLS (<=6 TOTAL HP)	CURTIS-TOLEDO	13465	MECH 02	D3060	2	HP	\$4,320	DR
BA14	HVAC CONTROLS - TERMINAL ASSEMBLIES - OFFICE	VAV BOXES WITH PNEUMATIC ACTUATORS		THROUGHOUT	D3060	76,695	SF	\$234,245	DR
BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	ORIGINAL - ROBERT SHAW		THIRD FLOOR	D3060	25,333	SF	\$21,410	DR
BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	ORIGINAL ROBERT SHAW		THIRD FLOOR	D3060	25,333	SF	\$11,257	DR
BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	UPGRADED DDC - ROBERT SHAW		2ND FLOOR	D3060	25,333	SF	\$11,257	DR
FA02	FIRE ALARM SYSTEM - DEVICES	HORN/STROBES, SMOKE/CO2 SENSORS, MAN PS	13465	THROUGHOUT	D4030	76,695	SF	\$361,577	DR
VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	AHU-02 RF-2 VFD		MECH 334	D5010	5	HP	\$4,217	DR
VF08	VARIABLE FREQUENCY DRIVE (30-40 HP)	AHU-02 SF VFD		MECH 334	D5010	40	HP	\$13,973	DR

### RECURRING NEEDS BY YEAR

*All costs shown as Future Value using a 3% average inflation rate*

SI01	CONCRETE PEDESTRIAN PAVING - JOINT MAINTENANCE	CONCRETE PAVING		PERIMETER	G2030	800	LF	\$4,784	DR
<b>TOTAL DEFERRED RENEWAL COST</b>								<b>\$3,264,795</b>	

*No Projected Component Replacement Cost for Asset No. 097 for 2023*

2024									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
FX02	PLUMBING FIXTURE - LAVATORY, WALL HUNG	PC		RESTROOMS	D2010	2	EA	\$3,299	2024
FX06	PLUMBING FIXTURE - SINK, SERVICE/LAUNDRY/UTILITY	PE ON CASTIRON		FLR 1-3	D2010	2	EA	\$4,445	2024
FX07	PLUMBING FIXTURE - SHOWER, GANG PEDESTAL, STAINLESS STEEL	SST 4 HEAD POLES		FLR 1	D2010	2	EA	\$40,219	2024
FX08	PLUMBING FIXTURE - SHOWER VALVE AND HEAD	SST FIXTURES		RESTROOMS	D2010	35	EA	\$74,843	2024

### RECURRING NEEDS BY YEAR

*All costs shown as Future Value using a 3% average inflation rate*

FX10	PLUMBING FIXTURE - URINAL	PC WALLMOUNT		RESTROOMS	D2010	14	EA	\$36,766	2024
FX12	PLUMBING FIXTURE - WATER CLOSET, TANKLESS	PC LOW FLOW		RESTROOMS	D2010	28	EA	\$67,650	2024
PS02	SUPPLY PIPING SYSTEM - CLASSROOM	ORIGINAL	097	THROUGHOUT	D2020	76,695	SF	\$887,618	2024
SG04	MAIN SWITCHBOARD W/BREAKERS (800-1200 AMP)	277/480		ELEC 03	D5010	1,200	AMP	\$109,725	2024
<b>2024 PROJECTED COMPONENT REPLACEMENT COST</b>								<b>\$1,224,563</b>	

2025									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	PNEUMATIC CONTROLS - UPGRADED ROBERT SHAW		2ND FLOOR	D3060	25,333	SF	\$22,714	2025
VF05	VARIABLE FREQUENCY DRIVE (15-20 HP)	CHWP 2B VFD		MECH 02	D5010	20	HP	\$9,580	2025
VF05	VARIABLE FREQUENCY DRIVE (15-20 HP)	CHWP 2A VFD		MECH 02	D5010	20	HP	\$9,580	2025
LI02	LIGHTING SYSTEM, INTERIOR - CLASSROOM	T8 FLUORESCENT	097	THROUGHOUT	D5020	76,695	SF	\$953,052	2025
<b>2025 PROJECTED COMPONENT REPLACEMENT COST</b>								<b>\$994,926</b>	

## RECURRING NEEDS BY YEAR

*All costs shown as Future Value using a 3% average inflation rate*

2026									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
BF03	BACKFLOW PREVENTER (2-3 INCHES)	PARALLEL BOTTOM		MECH 02	D2020	1	EA	\$10,146	2026
PP04	GREYWATER SUMP PUMP -SUBMERSIBLE PUMP (<0.5HP)	GREY WATER	13476	RM 04	D2030	2	EA	\$1,788	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24837	RM 105B	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24838	RM 105D	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24839	RM 105F, ACCESSIBLE FROM RM 105H	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-1	24840	RM 105F	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24841	RM 105H	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24843	RM 201, FRONT OF ELEV.	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24870	HALLWAY 357 OUTSIDE RM 356	D3040	1	HP	\$11,850	2026

### RECURRING NEEDS BY YEAR

*All costs shown as Future Value using a 3% average inflation rate*

AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24871	RM 366	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24872	RM 367	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24873	RM 368	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24864	RM 332, NORTH-WEST SIDE OF ROOM	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-1	24865	RM 337	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24862	RM 331, ENTER FROM RM 332	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24863	RM 332, EAST SIDE OF ROOM	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-1	24866	ELEV #2 LOBBY	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24867	RM 342 OUTSIDE RM 344	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24868	HALLWAY 346 OUTSIDE ROOM RM 348	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24869	RM 351	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24856	RM 301	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24857	RM 304	D3040	1	HP	\$11,850	2026

### RECURRING NEEDS BY YEAR

*All costs shown as Future Value using a 3% average inflation rate*

AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-4	24858	RM 316	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24859	RM 319	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24860	RM 320	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-6	24861	RM 323, ACCESS FROM HALLWAY	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-7	24850	RM 244	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24851	RM 259	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24852	ELEV #2 LOBBY	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24853	RM 270	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24854	RM 272	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24855	RM 275	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24844	RM 201, LEFT OF DOOR 265	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24845	RM 210	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24846	HALLWAY 213, ABOVE SINK	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-5	24847	HALLWAY 216	D3040	1	HP	\$11,850	2026
AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-2	24848	HALLWAY 228	D3040	1	HP	\$11,850	2026

