

# EAST CAROLINA UNIVERSITY

## JOYNER LIBRARY

ASSET CODE: JOYN

FACILITY CONDITION ANALYSIS

DECEMBER 22, 2009





EAST CAROLINA UNIVERSITY  
Facility Condition Analysis

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# FACILITY CONDITION ANALYSIS

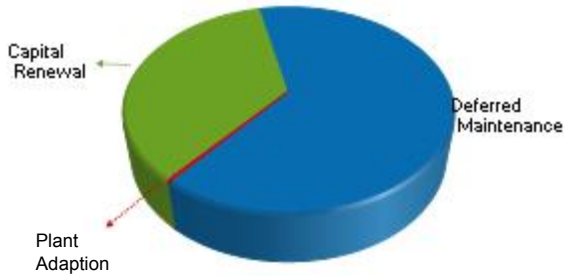
## SECTION 1

### GENERAL ASSET INFORMATION



## EXECUTIVE SUMMARY - JOYNER LIBRARY

### PROJECT COSTS BY CLASSIFICATION



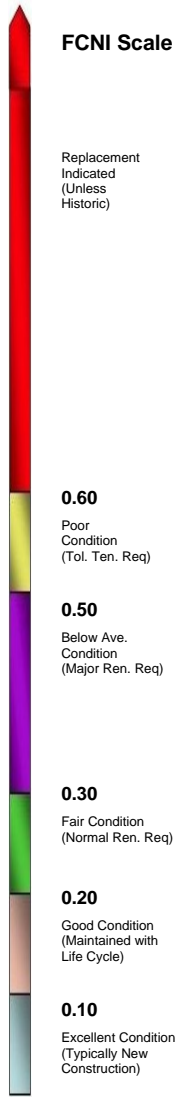
**Building Code:** JOYN  
**Building Name:** JOYNER LIBRARY  
**Year Built:** 1956  
**Building Use:** Library  
**Square Feet:** 280,575

### Project Costs by Priority

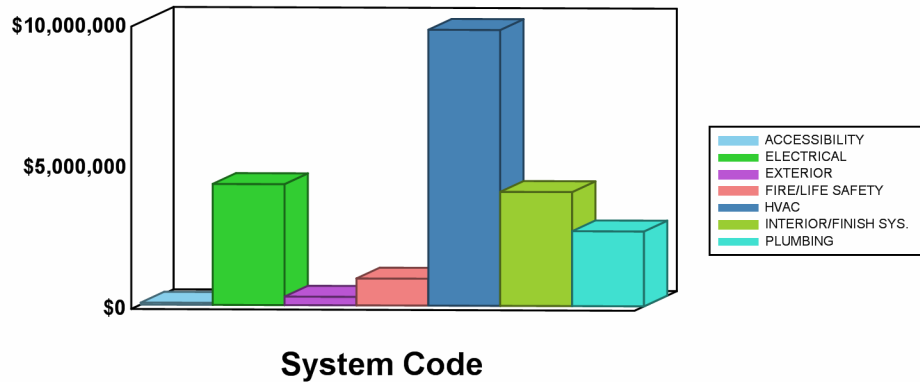
Priority 1:	\$0
Priority 2:	\$0
Priority 3:	\$14,906,432
Priority 4:	\$7,119,808
<b>Total Project Costs:</b>	<b>\$22,026,240</b>

**Facility Replacement Cost: \$114,754,000**

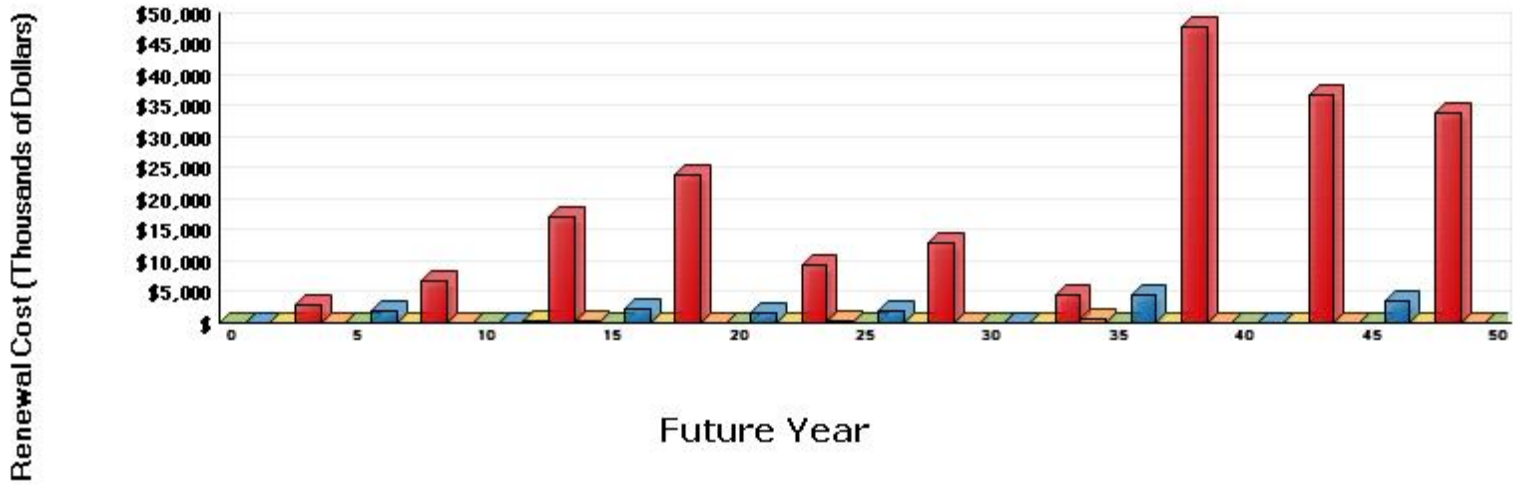
**Facility Condition Needs Index (FCNI): 0.19**  
 (Project Costs / Replacement Cost)



### PROJECT COSTS BY SYSTEM CODE



### LIFE CYCLE MODEL EXPENDITURE PROJECTIONS



**Average Annual Renewal Cost Per SqFt \$6.27**





## B. ASSET SUMMARY

Joyner Library is located on the campus of East Carolina University in Greenville, North Carolina. Originally constructed in phases from the 1950s through the 1990s, this International Style facility includes four stories above grade and a full basement. The 1996 addition has a drum shaped section. The building is constructed on a reinforced concrete basement foundation. Totalling 280,575 gross square feet, the facility is predominately utilized as library space and also includes study areas and offices.

Information for this report was gathered during a site visit conducted on September 3, 2009.

### SITE

The building sits on a flat parcel of land. Landscaping consists of ornamental planting beds, shrubbery, specimen trees, and areas of turf. Vehicular access is from the south via Glenn Way. The building is served by a parking lot south of the structure and a sidewalk system that serves all entrances. The site is in overall good condition and does not require anything more than routine maintenance.

### EXTERIOR STRUCTURE

The flat roof is covered with an unballasted single-ply system that is not expected to outlast the scope of this analysis. Future budget modeling should include a provision for the replacement of all failing roofing systems. Replace this roof with a similar application.

The exterior closure consists of brick with precast concrete window panels and cast-in-place concrete fascia. While the brick and concrete are fundamentally sound, exposure to the elements has caused some deterioration of the mortar joints and expansion joints. Cleaning, surface preparation, selective repairs, and applied finish or penetrating sealant upgrades are recommended to restore the aesthetics and integrity of the building envelope.

The aluminum frame window systems have thermal pane glazing and are in good condition. The main building entrance has metal-frame glazed doors, while the secondary entrances have hollow metal service doors. The exterior doors are in overall good condition. No window or door upgrades are recommended at this time.

### INTERIOR FINISHES / SYSTEMS

The wall finishes are generally painted sheetrock and in fair condition, with minor damage and finish discoloration. The ceiling systems are a combination of painted sheetrock and suspended, acoustical tile systems. They are also fair condition, with minor areas of damaged tile and discoloration. Floor finishes are typically carpet, vinyl tile, or ceramic tile, and are not expected to outlast the scope of this assessment. Floor, wall, and ceiling finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

The condition of the interior door systems is such that door system replacements are recommended as part of a comprehensive renovation effort. Complete demolition of the door systems and replacement according to a code compliant plan to properly protect egress passages is recommended.

## ACCESSIBILITY

Compliant parking spaces in south lot connect to curb cuts and a sidewalk system serving all entrances. The south entrance is wheelchair accessible and leads to one of three ADA compliant elevator systems serving all floors. There are men's and women's restrooms on each floor that are fully ADA compliant. There is also a dual level drinking fountain on each floor, excluding the single level fountains in the children's section. Interior doors are equipped with lever hardware and appropriate pictorial and Braille signage. However, several upgrades are recommended to enhance building accessibility.

Building entrances are required to be handicapped accessible. There are exterior railing systems that do not meet current ADA requirements. To comply with the intent of this legislation, it is recommended that compliant painted metal handrails be installed at all entrances as required.

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

## HEALTH

Based on the age of the original section of this facility, it is likely that lead paint or asbestos-containing materials were used in the original construction, although no physical testing or sampling was performed. However, no lead paint or suspected asbestos was observed during the inspection. The lead paint and asbestos health risks are extremely minimal, but workers during any and all remodeling should be made aware of the potential hazards of working with such materials. There were no reports or evidence of pest or insect infestations.

## FIRE / LIFE SAFETY

There are eight stair towers in the building. In the 1996 addition, the two stair towers serving floors one through four have deficient freestanding railing systems. The metal handrails and guardrails at the various interior stairs do not comply with current handrail and guardrail design standards. Handrails are not the required profile, and newel posts interrupt the switchback stair gripping surfaces. The guardrails typically have openings within the fill area that do not comply with the 4 inch sphere test. Also, upper horizontal landing guardrails are not 42 inches high, and the stair walls do not all have rails. Retrofit new guardrails and handrails in each of the stair segments as appropriate to resolve the design discrepancies.

This facility is protected by a central fire alarm system. The point addressable panel was manufactured by Simplex and is located in mechanical room B901. The devices that serve this system include manual pull stations, audible / visible devices, and smoke detectors. The fire alarm system is approaching the end of its intended life cycle and will require replacement within the scope of this analysis.

This facility is protected by a comprehensive, automatic, dry-pipe fire suppression system with glass bulb-type sprinkler heads. The statistical life cycle for a sprinkler head is approximately twenty years. During this time, scale can accumulate inside the head and cause it to malfunction when needed. It is recommended that the aging sprinkler heads be replaced to ensure that proper protection is available.

The fire suppression is also supported by a 500 gpm fire pump that was installed in 1976. Due to the age of the pump, there is a high probability of a malfunction within the next ten years. Failure of the fire pump during an emergency will affect the performance of the fire sprinkler system. Replace the fire pump assembly, including fire pump, electric motor, controls, valves, piping, and all connections.

Exit signs are illuminated with fluorescent lamps and are connected to the emergency power network. Emergency lighting is available through unitary fixtures also connected to the existing emergency power network. Replace the existing exit signage throughout the building, and install new exit signs as needed. The new units should be connected to the existing emergency power network. LED type exit signs are recommended, because they are energy efficient and require minimal maintenance.

## HVAC

This facility is on the campus steam loop. Hot water is circulated as the heating medium. Two local water-cooled chillers generate chilled water for building cooling. These Trane units have a capacity of 178 tons and 372 tons and are in good condition. With proper maintenance, they will outlast the purview of this analysis. Heat rejection is handled by cooling towers located on the east side of Joyner East. The evaluation and recommendations for these cooling towers are included in the Joyner East report.

Approximately 46 percent of this facility is served by an aging forced-air HVAC system with multizone air handling units that have hot water heating coils and chilled water cooling coils. Humidification systems serve the interior spaces. The air distribution network furnishes constant volume air to the occupied spaces. The controls for this system are a hybrid configuration with pneumatic temperature controls and direct digital utility modulation and monitoring. The direct digital controls were manufactured by Environmental. The components of this portion of the HVAC system have aged beyond their statistical life cycles, and the system is inefficient compared to modern standards. It is recommended that this portion be renovated.

The remaining 54 percent of this facility is served by a thirteen-year-old forced-air HVAC system with multizone air handling units that have hot water heating coils and chilled water cooling coils. The ventilation system delivers 100 percent outside air to all interior areas. Humidification systems serve the interior spaces. The air distribution network furnishes constant volume air to the occupied spaces. The controls for this system are a hybrid configuration with pneumatic temperature controls and direct digital utility modulation and monitoring. The direct digital controls were manufactured by Environmental. The components of this portion of the HVAC system are in good condition. With diligent maintenance, they will outlast the scope of this report.

## ELECTRICAL

Power is supplied to this facility at 12,470 volts. An oil-filled, S&C brand transformer rated for 4,000 kVA service steps the incoming power down to 277/480 volts, which is distributed by a main lug only Square D switchgear labeled MSB1 and rated for 2,000 amp service. A secondary Square D transformer rated for

225 kVA service steps the power down to 120/208 volts. Square D switchgear rated for 600 amps distributes the 120/208 volt power. All of the main electrical distribution system components are serviceable and will likely remain so throughout the scope of this report. The emergency power generator for this facility is located on the east side of Joyner East. The evaluation and recommendations for this generator is included in the Joyner East building report.

A portion of this facility is also served by a separate 12,470 volt electrical service feed. An S&C, oil-filled, 4,000 kVA transformer steps this power down to 277/480 volts, which is distributed by a Square D main breaker switchgear labeled MSB2 and rated for 2,500 amp service. A secondary Square D transformer rated for 112.5 kVA service steps the power down to 120/208 volts, which is distributed by a 300 amp Square D switchgear. All of the main electrical distribution system components are serviceable, and will likely remain so throughout the scope of this report.

The electrical distribution network supplied by MSB1 and MSB2 is a dual voltage configuration. 277/480 volt power is distributed to branch transformers that step the power down to 120/208 volts. The lighting and major mechanical systems are supported by the 277/480 volt circuit. The panels were manufactured predominantly by Square D. It should be anticipated that the electrical distribution network will require comprehensive, minor repairs within the scope of this report. Such remedies include, but are not limited to, installing additional circuits, replacing worn switches and receptacles, replacing circuit breakers, and updating panel directories.

The oldest portion of this facility is served by a separate circuit fed from the MSB2 switchgear. The 277/480 volt power is distributed by the original Square D switchgear rated for 1,600 amp service. The electrical distribution network in this older section is a dual voltage configuration. 277/480 volt power is distributed to branch transformers that step the power down to 120/208 volts. The lighting and major mechanical systems are supported by the 277/480 volt circuit. The panels were manufactured predominantly by General Electric. The electrical devices in this portion of the facility are aged and visibly worn, and the system is undersized to support the current needs of the occupants. It should be anticipated that the electrical distribution network will no longer be able to support normal loads and expansion. Replace this network within the scope of this analysis.

The interior is illuminated by fixtures that utilize compact and T8 fluorescent lamps. Most of the fluorescent lighting fixtures are recessed, compact applications. Occupancy sensors have been incorporated into the lighting systems. The lighting system is currently sufficient, but it should be anticipated that it will require replacement within the scope of this analysis. Specify energy-efficient fixtures, and expand the usage of occupancy sensor controls.

The exterior areas adjacent to the building are illuminated by building-mounted HID, compact fluorescent, and stanchion-mounted fixtures that are currently in good condition. However, their replacement should be scheduled within the next ten years due to predictable wear. Install new energy-efficient fixtures, and place them on photocell activation.

## PLUMBING

Potable water for the older portion of this facility is supplied through a copper piping network. The drain piping is of cast-iron, bell-and-spigot construction with copper run-outs. The supply and drain piping networks are aged and should be replaced. Failure to perform these renovations will likely lead to leaks, drainage issues, and other issues that will require costly maintenance.

Potable water for the newer portion of this facility is distributed via a copper piping network. Sanitary waste and stormwater piping is of cast-iron, bell-and-spigot construction with copper run-outs. These supply and drain piping networks are adequate and in good condition. They will likely provide reliable service throughout the scope of this analysis.

Domestic water is heated by heat exchangers that utilize steam. These units have served beyond their expected life cycles. Insulation is worn, and there is evidence of leakage. It is recommended that they be replaced.

Duplex sump pumps and sewage ejectors facilitate the drainage of stormwater and sanitary waste from this facility. These systems are currently serviceable. However, it should be anticipated that they will require replacement within the purview of this analysis.

#### VERTICAL TRANSPORTATION

The University commissioned an outside contractor to perform an elevator condition study in 2009. The aforementioned study did not identify any deficiencies requiring capital funding.

Note: The deficiencies outlined in this report were noted from a visual inspection. ISES engineers and architects developed projects with related costs that are needed over the next ten-year period to bring the facility to "like-new" condition. The costs developed do not represent the cost of a complete facility renovation. Soft costs not represented in this report include telecommunications, 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. However, existing fixed building components and systems were thoroughly inspected. The developed costs represent correcting existing deficiencies and anticipated life cycle failures (within a ten-year period) to bring the facility to modern standards without any anticipation of change to facility space layout or function. Please refer to Section Three of this report for recommended Specific Project Details.

### C. INSPECTION TEAM DATA

**DATE OF INSPECTION:** September 3, 2009

**INSPECTION TEAM PERSONNEL:**

<u>NAME</u>	<u>POSITION</u>	<u>SPECIALTY</u>
Thomas Ferguson, AIA, LEED® AP	Project Architect	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health
Rob Gasaway, Q.E.I.	Facility Analyst	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health
John Holder, Q.E.I.	Project Engineer	Mechanical / Electrical / Plumbing / Energy / Fire Safety / Life Safety / Health
Imelda Jordan	Project Engineer	Mechanical / Electrical / Plumbing / Energy / Fire Safety / Life Safety / Health
James Lewis	Project Engineer	Mechanical / Electrical / Plumbing / Energy / Fire Safety / Life Safety / Health
Carl Mason, PE, BSCP	Project Engineer	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health
Paul Southwell	Project Engineer	Mechanical / Electrical / Plumbing / Energy / Fire Safety / Life Safety / Health
Norm Teahan, RA, AIA, NCARB	Project Architect	Interior Finishes / Exterior / ADA- Handicapped Accessibility / Site / Fire Safety / Life Safety / Health

**FACILITY CONTACTS:**

<u>NAME</u>	<u>POSITION</u>
William Bagwell	Associate Vice Chancellor, Campus Operations

**REPORT DEVELOPMENT:**

Report Development by: ISES Corporation  
2165 West Park Court  
Suite N  
Stone Mountain, GA 30087

Contact: Kyle Thompson, Project Manager  
770-879-7376

## D. FACILITY CONDITION ANALYSIS - DEFINITIONS

The following information is a clarification of Asset Report Sections using example definitions.

### 1. REPORT DESCRIPTION

Section 1: Asset Executive Summary, Asset Summary, and General Report Information

Section 2: Detailed Project Summaries and Totals

- A. Detailed Project Totals – Matrix with FCNI Data and Associated Charts
- B. Detailed Projects by Priority Class / Priority Sequence
- C. Detailed Projects by Cost within range [ \$0 - < \$100,000 ]
- D. Detailed Projects by Cost within range [ ≥ \$100,000 - < \$500,000 ]
- E. Detailed Projects by Cost within range [ ≥ \$500,000 ]
- F. Detailed Projects by Project Classification
- G. Detailed Projects by Project Rating Type - Energy Conservation
- H. Detailed Projects by Category / System Code

FCNI = Facility Condition Needs Index, Total Cost vs. Replacement Cost. The FCNI provides a life cycle cost comparison. Facility replacement cost is based on replacement with current construction standards for 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.

$$\text{FCNI} = \frac{\text{Deferred Maintenance / Modernization} + \text{Capital Renewal} + \text{Plant Adaption}}{\text{Plant / Facility Replacement Cost}}$$

Section 3: Specific Project Details Illustrating Description / Cost

Section 4: Drawings with Iconography

The drawings for this facility are marked with ICONS (see legend), denoting the specific location(s) for each project. Within each ICON is the last four characters of the respective project number (e.g., 0001IS01 is marked on plan by IS01). There is one set of drawings marked with ICONS representing all priority classes (1, 2, 3, and 4).