### RECURRING NEEDS BY YEAR

*All costs shown as Future Value using a 3% average inflation rate*

AH01	AIR HANDLING UNIT - INDOOR (.5-1.25 HP)	FCU-3	24849	RM 230A	D3040	1	HP	\$11,850	2026
AH07	AIR HANDLING UNIT - INDOOR (9-12 HP)	YORK AHU-1	13464	MECH 02	D3040	10	HP	\$107,348	2026
AH12	AIR HANDLING UNIT - INDOOR (35-45 HP)	AHU-02	13463	MECH 334	D3040	40	HP	\$226,652	2026
FN01	FAN - AXIAL, RETURN, 1.5" SP (<=3 HP) 9,200 CFM	AHU-1 RF		MECH 02	D3040	2	HP	\$9,468	2026
FN02	FAN - AXIAL, RETURN, 1.5" SP (3-5 HP) 13,200 CFM	AHU-02 RF#1	13480	MECH 334	D3040	5	HP	\$15,975	2026
FN02	FAN - AXIAL, RETURN, 1.5" SP (3-5 HP) 13,200 CFM	AHU-02 RF#2	13481	MECH 334	D3040	5	HP	\$15,975	2026
FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	NO LABEL	13469	ROOF	D3040	1	EA	\$8,427	2026
FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	BREBIERT	13468	ROOF	D3040	1	EA	\$8,427	2026
FN19	FAN - CENTRIFUGAL ROOF EXHAUST, 1/4" SP (20"-22" DIAMETER)	EX AIR FAN	24307	UNKN	D3040	1	EA	\$8,427	2026
BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	UPGRADED DDC - TRANE		1ST FLOOR	D3060	25,333	SF	\$23,395	2026
BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	UPGRADED DDC - TRANE		1ST FLOOR	D3060	25,333	SF	\$12,301	2026
TX18	TRANSFORMER - OIL-FILLED, 3PH, 5-15KV PRIMARY (500-750 KVA)	WARD SPORTS		SOUTH SIDE	D5010	750	KVA	\$98,194	2026
LE03	LIGHTING - EXTERIOR, RECESSED (INC, CFL, LED)	RECESSED	097	ALL ELEVATIONS	D5020	13	EA	\$4,010	2026
LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	HID		ALL ELEVATIONS	D5020	1	EA	\$1,300	2026

### RECURRING NEEDS BY YEAR

*All costs shown as Future Value using a 3% average inflation rate*

LE07	LIGHTING - EXTERIOR, WALL FLOOD (SV, MH, ID, LED)	HID		SOUTH SIDE GEN PEN, LANDSCAPE BLDG	D5020	9	EA	\$11,702	2026
<b>2026 PROJECTED COMPONENT REPLACEMENT COST</b>								<b>\$990,132</b>	

*No Projected Component Replacement Cost for Asset No. 097 for 2027*

2028									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
IW01	WALL FINISH - PAINT, STANDARD	PT ON DRYWALL		FLR 1-3	C3010	81,630	SF	\$254,952	2028
IF01	FLOORING - CARPET, TILE OR ROLL, STANDARD	CARPET TILE			C3020	1,090	SF	\$18,627	2028
<b>2028 PROJECTED COMPONENT REPLACEMENT COST</b>								<b>\$273,579</b>	



## RECURRING NEEDS BY YEAR

All costs shown as Future Value using a 3% average inflation rate

2029									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
WN01	GLASS, WINDOW, ALUMINUM OR WOOD, STANDARD	METAL FRAME DUAL PANE		EXTERIOR	B2010	4,150	SF	\$1,159,676	2029
DR08	DOOR AND FRAME, EXTERIOR, SWINGING, HOLLOW METAL	PT ON HM		EXTERIOR	B2030	6	LEAF	\$17,516	2029
DR02	DOOR AND FRAME, INTERIOR, FIRE-RATED	PT ON METAL		FLR 1-3	C1020	150	LEAF	\$806,123	2029
PD02	DRAIN PIPING SYSTEM - CLASSROOM	ORIGINAL	097	THROUGHOUT	D2030	76,695	SF	\$1,554,131	2029
HV02	HVAC DISTRIBUTION NETWORKS - CLASSROOM	INTERNALLY INS METAL	097	THROUGHOUT	D3040	76,695	SF	\$3,397,966	2029
SF01	SEATING, FIXED, FOLDING, STANDARD			RM 236B	E2010	46	EA	\$23,305	2029
SF01	SEATING, FIXED, FOLDING, STANDARD			RM 236C	E2010	46	EA	\$23,305	2029
<b>2029 PROJECTED COMPONENT REPLACEMENT COST</b>								<b>\$6,982,020</b>	

2030									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR

### RECURRING NEEDS BY YEAR

*All costs shown as Future Value using a 3% average inflation rate*

VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	AHU-02 RF-1 VFD		MECH 334	D5010	5	HP	\$5,186	2030
VF01	VARIABLE FREQUENCY DRIVE (<=5 HP)	AHU-1 RF VFD		MECH 02	D5010	2	HP	\$2,074	2030
VF02	VARIABLE FREQUENCY DRIVE (5-7.5 HP)	HHWP VFD		MECH 02	D5010	7.50	HP	\$7,054	2030
VF03	VARIABLE FREQUENCY DRIVE (7.5-10 HP)	AHU-2 SF VFD		MECH 02	D5010	10	HP	\$7,844	2030
<b>2030 PROJECTED COMPONENT REPLACEMENT COST</b>								<b>\$22,158</b>	

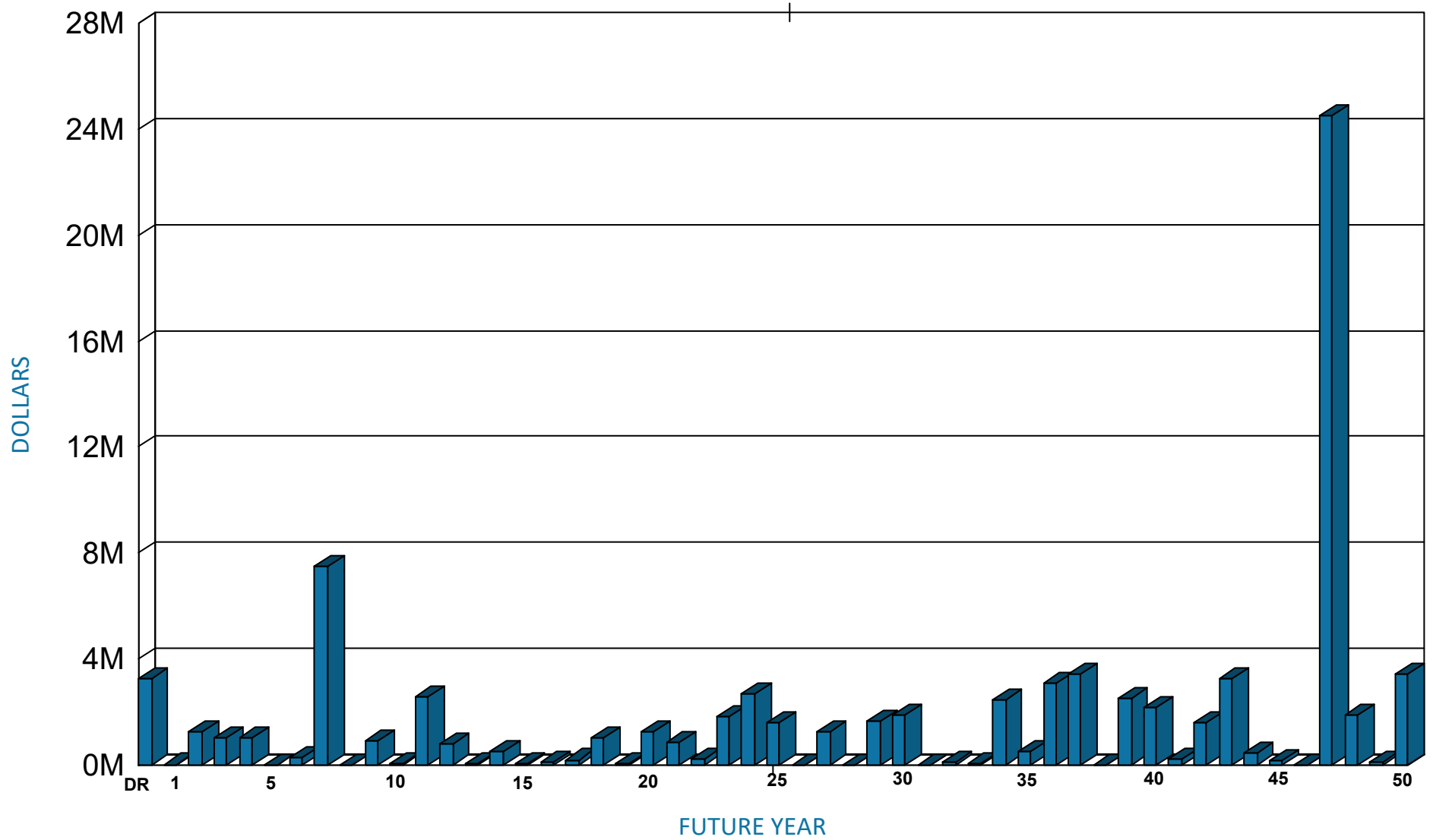
2031									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
IF14	FLOORING - FLUID APPLIED, EPOXY / ACRYLIC / POLYURETHANE	EPOXY AGGR		HYDRO THERAPY	C3020	5,450	SF	\$490,183	2031
IF17	FLOORING - ATHLETIC, RUBBER, TILE OR ROLL	HD NEOPRENE INTERLOCK		WEIGHT RM	C3020	2,720	SF	\$370,012	2031
<b>2031 PROJECTED COMPONENT REPLACEMENT COST</b>								<b>\$860,196</b>	

### RECURRING NEEDS BY YEAR

*All costs shown as Future Value using a 3% average inflation rate*

2032									
COMP CODE	COMPONENT DESCRIPTION	IDENTIFIER	CUSTOMER ID	LOCATION	UNI-FORMAT	QTY	UNITS	REPLACEMENT COST	YEAR
FX01	PLUMBING FIXTURE - LAVATORY, COUNTER	PE ON STEEL		RESTROOMS	D2010	29	EA	\$60,036	2032
BA37	HVAC CONTROLS - FIELD PANELS/OPS SOFTWARE - OFFICE	UPGRADED DDC - JCI (HEATING HOT WATER)		MECH 02	D3060	695	SF	\$766	2032
BA60	HVAC CONTROLS - MAJOR INSTRUMENTATION - OFFICE	UPGRADED DDC - JCI (HEATING HOT WATER)		MECH 02	D3060	695	SF	\$403	2032
<b>2032 PROJECTED COMPONENT REPLACEMENT COST</b>								<b>\$61,205</b>	

### RECURRING COMPONENT EXPENDITURE PROJECTIONS



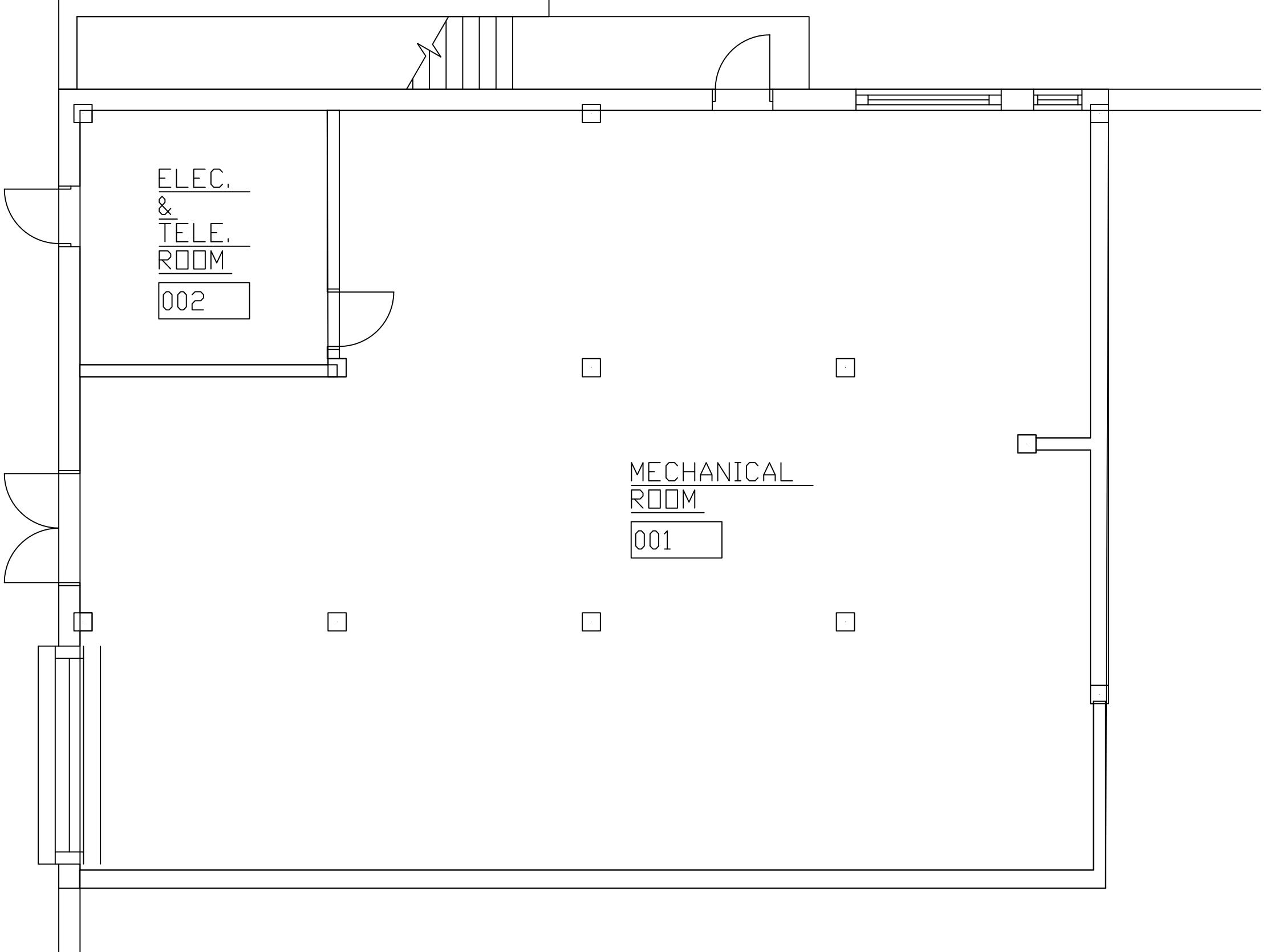
Average Annual Renewal Cost per SF \$9.53