Section 5: Life Cycle Model Summary and Projections

Section 6: Photographic Log

## 2. PROJECT CLASSIFICATION

- A. Plant / Program Adaption: Expenditures 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 changed teaching or research methods, and improvements occasioned by the adoption of modern technology (e.g., the use of personal computer networks).
- B. Deferred Maintenance: Refers to expenditures for repairs which were not accomplished as a part of normal maintenance or capital repair which have accumulated to the point that facility deterioration is evident and could impair the proper functioning of the facility. Costs estimated for deferred maintenance projects should include compliance with applicable codes, even if such compliance requires expenditures beyond those essential to affect the needed repairs. Deferred maintenance projects represent catch up expenses.
- C. Capital Renewal: A subset of regular or normal facility maintenance which refers to major repairs or the replacement / rebuilding of major facility components (e.g., roof replacement at the end of its normal useful life is capital repair; roof replacement several years after its normal useful life is deferred maintenance).

## 3. PROJECT SUBCLASS TYPE

- A. Energy Conservation: Projects with energy conservation opportunities, based on simple payback analysis.

## 4. PRIORITY SEQUENCE BY PRIORITY CLASS (Shown in Sections 2 and 3)

All projects are assigned both a Priority Sequence number and Priority Class number for categorizing and sorting projects based on criticality and recommended execution order.

Example:

	<u>PRIORITY CLASS 1</u>	
CODE	PROJECT NO.	PRIORITY SEQUENCE
HV2C	0001HV04	01
PL1D	0001PL02	02

	<u>PRIORITY CLASS 2</u>	
CODE	PROJECT NO.	PRIORITY SEQUENCE
IS1E	0001IS06	03
EL4C	0001EL03	04



## 5. PRIORITY CLASS (Shown in Sections 2 and 3)

### PRIORITY 1 - Currently Critical (Immediate)

Projects in this category require immediate action to:

- a. return a facility to normal operation
- b. stop accelerated deterioration
- c. correct a cited safety hazard

### PRIORITY 2 - Potentially Critical (Year One)

Projects in this category, if not corrected expeditiously, will become critical within a year. Situations in this category include:

- a. intermittent interruptions
- b. rapid deterioration
- c. potential safety hazards

### PRIORITY 3 - Necessary - Not Yet Critical (Years Two to Five)

Projects in this category include conditions requiring appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further.

### PRIORITY 4 - Recommended (Years Six to Ten)

Projects in this category include items that represent a sensible improvement to existing conditions. These items are not required for the most basic function of a facility; however, Priority 4 projects will either improve overall usability and / or reduce long-term maintenance.

## 6. COST SUMMARIES AND TOTALS

The cost summaries and totals are illustrated by Detailed Projects sorted in multiple formats (shown in Sections 2 and 3).

City Index material / labor cost factors: (shown in Sections 2 and 3)

Cost factors are based on the Greenville City Index and are adjusted for material and labor cost factors (2009). Refer to the project related labor report found later in this section.

#### Global Markup Percentages

#### R.S. MEANS

Local Labor Index:	51.3 %	of National Average
Local Materials Index:	100.7 %	of National average
General Contractor Markup:	20.0 %	Contractor profit & overhead, bonds & insurance
Professional Fees:	16.0 %	Arch. / Eng. Firm design fees and in-house design cost

**7. PROJECT NUMBER** (Shown in Sections 2 and 3)

Example:

Project Number = 0001-EL-04 (unique for each independent project)

- 0001 - Building Identification Number
- EL - System Code, EL represents Electrical
- 04 - Sequential Assignment Project Number by Category / System

**8. PHOTO NUMBER** (Shown in Section 6)

A code shown on the Photographic Log identifies the building number, photo sequence, and architect, engineer, or vertical transportation.

Example: 0001006e

<u>Building Number</u>	<u>Photo Sequence</u>	<u>Arch / Eng / VT</u>
0001	006	e

**9. LIFE CYCLE COST MODEL DESCRIPTION AND DEFINITIONS** (Shown in Section 5)

Included in this report is a Life Cycle Cost Model. This model consists of two elements, one is the component listing (starting on page 5.1.1) and the other is the Life Cycle Cost Projections Graph (page 5.2.1). The component list is a summary of all major systems and components within the facility. Each indicated component has the following associated information:

Uniformat Code	This is the standard Uniformat Code that applies to the component
Component Description	This line item describes the individual component
Qty	The quantity of the listed component
Units	The unit of measure associated with the quantity
Unit Cost	The cost to replace each individual component unit (This cost is in today's dollars)
Total Cost	Unit cost multiplied by Quantity, also in today's dollars. Note that this is a one time renewal / replacement cost
Install Date	Year that the component was installed. Where this data is not available, it defaults to the year the asset was constructed
Life Exp	Average life expectancy for each individual component

The component listing forms the basis for the Life Cycle Cost Projections Graph shown on page 5.2.1. This graph represents a projection over a fifty-year period (starting from the date the report is run) of expected component renewals based on each individual item's renewal cost and life span. Some components might require renewal several times within the fifty-year model, while others might not occur at all. Each individual component is assigned a renewal year based on life cycles, and the costs for each item are inflated forward to the appropriate year. The vertical bars shown on the graph represent the accumulated (and inflated) total costs for each individual year. At the bottom of the graph, the average annual cost per gross square foot (\$/GSF) is shown for the facility. In this calculation, all costs are not inflated. This figure can be utilized to assess the adequacy of existing capital renewal and repair budgets.

**10. CATEGORY CODE** (Shown in Sections 2 and 3)

Refer to the following Category Code Report.

Example: Category Code = EL5A

EL = System Description  
5 = Component Description  
A = Element Description

**CATEGORY CODE**

AC1A - AC4B  
EL1A - EL8A  
ES1A - ES6E  
FS1A - FS6A  
HE1A - HE7A  
HV1A - HV8B  
IS1A - IS6D  
PL1A - PL5A  
SI1A - SI4A  
SS1A - SS7A  
VT1A - VT7A

**SYSTEM DESCRIPTION**

ACCESSIBILITY  
ELECTRICAL  
EXTERIOR STRUCTURE  
FIRE / LIFE SAFETY  
HEALTH  
HVAC  
INTERIOR FINISHES / SYSTEMS  
PLUMBING  
SITE  
SECURITY SYSTEMS  
VERTICAL TRANSPORTATION

CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
<b>SYSTEM DESCRIPTION: ACCESSIBILITY</b>			
AC1A	SITE	STAIR AND RAILINGS	Includes exterior stairs and railings which are not part of the building entrance points.
AC1B	SITE	RAMPS AND WALKS	Includes sidewalks, grade change ramps (except for a building entrance), curb ramps, etc.
AC1C	SITE	PARKING	Designated parking spaces including striping, signage, access aisles and ramps, etc.
AC1D	SITE	TACTILE WARNINGS	Raised tactile warnings located at traffic crossing and elevation changes.
AC2A	BUILDING ENTRY	GENERAL	Covers all aspects of entry into the building itself including ramps, lifts, doors and hardware, power operators, etc.
AC3A	INTERIOR PATH OF TRAVEL	LIFTS/RAMPS/ELEVATORS	Interior lifts, ramps and elevators designed to accommodate level changes inside a building. Includes both installation and retrofitting.
AC3B	INTERIOR PATH OF TRAVEL	STAIRS AND RAILINGS	Upgrades to interior stairs and handrails for accessibility reasons.
AC3C	INTERIOR PATH OF TRAVEL	DOORS AND HARDWARE	Accessibility upgrades to the interior doors including widening, replacing hardware power, assisted operators, etc.
AC3D	INTERIOR PATH OF TRAVEL	SIGNAGE	Interior building signage upgrades for compliance with ADA.
AC3E	INTERIOR PATH OF TRAVEL	RESTROOMS/BATHROOMS	Modifications to and installation of accessible public restrooms and bathrooms. Bathrooms, which are an integral part of residential suites, are catalogued under HC4A.
AC3F	INTERIOR PATH OF TRAVEL	DRINKING FOUNTAINS	Upgrading/replacing drinking fountains for reasons of accessibility.
AC3G	INTERIOR PATH OF TRAVEL	PHONES	Replacement/modification of public access telephones.
AC4A	GENERAL	FUNCTIONAL SPACE MODIFICATIONS	This category covers all necessary interior modifications necessary to make the services and functions of a building accessible. It includes installation of assistive listening systems, modification of living quarters, modifications to laboratory workstations, etc. Bathrooms, which are integral to efficiency suites, are catalogued here.
AC4B	GENERAL	OTHER	All accessibility issues not catalogued elsewhere.
<b>SYSTEM DESCRIPTION: ELECTRICAL</b>			
EL1A	INCOMING SERVICE	TRANSFORMER	Main building service transformer.
EL1B	INCOMING SERVICE	DISCONNECTS	Main building disconnect and switchgear.
EL1C	INCOMING SERVICE	FEEDERS	Incoming service feeders. Complete incoming service upgrades, including transformers, feeders, and main distribution panels are catalogued here.
EL1D	INCOMING SERVICE	METERING	Installation of meters to record consumption and/or demand.
EL2A	MAIN DISTRIBUTION PANELS	CONDITION UPGRADE	Main distribution upgrade due to deficiencies in condition.
EL2B	MAIN DISTRIBUTION PANELS	CAPACITY UPGRADE	Main distribution upgrades due to inadequate capacity.
EL3A	SECONDARY DISTRIBUTION	STEP DOWN TRANSFORMERS	Secondary distribution stepdown and isolation transformers.
EL3B	SECONDARY DISTRIBUTION	DISTRIBUTION NETWORK	Includes conduit, conductors, sub-distribution panels, switches, outlets, etc. Complete interior rewiring of a facility is catalogued here.
EL3C	SECONDARY DISTRIBUTION	MOTOR CONTROLLERS	Mechanical equipment motor starters and control centers.
EL4A	DEVICES AND FIXTURES	EXTERIOR LIGHTING	Exterior building lighting fixtures including supply conductors and conduit.
EL4B	DEVICES AND FIXTURES	INTERIOR LIGHTING	Interior lighting fixtures (also system wide emergency lighting) including supply conductors and conduits.
EL4C	DEVICES AND FIXTURES	LIGHTING CONTROLLERS	Motion sensors, photocell controllers, lighting contactors, etc.

CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
EL4D	DEVICES AND FIXTURES	GFCI PROTECTION	Ground fault protection including GFCI receptacles and breakers.
EL4E	DEVICES AND FIXTURES	LIGHTNING PROTECTION	Lightning arrestation systems including air terminals and grounding conductors.
EL5A	EMERGENCY POWER SYSTEM	GENERATION/DISTRIBUTION	Includes generators, central battery banks, transfer switches, emergency power grid, etc.
EL6A	SYSTEMS	UPS/DC POWER SUPPLY	Uninterruptible power supply systems and DC motor-generator sets and distribution systems.
EL7A	INFRASTRUCTURE	ABOVE GROUND TRANSMISSION	Includes poles, towers, conductors, insulators, fuses, disconnects, etc.
EL7B	INFRASTRUCTURE	UNDERGROUND TRANSMISSION	Includes direct buried feeders, ductbanks, conduit, manholes, feeders, switches, disconnects, etc.
EL7C	INFRASTRUCTURE	SUBSTATIONS	Includes incoming feeders, breakers, buses, switchgear, meters, CTs, PTs, battery systems, capacitor banks, and all associated auxiliary equipment.
EL7D	INFRASTRUCTURE	DISTRIBUTION SWITCHGEAR	Stand-alone sectionalizing switches, distribution switchboards, etc.
EL7F	INFRASTRUCTURE	AREA AND STREET LIGHTING	Area and street lighting systems including stanchions, fixtures, feeders, etc.
EL8A	GENERAL	OTHER	Electrical system components not catalogued elsewhere.
<b>SYSTEM DESCRIPTION: EXTERIOR</b>			
ES1A	FOUNDATION/FOOTING	STRUCTURE	Structural foundation improvements involving structural work on foundation wall/footing, piers, caissons, piles including crack repairs, shoring & pointing
ES1B	FOUNDATION/FOOTING	DAMP/PROOFING/DEWATERING	Foundation/footing waterproofing work including, damp proofing, dewatering, insulation, etc.
ES2A	COLUMNS/BEAMS/WALLS	STRUCTURE	Structural work to primary load-bearing structural components aside from floors including columns, beams, bearing walls, lintels, arches, etc.
ES2B	COLUMNS/BEAMS/WALLS	FINISH	Work involving restoration of the appearance and weatherproof integrity of exterior wall/structural envelope components including masonry/pointing, expansion joints, efflorescence & stain removal, grouting, surfacing, chimney repairs, etc.
ES3A	FLOOR	STRUCTURE	Work concerning the structural integrity of the load supporting floors both exposed and unexposed including deformation, delamination, spalling, shoring, crack repair, etc.
ES4A	ROOF	REPAIR	Work on waterproof horizontal finish (roof) involving repair and/or limited replacement (<40% total) including membrane patching, flashing repair, coping caulk/resetting, PPT wall parging/coating, walkpad installation, skylight and roof hatch R&R, etc.
ES4B	ROOF	REPLACEMENT	Work involving total refurbishment of roofing system including related component rehab.
ES5A	FENESTRATIONS	DOORS	Work on exterior exit/access door including storefronts, airlocks, air curtains, vinyl slat doors, all power/manual operating hardware (except handicapped), etc.
ES5B	FENESTRATIONS	WINDOWS	Work on exterior fenestration closure & related components including glass/metal/wood curtain walls, fixed or operable window sashes, glazing, frames, sills, casings, stools, seats, coatings, treatments, screens, storm windows, etc.
ES6A	GENERAL	ATTACHED STRUCTURE	Work on attached exterior structure components not normally considered in above categories including porches, stoops, decks, monumental entrance stairs, cupolas, tower, etc.
ES6B	GENERAL	AREAWAYS	Work on attached grade level or below structural features including subterranean light wells, areaways, basement access stairs, etc.
ES6C	GENERAL	TRIM	Work on ornamental exterior (generally non-structural) elements including beltlines, quoins, porticos, soffits, cornices, moldings, trim, etc.
ES6D	GENERAL	SUPERSTRUCTURE	Finish and structural work on non-standard structures with exposed load-bearing elements such as stadiums, bag houses, bleachers, freestanding towers, etc.

CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
ES6E	GENERAL	OTHER	Any exterior work not specifically categorized elsewhere including finish and structural work on freestanding boiler stacks.
<b>SYSTEM DESCRIPTION: FIRE / LIFE SAFETY</b>			
FS1A	LIGHTING	EGRESS LIGHTING/EXIT SIGNAGE	R & R work on exit signage and packaged AC/DC emergency lighting.
FS2A	DETECTION/ALARM	GENERAL	Repair or replacement of fire alarm/detection system/components including alarms, pull boxes, smoke/heat detectors, annunciator panels, central fire control stations, remote dialers, fire station communications, etc.
FS3A	SUPPRESSION	SPRINKLERS	Repair or installation of water sprinklers type automatic fire suppressions including wet pipe & dry pipe systems, heads, piping, deflectors, valves, monitors, associated fire pump, etc.
FS3B	SUPPRESSION	STANDPIPE/HOSE	Repair or installation of standpipe system or components including hardware, hoses, cabinets, nozzles, necessary fire pumping system, etc.
FS3C	SUPPRESSION	EXTINGUISHERS	Repairs or upgrades to F.E. cabinets/wall fastenings and handheld extinguisher testing/replacement.
FS3D	SUPPRESSION	OTHER	Other fire suppression items not specifically categorized elsewhere including fire blankets, carbon dioxide automatic systems, Halon systems, dry chemical systems, etc.
FS4A	HAZARDOUS MATERIALS	STORAGE ENVIRONMENT	Installation or repair of special storage environment for the safe holding of flammable or otherwise dangerous materials/supplies including vented flammables storage cabinets, holding pens/rooms, cages, fire safe chemical storage rooms, etc.
FS4B	HAZARDOUS MATERIALS	USER SAFETY	Improvements, repairs, installation, or testing of user safety equipment including emergency eyewashes, safety showers, emergency panic/shut-down system, etc.
FS5A	EGRESS PATH	DESIGNATION	Installation, relocation or repair of posted diagrammatic emergency evacuation routes.
FS5B	EGRESS PATH	DISTANCE/GEOMETRY	Work involving remediation of egress routing problems including elimination of dead end corridors, excessive egress distance modifications and egress routing inadequacies.
FS5C	EGRESS PATH	SEPARATION RATING	Restoration of required fire protective barriers including wall rating compromises, fire rated construction, structural fire proofing, wind/safety glazing, transom retrofitting, etc.
FS5D	EGRESS PATH	OBSTRUCTION	Clearance of items restricting the required egress routes.
FS5E	EGRESS PATH	STAIRS RAILING	Retrofit of stair/landing configurations/structure, railing heights/geometries, etc.
FS5F	EGRESS PATH	FIRE DOORS/HARDWARE	Installation/replacement/repair of fire doors and hardware including labeled fire doors, fire shutters, closers, magnetic holders, panic hardware, etc.
FS5G	EGRESS PATH	FINISH/FURNITURE RATINGS	Remediation of improper fire/smoke ratings of finishes and furniture along egress routes.
FS6A	GENERAL	OTHER	Life/fire safety items not specifically categorized elsewhere.
<b>SYSTEM DESCRIPTION: HEALTH</b>			
HE1A	ENVIRONMENTAL CONTROL	EQUIPMENT AND ENCLOSURES	Temperature control chambers (both hot and cold) for non-food storage. Includes both chamber and all associated mechanical equipment.
HE1B	ENVIRONMENTAL CONTROL	OTHER	General environmental control problems not catalogued elsewhere.
HE2A	PEST CONTROL	GENERAL	Includes all measures necessary to control and destroy insects, rodents and other pests.
HE3A	REFUSE	GENERAL	Issues related to the collection, handling and disposal of refuse.
HE4A	SANITATION EQUIPMENT	LABORATORY AND PROCESS	Includes autoclaves, cage washers, steam cleaners, etc.
HE5A	FOOD SERVICE	KITCHEN EQUIPMENT	Includes ranges, grilles, cookers, sculleries, etc.
HE5B	FOOD SERVICE	COLD STORAGE	Includes the cold storage room and all associated refrigeration equipment.

CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
HE6A	HAZARDOUS MATERIAL	STRUCTURAL ASBESTOS	Testing, abatement and disposal of structural and building finish materials containing asbestos.
HE6B	HAZARDOUS MATERIAL	MECHANICAL ASBESTOS	Testing, abatement and disposal of mechanical insulation materials containing asbestos.
HE6C	HAZARDOUS MATERIAL	PCBs	Includes testing, demolition, disposal and cleanup of PCB contaminated substances.
HE6D	HAZARDOUS MATERIAL	FUEL STORAGE	Includes monitoring, removal and replacement of above and below ground fuel storage and distribution systems. Also includes testing and disposal of contaminated soils.
HE6E	HAZARDOUS MATERIAL	LEAD PAINT	Testing, removal and disposal of lead-based paint systems.
HE6F	HAZARDOUS MATERIAL	OTHER	Handling, storage, and disposal of other hazardous materials.
HE7A	GENERAL	OTHER	Health related issues not catalogued elsewhere.
<b>SYSTEM DESCRIPTION: HVAC</b>			
HV1A	HEATING	BOILERS/STACKS/ CONTROLS	Boilers for heating purposes including their related stacks, flues, and controls.
HV1B	HEATING	RADIATORS/ CONVECTORS	Including cast iron radiators, fin tube radiators, baseboard radiators, etc.
HV1C	HEATING	FURNACE	Furnaces and their related controls, flues, etc.
HV1D	HEATING	FUEL SUPPLY/STORAGE	Storage and/or distribution of fuel for heating purposes, including tanks and piping networks and related leak detection/monitoring.
HV2A	COOLING	CHILLERS/ CONTROLS	Chiller units for production of chilled water for cooling purposes, related controls (not including mods for CFC compliance).
HV2B	COOLING	HEAT REJECTION	Repair/replacement of cooling towers, dry coolers, air-cooling and heat rejection. (Includes connection of once-through system to cooling tower.)
HV3A	HEATING/COOLING	SYSTEM RETROFIT/ REPLACE	Replacement or major retrofit of HVAC systems.
HV3B	HEATING/COOLING	WATER TREATMENT	Treatment of hot water, chilled water, steam, condenser water, etc.
HV3C	HEATING/COOLING	PACKAGE/SELF-CONTAINED UNITS	Repair/replacement of self-contained/package type units including stand up units, rooftop units, window units, etc; both air conditioners and heat pumps.
HV3D	HEATING/COOLING	CONVENTIONAL SPLIT SYSTEMS	Repair, installation, or replacement of conventional split systems; both air conditioners and heat pumps including independent component replacements of compressors and condensers.
HV4A	AIR MOVING/ VENTILATION	AIR HANDLERS/ FAN UNITS	Includes air handlers & coils, fan coil units, unit ventilators, filtration upgrades, etc., not including package/self-contained units, split systems or other specifically categorized systems.
HV4B	AIR MOVING/ VENTILATION	EXHAUST FANS	Exhaust fan systems including fans, range and fume hoods, controls, and related ductwork.
HV4C	AIR MOVING/ VENTILATION	OTHER FANS	Supply, return, or any other fans not incorporated into a component categorized elsewhere.
HV4D	AIR MOVING/ VENTILATION	AIR DISTRIBUTION NETWORK	Repair, replacement, or cleaning of air distribution network including ductwork, terminal reheat/cool, VAV units, induction units, power induction units, insulation, dampers, linkages, etc.
HV5A	STEAM/HYDRONIC DISTRIBUTION	PIPING NETWORK	Repair/replacement of piping networks for heating and cooling systems including pipe, fittings, insulation, related components, etc.
HV5B	STEAM/HYDRONIC DISTRIBUTION	PUMPS	Repair or replacement of pumps used in heating and cooling systems, related control components, etc.
HV5C	STEAM/HYDRONIC DISTRIBUTION	HEAT EXCHANGERS	Including shell and tube heat exchangers and plate heat exchangers for heating and cooling.
HV6A	CONTROLS	COMPLETE SYSTEM	Replacement of HVAC control systems.

CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
		UPGRADE	
HV6B	CONTROLS	MODIFICATIONS/ REPAIRS	Repair or modification of HVAC control system.
HV6C	CONTROLS	AIR COMPRESSORS/ DRYERS	Repair or modification of control air compressors and dryers.
HV7A	INFRASTRUCTURE	STEAM/HOT WATER GENERATION	Generation of central steam and/or hot water including boilers and related components.
HV7B	INFRASTRUCTURE	STEAM/HOT WATER DISTRIBUTION	Distribution system for central hot water and/or steam.
HV7C	INFRASTRUCTURE	CHILLED WATER GENERATION	Generation of central chilled water including chillers and related components.
HV7D	INFRASTRUCTURE	CHILLED WATER DISTRIBUTION	Distribution system for central chilled water.
HV7E	INFRASTRUCTURE	TUNNELS/ MANHOLES/ TRENCHES	Repairs, installation, replacement of utility system access chambers.
HV7F	INFRASTRUCTURE	OTHER	HVAC infrastructure issues not specifically categorized elsewhere.
HV8A	GENERAL	CFC COMPLIANCE	Chiller conversions/replacements for CFC regulatory compliance, monitoring, etc.
HV8B	GENERAL	OTHER	HVAC issues not catalogued elsewhere.
<b>SYSTEM DESCRIPTION: INTERIOR FINISHES / SYSTEMS</b>			
IS1A	FLOOR	FINISHES-DRY	R & R of carpet, hardwood strip flooring, concrete coating, vinyl linoleum & tile, marble, terrazzo, rubber flooring, underlayment in predominantly dry areas ("dry" includes non-commercial kitchens)
IS1B	FLOOR	FINISHES-WET	Flooring finish/underlayment work in predominantly "wet" areas including work with linoleum, rubber, terrazzo, concrete coating, quarry tile, ceramic tile, epoxy aggregate, etc.
IS2A	PARTITIONS	STRUCTURE	Structural work on full height permanent interior partitions including wood/metal stud & drywall systems, CMU systems, structural brick, tile, glass block, etc.
IS2B	PARTITIONS	FINISHES	Work on full height permanent interior partitions including R & R to gypsum board, plaster, lath, wood paneling, acoustical panels, wall coverings, column coverings, tile, paint, etc.
IS3A	CEILINGS	REPAIR	Repair of interior ceilings (<40% of total) including tiles, gypsum board, plaster, paint, etc.
IS3B	CEILINGS	REPLACEMENT	Major refurbishments (>40% of total) to interior ceiling systems including grid system replacements, structural framing, new suspended systems, paint, plastering, etc.
IS4A	DOORS	GENERAL	Any work on interior non-fire rated doors, roll-up counter doors, mechanical/plumbing access doors, and all door hardware (except for reasons of access improvement).
IS5A	STAIRS	FINISH	Any finish restorative work to stair tower walking surfaces including replacement of rubber treads, safety grips, nosings, etc. (except as required to accommodate disabled persons).
IS6A	GENERAL	MOLDING	R & R to interior trim/molding systems including rubber/vinyl/wood base, crown/chair/ornamental moldings, cased openings, etc.
IS6B	GENERAL	CABINETY	R & R work to interior casework systems including cabinets, countertops, wardrobes, lockers, mail boxes, built-in bookcases, lab/work benches, reagent shelving, etc. (except as required for access by the disabled).
IS6C	GENERAL	SCREENING	Work on temporary or partial height partitioning systems including toilet partitions, urinal/vanity screens, etc.
IS6D	GENERAL	OTHER	Any work on interior elements not logically or specifically categorized elsewhere including light coves, phone booths, interior light wells, etc.
<b>SYSTEM DESCRIPTION: PLUMBING</b>			



CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
PL1A	DOMESTIC WATER	PIPING NETWORK	Repair or replacement of domestic water supply piping network, insulation, hangers, etc.
PL1B	DOMESTIC WATER	PUMPS	Domestic water booster pumps, circulating pumps, related controls, etc.
PL1C	DOMESTIC WATER	STORAGE/TREATMENT	Equipment or vessels for storage or treatment of domestic water.
PL1D	DOMESTIC WATER	METERING	Installation, repair, or replacement of water meters.
PL1E	DOMESTIC WATER	HEATING	Domestic water heaters including gas, oil, and electric water heaters, shell and tube heat exchangers, tank type and instantaneous.
PL1F	DOMESTIC WATER	COOLING	Central systems for cooling and distributing drinking water.
PL1G	DOMESTIC WATER	FIXTURES	Plumbing fixtures including sinks, drinking fountains, water closets, urinals, etc.
PL1H	DOMESTIC WATER	CONSERVATION	Alternations made to the water distribution system to conserve water.
PL1I	DOMESTIC WATER	BACKFLOW PROTECTION	Backflow protection devices including backflow preventers, vacuum breakers, etc.
PL2A	WASTEWATER	PIPING NETWORK	Repair or replacement of building wastewater piping network.
PL2B	WASTEWATER	PUMPS	Pump systems used to lift wastewater including sewage ejectors and other sump systems.
PL3A	SPECIAL SYSTEMS	PROCESS GAS/FLUIDS	Generation and/or distribution of process steam, compressed air, natural and LP gas, process water, vacuum, etc.
PL4A	INFRASTRUCTURE	POTABLE WATER STORAGE/TREATMENT	Storage and treatment of potable water for distribution.
PL4B	INFRASTRUCTURE	INDUSTRIAL WATER DISTRIBUTION/TREATMENT	Storage and treatment of industrial water for distribution.
PL4C	INFRASTRUCTURE	SANITARY WATER COLLECTION	Sanitary water collection systems, sanitary sewer systems; including combined systems.
PL4D	INFRASTRUCTURE	STORM WATER COLLECTION	Storm water collection systems, storm sewer systems; storm water only.
PL4E	INFRASTRUCTURE	POTABLE WATER DISTRIBUTION	Potable water distribution network.
PL4F	INFRASTRUCTURE	WASTEWATER TREATMENT	Wastewater treatment plants, associated equipment, etc.
PL5A	GENERAL	OTHER	Plumbing issues not categorized elsewhere.
<b>SYSTEM DESCRIPTION: SITE</b>			
SI1A	ACCESS	PEDESTRIAN	Paved pedestrian surfaces including walks, site stairs, step ramps, paths, pedestrian signage, sidewalk bridges/canopies, pedestrian plaza/mall areas, etc.
SI1B	ACCESS	VEHICULAR	Paved vehicular surfaces including roads, paths, curbs, guards, bollards, bridges, skyways, joints, shoulder work, culverts, ditches, vehicular signage, etc.
SI2A	LANDSCAPE	GRADE/FLORA	Landscape related work including new grass/turf refurbishment, grade improvements, catch basins, swales, berms, pruning, new ornamental flora, etc.
SI3A	HARDSCAPE	STRUCTURE	Permanent hard site features, predominantly ornamental, including terraces, fences, statues, freestanding signage, fountains, benches, etc.
SI4A	GENERAL	OTHER	Other site work not specifically categorized elsewhere.
<b>SYSTEM DESCRIPTION: SECURITY SYSTEMS</b>			
SS1A	LIGHTING	EXTERIOR	Fixtures, stanchions, foliage interference, cleanliness, locations, etc.

CATEGORY CODE REPORT			
CODE	COMPONENT DESCRIPTION	ELEMENT DESCRIPTION	DEFINITION
SS2A	SITE	FENCING	Perimeter campus fencing, individual building fencing, includes both pedestrian and vehicular control fences.
SS2B	SITE	GENERAL	Hidden areas due to foliage, fencing, parking, walls, etc.
SS3A	COMMUNICATIONS	EMERGENCY PHONES	Access, locations, visibility, function, reliability, etc.
SS4A	ACCESS CONTROL	DOORS	Access, locks, keys, two way speakers, reliability, redundancy, etc.
SS4B	ACCESS CONTROL	WINDOWS	Locks, screens, access, reliability, etc.
SS4C	ACCESS CONTROL	SYSTEMS	Card key, proximity devices, data control, data use, reliability, system design, etc.
SS5A	MONITORING	SYSTEMS	Cameras, audio communication, monitoring stations, locations, system design, etc.
SS6A	CIRCULATION	PEDESTRIAN	On campus as well as to and from off campus housing and class locations, etc.
SS6B	CIRCULATION	VEHICULAR	Guard gates, access, systems, data control and use, identification, etc.
SS7A	GENERAL	OTHER	General information/projects pertaining to security issues.
<b>SYSTEM DESCRIPTION: VERTICAL TRANSPORTATION</b>			
VT1A	MACHINE ROOM	GENERAL	Machine, worm gear, thrust bearing, brake, motors, sheaves, generator, controller, selector, governor, pump(s), valves, oil, access, lighting, ventilation, floor.
VT2A	CAR	GENERAL	Position indicator, lighting, floor, gate-doors, operation devices, safeties, safety shoe, light ray/detection, emergency light, fire fighter service, car top, door operator, stop switch, car frame, car guides, sheaves, phone, ventilation.
VT3A	HOISTWAY	GENERAL	Enclosure, fascia, interlock, doors, hangers, closers, sheaves, rails, hoistway switches, ropes, traveling cables, selector tape, weights, compensation.
VT4A	HALL FIXTURES	GENERAL	Operating panel, position indicator, hall buttons, lobby panel, hall lanterns, fire fighter service, audible signals, card/key access.
VT5A	PIT	GENERAL	Buffer(s), guards, sheaves, hydro packing, floor, lighting, safety controls.
VT6A	OPERATING CONDITIONS	GENERAL	Door open time, door close time, door thrust, acceleration, deceleration, leveling, dwell time, speed, OFR time, nudging.
VT7A	GENERAL	OTHER	General information/projects relating to vertical transportation system components.

FACILITY CONDITION ANALYSIS

**SECTION 2**

**DETAILED PROJECT SUMMARIES  
AND TOTALS**

**Detailed Project Totals  
 Facility Condition Analysis  
 System Code by Priority Class  
 JOYN : JOYNER LIBRARY**

System Code	System Description	Priority Classes				Subtotal
		1	2	3	4	
AC	ACCESSIBILITY	0	0	0	33,082	33,082
EL	ELECTRICAL	0	0	158,594	4,123,950	4,282,545
ES	EXTERIOR	0	0	110,776	191,340	302,116
FS	FIRE/LIFE SAFETY	0	0	816,094	136,961	953,055
HV	HVAC	0	0	9,766,566	0	9,766,566
IS	INTERIOR/FINISH SYS.	0	0	4,036,958	0	4,036,958
PL	PLUMBING	0	0	17,445	2,634,474	2,651,919
	<b>TOTALS</b>	0	0	14,906,432	7,119,808	22,026,240

<b>Facility Replacement Cost</b>	<b>\$114,754,000</b>
<b>Facility Condition Needs Index</b>	<b>0.19</b>

<b>Gross Square Feet</b>	<b>280,575</b>
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<b>Total Cost Per Square Foot</b>	<b>\$78.50</b>
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# FACILITY CONDITION ANALYSIS

## System Code by Priority Class

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**Detailed Project Totals  
 Facility Condition Analysis  
 System Code by Project Class  
 JOYN : JOYNER LIBRARY**

System Code	System Description	Project Classes			Subtotal
		Capitla Renewal	Deferred Maintenance	Plant Adaption	
AC	ACCESSIBILITY	0	0	33,082	33,082
EL	ELECTRICAL	4,123,950	158,594	0	4,282,545
ES	EXTERIOR	191,340	110,776	0	302,116
FS	FIRE/LIFE SAFETY	889,489	44,263	19,303	953,055
HV	HVAC	0	9,766,566	0	9,766,566
IS	INTERIOR/FINISH SYS.	0	4,036,958	0	4,036,958
PL	PLUMBING	2,634,474	17,445	0	2,651,919
	<b>TOTALS</b>	7,839,254	14,134,601	52,385	22,026,240

<b>Facility Replacement Cost</b>	\$114,754,000
<b>Facility Condition Needs Index</b>	0.19

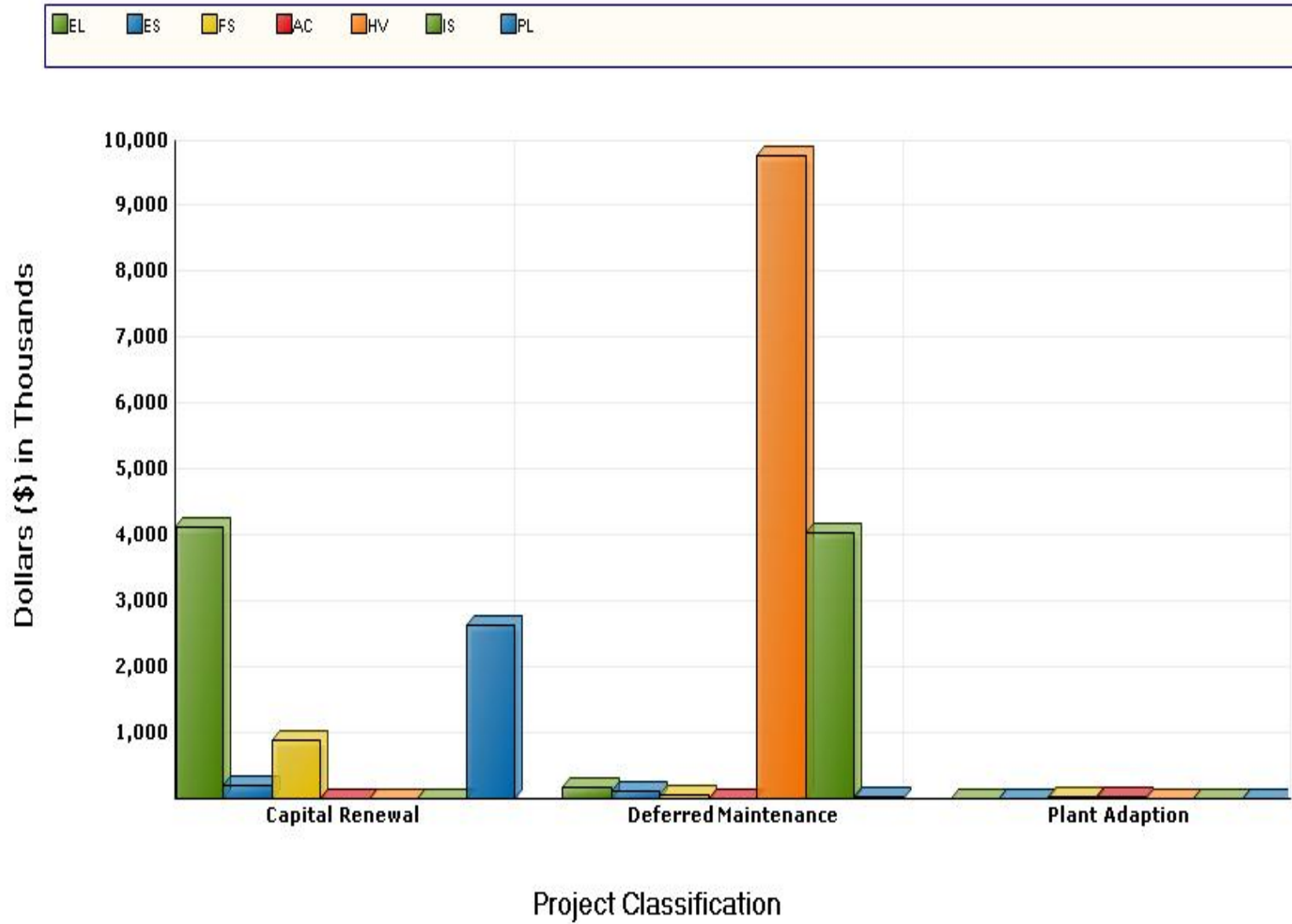
<b>Gross Square Feet</b>	280,575
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<b>Total Cost Per Square Foot</b>	\$78.50
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# FACILITY CONDITION ANALYSIS

## System Code by Project Class

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**Detailed Project Summary**  
**Facility Condition Analysis**  
**Project Class by Priority Class**  
**JOYN : JOYNER LIBRARY**

Project Class	Priority Classes				Subtotal
	1	2	3	4	
Capital Renewal	0	0	752,528	7,086,726	7,839,254
Deferred Maintenance	0	0	14,134,601	0	14,134,601
Plant Adaption	0	0	19,303	33,082	52,385
<b>TOTALS</b>	0	0	14,906,432	7,119,808	22,026,240

<b>Facility Replacement Cost</b>	\$114,754,000
<b>Facility Condition Needs Index</b>	0.19