FACILITY CONDITION ASSESSMENT

**SECTION 5**

DRAWINGS





ELEC.  
&  
TELE.  
ROOM

002

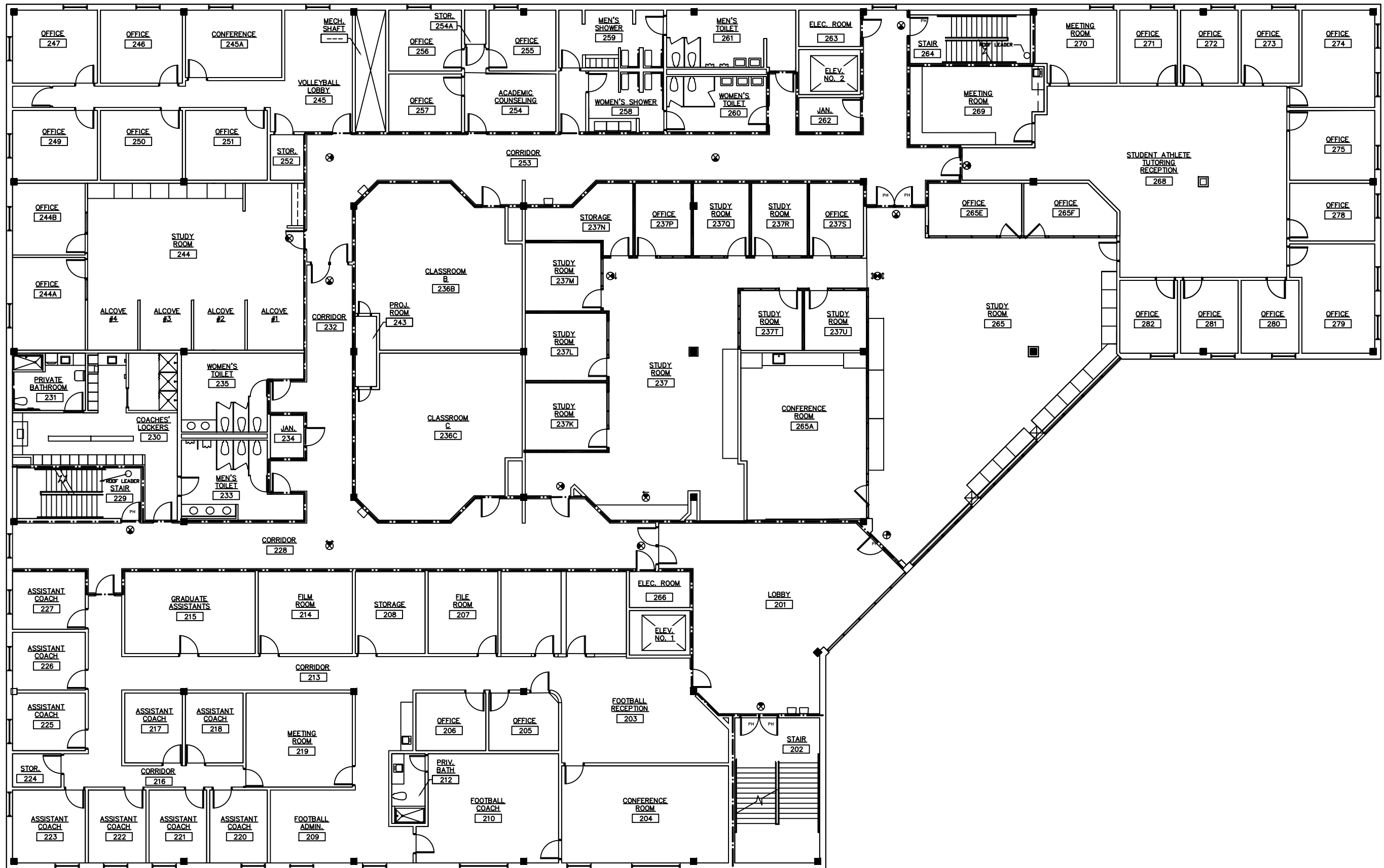
MECHANICAL  
ROOM

001



WARD SPORTS MEDICINE  
 FIRST FLOOR PLAN COMPOSITE  
 SCALE: 1/8" = 1'-0"      UPDATE: 03-16-2020





WARD SPORTS MEDICINE  
 SECOND FLOOR PLAN COMPOSITE  
 SCALE: UPDATE:



# FACILITY CONDITION ASSESSMENT

## **SECTION 6**

### PHOTOGRAPHS





097001a 1/24/2023  
Brick and stone exterior with glazing  
Front facade



097001e 1/25/2023  
Therapy spa  
Hydrotherapy 131



097002a 1/24/2023  
Modified bitumen roof  
Roof



097002e 1/25/2023  
Spa pool equipment  
Pump room 134



097003a 1/24/2023  
Modified bitumen roof  
Roof



097003e 1/25/2023  
Original recessed exterior light fixtures  
North elevation



097004a 1/24/2023  
Modified bitumen roof  
Roof



097004e 1/25/2023  
Elevator identification placard  
Elevator A cab



097005a 1/24/2023  
Modified bitumen roof  
Roof



097005e 1/25/2023  
Elevator controls  
Elevator A cab



097006a 1/24/2023  
Modified bitumen roof  
Roof



097006e 1/25/2023  
Roof exhauster EF-2  
Roof





097007a 1/24/2023  
ACT, CMU, and carpet  
Corridor



097007e 1/25/2023  
Powered roof exhauster  
Roof



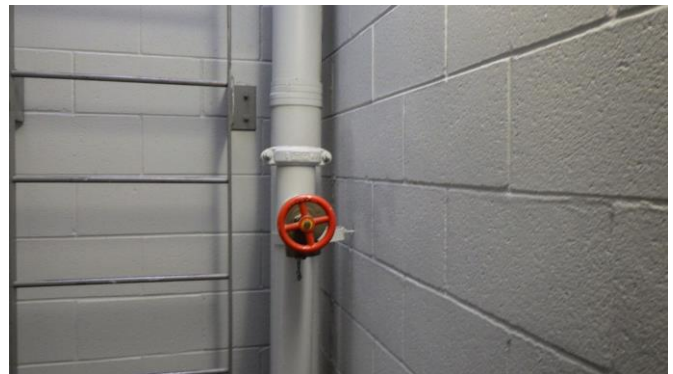
097008a 1/24/2023  
Tile walls and floor and countertop lavatories  
Restroom



097008e 1/25/2023  
Powered roof exhauster  
Roof



097009a 1/24/2023  
Tile walls and floor and water closet  
Restroom



097009e 1/25/2023  
Main fire riser  
Stair 326



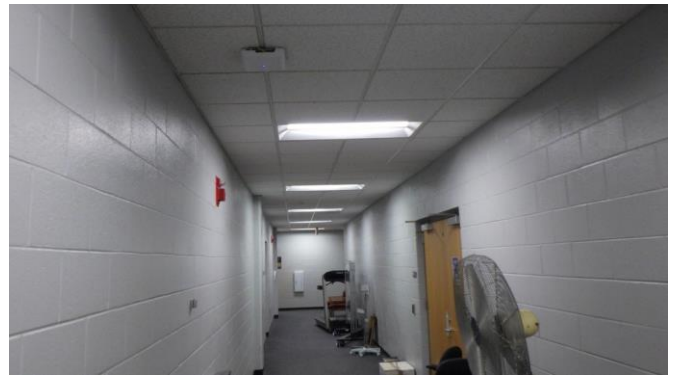
097010a 1/24/2023  
Tile walls and floor and urinals  
Restroom



097010e 1/25/2023  
Surface-mounted interior light fixture  
Stair 326



097011a 1/24/2023  
Single-level water fountain  
Corridor



097011e 1/25/2023  
Lay-in interior light fixtures  
Hall 330



097012a 1/24/2023  
ACT, finished wall, and carpet  
Office



097012e 1/25/2023  
Illuminated emergency exit sign  
Hall 330





097013a 1/24/2023  
ACT, finished wall, VCT, and casework with a sink  
Break room



097013e 1/25/2023  
Horn/strobe  
Hall 330



097014a 1/24/2023  
Tile walls and floor and shower fixtures  
Bathroom



097014e 1/25/2023  
Smoke/CO2 sensor  
Hall 330



097015a 1/24/2023  
Cast-iron utility sink  
Custodial closet



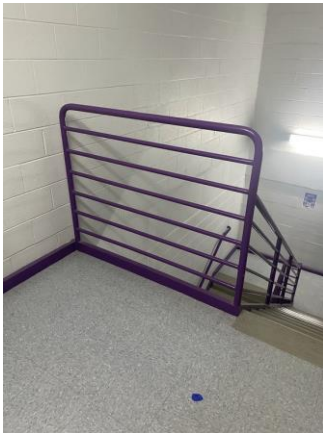
097015e 1/25/2023  
Central HVAC return air grill  
Hall 330



097016a 1/24/2023  
Unsealed penetrations  
Mechanical closet



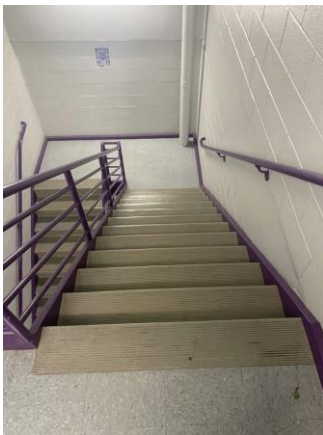
097016e 1/25/2023  
Air handler AHU-1 supply fan  
Mechanical 334



097017a 1/24/2023  
VCT landing, vinyl treads, painted CMU, and metal railing  
Stairwell



097017e 1/25/2023  
AHU-1 supply fan VFD  
Mechanical 334



097018a 1/24/2023  
VCT landing, vinyl treads, painted CMU, and metal railing  
Stairwell



097018e 1/25/2023  
AHU-1 return fan #1 VFD  
Mechanical 334



097019a 1/24/2023  
ACT, CMU, and carpet  
Office



097019e 1/25/2023  
AHU-1 return fan #2 VFD  
Mechanical 334



097020a 1/24/2023  
Fiberglass shower stall  
Bathroom



097020e 1/25/2023  
AHU-1 return fan #1  
Mechanical 334



097021a 1/24/2023  
Noncompliant phone in elevator panel  
Elevator

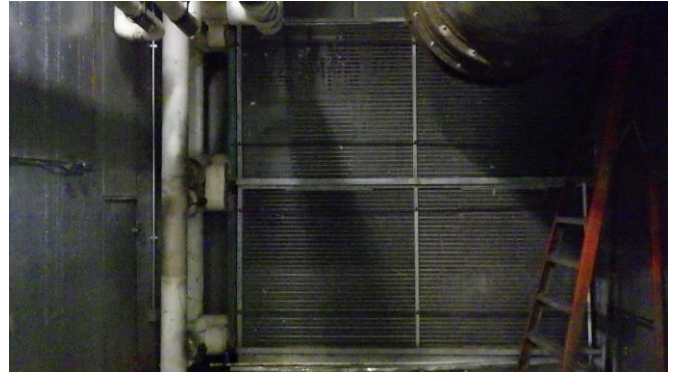


097021e 1/25/2023  
AHU-1 return fan #2  
Mechanical 334





097022a 1/24/2023  
ACT, finished wall, carpet, and wood and glass doors  
Hallway



097022e 1/25/2023  
AHU-1 cooling coil section  
Mechanical 334



097023a 1/24/2023  
Tile walls and floor and wall-hung lavatories  
Restroom



097023e 1/25/2023  
HVAC pneumatics control panel  
Mechanical 334



097024a 1/24/2023  
Panel ceiling, finished walls, and fixed seating  
Classroom



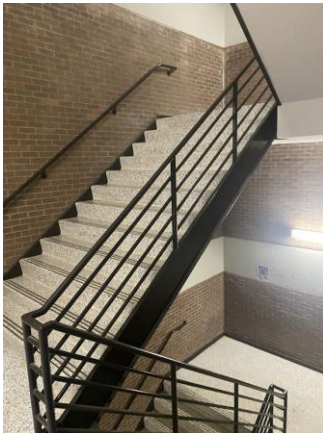
097024e 1/25/2023  
HVAC DDC control panel  
Mechanical 334