<b>Gross Square Feet</b>	280,575
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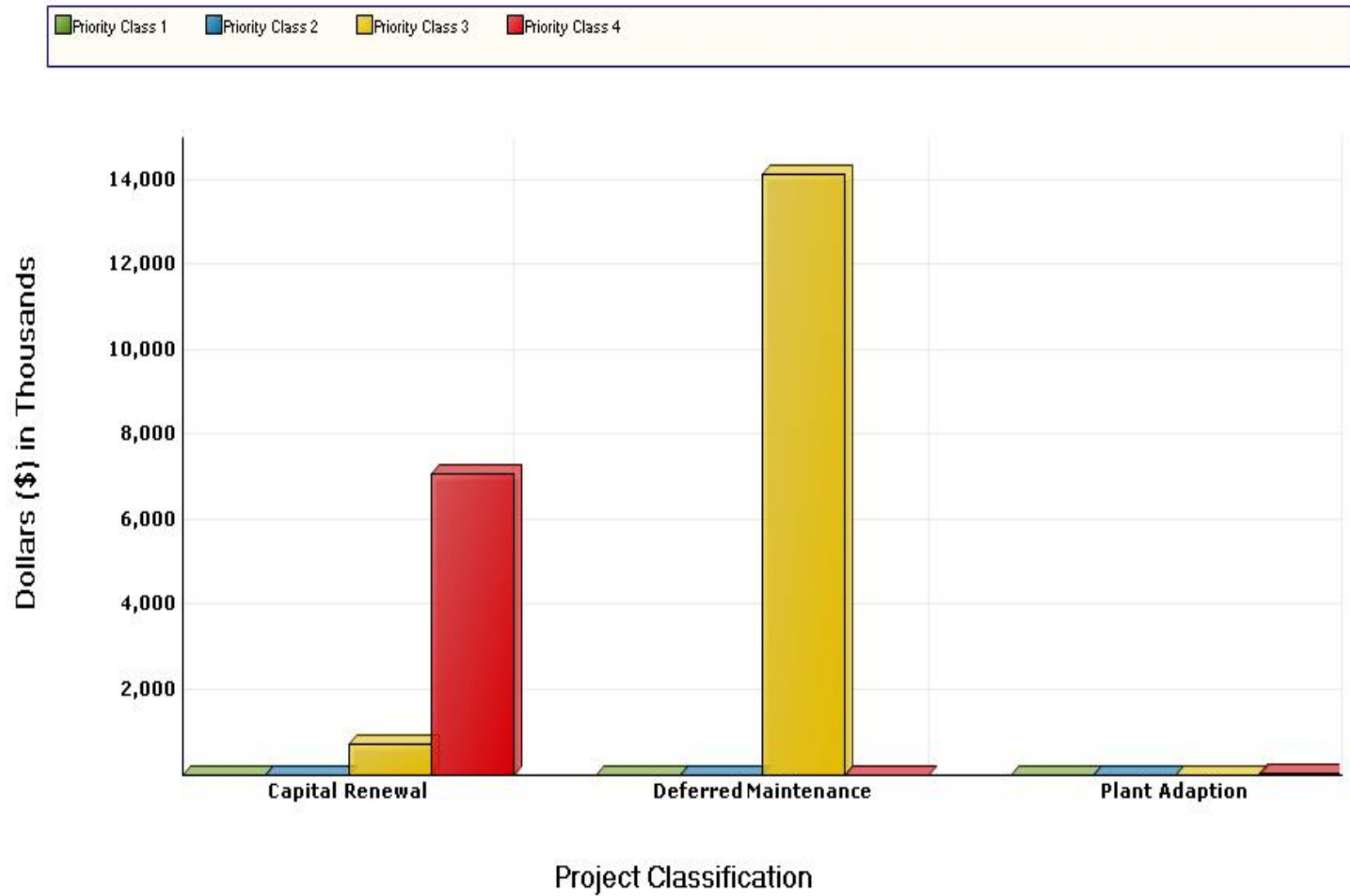
<b>Total Cost Per Square Foot</b>	\$78.50
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# FACILITY CONDITION ANALYSIS

## Project Class by Priority Class

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Detailed Project Summary  
Facility Condition Analysis  
**Priority Class - Priority Sequence**  
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Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	JOYNFS03	3	1	FIRE PUMP REPLACEMENT	38,157	6,105	44,263
FS5E	JOYNFS04	3	2	STAIR SAFETY UPGRADES	16,641	2,663	19,303
FS2A	JOYNFS05	3	3	FIRE ALARM SYSTEM REPLACEMENT	648,731	103,797	752,528
ES2B	JOYNES01	3	4	RESTORE BRICK VENEER	85,938	13,750	99,688
ES2B	JOYNES02	3	5	RESTORE CONCRETE FINISH	9,558	1,529	11,087
HV3A	JOYNHV01	3	6	HVAC SYSTEM REPLACEMENT	8,419,453	1,347,113	9,766,566
EL2A	JOYNEL01	3	7	REPLACE 277/480 VOLT SWITCHGEAR	51,376	8,220	59,596
EL4A	JOYNEL04	3	8	EXTERIOR LIGHTING REPLACEMENT	85,343	13,655	98,998
IS1A	JOYNIS01	3	9	REFINISH FLOORING	1,867,018	298,723	2,165,740
IS2B	JOYNIS02	3	10	REFINISH WALLS	195,075	31,212	226,287
IS3B	JOYNIS03	3	11	REFINISH CEILINGS	858,704	137,393	996,096
IS4A	JOYNIS04	3	12	REPLACE INTERIOR DOORS	559,340	89,494	648,834
PL1E	JOYNPL01	3	13	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	15,039	2,406	17,445
<b>Totals for Priority Class 3</b>					<b>12,850,372</b>	<b>2,056,060</b>	<b>14,906,432</b>
FS3A	JOYNFS01	4	14	REPLACE SPRINKLER HEADS	90,967	14,555	105,522
FS1A	JOYNFS02	4	15	REPLACE EXIT SIGNS	27,103	4,336	31,439
AC2A	JOYNAC01	4	16	BUILDING ENTRY ACCESSIBILITY UPGRADES	7,085	1,134	8,219
AC4A	JOYNAC02	4	17	KITCHENETTE ACCESSIBILITY UPGRADES	21,433	3,429	24,863
ES4B	JOYNES03	4	18	BUILT-UP ROOF REPLACEMENT	164,948	26,392	191,340
EL3B	JOYNEL03	4	19	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	1,998,009	319,681	2,317,691
EL4B	JOYNEL02	4	20	INTERIOR LIGHTING UPGRADE	1,557,121	249,139	1,806,260
PL1A	JOYNPL02	4	21	WATER SUPPLY PIPING REPLACEMENT	878,504	140,561	1,019,064
PL2A	JOYNPL03	4	22	DRAIN PIPING REPLACEMENT	1,334,307	213,489	1,547,796
PL2B	JOYNPL04	4	23	REPLACE SUMP PUMPS AND SEWAGE EJECTORS	58,288	9,326	67,614
<b>Totals for Priority Class 4</b>					<b>6,137,765</b>	<b>982,042</b>	<b>7,119,808</b>
<b>Grand Total:</b>					<b>18,988,138</b>	<b>3,038,102</b>	<b>22,026,240</b>

**Detailed Project Summary**  
**Facility Condition Analysis**  
**Project Cost Range**  
 JOYN : JOYNER LIBRARY

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
FS3A	JOYNFS03	3	1	FIRE PUMP REPLACEMENT	38,157	6,105	44,263
EL2A	JOYNEL01	3	7	REPLACE 277/480 VOLT SWITCHGEAR	51,376	8,220	59,596
EL4A	JOYNEL04	3	8	EXTERIOR LIGHTING REPLACEMENT	85,343	13,655	98,998
PL1E	JOYNPL01	3	13	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	15,039	2,406	17,445
ES2B	JOYNES01	3	4	RESTORE BRICK VENEER	85,938	13,750	99,688
ES2B	JOYNES02	3	5	RESTORE CONCRETE FINISH	9,558	1,529	11,087
FS5E	JOYNFS04	3	2	STAIR SAFETY UPGRADES	16,641	2,663	19,303
<b>Totals for Priority Class 3</b>					<b>302,052</b>	<b>48,328</b>	<b>350,380</b>
FS1A	JOYNFS02	4	15	REPLACE EXIT SIGNS	27,103	4,336	31,439
PL2B	JOYNPL04	4	23	REPLACE SUMP PUMPS AND SEWAGE EJECTORS	58,288	9,326	67,614
AC2A	JOYNAC01	4	16	BUILDING ENTRY ACCESSIBILITY UPGRADES	7,085	1,134	8,219
AC4A	JOYNAC02	4	17	KITCHENETTE ACCESSIBILITY UPGRADES	21,433	3,429	24,863
<b>Totals for Priority Class 4</b>					<b>113,909</b>	<b>18,226</b>	<b>132,135</b>
<b>Grand Totals for Projects &lt; 100,000</b>					<b>415,961</b>	<b>66,554</b>	<b>482,515</b>

**Detailed Project Summary**  
**Facility Condition Analysis**  
**Project Cost Range**  
 JOYN : JOYNER LIBRARY

<b>Cat. Code</b>	<b>Project Number</b>	<b>Pri Cls</b>	<b>Pri Seq</b>	<b>Project Title</b>	<b>Construction Cost</b>	<b>Professional Fee</b>	<b>Total Cost</b>
IS2B	JOYNIS02	3	10	REFINISH WALLS	195,075	31,212	226,287
<b>Totals for Priority Class 3</b>					<b>195,075</b>	<b>31,212</b>	<b>226,287</b>
FS3A	JOYNFS01	4	14	REPLACE SPRINKLER HEADS	90,967	14,555	105,522
ES4B	JOYNES03	4	18	BUILT-UP ROOF REPLACEMENT	164,948	26,392	191,340
<b>Totals for Priority Class 4</b>					<b>255,915</b>	<b>40,946</b>	<b>296,862</b>
<b>Grand Totals for Projects &gt;= 100,000 and &lt; 500,000</b>					<b>450,990</b>	<b>72,158</b>	<b>523,149</b>

**Detailed Project Summary**  
**Facility Condition Analysis**  
**Project Cost Range**  
 JOYN : JOYNER LIBRARY

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
HV3A	JOYNHV01	3	6	HVAC SYSTEM REPLACEMENT	8,419,453	1,347,113	9,766,566
IS1A	JOYNIS01	3	9	REFINISH FLOORING	1,867,018	298,723	2,165,740
IS3B	JOYNIS03	3	11	REFINISH CEILINGS	858,704	137,393	996,096
IS4A	JOYNIS04	3	12	REPLACE INTERIOR DOORS	559,340	89,494	648,834
FS2A	JOYNFS05	3	3	FIRE ALARM SYSTEM REPLACEMENT	648,731	103,797	752,528
<b>Totals for Priority Class 3</b>					<b>12,353,246</b>	<b>1,976,519</b>	<b>14,329,765</b>
EL4B	JOYNEL02	4	20	INTERIOR LIGHTING UPGRADE	1,557,121	249,139	1,806,260
EL3B	JOYNEL03	4	19	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	1,998,009	319,681	2,317,691
PL1A	JOYNPL02	4	21	WATER SUPPLY PIPING REPLACEMENT	878,504	140,561	1,019,064
PL2A	JOYNPL03	4	22	DRAIN PIPING REPLACEMENT	1,334,307	213,489	1,547,796
<b>Totals for Priority Class 4</b>					<b>5,767,941</b>	<b>922,870</b>	<b>6,690,811</b>
<b>Grand Totals for Projects &gt;= 500,000</b>					<b>18,121,186</b>	<b>2,899,390</b>	<b>21,020,576</b>
<b>Grand Totals For All Projects:</b>					<b>18,988,138</b>	<b>3,038,102</b>	<b>22,026,240</b>

**Detailed Project Summary**  
**Facility Condition Analysis**  
**Project Classification**  
JOYN : JOYNER LIBRARY

<b>Cat Code</b>	<b>Project Number</b>	<b>Pri. Seq.</b>	<b>Project Classification</b>	<b>Pri. Cls</b>	<b>Project Title</b>	<b>Total Cost</b>
FS2A	JOYNFS05	3	Capital Renewal	3	FIRE ALARM SYSTEM REPLACEMENT	752,528
FS3A	JOYNFS01	14	Capital Renewal	4	REPLACE SPRINKLER HEADS	105,522
FS1A	JOYNFS02	15	Capital Renewal	4	REPLACE EXIT SIGNS	31,439
ES4B	JOYNES03	18	Capital Renewal	4	BUILT-UP ROOF REPLACEMENT	191,340
EL3B	JOYNEL03	19	Capital Renewal	4	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	2,317,691
EL4B	JOYNEL02	20	Capital Renewal	4	INTERIOR LIGHTING UPGRADE	1,806,260
PL1A	JOYNPL02	21	Capital Renewal	4	WATER SUPPLY PIPING REPLACEMENT	1,019,064
PL2A	JOYNPL03	22	Capital Renewal	4	DRAIN PIPING REPLACEMENT	1,547,796
PL2B	JOYNPL04	23	Capital Renewal	4	REPLACE SUMP PUMPS AND SEWAGE EJECTORS	67,614
<b>Totals for Capital Renewal</b>						<b>7,839,254</b>
FS3A	JOYNFS03	1	Deferred Maintenance	3	FIRE PUMP REPLACEMENT	44,263
ES2B	JOYNES01	4	Deferred Maintenance	3	RESTORE BRICK VENEER	99,688
ES2B	JOYNES02	5	Deferred Maintenance	3	RESTORE CONCRETE FINISH	11,087
HV3A	JOYNHV01	6	Deferred Maintenance	3	HVAC SYSTEM REPLACEMENT	9,766,566
EL2A	JOYNEL01	7	Deferred Maintenance	3	REPLACE 277/480 VOLT SWITCHGEAR	59,596
EL4A	JOYNEL04	8	Deferred Maintenance	3	EXTERIOR LIGHTING REPLACEMENT	98,998
IS1A	JOYNIS01	9	Deferred Maintenance	3	REFINISH FLOORING	2,165,740
IS2B	JOYNIS02	10	Deferred Maintenance	3	REFINISH WALLS	226,287
IS3B	JOYNIS03	11	Deferred Maintenance	3	REFINISH CEILINGS	996,096
IS4A	JOYNIS04	12	Deferred Maintenance	3	REPLACE INTERIOR DOORS	648,834
PL1E	JOYNPL01	13	Deferred Maintenance	3	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	17,445
<b>Totals for Deferred Maintenance</b>						<b>14,134,601</b>
FS5E	JOYNFS04	2	Plant Adaption	3	STAIR SAFETY UPGRADES	19,303
AC2A	JOYNAC01	16	Plant Adaption	4	BUILDING ENTRY ACCESSIBILITY UPGRADES	8,219
AC4A	JOYNAC02	17	Plant Adaption	4	KITCHENETTE ACCESSIBILITY UPGRADES	24,863
<b>Totals for Plant Adaption</b>						<b>52,385</b>
<b>Grand Total:</b>						<b>22,026,240</b>

**Detailed Project Summary**  
**Facility Condition Analysis**  
**Energy Conservation**  
 JOYN : JOYNER LIBRARY

<b>Cat Code</b>	<b>Project Number</b>	<b>Pri Cls</b>	<b>Pri Seq</b>	<b>Project Title</b>	<b>Total Cost</b>	<b>Annual Savings</b>	<b>Simple Payback</b>
HV3A	JOYNHV01	3	6	HVAC SYSTEM REPLACEMENT	9,766,566	82,970	117.71
EL4A	JOYNEL04	3	8	EXTERIOR LIGHTING REPLACEMENT	98,998	200	494.99
<b>Totals for Priority Class 3</b>					<b>9,865,564</b>	<b>83,170</b>	<b>118.62</b>
FS1A	JOYNFS02	4	15	REPLACE EXIT SIGNS	31,439	1,560	20.15
ES4B	JOYNES03	4	18	BUILT-UP ROOF REPLACEMENT	191,340	5,400	35.43
EL4B	JOYNEL02	4	20	INTERIOR LIGHTING UPGRADE	1,806,260	85,860	21.04
<b>Totals for Priority Class 4</b>					<b>2,029,039</b>	<b>92,820</b>	<b>21.86</b>
<b>Grand Total:</b>					<b>11,894,603</b>	<b>175,990</b>	<b>67.59</b>

Detailed Project Summary  
Facility Condition Analysis  
Category/System Code  
JOYN : JOYNER LIBRARY

Cat. Code	Project Number	Pri Cls	Pri Seq	Project Title	Construction Cost	Professional Fee	Total Cost
AC2A	JOYNAC01	4	16	BUILDING ENTRY ACCESSIBILITY UPGRADES	7,085	1,134	8,219
AC4A	JOYNAC02	4	17	KITCHENETTE ACCESSIBILITY UPGRADES	21,433	3,429	24,863
<b>Totals for System Code: ACCESSIBILITY</b>					<b>28,519</b>	<b>4,563</b>	<b>33,082</b>
EL2A	JOYNEL01	3	7	REPLACE 277/480 VOLT SWITCHGEAR	51,376	8,220	59,596
EL4A	JOYNEL04	3	8	EXTERIOR LIGHTING REPLACEMENT	85,343	13,655	98,998
EL3B	JOYNEL03	4	19	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	1,998,009	319,681	2,317,691
EL4B	JOYNEL02	4	20	INTERIOR LIGHTING UPGRADE	1,557,121	249,139	1,806,260
<b>Totals for System Code: ELECTRICAL</b>					<b>3,691,849</b>	<b>590,696</b>	<b>4,282,545</b>
ES2B	JOYNES01	3	4	RESTORE BRICK VENEER	85,938	13,750	99,688
ES2B	JOYNES02	3	5	RESTORE CONCRETE FINISH	9,558	1,529	11,087
ES4B	JOYNES03	4	18	BUILT-UP ROOF REPLACEMENT	164,948	26,392	191,340
<b>Totals for System Code: EXTERIOR</b>					<b>260,445</b>	<b>41,671</b>	<b>302,116</b>
FS3A	JOYNFS03	3	1	FIRE PUMP REPLACEMENT	38,157	6,105	44,263
FS5E	JOYNFS04	3	2	STAIR SAFETY UPGRADES	16,641	2,663	19,303
FS2A	JOYNFS05	3	3	FIRE ALARM SYSTEM REPLACEMENT	648,731	103,797	752,528
FS3A	JOYNFS01	4	14	REPLACE SPRINKLER HEADS	90,967	14,555	105,522
FS1A	JOYNFS02	4	15	REPLACE EXIT SIGNS	27,103	4,336	31,439
<b>Totals for System Code: FIRE/LIFE SAFETY</b>					<b>821,599</b>	<b>131,456</b>	<b>953,055</b>
HV3A	JOYNHV01	3	6	HVAC SYSTEM REPLACEMENT	8,419,453	1,347,113	9,766,566
<b>Totals for System Code: HVAC</b>					<b>8,419,453</b>	<b>1,347,113</b>	<b>9,766,566</b>
IS1A	JOYNIS01	3	9	REFINISH FLOORING	1,867,018	298,723	2,165,740
IS2B	JOYNIS02	3	10	REFINISH WALLS	195,075	31,212	226,287
IS3B	JOYNIS03	3	11	REFINISH CEILINGS	858,704	137,393	996,096
IS4A	JOYNIS04	3	12	REPLACE INTERIOR DOORS	559,340	89,494	648,834
<b>Totals for System Code: INTERIOR/FINISH SYS.</b>					<b>3,480,136</b>	<b>556,822</b>	<b>4,036,958</b>
PL1E	JOYNPL01	3	13	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	15,039	2,406	17,445
PL1A	JOYNPL02	4	21	WATER SUPPLY PIPING REPLACEMENT	878,504	140,561	1,019,064
PL2A	JOYNPL03	4	22	DRAIN PIPING REPLACEMENT	1,334,307	213,489	1,547,796
PL2B	JOYNPL04	4	23	REPLACE SUMP PUMPS AND SEWAGE EJECTORS	58,288	9,326	67,614
<b>Totals for System Code: PLUMBING</b>					<b>2,286,137</b>	<b>365,782</b>	<b>2,651,919</b>
<b>Grand Total:</b>					<b>18,988,138</b>	<b>3,038,102</b>	<b>22,026,240</b>