097025a 1/24/2023  
ACT, finished walls, carpet, and lockers  
Locker Room



097025e 1/25/2023  
AHU-1 filter section  
Mechanical 334



097026a 1/24/2023  
Terrazzo treads and landings and metal railings  
Stairwell



097026e 1/25/2023  
Original temperature sensor/thermostat  
Men's restroom 337



097027a 1/24/2023  
Terrazzo treads and landings and metal railings  
Stairwell



097027e 1/25/2023  
Normal electrical outlet (no GFCI)  
Men's restroom 337



097028a 1/24/2023  
Terrazzo landing, metal railings, and under stair clearance  
Stairwell



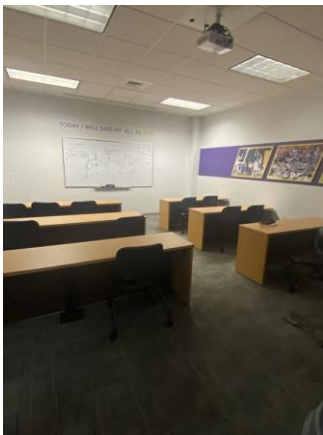
097028e 1/25/2023  
Central HVAC distribution grill  
Men's restroom 337



097029a 1/24/2023  
ACT, finished walls, carpet, and fixed seating  
Classroom



097029e 1/25/2023  
Central HVAC return air grill  
Men's restroom 337

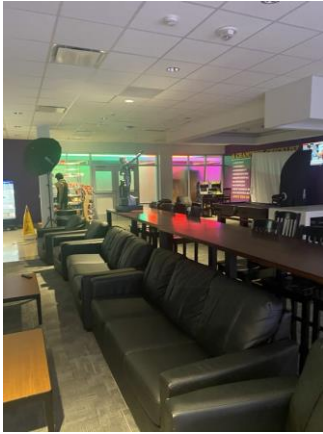


097030a 1/24/2023  
ACT, finished walls, and carpet  
Classroom



097030e 1/25/2023  
VAV box label  
Men's restroom 337





097031a 1/24/2023  
ACT, finished walls, and carpet  
Lounge



097031e 1/25/2023  
Manual pull station  
Hall 333



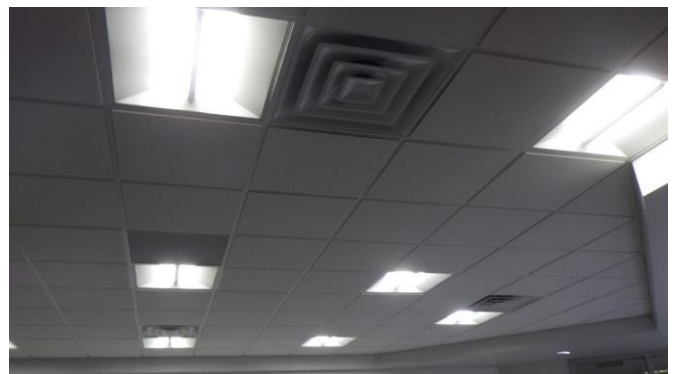
097032a 1/24/2023  
ACT, finished walls, carpet, and lockers  
Locker Room



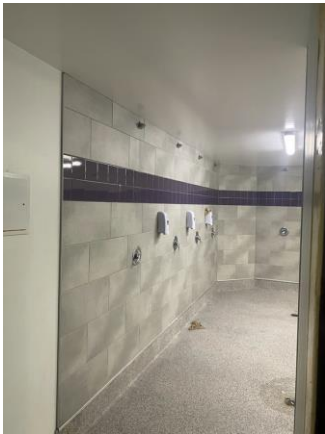
097032e 1/25/2023  
Secondary electrical distribution panels  
Electrical 340



097033a 1/24/2023  
Tile walls and floor and accessible water closet  
Restroom



097033e 1/25/2023  
Upgrade LED interior light fixtures  
Reception 203



097034a 1/24/2023  
Finished ceiling, tile walls, epoxy flooring, and shower  
Bathroom



097034e 1/25/2023  
Upgrade LED interior light fixtures  
Study room 237



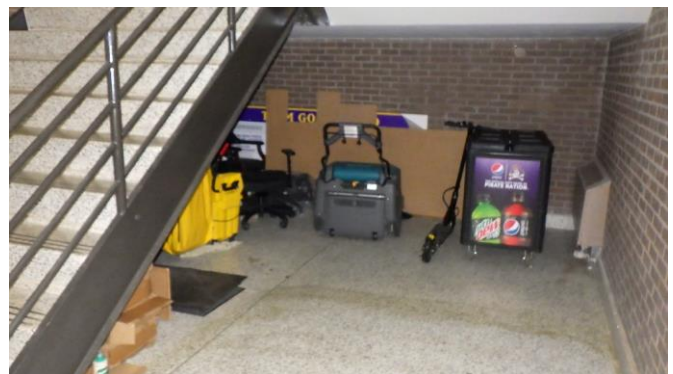
097035a 1/24/2023  
Overhead roll up window  
Equipment room



097035e 1/25/2023  
Upgraded emergency exit sign  
Study room 237



097036a 1/24/2023  
Hydrotherapy pool  
Training room



097036e 1/25/2023  
Storage under stair - nonsprinkled area  
Stair X102





097037a 1/24/2023  
Brick and stone exterior with glazing  
Exterior



097037e 1/25/2023  
Main fire alarm control panel  
Lobby 101



097038a 1/24/2023  
Brick and stone exterior  
Exterior



097038e 1/25/2023  
New boiler exhaust and original central plant utility  
entrances  
West elevation, mechanical basement



097039a 1/24/2023  
Brick and stone exterior with glazing  
Exterior



097039e 1/25/2023  
Original steam utility entrance (being replaced during  
inspection)  
Mechanical 02



097040a 1/24/2023  
Brick and stone exterior with glazing  
Exterior



097040e 1/25/2023  
Heating hot water electric motor driven pump  
Mechanical 02



097041a 1/24/2023  
Brick and stone exterior with glazing  
Exterior



097041e 1/25/2023  
New high efficiency natural gas heating hot water boiler  
Mechanical 02



097042a 1/24/2023  
Brick and stone exterior, hollow-metal door, and ramp  
Exterior