FACILITY CONDITION ANALYSIS

**SECTION 3**

SPECIFIC PROJECT DETAILS  
ILLUSTRATING DESCRIPTION / COST

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNFS03	<b>Title:</b>	FIRE PUMP REPLACEMENT
<b>Priority Sequence:</b>	1		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	FS3A	<b>System:</b>	FIRE/LIFE SAFETY
		<b>Component:</b>	SUPPRESSION
		<b>Element:</b>	SPRINKLERS
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	Not Applicable		
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Item Only: Floor(s) G		

**Project Description**

Failure of the fire pump in the event of an emergency will largely affect the performance of the fire sprinkler system. Replace the fire pump assembly, including fire pump, electric motor, controls, valves, piping, and all connections.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNFS03

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Electric fire pump, controls, piping, valves, and connections	GPM	500	\$58.10	\$29,050	\$9.92	\$4,960	\$34,010
<b>Project Totals:</b>				<b>\$29,050</b>		<b>\$4,960</b>	<b>\$34,010</b>

<b>Material/Labor Cost</b>		\$34,010
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		\$31,798
<b>General Contractor Mark Up at 20.0%</b>	+	\$6,360
<b>Construction Cost</b>		\$38,157
<b>Professional Fees at 16.0%</b>	+	\$6,105
<b>Total Project Cost</b>		<b>\$44,263</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNFS04	<b>Title:</b>	STAIR SAFETY UPGRADES
<b>Priority Sequence:</b>	2		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	FS5E	<b>System:</b>	FIRE/LIFE SAFETY
		<b>Component:</b>	EGRESS PATH
		<b>Element:</b>	STAIRS AND RAILING
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	IBC	1003.3	
	ADAAG	505	
<b>Project Class:</b>	Plant Adaption		
<b>Project Date:</b>	11/11/2009		
<b>Project Location:</b>	Item Only: Floor(s) 1, 2, 3, 4		

**Project Description**

The metal handrails and guardrails at the various interior stairs do not comply with current handrail and guardrail design standards. Handrails are not the required profile, and newel posts interrupt the switchback stair gripping surfaces. The guardrails typically have openings within the fill area that do not comply with the 4 inch sphere test. Also, upper horizontal landing guardrails are not 42 inches high, and the stair walls do not all have rails. Retrofit new guardrails and handrails in each of the stair segments as appropriate to resolve the design discrepancies.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNFS04

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Handrail / guardrail system per floor	FLR	8	\$1,297	\$10,376	\$833	\$6,664	\$17,040
<b>Project Totals:</b>				<b>\$10,376</b>		<b>\$6,664</b>	<b>\$17,040</b>

<b>Material/Labor Cost</b>		<b>\$17,040</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<u>\$13,867</u>
<b>General Contractor Mark Up at 20.0%</b>	+	<u>\$2,773</u>
<b>Construction Cost</b>		<u>\$16,641</u>
<b>Professional Fees at 16.0%</b>	+	<u>\$2,663</u>
<b>Total Project Cost</b>		<u><b>\$19,303</b></u>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNFS05	<b>Title:</b>	FIRE ALARM SYSTEM REPLACEMENT
<b>Priority Sequence:</b>	3		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	FS2A	<b>System:</b>	FIRE/LIFE SAFETY
		<b>Component:</b>	DETECTION ALARM
		<b>Element:</b>	GENERAL
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	ADAAG	702.1	
	NFPA	1, 101	
<b>Project Class:</b>	Capital Renewal		
<b>Project Date:</b>	12/8/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1,2,3,4,G		

**Project Description**

Upgrade the existing fire alarm system with a modern application. Specify a point addressable supervised main fire alarm panel with an annunciator. This work includes pull stations, audible and visible alarms, smoke and heat detectors, and a wiring network. Install all devices in accordance with current NFPA and ADA requirements. The system should be monitored to report activation or trouble to an applicable receiving station.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNFS05

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Fire alarm control panel(s), annunciator, smoke and heat detectors, manual pull stations, audible and visual alarms, wiring, raceways, cut and patching materials	SF	280,575	\$1.46	\$409,640	\$0.89	\$249,712	\$659,351
<b>Project Totals:</b>				<b>\$409,640</b>		<b>\$249,712</b>	<b>\$659,351</b>

<b>Material/Labor Cost</b>		\$659,351
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<u>\$540,609</u>
<b>General Contractor Mark Up at 20.0%</b>	+	<u>\$108,122</u>
<b>Construction Cost</b>		<u>\$648,731</u>
<b>Professional Fees at 16.0%</b>	+	<u>\$103,797</u>
<b>Total Project Cost</b>		<u><b>\$752,528</b></u>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNES01	<b>Title:</b>	RESTORE BRICK VENEER
<b>Priority Sequence:</b>	4		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	ES2B	<b>System:</b>	EXTERIOR
		<b>Component:</b>	COLUMNS/BEAMS/WALLS
		<b>Element:</b>	FINISH
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	Not Applicable		
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	11/11/2009		
<b>Project Location:</b>	Building-wide: Floor(s) 1		

**Project Description**

Brick veneer is the primary exterior finish. While the brick is fundamentally sound, exposure to the elements has caused some deterioration of the mortar joints and expansion joints. Cleaning, surface preparation, selective repairs, and applied finish or penetrating sealant upgrades are recommended to restore the aesthetics and integrity of the building envelope.



**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNES01

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Cleaning and surface preparation	SF	52,330	\$0.11	\$5,756	\$0.22	\$11,513	\$17,269
Selective mortar and / or sealant repairs (assumes 10 linear feet for every 100 square feet of envelope)	LF	5,233	\$2.45	\$12,821	\$4.99	\$26,113	\$38,934
Applied finish or sealant	SF	52,330	\$0.22	\$11,513	\$0.82	\$42,911	\$54,423
<b>Project Totals:</b>				<b>\$30,090</b>		<b>\$80,536</b>	<b>\$110,626</b>

<b>Material/Labor Cost</b>		<b>\$110,626</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$71,615</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$14,323</b>
<b>Construction Cost</b>		<b>\$85,938</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$13,750</b>
<b>Total Project Cost</b>		<b>\$99,688</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNES02	<b>Title:</b>	RESTORE CONCRETE FINISH
<b>Priority Sequence:</b>	5		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	ES2B	<b>System:</b>	EXTERIOR
		<b>Component:</b>	COLUMNS/BEAMS/WALLS
		<b>Element:</b>	FINISH
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	Not Applicable		
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	11/11/2009		
<b>Project Location:</b>	Building-wide: Floor(s) 1		

**Project Description**

The concrete exterior has become visibly soiled, and the construction joints are failing. Cleaning, surface preparation, selective repairs, and applied finish upgrades are recommended to restore the aesthetics and integrity of the building envelope.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNES02

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Cleaning and surface preparation	SF	5,820	\$0.11	\$640	\$0.22	\$1,280	\$1,921
Selective mortar and / or sealant repairs (assumes 10 linear feet for every 100 square feet of envelope)	LF	582	\$2.45	\$1,426	\$4.99	\$2,904	\$4,330
Applied finish or sealant	SF	5,820	\$0.22	\$1,280	\$0.82	\$4,772	\$6,053
<b>Project Totals:</b>				<b>\$3,347</b>		<b>\$8,957</b>	<b>\$12,303</b>

<b>Material/Labor Cost</b>		<b>\$12,303</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$7,965</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$1,593</b>
<b>Construction Cost</b>		<b>\$9,558</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$1,529</b>
<b>Total Project Cost</b>		<b>\$11,087</b>

**Specific Project Details**

**Facility Condition Analysis  
Section Three**

JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNHV01	<b>Title:</b>	HVAC SYSTEM REPLACEMENT
<b>Priority Sequence:</b>	6		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	HV3A	<b>System:</b>	HVAC
		<b>Component:</b>	HEATING/COOLING
		<b>Element:</b>	SYSTEM RETROFIT/REPLACE
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Energy Conservation	\$82,970	
<b>Code Application:</b>	ASHRAE	62-2004	
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G, R		

**Project Description**

Redesign and replacement of the older portion of the HVAC system is recommended. Demolish and dispose of existing equipment. Install a new modern HVAC system with variable air volume and constant volume air distribution as needed. This includes new air handlers, exhaust fans, ductwork, terminal units, heat exchangers, pumps, piping, controls, and related electrical components. Specify direct digital controls for the new equipment. Incorporate variable frequency drives into the new HVAC design as applicable.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNHV01

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Air handlers, exhaust fans, ductwork, VAVs, VFDs, DDCs, heat exchangers, pumps, piping, electrical connections, and demolition of existing equipment	SF	129,963	\$33.04	\$4,293,978	\$40.38	\$5,247,906	\$9,541,883
<b>Project Totals:</b>				<b>\$4,293,978</b>		<b>\$5,247,906</b>	<b>\$9,541,883</b>

<b>Material/Labor Cost</b>		<b>\$9,541,883</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$7,016,211</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$1,403,242</b>
<b>Construction Cost</b>		<b>\$8,419,453</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$1,347,113</b>
<b>Total Project Cost</b>		<b>\$9,766,566</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNEL01	<b>Title:</b>	REPLACE 277/480 VOLT SWITCHGEAR
<b>Priority Sequence:</b>	7		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	EL2A	<b>System:</b>	ELECTRICAL
		<b>Component:</b>	MAIN DISTRIBUTION PANELS
		<b>Element:</b>	CONDITION UPGRADE
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	NEC	Article 230	
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Item Only: Floor(s) G		

**Project Description**

The older 277/480 volt switchgear is recommended for replacement. The existing aged circuit breakers could serve as fire hazards should they fail to interrupt a circuit in an overload or short circuit condition. The switchgear should be replaced in its entirety. New switchgear components should include a ground fault main circuit breaker, digital metering for remote control / monitoring, and transient surge protection.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNEL01

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
277/480 V switchgear, includes switchboard, circuit breakers, feeders, digital metering, transient surge protector, and demolition of existing equipment	AMP	1,600	\$18.62	\$29,792	\$15.61	\$24,976	\$54,768
<b>Project Totals:</b>				<b>\$29,792</b>		<b>\$24,976</b>	<b>\$54,768</b>

<b>Material/Labor Cost</b>		<b>\$54,768</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$42,813</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$8,563</b>
<b>Construction Cost</b>		<b>\$51,376</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$8,220</b>
<b>Total Project Cost</b>		<b>\$59,596</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNEL04	<b>Title:</b>	EXTERIOR LIGHTING REPLACEMENT
<b>Priority Sequence:</b>	8		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	EL4A	<b>System:</b>	ELECTRICAL
		<b>Component:</b>	DEVICES AND FIXTURES
		<b>Element:</b>	EXTERIOR LIGHTING
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Energy Conservation	\$200	
<b>Code Application:</b>	NEC	410	
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Building-wide: Floor(s) 1, 2, 3, 4, G, R		

**Project Description**

The exterior areas adjacent to the building are illuminated by building-mounted HID, compact fluorescent, and stanchion-mounted fixtures that are currently in good condition. However, their replacement should be scheduled within the next ten years due to predictable wear. Install new energy-efficient fixtures, and place them on photocell activation.



**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNEL04

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
HID wall-mount fixture and demolition of existing fixture	EA	3	\$406	\$1,218	\$190	\$570	\$1,788
Compact fluorescent, recessed exterior light and demolition of existing light	EA	14	\$143	\$2,002	\$100	\$1,400	\$3,402
Compact fluorescent, wall-mount exterior light and demolition of existing light	EA	5	\$131	\$655	\$137	\$685	\$1,340
Replace lighting stanchion, including fixture, 30 foot	EA	13	\$2,662	\$34,606	\$1,996	\$25,948	\$60,554
Replace lighting stanchion, including fixture, 12 foot	EA	9	\$1,331	\$11,979	\$1,220	\$10,980	\$22,959
<b>Project Totals:</b>				<b>\$50,460</b>		<b>\$39,583</b>	<b>\$90,043</b>

<b>Material/Labor Cost</b>		<b>\$90,043</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$71,119</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$14,224</b>
<b>Construction Cost</b>		<b>\$85,343</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$13,655</b>
<b>Total Project Cost</b>		<b>\$98,998</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNIS01	<b>Title:</b>	REFINISH FLOORING
<b>Priority Sequence:</b>	9		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	IS1A	<b>System:</b>	INTERIOR/FINISH SYS.
		<b>Component:</b>	FLOOR
		<b>Element:</b>	FINISHES-DRY
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	Not Applicable		
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	11/11/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G		

**Project Description**

Floor finishes are typically carpet, vinyl tile, or ceramic tile, and are not expected to outlast the scope of this assessment. Floor finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNIS01

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Carpet	SF	138,600	\$5.36	\$742,896	\$2.00	\$277,200	\$1,020,096
Vinyl floor tile	SF	53,310	\$3.53	\$188,184	\$2.50	\$133,275	\$321,459
Ceramic tile	SF	31,990	\$7.24	\$231,608	\$10.63	\$340,054	\$571,661
<b>Project Totals:</b>				<b>\$1,162,688</b>		<b>\$750,529</b>	<b>\$1,913,217</b>

<b>Material/Labor Cost</b>		<b>\$1,913,217</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$1,555,848</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$311,170</b>
<b>Construction Cost</b>		<b>\$1,867,018</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$298,723</b>
<b>Total Project Cost</b>		<b>\$2,165,740</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNIS02	<b>Title:</b>	REFINISH WALLS
<b>Priority Sequence:</b>	10		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	IS2B	<b>System:</b>	INTERIOR/FINISH SYS.
		<b>Component:</b>	PARTITIONS
		<b>Element:</b>	FINISHES
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	Not Applicable		
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	11/11/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G		

**Project Description**

The wall finishes are generally painted sheetrock and in fair condition, with minor damage and finish discoloration. Wall finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNIS02

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Standard wall finish (paint, wall covering, etc.)	SF	277,070	\$0.17	\$47,102	\$0.81	\$224,427	\$271,529
<b>Project Totals:</b>				<b>\$47,102</b>		<b>\$224,427</b>	<b>\$271,529</b>

<b>Material/Labor Cost</b>		<b>\$271,529</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$162,563</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$32,513</b>
<b>Construction Cost</b>		<b>\$195,075</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$31,212</b>
<b>Total Project Cost</b>		<b>\$226,287</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNIS03	<b>Title:</b>	REFINISH CEILINGS
<b>Priority Sequence:</b>	11		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	IS3B	<b>System:</b>	INTERIOR/FINISH SYS.
		<b>Component:</b>	CEILINGS
		<b>Element:</b>	REPLACEMENT
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	Not Applicable		
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	11/11/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G		

**Project Description**

The ceiling systems are a combination of painted sheetrock and suspended, acoustical tile systems. They are fair condition, with minor areas of damaged tile and discoloration. Ceiling finish upgrades should be considered as part of any future cosmetic improvements or major comprehensive renovation efforts.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNIS03

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Acoustical tile ceiling system	SF	191,910	\$2.12	\$406,849	\$2.98	\$571,892	\$978,741
Painted ceiling finish application	SF	21,320	\$0.17	\$3,624	\$0.81	\$17,269	\$20,894
<b>Project Totals:</b>				<b>\$410,474</b>		<b>\$589,161</b>	<b>\$999,635</b>

<b>Material/Labor Cost</b>		<b>\$999,635</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$715,587</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$143,117</b>
<b>Construction Cost</b>		<b>\$858,704</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$137,393</b>
<b>Total Project Cost</b>		<b>\$996,096</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNIS04	<b>Title:</b>	REPLACE INTERIOR DOORS
<b>Priority Sequence:</b>	12		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	IS4A	<b>System:</b>	INTERIOR/FINISH SYS.
		<b>Component:</b>	DOORS
		<b>Element:</b>	GENERAL
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	Not Applicable		
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	11/11/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G		

**Project Description**

The condition of the interior door systems is such that door system replacements are recommended as part of a comprehensive renovation effort. Complete demolition of the door systems and replacement according to a code compliant plan to properly protect egress passages is recommended.



**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNIS04

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Interior door and frame installation, with all hardware and accessible signage	EA	126	\$370	\$46,620	\$396	\$49,896	\$96,516
Rated door and rated metal frame, including all hardware and accessible signage	EA	360	\$672	\$241,920	\$812	\$292,320	\$534,240
<b>Project Totals:</b>				<b>\$288,540</b>		<b>\$342,216</b>	<b>\$630,756</b>

<b>Material/Labor Cost</b>		<b>\$630,756</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$466,117</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$93,223</b>
<b>Construction Cost</b>		<b>\$559,340</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$89,494</b>
<b>Total Project Cost</b>		<b>\$648,834</b>

**Specific Project Details**

**Facility Condition Analysis  
Section Three**

JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNPL01	<b>Title:</b>	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT
<b>Priority Sequence:</b>	13		
<b>Priority Class:</b>	3		
<b>Category Code:</b>	PL1E	<b>System:</b>	PLUMBING
		<b>Component:</b>	DOMESTIC WATER
		<b>Element:</b>	HEATING
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	Not Applicable		
<b>Project Class:</b>	Deferred Maintenance		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Item Only: Floor(s) G		

**Project Description**

Replacement of the domestic hot water converter is recommended. With age, heat exchanger efficiency is reduced by internal tube scaling. Internal wear will eventually lead to failure, allowing contaminants to enter the water system. Remove the existing system. Install a new heat exchanger, pumps, piping, and controls as needed.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNPL01

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Heat exchanger, pumps, piping, valves, controls, insulation, demolition	GPM	48	\$183	\$8,789	\$150	\$7,177	\$15,966
<b>Project Totals:</b>				<b>\$8,789</b>		<b>\$7,177</b>	<b>\$15,966</b>

<b>Material/Labor Cost</b>		\$15,966
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		\$12,532
<b>General Contractor Mark Up at 20.0%</b>	+	\$2,506
<b>Construction Cost</b>		\$15,039
<b>Professional Fees at 16.0%</b>	+	\$2,406
<b>Total Project Cost</b>		<b>\$17,445</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNFS01	<b>Title:</b>	REPLACE SPRINKLER HEADS
<b>Priority Sequence:</b>	14		
<b>Priority Class:</b>	4		
<b>Category Code:</b>	FS3A	<b>System:</b>	FIRE/LIFE SAFETY
		<b>Component:</b>	SUPPRESSION
		<b>Element:</b>	SPRINKLERS
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	NFPA	1, 13, 13D, 101	
<b>Project Class:</b>	Capital Renewal		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G		

**Project Description**

The sprinkler heads are recommended for replacement. The statistical life cycle for a sprinkler head is approximately twenty years. During this time, scale can accumulate inside the head and cause it to malfunction when needed. It is recommended that the aging sprinkler heads be replaced to ensure that proper protection is available.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNFS01

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Fire sprinkler head replacement	SF	280,575	\$0.09	\$25,252	\$0.35	\$98,201	\$123,453
<b>Project Totals:</b>				<b>\$25,252</b>		<b>\$98,201</b>	<b>\$123,453</b>

<b>Material/Labor Cost</b>		<b>\$123,453</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$75,806</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$15,161</b>
<b>Construction Cost</b>		<b>\$90,967</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$14,555</b>
<b>Total Project Cost</b>		<b>\$105,522</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNFS02	<b>Title:</b>	REPLACE EXIT SIGNS
<b>Priority Sequence:</b>	15		
<b>Priority Class:</b>	4		
<b>Category Code:</b>	FS1A	<b>System:</b>	FIRE/LIFE SAFETY
		<b>Component:</b>	LIGHTING
		<b>Element:</b>	EGRESS LTG./EXIT SIGNAGE
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Energy Conservation	\$1,560	
<b>Code Application:</b>	NFPA	101-47	
	IBC	1011	
<b>Project Class:</b>	Capital Renewal		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G		

**Project Description**

Replace the existing exit signage throughout the building, and install new exit signs as needed. The new units should be connected to the existing emergency power network. LED type exit signs are recommended, because they are energy efficient and require minimal maintenance.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNFS02

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Replacement of existing exit signs with LED units	EA	188	\$76.00	\$14,288	\$85.00	\$15,980	\$30,268
<b>Project Totals:</b>				<b>\$14,288</b>		<b>\$15,980</b>	<b>\$30,268</b>

<b>Material/Labor Cost</b>		<b>\$30,268</b>
<b>Material Index</b>		<b>100.7%</b>
<b>Labor Index</b>		<b>51.3%</b>
<b>Material/Labor Indexed Cost</b>		<b>\$22,586</b>
<b>General Contractor Mark Up at 20.0%</b>	<b>+</b>	<b>\$4,517</b>
<b>Construction Cost</b>		<b>\$27,103</b>
<b>Professional Fees at 16.0%</b>	<b>+</b>	<b>\$4,336</b>
<b>Total Project Cost</b>		<b>\$31,439</b>

**Specific Project Details**

**Facility Condition Analysis  
Section Three**

JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNAC01	<b>Title:</b>	BUILDING ENTRY ACCESSIBILITY UPGRADES
<b>Priority Sequence:</b>	16		
<b>Priority Class:</b>	4		
<b>Category Code:</b>	AC2A	<b>System:</b>	ACCESSIBILITY
		<b>Component:</b>	BUILDING ENTRY
		<b>Element:</b>	GENERAL
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	ADAAG	403.6, 505	
<b>Project Class:</b>	Plant Adaption		
<b>Project Date:</b>	11/11/2009		
<b>Project Location:</b>	Undefined: Floor(s) 1		

**Project Description**

Building entrances are required to be handicapped accessible. There are exterior railing systems that do not meet current ADA requirements. To comply with the intent of this legislation, it is recommended that compliant painted metal handrails be installed at all entrances as required.



**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNAC01

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Freestanding handrail system, painted	LF	35	\$91.11	\$3,189	\$150	\$5,250	\$8,439
<b>Project Totals:</b>				<b>\$3,189</b>		<b>\$5,250</b>	<b>\$8,439</b>

<b>Material/Labor Cost</b>		<b>\$8,439</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$5,904</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$1,181</b>
<b>Construction Cost</b>		<b>\$7,085</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$1,134</b>
<b>Total Project Cost</b>		<b>\$8,219</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNAC02	<b>Title:</b>	KITCHENETTE ACCESSIBILITY UPGRADES
<b>Priority Sequence:</b>	17		
<b>Priority Class:</b>	4		
<b>Category Code:</b>	AC4A	<b>System:</b>	ACCESSIBILITY
		<b>Component:</b>	GENERAL
		<b>Element:</b>	FUNCTIONAL SPACE MOD.
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	ADAAG	804	
<b>Project Class:</b>	Plant Adaption		
<b>Project Date:</b>	11/11/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G		

**Project Description**

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

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNAC02

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
ADA compliant kitchenette unit with base cabinetry, overhead cabinetry, and amenities	SYS	3	\$4,894	\$14,682	\$1,999	\$5,997	\$20,679
<b>Project Totals:</b>				<b>\$14,682</b>		<b>\$5,997</b>	<b>\$20,679</b>

<b>Material/Labor Cost</b>		\$20,679
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		\$17,861
<b>General Contractor Mark Up at 20.0%</b>	+	\$3,572
<b>Construction Cost</b>		\$21,433
<b>Professional Fees at 16.0%</b>	+	\$3,429
<b>Total Project Cost</b>		<b>\$24,863</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNES03	<b>Title:</b>	BUILT-UP ROOF REPLACEMENT
<b>Priority Sequence:</b>	18		
<b>Priority Class:</b>	4		
<b>Category Code:</b>	ES4B	<b>System:</b>	EXTERIOR
		<b>Component:</b>	ROOF
		<b>Element:</b>	REPLACEMENT
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Energy Conservation	\$5,400	
<b>Code Application:</b>	Not Applicable		
<b>Project Class:</b>	Capital Renewal		
<b>Project Date:</b>	11/11/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) R		

**Project Description**

The built-up roofing system is not expected to outlast the scope of this analysis. Future budget modeling should include a provision for the replacement of all failing roofing systems. Replace this roof with a similar application.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNES03

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Built-up roof	SF	27,950	\$3.06	\$85,527	\$3.58	\$100,061	\$185,588
<b>Project Totals:</b>				<b>\$85,527</b>		<b>\$100,061</b>	<b>\$185,588</b>

<b>Material/Labor Cost</b>		<b>\$185,588</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<u>\$137,457</u>
<b>General Contractor Mark Up at 20.0%</b>	+	<u>\$27,491</u>
<b>Construction Cost</b>		<u>\$164,948</u>
<b>Professional Fees at 16.0%</b>	+	<u>\$26,392</u>
<b>Total Project Cost</b>		<u><b>\$191,340</b></u>



**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNEL03

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Power panels, conductors, raceways, devices, demolition, and cut and patching materials	SF	129,963	\$5.96	\$774,579	\$8.94	\$1,161,869	\$1,936,449
Switches, receptacles, cover plates, breakers, miscellaneous materials	SF	150,612	\$1.08	\$162,661	\$1.62	\$243,991	\$406,652
<b>Project Totals:</b>				<b>\$937,240</b>		<b>\$1,405,861</b>	<b>\$2,343,101</b>

<b>Material/Labor Cost</b>		\$2,343,101
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		\$1,665,008
<b>General Contractor Mark Up at 20.0%</b>	+	\$333,002
<b>Construction Cost</b>		\$1,998,009
<b>Professional Fees at 16.0%</b>	+	\$319,681
<b>Total Project Cost</b>		<b>\$2,317,691</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNEL02	<b>Title:</b>	INTERIOR LIGHTING UPGRADE
<b>Priority Sequence:</b>	20		
<b>Priority Class:</b>	4		
<b>Category Code:</b>	EL4B	<b>System:</b>	ELECTRICAL
		<b>Component:</b>	DEVICES AND FIXTURES
		<b>Element:</b>	INTERIOR LIGHTING
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Energy Conservation	\$85,860	
<b>Code Application:</b>	NEC	Articles 210, 410	
<b>Project Class:</b>	Capital Renewal		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G		

**Project Description**

An interior lighting upgrade is recommended. Replace existing aged and / or inefficient light fixtures with modern fixtures of the latest energy-efficient design. Select lamps with the same color temperature and rendering index for lighting uniformity. Install occupancy sensors in select areas for additional energy conservation.



**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNEL02

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
High efficiency fluorescent fixtures, occupancy sensors, and demolition of existing lighting	SF	280,575	\$2.83	\$794,027	\$3.46	\$970,790	\$1,764,817
<b>Project Totals:</b>				<b>\$794,027</b>		<b>\$970,790</b>	<b>\$1,764,817</b>

<b>Material/Labor Cost</b>		\$1,764,817
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		\$1,297,600
<b>General Contractor Mark Up at 20.0%</b>	+	\$259,520
<b>Construction Cost</b>		\$1,557,121
<b>Professional Fees at 16.0%</b>	+	\$249,139
<b>Total Project Cost</b>		<b>\$1,806,260</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNPL02	<b>Title:</b>	WATER SUPPLY PIPING REPLACEMENT
<b>Priority Sequence:</b>	21		
<b>Priority Class:</b>	4		
<b>Category Code:</b>	PL1A	<b>System:</b>	PLUMBING
		<b>Component:</b>	DOMESTIC WATER
		<b>Element:</b>	PIPING NETWORK
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	IPC	Chapter 6	
<b>Project Class:</b>	Capital Renewal		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G		

**Project Description**

Replace water supply and process piping as needed throughout the facility. Remove the aging water supply and process piping. Install new copper water supply piping with fiberglass insulation. Provide isolation valves, pressure regulators, shock absorbers, and backflow prevention devices in appropriate areas. Install new process piping as needed such as gas lines, vacuum lines, compressed air lines, purified water lines, process steam lines, etc., along with related isolation valves and gas cocks. Clearly label exposed piping for identification of the conveyed fluids and gases.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNPL02

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Water and specialty pipe and fittings, valves, backflow prevention devices, insulation, hangers, labels, demolition, and cut and patching materials	SF	129,983	\$2.46	\$319,758	\$6.15	\$799,395	\$1,119,154
<b>Project Totals:</b>				<b>\$319,758</b>		<b>\$799,395</b>	<b>\$1,119,154</b>

<b>Material/Labor Cost</b>		<b>\$1,119,154</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$732,086</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$146,417</b>
<b>Construction Cost</b>		<b>\$878,504</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$140,561</b>
<b>Total Project Cost</b>		<b>\$1,019,064</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNPL03	<b>Title:</b>	DRAIN PIPING REPLACEMENT
<b>Priority Sequence:</b>	22		
<b>Priority Class:</b>	4		
<b>Category Code:</b>	PL2A	<b>System:</b>	PLUMBING
		<b>Component:</b>	WASTEWATER
		<b>Element:</b>	PIPING NETWORK
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	IPC	Chapters 7-12	
<b>Project Class:</b>	Capital Renewal		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Floor-wide: Floor(s) 1, 2, 3, 4, G		

**Project Description**

Replacement of the aging drain piping is recommended throughout the facility. Failure to replace the old drain piping systems will result in frequent leaks and escalating maintenance costs. Remove sanitary and storm drain piping as needed. Install new cast-iron drain piping networks with copper run-outs to the fixtures to convey normal wastes. Install corrosion resistant pipe and fittings for acid wastes. Install new floor drains, roof drains, and traps.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNPL03

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Cast-iron, copper, and corrosion resistant pipe and fittings, hangers, floor / roof drains, traps, demolition, and cut and patching materials	SF	129,983	\$3.91	\$508,234	\$9.00	\$1,169,847	\$1,678,081
<b>Project Totals:</b>				<b>\$508,234</b>		<b>\$1,169,847</b>	<b>\$1,678,081</b>

<b>Material/Labor Cost</b>		<b>\$1,678,081</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$1,111,923</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$222,385</b>
<b>Construction Cost</b>		<b>\$1,334,307</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$213,489</b>
<b>Total Project Cost</b>		<b>\$1,547,796</b>

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
JOYN : JOYNER LIBRARY

**Project Description**

<b>Project Number:</b>	JOYNPL04	<b>Title:</b>	REPLACE SUMP PUMPS AND SEWAGE EJECTORS
<b>Priority Sequence:</b>	23		
<b>Priority Class:</b>	4		
<b>Category Code:</b>	PL2B	<b>System:</b>	PLUMBING
		<b>Component:</b>	WASTEWATER
		<b>Element:</b>	PUMPS
<b>Building Code:</b>	JOYN		
<b>Building Name:</b>	JOYNER LIBRARY		
<b>Subclass/Savings:</b>	Not Applicable		
<b>Code Application:</b>	IPC	712	
<b>Project Class:</b>	Capital Renewal		
<b>Project Date:</b>	10/16/2009		
<b>Project Location:</b>	Item Only: Floor(s) G		

**Project Description**

Duplex sump pumps and sewage ejectors facilitate the drainage of stormwater and sanitary waste from this facility. These systems are currently serviceable. However, it should be anticipated that they will require replacement within the purview of this analysis.

**Specific Project Details**  
**Facility Condition Analysis**  
**Section Three**  
 JOYN : JOYNER LIBRARY

**Project Cost**

**Project Number:** JOYNPL04

**Task Cost Estimate**

<b>Task Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Material Unit Cost</b>	<b>Total Material Cost</b>	<b>Labor Unit Cost</b>	<b>Total Labor Cost</b>	<b>Total Cost</b>
Sump pump system, including pit, pumps, controls, connections, and demolition of existing system	SYS	6	\$4,440	\$26,640	\$3,120	\$18,720	\$45,360
Sewage ejector system, including pit, pumps, controls, connections, and demolition of existing system	SYS	2	\$4,440	\$8,880	\$3,120	\$6,240	\$15,120
<b>Project Totals:</b>				<b>\$35,520</b>		<b>\$24,960</b>	<b>\$60,480</b>

<b>Material/Labor Cost</b>		<b>\$60,480</b>
<b>Material Index</b>		100.7%
<b>Labor Index</b>		51.3%
<b>Material/Labor Indexed Cost</b>		<b>\$48,573</b>
<b>General Contractor Mark Up at 20.0%</b>	+	<b>\$9,715</b>
<b>Construction Cost</b>		<b>\$58,288</b>
<b>Professional Fees at 16.0%</b>	+	<b>\$9,326</b>
<b>Total Project Cost</b>		<b>\$67,614</b>



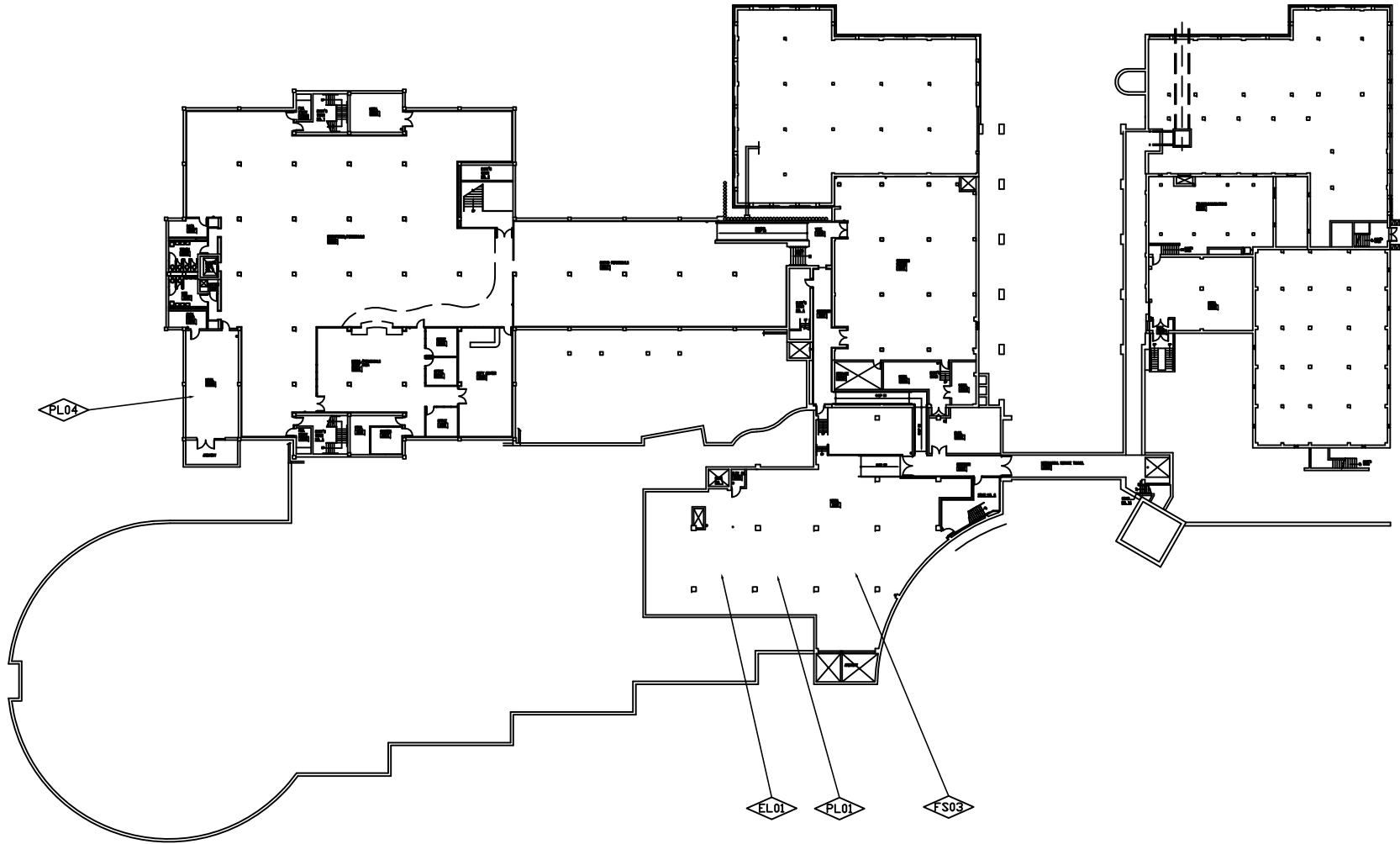


FACILITY CONDITION ANALYSIS

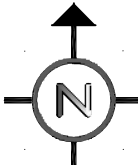
**SECTION 4**

**DRAWINGS  
AND PROJECT LOCATIONS**





- AC02
- EL02
- EL03
- FS01
- FS02
- FS05
- HV01
- IS01
- IS02
- IS03
- IS04
- PL02
- PL03



JOYNER  
LIBRARY

BLDG NO. JOYN



FACILITY  
CONDITION  
ANALYSIS

2165 West Park Court  
Suite N  
Stone Mountain GA 30087  
770.879.7376

PROJECT NUMBER  
APPLIES TO  
ONE ROOM ONLY

PROJECT NUMBER  
APPLIES TO  
ONE ITEM ONLY

PROJECT NUMBER  
APPLIES TO  
ENTIRE BUILDING

PROJECT NUMBER  
APPLIES TO  
ENTIRE FLOOR

PROJECT NUMBER  
APPLIES TO A SITUATION  
OF UNDEFINED EXTENTS

PROJECT NUMBER  
APPLIES TO AREA  
AS NOTED

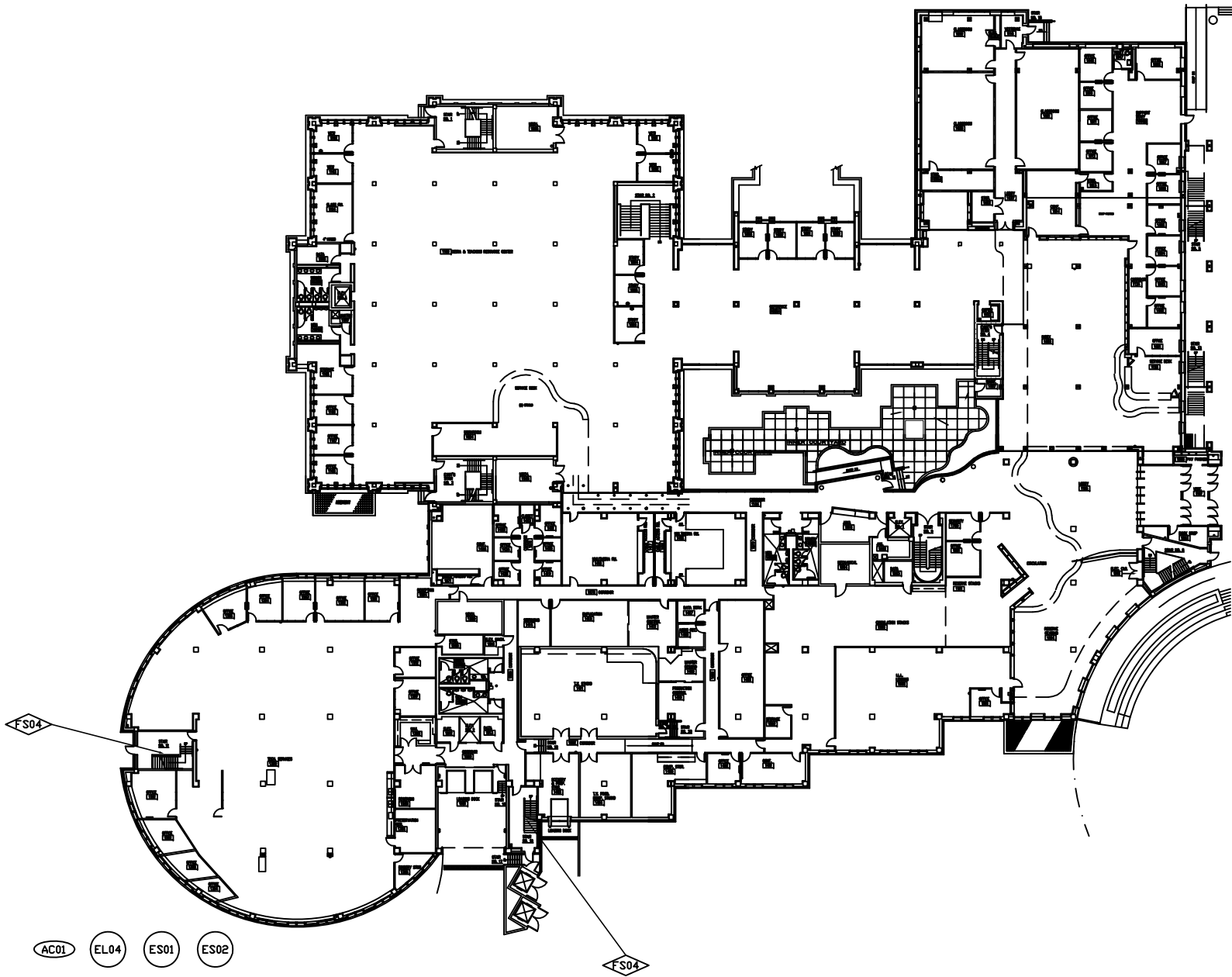
Date: 11/11/09

Drawn by: J.T.V.