097042e 1/25/2023  
HVAC expansion tank  
Mechanical 02





097043a 1/24/2023  
Storefront door with power-operated assistance  
Entrance



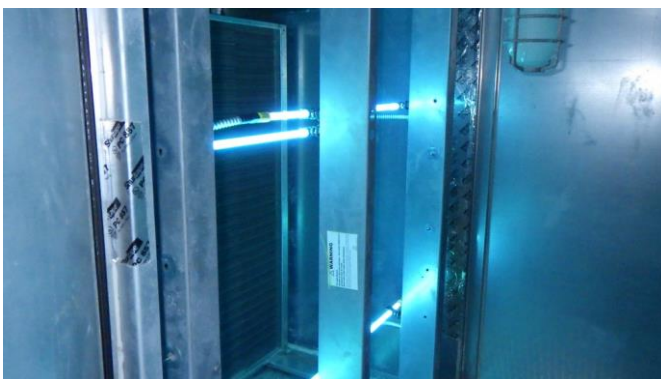
097043e 1/25/2023  
Original HVAC storage tanks  
Mechanical 02



097044e 1/25/2023  
Indoor AHU-1  
Mechanical 02



097045e 1/25/2023  
Hot water and chiller water piping to AHU -1 coil sections  
Mechanical 02



097046e 1/25/2023  
Ultraviolet filtration in AHU-1  
Mechanical 02



097047e 1/25/2023  
New tankless domestic hot water heater rack (4 units)  
Mechanical 02



097048e 1/25/2023  
HVAC controls air compressor  
Mechanical 02



097049e 1/25/2023  
Domestic water backflow preventers  
Mechanical 02



097050e 1/25/2023  
Abandoned domestic water pump  
Mechanical 02



097051e 1/25/2023  
New HVAC expansion tank  
Mechanical 02



097052e 1/25/2023  
VFDs for AHU-1 RF, SF, and HHWP  
Mechanical 02



097053e 1/25/2023  
HHW pump VFDs 2B and 3A  
Mechanical 02





097054e 1/25/2023  
CHW pump VFDs  
Mechanical 02



097055e 1/25/2023  
HVAC DDC control panel  
Mechanical 02



097056e 1/25/2023  
Chilled water pumps 2A and 2B  
Mechanical 02



097057e 1/25/2023  
HVAC controls panel (older generation)  
Mechanical 02



097058e 1/25/2023  
HVAC DDC control panel (older generation)  
Mechanical 02



097059e 1/25/2023  
HVAC DDC control panels  
Mechanical 02



097060e 1/25/2023  
Domestic water boiler exhaust network  
Mechanical 02



097061e 1/25/2023  
Primary electrical transformer  
South elevation



097062e 1/25/2023  
Primary electrical transformer cooling fins  
South elevation



097063e 1/25/2023  
LED exterior wall pack light fixture  
South elevation



097064e 1/25/2023  
Main electrical distribution switchboard  
Electrical 03



097065e 1/25/2023  
Emergency power ATS#1  
Electrical 03





097066e 1/25/2023  
Emergency power ATS#2  
Electrical 03



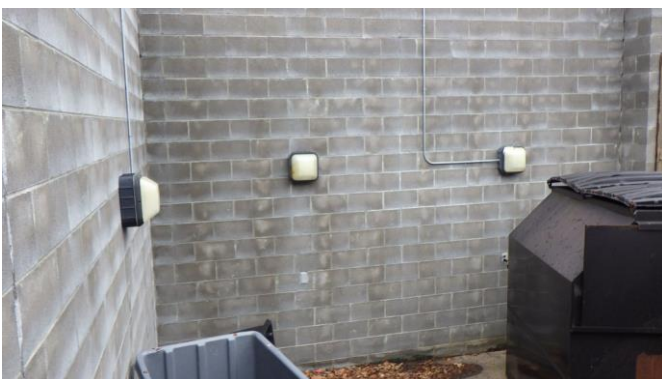
097067e 1/25/2023  
Diesel fuel emergency power generator  
South elevation, emergency generator building



097068e 1/25/2023  
Diesel fuel emergency power generator  
South elevation, emergency generator building



097069e 1/25/2023  
Diesel fuel day tank under emergency generator  
South elevation, emergency generator building



097070e 1/25/2023  
HID exterior wall pack light fixture  
South elevation, emergency generator building



097071e 1/25/2023  
HID exterior wall pack light fixture  
South elevation, lawn maintenance building



097072e 1/25/2023  
Surface mounted interior light fixture  
South elevation, lawn maintenance building



097073e 1/25/2023  
LED and HID exterior wall pack light fixtures  
South elevation



097074e 1/25/2023  
Natural gas supply meter  
South elevation



097075e 1/25/2023  
Primary electrical distribution network high voltage switch  
East elevation



FACILITY CONDITION ASSESSMENT

**SECTION 7**

PRELIMINARY ENERGY  
ASSESSMENT



## INTRODUCTION

A Preliminary Energy Assessment (PEA) was conducted to identify energy conservation opportunities. The PEA is intended to be a preliminary energy screening only. The goal is to identify potential energy savings opportunities in a building. It is not equivalent to an American Society of Heating, Refrigeration, or Air Conditioning Engineers (ASHRAE) Level 1, 2, or 3 audit. The PEA has two sections: 1) Benchmarking Data and 2) Energy Conservation Opportunities. Basic building information is provided in **Table 1**.

TABLE 1. BUILDING INFORMATION	
Client	East Carolina University
Asset Number	097
Asset Name	Ward Sports Medicine
Year Built or Last Energy Renovation	1989

## BENCHMARKING DATA

The purpose of benchmarking building performance is to determine how well a building performs in comparison to other similar buildings. For this analysis, buildings were assessed based on their primary use (e.g., education, food sales, food service, etc.) and year constructed. Two metrics -- energy use intensity and energy end use -- are presented for the building manager to use to assess how efficiently the building performs compared to similar buildings.

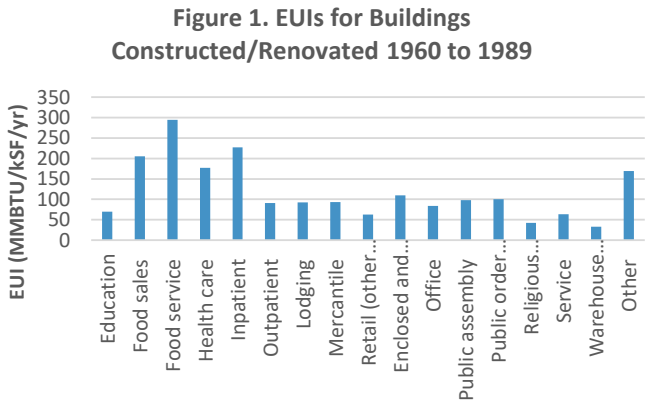
### Metric #1: Energy Use Intensity (EUI)

EUI is a measure of energy consumption per square foot of building space per year. The units of measurement are million British thermal units per thousand square foot per year (MMBTU/kSF/yr). The US-DOE EUI can be compared to the actual EUI of the client building to determine how efficient the building is compared to other similar buildings. A building manager can calculate EUI by summing total energy consumption per year (in MMBTU/yr) and dividing it by the building area (in kSF). Benchmarking data from the U.S. Energy Information Administration (EIA) Commercial Building Energy Consumption Survey (CBECS) database was used for this analysis.