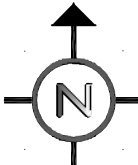
Project No. 09-041

GROUND  
FLOOR  
PLAN

Sheet No.  
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- AC01
- EL04
- ES01
- ES02
- AC02
- EL02
- EL03
- FS01
- FS02
- FS05
- HV01
- IS01
- IS02
- IS03
- IS04
- PL02
- PL03



JOYNER  
LIBRARY

BLDG NO. JOYN



FACILITY  
CONDITION  
ANALYSIS

2165 West Park Court  
Suite N  
Stone Mountain GA 30087  
770.879.7376

PROJECT NUMBER  
APPLIES TO  
ONE ROOM ONLY

PROJECT NUMBER  
APPLIES TO  
ONE ITEM ONLY

PROJECT NUMBER  
APPLIES TO  
ENTIRE BUILDING

PROJECT NUMBER  
APPLIES TO  
ENTIRE FLOOR

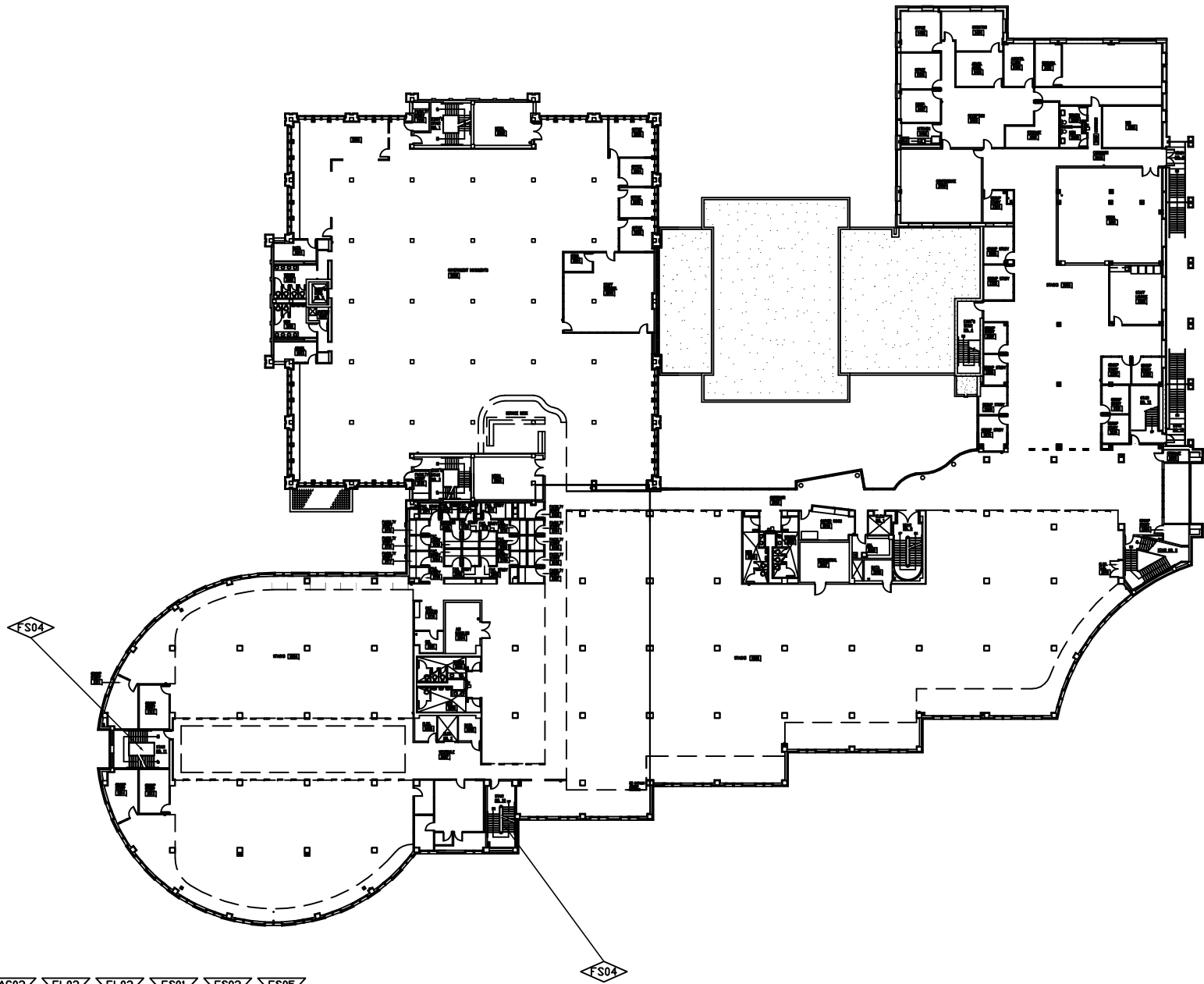
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APPLIES TO A SITUATION  
OF UNDEFINED EXTENTS

PROJECT NUMBER  
APPLIES TO AREA  
AS NOTED

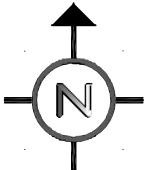
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Drawn by: J.T.V.  
Project No. 09-041

FIRST  
FLOOR  
PLAN

Sheet No.  
2 of 5



- AC02
- EL02
- EL03
- FS01
- FS02
- FS05
- HV01
- IS01
- IS02
- IS03
- IS04
- PL02
- PL03



JOYNER  
LIBRARY

BLDG NO. JOYN



FACILITY  
CONDITION  
ANALYSIS

2165 West Park Court  
Suite N  
Stone Mountain GA 30087  
770.879.7376

PROJECT NUMBER  
APPLIES TO  
ONE ROOM ONLY

PROJECT NUMBER  
APPLIES TO  
ONE ITEM ONLY

PROJECT NUMBER  
APPLIES TO  
ENTIRE BUILDING

PROJECT NUMBER  
APPLIES TO  
ENTIRE FLOOR

PROJECT NUMBER  
APPLIES TO A SITUATION  
OF UNDEFINED EXTENTS

PROJECT NUMBER  
APPLIES TO AREA  
AS NOTED

Date: 11/11/09

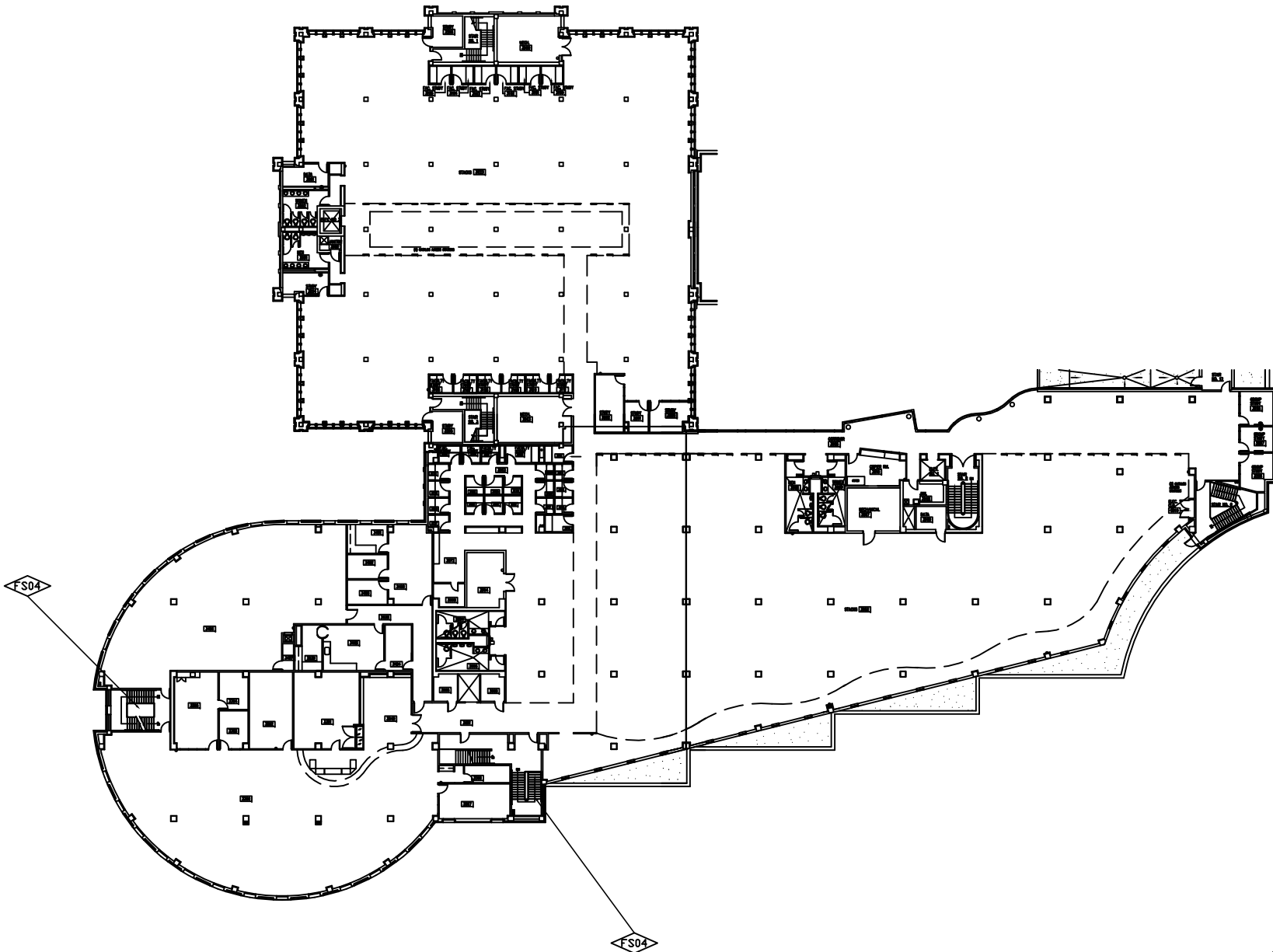
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Project No. 09-041

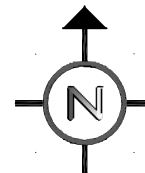
SECOND  
FLOOR  
PLAN

Sheet No.

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- AC02   EL02   EL03   FS01   FS02   FS05
- HV01   IS01   IS02   IS03   IS04   PL02
- PL03



JOYNER  
LIBRARY

BLDG NO. JOYN



FACILITY  
CONDITION  
ANALYSIS

2165 West Park Court  
Suite N  
Stone Mountain GA 30087  
770.879.7376

PROJECT NUMBER  
APPLIES TO  
ONE ROOM ONLY

PROJECT NUMBER  
APPLIES TO  
ONE ITEM ONLY

PROJECT NUMBER  
APPLIES TO  
ENTIRE BUILDING

PROJECT NUMBER  
APPLIES TO  
ENTIRE FLOOR

PROJECT NUMBER  
APPLIES TO A SITUATION  
OF UNDEFINED EXTENTS

PROJECT NUMBER  
APPLIES TO AREA  
AS NOTED

Date: 11/11/09

Drawn by: J.T.V.

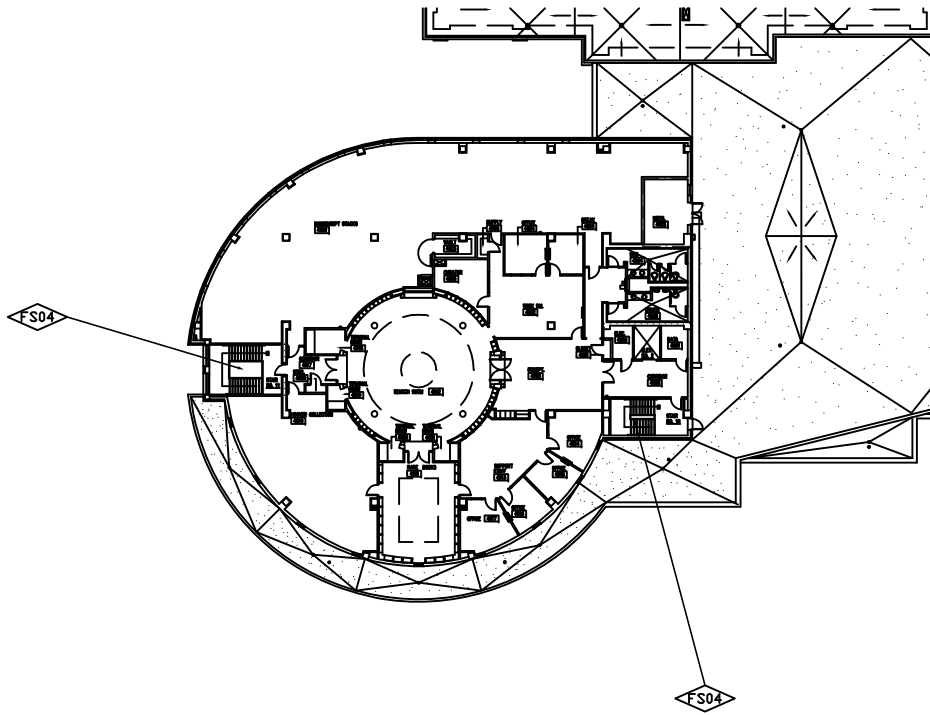
Project No. 09-041

THIRD  
FLOOR  
PLAN

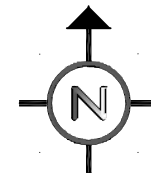
Sheet No.

4 of 5

ROOF  
 ES03 HV01



AC02	EL02	EL03	FS01	FS02	FS05
HV01	IS01	IS02	IS03	IS04	PL02
PL03					



JOYNER  
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BLDG NO. JOYN



FACILITY  
CONDITION  
ANALYSIS

2165 West Park Court  
Suite N  
Stone Mountain GA 30087  
770.879.7376

PROJECT NUMBER  
APPLIES TO  
ONE ROOM ONLY

PROJECT NUMBER  
APPLIES TO  
ONE ITEM ONLY

PROJECT NUMBER  
APPLIES TO  
ENTIRE BUILDING

PROJECT NUMBER  
APPLIES TO  
ENTIRE FLOOR

PROJECT NUMBER  
APPLIES TO A SITUATION  
OF UNDEFINED EXTENTS

PROJECT NUMBER  
APPLIES TO AREA  
AS NOTED

Date: 11/11/09

Drawn by: J.T.V.

Project No. 09-041

FOURTH  
FLOOR  
PLAN

Sheet No.

5 of 5





FACILITY CONDITION ANALYSIS

**SECTION 5**

LIFE CYCLE MODEL SUMMARY  
AND PROJECTIONS



**Life Cycle Model**  
**Building Component Summary**  
**JOYN : JOYNER LIBRARY**

<b>Unifomat Code</b>	<b>Component Description</b>	<b>Qty</b>	<b>Units</b>	<b>Unit Cost</b>	<b>Complex Adj</b>	<b>Total Cost</b>	<b>Install Date</b>	<b>Life Exp</b>
B2010	EXTERIOR FINISH RENEWAL	2,620	SF	\$1.30		\$3,415	1954	10
B2010	EXTERIOR FINISH RENEWAL	3,200	SF	\$1.30		\$4,171	1996	10
B2010	EXTERIOR FINISH RENEWAL	52,330	SF	\$1.30	.31	\$21,147	1954	10
B2020	STANDARD GLAZING AND CURTAIN WALL	6,460	SF	\$104.04		\$672,076	1996	55
B2030	OVERHEAD GARAGE DOOR	1	EA	\$7,425.74		\$7,426	1996	30
B2030	HIGH TRAFFIC EXTERIOR DOOR SYSTEM	12	LEAF	\$4,311.24		\$51,735	1996	20
B2030	LOW TRAFFIC EXTERIOR DOOR SYSTEM	24	LEAF	\$2,863.29		\$68,719	1996	40
B3010	BUILT-UP ROOF	27,950	SF	\$6.70		\$187,339	1996	20
B3010	BUILT-UP ROOF	34,160	SF	\$6.70		\$228,962	2002	20
C1020	STANDARD DOOR AND FRAME INCLUDING HARDWARE	126	LEAF	\$783.68		\$98,743	1954	35
C1020	STANDARD DOOR AND FRAME INCLUDING HARDWARE	115	LEAF	\$783.68		\$90,123	1996	35
C1020	RATED DOOR AND FRAME INCLUDING HARDWARE	360	LEAF	\$1,489.06		\$536,062	1954	35
C1020	RATED DOOR AND FRAME INCLUDING HARDWARE	344	LEAF	\$1,489.06		\$512,237	1996	35
C1020	INTERIOR DOOR HARDWARE	360	EA	\$423.04		\$152,295	1954	15
C1020	INTERIOR DOOR HARDWARE	344	EA	\$423.04		\$145,527	1996	15
C1020	INTERIOR DOOR HARDWARE	126	EA	\$423.04		\$53,303	1954	15
C1020	INTERIOR DOOR HARDWARE	115	EA	\$423.04		\$48,650	1996	15
C3010	STANDARD WALL FINISH (PAINT, WALL COVERING, ETC.)	124,680	SF	\$0.80		\$99,874	1954	10
C3010	STANDARD WALL FINISH (PAINT, WALL COVERING, ETC.)	152,390	SF	\$0.80		\$122,070	1996	10
C3020	CARPET	62,370	SF	\$8.75		\$545,517	1954	10
C3020	CARPET	76,230	SF	\$8.75		\$666,743	1996	10
C3020	VINYL FLOOR TILE	23,990	SF	\$6.59		\$158,043	1954	15
C3020	VINYL FLOOR TILE	29,320	SF	\$6.59		\$193,156	1996	15
C3020	CERAMIC FLOOR TILE	14,396	SF	\$17.36		\$249,949	1954	20
C3020	CERAMIC FLOOR TILE	17,594	SF	\$17.36		\$305,474	1996	20
C3030	ACOUSTICAL TILE CEILING SYSTEM	86,360	SF	\$4.99		\$431,196	1954	15
C3030	ACOUSTICAL TILE CEILING SYSTEM	105,550	SF	\$4.99		\$527,012	1996	15
C3030	PAINTED CEILING FINISH APPLICATION	9,594	SF	\$0.80		\$7,685	1954	15
C3030	PAINTED CEILING FINISH APPLICATION	11,726	SF	\$0.80		\$9,393	1996	15

**Life Cycle Model**  
**Building Component Summary**  
**JOYN : JOYNER LIBRARY**

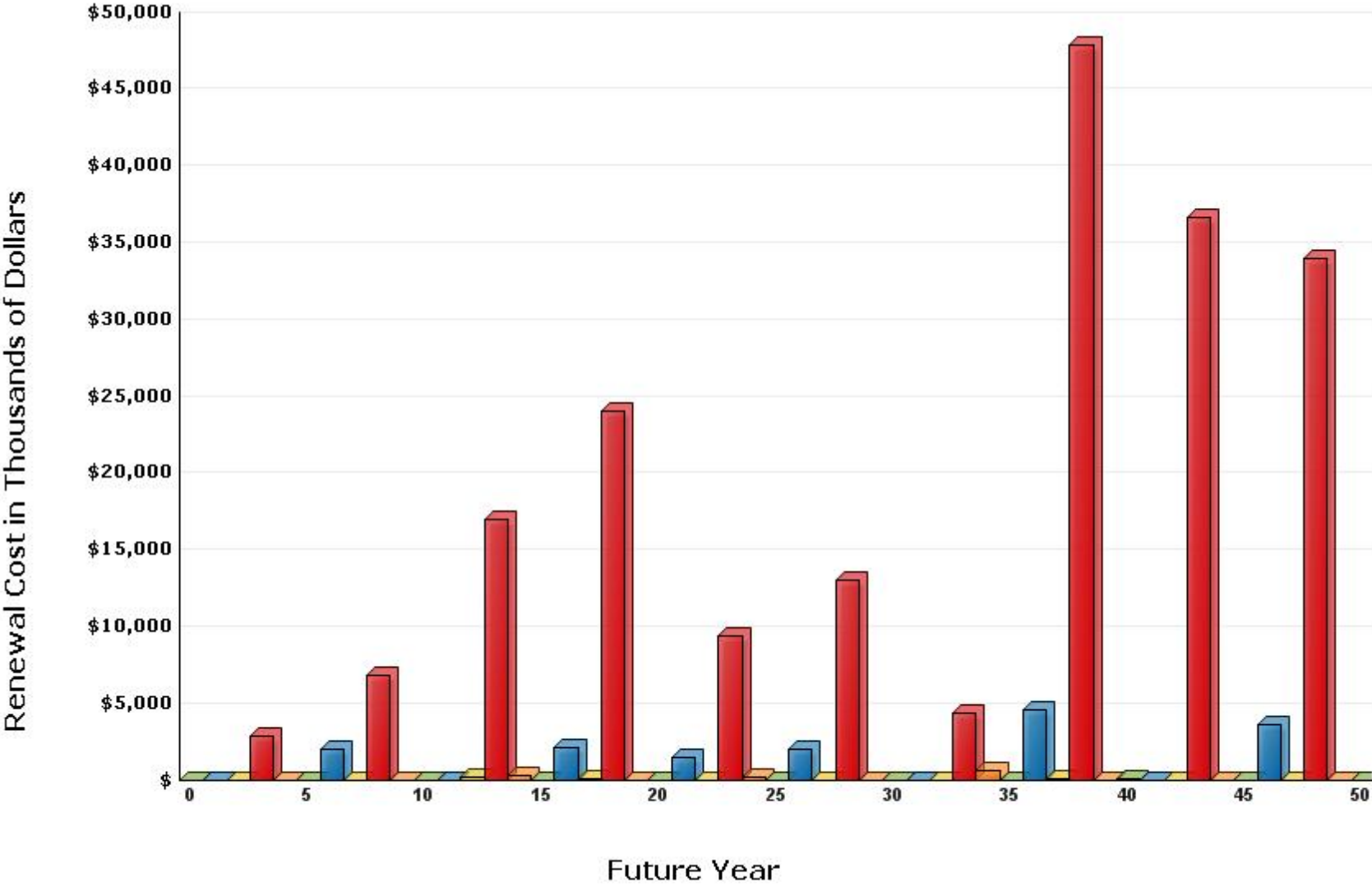
<b>Unifomat Code</b>	<b>Component Description</b>	<b>Qty</b>	<b>Units</b>	<b>Unit Cost</b>	<b>Complex Adj</b>	<b>Total Cost</b>	<b>Install Date</b>	<b>Life Exp</b>
D2010	PLUMBING FIXTURES - LABORATORY	280,575	SF	\$10.78		\$3,023,327	1996	35
D2020	WATER / PROCESS PIPING - LABORATORY	150,592	SF	\$7.67		\$1,155,401	1996	35
D2020	WATER / PROCESS PIPING - LABORATORY	129,983	SF	\$7.67		\$997,280	1976	35
D2020	WATER HEATER, SHELL AND TUBE HEAT EXCHANGER	77	GPM	\$355.69		\$27,388	1996	24
D2020	WATER HEATER, SHELL AND TUBE HEAT EXCHANGER	48	GPM	\$355.69		\$17,073	1976	24
D2030	DRAIN PIPING - LABORATORY	150,592	SF	\$11.66		\$1,756,177	1996	40
D2030	DRAIN PIPING - LABORATORY	129,983	SF	\$11.66		\$1,515,838	1976	40
D2030	SUMP PUMP SYS (2 PUMPS, CONTROLS)	6	SYS	\$8,276.49		\$49,659	1996	20
D2030	SUMP PUMP SYS (2 PUMPS, CONTROLS)	2	SYS	\$8,276.49		\$16,553	1996	20
D2050	AIR COMPRESSOR PACKAGE (AVERAGE SIZE)	1	SYS	\$6,456.49		\$6,456	1996	25
D3030	CHILLER - WATER COOLED (UP TO 200 TONS)	178	TON	\$1,032.84		\$183,845	1996	25
D3030	CHILLER - WATER COOLED (200-1000 TONS)	372	TON	\$686.38		\$255,334	1996	25
D3040	CONDENSATE RECEIVER	1	SYS	\$9,504.01		\$9,504	1996	15
D3040	EXHAUST FAN - CENTRIFUGAL ROOF EXHAUSTER OR SIMILAR	4	EA	\$2,768.62		\$11,074	1996	20
D3040	EXHAUST FAN - PROPELLER TYPE OR SIMILAR	2	EA	\$1,357.34		\$2,715	1996	20
D3040	FUME HOOD INCLUDING MECH. SYS	1	SYS	\$41,216.93		\$41,217	2005	20
D3040	HVAC SYSTEM - LABORATORY	129,963	SF	\$73.54		\$9,557,488	1976	25
D3040	HVAC SYSTEM - LABORATORY	150,612	SF	\$73.54		\$11,076,017	1996	25
D3040	BASE MTD. PUMP - UP TO 15 HP	40	HP	\$3,175.77		\$127,031	1996	20
D3040	BASE MTD. PUMP - 15 HP TO 50 HP	95	HP	\$1,142.19		\$108,508	1996	20
D3040	BASE MTD. PUMP - 50 HP TO 150 HP	100	HP	\$782.99		\$78,299	1996	25
D4010	FIRE SPRINKLER SYSTEM	150,612	SF	\$6.86		\$1,033,362	1996	80
D4010	FIRE SPRINKLER SYSTEM	129,963	SF	\$6.86		\$891,688	1976	80
D4010	FIRE SPRINKLER HEADS	150,612	SF	\$0.38		\$56,803	1996	20
D4010	FIRE SPRINKLER HEADS	129,963	SF	\$0.38		\$49,016	1996	20
D4020	FIRE PUMP - ELECTRIC (UP TO 750 GPM)	500	GPM	\$86.64		\$43,322	1976	25
D5010	ELECTRICAL SYSTEM - LABORATORY	150,612	SF	\$14.42		\$2,171,833	1996	50
D5010	ELECTRICAL SYSTEM - LABORATORY	129,963	SF	\$14.42		\$1,874,073	1976	50
D5010	ELECTRICAL SWITCHGEAR 277/480V	2,000	AMP	\$39.56		\$79,127	1996	20

**Life Cycle Model  
Building Component Summary  
JOYN : JOYNER LIBRARY**

<b>Unifomat Code</b>	<b>Component Description</b>	<b>Qty</b>	<b>Units</b>	<b>Unit Cost</b>	<b>Complex Adj</b>	<b>Total Cost</b>	<b>Install Date</b>	<b>Life Exp</b>
D5010	ELECTRICAL SWITCHGEAR 277/480V	2,500	AMP	\$39.56		\$98,909	1996	20
D5010	ELECTRICAL SWITCHGEAR 277/480V	1,600	AMP	\$39.56		\$63,302	1976	20
D5010	TRANSFORMER, DRY, 480-208V (30-150 KVA)	1,575	KVA	\$96.00		\$151,193	1996	30
D5010	TRANSFORMER, DRY, 480-208V (OVER 150 KVA)	225	KVA	\$61.11		\$13,751	1996	30
D5010	VARIABLE FREQUENCY DRIVE (UP TO 10 HP)	30	HP	\$1,020.08		\$30,602	1996	12
D5010	VARIABLE FREQUENCY DRIVE (10 - 50 HP)	105	HP	\$388.17		\$40,758	1996	12
D5010	VARIABLE FREQUENCY DRIVE (OVER 50 HP)	100	HP	\$237.46		\$23,746	1996	12
D5020	EMERGENCY LIGHT (BATTERY)	150	EA	\$283.62		\$42,543	1996	20
D5020	EXIT SIGNS (BATTERY)	188	EA	\$280.76		\$52,783	1996	20
D5020	EXTERIOR LIGHT (HID)	3	EA	\$689.58		\$2,069	1976	20
D5020	LIGHTING - LABORATORY	280,575	SF	\$6.29		\$1,765,709	1996	20
D5030	FIRE ALARM SYSTEM, POINT ADDRESSABLE	280,575	SF	\$2.61		\$733,589	1996	15
E2010	KITCHENETTE UNIT WITH CABINETRY AND AMENITIES	3	LOT	\$5,940.22		<u>\$17,821</u>	1996	20
						<b>\$45,450,224</b>		

# Life Cycle Model Expenditure Projections

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Average Annual Renewal Cost Per SqFt \$6.27

FACILITY CONDITION ANALYSIS

**SECTION 6**

PHOTOGRAPHIC LOG





**Photo Log - Facility Condition  
Analysis**

**JOYN : JOYNER LIBRARY**

<b>Photo ID No</b>	<b>Description</b>	<b>Location</b>	<b>Date</b>
JOYN001a	Roof finishes	Roof	9/2/2009
JOYN001e	Potter PFC Series fire alarm control sub-panel	Entrance to room 4010	9/2/2009
JOYN002a	Roof finishes	Roof	9/2/2009
JOYN002e	Sprinkler riser, dry system, and local air compressor	Room 4009	9/2/2009
JOYN003a	Roof finishes	Roof	9/2/2009
JOYN003e	Potter PFC Series fire alarm control sub-panel	Mechanical room B901	9/2/2009
JOYN004a	Roof finishes	Roof	9/2/2009
JOYN004e	Zenith automatic transfer switch	Mechanical room B901	9/2/2009
JOYN005a	Roof finishes	Roof	9/2/2009
JOYN005e	Simplex Model 4100 fire alarm master control panel	Mechanical room B901	9/2/2009
JOYN006a	Site finishes	East elevation	9/2/2009
JOYN006e	Electric fire pump	Mechanical room B901	9/2/2009
JOYN007a	Exterior elevation	West facade	9/2/2009
JOYN007e	Cutler Hammer fire pump controller / automatic transfer switch	Mechanical room B901	9/2/2009
JOYN008a	Handrail and guardrails that are ADA and code compliant except the lack of a guardrail around the inner rung of the open stair design	Fourth floor, southwest stair	9/2/2009
JOYN008e	Roof-mounted ventilation equipment	Roof, Joyner Drum addition	9/2/2009
JOYN009a	Single level drinking fountain set at a child's height	Third floor, elevator 3 lobby	9/2/2009
JOYN009e	Internal roof drain	Roof, Joyner Drum addition	9/2/2009
JOYN010a	Service counter	Third floor	9/2/2009
JOYN010e	Vane axial exhaust fan EF1	Roof, Joyner Drum addition	9/2/2009
JOYN011a	Lack of wheelchair access to base cabinet sinks	First floor, technical services room 1200	9/2/2009
JOYN011e	Multizone air handler	Mechanical room 4903	9/2/2009
JOYN012a	One of two east facade fire escapes with open risers and painted metal handrails but lacking guardrail at outside edge	East elevation	9/2/2009
JOYN012e	Multizone air handler	Mechanical room 3904	9/2/2009
JOYN013a	Exterior elevation	East facade, east wing	9/2/2009
JOYN013e	Multizone air handler	Mechanical room 3905	9/2/2009
JOYN014a	Exterior elevation	North facade, east wing	9/2/2009
JOYN014e	Multizone air handler	Mechanical room 3903	9/2/2009
JOYN015a	Exterior elevation, showing lack of handrails at site steps	Northeast corner, northwest wing	9/2/2009

**Photo Log - Facility Condition  
Analysis**

**JOYN : JOYNER LIBRARY**

<b>Photo ID No</b>	<b>Description</b>	<b>Location</b>	<b>Date</b>
JOYN015e	Multizone air handler	Mechanical room 3900	9/2/2009
JOYN016a	Exterior elevation	North facade, central wing	9/2/2009
JOYN016e	Multizone air handler	Mechanical room 2900	9/2/2009
JOYN017a	Exterior elevation	Northwest corner, east wing	9/2/2009
JOYN017e	Multizone air handler	Mechanical room 2903	9/2/2009
JOYN018a	Exterior elevation, showing lack of handrails at site steps	North facade, central wing	9/2/2009
JOYN018e	Hybrid digital /pneumatic HVAC controls by Environmental	Mechanical room 2903	9/2/2009
JOYN019a	Exterior elevation	West facade, northwest wing	9/2/2009
JOYN019e	Multizone air handler	Mechanical room 2904	9/2/2009
JOYN020a	Exterior elevation	West facade, northwest wing	9/2/2009
JOYN020e	Multizone air handler	Mechanical room 2907	9/2/2009
JOYN021a	Exterior elevation	Southwest side of "drum"	9/2/2009
JOYN021e	Multizone air handler	Mechanical room 2911	9/2/2009
JOYN022a	Exterior elevation	South facade	9/2/2009
JOYN022e	Multizone air handler	Mechanical room 2911	9/2/2009
JOYN023a	Exterior elevation	Southeast side of "drum"	9/2/2009
JOYN023e	Multizone air handler	Mechanical room 2911	9/2/2009
JOYN024a	Exterior elevation	South facade	9/2/2009
JOYN024e	Multizone air handler	Mechanical room 2909	9/2/2009
JOYN025a	Exterior elevation	Concave southeast corner	9/2/2009
JOYN025e	Multizone air handler	Mechanical room 2904	9/2/2009
JOYN026a	Exterior elevation	East facade	9/2/2009
JOYN026e	Multizone air handler	Mechanical room 2908	9/2/2009
JOYN027e	Multi-zone air handler	Mechanical room 2905	9/2/2009
JOYN028e	Trane water-cooled centrifugal 178 ton chiller	Mechanical room B901	9/2/2009
JOYN029e	Trane water-cooled centrifugal 372 ton chiller	Mechanical room B901	9/2/2009
JOYN030e	VFDs for cooling towers 1, 2A, 2B	Mechanical room B901	9/2/2009
JOYN031e	Chilled water circulation pump	Mechanical room B901	9/2/2009
JOYN032e	Glycol circulation pump P-7	Mechanical room B901	9/2/2009
JOYN033e	Glycol circulation pump P-9	Mechanical room B901	9/2/2009
JOYN034e	Two chilled water circulation pumps	Mechanical room B901	9/2/2009
JOYN035e	Duplex reciprocating air compressor, HVAC controls	Mechanical room B901	9/2/2009

**Photo Log - Facility Condition  
Analysis**

**JOYN : JOYNER LIBRARY**

<b>Photo ID No</b>	<b>Description</b>	<b>Location</b>	<b>Date</b>
JOYN036e	Chilled water circulation pump P-3, AHU-13	Mechanical room B901	9/2/2009
JOYN037e	Chilled water circulation pump P-1	Mechanical room B901	9/2/2009
JOYN038e	Chilled water circulation pump P-6	Mechanical room B901	9/2/2009
JOYN039e	Water to steam heat exchanger, pumps, and tank	Mechanical room B901	9/2/2009
JOYN040e	Chilled water circulation pump P-8	Mechanical room B901	9/2/2009
JOYN041e	Chilled water circulation pump P-10	Mechanical room B901	9/2/2009
JOYN042e	Glycol mixing station with circulation pump P-16	Mechanical room B901	9/2/2009
JOYN043e	Water softener with circulation pump	Mechanical room B901	9/2/2009
JOYN044e	Duplex condensate receiver P-13	Mechanical room B901	9/2/2009
JOYN045e	Duplex stormwater sump pump	Mechanical room B901	9/2/2009
JOYN046e	Air handler	Mechanical room B901	9/2/2009
JOYN047e	Vane axial exhaust fan	Mechanical room B901	9/2/2009
JOYN048e	Multizone air handler	Mechanical room B904	9/2/2009
JOYN049e	Multizone air handler	Mechanical room B909	9/2/2009
JOYN050e	Water to steam heat exchanger, pump	Mechanical room B909	9/2/2009
JOYN051e	Duplex sanitary sewer lift station	Mechanical room B909	9/2/2009
JOYN052e	Duplex stormwater sump pump	Mechanical room B909	9/2/2009
JOYN053e	Domestic water manifold	Mechanical room B909	9/2/2009
JOYN054e	Halogen gas monitor	Mechanical room B901	9/2/2009
JOYN055e	Duplex stormwater sump pump	Mechanical room B909	9/2/2009
JOYN056e	Steam-fired domestic hot water heater	Mechanical room B901	9/2/2009
JOYN057e	Vane axial ventilation fan with VFD	Mechanical room B901	9/2/2009
JOYN058e	General Electric distribution panel	Electrical room 3905	9/2/2009
JOYN059e	Square D transformer and distribution panels	Mechanical room 2911	9/2/2009
JOYN060e	Switchgear MSB1	Electrical room B902	9/2/2009
JOYN061e	Transformer	Electrical room B902	9/2/2009
JOYN062e	Switchgear MSB2	Electrical room B902	9/2/2009
JOYN063e	Instructions on MSB1/MSB2 for power disconnect	Electrical room B902	9/2/2009
JOYN064e	General Electric switchboard	Mechanical room B909	9/2/2009
JOYN065e	Transformer	South side of building	9/2/2009
JOYN066e	HID pole light	South side of building	9/2/2009
JOYN067e	Converted HID pole light	North side of building	9/2/2009
JOYN068e	HID pole light	Northeast entrance to building	9/2/2009

**Photo Log - Facility Condition  
Analysis**

**JOYN : JOYNER LIBRARY**

<b>Photo ID No</b>	<b>Description</b>	<b>Location</b>	<b>Date</b>
JOYN069e	Lavatories	Men's restroom 4005	9/2/2009
JOYN070e	Urinals	Men's restroom 4005	9/2/2009
JOYN071e	Water closet	Men's restroom 4005	9/2/2009
JOYN072e	Dual level water fountains	Third floor, hallway	9/2/2009

Facility Condition Analysis - Photo Log



JOYN001A.jpg



JOYN001E.jpg



JOYN002A.jpg



JOYN002E.jpg



JOYN003A.jpg



JOYN003E.jpg



JOYN004A.jpg



JOYN004E.jpg



JOYN005A.jpg



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JOYN006A.jpg



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JOYN007A.jpg



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JOYN010A.jpg



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Facility Condition Analysis - Photo Log



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JOYN011E.jpg



JOYN012A.jpg



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JOYN014A.jpg



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JOYN015A.jpg



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JOYN016A.jpg



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Facility Condition Analysis - Photo Log



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Facility Condition Analysis - Photo Log



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Facility Condition Analysis - Photo Log



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