Basic information about the building use and the time of the most recent major HVAC or lighting upgrade is provided in **Table 2**. That information is used to determine the Benchmark EUI. The building manager can calculate the Building EUI and compare it to the Benchmark EUI to determine how building efficiency compares to similar buildings (see **Table 3**). In addition, **Figure 1** shows the EUIs of various building types for further comparison.

TABLE 2. BUILDING DETAILS	
FCA Building Type	Classroom
Energy Information Administration Equivalent Building Type	Education
Range of Years Constructed/Last Major Energy Renovation	1960 to 1989
<b>Benchmark EUI (MMBTU/kSF/yr) =</b>	<b>70.1</b>
<b>Building EUI to be Calculated by Client (MMBTU/kSF/yr) =</b>	

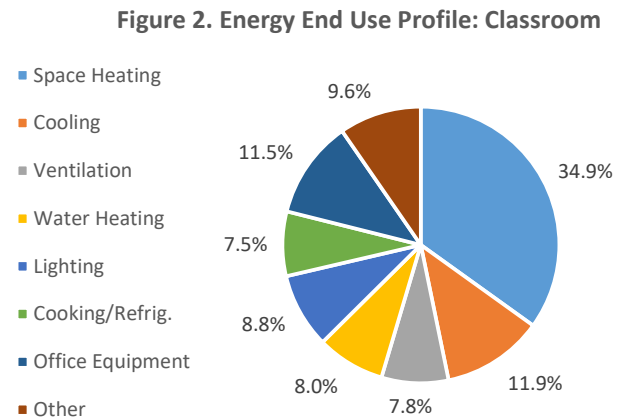
TABLE 3. EUI COMPARISON	
<b>Very Energy Efficient</b> (consumes more than 30% less energy)	EUI < 49.1
<b>Energy Efficient</b> (consumes 10% to 30% less energy)	49.1 <= EUI <= 63.1
<b>Similar</b> (consumes within 10% less or 10% more energy)	63.1 < EUI < 77.1
<b>Energy Inefficient</b> (consumes 10% to 30% more energy)	77.1 <= EUI <= 91.1
<b>Very Energy Inefficient</b> (consumes more than 30% more energy)	EUI > 91.1



### Metric #2: Energy End Use

Energy end use data characterizes how energy is used by profiling energy consumption into end use categories such as space heating, cooling, ventilation, lighting, etc. When energy end use data is presented in a pie chart, high energy-consuming activities are readily identified. A building manager can determine the energy end use profile for a building by analyzing trend data from a Building Automation System and/or Energy Management Control System.

TABLE 4. ENERGY END USE PROFILE: CLASSROOM	
Space Heating	34.9%
Cooling	11.9%
Ventilation	7.8%
Water Heating	8.0%
Lighting	8.8%
Cooking/Refrig.	7.5%
Office Equipment	11.5%
Other	9.6%
Total	100.0%



References:

1. U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy. "Technologies and Products by Category." Efficient Technologies and Products for Federal Facilities. DOE. <http://energy.gov/eere/femp/efficient-technologies-and-products-federal-facilities>. Accessed: June 2016.
2. U.S. Energy Information Administration [EIA]. "2012 CBECS Survey Data." Commercial Building Energy Consumption Survey. EIA. <http://www.eia.gov/consumption/commercial/data/2012/index.cfm?view=consumption#c1-c12>, Accessed: June 2016.

## ENERGY CONSERVATION OPPORTUNITIES

This section presents energy conservation measures (ECMs) recommended for further investigation. Recommended ECMs are categorized into one or more cost categories to indicate an approximate level of resources required to implement the ECM. These cost categories are:

**Operation and Maintenance Measures (O&M):** O&M actions usually (a) can be completed by in-house maintenance personnel and (b) result in an immediate return on investment.

**Low-Cost/No-Cost Measures (LC/NC):** LC/NC measures typically (a) can be done by in-house personnel, (b) require little to no investment cost, and (c) result in significant energy savings. In other words, LC/NC measures typically have a quick payback period (less than one year).

**Capital Improvement Measures (CAP):** CAP measures are major capital investments that usually require significant time (i.e., approximately six months to three years) for planning, design, and implementation. Oftentimes, a request for proposal, design/bid/build (D/B/B), and/or design/build (D/B) package is required. The return on investment for CAP projects ranges significantly, varying from a payback period from one to twenty plus years.

ECM CATEGORY	ECM RECOMMENDED FOR FURTHER CONSIDERATION	COST CATEGORY
Lighting - Interior	INSTALL EFFICIENT LIGHTING FIXTURES. While incandescent lamp fixtures have a low initial cost, the lamps are energy inefficient and have a short useful life. Consider CFL and LED lighting instead. HID lamps are necessary in some applications; however, alternatives such as high bay, T5 lighting fixtures or LED fixtures should be considered as an alternate. T12 lamps are an outdated lighting technology that should be replaced with newer technologies such as T8, T5, or LED lamp fixtures.	N/A, Varies
Lighting - Interior, Controls	INSTALL LIGHTING CONTROLS. Oftentimes, lighting fixtures on switches do not get turned off when a space is unoccupied. Occupancy sensors, photocell sensors, and lighting control systems can help reduce lighting energy consumption. For example, consider installing occupancy sensors in offices, common areas, and other areas that have variable occupancy. In areas where there is natural lighting, consider using photocell sensors to dim or shut off fixtures that aren't needed. Alternatively, install a comprehensive light control system that uses time clock schedules, occupancy sensors, photocell sensors, etc., to monitor and control lighting throughout an entire building.	N/A, Varies
Lighting - Exterior, Controls	INSTALL LIGHTING CONTROLS. Consider using photocell sensors or timeclocks to shut off building/parking lot fixtures during daylight hours.	N/A, Varies
HVAC - BAS	INSTALL A BAS. Consider installing a BAS so that there is autonomous control of the building HVAC systems.	CAP
HVAC - EMCS	CONNECT BAS TO EMCS. Consider connecting the BAS to a central EMCS so that the system can be monitored and controlled at a central location.	CAP
HVAC - Building Comfort/Tuning	CONDUCT RETROCOMMISSIONING (RCX). RCx the building to identify and address operating deficiencies, optimize HVAC operations, reduce energy bills, and improve occupant comfort.	CAP

